# 2019 ANNUAL CLOSED PONDS POST-CLOSURE MONITORING REPORT

## FORMER MONTROSE FACILITY
## HENDERSON, NEVADA

**Prepared for:**

**Montrose Chemical Corporation**
**of California**
**600 Ericksen Avenue NE, Suite 360**
**Bainbridge Island, WA 98110**

**Converse Project No. 89-43133-24**

**October 18, 2019**

# Montrose 2019 Post Closure Report

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KJP:ls

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## Limitations

Conclusions in this report are based on monitoring and sampling completed for the annual monitoring program performed in April 2019 for the closed ponds area of the former Montrose Chemical Corporation of California site in Henderson, Nevada. Groundwater sampling was intended to confirm the presence or absence of target contaminants at selected locations. Contaminant levels observed may not be representative of site-wide conditions. It is the intent of this monitoring event to detect only contaminants for which laboratory analyses were performed. Therefore, conclusions may be drawn only on the presence or absence of reported analytes. Observed contaminants may change with relation to time, on-site activities, and adjacent site activities.

This report is for the use of Montrose Chemical Corporation of California as it applies to the subject site in Henderson, Nevada. Its preparation has been in accordance with generally accepted practices in environmental and hydrogeology. No other warranty, either expressed or implied, is made.

**Certified Environmental Manager (CEM) Statement**

For the services provided and described in this document, the following language is from NAC 459.

*I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable federal, state, and local statutes, regulations, and ordinances.*

A Converse Certified Environmental Manager was in responsible charge during the collection of the field sampling data, as described in this report, and also during the compilation of this report.

CONVERSE CONSULTANTS

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Nevada CEM EM-1231 (Exp. 01/04/21)
Dated 10/21/19

This report has been prepared in accordance with the *Amended Closure/Post-Closure Plan* approved by the Nevada Division of Environmental Protection (NDEP). This report covers the 2019 annual monitoring and sampling of four groundwater monitoring wells located near the closed ponds of the former Montrose Chemical Corporation of California (Montrose) facility in Henderson, Nevada. Well MW-1 is located upgradient of the former ponds, while wells MW-2, MW-3, and MW-4 are arrayed in an east-west transect across the downgradient edge of the ponds. A site map depicting the locations of these wells is provided in Figure 1. Groundwater quality and water level trending data is presented within this report and included in Appendices A and B.

## 1.0 Sampling and Analysis Procedures

Field sampling was performed in accordance with the current version of the *Sampling and Analysis Plan* dated April 16, 2014. Water levels were measured using a Keck and Solinst water level meter. Micro-purge sampling procedures were used during this event to facilitate the use of consistent groundwater sampling techniques across the sampling programs being performed at the Montrose site. Water samples were logged and tracked using *Chain-of-Custody* forms and shipped to Test America Laboratories of Irvine, California for analysis (Appendix C). The groundwater samples were analyzed by TestAmerica Analytical Testing Corporation, a Nevada certified laboratory. The samples were analyzed for the following chemical parameters:

- Volatile organic compounds (VOCs) using EPA Method 8260B
- Organochlorine pesticides using EPA Method 8081A
- 2,2/4,4-dichlorobenzil using EPA Method 8270C

Sampling data for each well was recorded on Low-Flow Purge/Sampling Forms, as presented in Appendix D.

## 2.0 Water Level and Water Quality Data Evaluation

### 2.1 Groundwater Elevation Data

When compared to the April 2018 monitoring event, the static water level elevations during April 2019 increased/decreased in the closed pond area as follows:

**Table 1 - Groundwater Elevation Comparison**

**2018 to 2019 Monitoring Events**

| Well I.D. | MW-1 | MW-2 | MW-3 | MW-4 |
|---|---|---|---|---|
| **Apr-18** | 1798.03 | 1781.98 | 1781.28 | 1781.99 |
| **Apr-19** | 1797.99 | 1781.97 | 1781.38 | 1782.01 |
| **Difference** | -0.04 ft | -0.01 ft | +0.10 ft | +0.02 ft |

Since the inception of monitoring in 1989, static groundwater elevations have increased as follows:

**1989 to 2019 Monitoring Events**

| Well I.D. | MW-1 | MW-2 | MW-3 | MW-4 |
|---|---|---|---|---|
| **May-89** | 1775.66 | 1771.37 | 1770.99 | 1771.77 |
| **Apr-19** | 1797.99 | 1781.97 | 1781.38 | 1782.01 |
| **Difference** | +22.33 ft | +10.60 ft | +10.39 ft | +10.24 ft |

A table and graph displaying the overall rise in groundwater elevations for these wells over time is provided as Figure 8 in Appendix B. As a note, water levels in monitor wells MW-2 through MW-4 have leveled off and show a slight decrease since 2013.

### 2.2 Evaluation of Concentration Data

In accordance with the March 20, 1989 NDEP letter to Montrose, seven compounds, as listed below, were identified as “indicator compounds” for evaluation.

- Carbon Tetrachloride
- DDT
- Dichlorobenzil
- Ethylbenzene
- Methylene Chloride
- Toluene
- Total Xylenes

The analytical suite used to analyze these indicator compounds also identifies other compounds that, for the purposes of this report, are referred to as "non-indicator" compounds. The following non-indicator compounds have had detectable concentrations during monitoring:

- Benzene
- Chloroform
- 1,4 – Dichlorobenzene
- Chlorobenzene
- 1,2 – Dichlorobenzene

An evaluation of concentration data for indicator and commonly observed non-indicator compounds in each well is as follows:

- From the preceding sampling period (April 2018)
- Historical concentration range observed over all monitoring periods since 1990
- Presence of trends occurring over the last five years (April 2015 to April 2019 monitoring events)

### 2.2.1 Indicator Compounds

For the April 2019 monitoring event, carbon tetrachloride and methylene chloride were the only indicator compounds detected above their respective method detection limits (MDL). Dichlorobenzil, ethylbenzene, toluene, DDT, and total xylenes (o-Xylene + m,p-Xylene) were below their respective MDLs.

**Table 2 – Indicator Compound Results 2019**

| Constituent | MCL | MW-1 | MW-2 | MW-3 | MW-4 |
|---|---|---|---|---|---|
| Carbon Tetrachloride | 5 | <0.25 | 97J | <25 | 0.93J |
| DDT | N/A | <0.0038 | <0.0039 | <0.039 | <0.0041 |
| Dichlorobenzil | N/A | <4.4 | <4.4 | <45 | <4.4 |
| Ethylbenzene | 700 | <0.25 | <25 | <25 | <0.50 |
| Methylene Chloride | 5 (BCL) | <1.1 | <110 | 120J | <2.2 |
| Toluene | 1,000 | <0.25 | <25 | <25 | <0.50 |
| Total Xylenes | 10,000 | <0.75 | <75 | <75 | <1.50 |

**Note:** All concentrations are listed in micrograms per liter (µg/L). Numbers with (J) symbol indicates a result that is less than the reporting limit (RL) but greater than or equal to the MDL and the concentration is an approximate value. Numbers with a less than (<) symbol indicates that the number is less than the MDL. Methylene Chloride does not have an EPA MCL. The Nevada Division of Environmental Protection (NDEP) Basic Comparison Level (BCL) was used.

**Table 2A - Carbon Tetrachloride Analytical Summary**

| Well | 2019 | 2018 | Historical High | Date | Historical Low | Date | 5 Year Range |
|---|---|---|---|---|---|---|---|
| MW-1 | <0.25 | <0.25 | <5 | Multiple | <0.25 | Multiple | <0.25-<0.25 |
| MW-2 | 97J | <100 | 1,500 | October 2006 | <100 | April 2018 | <100-150 |
| MW-3 | <25 | <13 | 76 | October 2006 | <13 | Multiple | <13-<25 |
| MW-4 | 0.93J | 0.76 | 80 | October 2006 | 0.76 | April 2018 | 0.76-3.0 |

## Carbon Tetrachloride Summary

The carbon tetrachloride concentration in MW-1 remained below the MCL of 5 µg/L. The concentration of carbon tetrachloride in monitoring well MW-2 in the 2019 sampling event was denoted with a J qualifier which indicates a result that is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. The 97 µg/L concentration is approximate and maybe above the EPA MCL of 5.0 µg/L for carbon tetrachloride. The carbon tetrachloride concentration was non-detectable (<25 µg/L) in monitoring well MW-3. Although it was reported as non-detectable, there is a possibility that the concentration of carbon tetrachloride in MW-3 is above the MCL of 5 µg/L. The carbon tetrachloride concentration in well MW-4 (0.93 µg/L) was also denoted with a J qualifier, but may be below the MCL of 5.0 µg/L. Carbon tetrachloride concentrations in all wells are at the low end of its historical and 5-year ranges.

**Table 2B - Methylene Chloride Analytical Summary**

| Well | 2019 | 2018 | Historical High | Date | Historical Low | Date | 5 Year Range |
|---|---|---|---|---|---|---|---|
| MW-1 | <1.1 | <1.1 | <10 | Multiple | <0.95 | Multiple | <1.1-<1.1 |
| MW-2 | <110 | <440 | 690 | April 2013 | 4.3 | April 1997 | <110-240 |
| MW-3 | 120J | 100 | 300 | January 1992 | <5.0 | Multiple | 100-160 |
| MW-4 | <2.2 | <2.8 | 300 | January 1992 | <2.2 | Multiple | <2.2-<5.5 |

**Methylene Chloride**

The methylene chloride concentration in MW-1 and MW-3 was non-detectable (<1.1 µg/L & <2.2 µg/L) and below the NDEP BCL of 5.0 µg/L. The methylene chloride was non-detectable (<110 µg/L) in monitoring well MW-2. Although it was reported as non-detectable, there is a possibility that the concentration of methylene chloride in well MW-2 is above the NDEP BCL of 5.0 µg/L. The concentration of methylene chloride in monitoring well MW-3 in the 2019 sampling event was denoted with a J qualifier which indicates a result that is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. The 120 µg/L concentration is approximate and may above the EPA MCL of 5.0 µg/L for methylene chloride. Methylene chloride concentrations in all wells are at the low/mid end of its historical and 5-year ranges.

**Remaining Indicators**

All other indicator compounds: Dichlorobenzil, ethylbenzene, toluene, DDT, and total xylenes (o-Xylene + m,p-Xylene) were below their respective MDLs.

### 2.2.2 Non-Indicator Compounds

Data Presentation Conventions

The following presentation of the concentrations and trends for non-indicator compounds focuses on those compounds having MCLs and for which historic long-term data is available.

Data Evaluation and Trends

The concentrations of benzene, chloroform, chlorobenzene, 1,2-dichlorobenzene and 1,4-dichlorobenzene identified during this monitoring event are summarized along with their respective MCLs in Table 2 below. In Tables 2A-E, the compound concentrations are shown relative to historic observations in each well. Trends are based on Mann Kendall analysis which summarizes the findings of each compound and identifies trends in each well over the preceding five-year time period. The full Mann Kendall trend analysis can be found in Appendix A and the full analytical report is provided in Appendix B.

**Table 3 - Quantified Non-Indicator Compounds**
**April 2019 Monitoring Event**

| Constituent | MCL | MW-1 | MW-2 | MW-3 | MW-4 |
|---|---|---|---|---|---|
| Benzene | 5 | <0.25 | **1,300** | **400** | <0.50 |
| Chloroform | 80 | 3.3 | **94,000** | **25,000** | **520** |
| Chlorobenzene | 100 | <0.25 | **1,600** | **12,000** | 2.2 |
| 1,2-Dichlorobenzene | 600 | <0.25 | 46J | **18,000** | 4.4 |
| 1,4-Dichlorobenzene | 75 | <0.25 | 69J | **16,000** | 4.0 |

**Note:** All concentrations are listed in micrograms per liter (µg/L). Bold text are concentrations above their maximum containment level. Numbers with (J) symbol indicates a result that is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. Numbers with a less than (<) symbol indicates that the number is less than the MDL. The MCL for Total Trihalomethanes has been utilized for chloroform.

**Table 3A - Benzene Analytical Summary**

| Well | 2019 | 2018 | Historical High | Date | Historical Low | Date | 5 Year Range | Mann Kendall Trend |
|---|---|---|---|---|---|---|---|---|
| MW-1 | <0.25 | <0.25 | 10 | April 2004 | <0.25 | Multiple | <0.25-<0.25 | Stable |
| MW-2 | 1,300 | 1,300 | 24,000 | September 1990 | <100 | April 1994 | 1,300-1,700 | Shrinking |
| MW-3 | 400 | 390 | 15,000 | September 1990 | 390 | April 2018 | 390-970 | Shrinking |
| MW-4 | <0.50 | <0.63 | 15,000 | March 1990 | <0.50 | Multiple | <0.50-<1.3 | Stable |

**Benzene Summary**

The benzene concentrations in MW-1 and MW-4 remained below the MCL of 5 µg/L. Benzene concentrations in MW-2 and MW-3 were above the MCL, but are at the low end of these well's historic and 5-year concentration range for benzene.

**Table 3B- Chloroform Analytical Summary**

| Well | 2019 | 2018 | Historical High | Date | Historical Low | Date | 5 Year Range | Mann Kendall Trend |
|---|---|---|---|---|---|---|---|---|
| MW-1 | 3.3 | 2.5 | 150 | October 1995 | 0.69 | April 2007 | 2.0-3.3 | Stable |
| MW-2 | 94,000 | 93,000 | 130,000 | April 2016 | 2,600 | July 1991 | 93,000-130,000 | Shrinking |
| MW-3 | 25,000 | 24,000 | 43,200 | September 1990 | 7,500 | December 2002 | 24,000-30,000 | Shrinking |
| MW-4 | 520 | 730 | 97,000 | October 1998 | 520 | April 2019 | 520-1,500 | Stable |

**Chloroform Summary**

The chloroform concentration in MW-1 remained below the MCL of 80 µg/L. Chloroform concentrations in wells MW-2, MW-3, and MW-4 remained above the MCL of 80 µg/L. Chloroform concentrations in well MW-1 is at the low end of its historical range. Chloroform concentrations in MW-2 is at its high end of its historical range, but low end of its 5-year range. The chloroform concentration for MW-3 is in the middle of the historical range and low end of its 5-year range. Chloroform concentrations in MW-4 is at its lowest concentration since the inception of sampling.

**Table 3C- Chlorobenzene Analytical Summary**

| Well | 2019 | 2018 | Historical High | Date | Historical Low | Date | 5 Year Range | Mann Kendall Trend |
|---|---|---|---|---|---|---|---|---|
| MW-1 | <0.25 | <0.25 | 180 | April 2004 | <0.25 | Multiple | <0.25-0.55 | Stable |
| MW-2 | 1,600 | 1,700 | 78,000 | April 1993 | 110 | October 1999 | 1,600-2,400 | Stable |
| MW-3 | 12,000 | 13,000 | 38,000 | October 2003 | 12,000 | April 2019 | 12,000-24,000 | Stable |
| MW-4 | 2.2 | 2.2 | 43,000 | March 1990 | 1.3 | April 2015 | 1.3-3.3 | Shrinking |

## Chlorobenzene Summary

Chlorobenzene concentrations in MW-1 and MW-4 remain below the MCL, while concentrations in MW-2 and MW-3 exceeded the MCL of 100 µg/L. Chlorobenzene concentrations in all wells are near the low end of their historical ranges. The chlorobenzene concentration in MW-3 is its lowest chlorobenzene concentration since the inception of sampling.

**Table 3D- 1,2 Dichlorobenzene Analytical Summary**

| Well | 2019 | 2018 | Historical High | Date | Historical Low | Date | 5 Year Range | Mann Kendall Trend |
|---|---|---|---|---|---|---|---|---|
| MW-1 | <0.25 | <0.25 | 180 | April 2004 | <0.25 | Multiple | <0.25-1.1 | Stable |
| MW-2 | 44 | <100 | 520 | April 1992 | 13 | April 2003 | 44-81 | Stable |
| MW-3 | 18,000 | 18,000 | 43,000 | October 1996 | 12,000 | June 1990 | 18,000-27,000 | Stable |
| MW-4 | 4.4 | 4.9 | 8,900 | April 1999 | <1.3 | April 2015 | <1.3-4.9 | Stable |

## 1,2-Dichlorobenzene Summary

1,2-Dichlorobenzene concentrations in MW-1, MW-2 and MW-4 remain below the MCL, while the concentration in MW-3 exceeded the MCL of 600 µg/L. Concentrations of 1,2-Dichlorobenzene in wells MW-1, MW-2, and MW-4 remain near the low end of their respective historic ranges. The concentration of 1,2-Dichlorobenzene in MW-3 is in the low end of its five year and historical range, but remains above the MCL.

**Table 3E- 1,4 Dichlorobenzene Analytical Summary**

| Well | 2019 | 2018 | Historical High | Date | Historical Low | Date | 5 Year Range | Mann Kendall Trend |
|---|---|---|---|---|---|---|---|---|
| MW-1 | <0.25 | <0.25 | 200 | April 2004 | <0.25 | Multiple | <0.25-1.2 | Stable |
| MW-2 | 69 | 110 | 650 | April 1992 | 20 | April 2003 | 69-160 | Shrinking |
| MW-3 | 16,000 | 14,000 | 48,000 | October 1996 | 14,000 | April 2018 | 14,000-28,000 | Stable |
| MW-4 | 4.0 | 4.3 | 21,000 | October 1998 | <1.3 | June 2014 | <1.3-4.3 | Stable |

**1,4-Dichlorobenzene Summary**

Concentrations of 1,4-Dichlorobenzene in wells MW-1, MW-2, and MW-4 are below the MCL of 75 µg/L, while the concentration in MW-3 exceeded the MCL. Concentrations of 1,4-Dichlorobenzene are at the low end of their historically observed ranges for all four wells.

### 2.2.3 Miscellaneous Organic Compounds

In addition to the indicator and non-indicator compounds discussed above, five additional organic compounds and three pesticides have had measureable concentrations during monitoring. These compounds are listed by well and concentration in Table 4 below and the following is a summary of the detections relative to MCLs or BCLs.

**Table 4 - Quantified Miscellaneous Compounds April 2019 Monitoring Event**

| Constituent | MCL | BCL | MW-1 | MW-2 | MW-3 | MW-4 |
|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | NA | 80.7 | <0.25 | <25 | **750** | <0.50 |
| 1,2,4-Trichlorobenzene | 70 | 70 | <0.40 | <40 | 58J | <0.80 |
| beta-BHC | NA | 2.19 | <0.0038 | <0.0098 | 0.23 | <0.0041 |
| alpha-BHC | NA | 11 | <0.0025 | 0.029 | 0.22 | 0.0030J |
| gamma-BHC (Lindane) | 0.20 | 0.20 | <0.0029 | 0.0047J | 0.14p | <0.0030 |

| Constituent | MCL | BCL | MW-1 | MW-2 | MW-3 | MW-4 |
|---|---|---|---|---|---|---|

**Note:** All concentrations are listed in micrograms per liter (µg/L). Bold text are concentrations above their maximum containment level. Numbers with a (J) symbol indicates a result that is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. Numbers with a less than (<) symbol indicates that the number is less than the MDL. Numbers with a (p) symbol indicates a relative percentage difference between the primary and confirmation column/detector is >40% and the lower value has been reported.

- A concentration of 1,3-Dichlorobenzene was non-detectable in monitoring wells MW-1, MW-2, and MW-4, but was detected in MW-3 at a concentration of 750 µg/L, which above the BCL of 80.7 µg/L. 1,3-Dichlorobenzene does not have a MCL.
- No other miscellaneous compounds had a concentration over their respective MCLs or BCLs. There were numbers that were designated with J and p symbols in the laboratory analysis, which show discrepancies with the data. These numbers may be over their respective MCLs or BCLs.

## 3.0 Conclusions

Compared to the previous monitoring event, which was performed during April 2018, concentrations of the indicator and non-indicator compounds sampled (VOCs, pesticides, and dichlorobenzil) in monitoring wells MW-1 through MW-4 generally decreased or remained stable as compared to their respective historic ranges.

## 4.0 Path Forward

This annual closed pond post-closure monitoring event was conducted concurrently with the annual site-wide groundwater monitoring event that covers the entire Olin-Stauffer-Syngenta-Montrose (OSSM) site.

Unless otherwise planned through discussions with the NDEP, the next monitoring event will be conducted in April 2020 and the analytical suite for the monitoring event will utilize the same, standard post-closure monitoring suite of VOCs, SVOCs (4,4-dichlorobenzil only), and organochlorine pesticides.

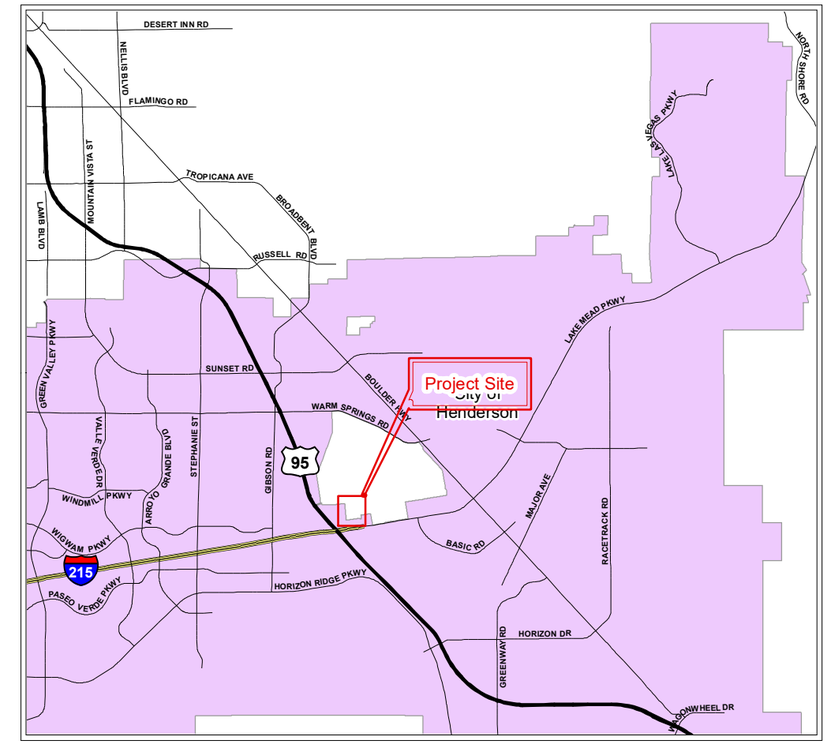
The data generated by each monitoring event will continue to be presented in a format similar to that used for this report and will also be evaluated as part of the OSSM annual site-wide comprehensive groundwater evaluation report to provide a site-wide context to the data.

**Converse Consultants**
Over 70 Years of Geotechnical Engineering, Environmental & Groundwater Science, Inspection & Testing Services

1 inch = 300 feet

0 150 300 600 900 1,200 1,500 Feet

Montrose.mxd




1 inch = 2 miles

**Legend**

Monitoring Well Locations

# SITE MAP

## MONTROSE CLOSED POND AREA

Lake Mead Parkway and US 95 Intersection
Henderson, Nevada

Figure 1

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# Appendix A

## Groundwater Trending Data

Table 1 - Two Year Analytical Results

| MW-1 | | | | |
|---|---|---|---|---|
| PARAMETER/ DATE | 4/16/2018 | 4/12/2019 | MCL (ug/L) | BCL (ug/L) |
| INDICATOR COMPOUNDS | | | | |
| Carbon tetrachloride µg/L | <0.25 | <0.25 | 5 | 5 |
| DDT ug/L | <0.04 | <0.0038 | No MCL | 0.20 |
| 4,4-Dichlorobenzil µg/L | <4.6 | <4.4 | No MCL | 11 |
| Ethylbenzene µg/L | <0.25 | <0.25 | 700 | 700 |
| Methylene Chloride µg/L | <1.1 | <1.1 | No MCL | 5 |
| Toluene µg/L | <0.25 | <0.25 | 1,000 | 1,000 |
| Total Xylenes µg/L | <0.5 | <0.75 | 10,000 | 10,000 |
| NON-INDICATOR COMPOUNDS | | | | |
| Benzene µg/L | <0.25 | <0.25 | 5 | 5 |
| Chloroform µg/L | 2.5 | 3.3 | 80 | 0.19 |
| Chlorobenzene µg/L | <0.25 | <0.25 | 100 | 100 |
| 1,2 - Dichlorobenzene µg/L | <0.25 | <0.25 | 600 | 600 |
| 1,4 - Dichlorobenzene µg/L | <0.25 | <0.25 | 75 | 75 |
| GROUNDWATER PARAMETERS | | | | |
| pH | 8.00 | 7.56 | 6.50-8.50 | No BCL |
| Conductivity | 1,327 | 1,265 | No MCL | No BCL |

Table 1 - Two Year Analytical Results

| MW-2 | | | | |
|---|---|---|---|---|
| PARAMETER/ DATE | 4/16/2018 | 4/12/2019 | MCL (ug/L) | BCL (ug/L) |
| INDICATOR COMPOUNDS | | | | |
| Carbon tetrachloride µg/L | <100 | 97 | 5 | 5 |
| DDT ug/L | <0.0021 | <0.0039 | No MCL | 0.20 |
| 4,4-Dichlorobenzil µg/L | <4.8 | <4.4 | No MCL | 11 |
| Ethylbenzene µg/L | <100 | <25 | 700 | 700 |
| Methylene Chloride µg/L | <440 | <110 | No MCL | 5 |
| Toluene µg/L | <100 | <25 | 1,000 | 1,000 |
| Total Xylenes µg/L | <200 | <75 | 10,000 | 10,000 |
| NON-INDICATOR COMPOUNDS | | | | |
| Benzene µg/L | 1,300 | 1,300 | 5 | 5 |
| Chloroform µg/L | 93,000 | 94,000 | 80 | 0.19 |
| Chlorobenzene µg/L | 1,700 | 1,600 | 100 | 100 |
| 1,2 - Dichlorobenzene µg/L | <100 | 46 | 600 | 600 |
| 1,4 - Dichlorobenzene µg/L | 110 | 69 | 75 | 75 |
| GROUNDWATER PARAMETERS | | | | |
| pH | 7.13 | 6.60 | 6.50-8.50 | No BCL |
| Conductivity | 11,600 | 10,600 | No MCL | No BCL |

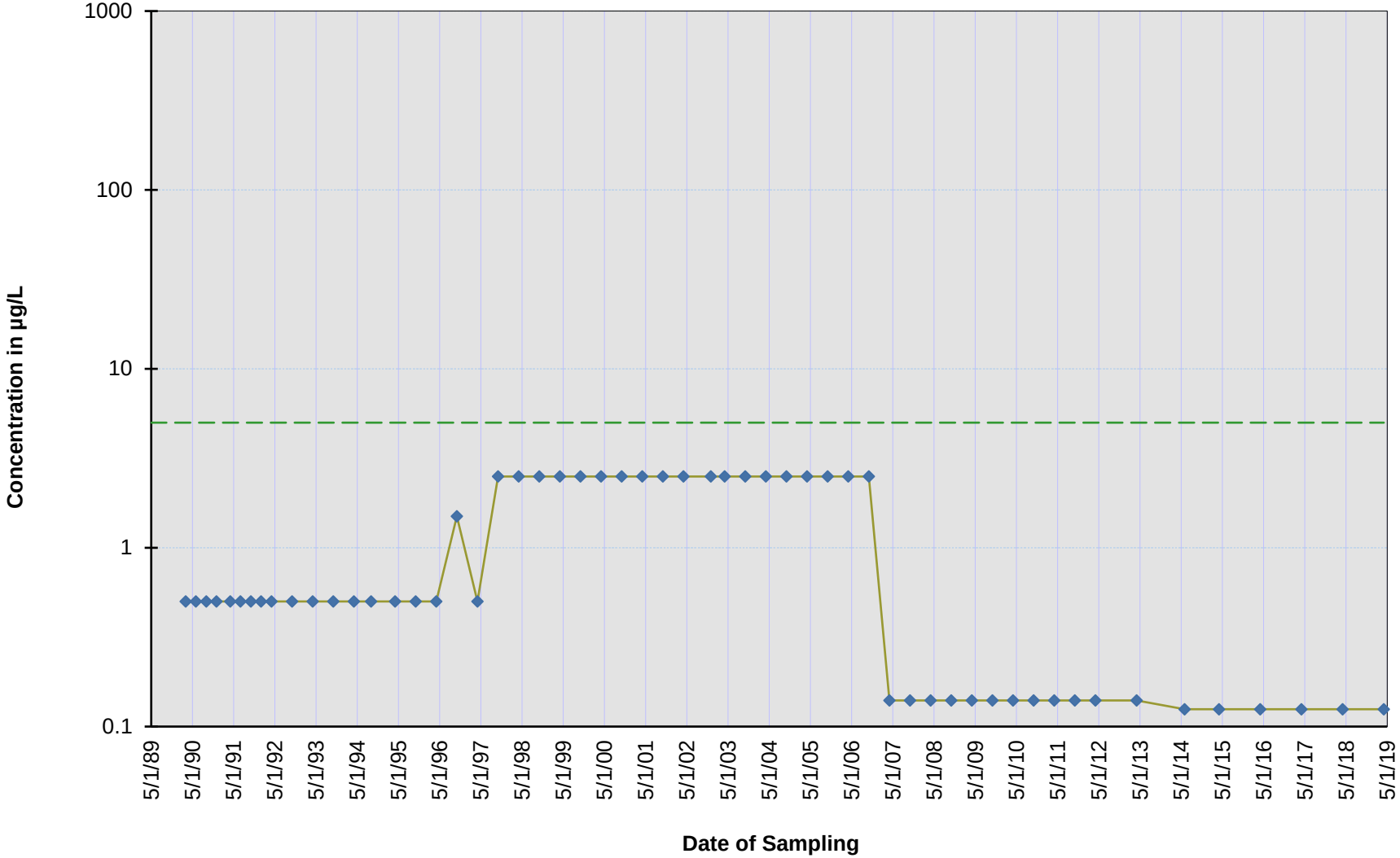
Table 1 - Two Year Analytical Results

| MW-3 | | | | |
|---|---|---|---|---|
| PARAMETER/ DATE | 4/16/2018 | 4/12/2019 | MCL (ug/L) | BCL (ug/L) |
| INDICATOR COMPOUNDS | | | | |
| Carbon tetrachloride µg/L | <13 | <25 | 5 | 5 |
| DDT ug/L | <0.039 | <0.039 | No MCL | 0.20 |
| 4,4-Dichlorobenzil µg/L | <4.6 | <45 | No MCL | 11 |
| Ethylbenzene µg/L | <13 | <25 | 700 | 700 |
| Methylene Chloride µg/L | 100 | 120 | No MCL | 5 |
| Toluene µg/L | <13 | <25 | 1,000 | 1,000 |
| Total Xylenes µg/L | <25 | <75 | 10,000 | 10,000 |
| NON-INDICATOR COMPOUNDS | | | | |
| Benzene µg/L | 390 | 400 | 5 | 5 |
| Chloroform µg/L | 24,000 | 25,000 | 80 | 0.19 |
| Chlorobenzene µg/L | 13,000 | 12,000 | 100 | 100 |
| 1,2 - Dichlorobenzene µg/L | 18,000 | 18,000 | 600 | 600 |
| 1,4 - Dichlorobenzene µg/L | 14,000 | 16,000 | 75 | 75 |
| GROUNDWATER PARAMETERS | | | | |
| pH | 6.25 | 6.10 | 6.50-8.50 | No BCL |
| Conductivity | 9,750 | 10,760 | No MCL | No BCL |

Table 1 - Two Year Analytical Results

| MW-4 | | | | |
|---|---|---|---|---|
| PARAMETER/ DATE | 4/16/2018 | 4/12/2019 | MCL (ug/L) | BCL (ug/L) |
| INDICATOR COMPOUNDS | | | | |
| Carbon tetrachloride µg/L | 0.76 | 0.93 | 5 | 5 |
| DDT ug/L | <0.04 | <0.0041 | No MCL | 0.20 |
| 4,4-Dichlorobenzil µg/L | <4.6 | <4.4 | No MCL | 11 |
| Ethylbenzene µg/L | <0.63 | <0.50 | 700 | 700 |
| Methylene Chloride µg/L | <2.8 | <2.2 | No MCL | 5 |
| Toluene µg/L | <0.63 | <0.50 | 1,000 | 1,000 |
| Total Xylenes µg/L | <1.3 | <1.50 | 10,000 | 10,000 |
| NON-INDICATOR COMPOUNDS | | | | |
| Benzene µg/L | <0.63 | <0.50 | 5 | 5 |
| Chloroform µg/L | 730 | 520 | 80 | 0.19 |
| Chlorobenzene µg/L | 2.2 | 2.2 | 100 | 100 |
| 1,2 - Dichlorobenzene µg/L | 4.9 | 4.4 | 600 | 600 |
| 1,4 - Dichlorobenzene µg/L | 4.3 | 4.0 | 75 | 75 |
| GROUNDWATER PARAMETERS | | | | |
| pH | 5.14 | 5.88 | 6.50-8.50 | No BCL |
| Conductivity | 5,080 | 5,440 | No MCL | No BCL |

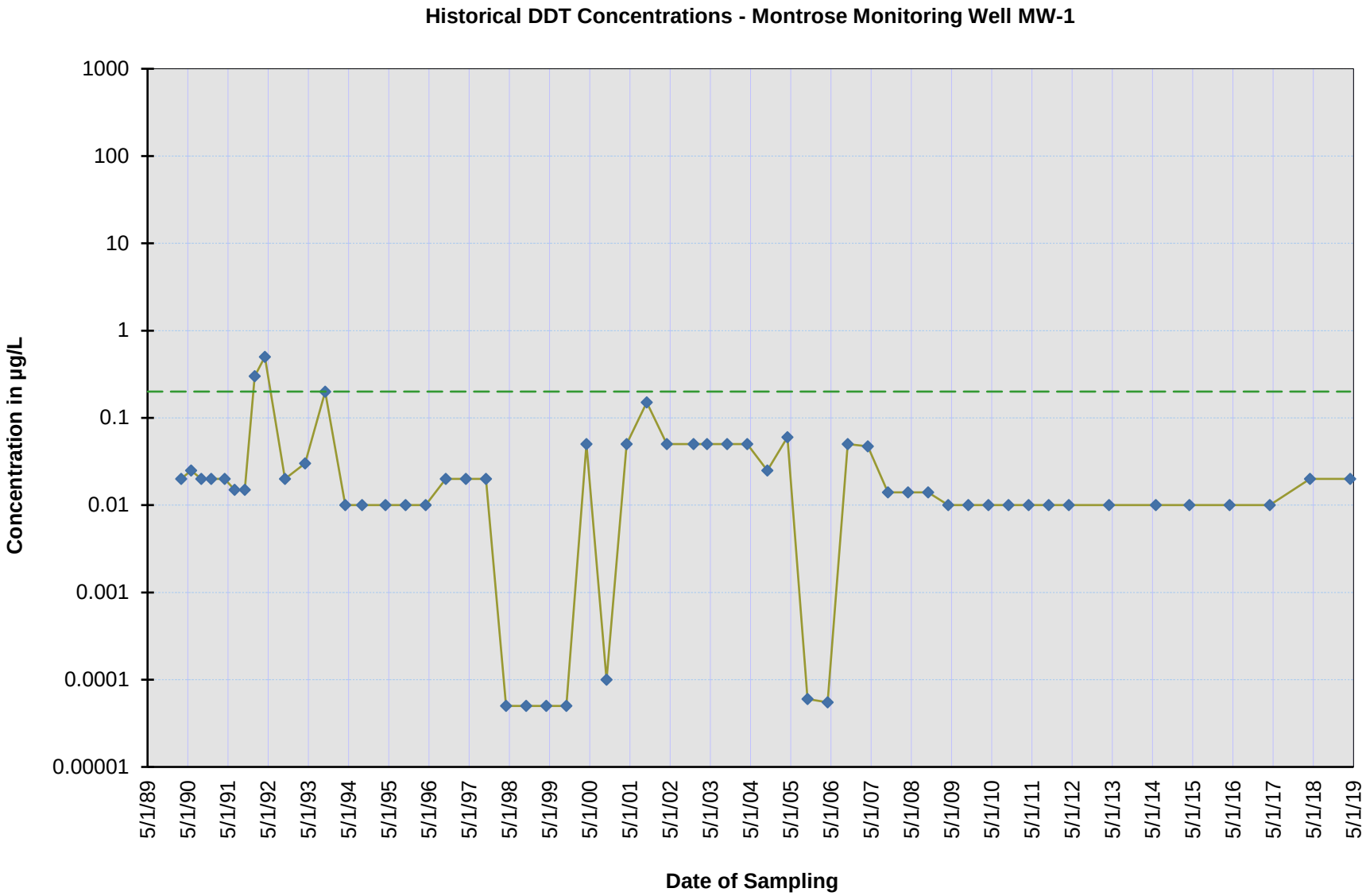
## Historical Carbon Tertachloride Concentrations - Montrose Monitoring Well MW-1




Note: Non-detectable concentrations are shown as half of the method detectable limit.

Carbon Tetrachloride

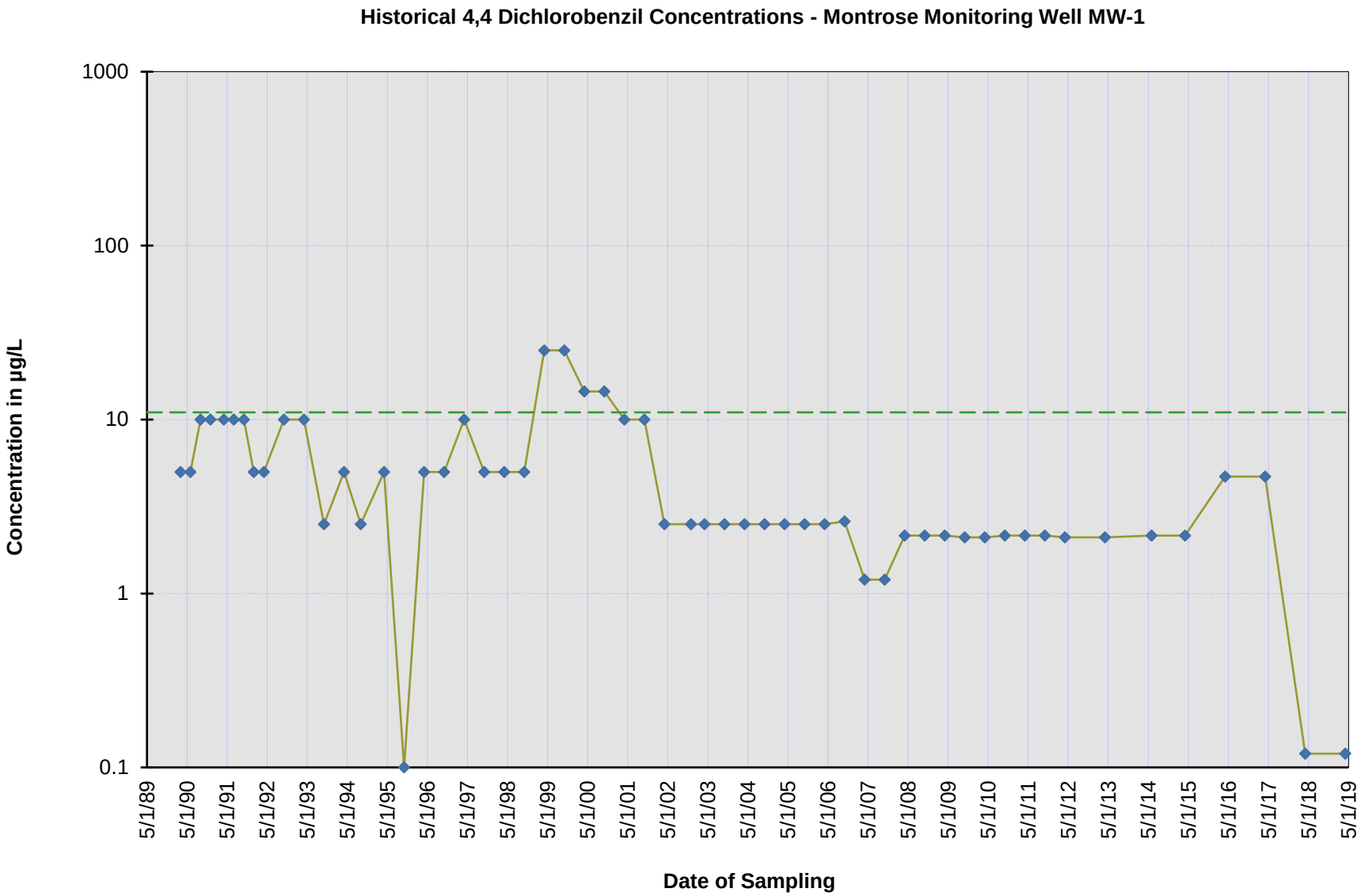
Carbon tetrachloride MCL




Note: Non-detectable concentrations are shown as half of the method detectable limit.

DDT

DDT BCL



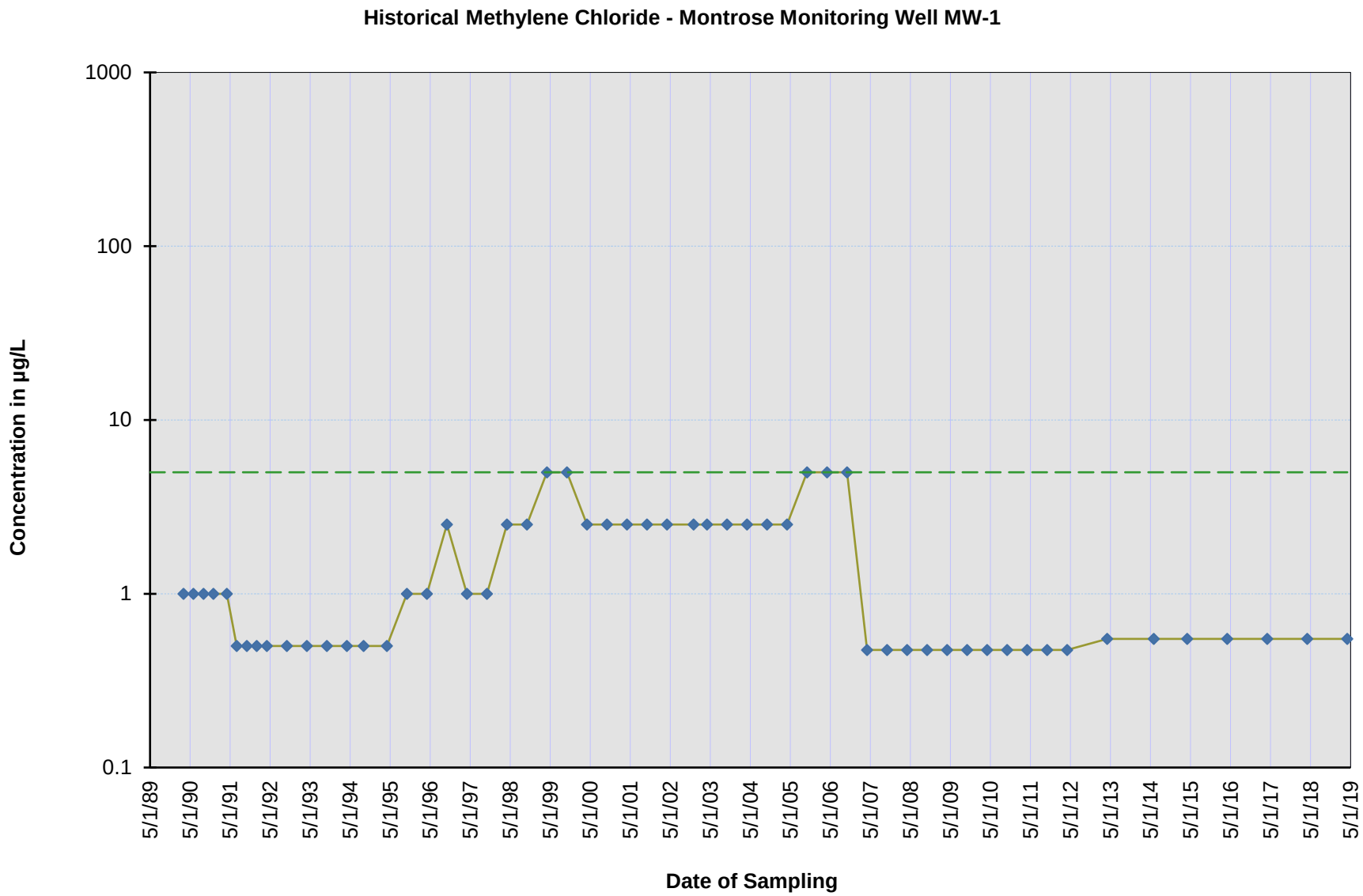

Note: Non-detectable concentrations are shown as half of the method detectable limit.

## Historical Ethylbenzene Concentrations - Montrose Monitoring Well MW-1

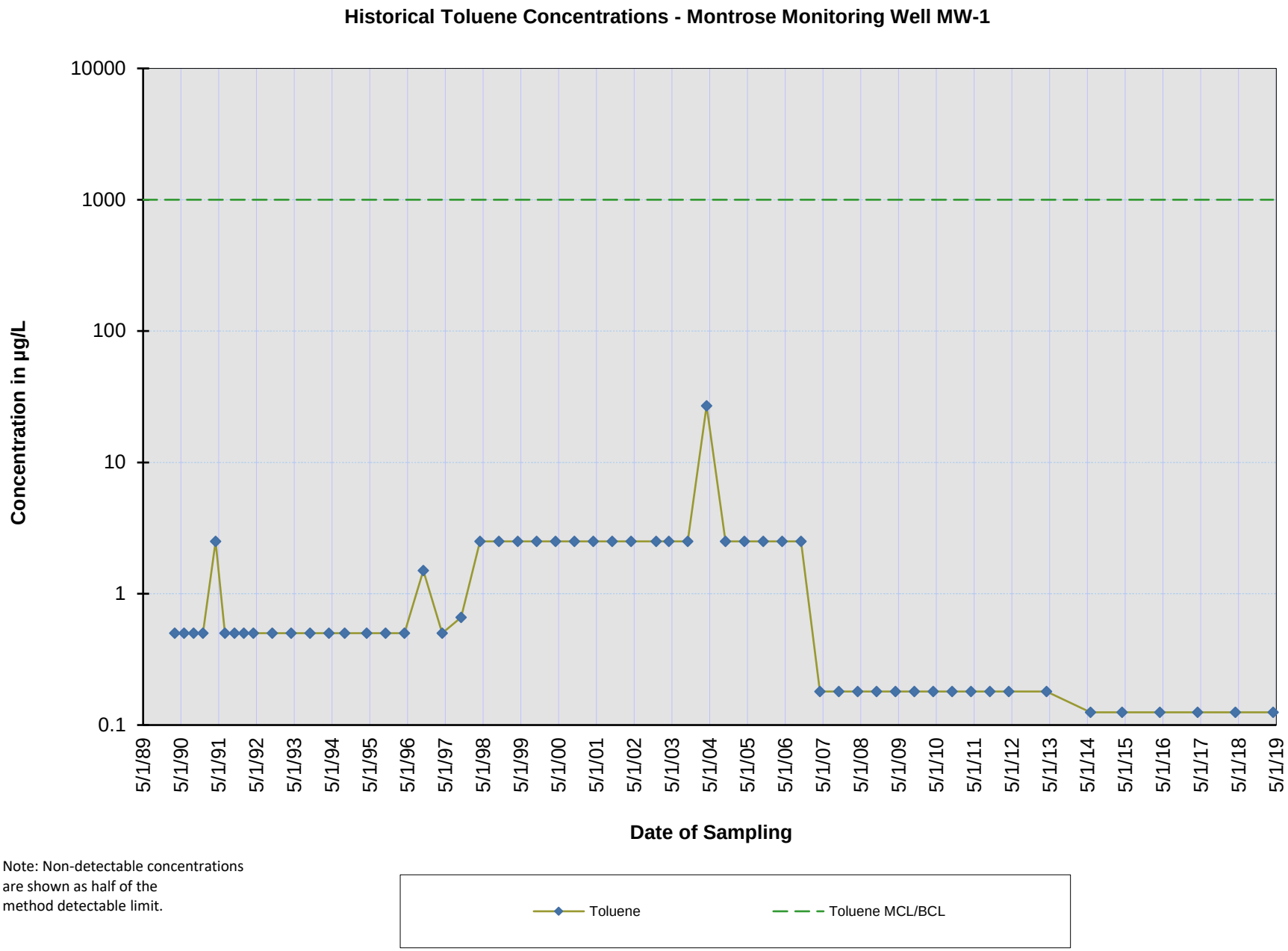
Note: Non-detectable concentrations are shown as half of the method detectable limit.

Ethylbenzene

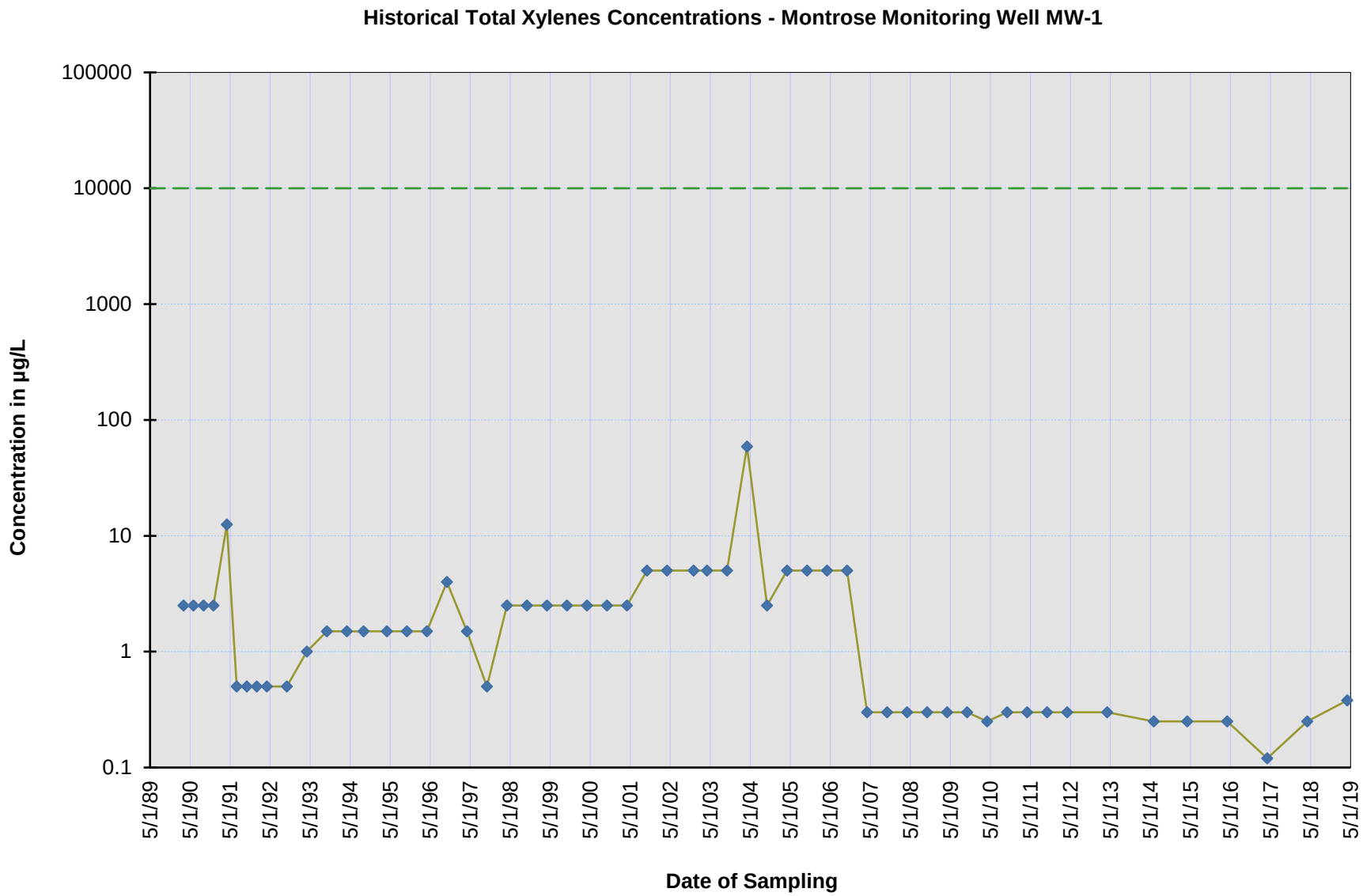
Ethylbenzene MCL



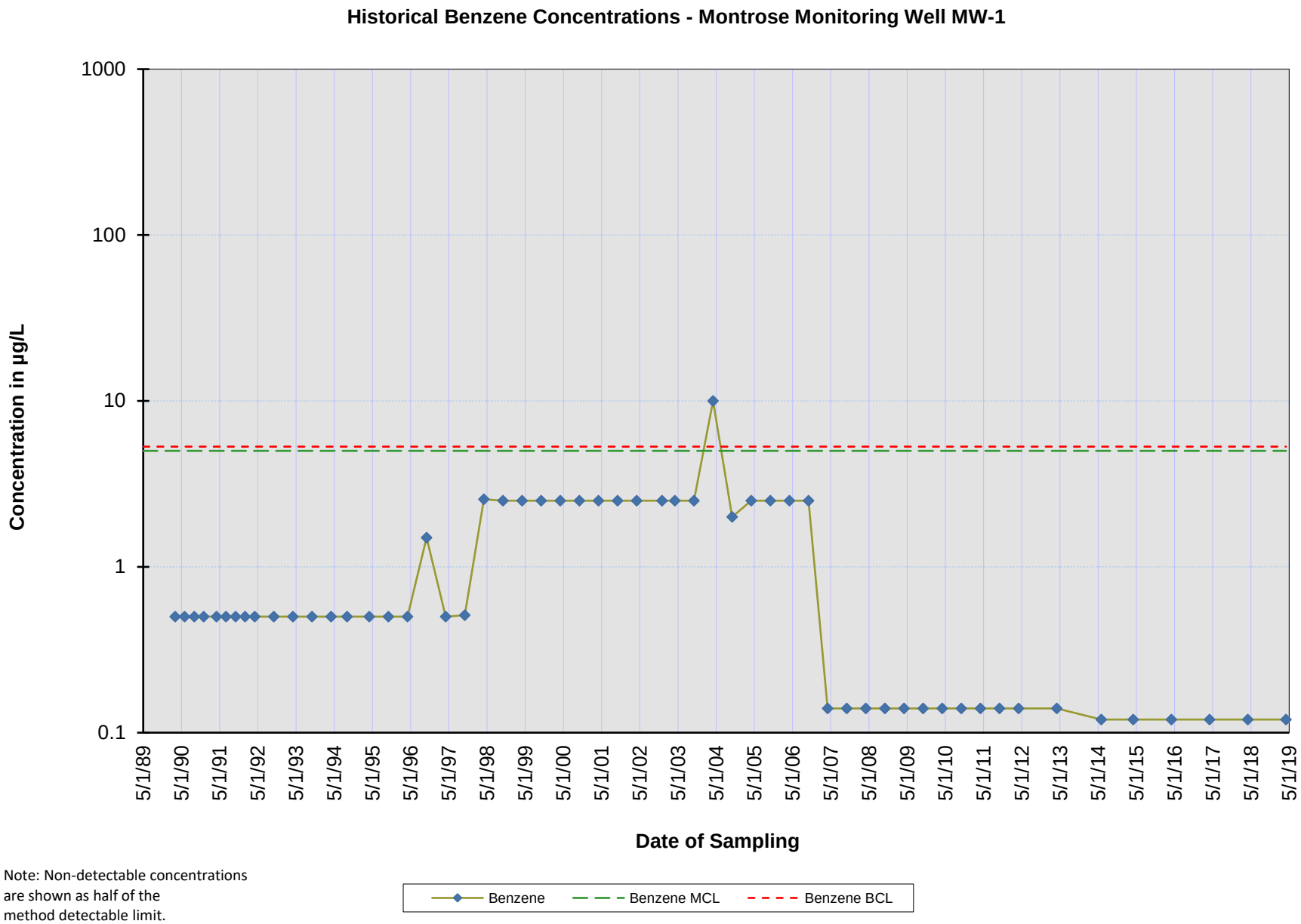

Note: Non-detectable concentrations are shown as half of the method detectable limit.



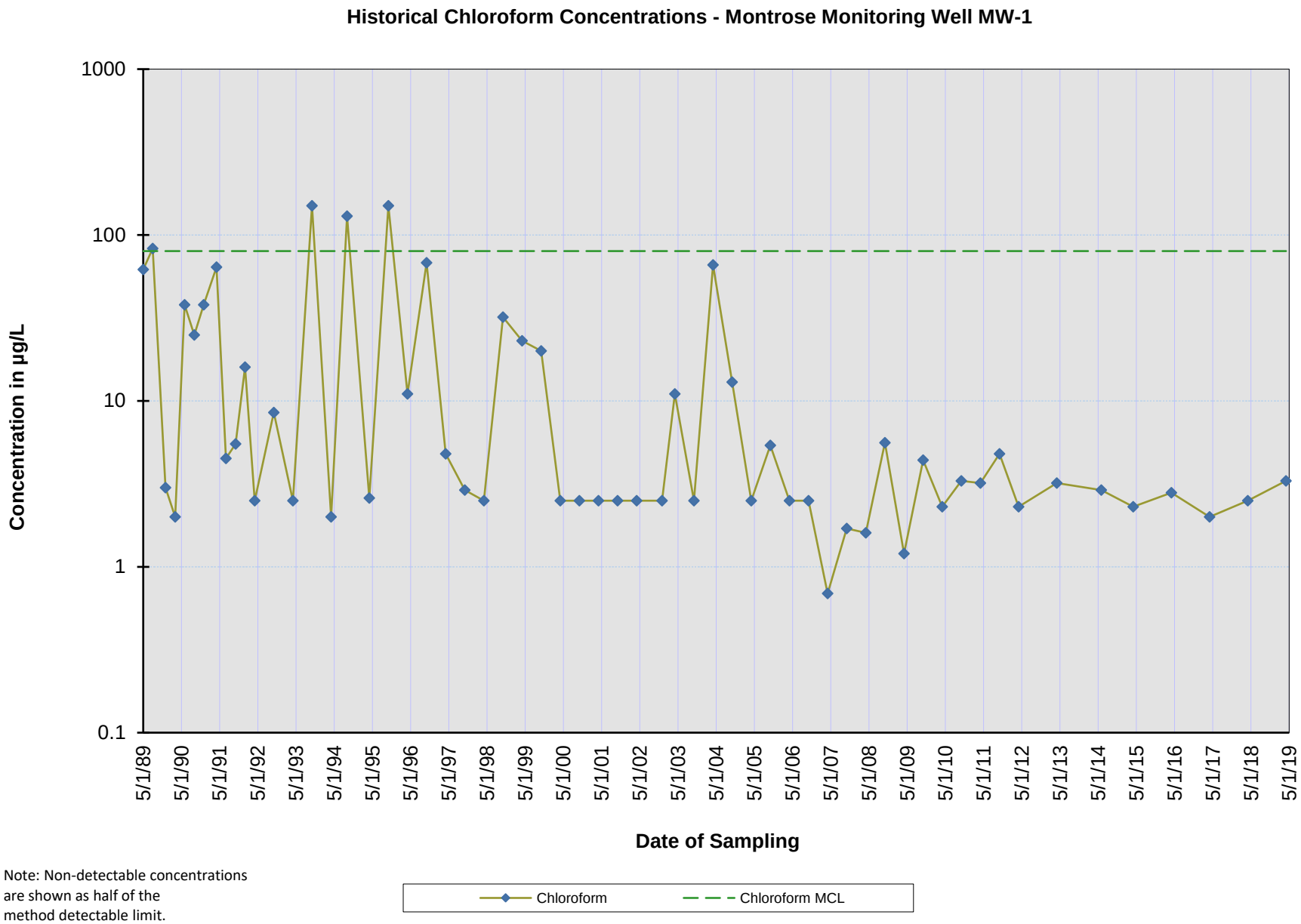

Note: Non-detectable concentrations are shown as half of the method detectable limit.



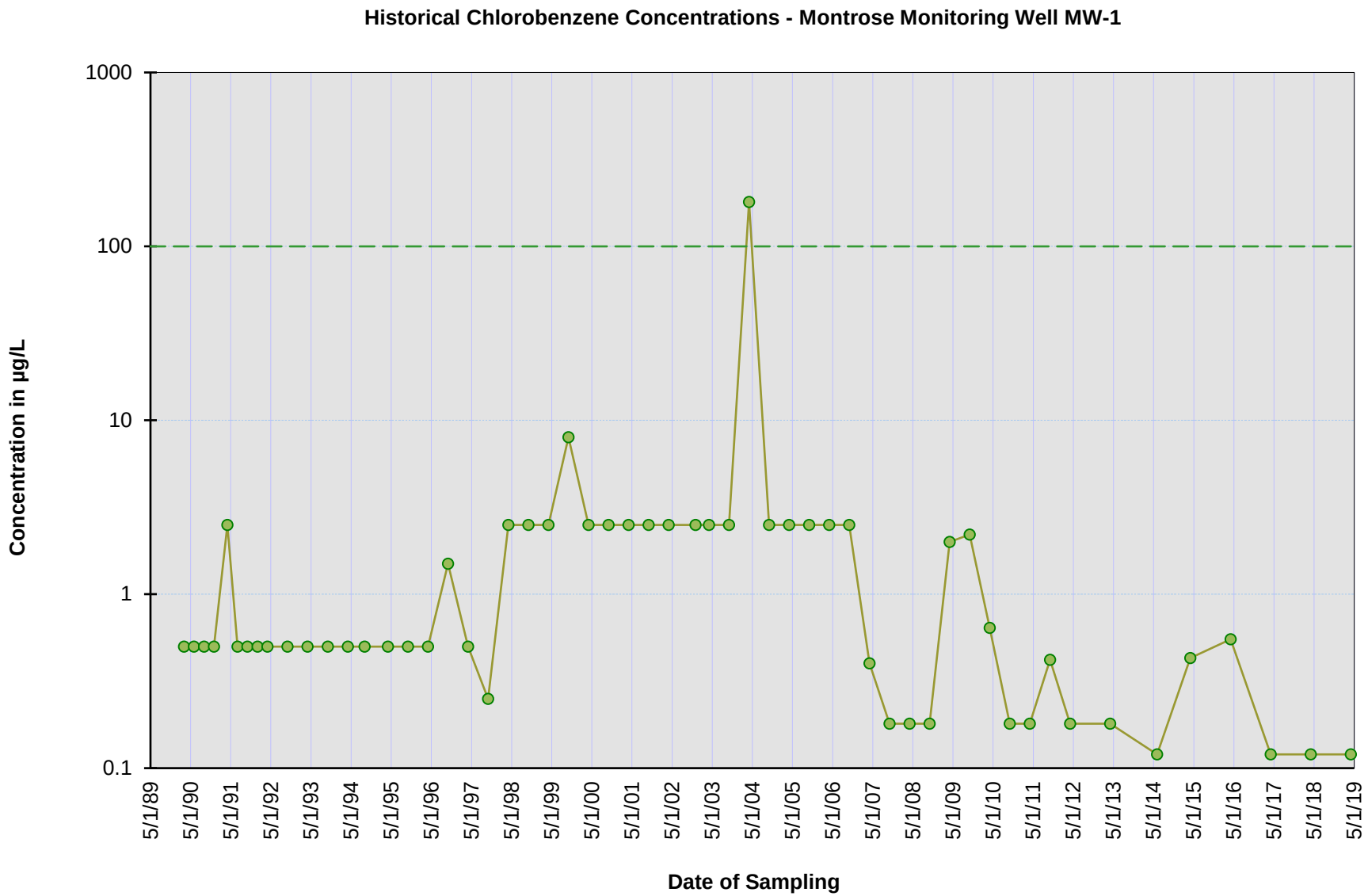

Note: Non-detectable concentrations are shown as half of the method detectable limit.



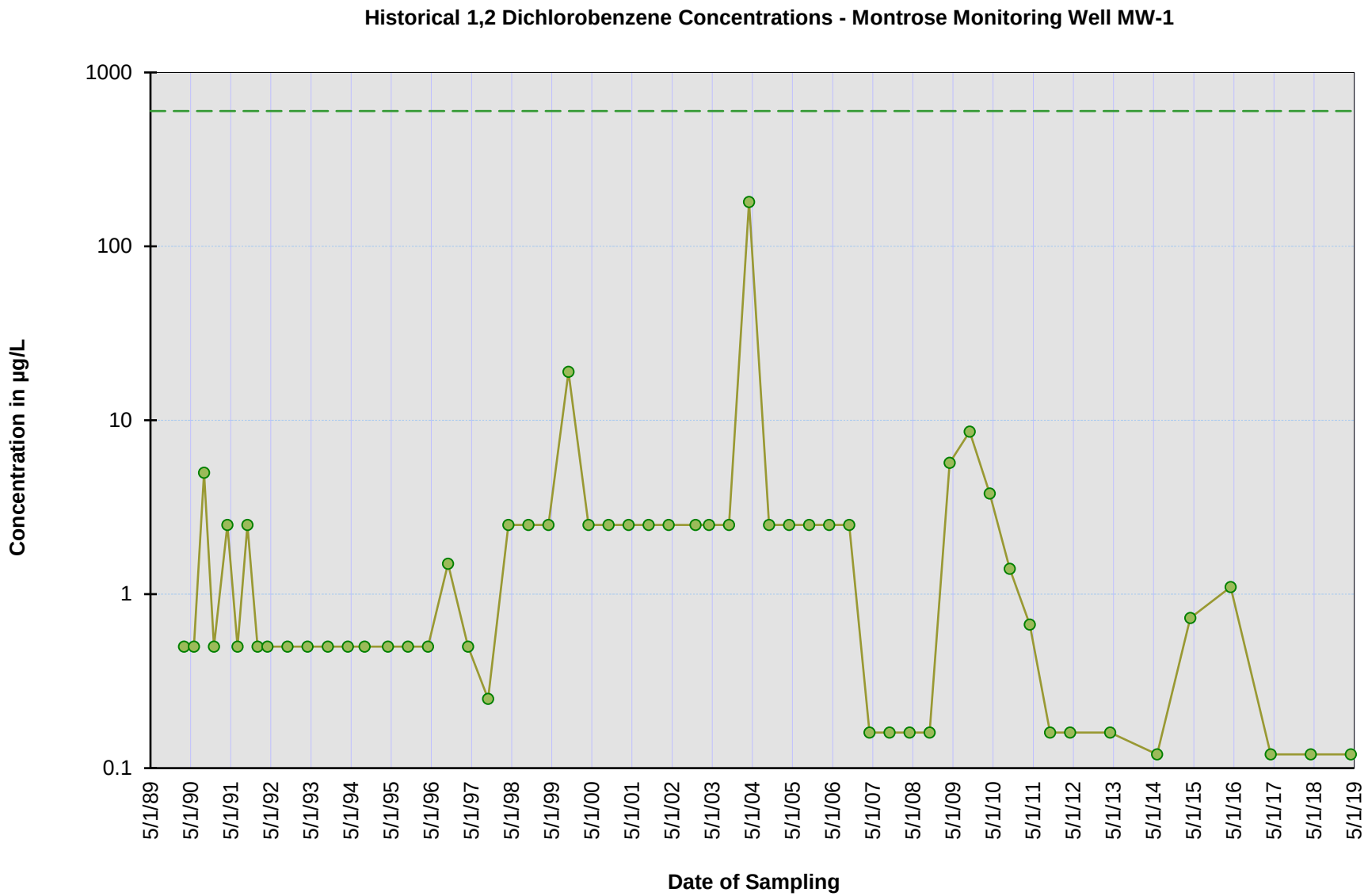

Note: Non-detectable concentrations are shown as half of the method detectable limit.



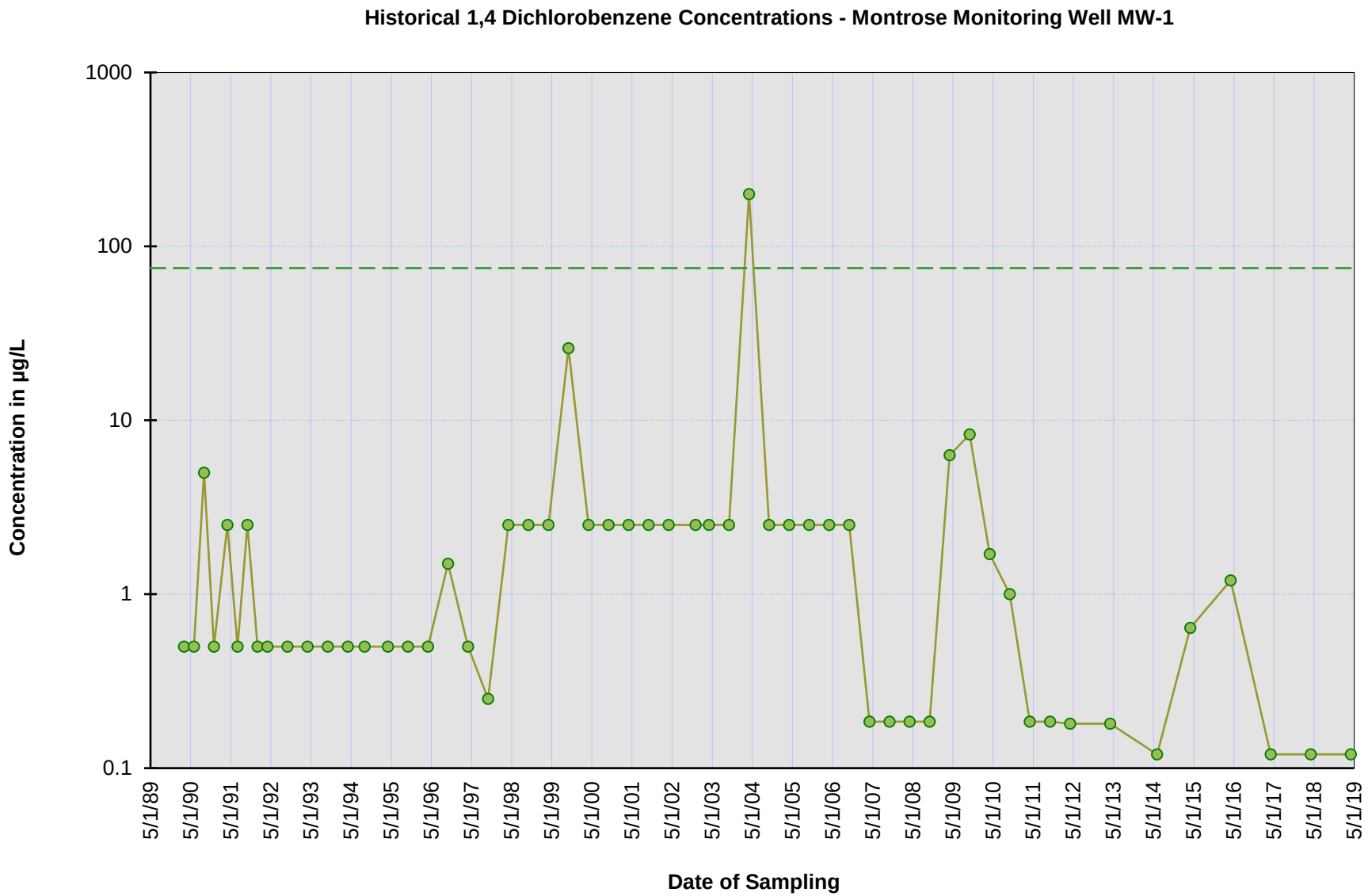

Note: Non-detectable concentrations are shown as half of the method detectable limit.



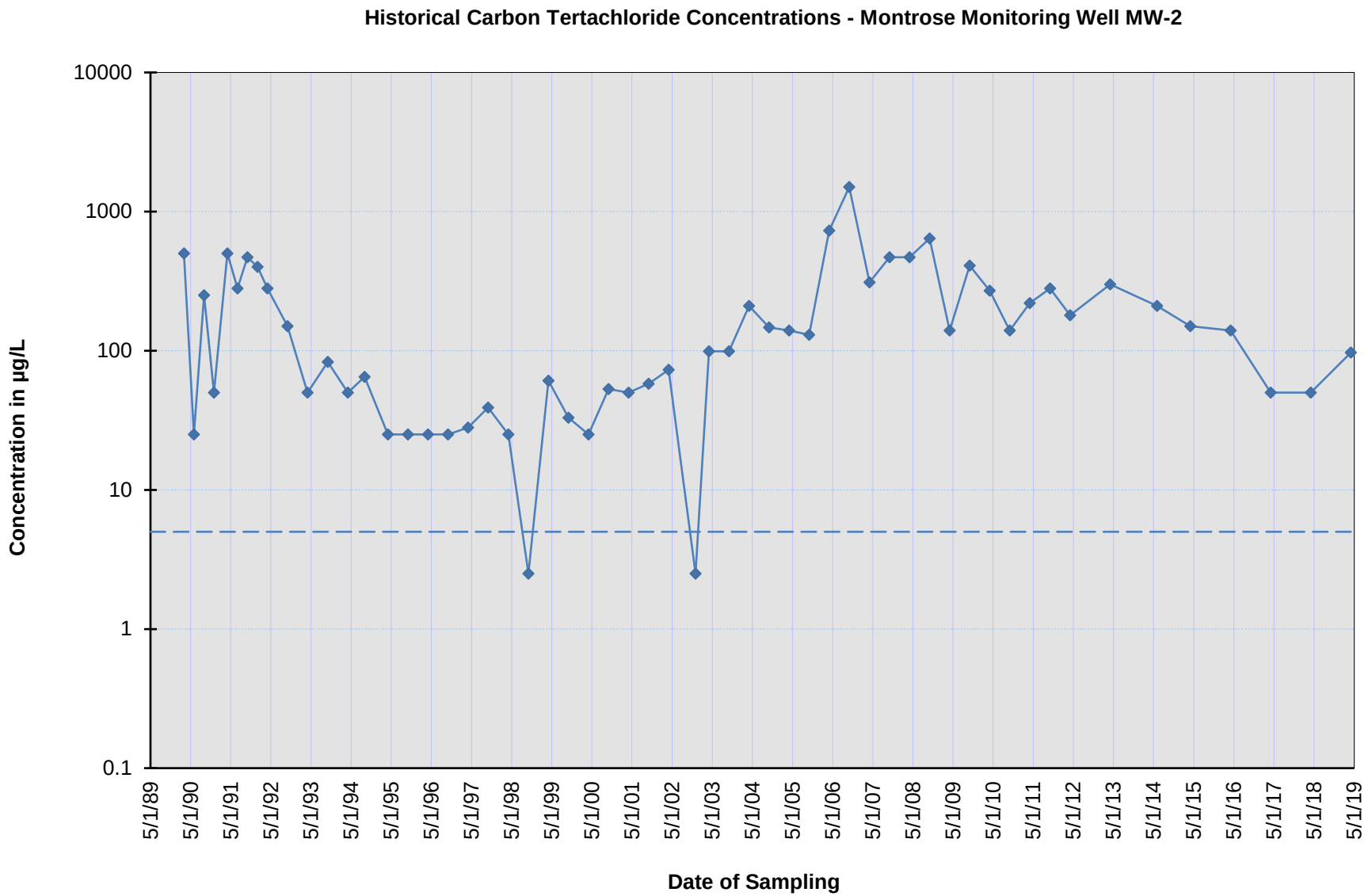

Note: Non-detectable concentrations are shown as half of the method detectable limit.



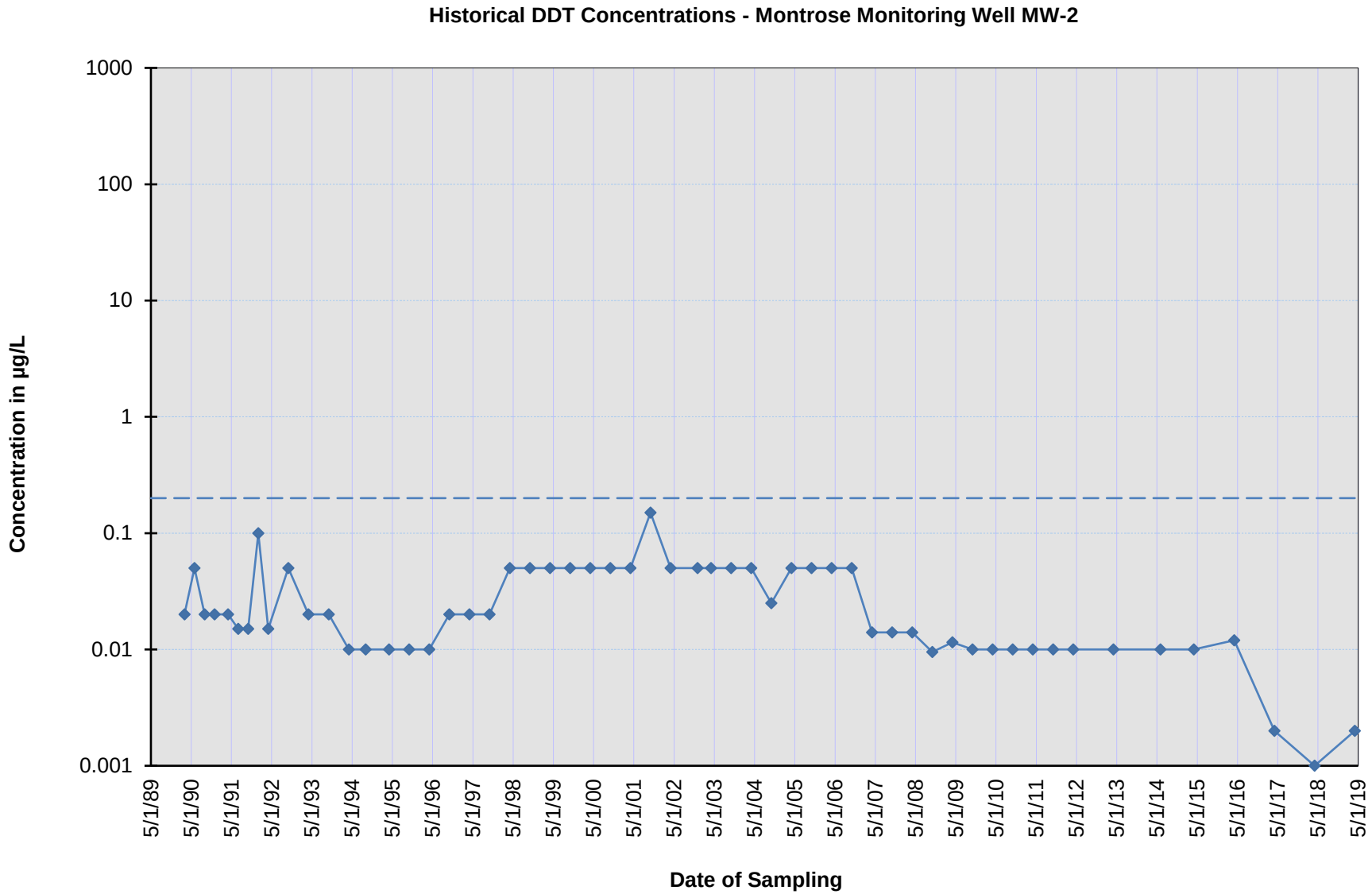

Note: Non-detectable concentrations are shown as half of the method detectable limit.



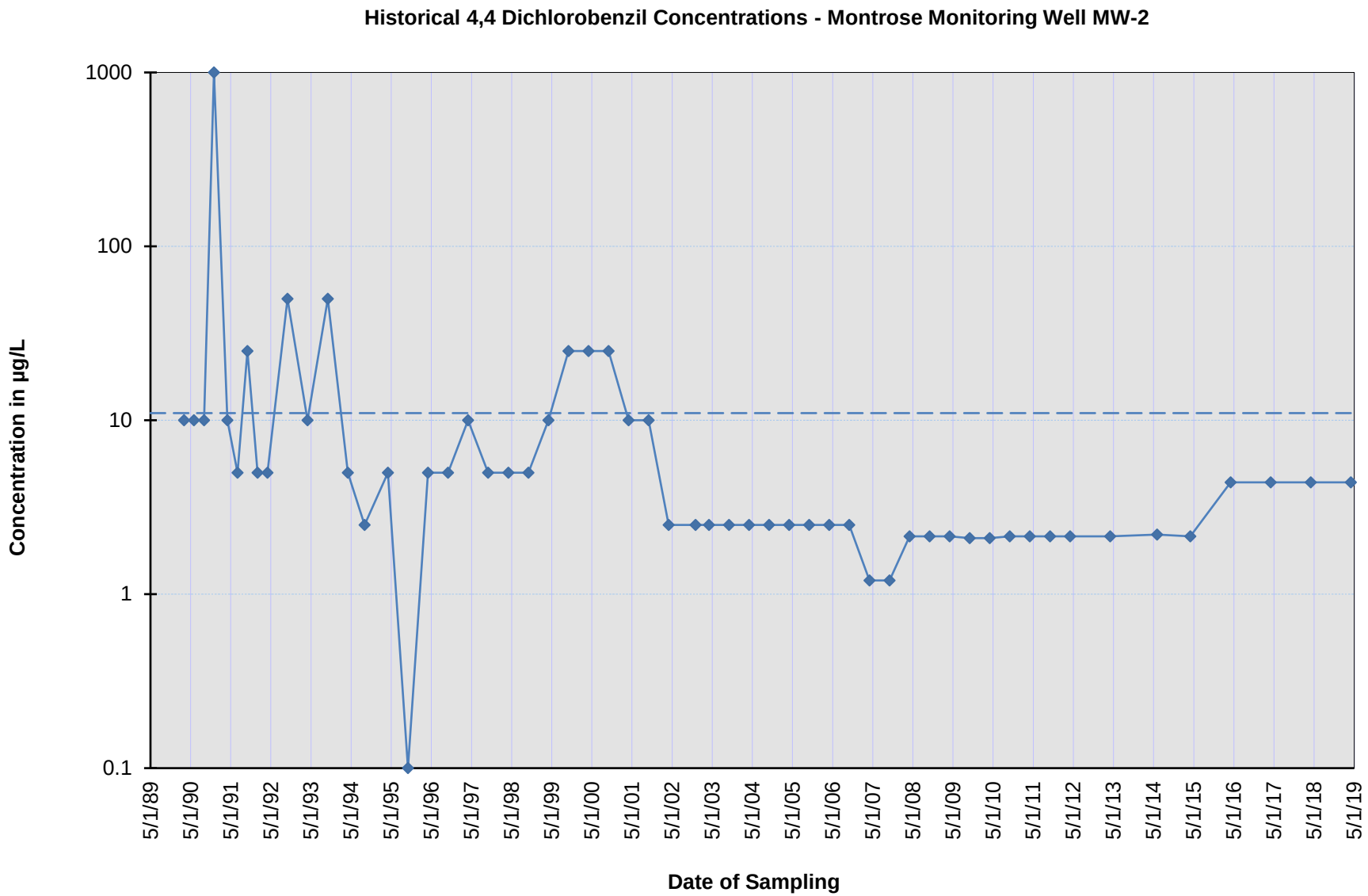

Note: Non-detectable concentrations are shown as half of the method detectable limit.



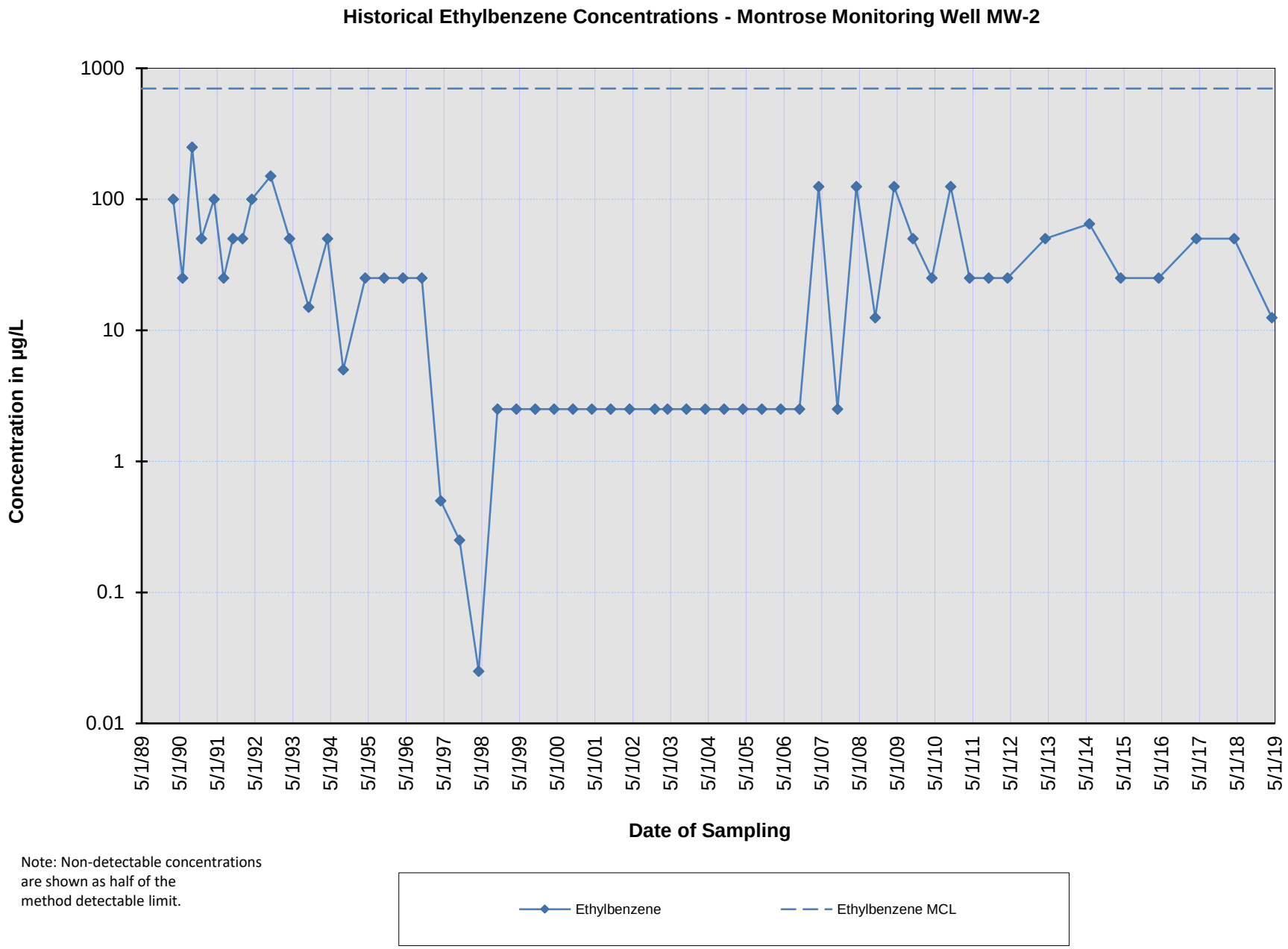

Note: Non-detectable concentrations are shown as half of the method detectable limit.



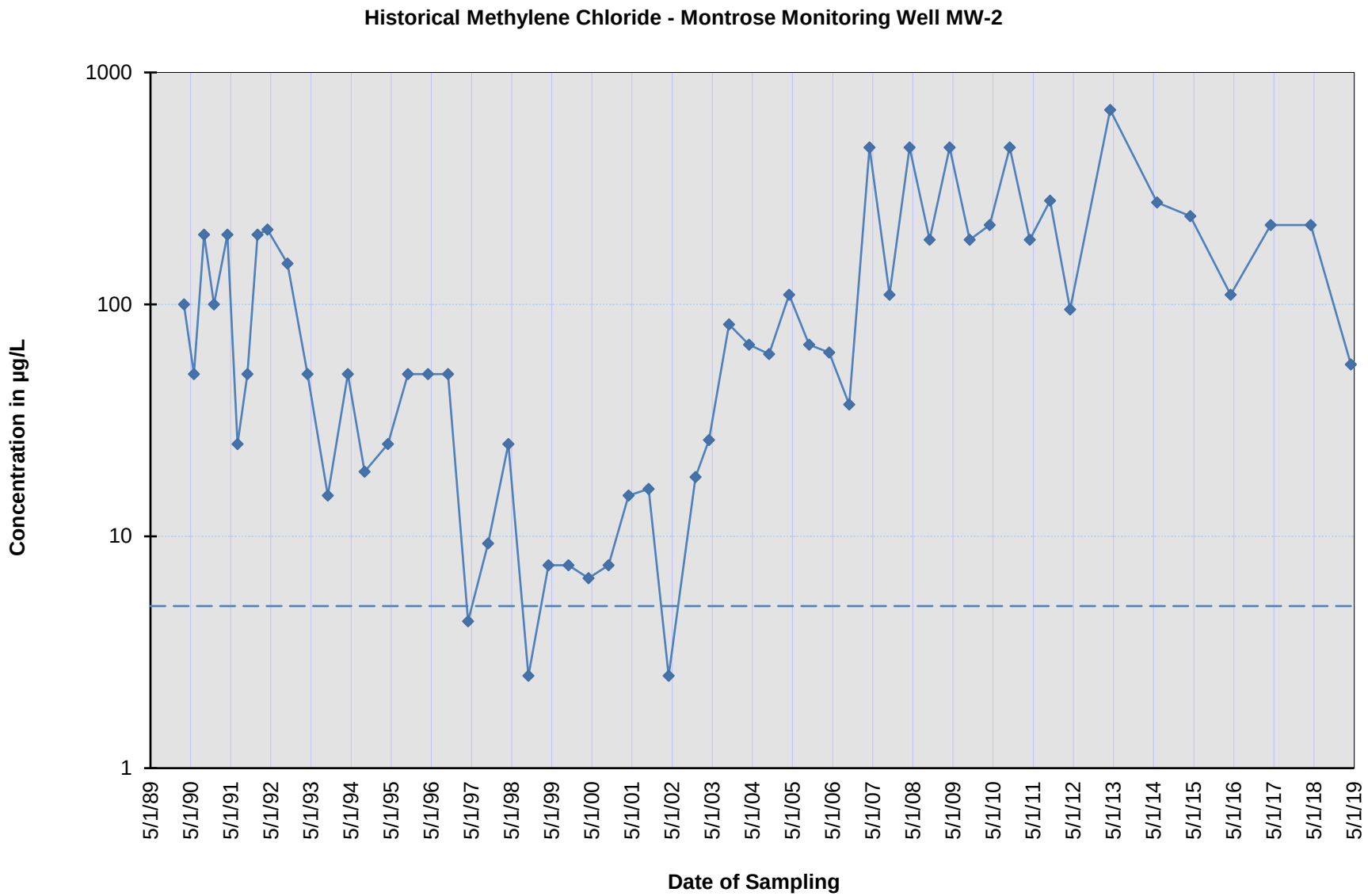

Note: Non-detectable concentrations are shown as half of the method detectable limit.



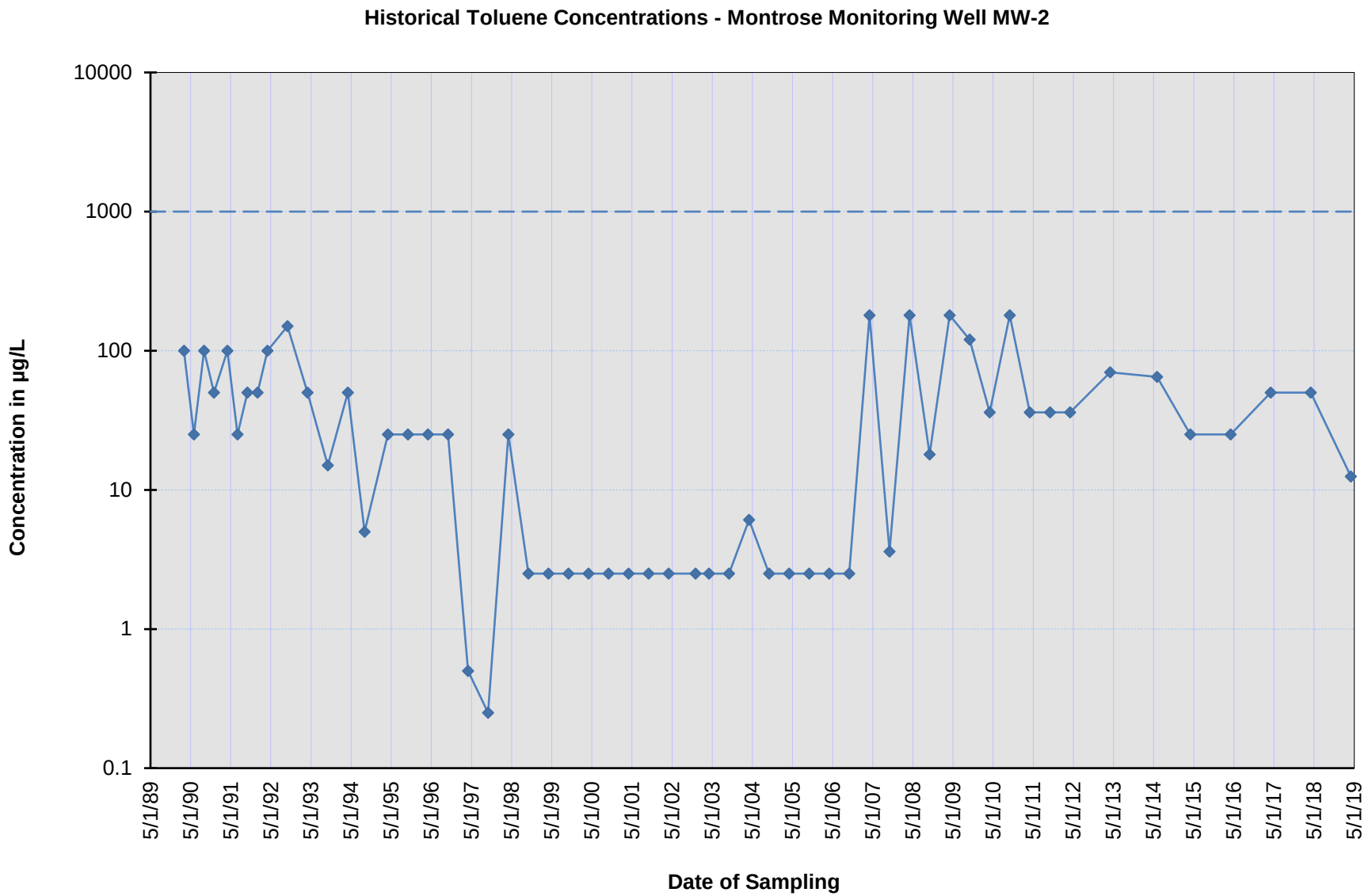

Note: Non-detectable concentrations are shown as half of the method detectable limit.



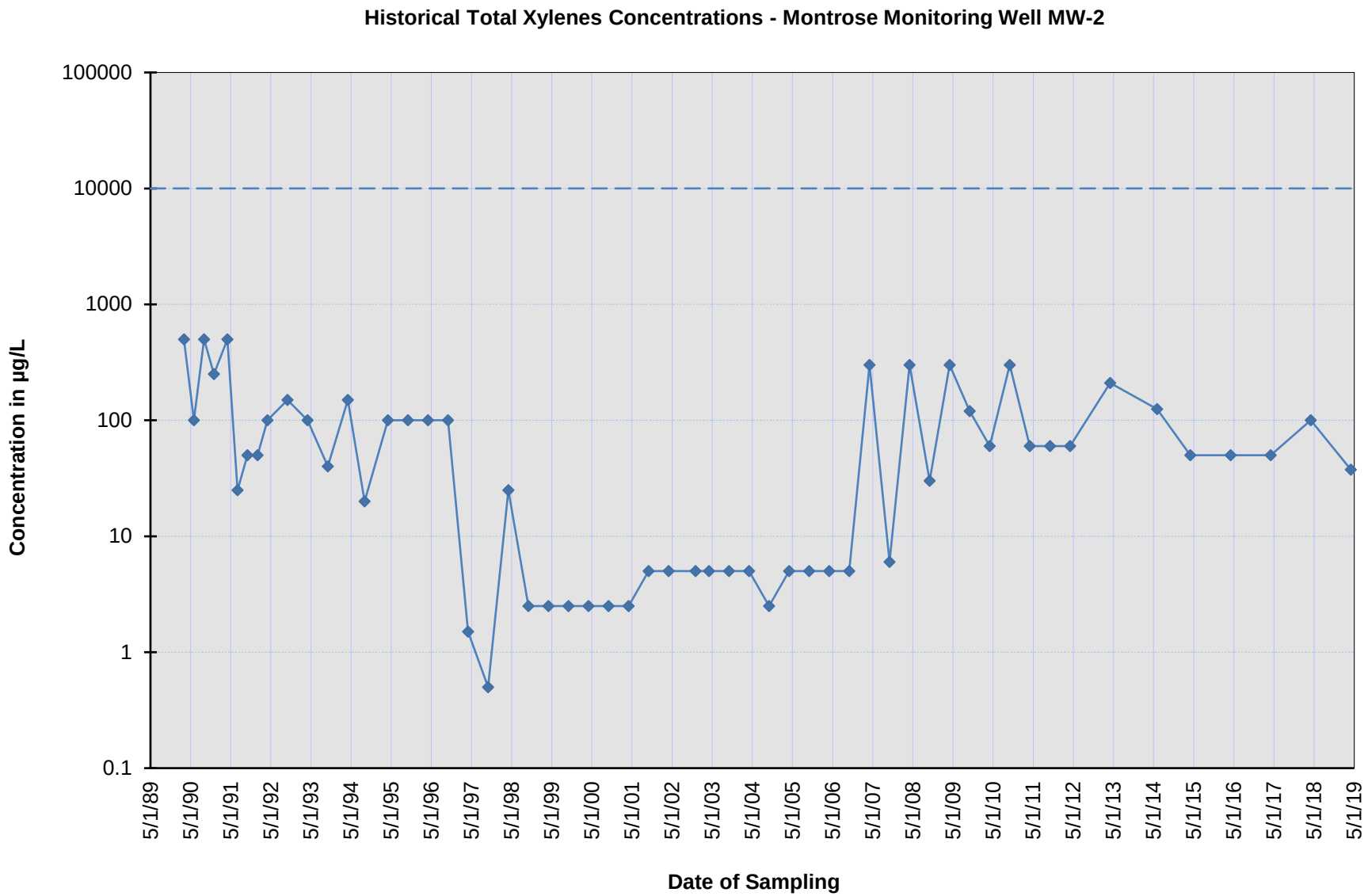

Note: Non-detectable concentrations are shown as half of the method detectable limit.



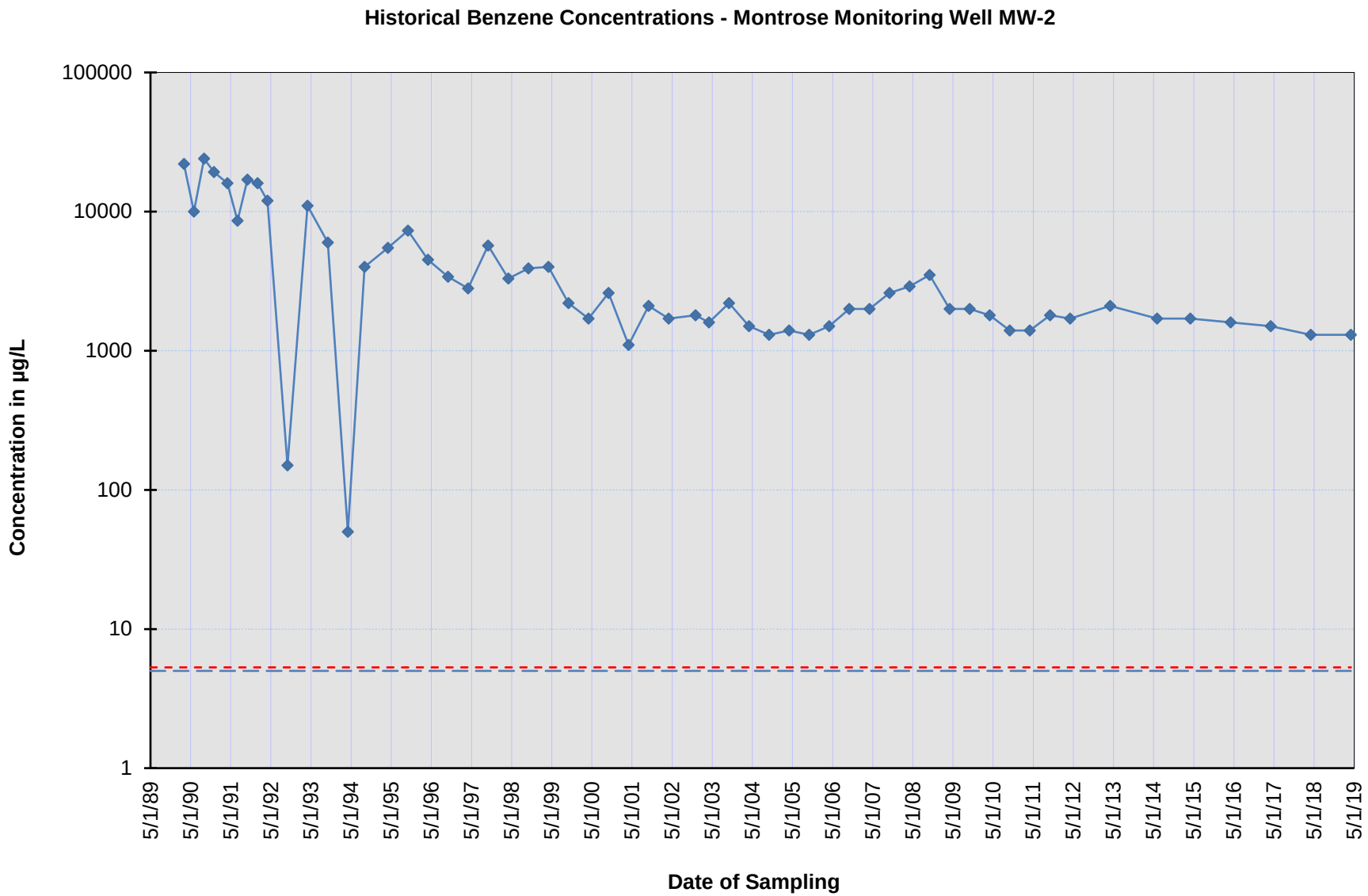

Note: Non-detectable concentrations are shown as half of the method detectable limit.



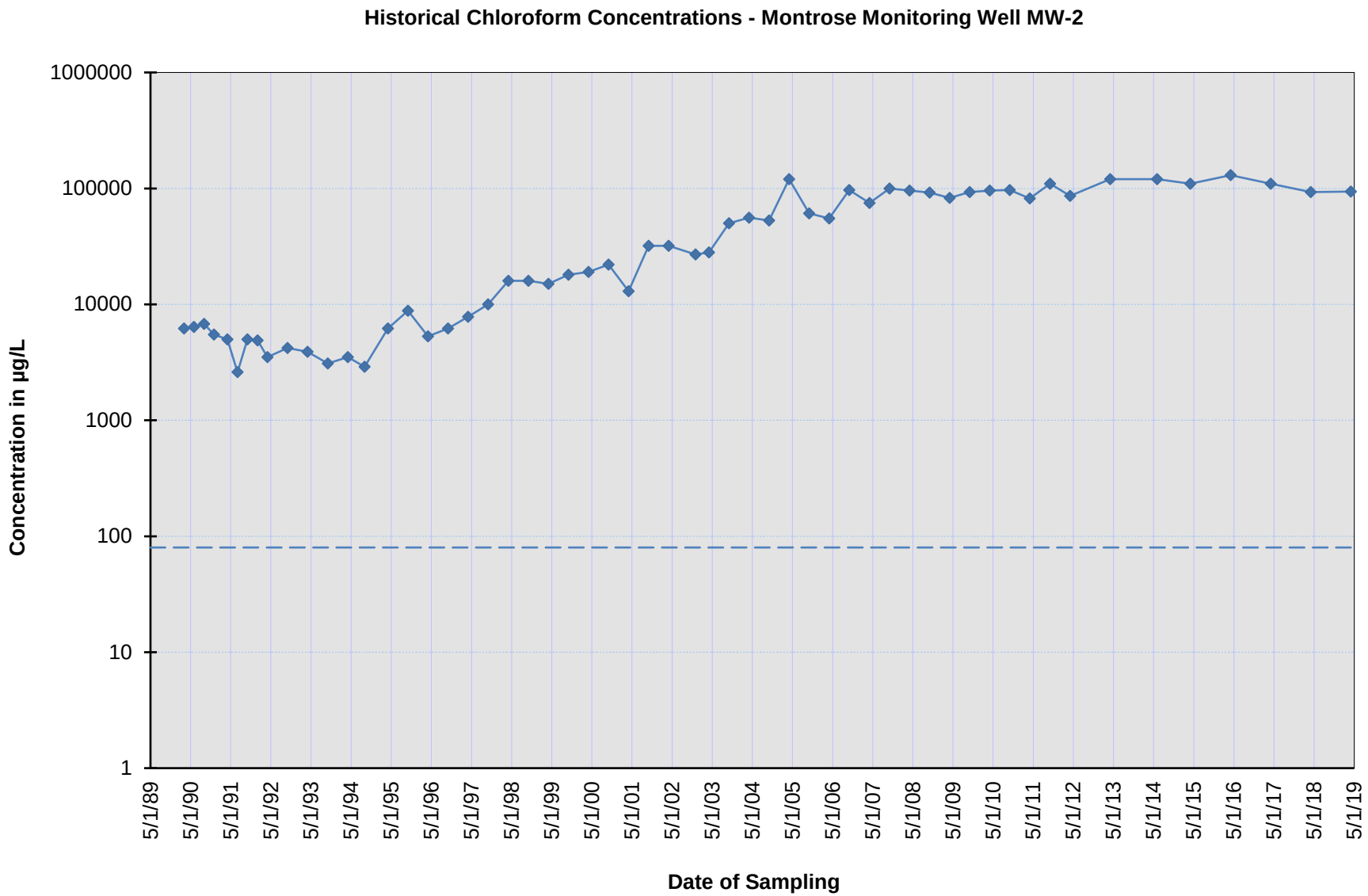

Note: Non-detectable concentrations are shown as half of the method detectable limit.



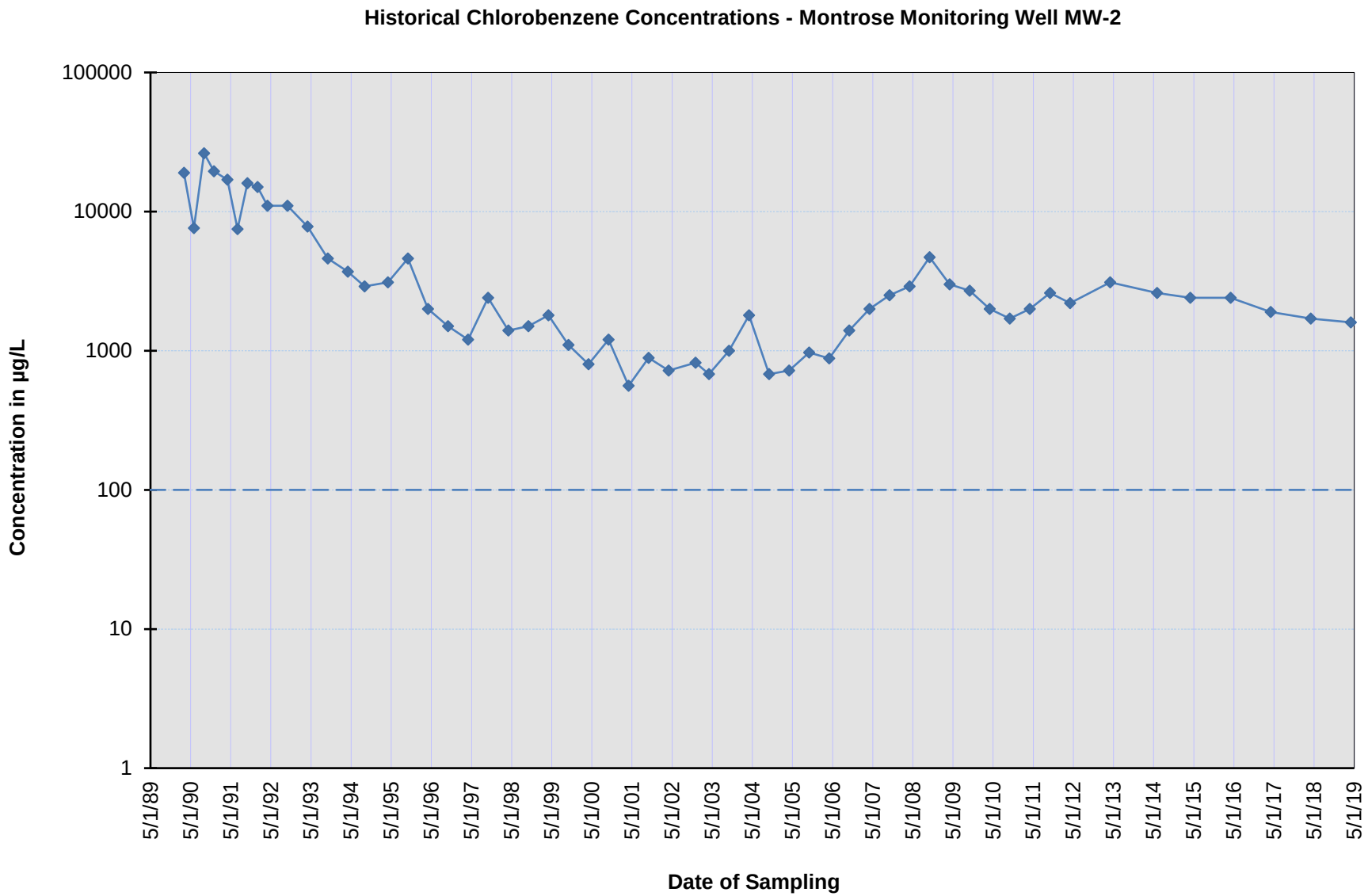

Note: Non-detectable concentrations are shown as half of the method detectable limit.



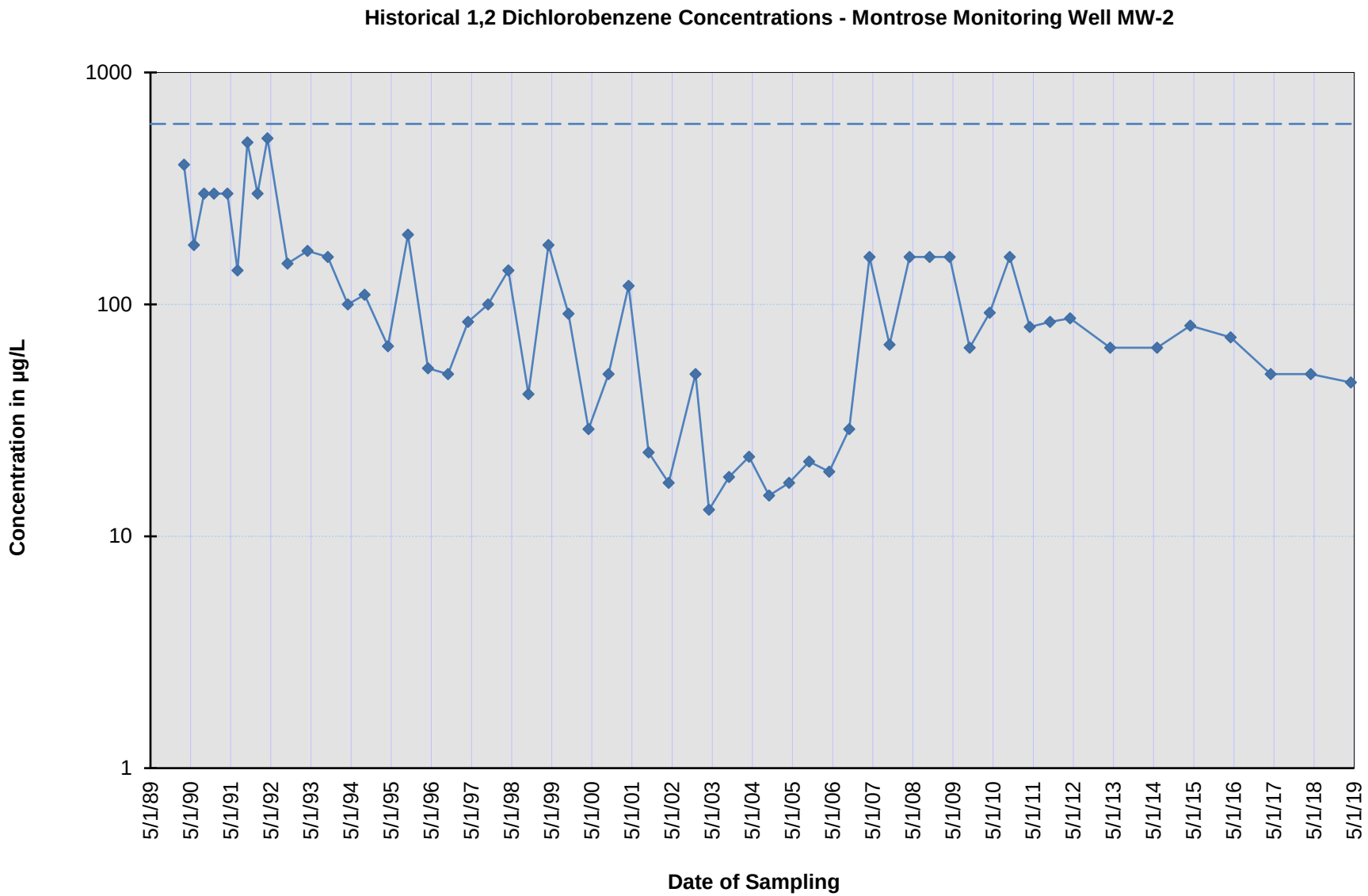

Note: Non-detectable concentrations are shown as half of the method detectable limit.



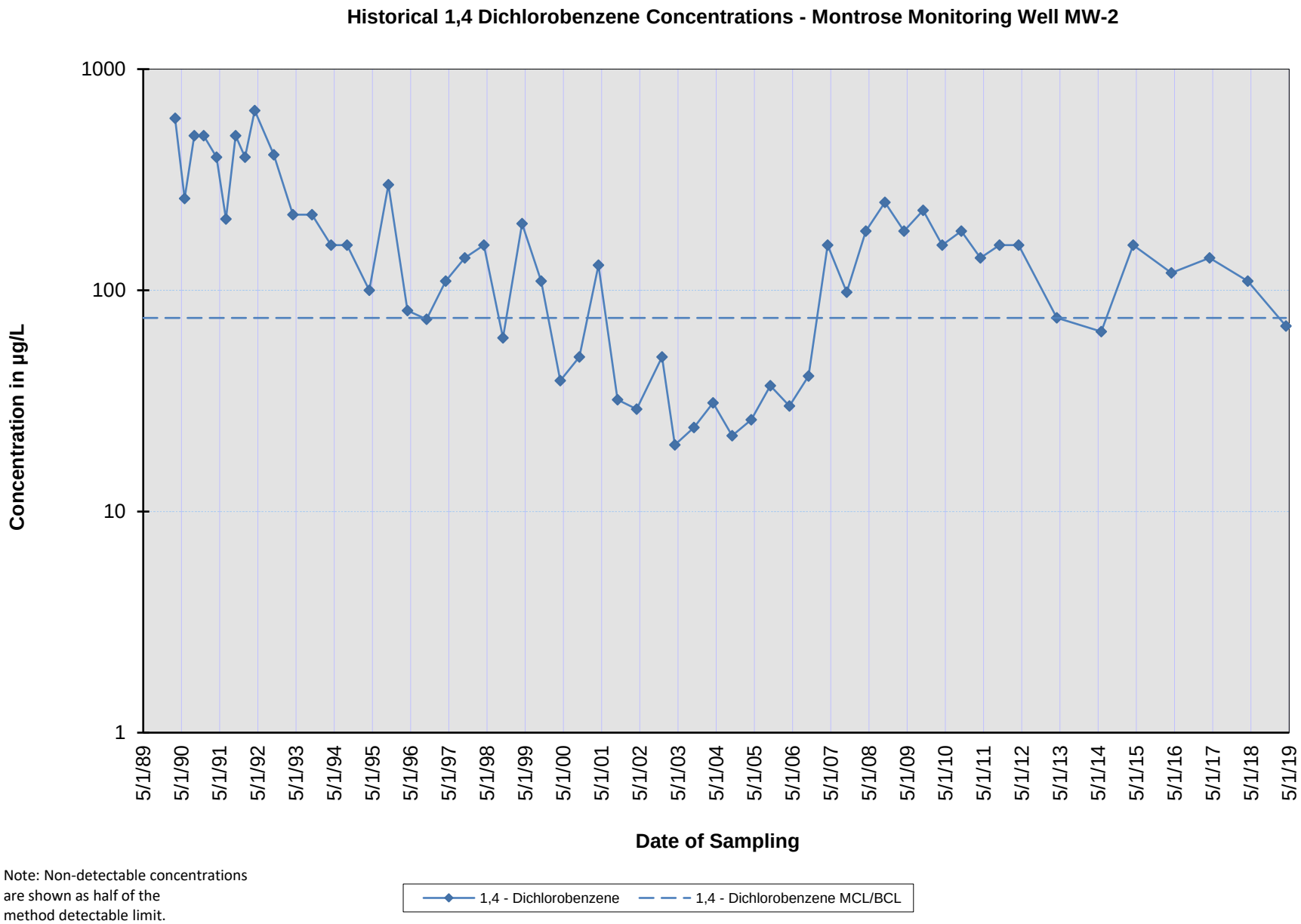

Note: Non-detectable concentrations are shown as half of the method detectable limit.



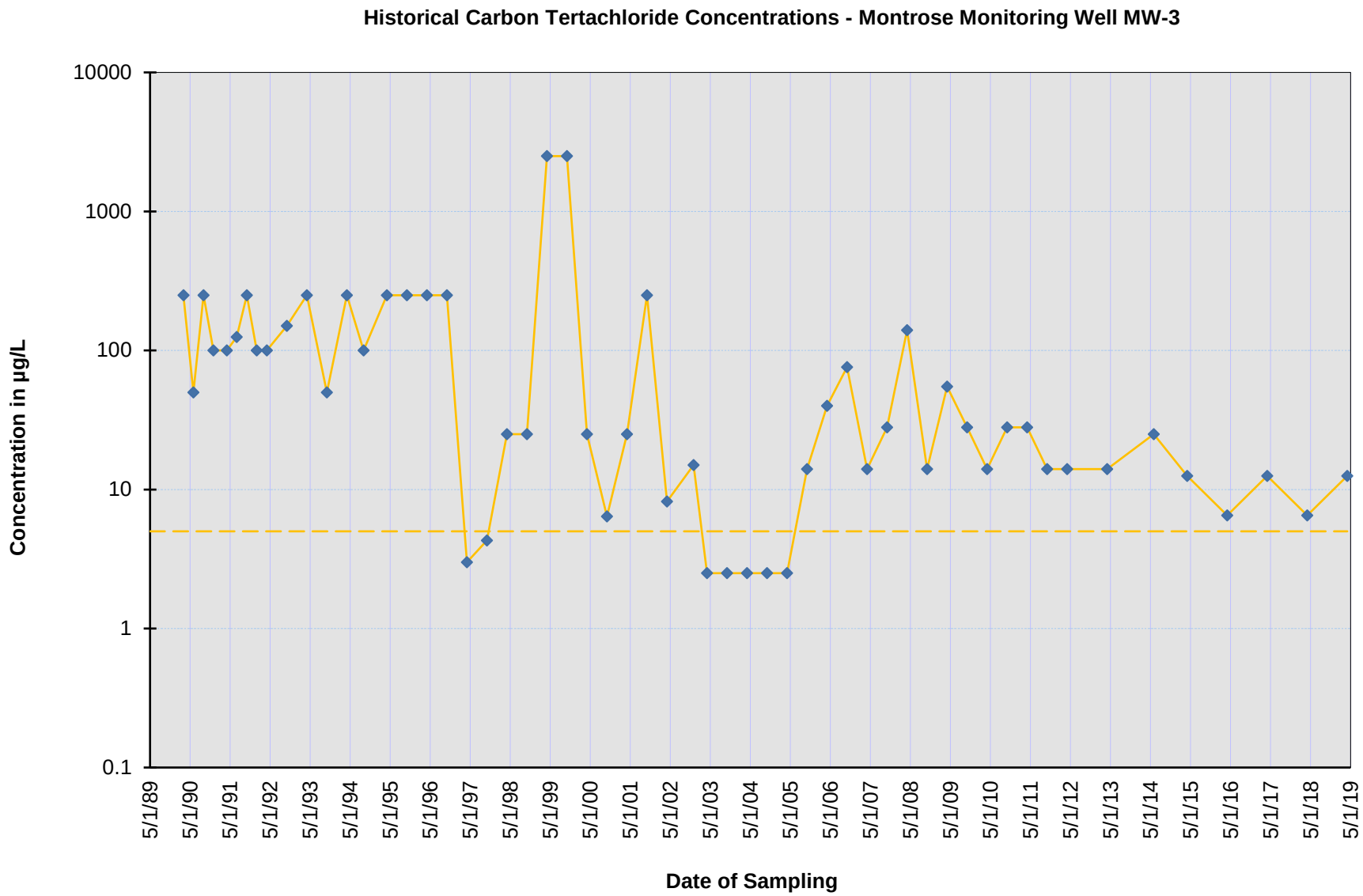

Note: Non-detectable concentrations are shown as half of the method detectable limit.



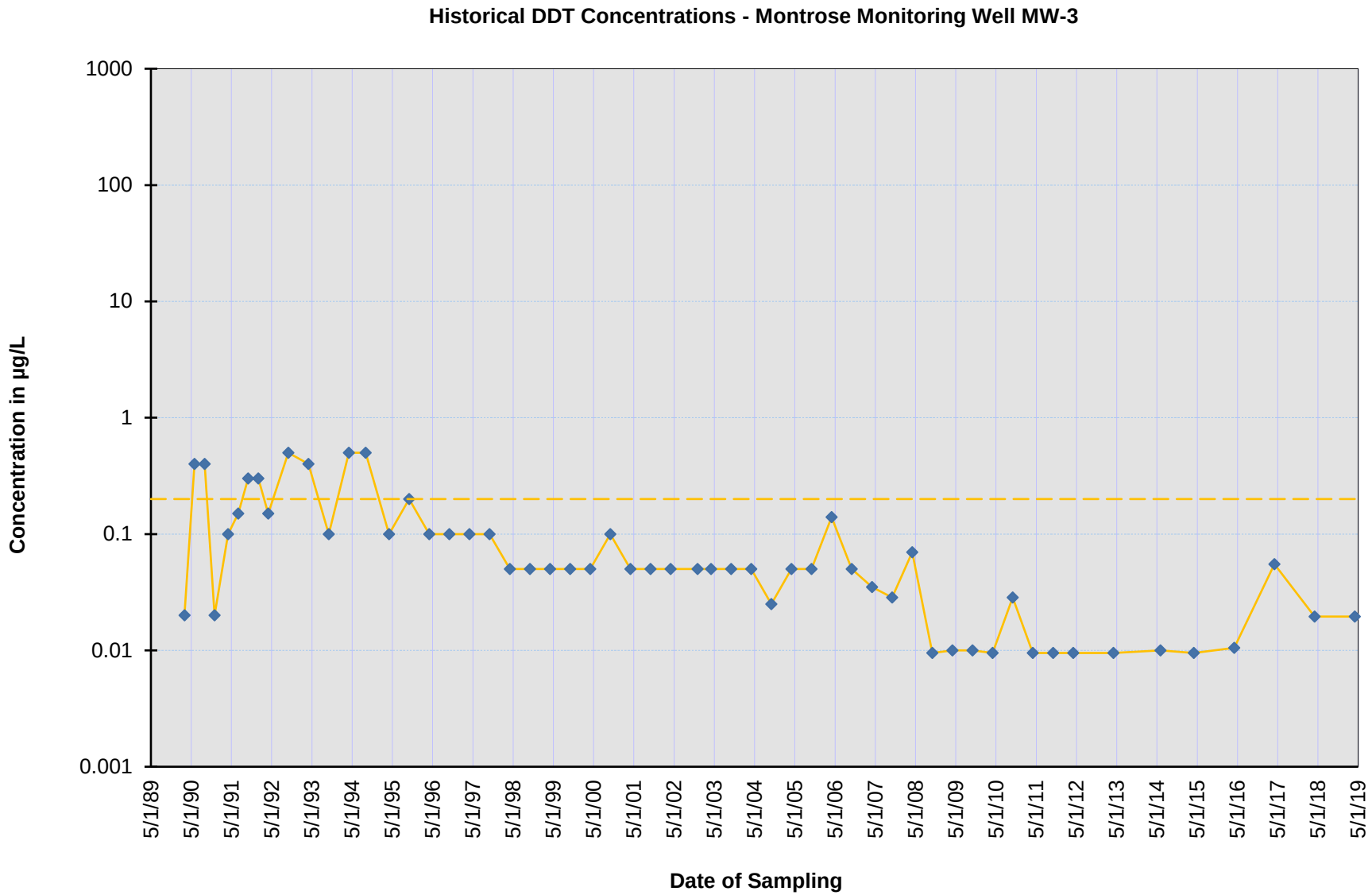

Note: Non-detectable concentrations are shown as half of the method detectable limit.



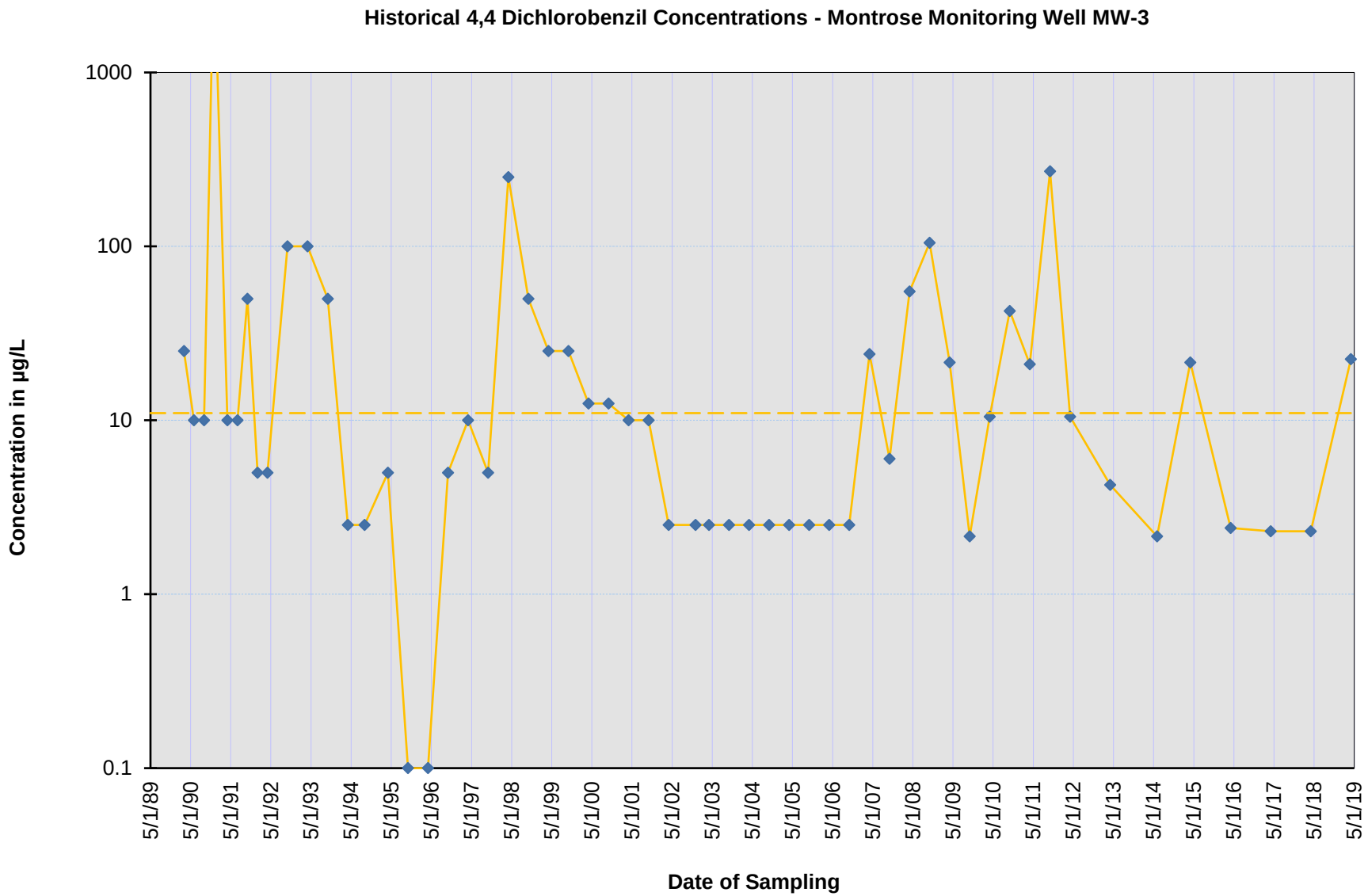

Note: Non-detectable concentrations are shown as half of the method detectable limit.



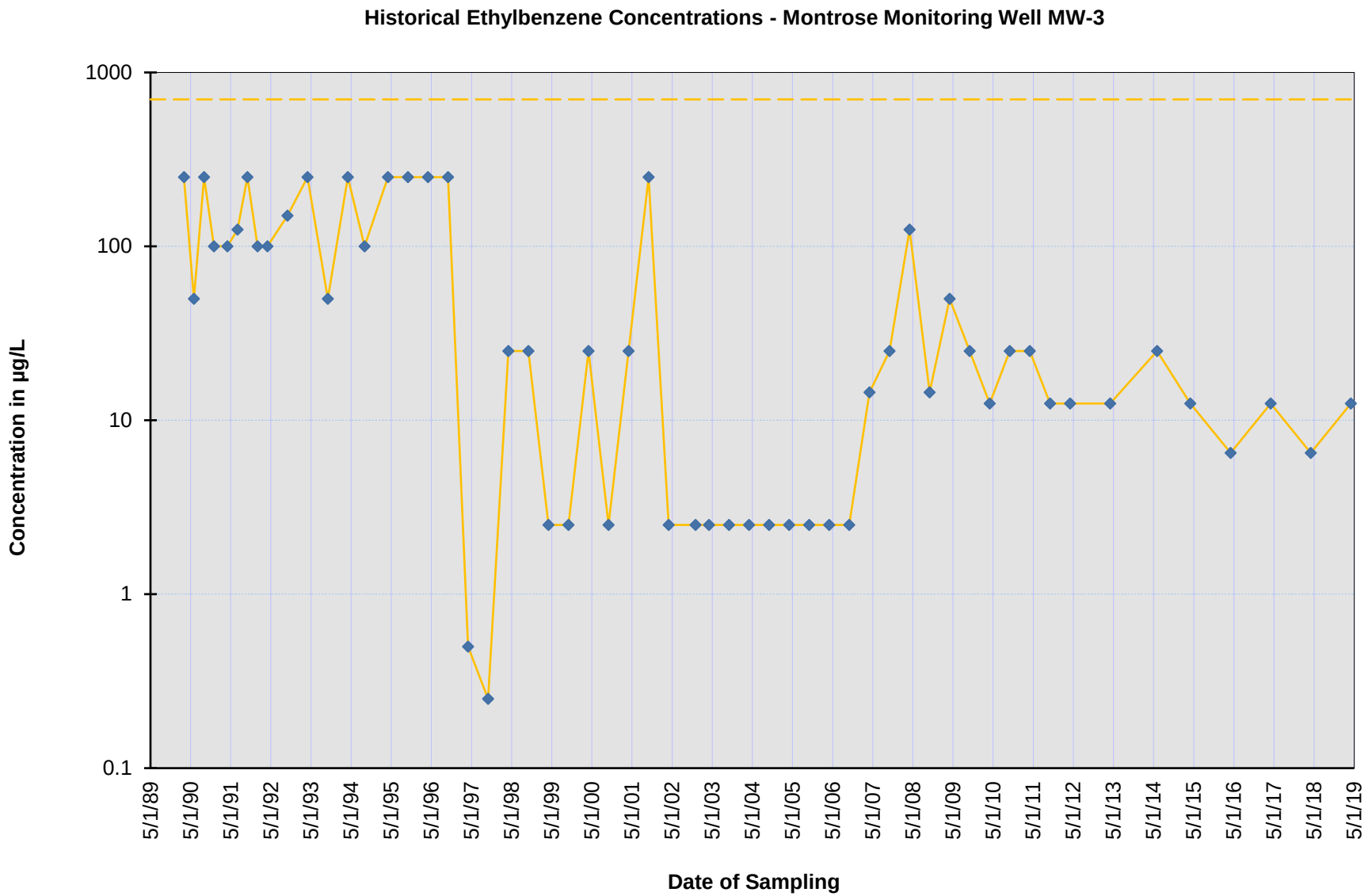

Note: Non-detectable concentrations are shown as half of the method detectable limit.



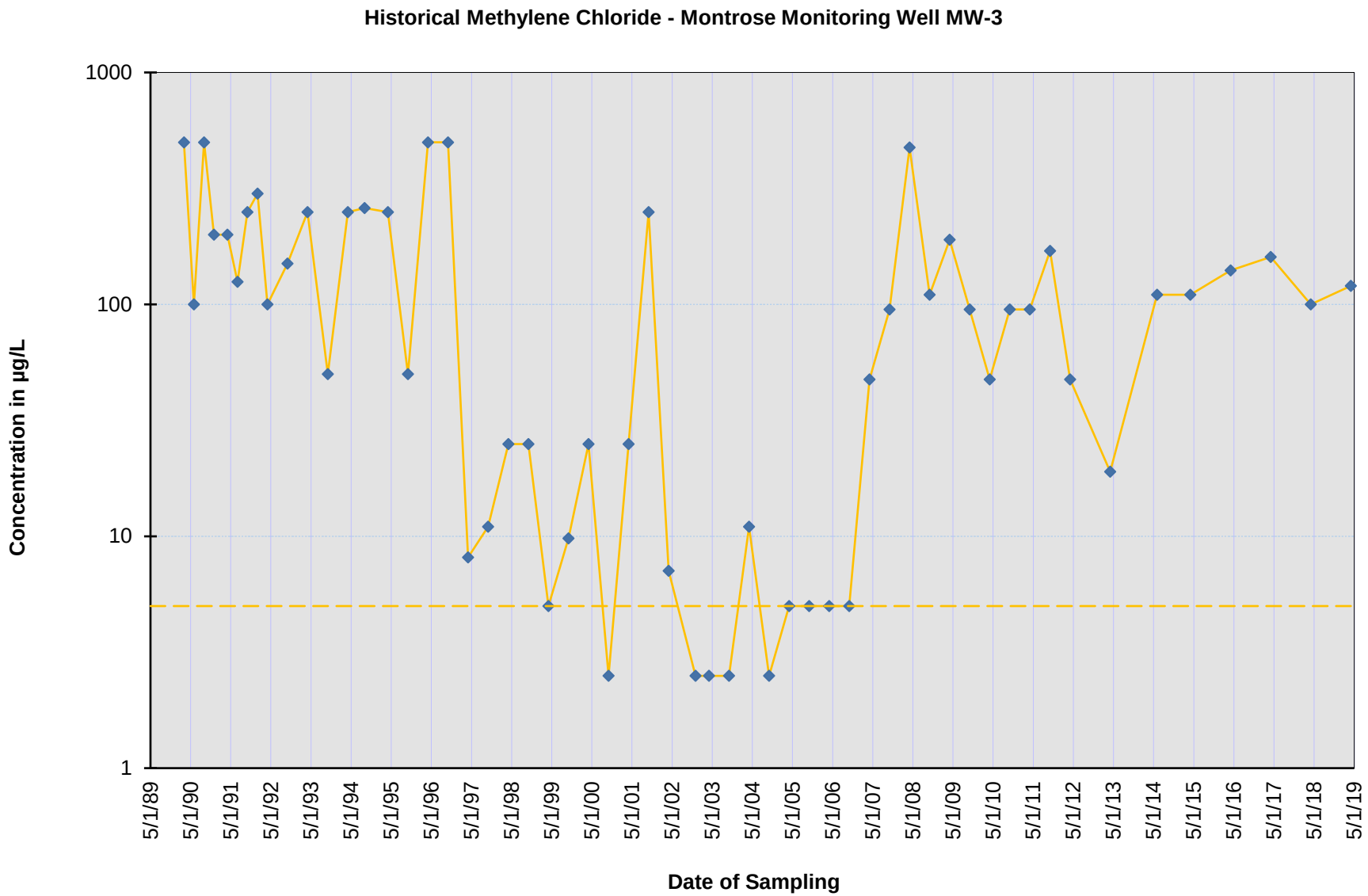

Note: Non-detectable concentrations are shown as half of the method detectable limit.



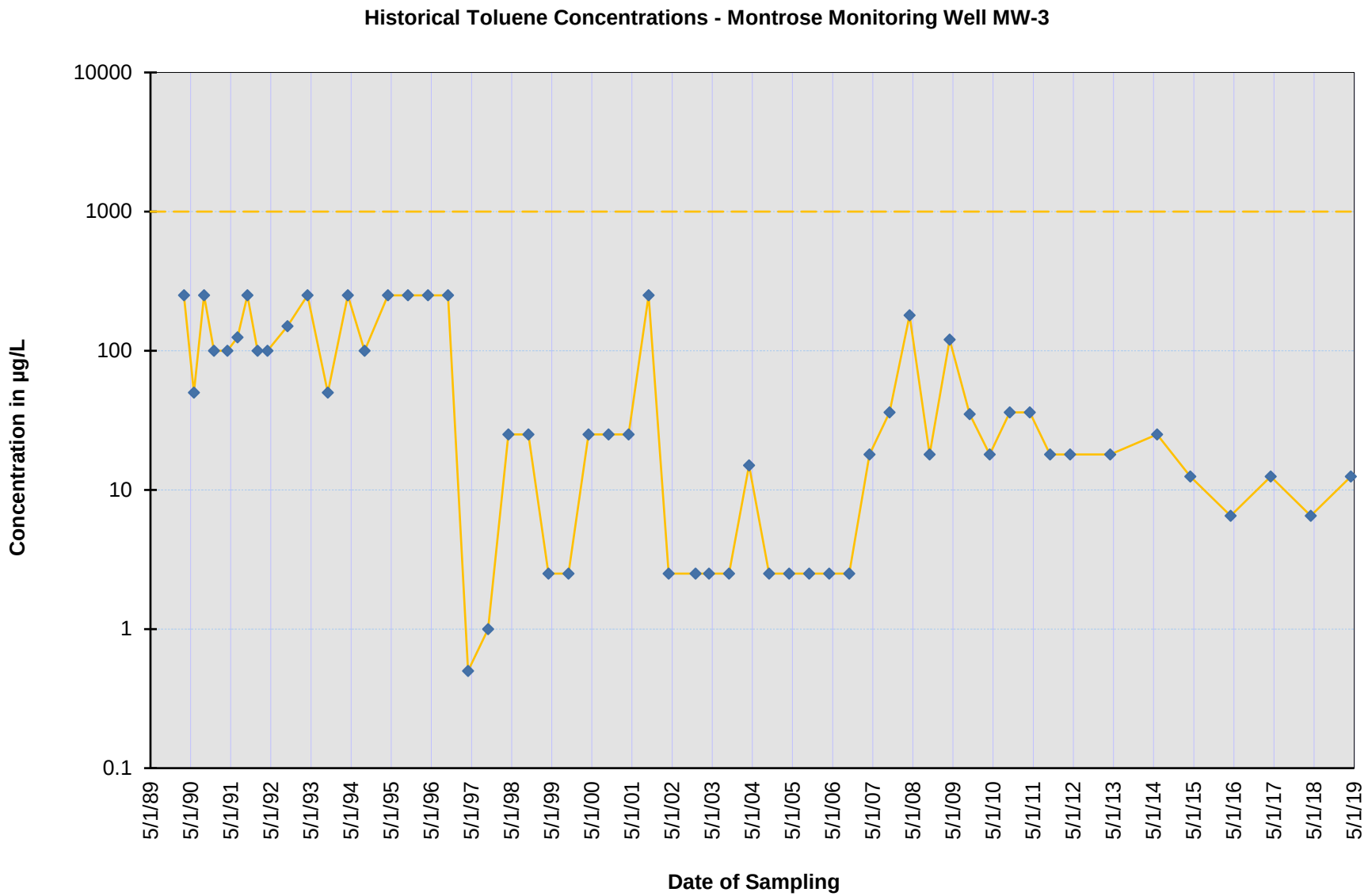

Note: Non-detectable concentrations are shown as half of the method detectable limit.



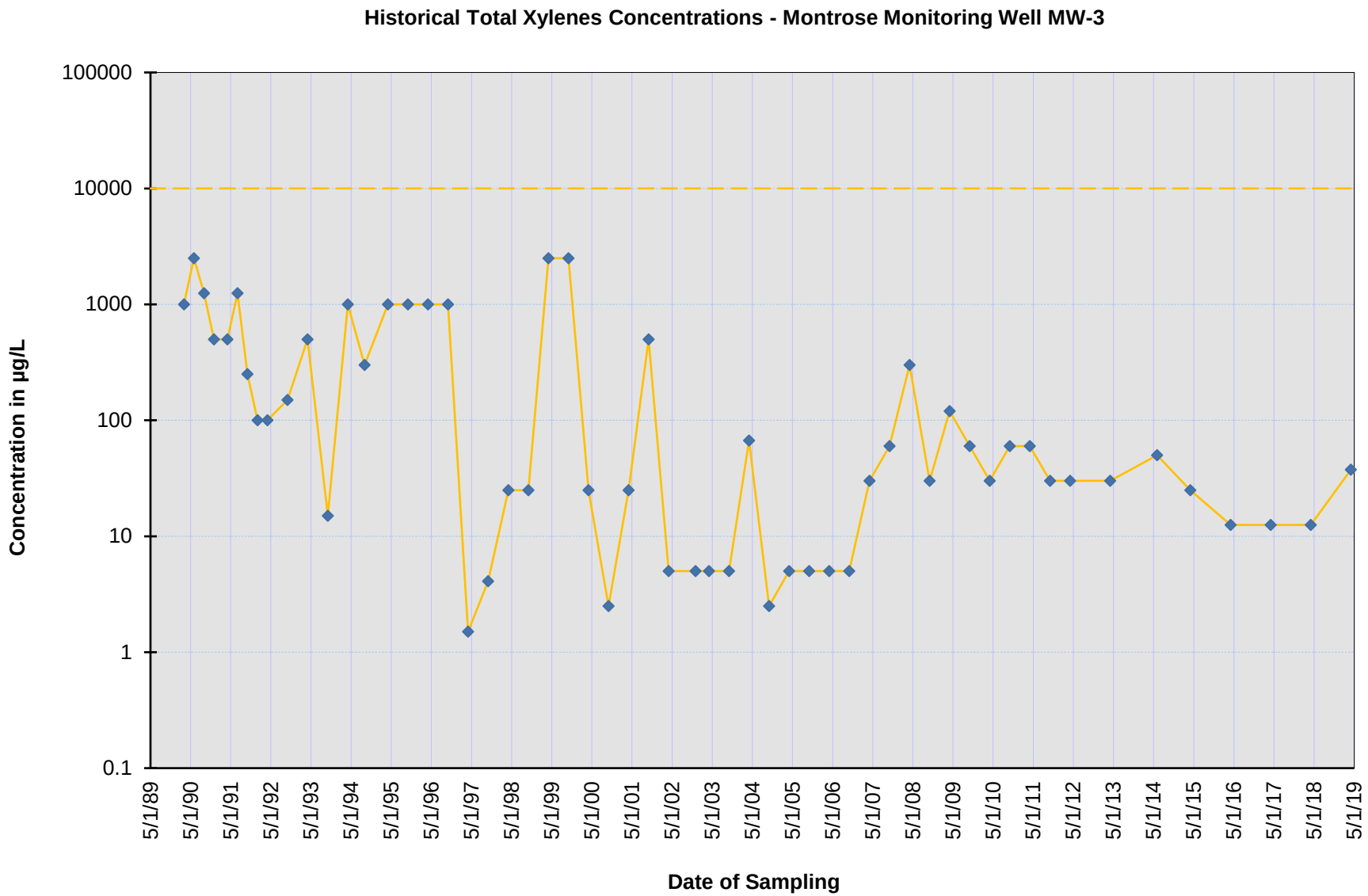

Note: Non-detectable concentrations are shown as half of the method detectable limit.



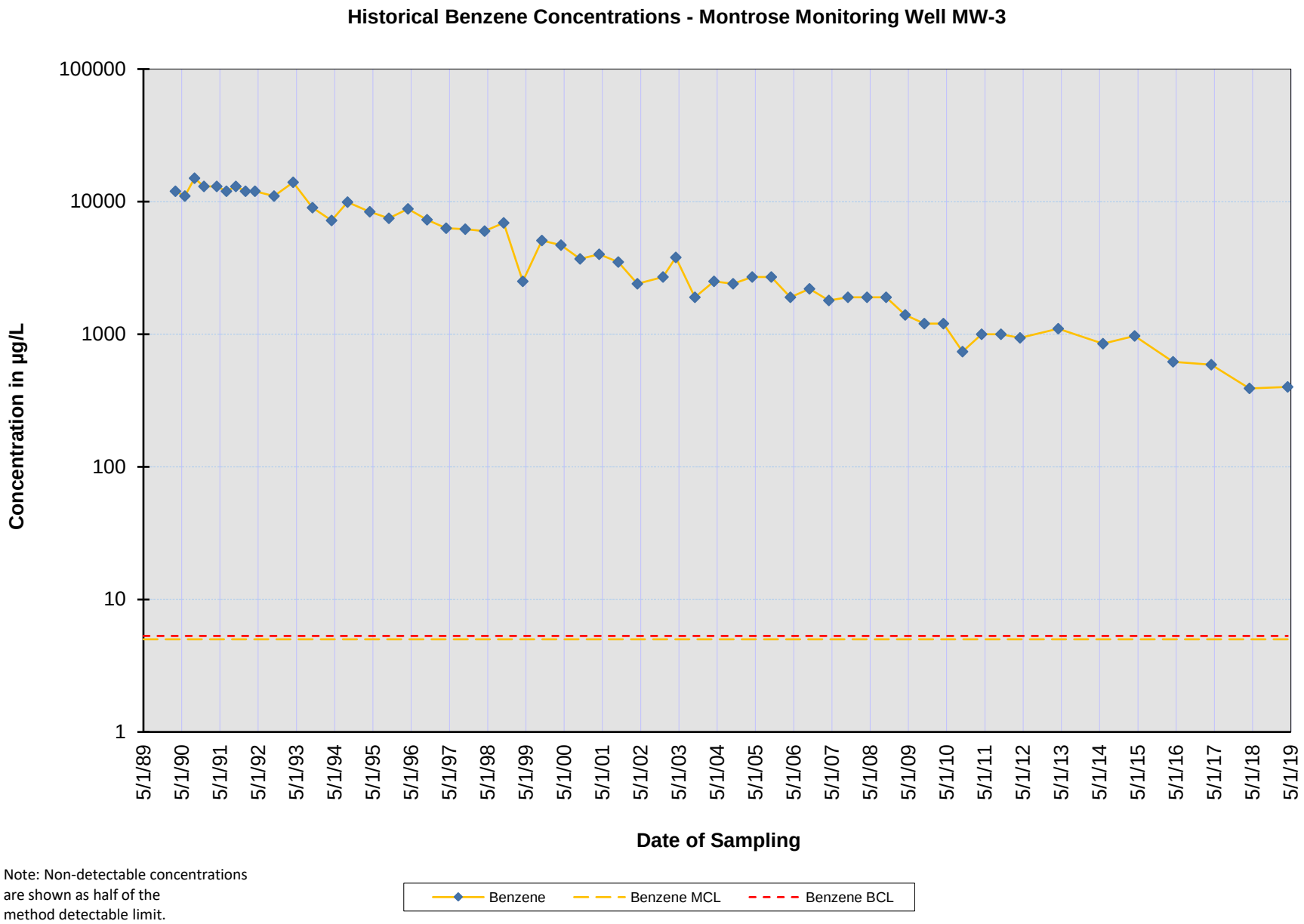

Note: Non-detectable concentrations are shown as half of the method detectable limit.



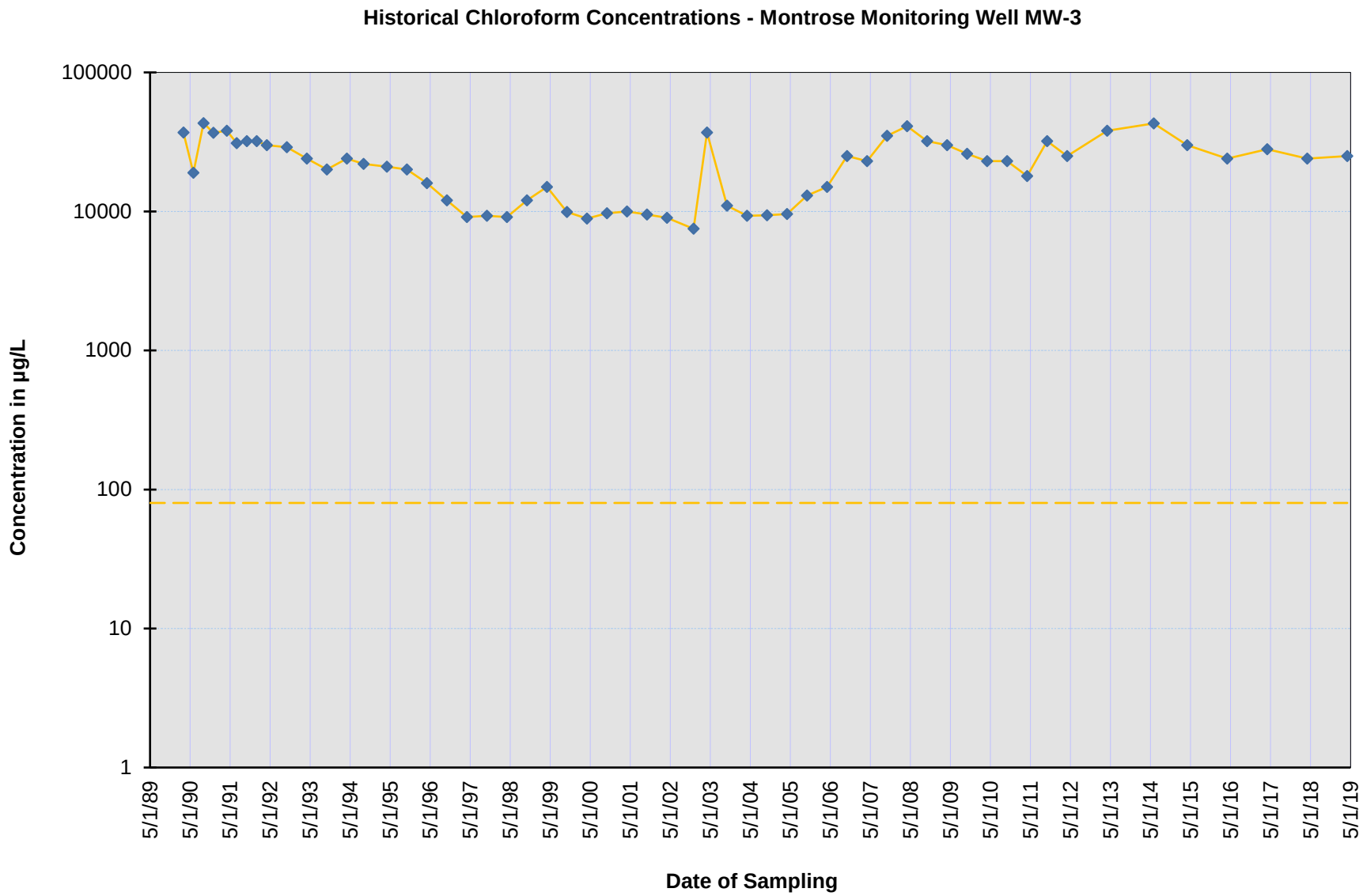

Note: Non-detectable concentrations are shown as half of the method detectable limit.



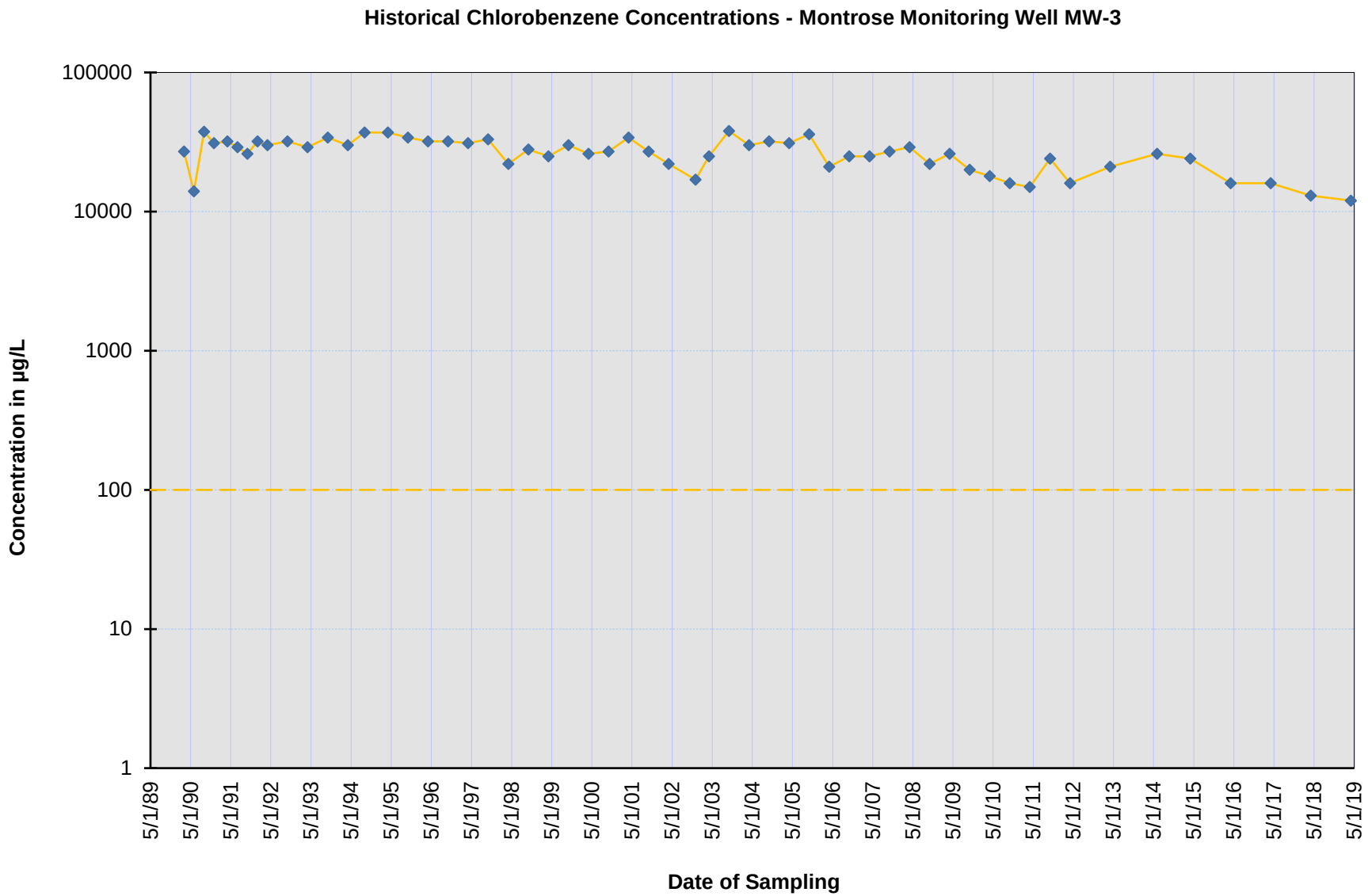

Note: Non-detectable concentrations are shown as half of the method detectable limit.



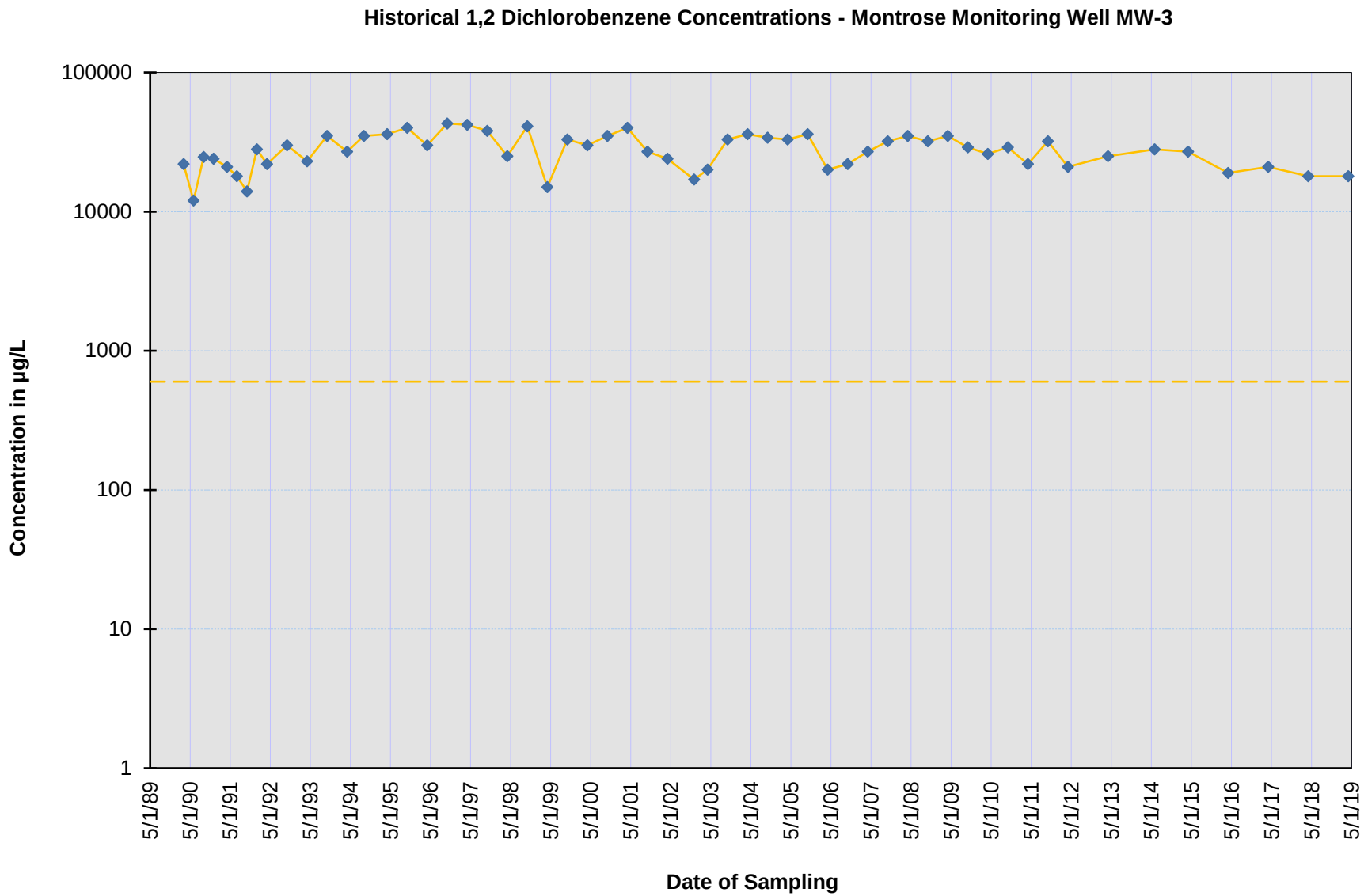

Note: Non-detectable concentrations are shown as half of the method detectable limit.



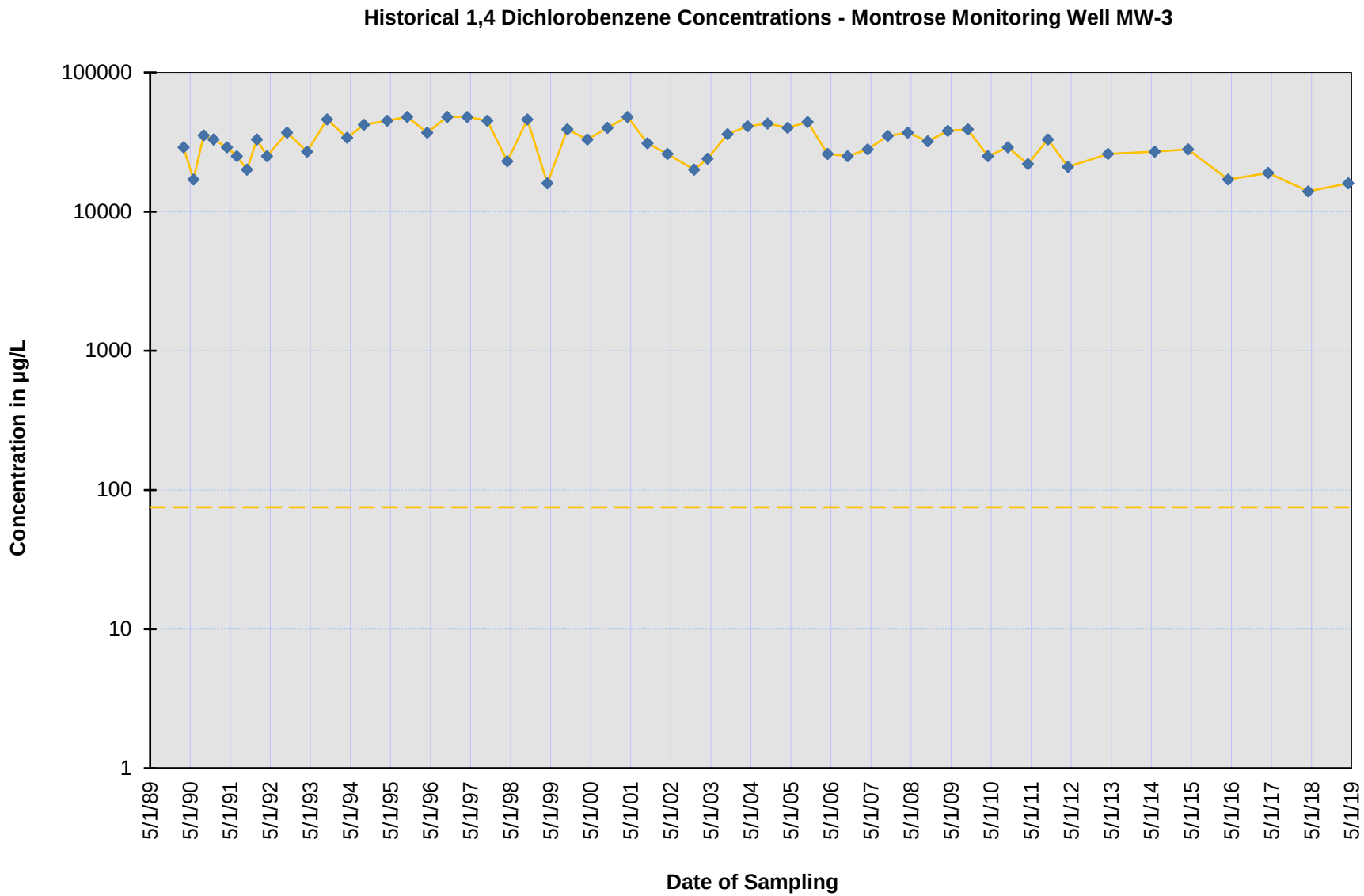

Note: Non-detectable concentrations are shown as half of the method detectable limit.




Note: Non-detectable concentrations are shown as half of the method detectable limit.

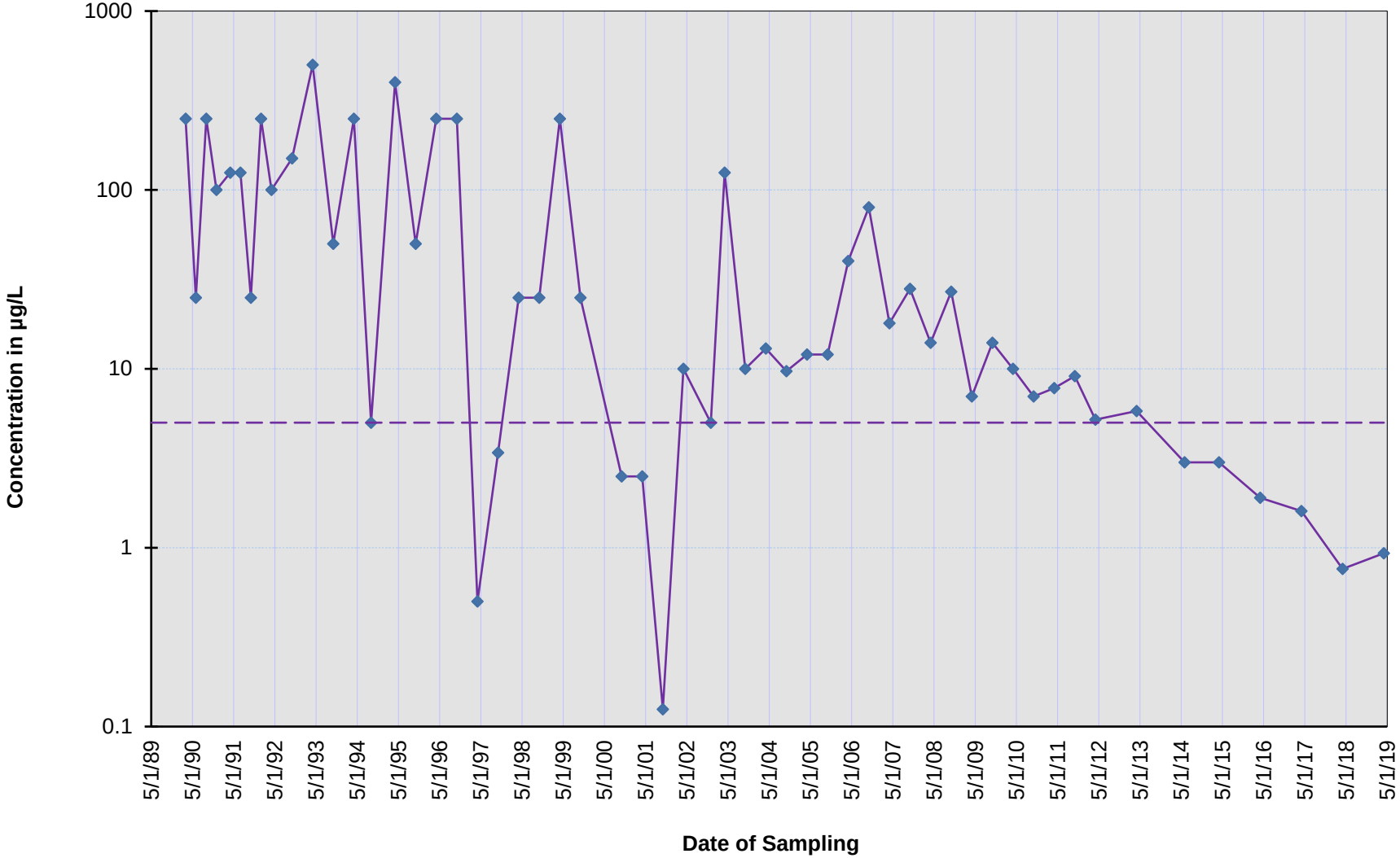



Note: Non-detectable concentrations are shown as half of the method detectable limit.




Note: Non-detectable concentrations are shown as half of the method detectable limit.

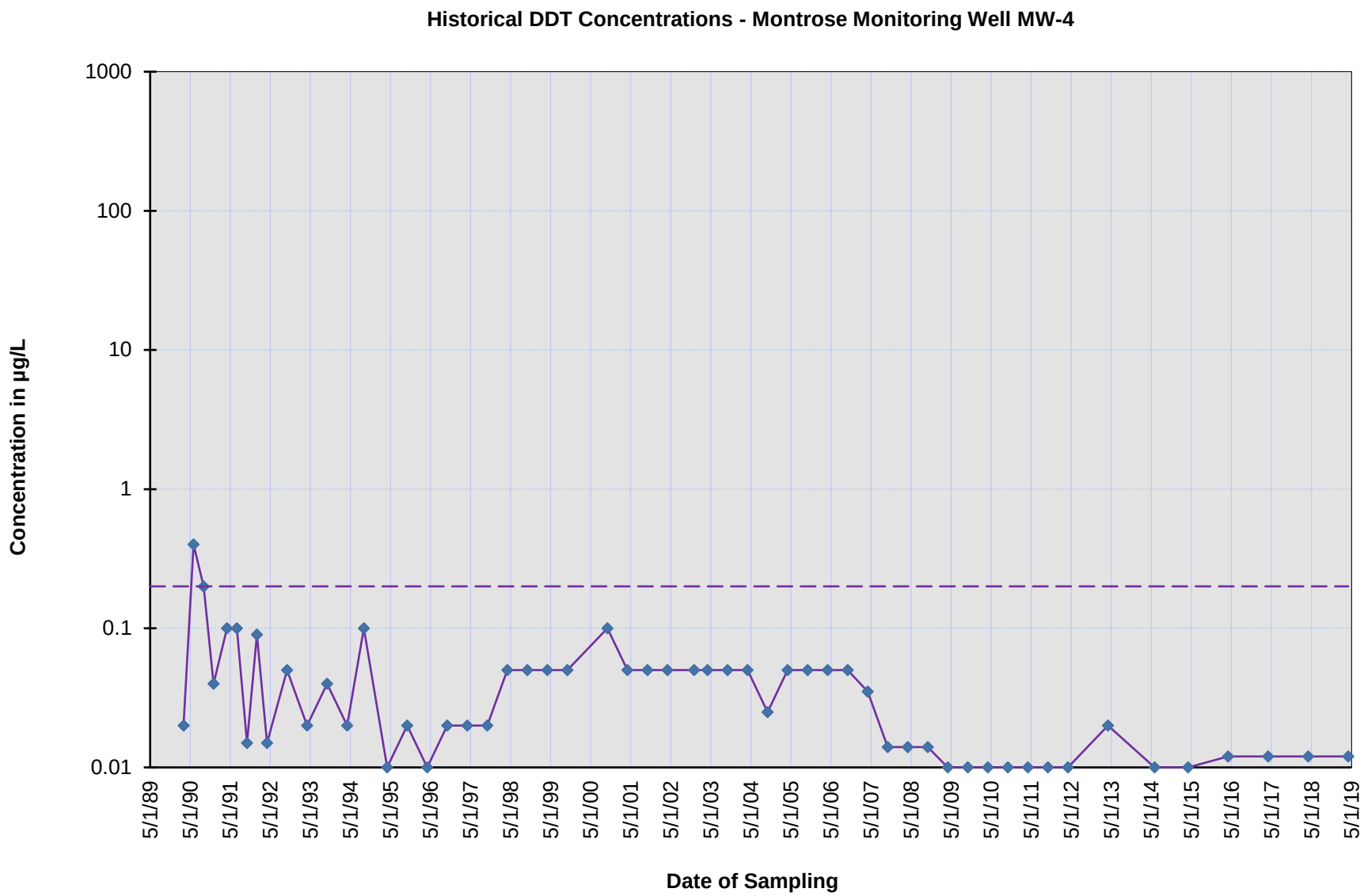
## Historical Carbon Tertachloride Concentrations - Montrose Monitoring Well MW-4



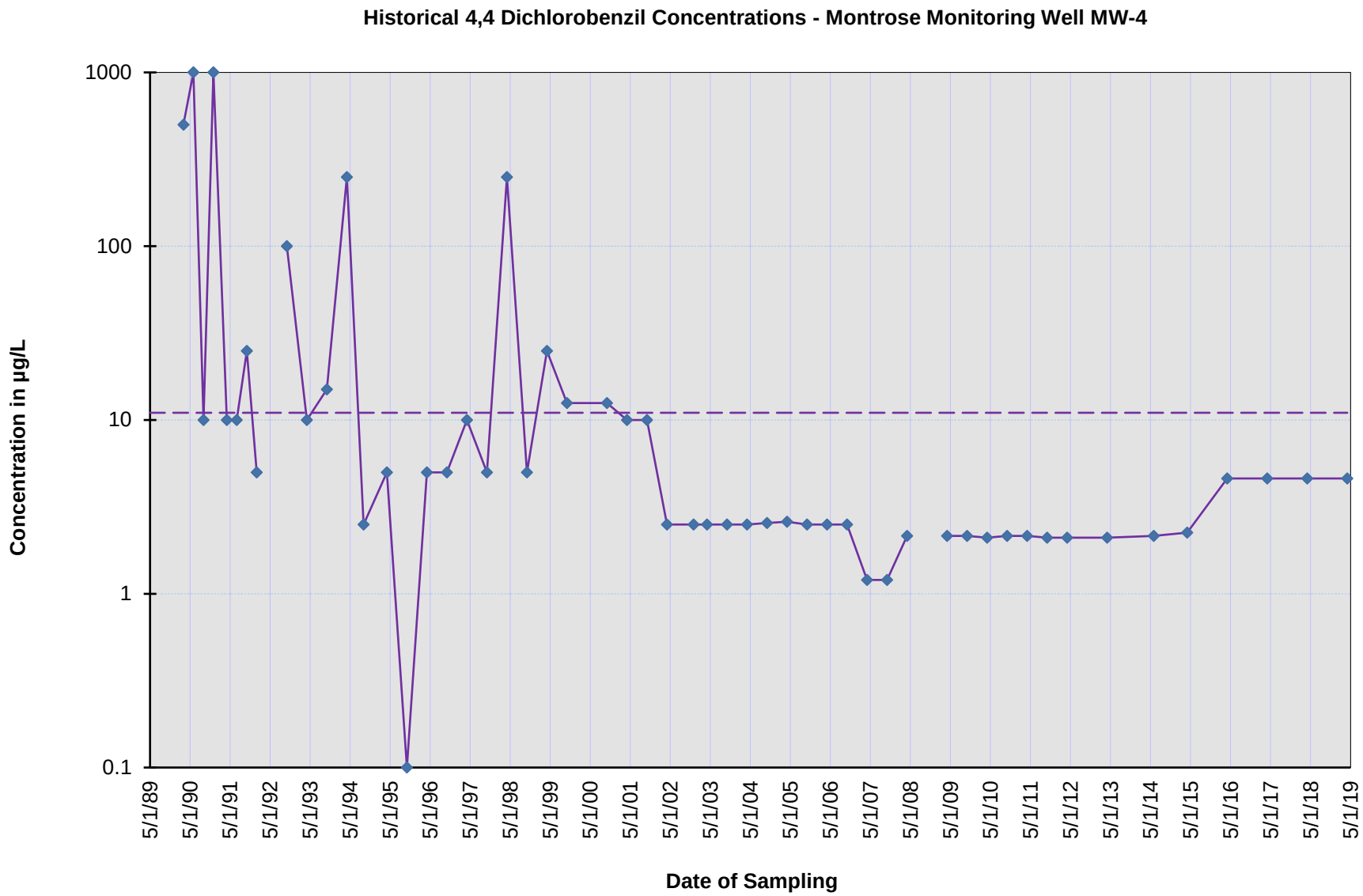

Note: Non-detectable concentrations are shown as half of the method detectable limit.

Carbon Tetrachloride

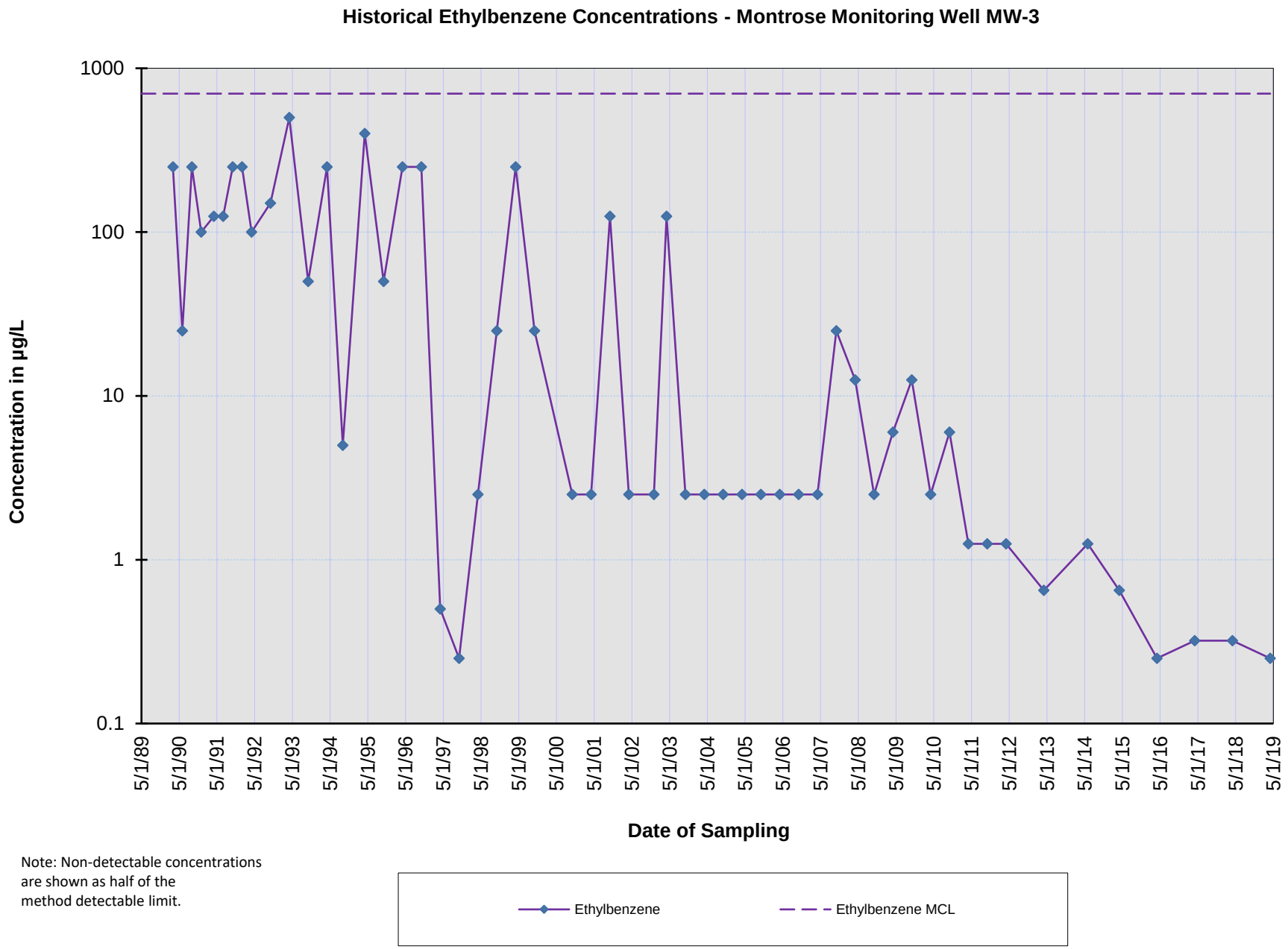
Carbon tetrachloride MCL



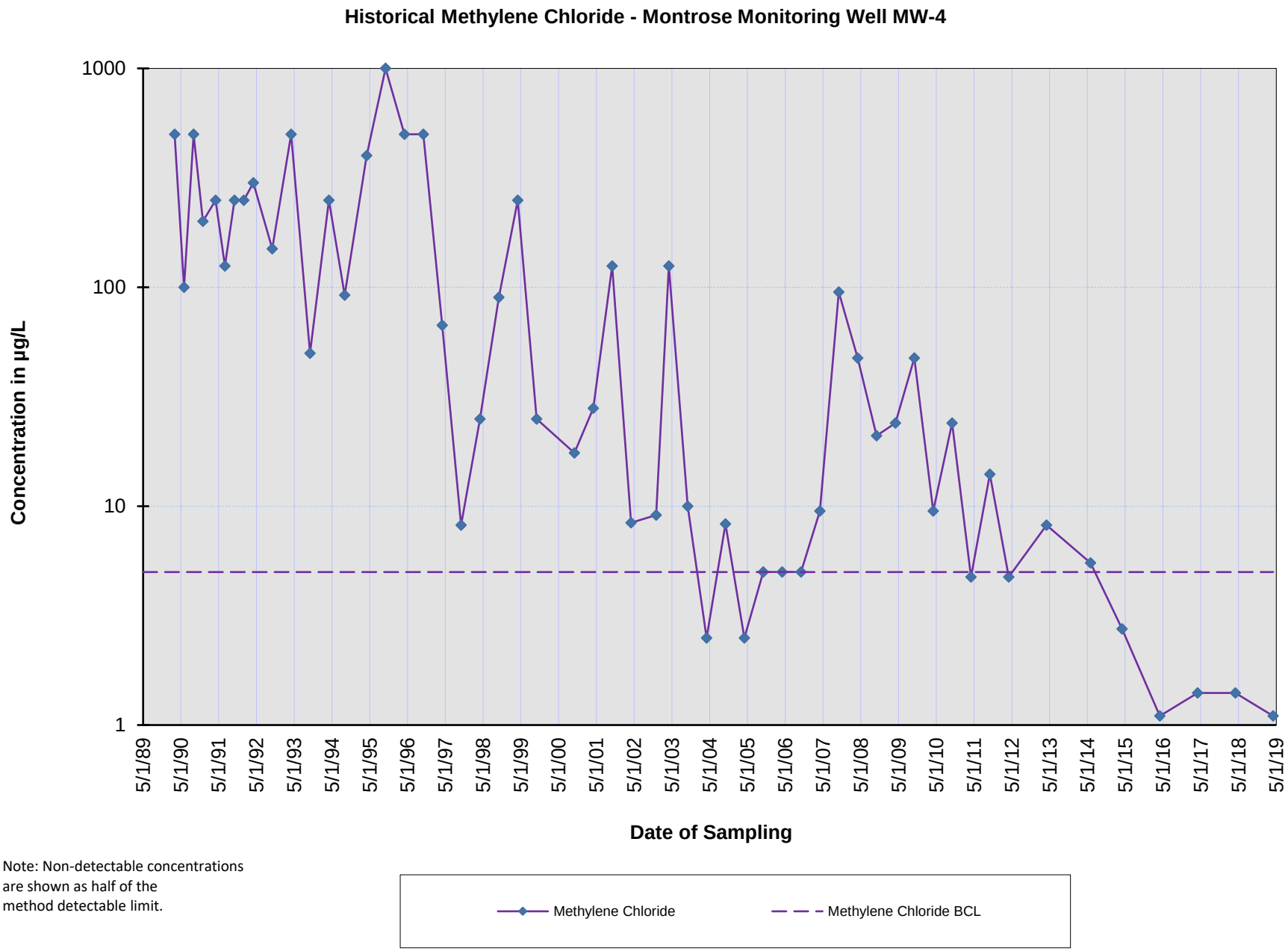

Note: Non-detectable concentrations are shown as half of the method detectable limit.



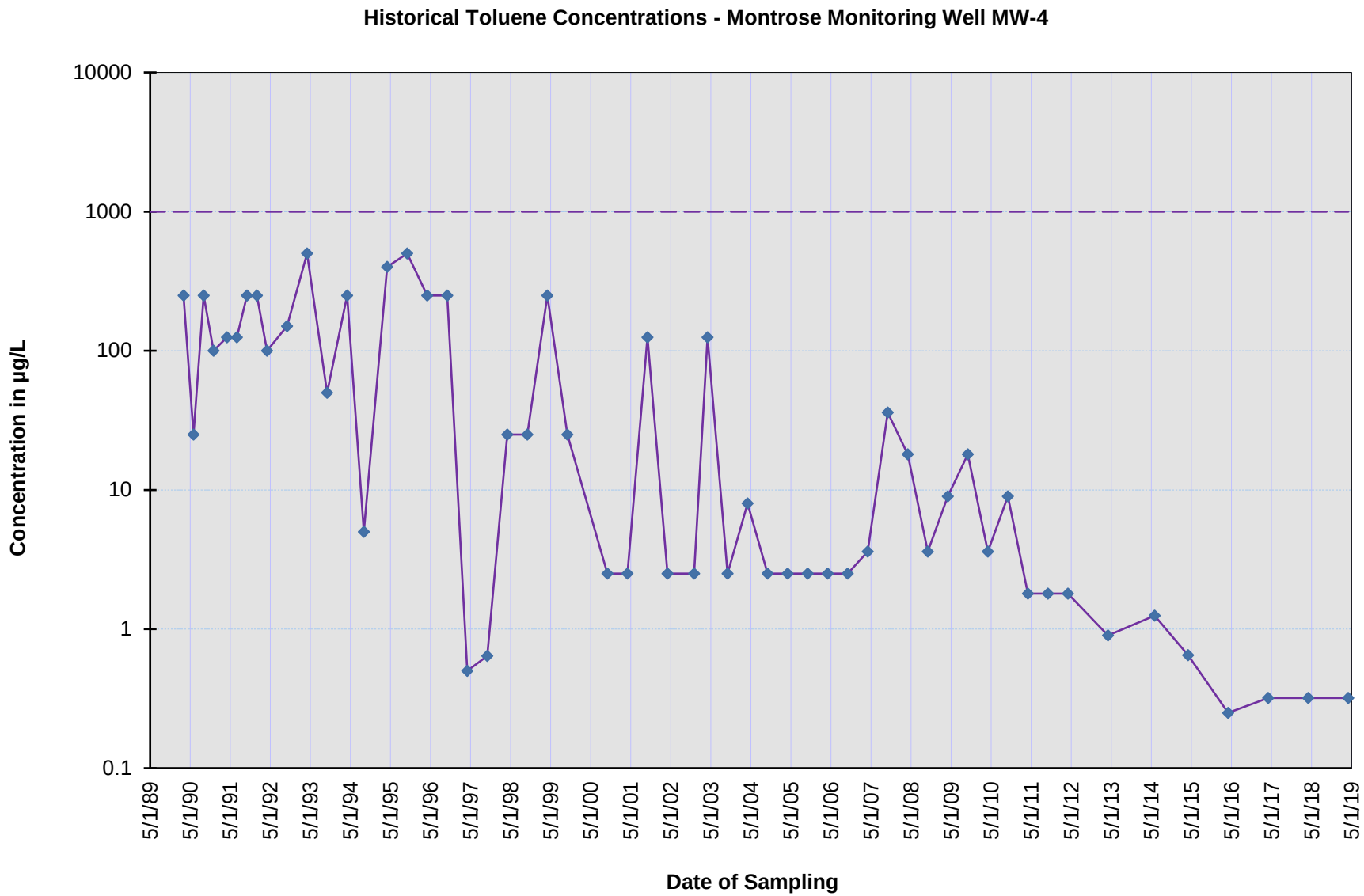

Note: Non-detectable concentrations are shown as half of the method detectable limit.



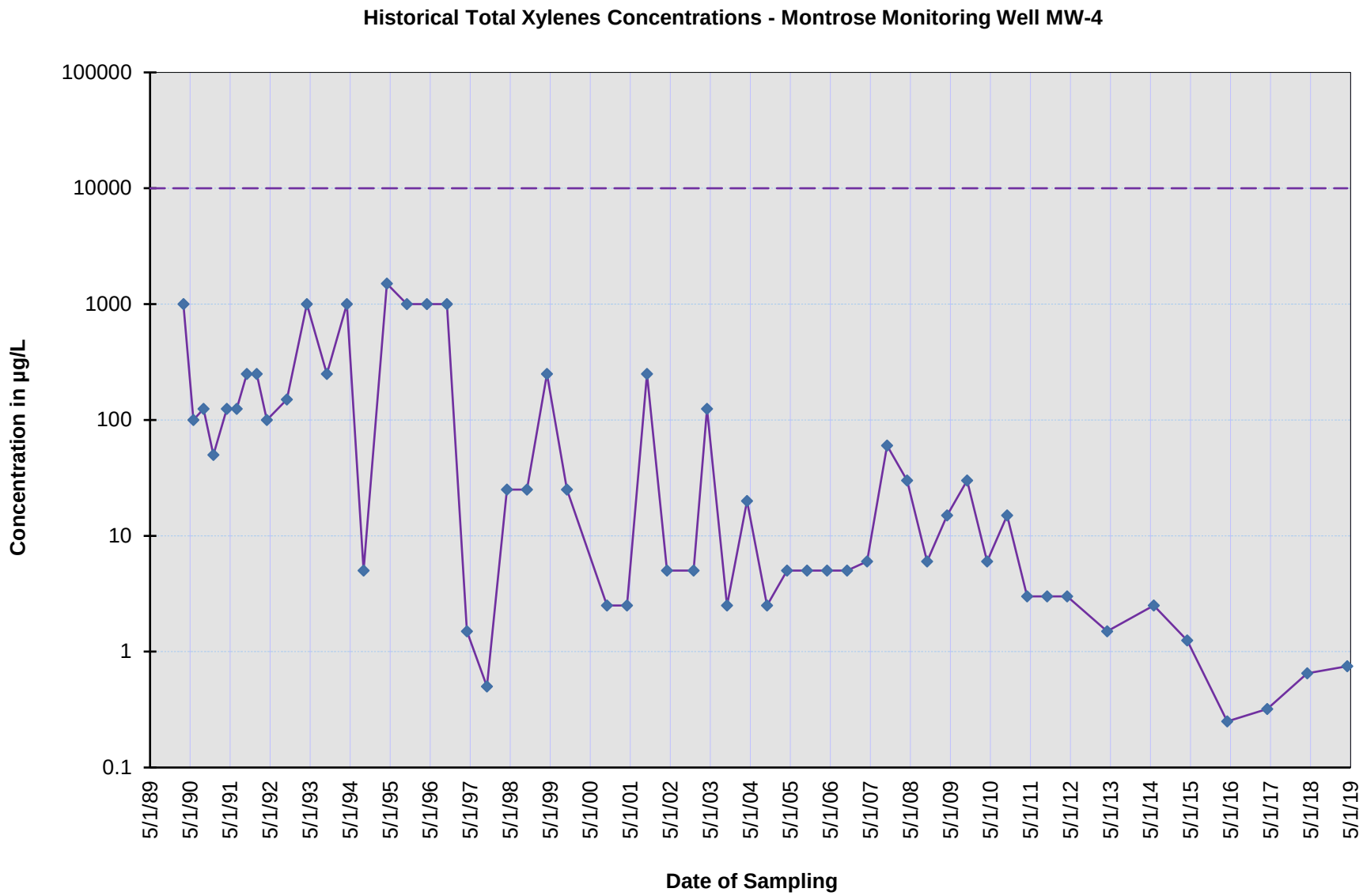

Note: Non-detectable concentrations are shown as half of the method detectable limit.



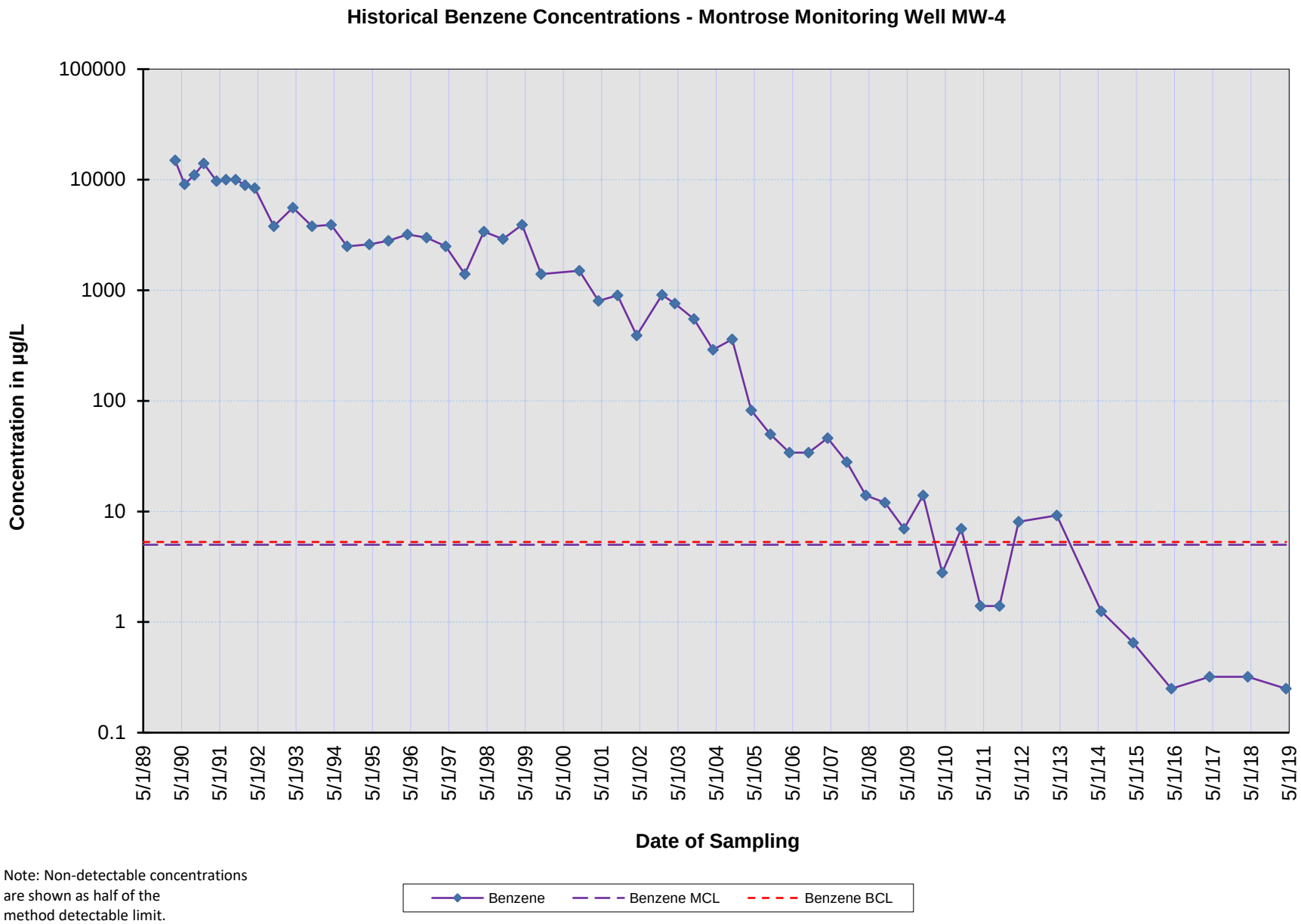

Note: Non-detectable concentrations are shown as half of the method detectable limit.



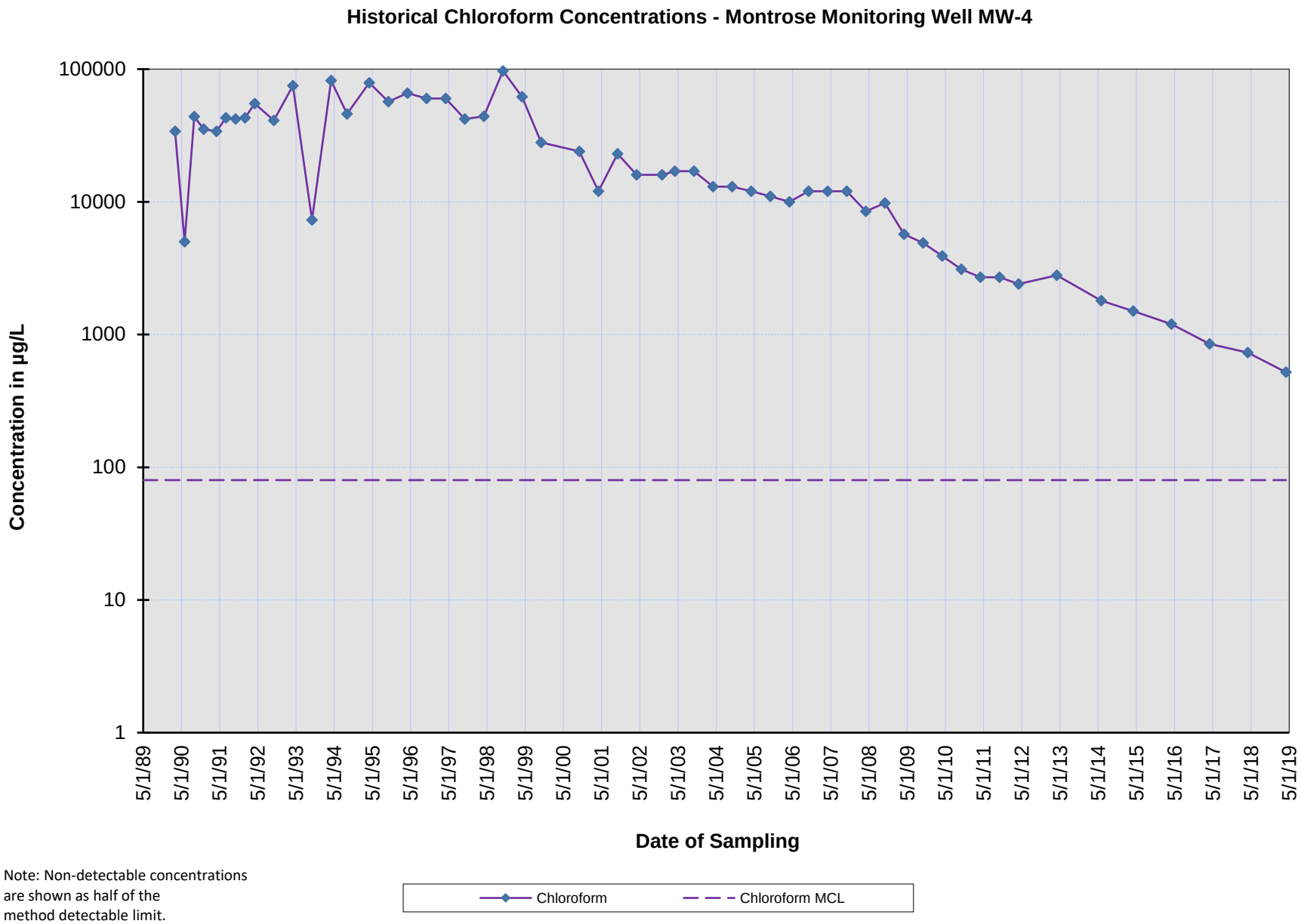

Note: Non-detectable concentrations are shown as half of the method detectable limit.



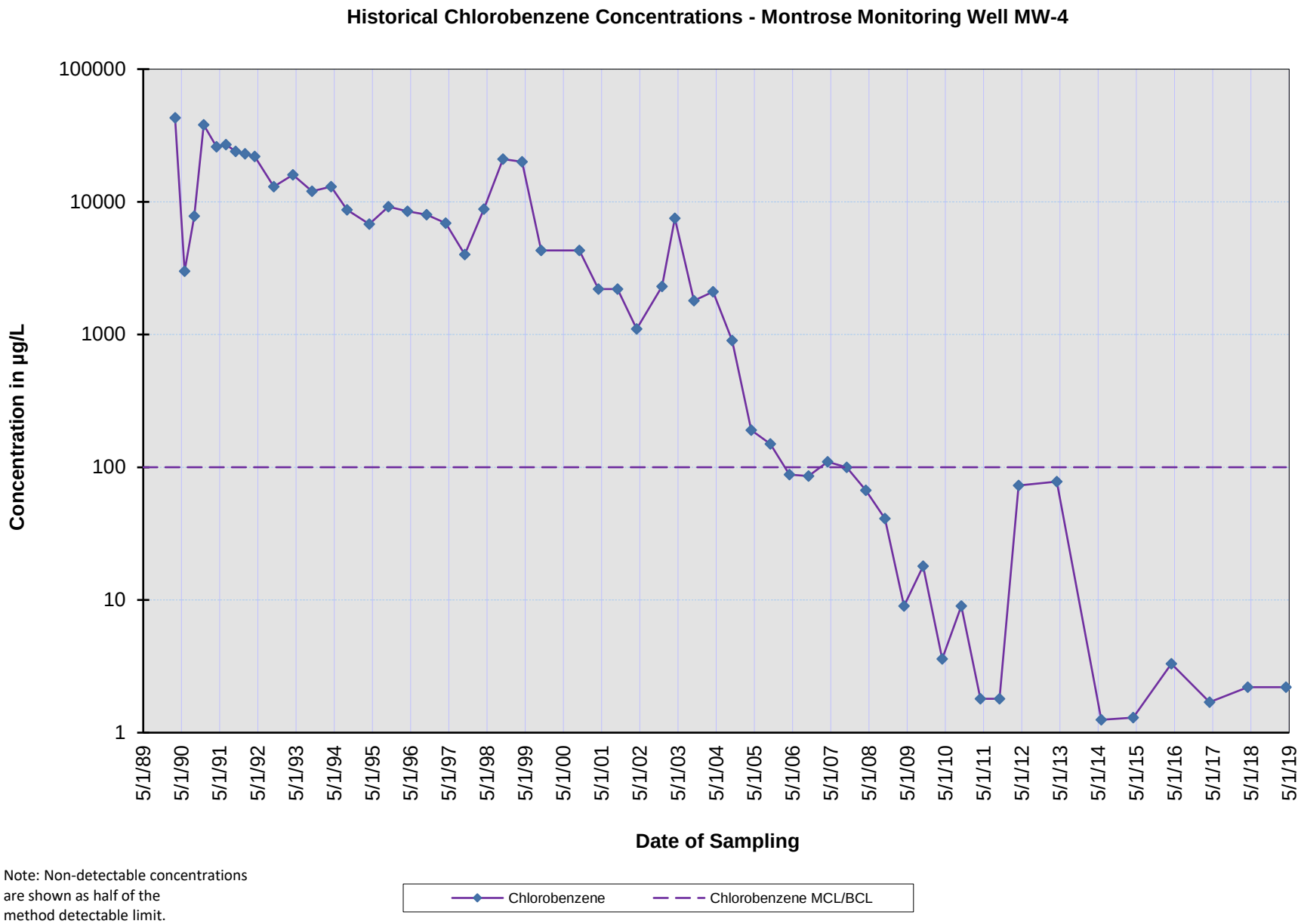

Note: Non-detectable concentrations are shown as half of the method detectable limit.



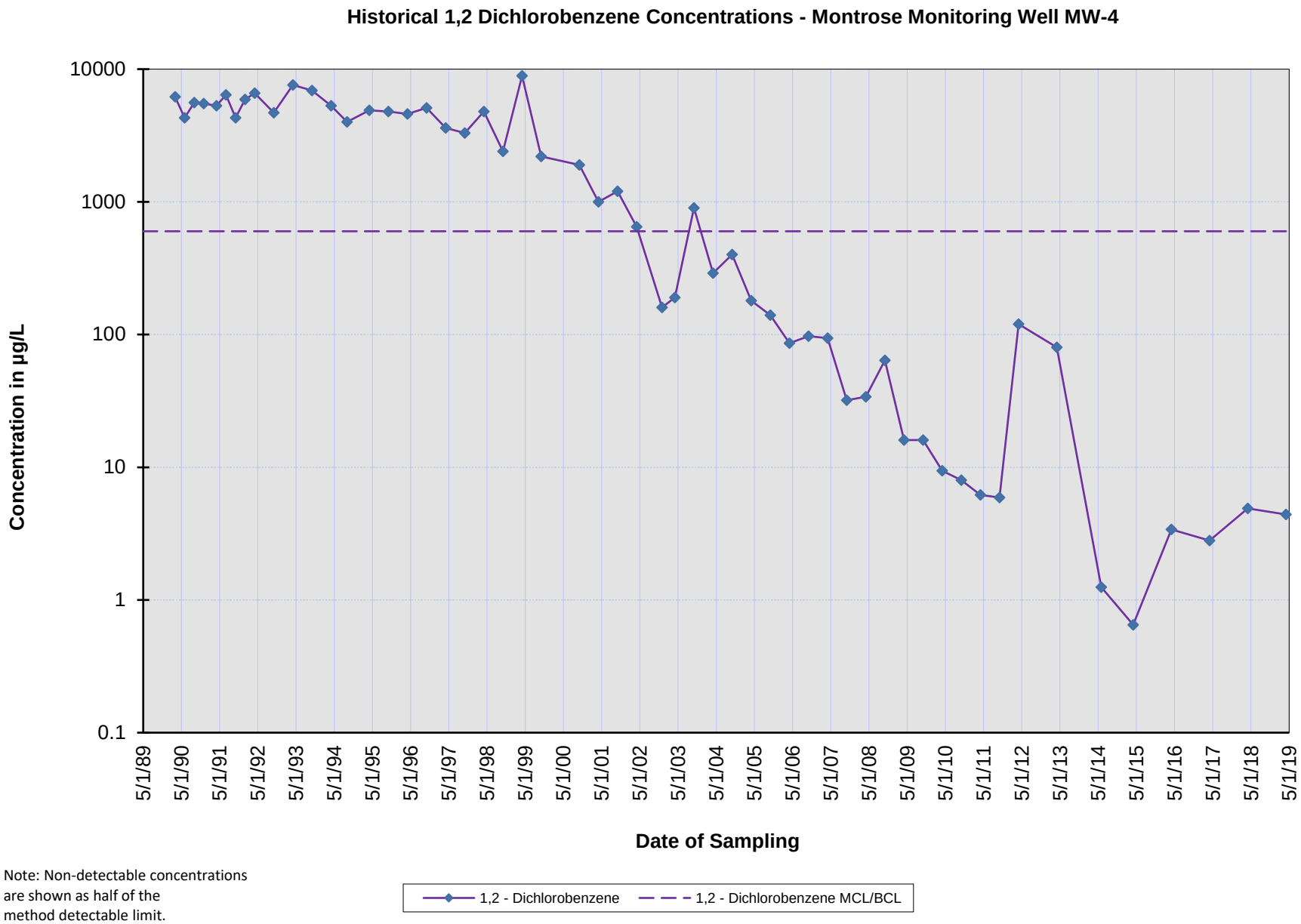

Note: Non-detectable concentrations are shown as half of the method detectable limit.



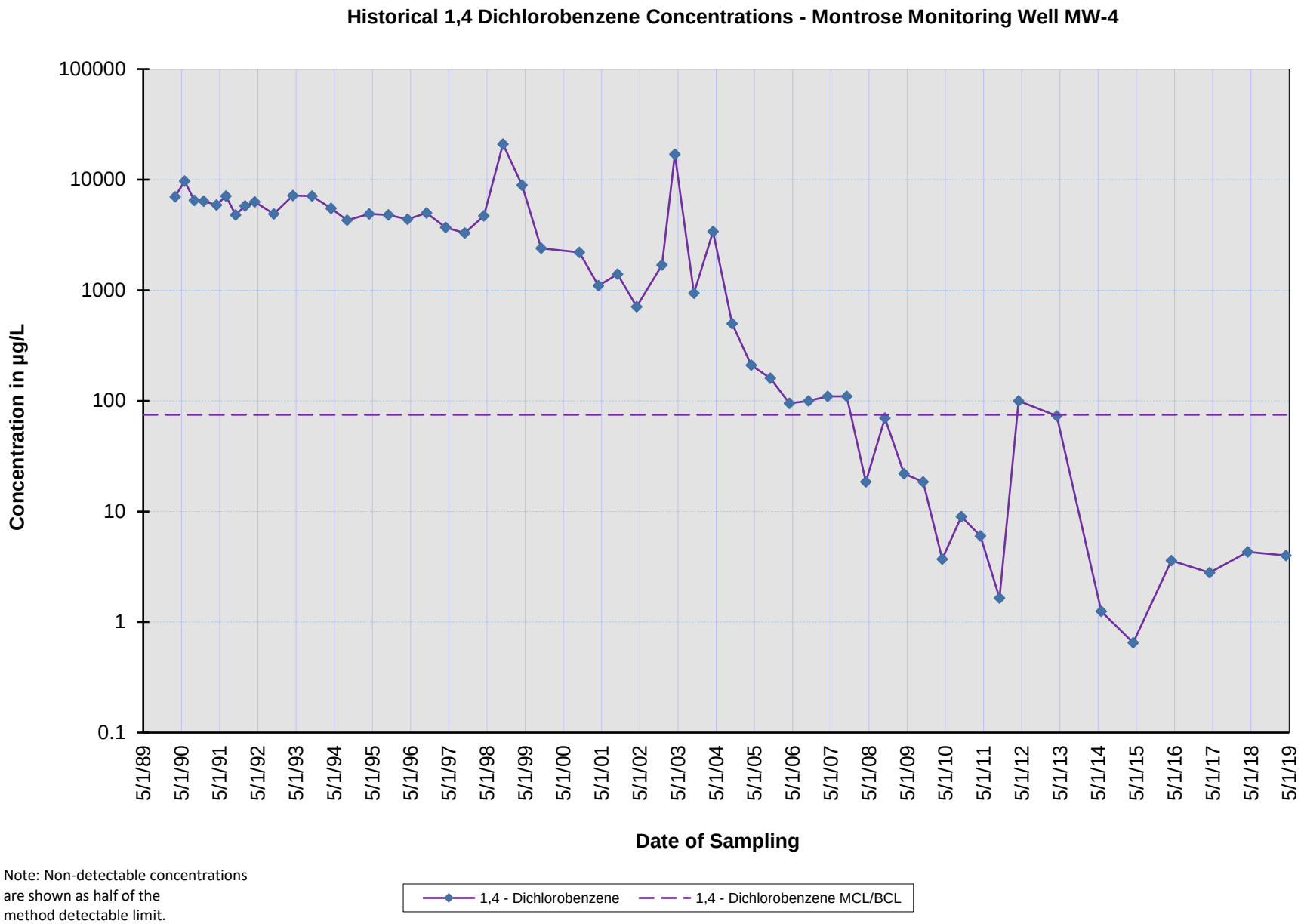

Note: Non-detectable concentrations are shown as half of the method detectable limit.




Note: Non-detectable concentrations are shown as half of the method detectable limit.




Note: Non-detectable concentrations are shown as half of the method detectable limit.




Note: Non-detectable concentrations are shown as half of the method detectable limit.

# Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)

| | |
|---|---|
| *Site Name:* | *Montrose* |
| *Site Address:* | *Henderson, NV* |
| *Additional Description:* | *Benzene* |

| | |
|---|---|
| **Well (Sampling) Location?** | **MS** |
| **Level of Confidence (Decision Criteria)?** | **90%** |

## 1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.

| | | Hazardous Substances (unit is ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sampling Event | Date Sampled | MW-1 | MW-2 | MW-3 | MW-4 | | |
| *#1* | Apr-15 | 0.25 | 1700 | 970 | 1.3 | | |
| *#2* | Apr-16 | 0.25 | 1600 | 620 | 0.5 | | |
| *#3* | Apr-17 | 0.25 | 1500 | 590 | 0.63 | | |
| *#4* | Apr-18 | 0.25 | 1300 | 390 | 0.63 | | |
| *#5* | Apr-19 | 0.25 | 1300 | 400 | 0.5 | | |
| *#6* | | | | | | | |
| *#7* | | | | | | | |
| *#8* | | | | | | | |
| *#9* | | | | | | | |
| *#10* | | | | | | | |
| *#11* | | | | | | | |
| *#12* | | | | | | | |
| *#13* | | | | | | | |
| *#14* | | | | | | | |
| *#15* | | | | | | | |
| *#16* | | | | | | | |

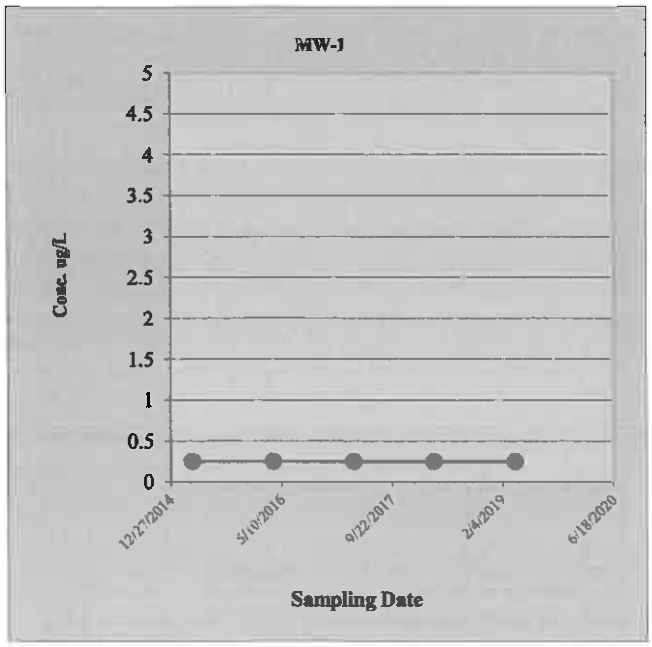
## 2. Mann-Kendall Non-parametric Statistical Test Results

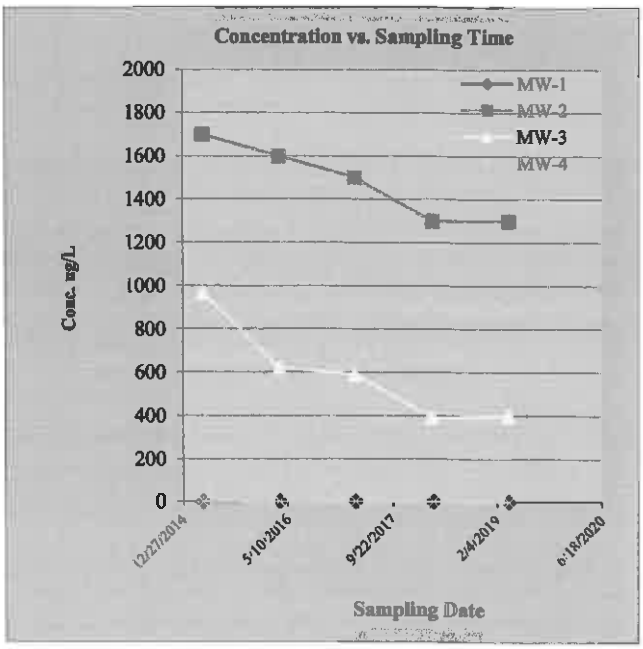
| Hazardous Substance? | MW-1 | MW-2 | MW-3 | MW-4 | | |
|---|---|---|---|---|---|---|
| Confidence Level Calculated? | 40.80% | 95.80% | 95.80% | 75.80% | NA | NA |
| **Plume Stability?** | Stable | Shrinking | Shrinking | Stable | NA | NA |
| Coefficient of Variation? | CV <= 1 | | | CV <= 1 | n<4 | n<4 |
| Mann-Kendall Statistic "S" value? | 0 | -9 | -8 | -4 | 0 | 0 |
| Number of Sampling Rounds? | 5 | 5 | 5 | 5 | 0 | 0 |
| Average Concentration? | 0.25 | 1480.00 | 594.00 | 0.71 | NA | NA |
| Standard Deviation? | 0.00 | 178.89 | 235.22 | 0.34 | NA | NA |
| Coefficient of Variation? | 0.00 | 0.12 | 0.40 | 0.47 | NA | NA |
| Blank if No Errors found | | | | | n<4 | n<4 |

## 3. Temporal Trend: Plot of Concentration vs. Sampling Time

Hazardous substance? **MW-1**

Plume Stability? **Stable**



# Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)

*Site Name:* *Montrose*
*Site Address:* *Henderson, NV*
*Additional Description:* *Benzene*

**Well (Sampling) Location?** **MS**
**Level of Confidence (Decision Criteria)?** **90%**

**1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.**

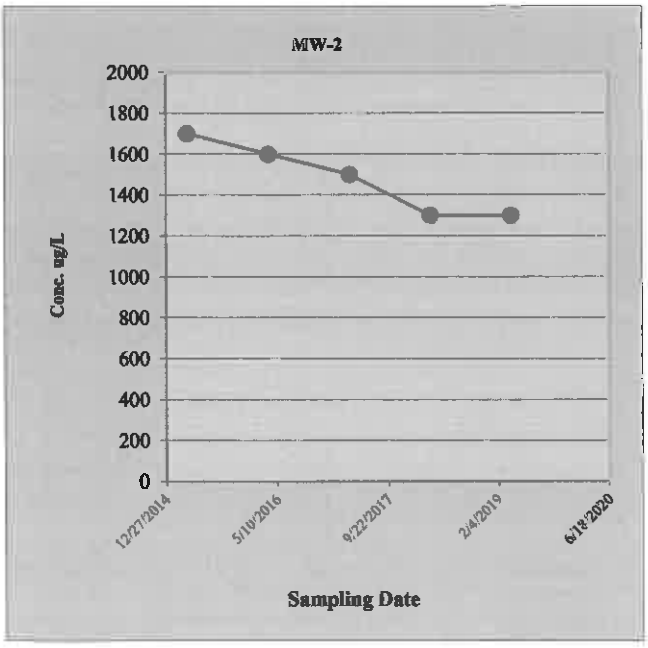
| | | Hazardous Substances (unit is ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sampling Event | Date Sampled | MW-1 | MW-2 | MW-3 | MW-4 | | |
| *#1* | Apr-15 | 0.25 | 1700 | 970 | 1.3 | | |
| *#2* | Apr-16 | 0.25 | 1600 | 620 | 0.5 | | |
| *#3* | Apr-17 | 0.25 | 1500 | 590 | 0.63 | | |
| *#4* | Apr-18 | 0.25 | 1300 | 390 | 0.63 | | |
| *#5* | Apr-19 | 0.25 | 1300 | 400 | 0.5 | | |
| *#6* | | | | | | | |
| *#7* | | | | | | | |
| *#8* | | | | | | | |
| *#9* | | | | | | | |
| *#10* | | | | | | | |
| *#11* | | | | | | | |
| *#12* | | | | | | | |
| *#13* | | | | | | | |
| *#14* | | | | | | | |
| *#15* | | | | | | | |
| *#16* | | | | | | | |

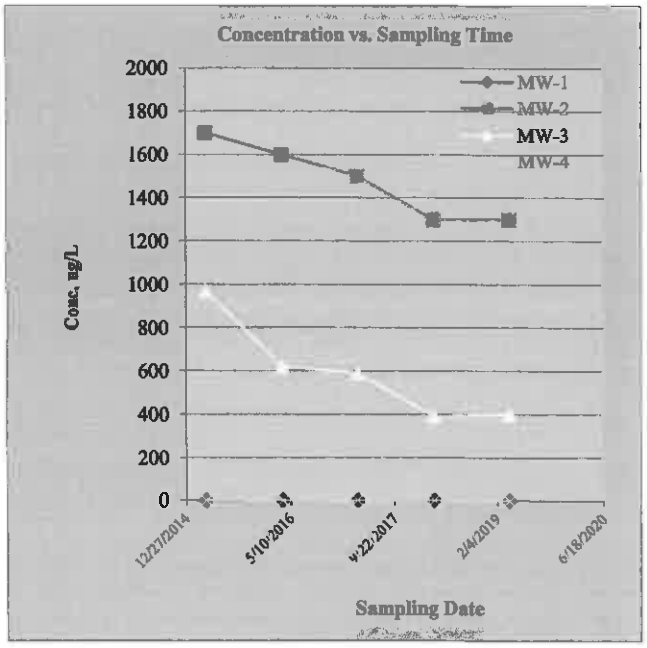
**2. Mann-Kendall Non-parametric Statistical Test Results**

| Hazardous Substance? | MW-1 | MW-2 | MW-3 | MW-4 | | |
|---|---|---|---|---|---|---|
| Confidence Level Calculated? | 40.80% | 95.80% | 95.80% | 75.80% | NA | NA |
| **Plume Stability?** | Stable | Shrinking | Shrinking | Stable | NA | NA |
| Coefficient of Variation? | CV <= 1 | | | CV <= 1 | n<4 | n<4 |
| Mann-Kendall Statistic "S" value? | 0 | -9 | -8 | -4 | 0 | 0 |
| Number of Sampling Rounds? | 5 | 5 | 5 | 5 | 0 | 0 |
| Average Concentration? | 0.25 | 1480.00 | 594.00 | 0.71 | NA | NA |
| Standard Deviation? | 0.00 | 178.89 | 235.22 | 0.34 | NA | NA |
| Coefficient of Variation? | 0.00 | 0.12 | 0.40 | 0.47 | NA | NA |
| Blank if No Errors found | | | | | n<4 | n<4 |

**3. Temporal Trend: Plot of Concentration vs. Sampling Time**

Hazardous substance? **MW-2**
Plume Stability? **Shrinking**



# Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)

| | |
|---|---|
| *Site Name:* | *Montrose* |
| *Site Address:* | *Henderson, NV* |
| *Additional Description:* | *Benzene* |

| | |
|---|---|
| **Well (Sampling) Location?** | **MS** |
| **Level of Confidence (Decision Criteria)?** | **90%** |

**1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.**

| | | Hazardous Substances (unit is ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sampling Event | Date Sampled | MW-1 | MW-2 | MW-3 | MW-4 | | |
| *#1* | Apr-15 | 0.25 | 1700 | 970 | 1.3 | | |
| *#2* | Apr-16 | 0.25 | 1600 | 620 | 0.5 | | |
| *#3* | Apr-17 | 0.25 | 1500 | 590 | 0.63 | | |
| *#4* | Apr-18 | 0.25 | 1300 | 390 | 0.63 | | |
| *#5* | Apr-19 | 0.25 | 1300 | 400 | 0.5 | | |
| *#6* | | | | | | | |
| *#7* | | | | | | | |
| *#8* | | | | | | | |
| *#9* | | | | | | | |
| *#10* | | | | | | | |
| *#11* | | | | | | | |
| *#12* | | | | | | | |
| *#13* | | | | | | | |
| *#14* | | | | | | | |
| *#15* | | | | | | | |
| *#16* | | | | | | | |

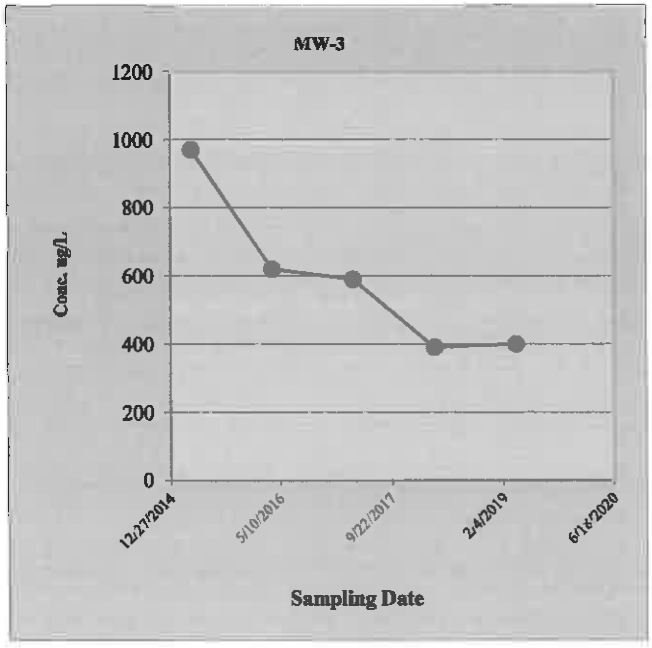
**2. Mann-Kendall Non-parametric Statistical Test Results**

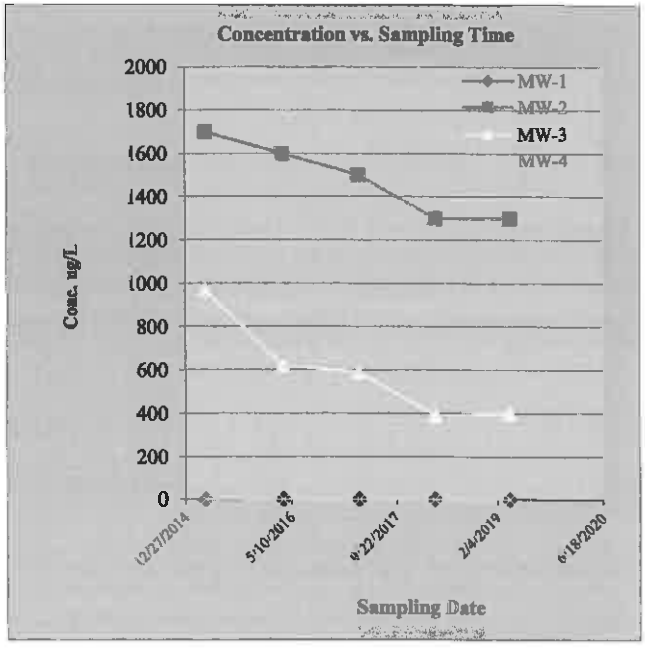
| Hazardous Substance? | MW-1 | MW-2 | MW-3 | MW-4 | | |
|---|---|---|---|---|---|---|
| Confidence Level Calculated? | 40.80% | 95.80% | 95.80% | 75.80% | NA | NA |
| **Plume Stability?** | Stable | Shrinking | Shrinking | Stable | NA | NA |
| Coefficient of Variation? | CV <= 1 | | | CV <= 1 | n<4 | n<4 |
| Mann-Kendall Statistic "S" value? | 0 | -9 | -8 | -4 | 0 | 0 |
| Number of Sampling Rounds? | 5 | 5 | 5 | 5 | 0 | 0 |
| Average Concentration? | 0.25 | 1480.00 | 594.00 | 0.71 | NA | NA |
| Standard Deviation? | 0.00 | 178.89 | 235.22 | 0.34 | NA | NA |
| Coefficient of Variation? | 0.00 | 0.12 | 0.40 | 0.47 | NA | NA |
| Blank if No Errors found | | | | | n<4 | n<4 |

**3. Temporal Trend: Plot of Concentration vs. Sampling Time**

Hazardous substance? **MW-3**

Plume Stability? **Shrinking**



## Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)

| | |
|---|---|
| *Site Name:* | *Montrose* |
| *Site Address:* | *Henderson, NV* |
| *Additional Description:* | *Benzene* |

| | |
|---|---|
| **Well (Sampling) Location?** | **MS** |
| **Level of Confidence (Decision Criteria)?** | **90%** |

**1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.**

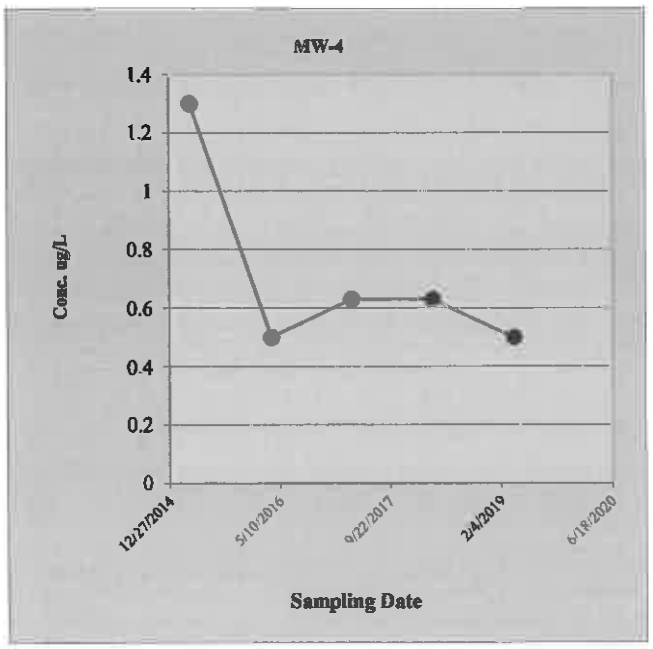
| | | Hazardous Substances (unit is ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sampling Event | Date Sampled | MW-1 | MW-2 | MW-3 | MW-4 | | |
| *#1* | Apr-15 | 0.25 | 1700 | 970 | 1.3 | | |
| *#2* | Apr-16 | 0.25 | 1600 | 620 | 0.5 | | |
| *#3* | Apr-17 | 0.25 | 1500 | 590 | 0.63 | | |
| *#4* | Apr-18 | 0.25 | 1300 | 390 | 0.63 | | |
| *#5* | Apr-19 | 0.25 | 1300 | 400 | 0.5 | | |
| *#6* | | | | | | | |
| *#7* | | | | | | | |
| *#8* | | | | | | | |
| *#9* | | | | | | | |
| *#10* | | | | | | | |
| *#11* | | | | | | | |
| *#12* | | | | | | | |
| *#13* | | | | | | | |
| *#14* | | | | | | | |
| *#15* | | | | | | | |
| *#16* | | | | | | | |

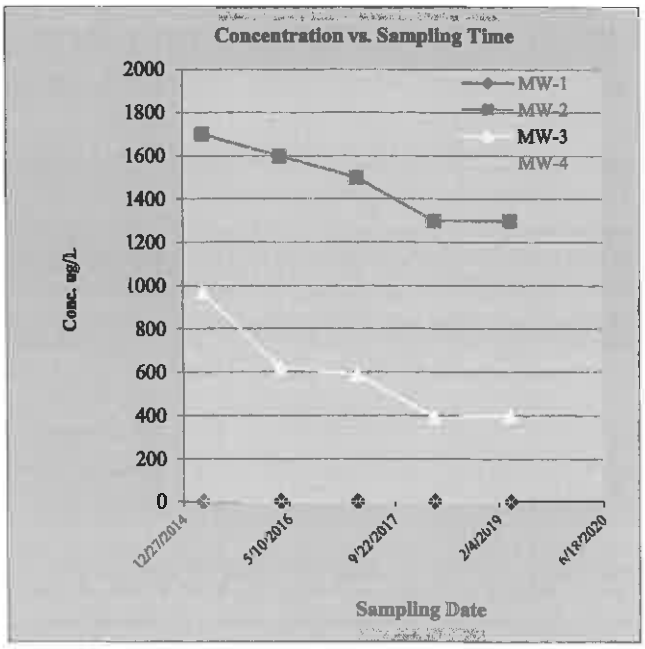
**2. Mann-Kendall Non-parametric Statistical Test Results**

| Hazardous Substance? | MW-1 | MW-2 | MW-3 | MW-4 | | |
|---|---|---|---|---|---|---|
| Confidence Level Calculated? | 40.80% | 95.80% | 95.80% | 75.80% | NA | NA |
| **Plume Stability?** | Stable | Shrinking | Shrinking | Stable | NA | NA |
| Coefficient of Variation? | CV <= 1 | | | CV <= 1 | n<4 | n<4 |
| Mann-Kendall Statistic "S" value? | 0 | -9 | -8 | -4 | 0 | 0 |
| Number of Sampling Rounds? | 5 | 5 | 5 | 5 | 0 | 0 |
| Average Concentration? | 0.25 | 1480.00 | 594.00 | 0.71 | NA | NA |
| Standard Deviation? | 0.00 | 178.89 | 235.22 | 0.34 | NA | NA |
| Coefficient of Variation? | 0.00 | 0.12 | 0.40 | 0.47 | NA | NA |
| Blank if No Errors found | | | | | n<4 | n<4 |

**3. Temporal Trend: Plot of Concentration vs. Sampling Time**

| | |
|---|---|
| Hazardous substance? | **MW-4** |
| Plume Stability? | **Stable** |



# Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)

| | |
|---|---|
| *Site Name:* | *Montrose* |
| *Site Address:* | *Henderson, NV* |
| *Additional Description:* | *Chloroform* |

| | |
|---|---|
| **Well (Sampling) Location?** | **MS** |
| **Level of Confidence (Decision Criteria)?** | **90%** |

## 1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.

| | | Hazardous Substances (unit is ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sampling Event | Date Sampled | MW-1 | MW-2 | MW-3 | MW-4 | | |
| *#1* | Apr-15 | 2.3 | 110000 | 30000 | 1500 | | |
| *#2* | Apr-16 | 2.8 | 130000 | 24000 | 1200 | | |
| *#3* | Apr-17 | 2 | 110000 | 28000 | 850 | | |
| *#4* | Apr-18 | 2.5 | 93000 | 24000 | 730 | | |
| *#5* | Apr-19 | 3.3 | 94000 | 25000 | 520 | | |
| *#6* | | | | | | | |
| *#7* | | | | | | | |
| *#8* | | | | | | | |
| *#9* | | | | | | | |
| *#10* | | | | | | | |
| *#11* | | | | | | | |
| *#12* | | | | | | | |
| *#13* | | | | | | | |
| *#14* | | | | | | | |
| *#15* | | | | | | | |
| *#16* | | | | | | | |

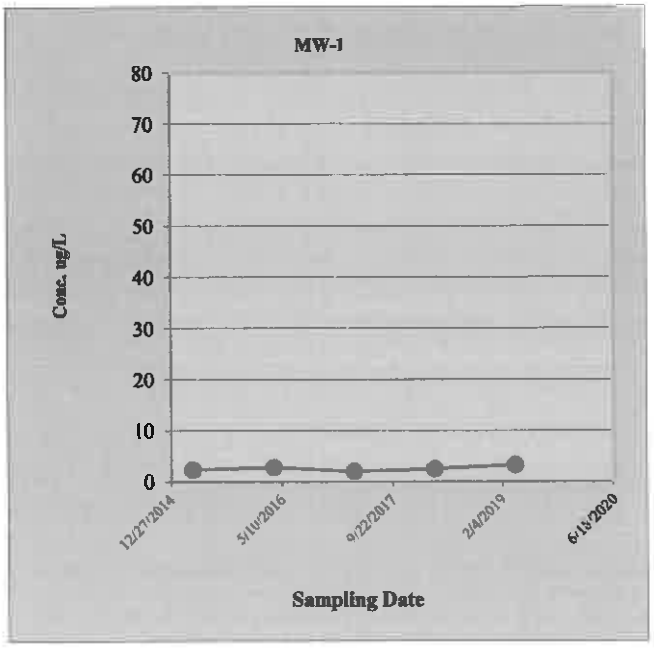
## 2. Mann-Kendall Non-parametric Statistical Test Results

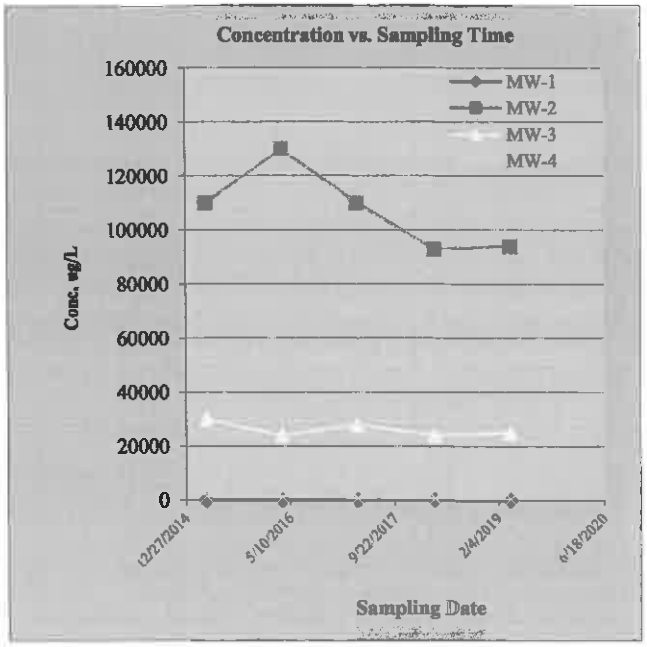
| Hazardous Substance? | MW-1 | MW-2 | MW-3 | MW-4 | | |
|---|---|---|---|---|---|---|
| Confidence Level Calculated? | 75.80% | 75.80% | 59.20% | 99.20% | NA | NA |
| **Plume Stability?** | Stable | Stable | Stable | Shrinking | NA | NA |
| Coefficient of Variation? | CV <= 1 | CV <= 1 | CV <= 1 | | n<4 | n<4 |
| Mann-Kendall Statistic "S" value? | 4 | -5 | -3 | -10 | 0 | 0 |
| Number of Sampling Rounds? | 5 | 5 | 5 | 5 | 0 | 0 |
| Average Concentration? | 2.58 | 107400.00 | 26200.00 | 960.00 | NA | NA |
| Standard Deviation? | 0.50 | 15093.04 | 2683.28 | 389.81 | NA | NA |
| Coefficient of Variation? | 0.19 | 0.14 | 0.10 | 0.41 | NA | NA |
| Blank if No Errors found | | | | | n<4 | n<4 |

## 3. Temporal Trend: Plot of Concentration vs. Sampling Time

Hazardous substance? **MW-1**

Plume Stability? **Stable**



# Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)

| | |
|---|---|
| *Site Name:* | *Montrose* |
| *Site Address:* | *Henderson, NV* |
| *Additional Description:* | *Chloroform* |

| | |
|---|---|
| **Well (Sampling) Location?** | **MS** |
| **Level of Confidence (Decision Criteria)?** | **90%** |

**1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.**

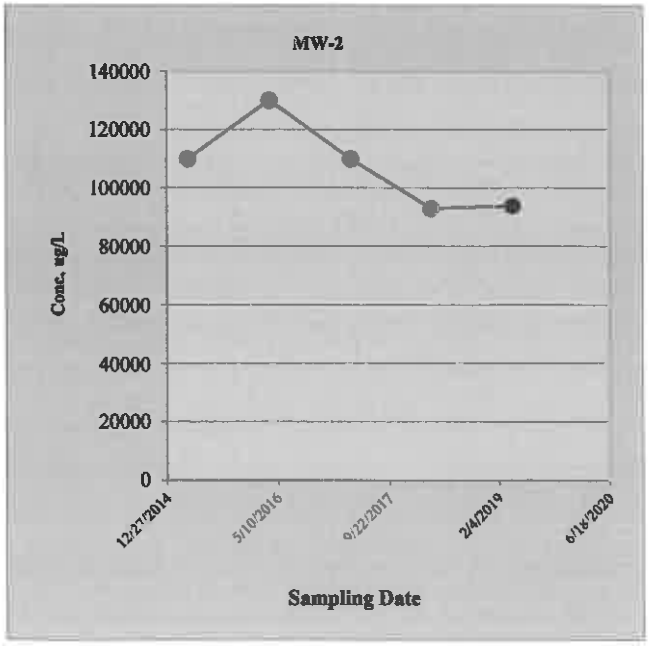
| | | Hazardous Substances (unit is ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sampling Event | Date Sampled | MW-1 | MW-2 | MW-3 | MW-4 | | |
| *#1* | Apr-15 | 2.3 | 110000 | 30000 | 1500 | | |
| *#2* | Apr-16 | 2.8 | 130000 | 24000 | 1200 | | |
| *#3* | Apr-17 | 2 | 110000 | 28000 | 850 | | |
| *#4* | Apr-18 | 2.5 | 93000 | 24000 | 730 | | |
| *#5* | Apr-19 | 3.3 | 94000 | 25000 | 520 | | |
| *#6* | | | | | | | |
| *#7* | | | | | | | |
| *#8* | | | | | | | |
| *#9* | | | | | | | |
| *#10* | | | | | | | |
| *#11* | | | | | | | |
| *#12* | | | | | | | |
| *#13* | | | | | | | |
| *#14* | | | | | | | |
| *#15* | | | | | | | |
| *#16* | | | | | | | |

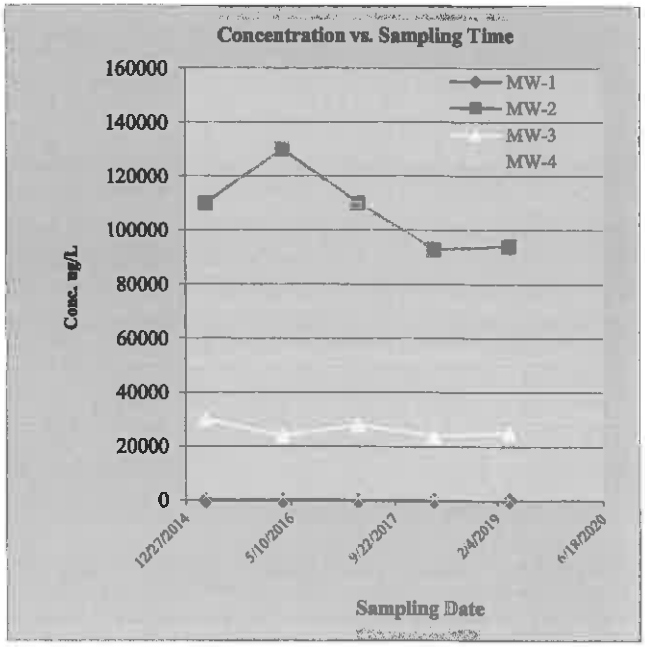
**2. Mann-Kendall Non-parametric Statistical Test Results**

| Hazardous Substance? | MW-1 | MW-2 | MW-3 | MW-4 | | |
|---|---|---|---|---|---|---|
| Confidence Level Calculated? | 75.80% | 75.80% | 59.20% | 99.20% | NA | NA |
| **Plume Stability?** | Stable | Stable | Stable | Shrinking | NA | NA |
| Coefficient of Variation? | CV <= 1 | CV <= 1 | CV <= 1 | | n<4 | n<4 |
| Mann-Kendall Statistic "S" value? | 4 | -5 | -3 | -10 | 0 | 0 |
| Number of Sampling Rounds? | 5 | 5 | 5 | 5 | 0 | 0 |
| Average Concentration? | 2.58 | 107400.00 | 26200.00 | 960.00 | NA | NA |
| Standard Deviation? | 0.50 | 15093.04 | 2683.28 | 389.81 | NA | NA |
| Coefficient of Variation? | 0.19 | 0.14 | 0.10 | 0.41 | NA | NA |
| Blank if No Errors found | | | | | n<4 | n<4 |

**3. Temporal Trend: Plot of Concentration vs. Sampling Time**

| | |
|---|---|
| Hazardous substance? | **MW-2** |
| Plume Stability? | **Stable** |



## Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)

| | |
|---|---|
| *Site Name:* | *Montrose* |
| *Site Address:* | *Henderson, NV* |
| *Additional Description:* | *Chloroform* |

| | |
|---|---|
| **Well (Sampling) Location?** | **MS** |
| **Level of Confidence (Decision Criteria)?** | **90%** |

### 1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.

| | | Hazardous Substances (unit is ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sampling Event | Date Sampled | MW-1 | MW-2 | MW-3 | MW-4 | | |
| *#1* | Apr-15 | 2.3 | 110000 | 30000 | 1500 | | |
| *#2* | Apr-16 | 2.8 | 130000 | 24000 | 1200 | | |
| *#3* | Apr-17 | 2 | 110000 | 28000 | 850 | | |
| *#4* | Apr-18 | 2.5 | 93000 | 24000 | 730 | | |
| *#5* | Apr-19 | 3.3 | 94000 | 25000 | 520 | | |
| *#6* | | | | | | | |
| *#7* | | | | | | | |
| *#8* | | | | | | | |
| *#9* | | | | | | | |
| *#10* | | | | | | | |
| *#11* | | | | | | | |
| *#12* | | | | | | | |
| *#13* | | | | | | | |
| *#14* | | | | | | | |
| *#15* | | | | | | | |
| *#16* | | | | | | | |

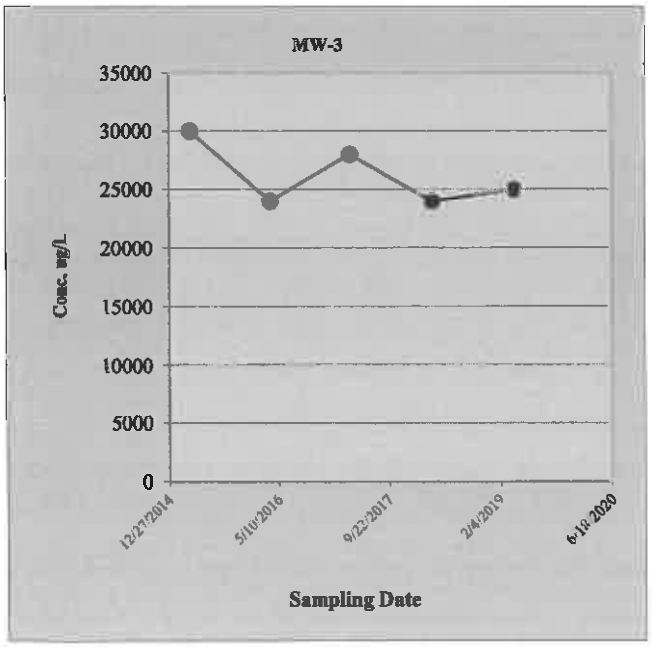
### 2. Mann-Kendall Non-parametric Statistical Test Results

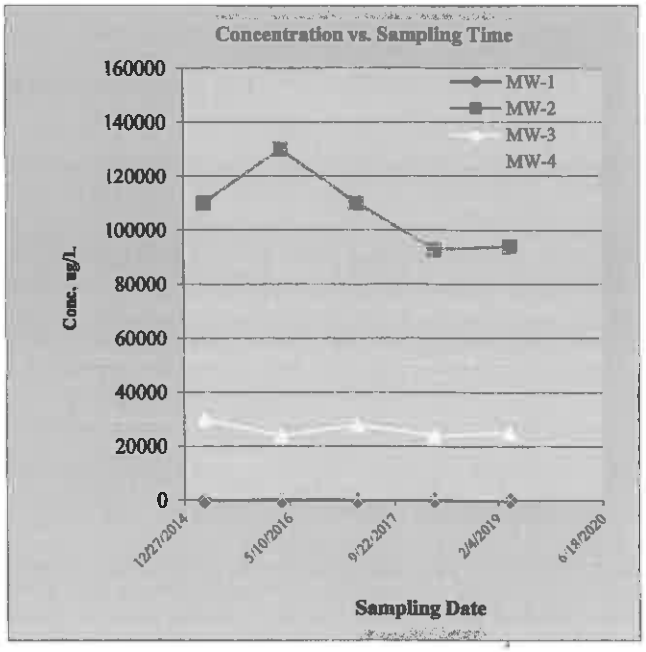
| Hazardous Substance? | MW-1 | MW-2 | MW-3 | MW-4 | | |
|---|---|---|---|---|---|---|
| Confidence Level Calculated? | 75.80% | 75.80% | 59.20% | 99.20% | NA | NA |
| **Plume Stability?** | Stable | Stable | Stable | Shrinking | NA | NA |
| Coefficient of Variation? | CV <= 1 | CV <= 1 | CV <= 1 | | n<4 | n<4 |
| Mann-Kendall Statistic "S" value? | 4 | -5 | -3 | -10 | 0 | 0 |
| Number of Sampling Rounds? | 5 | 5 | 5 | 5 | 0 | 0 |
| Average Concentration? | 2.58 | 107400.00 | 26200.00 | 960.00 | NA | NA |
| Standard Deviation? | 0.50 | 15093.04 | 2683.28 | 389.81 | NA | NA |
| Coefficient of Variation? | 0.19 | 0.14 | 0.10 | 0.41 | NA | NA |
| Blank if No Errors found | | | | | n<4 | n<4 |

### 3. Temporal Trend: Plot of Concentration vs. Sampling Time

Hazardous substance? **MW-3**

Plume Stability? **Stable**



# Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)

| | |
|---|---|
| *Site Name:* | *Montrose* |
| *Site Address:* | *Henderson, NV* |
| *Additional Description:* | *Chloroform* |

| | |
|---|---|
| **Well (Sampling) Location?** | **MS** |
| **Level of Confidence (Decision Criteria)?** | **90%** |

## 1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.

| | | Hazardous Substances (unit is ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sampling Event | Date Sampled | MW-1 | MW-2 | MW-3 | MW-4 | | |
| *#1* | Apr-15 | 2.3 | 110000 | 30000 | 1500 | | |
| *#2* | Apr-16 | 2.8 | 130000 | 24000 | 1200 | | |
| *#3* | Apr-17 | 2 | 110000 | 28000 | 850 | | |
| *#4* | Apr-18 | 2.5 | 93000 | 24000 | 730 | | |
| *#5* | Apr-19 | 3.3 | 94000 | 25000 | 520 | | |
| *#6* | | | | | | | |
| *#7* | | | | | | | |
| *#8* | | | | | | | |
| *#9* | | | | | | | |
| *#10* | | | | | | | |
| *#11* | | | | | | | |
| *#12* | | | | | | | |
| *#13* | | | | | | | |
| *#14* | | | | | | | |
| *#15* | | | | | | | |
| *#16* | | | | | | | |

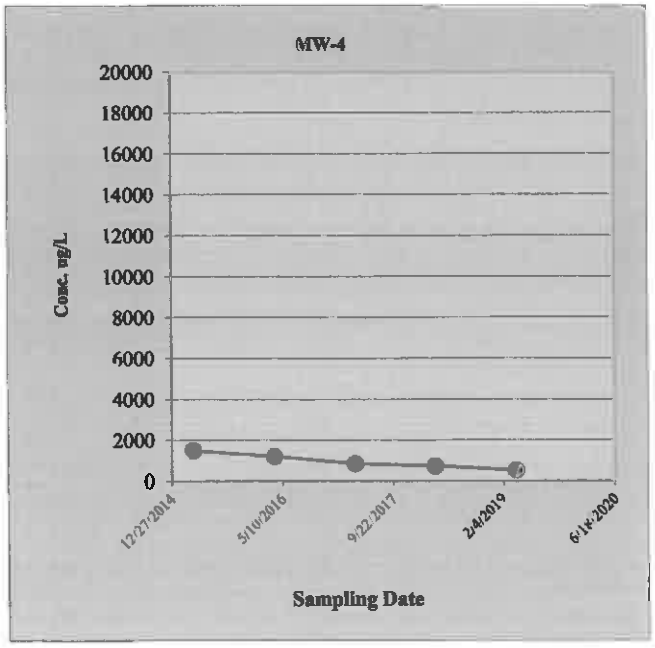
## 2. Mann-Kendall Non-parametric Statistical Test Results

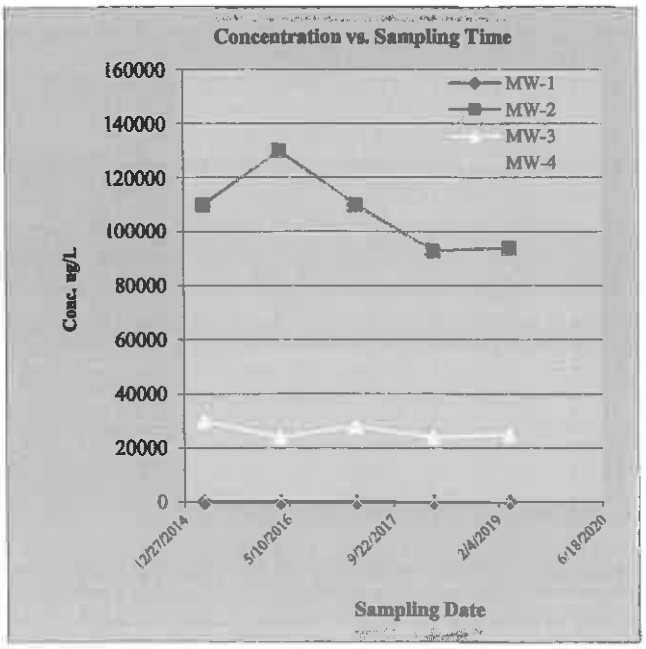
| Hazardous Substance? | MW-1 | MW-2 | MW-3 | MW-4 | | |
|---|---|---|---|---|---|---|
| Confidence Level Calculated? | 75.80% | 75.80% | 59.20% | 99.20% | NA | NA |
| **Plume Stability?** | Stable | Stable | Stable | Shrinking | NA | NA |
| Coefficient of Variation? | CV <= 1 | CV <= 1 | CV <= 1 | | n<4 | n<4 |
| Mann-Kendall Statistic "S" value? | 4 | -5 | -3 | -10 | 0 | 0 |
| Number of Sampling Rounds? | 5 | 5 | 5 | 5 | 0 | 0 |
| Average Concentration? | 2.58 | 107400.00 | 26200.00 | 960.00 | NA | NA |
| Standard Deviation? | 0.50 | 15093.04 | 2683.28 | 389.81 | NA | NA |
| Coefficient of Variation? | 0.19 | 0.14 | 0.10 | 0.41 | NA | NA |
| Blank if No Errors found | | | | | n<4 | n<4 |

## 3. Temporal Trend: Plot of Concentration vs. Sampling Time

Hazardous substance? **MW-4**

Plume Stability? **Shrinking**



# Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)

*Site Name:* *Montrose*
*Site Address:* *Henderson, NV*
*Additional Description:* *Chlorobenzene*

**Well (Sampling) Location?** **MS**
**Level of Confidence (Decision Criteria)?** **90%**

**1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.**

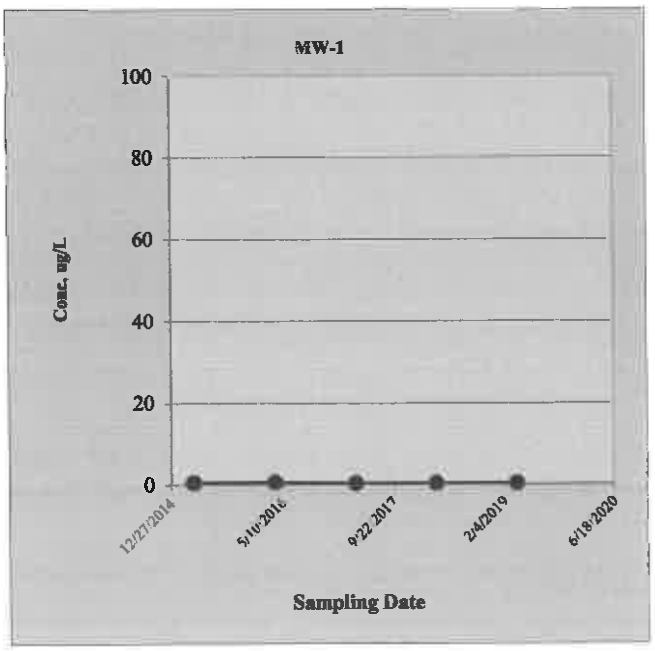
| | | Hazardous Substances (unit is ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sampling Event | Date Sampled | MW-1 | MW-2 | MW-3 | MW-4 | | |
| *#1* | Apr-15 | 0.43 | 2400 | 24000 | 1.3 | | |
| *#2* | Apr-16 | 0.55 | 2400 | 16000 | 3.3 | | |
| *#3* | Apr-17 | 0.25 | 1900 | 16000 | 1.7 | | |
| *#4* | Apr-18 | 0.25 | 1700 | 13000 | 2.2 | | |
| *#5* | Apr-19 | 0.25 | 1600 | 12000 | 2.2 | | |
| *#6* | | | | | | | |
| *#7* | | | | | | | |
| *#8* | | | | | | | |
| *#9* | | | | | | | |
| *#10* | | | | | | | |
| *#11* | | | | | | | |
| *#12* | | | | | | | |
| *#13* | | | | | | | |
| *#14* | | | | | | | |
| *#15* | | | | | | | |
| *#16* | | | | | | | |

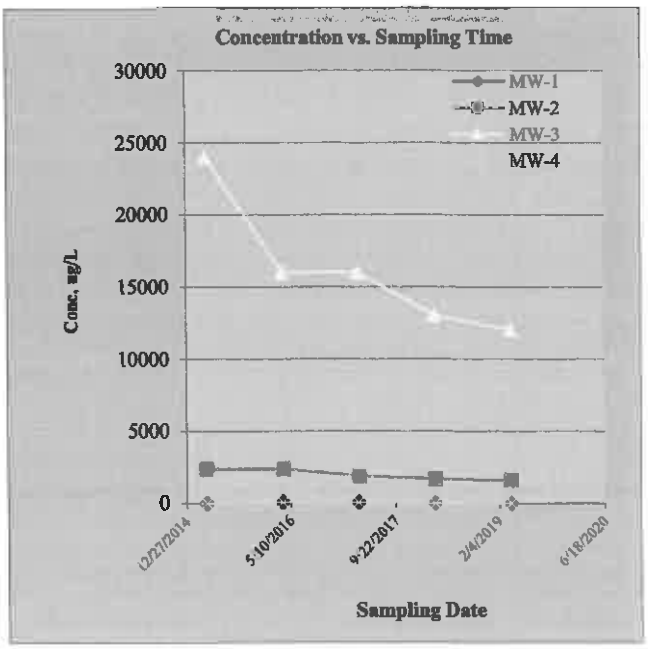
**2. Mann-Kendall Non-parametric Statistical Test Results**

| Hazardous Substance? | MW-1 | MW-2 | MW-3 | MW-4 | | |
|---|---|---|---|---|---|---|
| Confidence Level Calculated? | 75.80% | 95.80% | 95.80% | 59.20% | NA | NA |
| **Plume Stability?** | Stable | Shrinking | Shrinking | Stable | NA | NA |
| Coefficient of Variation? | CV <= 1 | | | CV <= 1 | n<4 | n<4 |
| Mann-Kendall Statistic "S" value? | -5 | -9 | -9 | 3 | 0 | 0 |
| Number of Sampling Rounds? | 5 | 5 | 5 | 5 | 0 | 0 |
| Average Concentration? | 0.35 | 2000.00 | 16200.00 | 2.14 | NA | NA |
| Standard Deviation? | 0.14 | 380.79 | 4711.69 | 0.75 | NA | NA |
| Coefficient of Variation? | 0.40 | 0.19 | 0.29 | 0.35 | NA | NA |
| Blank if No Errors found | | | | | n<4 | n<4 |

**3. Temporal Trend: Plot of Concentration vs. Sampling Time**

Hazardous substance? **MW-1**
Plume Stability? **Stable**



# Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)

*Site Name:* *Montrose*
*Site Address:* *Henderson, NV*
*Additional Description:* *Chlorobenzene*

**Well (Sampling) Location?** **MS**
**Level of Confidence (Decision Criteria)?** **90%**

**1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.**

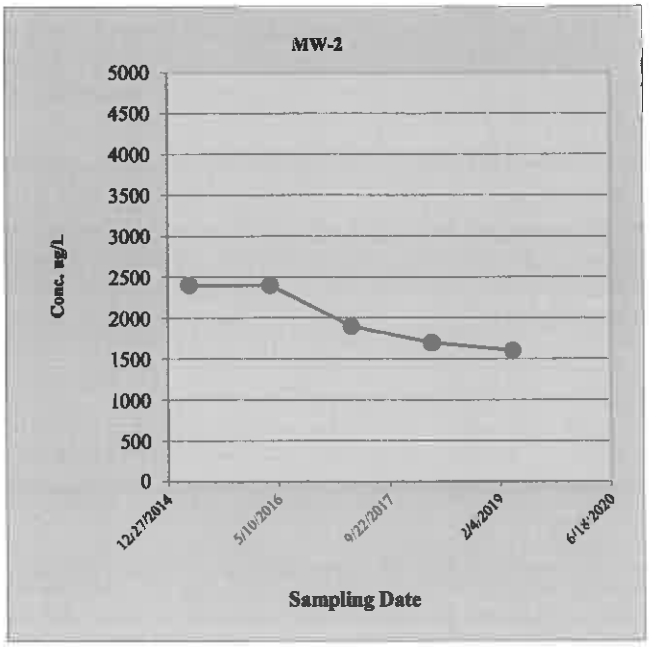
| | | Hazardous Substances (unit is ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sampling Event | Date Sampled | MW-1 | MW-2 | MW-3 | MW-4 | | |
| *#1* | Apr-15 | 0.43 | 2400 | 24000 | 1.3 | | |
| *#2* | Apr-16 | 0.55 | 2400 | 16000 | 3.3 | | |
| *#3* | Apr-17 | 0.25 | 1900 | 16000 | 1.7 | | |
| *#4* | Apr-18 | 0.25 | 1700 | 13000 | 2.2 | | |
| *#5* | Apr-19 | 0.25 | 1600 | 12000 | 2.2 | | |
| *#6* | | | | | | | |
| *#7* | | | | | | | |
| *#8* | | | | | | | |
| *#9* | | | | | | | |
| *#10* | | | | | | | |
| *#11* | | | | | | | |
| *#12* | | | | | | | |
| *#13* | | | | | | | |
| *#14* | | | | | | | |
| *#15* | | | | | | | |
| *#16* | | | | | | | |

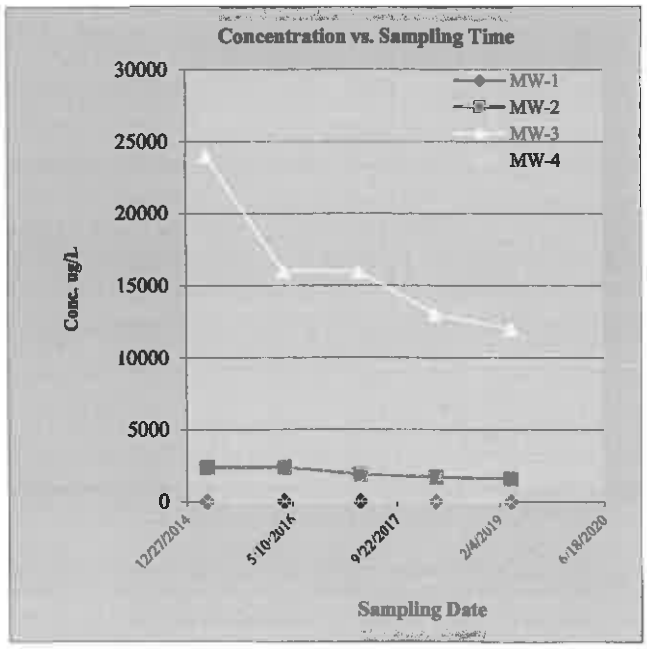
**2. Mann-Kendall Non-parametric Statistical Test Results**

| Hazardous Substance? | MW-1 | MW-2 | MW-3 | MW-4 | | |
|---|---|---|---|---|---|---|
| Confidence Level Calculated? | 75.80% | 95.80% | 95.80% | 59.20% | NA | NA |
| **Plume Stability?** | Stable | Shrinking | Shrinking | Stable | NA | NA |
| Coefficient of Variation? | CV <= 1 | | | CV <= 1 | n<4 | n<4 |
| Mann-Kendall Statistic "S" value? | -5 | -9 | -9 | 3 | 0 | 0 |
| Number of Sampling Rounds? | 5 | 5 | 5 | 5 | 0 | 0 |
| Average Concentration? | 0.35 | 2000.00 | 16200.00 | 2.14 | NA | NA |
| Standard Deviation? | 0.14 | 380.79 | 4711.69 | 0.75 | NA | NA |
| Coefficient of Variation? | 0.40 | 0.19 | 0.29 | 0.35 | NA | NA |
| Blank if No Errors found | | | | | n<4 | n<4 |

**3. Temporal Trend: Plot of Concentration vs. Sampling Time**

Hazardous substance? **MW-2**
Plume Stability? **Shrinking**



## Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)

*Site Name:* *Montrose*
*Site Address:* *Henderson, NV*
*Additional Description:* *Chlorobenzene*

**Well (Sampling) Location?** **MS**
**Level of Confidence (Decision Criteria)?** **90%**

**1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.**

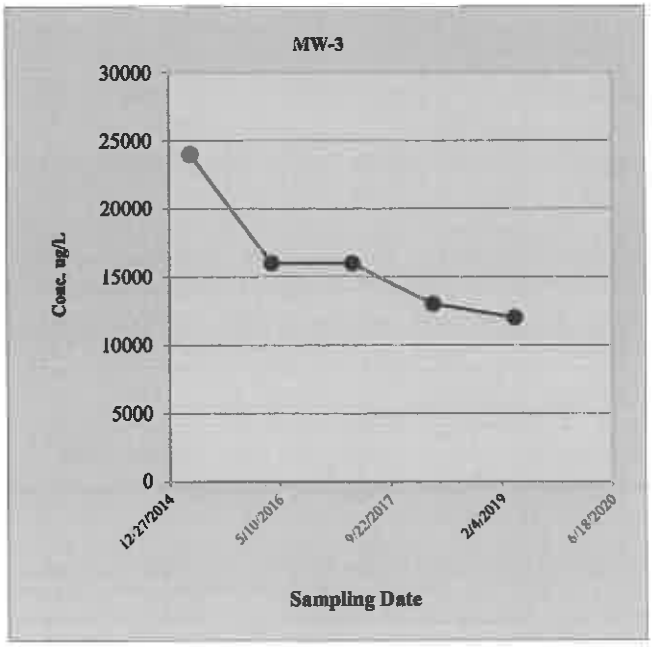
| | | Hazardous Substances (unit is ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sampling Event | Date Sampled | MW-1 | MW-2 | MW-3 | MW-4 | | |
| *#1* | Apr-15 | 0.43 | 2400 | 24000 | 1.3 | | |
| *#2* | Apr-16 | 0.55 | 2400 | 16000 | 3.3 | | |
| *#3* | Apr-17 | 0.25 | 1900 | 16000 | 1.7 | | |
| *#4* | Apr-18 | 0.25 | 1700 | 13000 | 2.2 | | |
| *#5* | Apr-19 | 0.25 | 1600 | 12000 | 2.2 | | |
| *#6* | | | | | | | |
| *#7* | | | | | | | |
| *#8* | | | | | | | |
| *#9* | | | | | | | |
| *#10* | | | | | | | |
| *#11* | | | | | | | |
| *#12* | | | | | | | |
| *#13* | | | | | | | |
| *#14* | | | | | | | |
| *#15* | | | | | | | |
| *#16* | | | | | | | |

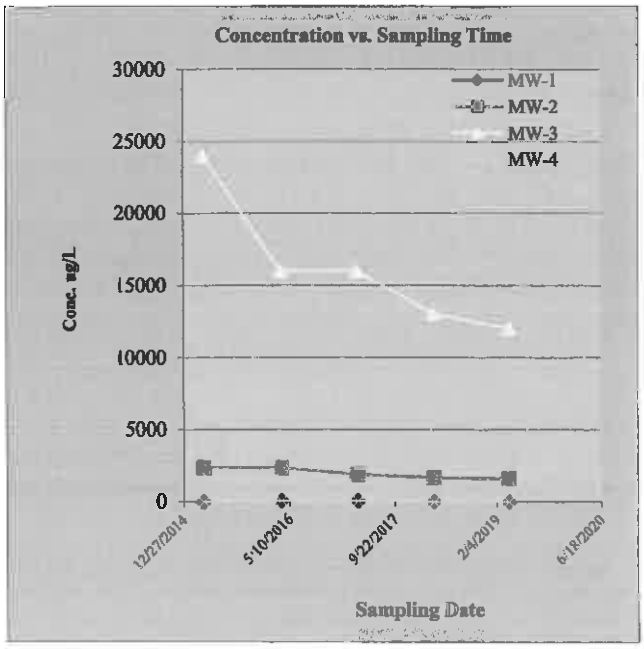
**2. Mann-Kendall Non-parametric Statistical Test Results**

| Hazardous Substance? | MW-1 | MW-2 | MW-3 | MW-4 | | |
|---|---|---|---|---|---|---|
| Confidence Level Calculated? | 75.80% | 95.80% | 95.80% | 59.20% | NA | NA |
| **Plume Stability?** | Stable | Shrinking | Shrinking | Stable | NA | NA |
| Coefficient of Variation? | CV <= 1 | | | CV <= 1 | n<4 | n<4 |
| Mann-Kendall Statistic "S" value? | -5 | -9 | -9 | 3 | 0 | 0 |
| Number of Sampling Rounds? | 5 | 5 | 5 | 5 | 0 | 0 |
| Average Concentration? | 0.35 | 2000.00 | 16200.00 | 2.14 | NA | NA |
| Standard Deviation? | 0.14 | 380.79 | 4711.69 | 0.75 | NA | NA |
| Coefficient of Variation? | 0.40 | 0.19 | 0.29 | 0.35 | NA | NA |
| Blank if No Errors found | | | | | n<4 | n<4 |

**3. Temporal Trend: Plot of Concentration vs. Sampling Time**

Hazardous substance? **MW-3**
Plume Stability? **Shrinking**



## Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)

| | |
|---|---|
| *Site Name:* | *Montrose* |
| *Site Address:* | *Henderson, NV* |
| *Additional Description:* | *Chlorobenzene* |

| | |
|---|---|
| **Well (Sampling) Location?** | **MS** |
| **Level of Confidence (Decision Criteria)?** | **90%** |

**1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.**

| | | Hazardous Substances (unit is ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sampling Event | Date Sampled | MW-1 | MW-2 | MW-3 | MW-4 | | |
| *#1* | Apr-15 | 0.43 | 2400 | 24000 | 1.3 | | |
| *#2* | Apr-16 | 0.55 | 2400 | 16000 | 3.3 | | |
| *#3* | Apr-17 | 0.25 | 1900 | 16000 | 1.7 | | |
| *#4* | Apr-18 | 0.25 | 1700 | 13000 | 2.2 | | |
| *#5* | Apr-19 | 0.25 | 1600 | 12000 | 2.2 | | |
| *#6* | | | | | | | |
| *#7* | | | | | | | |
| *#8* | | | | | | | |
| *#9* | | | | | | | |
| *#10* | | | | | | | |
| *#11* | | | | | | | |
| *#12* | | | | | | | |
| *#13* | | | | | | | |
| *#14* | | | | | | | |
| *#15* | | | | | | | |
| *#16* | | | | | | | |

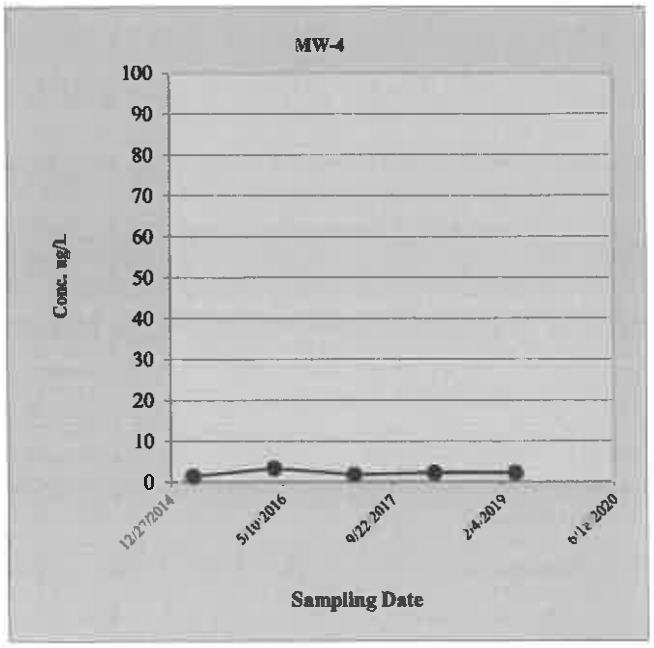
**2. Mann-Kendall Non-parametric Statistical Test Results**

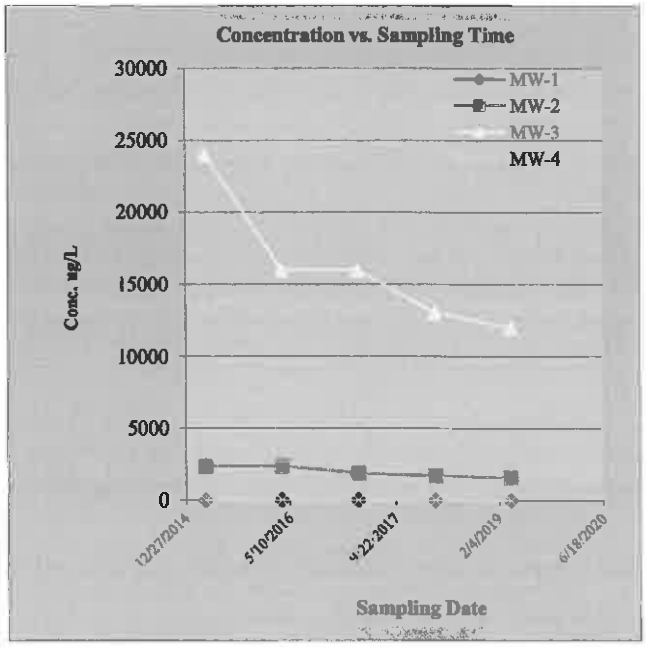
| Hazardous Substance? | MW-1 | MW-2 | MW-3 | MW-4 | | |
|---|---|---|---|---|---|---|
| Confidence Level Calculated? | 75.80% | 95.80% | 95.80% | 59.20% | NA | NA |
| **Plume Stability?** | Stable | Shrinking | Shrinking | Stable | NA | NA |
| Coefficient of Variation? | CV <= 1 | | | CV <= 1 | n<4 | n<4 |
| Mann-Kendall Statistic "S" value? | -5 | -9 | -9 | 3 | 0 | 0 |
| Number of Sampling Rounds? | 5 | 5 | 5 | 5 | 0 | 0 |
| Average Concentration? | 0.35 | 2000.00 | 16200.00 | 2.14 | NA | NA |
| Standard Deviation? | 0.14 | 380.79 | 4711.69 | 0.75 | NA | NA |
| Coefficient of Variation? | 0.40 | 0.19 | 0.29 | 0.35 | NA | NA |
| Blank if No Errors found | | | | | n<4 | n<4 |

**3. Temporal Trend: Plot of Concentration vs. Sampling Time**

Hazardous substance? **MW-4**

Plume Stability? **Stable**



# Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)

| | |
|---|---|
| *Site Name:* | *Montrose* |
| *Site Address:* | *Henderson, NV* |
| *Additional Description:* | *1,2 Dichlorobenzene* |

| | |
|---|---|
| **Well (Sampling) Location?** | **MS** |
| **Level of Confidence (Decision Criteria)?** | **90%** |

**1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.**

| | | Hazardous Substances (unit is ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sampling Event | Date Sampled | MW-1 | MW-2 | MW-3 | MW-4 | | |
| *#1* | Apr-15 | 0.73 | 81 | 27000 | 1.3 | | |
| *#2* | Apr-16 | 1.1 | 72 | 19000 | 3.6 | | |
| *#3* | Apr-17 | 0.25 | 100 | 21000 | 2.8 | | |
| *#4* | Apr-18 | 0.25 | 100 | 18000 | 4.9 | | |
| *#5* | Apr-19 | 0.25 | 44 | 18000 | 4.4 | | |
| *#6* | | | | | | | |
| *#7* | | | | | | | |
| *#8* | | | | | | | |
| *#9* | | | | | | | |
| *#10* | | | | | | | |
| *#11* | | | | | | | |
| *#12* | | | | | | | |
| *#13* | | | | | | | |
| *#14* | | | | | | | |
| *#15* | | | | | | | |
| *#16* | | | | | | | |

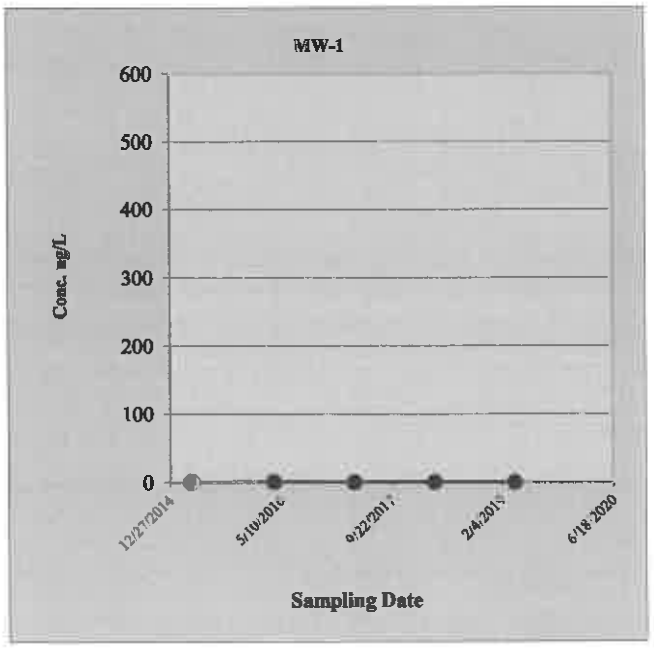
**2. Mann-Kendall Non-parametric Statistical Test Results**

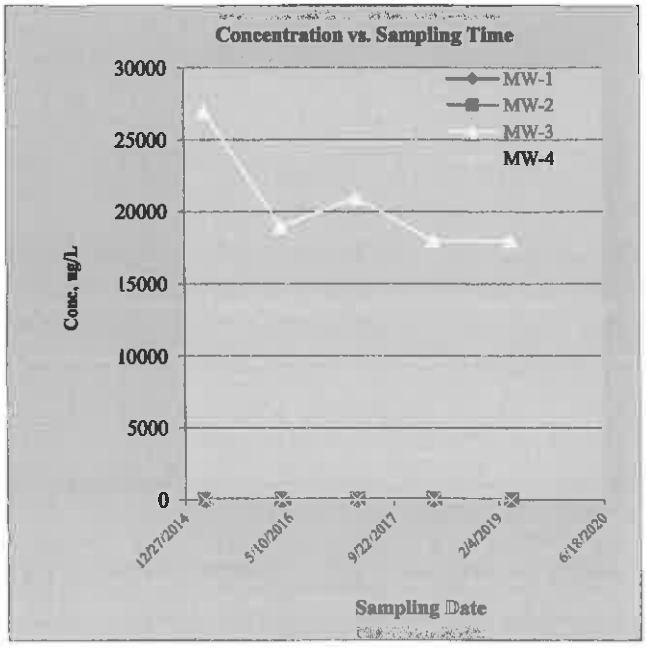
| Hazardous Substance? | MW-1 | MW-2 | MW-3 | MW-4 | | |
|---|---|---|---|---|---|---|
| Confidence Level Calculated? | 75.80% | 40.80% | 88.30% | 88.30% | NA | NA |
| **Plume Stability?** | Stable | Stable | Stable | Stable | NA | NA |
| Coefficient of Variation? | CV <= 1 | CV <= 1 | CV <= 1 | CV <= 1 | n<4 | n<4 |
| Mann-Kendall Statistic "S" value? | -5 | -1 | -7 | 6 | 0 | 0 |
| Number of Sampling Rounds? | 5 | 5 | 5 | 5 | 0 | 0 |
| Average Concentration? | 0.52 | 79.40 | 20600.00 | 3.40 | NA | NA |
| Standard Deviation? | 0.39 | 23.23 | 3781.53 | 1.42 | NA | NA |
| Coefficient of Variation? | 0.75 | 0.29 | 0.18 | 0.42 | NA | NA |
| Blank if No Errors found | | | | | n<4 | n<4 |

**3. Temporal Trend: Plot of Concentration vs. Sampling Time**

Hazardous substance? **MW-1**

Plume Stability? **Stable**



## Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)

*Site Name:* *Montrose*
*Site Address:* *Henderson, NV*
*Additional Description:* *1,2 Dichlorobenzene*

**Well (Sampling) Location?** **MS**
**Level of Confidence (Decision Criteria)?** **90%**

**1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.**

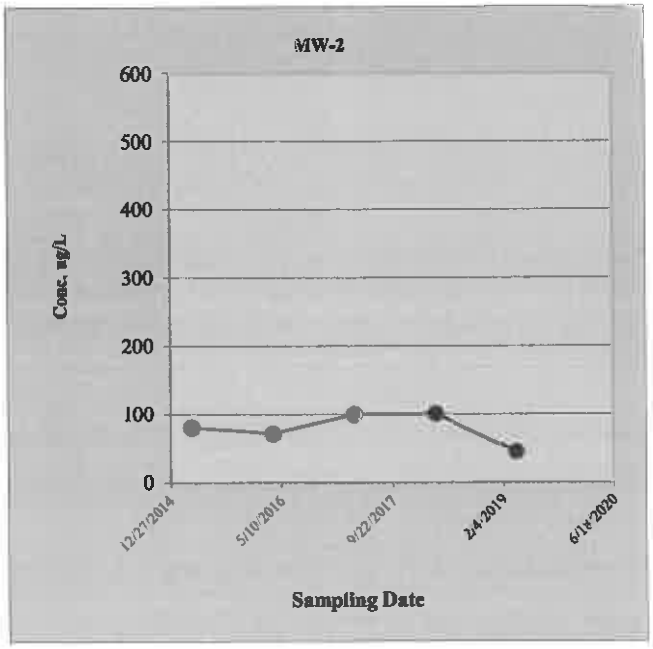
| | | Hazardous Substances (unit is ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sampling Event | Date Sampled | MW-1 | MW-2 | MW-3 | MW-4 | | |
| *#1* | Apr-15 | 0.73 | 81 | 27000 | 1.3 | | |
| *#2* | Apr-16 | 1.1 | 72 | 19000 | 3.6 | | |
| *#3* | Apr-17 | 0.25 | 100 | 21000 | 2.8 | | |
| *#4* | Apr-18 | 0.25 | 100 | 18000 | 4.9 | | |
| *#5* | Apr-19 | 0.25 | 44 | 18000 | 4.4 | | |
| *#6* | | | | | | | |
| *#7* | | | | | | | |
| *#8* | | | | | | | |
| *#9* | | | | | | | |
| *#10* | | | | | | | |
| *#11* | | | | | | | |
| *#12* | | | | | | | |
| *#13* | | | | | | | |
| *#14* | | | | | | | |
| *#15* | | | | | | | |
| *#16* | | | | | | | |

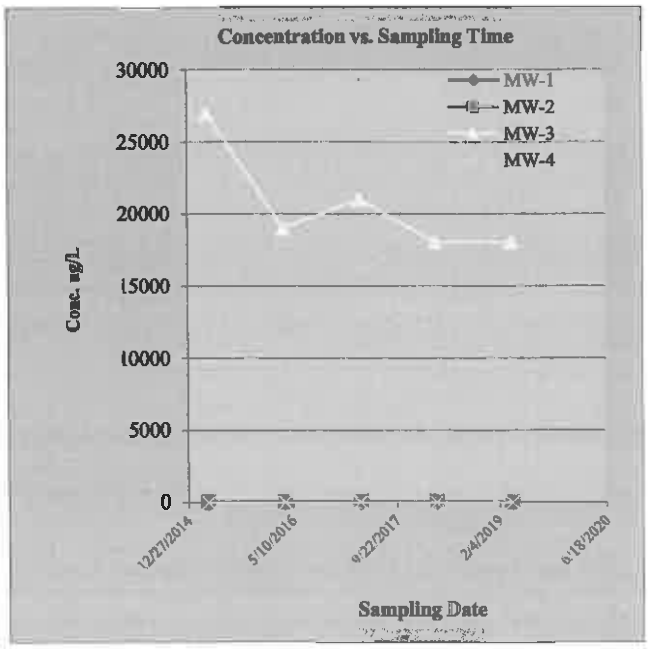
**2. Mann-Kendall Non-parametric Statistical Test Results**

| Hazardous Substance? | MW-1 | MW-2 | MW-3 | MW-4 | | |
|---|---|---|---|---|---|---|
| Confidence Level Calculated? | 75.80% | 40.80% | 88.30% | 88.30% | NA | NA |
| **Plume Stability?** | Stable | Stable | Stable | Stable | NA | NA |
| Coefficient of Variation? | CV <= 1 | CV <= 1 | CV <= 1 | CV <= 1 | n<4 | n<4 |
| Mann-Kendall Statistic "S" value? | -5 | -1 | -7 | 6 | 0 | 0 |
| Number of Sampling Rounds? | 5 | 5 | 5 | 5 | 0 | 0 |
| Average Concentration? | 0.52 | 79.40 | 20600.00 | 3.40 | NA | NA |
| Standard Deviation? | 0.39 | 23.23 | 3781.53 | 1.42 | NA | NA |
| Coefficient of Variation? | 0.75 | 0.29 | 0.18 | 0.42 | NA | NA |
| Blank if No Errors found | | | | | n<4 | n<4 |

**3. Temporal Trend: Plot of Concentration vs. Sampling Time**

Hazardous substance? **MW-2**
Plume Stability? **Stable**



# Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)

*Site Name:* *Montrose*
*Site Address:* *Henderson, NV*
*Additional Description:* *1,2 Dichlorobenzene*

**Well (Sampling) Location?** **MS**
**Level of Confidence (Decision Criteria)?** **90%**

**1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.**

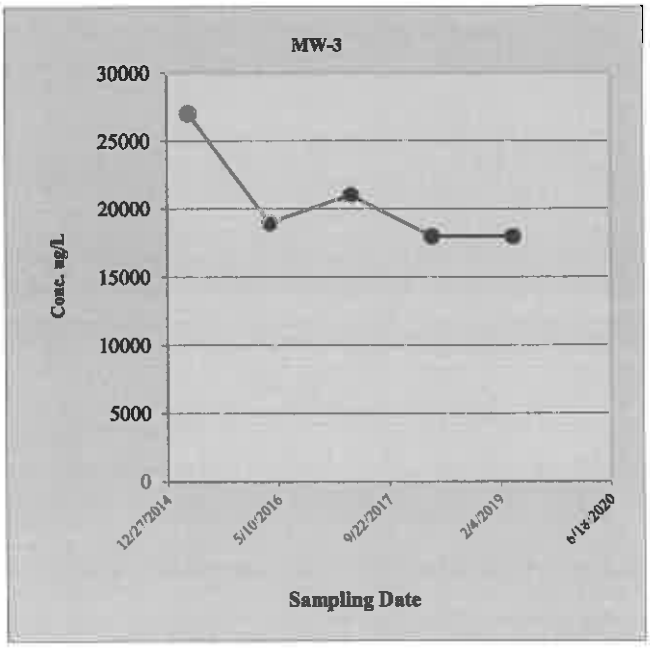
| | | Hazardous Substances (unit is ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sampling Event | Date Sampled | MW-1 | MW-2 | MW-3 | MW-4 | | |
| *#1* | Apr-15 | 0.73 | 81 | 27000 | 1.3 | | |
| *#2* | Apr-16 | 1.1 | 72 | 19000 | 3.6 | | |
| *#3* | Apr-17 | 0.25 | 100 | 21000 | 2.8 | | |
| *#4* | Apr-18 | 0.25 | 100 | 18000 | 4.9 | | |
| *#5* | Apr-19 | 0.25 | 44 | 18000 | 4.4 | | |
| *#6* | | | | | | | |
| *#7* | | | | | | | |
| *#8* | | | | | | | |
| *#9* | | | | | | | |
| *#10* | | | | | | | |
| *#11* | | | | | | | |
| *#12* | | | | | | | |
| *#13* | | | | | | | |
| *#14* | | | | | | | |
| *#15* | | | | | | | |
| *#16* | | | | | | | |

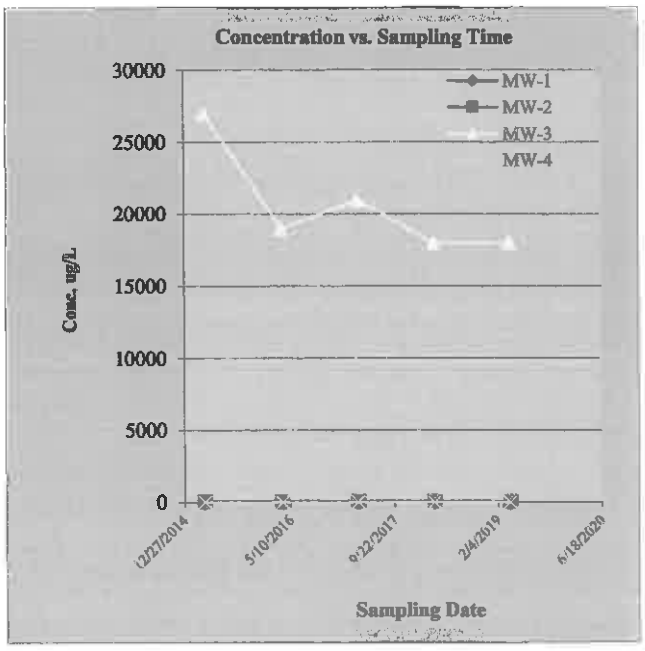
**2. Mann-Kendall Non-parametric Statistical Test Results**

| Hazardous Substance? | MW-1 | MW-2 | MW-3 | MW-4 | | |
|---|---|---|---|---|---|---|
| Confidence Level Calculated? | 75.80% | 40.80% | 88.30% | 88.30% | NA | NA |
| **Plume Stability?** | Stable | Stable | Stable | Stable | NA | NA |
| Coefficient of Variation? | CV <= 1 | CV <= 1 | CV <= 1 | CV <= 1 | n<4 | n<4 |
| Mann-Kendall Statistic "S" value? | -5 | -1 | -7 | 6 | 0 | 0 |
| Number of Sampling Rounds? | 5 | 5 | 5 | 5 | 0 | 0 |
| Average Concentration? | 0.52 | 79.40 | 20600.00 | 3.40 | NA | NA |
| Standard Deviation? | 0.39 | 23.23 | 3781.53 | 1.42 | NA | NA |
| Coefficient of Variation? | 0.75 | 0.29 | 0.18 | 0.42 | NA | NA |
| Blank if No Errors found | | | | | n<4 | n<4 |

**3. Temporal Trend: Plot of Concentration vs. Sampling Time**

Hazardous substance? **MW-3**
Plume Stability? **Stable**



## Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)

| | |
|---|---|
| *Site Name:* | *Montrose* |
| *Site Address:* | *Henderson, NV* |
| *Additional Description:* | *1,2 Dichlorobenzene* |

| | |
|---|---|
| **Well (Sampling) Location?** | **MS** |
| **Level of Confidence (Decision Criteria)?** | **90%** |

**1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.**

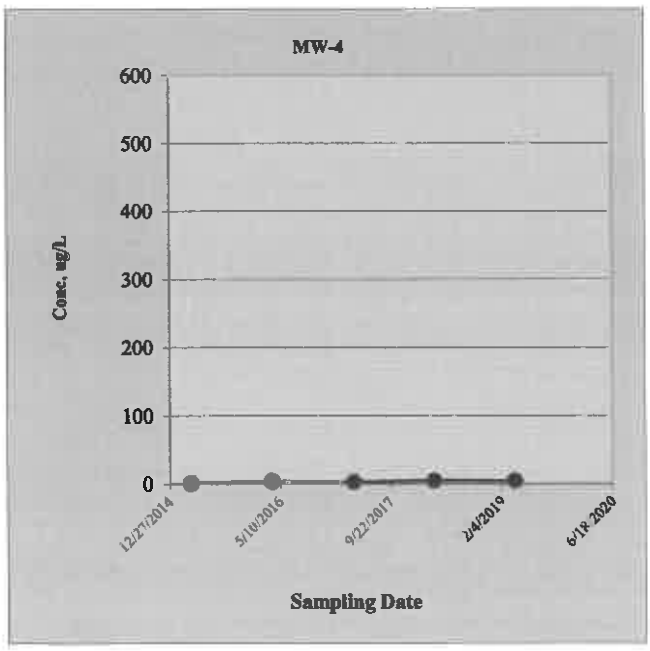
| | | Hazardous Substances (unit is ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sampling Event | Date Sampled | MW-1 | MW-2 | MW-3 | MW-4 | | |
| *#1* | Apr-15 | 0.73 | 81 | 27000 | 1.3 | | |
| *#2* | Apr-16 | 1.1 | 72 | 19000 | 3.6 | | |
| *#3* | Apr-17 | 0.25 | 100 | 21000 | 2.8 | | |
| *#4* | Apr-18 | 0.25 | 100 | 18000 | 4.9 | | |
| *#5* | Apr-19 | 0.25 | 44 | 18000 | 4.4 | | |
| *#6* | | | | | | | |
| *#7* | | | | | | | |
| *#8* | | | | | | | |
| *#9* | | | | | | | |
| *#10* | | | | | | | |
| *#11* | | | | | | | |
| *#12* | | | | | | | |
| *#13* | | | | | | | |
| *#14* | | | | | | | |
| *#15* | | | | | | | |
| *#16* | | | | | | | |

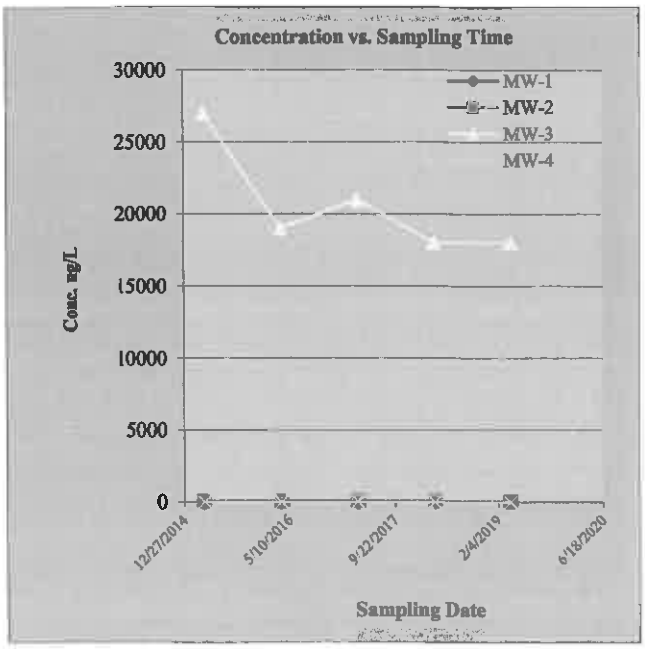
**2. Mann-Kendall Non-parametric Statistical Test Results**

| Hazardous Substance? | MW-1 | MW-2 | MW-3 | MW-4 | | |
|---|---|---|---|---|---|---|
| Confidence Level Calculated? | 75.80% | 40.80% | 88.30% | 88.30% | NA | NA |
| **Plume Stability?** | Stable | Stable | Stable | Stable | NA | NA |
| Coefficient of Variation? | CV <= 1 | CV <= 1 | CV <= 1 | CV <= 1 | n<4 | n<4 |
| Mann-Kendall Statistic "S" value? | -5 | -1 | -7 | 6 | 0 | 0 |
| Number of Sampling Rounds? | 5 | 5 | 5 | 5 | 0 | 0 |
| Average Concentration? | 0.52 | 79.40 | 20600.00 | 3.40 | NA | NA |
| Standard Deviation? | 0.39 | 23.23 | 3781.53 | 1.42 | NA | NA |
| Coefficient of Variation? | 0.75 | 0.29 | 0.18 | 0.42 | NA | NA |
| Blank if No Errors found | | | | | n<4 | n<4 |

**3. Temporal Trend: Plot of Concentration vs. Sampling Time**

| | |
|---|---|
| Hazardous substance? | **MW-4** |
| Plume Stability? | **Stable** |



# Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)

| | |
|---|---|
| *Site Name:* | *Montrose* |
| *Site Address:* | *Henderson, NV* |
| *Additional Description:* | *1,4 Dichlorobenzene* |

| | |
|---|---|
| **Well (Sampling) Location?** | **MS** |
| **Level of Confidence (Decision Criteria)?** | **90%** |

**1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.**

| | | Hazardous Substances (unit is ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sampling Event | Date Sampled | MW-1 | MW-2 | MW-3 | MW-4 | | |
| *#1* | Apr-15 | 0.64 | 160 | 28000 | 1.3 | | |
| *#2* | Apr-16 | 1.2 | 120 | 17000 | 3.6 | | |
| *#3* | Apr-17 | 0.25 | 140 | 19000 | 2.8 | | |
| *#4* | Apr-18 | 0.25 | 110 | 14000 | 4.3 | | |
| *#5* | Apr-19 | 0.25 | 69 | 16000 | 4 | | |
| *#6* | | | | | | | |
| *#7* | | | | | | | |
| *#8* | | | | | | | |
| *#9* | | | | | | | |
| *#10* | | | | | | | |
| *#11* | | | | | | | |
| *#12* | | | | | | | |
| *#13* | | | | | | | |
| *#14* | | | | | | | |
| *#15* | | | | | | | |
| *#16* | | | | | | | |

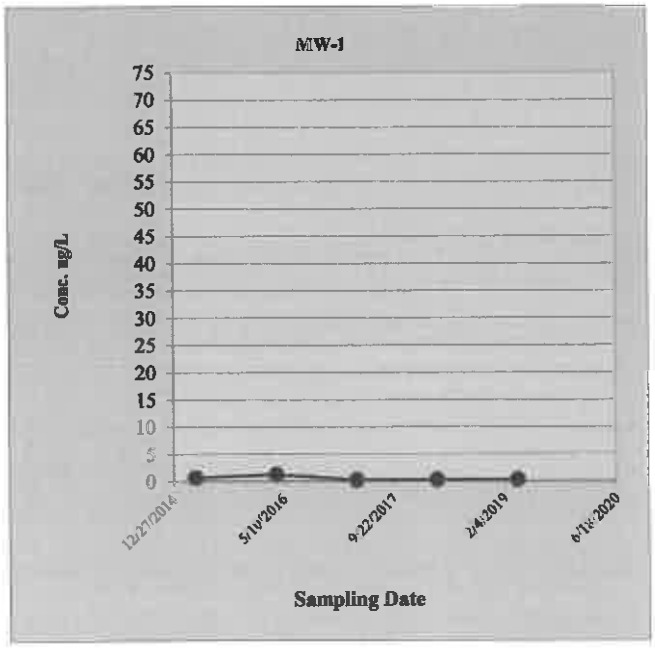
**2. Mann-Kendall Non-parametric Statistical Test Results**

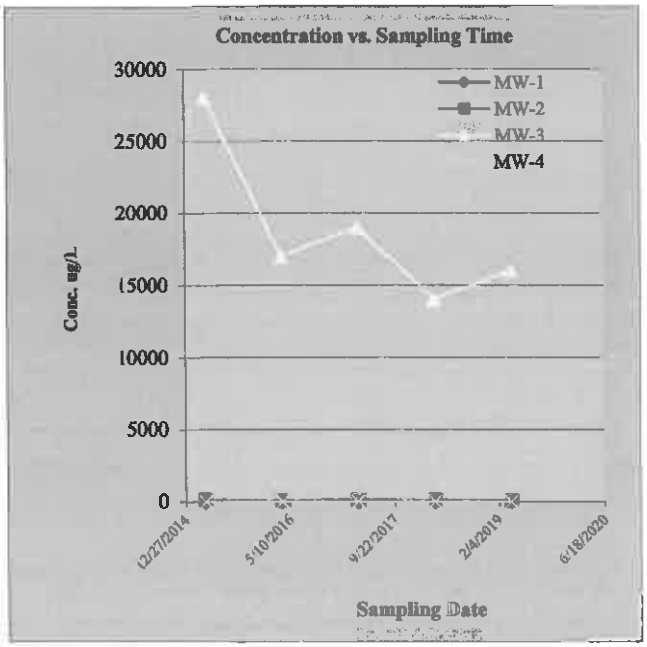
| Hazardous Substance? | MW-1 | MW-2 | MW-3 | MW-4 | | |
|---|---|---|---|---|---|---|
| Confidence Level Calculated? | 75.80% | 95.80% | 88.30% | 88.30% | NA | NA |
| **Plume Stability?** | Stable | Shrinking | Stable | Stable | NA | NA |
| Coefficient of Variation? | CV <= 1 | | CV <= 1 | CV <= 1 | n<4 | n<4 |
| Mann-Kendall Statistic "S" value? | -5 | -8 | -6 | 6 | 0 | 0 |
| Number of Sampling Rounds? | 5 | 5 | 5 | 5 | 0 | 0 |
| Average Concentration? | 0.52 | 119.80 | 18800.00 | 3.20 | NA | NA |
| Standard Deviation? | 0.42 | 34.28 | 5449.77 | 1.20 | NA | NA |
| Coefficient of Variation? | 0.80 | 0.29 | 0.29 | 0.38 | NA | NA |
| Blank if No Errors found | | | | | n<4 | n<4 |

**3. Temporal Trend: Plot of Concentration vs. Sampling Time**

Hazardous substance? **MW-1**

Plume Stability? **Stable**



# Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)

*Site Name:* *Montrose*
*Site Address:* *Henderson, NV*
*Additional Description:* *1,4 Dichlorobenzene*

**Well (Sampling) Location?** **MS**
**Level of Confidence (Decision Criteria)?** **90%**

**1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.**

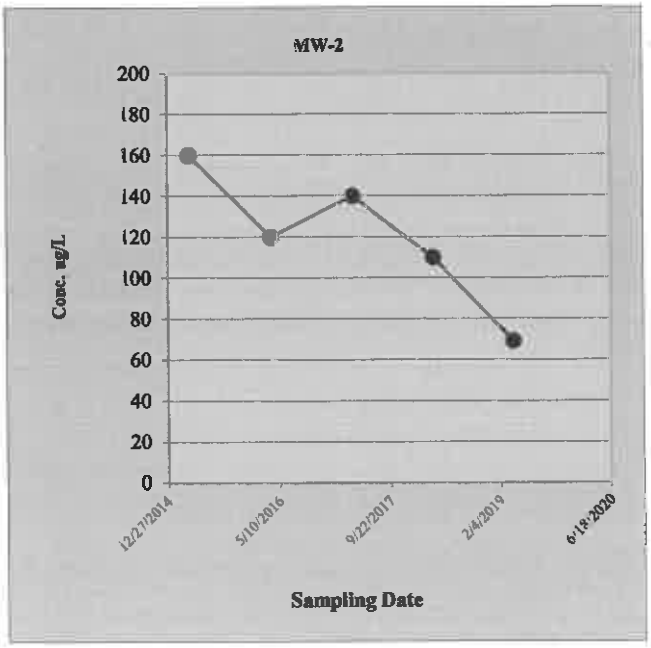
| | | Hazardous Substances (unit is ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sampling Event | Date Sampled | MW-1 | MW-2 | MW-3 | MW-4 | | |
| *#1* | Apr-15 | 0.64 | 160 | 28000 | 1.3 | | |
| *#2* | Apr-16 | 1.2 | 120 | 17000 | 3.6 | | |
| *#3* | Apr-17 | 0.25 | 140 | 19000 | 2.8 | | |
| *#4* | Apr-18 | 0.25 | 110 | 14000 | 4.3 | | |
| *#5* | Apr-19 | 0.25 | 69 | 16000 | 4 | | |
| *#6* | | | | | | | |
| *#7* | | | | | | | |
| *#8* | | | | | | | |
| *#9* | | | | | | | |
| *#10* | | | | | | | |
| *#11* | | | | | | | |
| *#12* | | | | | | | |
| *#13* | | | | | | | |
| *#14* | | | | | | | |
| *#15* | | | | | | | |
| *#16* | | | | | | | |

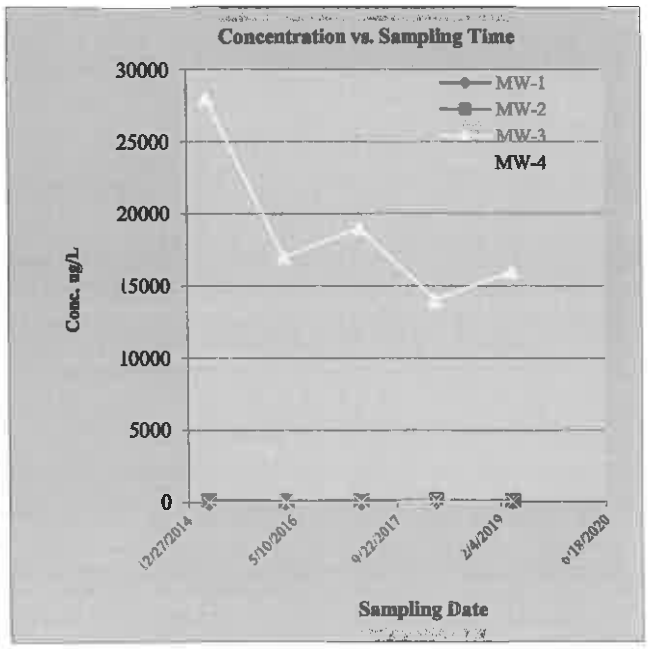
**2. Mann-Kendall Non-parametric Statistical Test Results**

| Hazardous Substance? | MW-1 | MW-2 | MW-3 | MW-4 | | |
|---|---|---|---|---|---|---|
| Confidence Level Calculated? | 75.80% | 95.80% | 88.30% | 88.30% | NA | NA |
| **Plume Stability?** | Stable | Shrinking | Stable | Stable | NA | NA |
| Coefficient of Variation? | CV <= 1 | | CV <= 1 | CV <= 1 | n<4 | n<4 |
| Mann-Kendall Statistic "S" value? | -5 | -8 | -6 | 6 | 0 | 0 |
| Number of Sampling Rounds? | 5 | 5 | 5 | 5 | 0 | 0 |
| Average Concentration? | 0.52 | 119.80 | 18800.00 | 3.20 | NA | NA |
| Standard Deviation? | 0.42 | 34.28 | 5449.77 | 1.20 | NA | NA |
| Coefficient of Variation? | 0.80 | 0.29 | 0.29 | 0.38 | NA | NA |
| Blank if No Errors found | | | | | n<4 | n<4 |

**3. Temporal Trend: Plot of Concentration vs. Sampling Time**

Hazardous substance? **MW-2**
Plume Stability? **Shrinking**



# Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)

*Site Name:* *Montrose*
*Site Address:* *Henderson, NV*
*Additional Description:* *1,4 Dichlorobenzene*

**Well (Sampling) Location?** **MS**
**Level of Confidence (Decision Criteria)?** **90%**

## 1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.

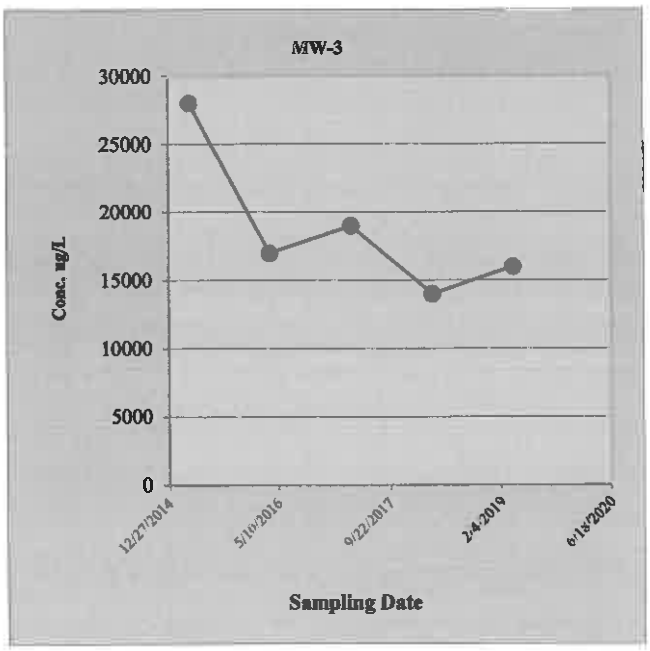
| | | Hazardous Substances (unit is ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sampling Event | Date Sampled | MW-1 | MW-2 | MW-3 | MW-4 | | |
| *#1* | Apr-15 | 0.64 | 160 | 28000 | 1.3 | | |
| *#2* | Apr-16 | 1.2 | 120 | 17000 | 3.6 | | |
| *#3* | Apr-17 | 0.25 | 140 | 19000 | 2.8 | | |
| *#4* | Apr-18 | 0.25 | 110 | 14000 | 4.3 | | |
| *#5* | Apr-19 | 0.25 | 69 | 16000 | 4 | | |
| *#6* | | | | | | | |
| *#7* | | | | | | | |
| *#8* | | | | | | | |
| *#9* | | | | | | | |
| *#10* | | | | | | | |
| *#11* | | | | | | | |
| *#12* | | | | | | | |
| *#13* | | | | | | | |
| *#14* | | | | | | | |
| *#15* | | | | | | | |
| *#16* | | | | | | | |

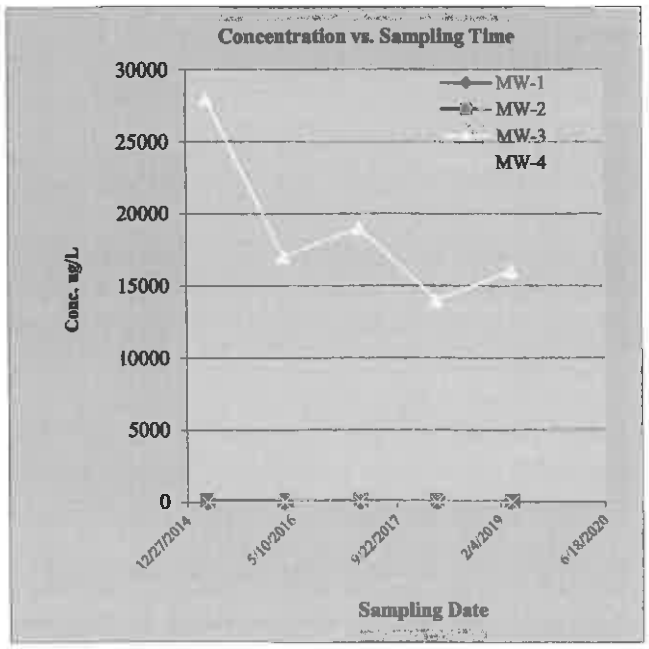
## 2. Mann-Kendall Non-parametric Statistical Test Results

| Hazardous Substance? | MW-1 | MW-2 | MW-3 | MW-4 | | |
|---|---|---|---|---|---|---|
| Confidence Level Calculated? | 75.80% | 95.80% | 88.30% | 88.30% | NA | NA |
| **Plume Stability?** | Stable | Shrinking | Stable | Stable | NA | NA |
| Coefficient of Variation? | CV <= 1 | | CV <= 1 | CV <= 1 | n<4 | n<4 |
| Mann-Kendall Statistic "S" value? | -5 | -8 | -6 | 6 | 0 | 0 |
| Number of Sampling Rounds? | 5 | 5 | 5 | 5 | 0 | 0 |
| Average Concentration? | 0.52 | 119.80 | 18800.00 | 3.20 | NA | NA |
| Standard Deviation? | 0.42 | 34.28 | 5449.77 | 1.20 | NA | NA |
| Coefficient of Variation? | 0.80 | 0.29 | 0.29 | 0.38 | NA | NA |
| Blank if No Errors found | | | | | n<4 | n<4 |

## 3. Temporal Trend: Plot of Concentration vs. Sampling Time

Hazardous substance? **MW-3**
Plume Stability? **Stable**



# Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)

| | |
|---|---|
| *Site Name:* | *Montrose* |
| *Site Address:* | *Henderson, NV* |
| *Additional Description:* | *1,4 Dichlorobenzene* |

| | |
|---|---|
| **Well (Sampling) Location?** | **MS** |
| **Level of Confidence (Decision Criteria)?** | **90%** |

**1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.**

| | | Hazardous Substances (unit is ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sampling Event | Date Sampled | MW-1 | MW-2 | MW-3 | MW-4 | | |
| *#1* | Apr-15 | 0.64 | 160 | 28000 | 1.3 | | |
| *#2* | Apr-16 | 1.2 | 120 | 17000 | 3.6 | | |
| *#3* | Apr-17 | 0.25 | 140 | 19000 | 2.8 | | |
| *#4* | Apr-18 | 0.25 | 110 | 14000 | 4.3 | | |
| *#5* | Apr-19 | 0.25 | 69 | 16000 | 4 | | |
| *#6* | | | | | | | |
| *#7* | | | | | | | |
| *#8* | | | | | | | |
| *#9* | | | | | | | |
| *#10* | | | | | | | |
| *#11* | | | | | | | |
| *#12* | | | | | | | |
| *#13* | | | | | | | |
| *#14* | | | | | | | |
| *#15* | | | | | | | |
| *#16* | | | | | | | |

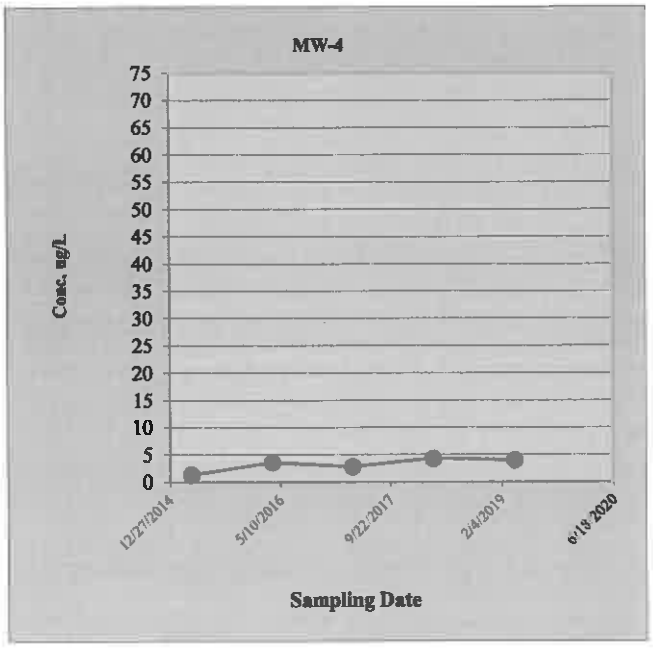
**2. Mann-Kendall Non-parametric Statistical Test Results**

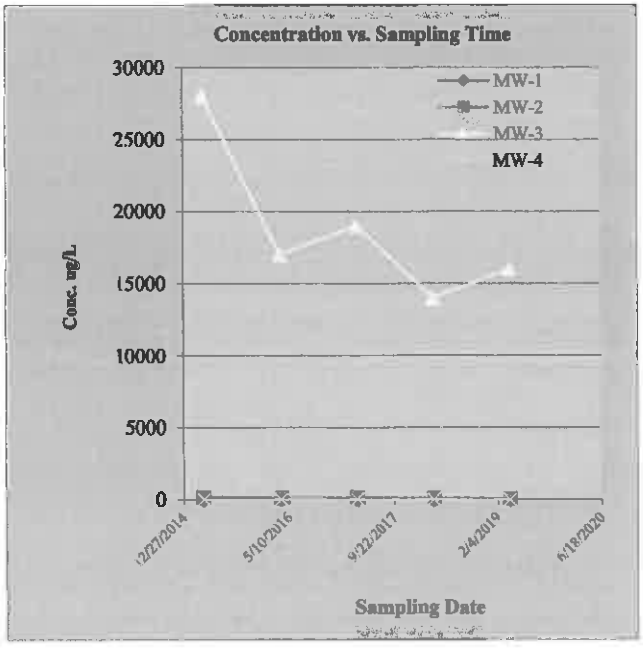
| Hazardous Substance? | MW-1 | MW-2 | MW-3 | MW-4 | | |
|---|---|---|---|---|---|---|
| Confidence Level Calculated? | 75.80% | 95.80% | 88.30% | 88.30% | NA | NA |
| **Plume Stability?** | Stable | Shrinking | Stable | Stable | NA | NA |
| Coefficient of Variation? | CV <= 1 | | CV <= 1 | CV <= 1 | n<4 | n<4 |
| Mann-Kendall Statistic "S" value? | -5 | -8 | -6 | 6 | 0 | 0 |
| Number of Sampling Rounds? | 5 | 5 | 5 | 5 | 0 | 0 |
| Average Concentration? | 0.52 | 119.80 | 18800.00 | 3.20 | NA | NA |
| Standard Deviation? | 0.42 | 34.28 | 5449.77 | 1.20 | NA | NA |
| Coefficient of Variation? | 0.80 | 0.29 | 0.29 | 0.38 | NA | NA |
| Blank if No Errors found | | | | | n<4 | n<4 |

**3. Temporal Trend: Plot of Concentration vs. Sampling Time**

Hazardous substance? **MW-4**

Plume Stability? **Stable**



# Appendix B

## Groundwater Elevation Data

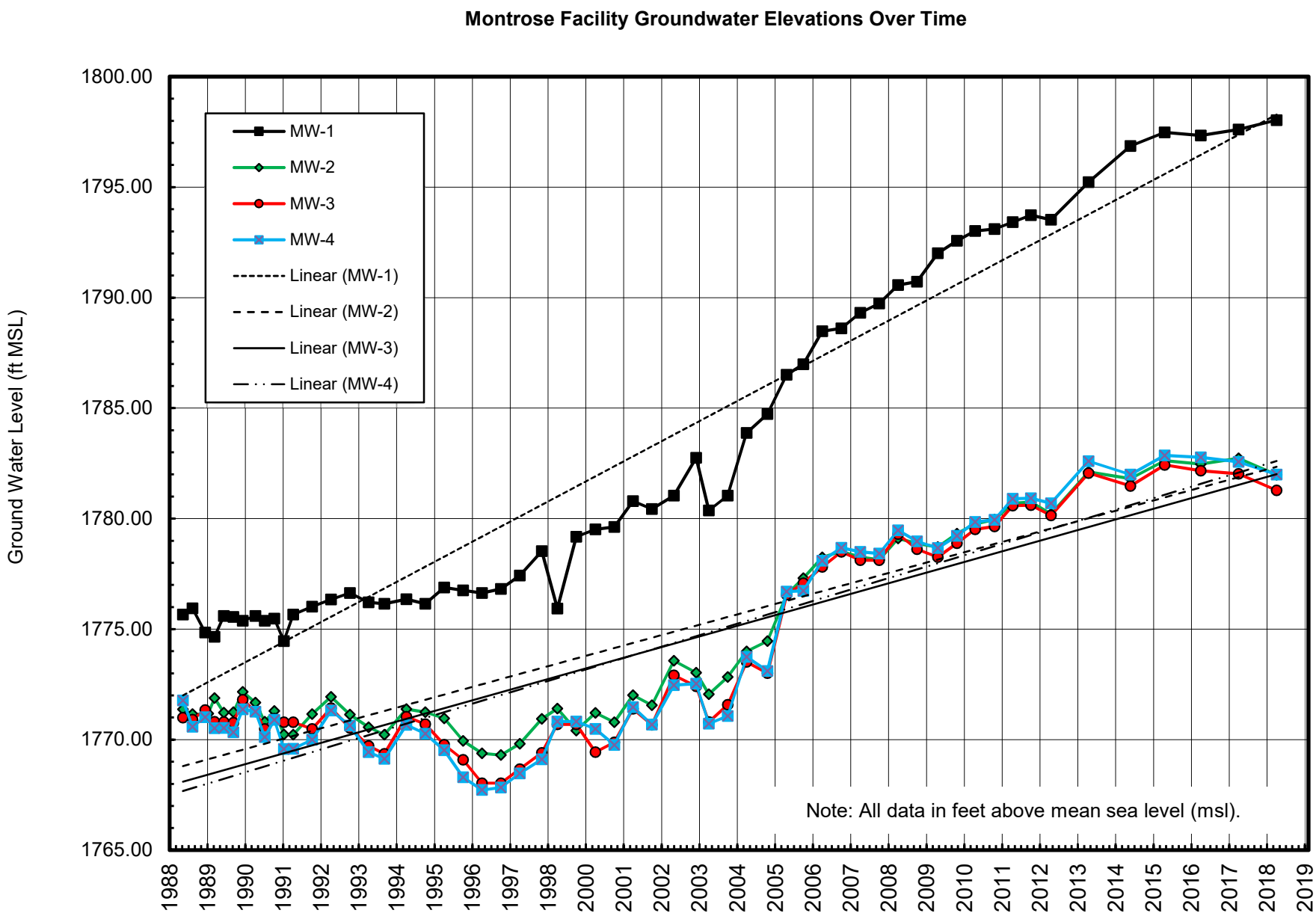
# Montrose Facility
## *Groundwater Elevation Data*

| Well I.D. | MW-1 | MW-2 | MW-3 | MW-4 |
|---|---|---|---|---|
| **M.P.E.** | **1851.18** | **1825.26** | **1826.31** | **1826.20** |
| **Date** | | | | |
| **May-89** | 1775.66 | 1771.37 | 1770.99 | 1771.77 |
| **Aug-89** | 1775.94 | 1771.16 | 1770.91 | 1770.58 |
| **Dec-89** | 1774.85 | 1771.14 | 1771.34 | 1771.02 |
| **Jan-90** | -- | 1771.18 | -- | -- |
| **Mar-90** | 1774.65 | 1771.88 | 1770.81 | 1770.52 |
| **Jun-90** | 1775.60 | 1771.22 | 1770.80 | 1770.53 |
| **Sep-90** | 1775.55 | 1771.24 | 1770.77 | 1770.33 |
| **Dec-90** | 1775.38 | 1772.16 | 1771.81 | 1771.37 |
| **Apr-91** | 1775.60 | 1771.68 | 1771.28 | 1771.26 |
| **Jul-91** | 1775.38 | 1770.81 | 1770.49 | 1770.12 |
| **Oct-91** | 1775.48 | 1771.30 | 1770.95 | 1770.90 |
| **Jan-92** | 1774.46 | 1770.24 | 1770.79 | 1769.58 |
| **Apr-92** | 1775.66 | 1770.22 | 1770.79 | 1769.59 |
| **Oct-92** | 1776.02 | 1771.16 | 1770.48 | 1770.00 |
| **Apr-93** | 1776.34 | 1771.94 | 1771.43 | 1771.32 |
| **Oct-93** | 1776.63 | 1771.14 | 1770.53 | 1770.64 |
| **Apr-94** | 1776.21 | 1770.56 | 1769.72 | 1769.44 |
| **Sep-94** | 1776.15 | 1770.22 | 1769.36 | 1769.13 |
| **Apr-95** | 1776.35 | 1771.38 | 1771.04 | 1770.67 |
| **Oct-95** | 1776.15 | 1771.24 | 1770.70 | 1770.27 |
| **Apr-96** | 1776.88 | 1770.96 | 1769.77 | 1769.52 |
| **Oct-96** | 1776.75 | 1769.94 | 1769.09 | 1768.30 |
| **Apr-97** | 1776.64 | 1769.38 | 1768.03 | 1767.72 |
| **Oct-97** | 1776.82 | 1769.30 | 1768.03 | 1767.83 |
| **Apr-98** | 1777.42 | 1769.81 | 1768.67 | 1768.47 |
| **Nov-98** | 1778.53 | 1770.94 | 1769.40 | 1769.11 |
| **Apr-99** | 1775.93 | 1771.41 | 1770.69 | 1770.82 |
| **Oct-99** | 1779.18 | 1770.41 | 1770.69 | 1770.82 |
| **Apr-00** | 1779.52 | 1771.21 | 1769.43 | 1770.48 |
| **Oct-00** | 1779.62 | 1770.79 | 1769.88 | 1769.76 |
| **Apr-01** | 1780.79 | 1772.01 | 1771.39 | 1771.47 |
| **Oct-01** | 1780.44 | 1771.56 | 1770.67 | 1770.68 |
| **Apr-02** | 1781.04 | 1773.57 | 1772.91 | 1772.47 |
| **Dec-02** | 1782.75 | 1773.03 | 1772.41 | 1772.53 |
| **Apr-03** | 1780.37 | 1772.06 | 1770.80 | 1770.72 |
| **Oct-03** | 1781.04 | 1772.83 | 1771.58 | 1771.07 |
| **Apr-04** | 1783.88 | 1773.99 | 1773.52 | 1773.74 |
| **Oct-04** | 1784.73 | 1774.46 | 1773.01 | 1773.10 |
| **Apr-05** | 1786.51 | 1776.56 | 1776.56 | 1776.70 |
| **Oct-05** | 1786.99 | 1777.31 | 1777.08 | 1776.73 |
| **Apr-06** | 1788.48 | 1778.25 | 1777.81 | 1778.10 |
| **Oct-07** | 1788.61 | 1778.51 | 1778.50 | 1778.68 |
| **Apr-07** | 1789.31 | 1778.26 | 1778.12 | 1778.50 |
| **Oct-07** | 1789.74 | 1778.14 | 1778.12 | 1778.42 |
| **Apr-08** | 1790.57 | 1779.10 | 1779.30 | 1779.47 |
| **Oct-08** | 1790.72 | 1778.88 | 1778.62 | 1778.97 |
| **Apr-09** | 1792.01 | 1778.71 | 1778.26 | 1778.67 |
| **Oct-09** | 1792,57 | 1779.32 | 1778.89 | 1779.22 |
| **Apr-10** | 1793.02 | 1779.76 | 1779.51 | 1779.85 |
| **Oct-10** | 1793.10 | 1779.96 | 1779.64 | 1779.95 |
| **Apr-11** | 1793.42 | 1780.70 | 1780.59 | 1780.90 |
| **Oct-11** | 1793.73 | 1780.75 | 1780.61 | 1780.92 |
| **Apr-12** | 1793.53 | 1780.21 | 1780.14 | 1780.70 |
| **Apr-13** | 1795.23 | 1782.11 | 1782.06 | 1782.60 |
| **Jun-14** | 1796.86 | 1781.81 | 1781.47 | 1781.99 |
| **Apr-15** | 1797.48 | 1782.62 | 1782.43 | 1782.86 |
| **Apr-16** | 1797.34 | 1782.47 | 1782.17 | 1782.77 |
| **Apr-17** | 1797.61 | 1782.73 | 1782.03 | 1782.57 |
| **Apr-18** | 1798.03 | 1781.98 | 1781.28 | 1781.99 |
| **Apr-19** | 1797.99 | 1781.97 | 1781.38 | 1782.01 |

**Notes:**

All data in feet above mean sea level (msl) calculated from depth to water measurements and 2004 top-of-casing Nevada State Plane elevation survey.

M.P.E. = Measuring Point Elevation


Montrose Facility Groundwater Elevations Over Time
Ground Water Level (ft MSL)
1800.00
1795.00
1790.00
1785.00
1780.00
1775.00
1770.00
1765.00
MW-1
MW-2
MW-3
MW-4
Linear (MW-1)
Linear (MW-2)
Linear (MW-3)
Linear (MW-4)
Note: All data in feet above mean sea level (msl).
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

# Appendix C

## April 2019 Laboratory Report

eurofins | Environment Testing TestAmerica

# ANALYTICAL REPORT

Eurofins TestAmerica, Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-238791-1
Laboratory Sample Delivery Group: Henderson, NV
Client Project/Site: Montrose Wells

For:
Montrose Chemical Company
731 Pilot Road, Suite H
Las Vegas, Nevada 89119

Attn: Ed Modiano

*Authorized for release by:*
*5/15/2019 1:02:33 PM*

Danielle Roberts, Senior Project Manager
(949)260-3249
danielle.roberts@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Sample Summary

Client: Montrose Chemical Company
Project/Site: Montrose Wells

Job ID: 440-238791-1
SDG: Henderson, NV

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 440-238791-1 | MW-1-201090412 | Water | 04/12/19 10:26 | 04/13/19 10:30 |
| 440-238791-2 | MW-2-20190412 | Water | 04/12/19 08:48 | 04/13/19 10:30 |
| 440-238791-3 | MW-3-20190412 | Water | 04/12/19 08:53 | 04/13/19 10:30 |
| 440-238791-4 | MW-4-20190412 | Water | 04/12/19 10:23 | 04/13/19 10:30 |
| 440-238791-5 | TB-20190412 | Water | 04/12/19 06:40 | 04/13/19 10:30 |
| 440-238791-6 | PL-509-20190412 | Water | 04/12/19 10:30 | 04/13/19 10:30 |

## Job ID: 440-238791-1

### Laboratory: Eurofins TestAmerica, Irvine

**Narrative**

**Job Narrative**
**440-238791-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 4/13/2019 10:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.2° C.

**Receipt Exceptions**

The following sample(s) was received with headspace in the sample container. This sample container was received with headspace. TB-20190412 (440-238791-5). Received one out of three voa vials TB with headspace more than 6 mm. Two remain.

**GC/MS VOA**
Method(s) 8260: Dilution error corrected for MW-2-20190412 (440-238791-2), 5/15/2019.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**GC/MS Semi VOA**
Method(s) 8270C: The following sample was diluted due to the abundance of non-target analytes: MW-3-20190412 (440-238791-3). Elevated reporting limits (RLs) are provided.

Method(s) 8270C: The following sample required a dilution due to the nature of the sample matrix: MW-3-20190412 (440-238791-3). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**GC Semi VOA**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**Organic Prep**
Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-541200. Method 8270-REG. LCS was performed in duplicate to provide precision of data.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**VOA Prep**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: Montrose Chemical Company
Project/Site: Montrose Wells

Job ID: 440-238791-1
SDG: Henderson, NV

## Client Sample ID: MW-1-201090412 — Lab Sample ID: 440-238791-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | 3.3 | | 2.0 | 0.25 | ug/L | 1 | | 8260B | Total/NA |

## Client Sample ID: MW-2-20190412 — Lab Sample ID: 440-238791-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 46 | J | 200 | 25 | ug/L | 100 | | 8260B | Total/NA |
| 1,4-Dichlorobenzene | 69 | J | 200 | 25 | ug/L | 100 | | 8260B | Total/NA |
| Benzene | 1300 | | 200 | 25 | ug/L | 100 | | 8260B | Total/NA |
| Carbon tetrachloride | 97 | J | 100 | 25 | ug/L | 100 | | 8260B | Total/NA |
| Chlorobenzene | 1600 | | 200 | 25 | ug/L | 100 | | 8260B | Total/NA |
| Chloroform - DL | 94000 | | 20000 | 2500 | ug/L | 10000 | | 8260B | Total/NA |
| alpha-BHC | 0.029 | | 0.0049 | 0.0025 | ug/L | 1 | | 8081A | Total/NA |
| gamma-BHC (Lindane) | 0.0047 | J | 0.098 | 0.0029 | ug/L | 1 | | 8081A | Total/NA |

## Client Sample ID: MW-3-20190412 — Lab Sample ID: 440-238791-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 58 | J | 500 | 40 | ug/L | 100 | | 8260B | Total/NA |
| 1,3-Dichlorobenzene | 750 | | 200 | 25 | ug/L | 100 | | 8260B | Total/NA |
| Benzene | 400 | | 200 | 25 | ug/L | 100 | | 8260B | Total/NA |
| Methylene Chloride | 120 | J | 200 | 110 | ug/L | 100 | | 8260B | Total/NA |
| 1,2-Dichlorobenzene - DL | 18000 | | 4000 | 500 | ug/L | 2000 | | 8260B | Total/NA |
| 1,4-Dichlorobenzene - DL | 16000 | | 4000 | 500 | ug/L | 2000 | | 8260B | Total/NA |
| Chlorobenzene - DL | 12000 | | 4000 | 500 | ug/L | 2000 | | 8260B | Total/NA |
| Chloroform - DL | 25000 | | 4000 | 500 | ug/L | 2000 | | 8260B | Total/NA |
| alpha-BHC | 0.22 | | 0.0049 | 0.0024 | ug/L | 1 | | 8081A | Total/NA |
| beta-BHC | 0.23 | | 0.0097 | 0.0039 | ug/L | 1 | | 8081A | Total/NA |
| gamma-BHC (Lindane) | 0.14 | p | 0.097 | 0.0029 | ug/L | 1 | | 8081A | Total/NA |

## Client Sample ID: MW-4-20190412 — Lab Sample ID: 440-238791-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 4.4 | | 4.0 | 0.50 | ug/L | 2 | | 8260B | Total/NA |
| 1,4-Dichlorobenzene | 4.0 | | 4.0 | 0.50 | ug/L | 2 | | 8260B | Total/NA |
| Carbon tetrachloride | 0.93 | J | 2.0 | 0.50 | ug/L | 2 | | 8260B | Total/NA |
| Chlorobenzene | 2.2 | J | 4.0 | 0.50 | ug/L | 2 | | 8260B | Total/NA |
| Chloroform - DL | 520 | | 200 | 25 | ug/L | 100 | | 8260B | Total/NA |
| alpha-BHC | 0.0030 | J | 0.0051 | 0.0025 | ug/L | 1 | | 8081A | Total/NA |

## Client Sample ID: TB-20190412 — Lab Sample ID: 440-238791-5

No Detections.

## Client Sample ID: PL-509-20190412 — Lab Sample ID: 440-238791-6

No Detections.

This Detection Summary does not include radiochemical test results.

# Client Sample Results

Client: Montrose Chemical Company
Project/Site: Montrose Wells

Job ID: 440-238791-1
SDG: Henderson, NV

## Client Sample ID: MW-1-201090412

**Date Collected: 04/12/19 10:26**
**Date Received: 04/13/19 10:30**

## Lab Sample ID: 440-238791-1

**Matrix: Water**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| 1,1,1-Trichloroethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| 1,1,2-Trichloroethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| 1,1-Dichloroethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| 1,1-Dichloroethene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| 1,1-Dichloropropene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 5.0 | 0.40 | ug/L | | | 04/26/19 11:24 | 1 |
| 1,2,3-Trichloropropane | ND | | 10 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 5.0 | 0.40 | ug/L | | | 04/26/19 11:24 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | 0.50 | ug/L | | | 04/26/19 11:24 | 1 |
| 1,2-Dibromoethane (EDB) | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| 1,2-Dichlorobenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| 1,2-Dichloroethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| 1,2-Dichloropropane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| 1,3-Dichlorobenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| 1,3-Dichloropropane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| 1,4-Dichlorobenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| 2,2-Dichloropropane | ND | | 2.0 | 0.40 | ug/L | | | 04/26/19 11:24 | 1 |
| 2-Chlorotoluene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| 4-Chlorotoluene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| Benzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| Bromobenzene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| Bromochloromethane | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| Bromodichloromethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| Bromoform | ND | | 5.0 | 0.40 | ug/L | | | 04/26/19 11:24 | 1 |
| Bromomethane | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| Carbon tetrachloride | ND | | 1.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| Chlorobenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| Chloroethane | ND | | 5.0 | 0.40 | ug/L | | | 04/26/19 11:24 | 1 |
| **Chloroform** | **3.3** | | 2.0 | 0.25 | ug/L | | | 04/25/19 20:58 | 1 |
| Chloromethane | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| cis-1,2-Dichloroethene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| cis-1,3-Dichloropropene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| Dibromochloromethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| Dibromomethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| Dichlorodifluoromethane | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| Dimethyl disulfide | ND | | 2.0 | 1.0 | ug/L | | | 04/26/19 11:24 | 1 |
| Ethylbenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| Hexachlorobutadiene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| Isopropylbenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| m,p-Xylene | ND | | 2.0 | 0.50 | ug/L | | | 04/26/19 11:24 | 1 |
| Methylene Chloride | ND | | 2.0 | 1.1 | ug/L | | | 04/26/19 11:24 | 1 |
| Naphthalene | ND | | 5.0 | 0.40 | ug/L | | | 04/26/19 11:24 | 1 |
| n-Butylbenzene | ND | | 5.0 | 0.40 | ug/L | | | 04/26/19 11:24 | 1 |
| N-Propylbenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| o-Xylene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |

## Client Sample ID: MW-1-201090412

**Date Collected: 04/12/19 10:26**
**Date Received: 04/13/19 10:30**

## Lab Sample ID: 440-238791-1

**Matrix: Water**

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| p-Isopropyltoluene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| sec-Butylbenzene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| Styrene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| tert-Butylbenzene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| Tetrachloroethene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| Toluene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| trans-1,2-Dichloroethene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| trans-1,3-Dichloropropene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| Trichloroethene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| Trichlorofluoromethane | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |
| Vinyl chloride | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 11:24 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *98* | | *70 - 130* | | *04/25/19 20:58* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *91* | | *70 - 130* | | *04/26/19 11:24* | *1* |
| *4-Bromofluorobenzene (Surr)* | *95* | | *80 - 120* | | *04/25/19 20:58* | *1* |
| *4-Bromofluorobenzene (Surr)* | *92* | | *80 - 120* | | *04/26/19 11:24* | *1* |
| *Dibromofluoromethane (Surr)* | *105* | | *76 - 132* | | *04/25/19 20:58* | *1* |
| *Dibromofluoromethane (Surr)* | *107* | | *76 - 132* | | *04/26/19 11:24* | *1* |
| *Toluene-d8 (Surr)* | *104* | | *80 - 128* | | *04/25/19 20:58* | *1* |
| *Toluene-d8 (Surr)* | *104* | | *80 - 128* | | *04/26/19 11:24* | *1* |

### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2,2'-Dichlorobenzil & 4,4'-Dichlorobenzil | ND | | 9.8 | 4.4 | ug/L | | 04/18/19 12:42 | 04/20/19 17:31 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2,4,6-Tribromophenol (Surr)* | *97* | | *40 - 120* | *04/18/19 12:42* | *04/20/19 17:31* | *1* |
| *2-Fluorobiphenyl* | *85* | | *50 - 120* | *04/18/19 12:42* | *04/20/19 17:31* | *1* |
| *2-Fluorophenol (Surr)* | *83* | | *30 - 120* | *04/18/19 12:42* | *04/20/19 17:31* | *1* |
| *Nitrobenzene-d5 (Surr)* | *83* | | *45 - 120* | *04/18/19 12:42* | *04/20/19 17:31* | *1* |
| *Phenol-d6 (Surr)* | *83* | | *35 - 120* | *04/18/19 12:42* | *04/20/19 17:31* | *1* |
| *Terphenyl-d14 (Surr)* | *101* | | *10 - 150* | *04/18/19 12:42* | *04/20/19 17:31* | *1* |

### Method: 8081A - Organochlorine Pesticides (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.0048 | 0.0014 | ug/L | | 04/15/19 10:40 | 04/16/19 17:57 | 1 |
| alpha-BHC | ND | | 0.0048 | 0.0024 | ug/L | | 04/15/19 10:40 | 04/16/19 17:57 | 1 |
| beta-BHC | ND | | 0.0096 | 0.0038 | ug/L | | 04/15/19 10:40 | 04/16/19 17:57 | 1 |
| Chlordane | ND | | 0.096 | 0.077 | ug/L | | 04/15/19 10:40 | 04/16/19 17:57 | 1 |
| 2,4'-DDD | ND | | 0.096 | 0.019 | ug/L | | 04/15/19 10:40 | 04/16/19 17:57 | 1 |
| 4,4'-DDD | ND | | 0.096 | 0.0038 | ug/L | | 04/15/19 10:40 | 04/16/19 17:57 | 1 |
| 2,4'-DDE | ND | | 0.096 | 0.019 | ug/L | | 04/15/19 10:40 | 04/16/19 17:57 | 1 |
| 4,4'-DDE | ND | | 0.096 | 0.0029 | ug/L | | 04/15/19 10:40 | 04/16/19 17:57 | 1 |
| 2,4'-DDT | ND | | 0.096 | 0.019 | ug/L | | 04/15/19 10:40 | 04/16/19 17:57 | 1 |
| 4,4'-DDT | ND | | 0.096 | 0.0038 | ug/L | | 04/15/19 10:40 | 04/16/19 17:57 | 1 |
| delta-BHC | ND | | 0.19 | 0.0034 | ug/L | | 04/15/19 10:40 | 04/16/19 17:57 | 1 |
| Dieldrin | ND | | 0.0048 | 0.0019 | ug/L | | 04/15/19 10:40 | 04/16/19 17:57 | 1 |
| Endosulfan I | ND | | 0.096 | 0.0029 | ug/L | | 04/15/19 10:40 | 04/16/19 17:57 | 1 |
| Endosulfan II | ND | | 0.096 | 0.0019 | ug/L | | 04/15/19 10:40 | 04/16/19 17:57 | 1 |

## Client Sample ID: MW-1-201090412

**Lab Sample ID: 440-238791-1**

**Date Collected: 04/12/19 10:26**

**Matrix: Water**

**Date Received: 04/13/19 10:30**

### Method: 8081A - Organochlorine Pesticides (GC) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Endosulfan sulfate | ND | | 0.19 | 0.0029 | ug/L | | 04/15/19 10:40 | 04/16/19 17:57 | 1 |
| Endrin | ND | | 0.096 | 0.0019 | ug/L | | 04/15/19 10:40 | 04/16/19 17:57 | 1 |
| Endrin aldehyde | ND | | 0.096 | 0.0019 | ug/L | | 04/15/19 10:40 | 04/16/19 17:57 | 1 |
| Endrin ketone | ND | | 0.096 | 0.0067 | ug/L | | 04/15/19 10:40 | 04/16/19 17:57 | 1 |
| gamma-BHC (Lindane) | ND | | 0.096 | 0.0029 | ug/L | | 04/15/19 10:40 | 04/16/19 17:57 | 1 |
| Heptachlor | ND | | 0.0096 | 0.0029 | ug/L | | 04/15/19 10:40 | 04/16/19 17:57 | 1 |
| Heptachlor epoxide | ND | | 0.0048 | 0.0024 | ug/L | | 04/15/19 10:40 | 04/16/19 17:57 | 1 |
| Methoxychlor | ND | | 0.096 | 0.0034 | ug/L | | 04/15/19 10:40 | 04/16/19 17:57 | 1 |
| Toxaphene | ND | | 4.8 | 0.24 | ug/L | | 04/15/19 10:40 | 04/16/19 17:57 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl (Surr)* | *68* | | *28 - 108* | *04/15/19 10:40* | *04/16/19 17:57* | *1* |
| *Tetrachloro-m-xylene* | *48* | | *10 - 123* | *04/15/19 10:40* | *04/16/19 17:57* | *1* |

## Client Sample ID: MW-2-20190412

**Lab Sample ID: 440-238791-2**

**Date Collected: 04/12/19 08:48**

**Matrix: Water**

**Date Received: 04/13/19 10:30**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 500 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| 1,1,1-Trichloroethane | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| 1,1,2,2-Tetrachloroethane | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| 1,1,2-Trichloroethane | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| 1,1-Dichloroethane | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| 1,1-Dichloroethene | ND | | 500 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| 1,1-Dichloropropene | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| 1,2,3-Trichlorobenzene | ND | | 500 | 40 | ug/L | | | 04/26/19 04:58 | 100 |
| 1,2,3-Trichloropropane | ND | | 1000 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| 1,2,4-Trichlorobenzene | ND | | 500 | 40 | ug/L | | | 04/26/19 04:58 | 100 |
| 1,2,4-Trimethylbenzene | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| 1,2-Dibromo-3-Chloropropane | ND | | 500 | 50 | ug/L | | | 04/26/19 04:58 | 100 |
| 1,2-Dibromoethane (EDB) | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| **1,2-Dichlorobenzene** | **46** | **J** | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| 1,2-Dichloroethane | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| 1,2-Dichloropropane | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| 1,3,5-Trimethylbenzene | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| 1,3-Dichlorobenzene | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| 1,3-Dichloropropane | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| **1,4-Dichlorobenzene** | **69** | **J** | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| 2,2-Dichloropropane | ND | | 200 | 40 | ug/L | | | 04/26/19 04:58 | 100 |
| 2-Chlorotoluene | ND | | 500 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| 4-Chlorotoluene | ND | | 500 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| **Benzene** | **1300** | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| Bromobenzene | ND | | 500 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| Bromochloromethane | ND | | 500 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| Bromodichloromethane | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| Bromoform | ND | | 500 | 40 | ug/L | | | 04/26/19 04:58 | 100 |
| Bromomethane | ND | | 500 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| **Carbon tetrachloride** | **97** | **J** | 100 | 25 | ug/L | | | 04/26/19 04:58 | 100 |

## Client Sample ID: MW-2-20190412

**Date Collected: 04/12/19 08:48**
**Date Received: 04/13/19 10:30**

## Lab Sample ID: 440-238791-2

**Matrix: Water**

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chlorobenzene** | **1600** | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| Chloroethane | ND | | 500 | 40 | ug/L | | | 04/26/19 04:58 | 100 |
| Chloromethane | ND | | 500 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| cis-1,2-Dichloroethene | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| cis-1,3-Dichloropropene | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| Dibromochloromethane | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| Dibromomethane | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| Dichlorodifluoromethane | ND | | 500 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| Dimethyl disulfide | ND | | 200 | 100 | ug/L | | | 04/26/19 04:58 | 100 |
| Ethylbenzene | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| Hexachlorobutadiene | ND | | 500 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| Isopropylbenzene | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| m,p-Xylene | ND | | 200 | 50 | ug/L | | | 04/26/19 04:58 | 100 |
| Methylene Chloride | ND | | 200 | 110 | ug/L | | | 04/26/19 04:58 | 100 |
| Naphthalene | ND | | 500 | 40 | ug/L | | | 04/26/19 04:58 | 100 |
| n-Butylbenzene | ND | | 500 | 40 | ug/L | | | 04/26/19 04:58 | 100 |
| N-Propylbenzene | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| o-Xylene | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| p-Isopropyltoluene | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| sec-Butylbenzene | ND | | 500 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| Styrene | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| tert-Butylbenzene | ND | | 500 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| Tetrachloroethene | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| Toluene | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| trans-1,2-Dichloroethene | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| trans-1,3-Dichloropropene | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| Trichloroethene | ND | | 200 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| Trichlorofluoromethane | ND | | 500 | 25 | ug/L | | | 04/26/19 04:58 | 100 |
| Vinyl chloride | ND | | 500 | 25 | ug/L | | | 04/26/19 04:58 | 100 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *94* | | *70 - 130* | | *04/26/19 04:58* | *100* |
| *4-Bromofluorobenzene (Surr)* | *91* | | *80 - 120* | | *04/26/19 04:58* | *100* |
| *Dibromofluoromethane (Surr)* | *111* | | *76 - 132* | | *04/26/19 04:58* | *100* |
| *Toluene-d8 (Surr)* | *104* | | *80 - 128* | | *04/26/19 04:58* | *100* |

### Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloroform** | **94000** | | 20000 | 2500 | ug/L | | | 04/26/19 05:25 | 10000 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *94* | | *70 - 130* | | *04/26/19 05:25* | *10000* |
| *4-Bromofluorobenzene (Surr)* | *91* | | *80 - 120* | | *04/26/19 05:25* | *10000* |
| *Dibromofluoromethane (Surr)* | *108* | | *76 - 132* | | *04/26/19 05:25* | *10000* |
| *Toluene-d8 (Surr)* | *103* | | *80 - 128* | | *04/26/19 05:25* | *10000* |

### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2,2'-Dichlorobenzil & 4,4'-Dichlorobenzil | ND | | 9.9 | 4.4 | ug/L | | 04/18/19 12:42 | 04/20/19 17:56 | 1 |

## Client Sample ID: MW-2-20190412

**Lab Sample ID: 440-238791-2**

**Date Collected: 04/12/19 08:48**
**Date Received: 04/13/19 10:30**

**Matrix: Water**

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 2,4,6-Tribromophenol (Surr) | 107 | | 40 - 120 | 04/18/19 12:42 | 04/20/19 17:56 | 1 |
| 2-Fluorobiphenyl | 85 | | 50 - 120 | 04/18/19 12:42 | 04/20/19 17:56 | 1 |
| 2-Fluorophenol (Surr) | 82 | | 30 - 120 | 04/18/19 12:42 | 04/20/19 17:56 | 1 |
| Nitrobenzene-d5 (Surr) | 83 | | 45 - 120 | 04/18/19 12:42 | 04/20/19 17:56 | 1 |
| Phenol-d6 (Surr) | 80 | | 35 - 120 | 04/18/19 12:42 | 04/20/19 17:56 | 1 |
| Terphenyl-d14 (Surr) | 89 | | 10 - 150 | 04/18/19 12:42 | 04/20/19 17:56 | 1 |

### Method: 8081A - Organochlorine Pesticides (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.0049 | 0.0015 | ug/L | | 04/15/19 10:40 | 04/16/19 18:23 | 1 |
| alpha-BHC | 0.029 | | 0.0049 | 0.0025 | ug/L | | 04/15/19 10:40 | 04/16/19 18:23 | 1 |
| beta-BHC | ND | | 0.0098 | 0.0039 | ug/L | | 04/15/19 10:40 | 04/16/19 18:23 | 1 |
| Chlordane | ND | | 0.098 | 0.078 | ug/L | | 04/15/19 10:40 | 04/16/19 18:23 | 1 |
| 2,4'-DDD | ND | | 0.098 | 0.020 | ug/L | | 04/15/19 10:40 | 04/16/19 18:23 | 1 |
| 4,4'-DDD | ND | | 0.098 | 0.0039 | ug/L | | 04/15/19 10:40 | 04/16/19 18:23 | 1 |
| 2,4'-DDE | ND | | 0.098 | 0.020 | ug/L | | 04/15/19 10:40 | 04/16/19 18:23 | 1 |
| 4,4'-DDE | ND | | 0.098 | 0.0029 | ug/L | | 04/15/19 10:40 | 04/16/19 18:23 | 1 |
| 2,4'-DDT | ND | | 0.098 | 0.020 | ug/L | | 04/15/19 10:40 | 04/16/19 18:23 | 1 |
| 4,4'-DDT | ND | | 0.098 | 0.0039 | ug/L | | 04/15/19 10:40 | 04/16/19 18:23 | 1 |
| delta-BHC | ND | | 0.20 | 0.0034 | ug/L | | 04/15/19 10:40 | 04/16/19 18:23 | 1 |
| Dieldrin | ND | | 0.0049 | 0.0020 | ug/L | | 04/15/19 10:40 | 04/16/19 18:23 | 1 |
| Endosulfan I | ND | | 0.098 | 0.0029 | ug/L | | 04/15/19 10:40 | 04/16/19 18:23 | 1 |
| Endosulfan II | ND | | 0.098 | 0.0020 | ug/L | | 04/15/19 10:40 | 04/16/19 18:23 | 1 |
| Endosulfan sulfate | ND | | 0.20 | 0.0029 | ug/L | | 04/15/19 10:40 | 04/16/19 18:23 | 1 |
| Endrin | ND | | 0.098 | 0.0020 | ug/L | | 04/15/19 10:40 | 04/16/19 18:23 | 1 |
| Endrin aldehyde | ND | | 0.098 | 0.0020 | ug/L | | 04/15/19 10:40 | 04/16/19 18:23 | 1 |
| Endrin ketone | ND | | 0.098 | 0.0069 | ug/L | | 04/15/19 10:40 | 04/16/19 18:23 | 1 |
| gamma-BHC (Lindane) | 0.0047 | J | 0.098 | 0.0029 | ug/L | | 04/15/19 10:40 | 04/16/19 18:23 | 1 |
| Heptachlor | ND | | 0.0098 | 0.0029 | ug/L | | 04/15/19 10:40 | 04/16/19 18:23 | 1 |
| Heptachlor epoxide | ND | | 0.0049 | 0.0025 | ug/L | | 04/15/19 10:40 | 04/16/19 18:23 | 1 |
| Methoxychlor | ND | | 0.098 | 0.0034 | ug/L | | 04/15/19 10:40 | 04/16/19 18:23 | 1 |
| Toxaphene | ND | | 4.9 | 0.25 | ug/L | | 04/15/19 10:40 | 04/16/19 18:23 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| DCB Decachlorobiphenyl (Surr) | 65 | | 28 - 108 | 04/15/19 10:40 | 04/16/19 18:23 | 1 |
| Tetrachloro-m-xylene | 50 | | 10 - 123 | 04/15/19 10:40 | 04/16/19 18:23 | 1 |

## Client Sample ID: MW-3-20190412

**Lab Sample ID: 440-238791-3**

**Date Collected: 04/12/19 08:53**
**Date Received: 04/13/19 10:30**

**Matrix: Water**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 500 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| 1,1,1-Trichloroethane | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| 1,1,2,2-Tetrachloroethane | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| 1,1,2-Trichloroethane | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| 1,1-Dichloroethane | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| 1,1-Dichloroethene | ND | | 500 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| 1,1-Dichloropropene | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| 1,2,3-Trichlorobenzene | ND | | 500 | 40 | ug/L | | | 04/26/19 05:51 | 100 |

Client: Montrose Chemical Company
Project/Site: Montrose Wells

Job ID: 440-238791-1
SDG: Henderson, NV

## Client Sample ID: MW-3-20190412

**Date Collected: 04/12/19 08:53**
**Date Received: 04/13/19 10:30**

## Lab Sample ID: 440-238791-3

**Matrix: Water**

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3-Trichloropropane | ND | | 1000 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| **1,2,4-Trichlorobenzene** | **58** | **J** | 500 | 40 | ug/L | | | 04/26/19 05:51 | 100 |
| 1,2,4-Trimethylbenzene | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| 1,2-Dibromo-3-Chloropropane | ND | | 500 | 50 | ug/L | | | 04/26/19 05:51 | 100 |
| 1,2-Dibromoethane (EDB) | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| 1,2-Dichloroethane | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| 1,2-Dichloropropane | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| 1,3,5-Trimethylbenzene | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| **1,3-Dichlorobenzene** | **750** | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| 1,3-Dichloropropane | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| 2,2-Dichloropropane | ND | | 200 | 40 | ug/L | | | 04/26/19 05:51 | 100 |
| 2-Chlorotoluene | ND | | 500 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| 4-Chlorotoluene | ND | | 500 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| **Benzene** | **400** | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| Bromobenzene | ND | | 500 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| Bromochloromethane | ND | | 500 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| Bromodichloromethane | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| Bromoform | ND | | 500 | 40 | ug/L | | | 04/26/19 05:51 | 100 |
| Bromomethane | ND | | 500 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| Carbon tetrachloride | ND | | 100 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| Chloroethane | ND | | 500 | 40 | ug/L | | | 04/26/19 05:51 | 100 |
| Chloromethane | ND | | 500 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| cis-1,2-Dichloroethene | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| cis-1,3-Dichloropropene | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| Dibromochloromethane | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| Dibromomethane | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| Dichlorodifluoromethane | ND | | 500 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| Dimethyl disulfide | ND | | 200 | 100 | ug/L | | | 04/26/19 05:51 | 100 |
| Ethylbenzene | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| Hexachlorobutadiene | ND | | 500 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| Isopropylbenzene | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| m,p-Xylene | ND | | 200 | 50 | ug/L | | | 04/26/19 05:51 | 100 |
| **Methylene Chloride** | **120** | **J** | 200 | 110 | ug/L | | | 04/26/19 05:51 | 100 |
| Naphthalene | ND | | 500 | 40 | ug/L | | | 04/26/19 05:51 | 100 |
| n-Butylbenzene | ND | | 500 | 40 | ug/L | | | 04/26/19 05:51 | 100 |
| N-Propylbenzene | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| o-Xylene | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| p-Isopropyltoluene | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| sec-Butylbenzene | ND | | 500 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| Styrene | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| tert-Butylbenzene | ND | | 500 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| Tetrachloroethene | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| Toluene | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| trans-1,2-Dichloroethene | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| trans-1,3-Dichloropropene | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| Trichloroethene | ND | | 200 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| Trichlorofluoromethane | ND | | 500 | 25 | ug/L | | | 04/26/19 05:51 | 100 |
| Vinyl chloride | ND | | 500 | 25 | ug/L | | | 04/26/19 05:51 | 100 |

# Client Sample Results

Client: Montrose Chemical Company
Project/Site: Montrose Wells

Job ID: 440-238791-1
SDG: Henderson, NV

## Client Sample ID: MW-3-20190412

**Date Collected: 04/12/19 08:53**
**Date Received: 04/13/19 10:30**

## Lab Sample ID: 440-238791-3

**Matrix: Water**

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 (Surr) | 93 | | 70 - 130 | | 04/26/19 05:51 | 100 |
| 4-Bromofluorobenzene (Surr) | 91 | | 80 - 120 | | 04/26/19 05:51 | 100 |
| Dibromofluoromethane (Surr) | 109 | | 76 - 132 | | 04/26/19 05:51 | 100 |
| Toluene-d8 (Surr) | 102 | | 80 - 128 | | 04/26/19 05:51 | 100 |

### Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 18000 | | 4000 | 500 | ug/L | | | 04/26/19 06:18 | 2000 |
| 1,4-Dichlorobenzene | 16000 | | 4000 | 500 | ug/L | | | 04/26/19 06:18 | 2000 |
| Chlorobenzene | 12000 | | 4000 | 500 | ug/L | | | 04/26/19 06:18 | 2000 |
| Chloroform | 25000 | | 4000 | 500 | ug/L | | | 04/26/19 06:18 | 2000 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 (Surr) | 93 | | 70 - 130 | | 04/26/19 06:18 | 2000 |
| 4-Bromofluorobenzene (Surr) | 90 | | 80 - 120 | | 04/26/19 06:18 | 2000 |
| Dibromofluoromethane (Surr) | 108 | | 76 - 132 | | 04/26/19 06:18 | 2000 |
| Toluene-d8 (Surr) | 103 | | 80 - 128 | | 04/26/19 06:18 | 2000 |

### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2,2'-Dichlorobenzil & 4,4'-Dichlorobenzil | ND | | 100 | 45 | ug/L | | 04/18/19 12:42 | 04/20/19 18:22 | 10 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 2,4,6-Tribromophenol (Surr) | 85 | | 40 - 120 | 04/18/19 12:42 | 04/20/19 18:22 | 10 |
| 2-Fluorobiphenyl | 82 | | 50 - 120 | 04/18/19 12:42 | 04/20/19 18:22 | 10 |
| 2-Fluorophenol (Surr) | 64 | | 30 - 120 | 04/18/19 12:42 | 04/20/19 18:22 | 10 |
| Nitrobenzene-d5 (Surr) | 77 | | 45 - 120 | 04/18/19 12:42 | 04/20/19 18:22 | 10 |
| Phenol-d6 (Surr) | 65 | | 35 - 120 | 04/18/19 12:42 | 04/20/19 18:22 | 10 |
| Terphenyl-d14 (Surr) | 84 | | 10 - 150 | 04/18/19 12:42 | 04/20/19 18:22 | 10 |

### Method: 8081A - Organochlorine Pesticides (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.0049 | 0.0015 | ug/L | | 04/15/19 10:40 | 04/16/19 18:49 | 1 |
| alpha-BHC | 0.22 | | 0.0049 | 0.0024 | ug/L | | 04/15/19 10:40 | 04/16/19 18:49 | 1 |
| beta-BHC | 0.23 | | 0.0097 | 0.0039 | ug/L | | 04/15/19 10:40 | 04/16/19 18:49 | 1 |
| Chlordane | ND | | 0.097 | 0.078 | ug/L | | 04/15/19 10:40 | 04/16/19 18:49 | 1 |
| 2,4'-DDD | ND | | 0.097 | 0.019 | ug/L | | 04/15/19 10:40 | 04/16/19 18:49 | 1 |
| 4,4'-DDD | ND | | 0.097 | 0.0039 | ug/L | | 04/15/19 10:40 | 04/16/19 18:49 | 1 |
| 2,4'-DDE | ND | | 0.097 | 0.019 | ug/L | | 04/15/19 10:40 | 04/16/19 18:49 | 1 |
| 4,4'-DDE | ND | | 0.097 | 0.0029 | ug/L | | 04/15/19 10:40 | 04/16/19 18:49 | 1 |
| 2,4'-DDT | ND | | 0.097 | 0.019 | ug/L | | 04/15/19 10:40 | 04/16/19 18:49 | 1 |
| 4,4'-DDT | ND | | 0.097 | 0.0039 | ug/L | | 04/15/19 10:40 | 04/16/19 18:49 | 1 |
| delta-BHC | ND | | 0.19 | 0.0034 | ug/L | | 04/15/19 10:40 | 04/16/19 18:49 | 1 |
| Dieldrin | ND | | 0.0049 | 0.0019 | ug/L | | 04/15/19 10:40 | 04/16/19 18:49 | 1 |
| Endosulfan I | ND | | 0.097 | 0.0029 | ug/L | | 04/15/19 10:40 | 04/16/19 18:49 | 1 |
| Endosulfan II | ND | | 0.097 | 0.0019 | ug/L | | 04/15/19 10:40 | 04/16/19 18:49 | 1 |
| Endosulfan sulfate | ND | | 0.19 | 0.0029 | ug/L | | 04/15/19 10:40 | 04/16/19 18:49 | 1 |
| Endrin | ND | | 0.097 | 0.0019 | ug/L | | 04/15/19 10:40 | 04/16/19 18:49 | 1 |
| Endrin aldehyde | ND | | 0.097 | 0.0019 | ug/L | | 04/15/19 10:40 | 04/16/19 18:49 | 1 |
| Endrin ketone | ND | | 0.097 | 0.0068 | ug/L | | 04/15/19 10:40 | 04/16/19 18:49 | 1 |

## Client Sample ID: MW-3-20190412

**Lab Sample ID: 440-238791-3**

**Date Collected: 04/12/19 08:53**

**Matrix: Water**

**Date Received: 04/13/19 10:30**

### Method: 8081A - Organochlorine Pesticides (GC) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| gamma-BHC (Lindane) | 0.14 | p | 0.097 | 0.0029 | ug/L | | 04/15/19 10:40 | 04/16/19 18:49 | 1 |
| Heptachlor | ND | | 0.0097 | 0.0029 | ug/L | | 04/15/19 10:40 | 04/16/19 18:49 | 1 |
| Heptachlor epoxide | ND | | 0.0049 | 0.0024 | ug/L | | 04/15/19 10:40 | 04/16/19 18:49 | 1 |
| Methoxychlor | ND | | 0.097 | 0.0034 | ug/L | | 04/15/19 10:40 | 04/16/19 18:49 | 1 |
| Toxaphene | ND | | 4.9 | 0.24 | ug/L | | 04/15/19 10:40 | 04/16/19 18:49 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl (Surr)* | *72* | | *28 - 108* | *04/15/19 10:40* | *04/16/19 18:49* | *1* |
| *Tetrachloro-m-xylene* | *48* | | *10 - 123* | *04/15/19 10:40* | *04/16/19 18:49* | *1* |

## Client Sample ID: MW-4-20190412

**Lab Sample ID: 440-238791-4**

**Date Collected: 04/12/19 10:23**

**Matrix: Water**

**Date Received: 04/13/19 10:30**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 10 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| 1,1,1-Trichloroethane | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| 1,1,2,2-Tetrachloroethane | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| 1,1,2-Trichloroethane | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| 1,1-Dichloroethane | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| 1,1-Dichloroethene | ND | | 10 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| 1,1-Dichloropropene | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| 1,2,3-Trichlorobenzene | ND | | 10 | 0.80 | ug/L | | | 04/26/19 06:44 | 2 |
| 1,2,3-Trichloropropane | ND | | 20 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| 1,2,4-Trichlorobenzene | ND | | 10 | 0.80 | ug/L | | | 04/26/19 06:44 | 2 |
| 1,2,4-Trimethylbenzene | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| 1,2-Dibromo-3-Chloropropane | ND | | 10 | 1.0 | ug/L | | | 04/26/19 06:44 | 2 |
| 1,2-Dibromoethane (EDB) | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| 1,2-Dichlorobenzene | 4.4 | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| 1,2-Dichloroethane | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| 1,2-Dichloropropane | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| 1,3,5-Trimethylbenzene | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| 1,3-Dichlorobenzene | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| 1,3-Dichloropropane | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| 1,4-Dichlorobenzene | 4.0 | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| 2,2-Dichloropropane | ND | | 4.0 | 0.80 | ug/L | | | 04/26/19 06:44 | 2 |
| 2-Chlorotoluene | ND | | 10 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| 4-Chlorotoluene | ND | | 10 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| Benzene | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| Bromobenzene | ND | | 10 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| Bromochloromethane | ND | | 10 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| Bromodichloromethane | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| Bromoform | ND | | 10 | 0.80 | ug/L | | | 04/26/19 06:44 | 2 |
| Bromomethane | ND | | 10 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| Carbon tetrachloride | 0.93 | J | 2.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| Chlorobenzene | 2.2 | J | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| Chloroethane | ND | | 10 | 0.80 | ug/L | | | 04/26/19 06:44 | 2 |
| Chloromethane | ND | | 10 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| cis-1,2-Dichloroethene | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |

## Client Sample ID: MW-4-20190412

**Date Collected: 04/12/19 10:23**
**Date Received: 04/13/19 10:30**

## Lab Sample ID: 440-238791-4

**Matrix: Water**

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| Dibromochloromethane | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| Dibromomethane | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| Dichlorodifluoromethane | ND | | 10 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| Dimethyl disulfide | ND | | 4.0 | 2.0 | ug/L | | | 04/26/19 06:44 | 2 |
| Ethylbenzene | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| Hexachlorobutadiene | ND | | 10 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| Isopropylbenzene | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| m,p-Xylene | ND | | 4.0 | 1.0 | ug/L | | | 04/26/19 06:44 | 2 |
| Methylene Chloride | ND | | 4.0 | 2.2 | ug/L | | | 04/26/19 06:44 | 2 |
| Naphthalene | ND | | 10 | 0.80 | ug/L | | | 04/26/19 06:44 | 2 |
| n-Butylbenzene | ND | | 10 | 0.80 | ug/L | | | 04/26/19 06:44 | 2 |
| N-Propylbenzene | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| o-Xylene | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| p-Isopropyltoluene | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| sec-Butylbenzene | ND | | 10 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| Styrene | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| tert-Butylbenzene | ND | | 10 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| Tetrachloroethene | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| Toluene | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| trans-1,2-Dichloroethene | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| trans-1,3-Dichloropropene | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| Trichloroethene | ND | | 4.0 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| Trichlorofluoromethane | ND | | 10 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |
| Vinyl chloride | ND | | 10 | 0.50 | ug/L | | | 04/26/19 06:44 | 2 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *94* | | *70 - 130* | | *04/26/19 06:44* | *2* |
| *4-Bromofluorobenzene (Surr)* | *91* | | *80 - 120* | | *04/26/19 06:44* | *2* |
| *Dibromofluoromethane (Surr)* | *109* | | *76 - 132* | | *04/26/19 06:44* | *2* |
| *Toluene-d8 (Surr)* | *103* | | *80 - 128* | | *04/26/19 06:44* | *2* |

### Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloroform** | **520** | | 200 | 25 | ug/L | | | 04/26/19 07:11 | 100 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *91* | | *70 - 130* | | *04/26/19 07:11* | *100* |
| *4-Bromofluorobenzene (Surr)* | *90* | | *80 - 120* | | *04/26/19 07:11* | *100* |
| *Dibromofluoromethane (Surr)* | *105* | | *76 - 132* | | *04/26/19 07:11* | *100* |
| *Toluene-d8 (Surr)* | *105* | | *80 - 128* | | *04/26/19 07:11* | *100* |

### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2,2'-Dichlorobenzil & 4,4'-Dichlorobenzil | ND | | 9.8 | 4.4 | ug/L | | 04/18/19 12:42 | 04/20/19 18:47 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2,4,6-Tribromophenol (Surr)* | *98* | | *40 - 120* | *04/18/19 12:42* | *04/20/19 18:47* | *1* |
| *2-Fluorobiphenyl* | *86* | | *50 - 120* | *04/18/19 12:42* | *04/20/19 18:47* | *1* |
| *2-Fluorophenol (Surr)* | *82* | | *30 - 120* | *04/18/19 12:42* | *04/20/19 18:47* | *1* |

## Client Sample ID: MW-4-20190412

**Lab Sample ID: 440-238791-4**

**Date Collected: 04/12/19 10:23**
**Date Received: 04/13/19 10:30**
**Matrix: Water**

### Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Nitrobenzene-d5 (Surr) | 85 | | 45 - 120 | 04/18/19 12:42 | 04/20/19 18:47 | 1 |
| Phenol-d6 (Surr) | 82 | | 35 - 120 | 04/18/19 12:42 | 04/20/19 18:47 | 1 |
| Terphenyl-d14 (Surr) | 95 | | 10 - 150 | 04/18/19 12:42 | 04/20/19 18:47 | 1 |

### Method: 8081A - Organochlorine Pesticides (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.0051 | 0.0015 | ug/L | | 04/15/19 10:40 | 04/16/19 19:14 | 1 |
| alpha-BHC | 0.0030 | J | 0.0051 | 0.0025 | ug/L | | 04/15/19 10:40 | 04/16/19 19:14 | 1 |
| beta-BHC | ND | | 0.010 | 0.0041 | ug/L | | 04/15/19 10:40 | 04/16/19 19:14 | 1 |
| Chlordane | ND | | 0.10 | 0.081 | ug/L | | 04/15/19 10:40 | 04/16/19 19:14 | 1 |
| 2,4'-DDD | ND | | 0.10 | 0.020 | ug/L | | 04/15/19 10:40 | 04/16/19 19:14 | 1 |
| 4,4'-DDD | ND | | 0.10 | 0.0041 | ug/L | | 04/15/19 10:40 | 04/16/19 19:14 | 1 |
| 2,4'-DDE | ND | | 0.10 | 0.020 | ug/L | | 04/15/19 10:40 | 04/16/19 19:14 | 1 |
| 4,4'-DDE | ND | | 0.10 | 0.0030 | ug/L | | 04/15/19 10:40 | 04/16/19 19:14 | 1 |
| 2,4'-DDT | ND | | 0.10 | 0.020 | ug/L | | 04/15/19 10:40 | 04/16/19 19:14 | 1 |
| 4,4'-DDT | ND | | 0.10 | 0.0041 | ug/L | | 04/15/19 10:40 | 04/16/19 19:14 | 1 |
| delta-BHC | ND | | 0.20 | 0.0036 | ug/L | | 04/15/19 10:40 | 04/16/19 19:14 | 1 |
| Dieldrin | ND | | 0.0051 | 0.0020 | ug/L | | 04/15/19 10:40 | 04/16/19 19:14 | 1 |
| Endosulfan I | ND | | 0.10 | 0.0030 | ug/L | | 04/15/19 10:40 | 04/16/19 19:14 | 1 |
| Endosulfan II | ND | | 0.10 | 0.0020 | ug/L | | 04/15/19 10:40 | 04/16/19 19:14 | 1 |
| Endosulfan sulfate | ND | | 0.20 | 0.0030 | ug/L | | 04/15/19 10:40 | 04/16/19 19:14 | 1 |
| Endrin | ND | | 0.10 | 0.0020 | ug/L | | 04/15/19 10:40 | 04/16/19 19:14 | 1 |
| Endrin aldehyde | ND | | 0.10 | 0.0020 | ug/L | | 04/15/19 10:40 | 04/16/19 19:14 | 1 |
| Endrin ketone | ND | | 0.10 | 0.0071 | ug/L | | 04/15/19 10:40 | 04/16/19 19:14 | 1 |
| gamma-BHC (Lindane) | ND | | 0.10 | 0.0030 | ug/L | | 04/15/19 10:40 | 04/16/19 19:14 | 1 |
| Heptachlor | ND | | 0.010 | 0.0030 | ug/L | | 04/15/19 10:40 | 04/16/19 19:14 | 1 |
| Heptachlor epoxide | ND | | 0.0051 | 0.0025 | ug/L | | 04/15/19 10:40 | 04/16/19 19:14 | 1 |
| Methoxychlor | ND | | 0.10 | 0.0036 | ug/L | | 04/15/19 10:40 | 04/16/19 19:14 | 1 |
| Toxaphene | ND | | 5.1 | 0.25 | ug/L | | 04/15/19 10:40 | 04/16/19 19:14 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| DCB Decachlorobiphenyl (Surr) | 69 | | 28 - 108 | 04/15/19 10:40 | 04/16/19 19:14 | 1 |
| Tetrachloro-m-xylene | 37 | | 10 - 123 | 04/15/19 10:40 | 04/16/19 19:14 | 1 |

## Client Sample ID: TB-20190412

**Lab Sample ID: 440-238791-5**

**Date Collected: 04/12/19 06:40**
**Date Received: 04/13/19 10:30**
**Matrix: Water**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| 1,1,1-Trichloroethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| 1,1,2-Trichloroethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| 1,1-Dichloroethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| 1,1-Dichloroethene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| 1,1-Dichloropropene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 5.0 | 0.40 | ug/L | | | 04/26/19 15:50 | 1 |
| 1,2,3-Trichloropropane | ND | | 10 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 5.0 | 0.40 | ug/L | | | 04/26/19 15:50 | 1 |

## Client Sample ID: TB-20190412

**Date Collected: 04/12/19 06:40**
**Date Received: 04/13/19 10:30**

## Lab Sample ID: 440-238791-5

**Matrix: Water**

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | 0.50 | ug/L | | | 04/26/19 15:50 | 1 |
| 1,2-Dibromoethane (EDB) | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| 1,2-Dichlorobenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| 1,2-Dichloroethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| 1,2-Dichloropropane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| 1,3-Dichlorobenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| 1,3-Dichloropropane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| 1,4-Dichlorobenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| 2,2-Dichloropropane | ND | | 2.0 | 0.40 | ug/L | | | 04/26/19 15:50 | 1 |
| 2-Chlorotoluene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| 4-Chlorotoluene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| Benzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| Bromobenzene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| Bromochloromethane | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| Bromodichloromethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| Bromoform | ND | | 5.0 | 0.40 | ug/L | | | 04/26/19 15:50 | 1 |
| Bromomethane | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| Carbon tetrachloride | ND | | 1.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| Chlorobenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| Chloroethane | ND | | 5.0 | 0.40 | ug/L | | | 04/26/19 15:50 | 1 |
| Chloroform | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| Chloromethane | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| cis-1,2-Dichloroethene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| cis-1,3-Dichloropropene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| Dibromochloromethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| Dibromomethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| Dichlorodifluoromethane | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| Dimethyl disulfide | ND | | 2.0 | 1.0 | ug/L | | | 04/26/19 15:50 | 1 |
| Ethylbenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| Hexachlorobutadiene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| Isopropylbenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| m,p-Xylene | ND | | 2.0 | 0.50 | ug/L | | | 04/26/19 15:50 | 1 |
| Methylene Chloride | ND | | 2.0 | 1.1 | ug/L | | | 04/26/19 15:50 | 1 |
| Naphthalene | ND | | 5.0 | 0.40 | ug/L | | | 04/26/19 15:50 | 1 |
| n-Butylbenzene | ND | | 5.0 | 0.40 | ug/L | | | 04/26/19 15:50 | 1 |
| N-Propylbenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| o-Xylene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| p-Isopropyltoluene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| sec-Butylbenzene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| Styrene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| tert-Butylbenzene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| Tetrachloroethene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| Toluene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| trans-1,2-Dichloroethene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| trans-1,3-Dichloropropene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| Trichloroethene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |
| Trichlorofluoromethane | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |

## Client Sample ID: TB-20190412

**Lab Sample ID: 440-238791-5**

**Date Collected: 04/12/19 06:40**
**Matrix: Water**
**Date Received: 04/13/19 10:30**

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Vinyl chloride | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 15:50 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *87* | | *70 - 130* | | *04/26/19 15:50* | *1* |
| *4-Bromofluorobenzene (Surr)* | *92* | | *80 - 120* | | *04/26/19 15:50* | *1* |
| *Dibromofluoromethane (Surr)* | *105* | | *76 - 132* | | *04/26/19 15:50* | *1* |
| *Toluene-d8 (Surr)* | *105* | | *80 - 128* | | *04/26/19 15:50* | *1* |

## Client Sample ID: PL-509-20190412

**Lab Sample ID: 440-238791-6**

**Date Collected: 04/12/19 10:30**
**Matrix: Water**
**Date Received: 04/13/19 10:30**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| 1,1,1-Trichloroethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| 1,1,2-Trichloroethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| 1,1-Dichloroethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| 1,1-Dichloroethene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| 1,1-Dichloropropene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 5.0 | 0.40 | ug/L | | | 04/26/19 16:17 | 1 |
| 1,2,3-Trichloropropane | ND | | 10 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 5.0 | 0.40 | ug/L | | | 04/26/19 16:17 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | 0.50 | ug/L | | | 04/26/19 16:17 | 1 |
| 1,2-Dibromoethane (EDB) | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| 1,2-Dichlorobenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| 1,2-Dichloroethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| 1,2-Dichloropropane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| 1,3-Dichlorobenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| 1,3-Dichloropropane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| 1,4-Dichlorobenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| 2,2-Dichloropropane | ND | | 2.0 | 0.40 | ug/L | | | 04/26/19 16:17 | 1 |
| 2-Chlorotoluene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| 4-Chlorotoluene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| Benzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| Bromobenzene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| Bromochloromethane | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| Bromodichloromethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| Bromoform | ND | | 5.0 | 0.40 | ug/L | | | 04/26/19 16:17 | 1 |
| Bromomethane | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| Carbon tetrachloride | ND | | 1.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| Chlorobenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| Chloroethane | ND | | 5.0 | 0.40 | ug/L | | | 04/26/19 16:17 | 1 |
| Chloroform | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| Chloromethane | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| cis-1,2-Dichloroethene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| cis-1,3-Dichloropropene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |

## Client Sample ID: PL-509-20190412

**Date Collected: 04/12/19 10:30**
**Date Received: 04/13/19 10:30**

## Lab Sample ID: 440-238791-6

**Matrix: Water**

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| Dibromomethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| Dichlorodifluoromethane | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| Dimethyl disulfide | ND | | 2.0 | 1.0 | ug/L | | | 04/26/19 16:17 | 1 |
| Ethylbenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| Hexachlorobutadiene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| Isopropylbenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| m,p-Xylene | ND | | 2.0 | 0.50 | ug/L | | | 04/26/19 16:17 | 1 |
| Methylene Chloride | ND | | 2.0 | 1.1 | ug/L | | | 04/26/19 16:17 | 1 |
| Naphthalene | ND | | 5.0 | 0.40 | ug/L | | | 04/26/19 16:17 | 1 |
| n-Butylbenzene | ND | | 5.0 | 0.40 | ug/L | | | 04/26/19 16:17 | 1 |
| N-Propylbenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| o-Xylene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| p-Isopropyltoluene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| sec-Butylbenzene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| Styrene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| tert-Butylbenzene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| Tetrachloroethene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| Toluene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| trans-1,2-Dichloroethene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| trans-1,3-Dichloropropene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| Trichloroethene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| Trichlorofluoromethane | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |
| Vinyl chloride | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 16:17 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *85* | | *70 - 130* | | *04/26/19 16:17* | *1* |
| *4-Bromofluorobenzene (Surr)* | *93* | | *80 - 120* | | *04/26/19 16:17* | *1* |
| *Dibromofluoromethane (Surr)* | *102* | | *76 - 132* | | *04/26/19 16:17* | *1* |
| *Toluene-d8 (Surr)* | *103* | | *80 - 128* | | *04/26/19 16:17* | *1* |

# Surrogate Summary

Client: Montrose Chemical Company
Project/Site: Montrose Wells

Job ID: 440-238791-1
SDG: Henderson, NV

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| Lab Sample ID | Client Sample ID | DCA (70-130) | BFB (80-120) | DBFM (76-132) | TOL (80-128) |
| 440-238715-L-2 MS | Matrix Spike | 90 | 92 | 108 | 100 |
| 440-238715-L-2 MSD | Matrix Spike Duplicate | 89 | 93 | 105 | 100 |
| 440-238791-1 | MW-1-201090412 | 98 | 95 | 105 | 104 |
| 440-238791-1 | MW-1-201090412 | 91 | 92 | 107 | 104 |
| 440-238791-1 MS | MW-1-201090412 | 100 | 101 | 102 | 99 |
| 440-238791-1 MSD | MW-1-201090412 | 103 | 100 | 102 | 100 |
| 440-238791-2 | MW-2-20190412 | 94 | 91 | 111 | 104 |
| 440-238791-2 - DL | MW-2-20190412 | 94 | 91 | 108 | 103 |
| 440-238791-3 | MW-3-20190412 | 93 | 91 | 109 | 102 |
| 440-238791-3 - DL | MW-3-20190412 | 93 | 90 | 108 | 103 |
| 440-238791-4 | MW-4-20190412 | 94 | 91 | 109 | 103 |
| 440-238791-4 - DL | MW-4-20190412 | 91 | 90 | 105 | 105 |
| 440-238791-5 | TB-20190412 | 87 | 92 | 105 | 105 |
| 440-238791-6 | PL-509-20190412 | 85 | 93 | 102 | 103 |
| 440-239073-A-6 MS | Matrix Spike | 93 | 91 | 110 | 101 |
| 440-239073-B-6 MSD | Matrix Spike Duplicate | 92 | 93 | 108 | 100 |
| LCS 440-542646/14 | Lab Control Sample | 94 | 95 | 102 | 96 |
| LCS 440-542648/5 | Lab Control Sample | 88 | 92 | 105 | 100 |
| LCS 440-542722/5 | Lab Control Sample | 90 | 90 | 106 | 100 |
| MB 440-542646/4 | Method Blank | 101 | 95 | 104 | 105 |
| MB 440-542648/7 | Method Blank | 88 | 90 | 105 | 104 |
| MB 440-542722/7 | Method Blank | 93 | 91 | 107 | 103 |

**Surrogate Legend**

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | | | |
|---|---|---|---|---|---|---|---|
| Lab Sample ID | Client Sample ID | TBP (40-120) | FBP (50-120) | 2FP (30-120) | NBZ (45-120) | PHL6 (35-120) | TPHL (10-150) |
| 440-238791-1 | MW-1-201090412 | 97 | 85 | 83 | 83 | 83 | 101 |
| 440-238791-2 | MW-2-20190412 | 107 | 85 | 82 | 83 | 80 | 89 |
| 440-238791-3 | MW-3-20190412 | 85 | 82 | 64 | 77 | 65 | 84 |
| 440-238791-4 | MW-4-20190412 | 98 | 86 | 82 | 85 | 82 | 95 |
| LCS 440-541200/2-A | Lab Control Sample | 98 | 79 | 65 | 76 | 67 | 87 |
| LCSD 440-541200/3-A | Lab Control Sample Dup | 98 | 84 | 72 | 78 | 75 | 91 |
| MB 440-541200/1-A | Method Blank | 87 | 79 | 75 | 78 | 77 | 93 |

**Surrogate Legend**

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL6 = Phenol-d6 (Surr)
TPHL = Terphenyl-d14 (Surr)

# Surrogate Summary

Client: Montrose Chemical Company
Project/Site: Montrose Wells

Job ID: 440-238791-1
SDG: Henderson, NV

## Method: 8081A - Organochlorine Pesticides (GC)

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | DCB1 (28-108) | TCX1 (10-123) |
| 440-238680-G-5-A MS | Matrix Spike | 74 | 47 |
| 440-238680-G-5-B MSD | Matrix Spike Duplicate | 74 | 49 |
| 440-238791-1 | MW-1-201090412 | 68 | 48 |
| 440-238791-2 | MW-2-20190412 | 65 | 50 |
| 440-238791-3 | MW-3-20190412 | 72 | 48 |
| 440-238791-4 | MW-4-20190412 | 69 | 37 |
| LCS 440-540366/2-A | Lab Control Sample | 64 | 52 |
| MB 440-540366/1-A | Method Blank | 71 | 52 |

**Surrogate Legend**

DCB = DCB Decachlorobiphenyl (Surr)
TCX = Tetrachloro-m-xylene

# Method Summary

Client: Montrose Chemical Company
Project/Site: Montrose Wells

Job ID: 440-238791-1
SDG: Henderson, NV

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260B | Volatile Organic Compounds (GC/MS) | SW846 | TAL IRV |
| 8270C | Semivolatile Organic Compounds (GC/MS) | SW846 | TAL IRV |
| 8081A | Organochlorine Pesticides (GC) | SW846 | TAL IRV |
| 3510C | Liquid-Liquid Extraction (Separatory Funnel) | SW846 | TAL IRV |
| 3520C | Liquid-Liquid Extraction (Continuous) | SW846 | TAL IRV |
| 5030B | Purge and Trap | SW846 | TAL IRV |

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL IRV = Eurofins TestAmerica, Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

# Lab Chronicle

Client: Montrose Chemical Company
Project/Site: Montrose Wells

Job ID: 440-238791-1
SDG: Henderson, NV

## Client Sample ID: MW-1-201090412

**Lab Sample ID: 440-238791-1**
**Matrix: Water**

**Date Collected: 04/12/19 10:26**
**Date Received: 04/13/19 10:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 1 | 10 mL | 10 mL | 542722 | 04/26/19 11:24 | RM | TAL IRV |
| Total/NA | Analysis | 8260B | | 1 | 10 mL | 10 mL | 542646 | 04/25/19 20:58 | P1P | TAL IRV |
| Total/NA | Prep | 3520C | | | 1020 mL | 2.0 mL | 541200 | 04/18/19 12:42 | JAA | TAL IRV |
| Total/NA | Analysis | 8270C | | 1 | | | 541577 | 04/20/19 17:31 | HN | TAL IRV |
| Total/NA | Prep | 3510C | | | 1040 mL | 2 mL | 540366 | 04/15/19 10:40 | HCK | TAL IRV |
| Total/NA | Analysis | 8081A | | 1 | | | 540610 | 04/16/19 17:57 | D1D | TAL IRV |

## Client Sample ID: MW-2-20190412

**Lab Sample ID: 440-238791-2**
**Matrix: Water**

**Date Collected: 04/12/19 08:48**
**Date Received: 04/13/19 10:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 100 | 10 mL | 10 mL | 542648 | 04/26/19 04:58 | OH1 | TAL IRV |
| Total/NA | Analysis | 8260B | DL | 10000 | 10 mL | 10 mL | 542648 | 04/26/19 05:25 | OH1 | TAL IRV |
| Total/NA | Prep | 3520C | | | 1015 mL | 2.0 mL | 541200 | 04/18/19 12:42 | JAA | TAL IRV |
| Total/NA | Analysis | 8270C | | 1 | | | 541577 | 04/20/19 17:56 | HN | TAL IRV |
| Total/NA | Prep | 3510C | | | 1020 mL | 2 mL | 540366 | 04/15/19 10:40 | HCK | TAL IRV |
| Total/NA | Analysis | 8081A | | 1 | | | 540610 | 04/16/19 18:23 | D1D | TAL IRV |

## Client Sample ID: MW-3-20190412

**Lab Sample ID: 440-238791-3**
**Matrix: Water**

**Date Collected: 04/12/19 08:53**
**Date Received: 04/13/19 10:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 100 | 10 mL | 10 mL | 542648 | 04/26/19 05:51 | OH1 | TAL IRV |
| Total/NA | Analysis | 8260B | DL | 2000 | 10 mL | 10 mL | 542648 | 04/26/19 06:18 | OH1 | TAL IRV |
| Total/NA | Prep | 3520C | | | 1005 mL | 2.0 mL | 541200 | 04/18/19 12:42 | JAA | TAL IRV |
| Total/NA | Analysis | 8270C | | 10 | | | 541577 | 04/20/19 18:22 | HN | TAL IRV |
| Total/NA | Prep | 3510C | | | 1030 mL | 2 mL | 540366 | 04/15/19 10:40 | HCK | TAL IRV |
| Total/NA | Analysis | 8081A | | 1 | | | 540610 | 04/16/19 18:49 | D1D | TAL IRV |

## Client Sample ID: MW-4-20190412

**Lab Sample ID: 440-238791-4**
**Matrix: Water**

**Date Collected: 04/12/19 10:23**
**Date Received: 04/13/19 10:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 2 | 10 mL | 10 mL | 542648 | 04/26/19 06:44 | OH1 | TAL IRV |
| Total/NA | Analysis | 8260B | DL | 100 | 10 mL | 10 mL | 542648 | 04/26/19 07:11 | OH1 | TAL IRV |
| Total/NA | Prep | 3520C | | | 1025 mL | 2.0 mL | 541200 | 04/18/19 12:42 | JAA | TAL IRV |
| Total/NA | Analysis | 8270C | | 1 | | | 541577 | 04/20/19 18:47 | HN | TAL IRV |
| Total/NA | Prep | 3510C | | | 985 mL | 2 mL | 540366 | 04/15/19 10:40 | HCK | TAL IRV |
| Total/NA | Analysis | 8081A | | 1 | | | 540610 | 04/16/19 19:14 | D1D | TAL IRV |

# Lab Chronicle

Client: Montrose Chemical Company
Project/Site: Montrose Wells

Job ID: 440-238791-1
SDG: Henderson, NV

## Client Sample ID: TB-20190412

**Date Collected: 04/12/19 06:40**
**Date Received: 04/13/19 10:30**

**Lab Sample ID: 440-238791-5**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 1 | 10 mL | 10 mL | 542722 | 04/26/19 15:50 | RM | TAL IRV |

## Client Sample ID: PL-509-20190412

**Date Collected: 04/12/19 10:30**
**Date Received: 04/13/19 10:30**

**Lab Sample ID: 440-238791-6**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 1 | 10 mL | 10 mL | 542722 | 04/26/19 16:17 | RM | TAL IRV |

**Laboratory References:**

TAL IRV = Eurofins TestAmerica, Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-542646/4**
**Matrix: Water**
**Analysis Batch: 542646**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 20:33 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 (Surr) | 101 | | 70 - 130 | | 04/25/19 20:33 | 1 |
| 4-Bromofluorobenzene (Surr) | 95 | | 80 - 120 | | 04/25/19 20:33 | 1 |
| Dibromofluoromethane (Surr) | 104 | | 76 - 132 | | 04/25/19 20:33 | 1 |
| Toluene-d8 (Surr) | 105 | | 80 - 128 | | 04/25/19 20:33 | 1 |

**Lab Sample ID: LCS 440-542646/14**
**Matrix: Water**
**Analysis Batch: 542646**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloroform | 10.0 | 10.6 | | ug/L | | 106 | 70 - 130 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 (Surr) | 94 | | 70 - 130 |
| 4-Bromofluorobenzene (Surr) | 95 | | 80 - 120 |
| Dibromofluoromethane (Surr) | 102 | | 76 - 132 |
| Toluene-d8 (Surr) | 96 | | 80 - 128 |

**Lab Sample ID: 440-238791-1 MS**
**Matrix: Water**
**Analysis Batch: 542646**

**Client Sample ID: MW-1-201090412**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | 3.3 | | 10.0 | 13.0 | | ug/L | | 98 | 70 - 130 |

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 (Surr) | 100 | | 70 - 130 |
| 4-Bromofluorobenzene (Surr) | 101 | | 80 - 120 |
| Dibromofluoromethane (Surr) | 102 | | 76 - 132 |
| Toluene-d8 (Surr) | 99 | | 80 - 128 |

**Lab Sample ID: 440-238791-1 MSD**
**Matrix: Water**
**Analysis Batch: 542646**

**Client Sample ID: MW-1-201090412**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloroform | 3.3 | | 10.0 | 12.3 | | ug/L | | 90 | 70 - 130 | 6 | 20 |

| Surrogate | MSD %Recovery | MSD Qualifier | Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 (Surr) | 103 | | 70 - 130 |
| 4-Bromofluorobenzene (Surr) | 100 | | 80 - 120 |
| Dibromofluoromethane (Surr) | 102 | | 76 - 132 |
| Toluene-d8 (Surr) | 100 | | 80 - 128 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-542648/7**
**Matrix: Water**
**Analysis Batch: 542648**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 5.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| 1,1,1-Trichloroethane | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| 1,1,2-Trichloroethane | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| 1,1-Dichloroethane | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| 1,1-Dichloroethene | ND | | 5.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| 1,1-Dichloropropene | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 5.0 | 0.40 | ug/L | | | 04/25/19 21:27 | 1 |
| 1,2,3-Trichloropropane | ND | | 10 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 5.0 | 0.40 | ug/L | | | 04/25/19 21:27 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | 0.50 | ug/L | | | 04/25/19 21:27 | 1 |
| 1,2-Dibromoethane (EDB) | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| 1,2-Dichlorobenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| 1,2-Dichloroethane | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| 1,2-Dichloropropane | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| 1,3-Dichlorobenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| 1,3-Dichloropropane | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| 1,4-Dichlorobenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| 2,2-Dichloropropane | ND | | 2.0 | 0.40 | ug/L | | | 04/25/19 21:27 | 1 |
| 2-Chlorotoluene | ND | | 5.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| 4-Chlorotoluene | ND | | 5.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| Benzene | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| Bromobenzene | ND | | 5.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| Bromochloromethane | ND | | 5.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| Bromodichloromethane | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| Bromoform | ND | | 5.0 | 0.40 | ug/L | | | 04/25/19 21:27 | 1 |
| Bromomethane | ND | | 5.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| Carbon tetrachloride | ND | | 1.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| Chlorobenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| Chloroethane | ND | | 5.0 | 0.40 | ug/L | | | 04/25/19 21:27 | 1 |
| Chloroform | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| Chloromethane | ND | | 5.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| cis-1,2-Dichloroethene | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| cis-1,3-Dichloropropene | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| Dibromochloromethane | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| Dibromomethane | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| Dichlorodifluoromethane | ND | | 5.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| Dimethyl disulfide | ND | | 2.0 | 1.0 | ug/L | | | 04/25/19 21:27 | 1 |
| Ethylbenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| Hexachlorobutadiene | ND | | 5.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| Isopropylbenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| m,p-Xylene | ND | | 2.0 | 0.50 | ug/L | | | 04/25/19 21:27 | 1 |
| Methylene Chloride | ND | | 2.0 | 1.1 | ug/L | | | 04/25/19 21:27 | 1 |
| Naphthalene | ND | | 5.0 | 0.40 | ug/L | | | 04/25/19 21:27 | 1 |
| n-Butylbenzene | ND | | 5.0 | 0.40 | ug/L | | | 04/25/19 21:27 | 1 |
| N-Propylbenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-542648/7**
**Matrix: Water**
**Analysis Batch: 542648**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| o-Xylene | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| p-Isopropyltoluene | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| sec-Butylbenzene | ND | | 5.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| Styrene | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| tert-Butylbenzene | ND | | 5.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| Tetrachloroethene | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| Toluene | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| trans-1,2-Dichloroethene | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| trans-1,3-Dichloropropene | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| Trichloroethene | ND | | 2.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| Trichlorofluoromethane | ND | | 5.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |
| Vinyl chloride | ND | | 5.0 | 0.25 | ug/L | | | 04/25/19 21:27 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *88* | | *70 - 130* | | *04/25/19 21:27* | *1* |
| *4-Bromofluorobenzene (Surr)* | *90* | | *80 - 120* | | *04/25/19 21:27* | *1* |
| *Dibromofluoromethane (Surr)* | *105* | | *76 - 132* | | *04/25/19 21:27* | *1* |
| *Toluene-d8 (Surr)* | *104* | | *80 - 128* | | *04/25/19 21:27* | *1* |

**Lab Sample ID: LCS 440-542648/5**
**Matrix: Water**
**Analysis Batch: 542648**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 10.0 | 11.6 | | ug/L | | 116 | 60 - 141 |
| 1,1,1-Trichloroethane | 10.0 | 10.7 | | ug/L | | 107 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | 10.0 | 9.04 | | ug/L | | 90 | 63 - 130 |
| 1,1,2-Trichloroethane | 10.0 | 8.71 | | ug/L | | 87 | 70 - 130 |
| 1,1-Dichloroethane | 10.0 | 10.4 | | ug/L | | 104 | 64 - 130 |
| 1,1-Dichloroethene | 10.0 | 11.1 | | ug/L | | 111 | 70 - 130 |
| 1,1-Dichloropropene | 10.0 | 10.0 | | ug/L | | 100 | 70 - 130 |
| 1,2,3-Trichlorobenzene | 10.0 | 12.1 | | ug/L | | 121 | 60 - 140 |
| 1,2,3-Trichloropropane | 10.0 | 8.42 | J | ug/L | | 84 | 63 - 130 |
| 1,2,4-Trichlorobenzene | 10.0 | 12.1 | | ug/L | | 121 | 60 - 140 |
| 1,2,4-Trimethylbenzene | 10.0 | 11.1 | | ug/L | | 111 | 70 - 135 |
| 1,2-Dibromo-3-Chloropropane | 10.0 | 8.54 | | ug/L | | 85 | 52 - 140 |
| 1,2-Dibromoethane (EDB) | 10.0 | 8.49 | | ug/L | | 85 | 70 - 130 |
| 1,2-Dichlorobenzene | 10.0 | 11.5 | | ug/L | | 115 | 70 - 130 |
| 1,2-Dichloroethane | 10.0 | 8.38 | | ug/L | | 84 | 57 - 138 |
| 1,2-Dichloropropane | 10.0 | 8.66 | | ug/L | | 87 | 67 - 130 |
| 1,3,5-Trimethylbenzene | 10.0 | 11.2 | | ug/L | | 112 | 70 - 136 |
| 1,3-Dichlorobenzene | 10.0 | 10.7 | | ug/L | | 107 | 70 - 130 |
| 1,3-Dichloropropane | 10.0 | 8.49 | | ug/L | | 85 | 70 - 130 |
| 1,4-Dichlorobenzene | 10.0 | 10.4 | | ug/L | | 104 | 70 - 130 |
| 2,2-Dichloropropane | 10.0 | 12.0 | | ug/L | | 120 | 68 - 141 |
| 2-Chlorotoluene | 10.0 | 10.7 | | ug/L | | 107 | 70 - 130 |
| 4-Chlorotoluene | 10.0 | 10.2 | | ug/L | | 102 | 70 - 130 |
| Benzene | 10.0 | 9.80 | | ug/L | | 98 | 68 - 130 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-542648/5**
**Matrix: Water**
**Analysis Batch: 542648**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Bromobenzene | 10.0 | 10.4 | | ug/L | | 104 | 70 - 130 |
| Bromochloromethane | 10.0 | 10.9 | | ug/L | | 109 | 70 - 130 |
| Bromodichloromethane | 10.0 | 9.24 | | ug/L | | 92 | 70 - 132 |
| Bromoform | 10.0 | 8.60 | | ug/L | | 86 | 60 - 148 |
| Bromomethane | 10.0 | 10.0 | | ug/L | | 100 | 64 - 139 |
| Carbon tetrachloride | 10.0 | 10.5 | | ug/L | | 105 | 60 - 150 |
| Chlorobenzene | 10.0 | 9.94 | | ug/L | | 99 | 70 - 130 |
| Chloroethane | 10.0 | 10.0 | | ug/L | | 100 | 64 - 135 |
| Chloroform | 10.0 | 10.6 | | ug/L | | 106 | 70 - 130 |
| Chloromethane | 10.0 | 7.94 | | ug/L | | 79 | 47 - 140 |
| cis-1,2-Dichloroethene | 10.0 | 10.5 | | ug/L | | 105 | 70 - 133 |
| cis-1,3-Dichloropropene | 10.0 | 9.47 | | ug/L | | 95 | 70 - 133 |
| Dibromochloromethane | 10.0 | 9.57 | | ug/L | | 96 | 69 - 145 |
| Dibromomethane | 10.0 | 8.49 | | ug/L | | 85 | 70 - 130 |
| Dichlorodifluoromethane | 10.0 | 9.43 | | ug/L | | 94 | 29 - 150 |
| Ethylbenzene | 10.0 | 9.92 | | ug/L | | 99 | 70 - 130 |
| Hexachlorobutadiene | 10.0 | 11.5 | | ug/L | | 115 | 10 - 150 |
| Isopropylbenzene | 10.0 | 10.7 | | ug/L | | 107 | 70 - 136 |
| m,p-Xylene | 10.0 | 10.1 | | ug/L | | 101 | 70 - 130 |
| Methylene Chloride | 10.0 | 10.9 | | ug/L | | 109 | 52 - 130 |
| Naphthalene | 10.0 | 10.2 | | ug/L | | 102 | 60 - 140 |
| n-Butylbenzene | 10.0 | 11.1 | | ug/L | | 111 | 65 - 150 |
| N-Propylbenzene | 10.0 | 10.5 | | ug/L | | 105 | 67 - 139 |
| o-Xylene | 10.0 | 10.9 | | ug/L | | 109 | 70 - 130 |
| p-Isopropyltoluene | 10.0 | 11.4 | | ug/L | | 114 | 70 - 132 |
| sec-Butylbenzene | 10.0 | 11.2 | | ug/L | | 112 | 70 - 138 |
| Styrene | 10.0 | 10.0 | | ug/L | | 100 | 70 - 134 |
| tert-Butylbenzene | 10.0 | 10.8 | | ug/L | | 108 | 70 - 130 |
| Tetrachloroethene | 10.0 | 10.6 | | ug/L | | 106 | 70 - 130 |
| Toluene | 10.0 | 9.78 | | ug/L | | 98 | 70 - 130 |
| trans-1,2-Dichloroethene | 10.0 | 10.7 | | ug/L | | 107 | 70 - 130 |
| trans-1,3-Dichloropropene | 10.0 | 8.88 | | ug/L | | 89 | 70 - 132 |
| Trichloroethene | 10.0 | 10.2 | | ug/L | | 102 | 70 - 130 |
| Trichlorofluoromethane | 10.0 | 10.5 | | ug/L | | 105 | 60 - 150 |
| Vinyl chloride | 10.0 | 9.47 | | ug/L | | 95 | 59 - 133 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *88* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *92* | | *80 - 120* |
| *Dibromofluoromethane (Surr)* | *105* | | *76 - 132* |
| *Toluene-d8 (Surr)* | *100* | | *80 - 128* |

**Lab Sample ID: 440-239073-A-6 MS**
**Matrix: Water**
**Analysis Batch: 542648**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 12.5 | 14.9 | | ug/L | | 119 | 60 - 149 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-239073-A-6 MS**
**Matrix: Water**
**Analysis Batch: 542648**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 12.5 | 13.9 | | ug/L | | 111 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | ND | | 12.5 | 12.3 | | ug/L | | 99 | 63 - 130 |
| 1,1,2-Trichloroethane | ND | | 12.5 | 11.6 | | ug/L | | 93 | 70 - 130 |
| 1,1-Dichloroethane | ND | | 12.5 | 13.7 | | ug/L | | 110 | 65 - 130 |
| 1,1-Dichloroethene | 0.51 | J | 12.5 | 15.0 | | ug/L | | 116 | 70 - 130 |
| 1,1-Dichloropropene | ND | | 12.5 | 13.3 | | ug/L | | 106 | 64 - 130 |
| 1,2,3-Trichlorobenzene | ND | | 12.5 | 14.8 | | ug/L | | 119 | 60 - 140 |
| 1,2,3-Trichloropropane | ND | | 12.5 | 12.4 | | ug/L | | 99 | 60 - 130 |
| 1,2,4-Trichlorobenzene | ND | | 12.5 | 15.1 | | ug/L | | 121 | 60 - 140 |
| 1,2,4-Trimethylbenzene | ND | | 12.5 | 13.8 | | ug/L | | 110 | 70 - 130 |
| 1,2-Dibromo-3-Chloropropane | ND | | 12.5 | 11.8 | | ug/L | | 94 | 48 - 140 |
| 1,2-Dibromoethane (EDB) | ND | | 12.5 | 11.8 | | ug/L | | 94 | 70 - 131 |
| 1,2-Dichlorobenzene | 0.29 | J | 12.5 | 14.3 | | ug/L | | 112 | 70 - 130 |
| 1,2-Dichloroethane | ND | | 12.5 | 11.5 | | ug/L | | 92 | 56 - 146 |
| 1,2-Dichloropropane | ND | | 12.5 | 11.4 | | ug/L | | 91 | 69 - 130 |
| 1,3,5-Trimethylbenzene | ND | | 12.5 | 13.9 | | ug/L | | 111 | 70 - 130 |
| 1,3-Dichlorobenzene | ND | | 12.5 | 13.3 | | ug/L | | 107 | 70 - 130 |
| 1,3-Dichloropropane | ND | | 12.5 | 11.1 | | ug/L | | 89 | 70 - 130 |
| 1,4-Dichlorobenzene | 0.29 | J | 12.5 | 13.3 | | ug/L | | 104 | 70 - 130 |
| 2,2-Dichloropropane | ND | | 12.5 | 15.5 | | ug/L | | 124 | 69 - 138 |
| 2-Chlorotoluene | ND | | 12.5 | 13.3 | | ug/L | | 106 | 70 - 130 |
| 4-Chlorotoluene | ND | | 12.5 | 12.9 | | ug/L | | 103 | 70 - 130 |
| Benzene | ND | | 12.5 | 12.6 | | ug/L | | 101 | 66 - 130 |
| Bromobenzene | ND | | 12.5 | 13.0 | | ug/L | | 104 | 70 - 130 |
| Bromochloromethane | ND | | 12.5 | 14.6 | | ug/L | | 116 | 70 - 130 |
| Bromodichloromethane | ND | | 12.5 | 11.5 | | ug/L | | 92 | 70 - 138 |
| Bromoform | ND | | 12.5 | 12.1 | | ug/L | | 97 | 59 - 150 |
| Bromomethane | ND | | 12.5 | 13.6 | | ug/L | | 109 | 62 - 131 |
| Carbon tetrachloride | 0.73 | J | 12.5 | 14.7 | | ug/L | | 112 | 60 - 150 |
| Chlorobenzene | ND | | 12.5 | 12.8 | | ug/L | | 102 | 70 - 130 |
| Chloroethane | ND | | 12.5 | 13.4 | | ug/L | | 107 | 68 - 130 |
| Chloroform | 66 | | 12.5 | 79.8 | 4 | ug/L | | 112 | 70 - 130 |
| Chloromethane | ND | | 12.5 | 11.4 | | ug/L | | 91 | 39 - 144 |
| cis-1,2-Dichloroethene | ND | | 12.5 | 13.6 | | ug/L | | 109 | 70 - 130 |
| cis-1,3-Dichloropropene | ND | | 12.5 | 12.6 | | ug/L | | 100 | 70 - 133 |
| Dibromochloromethane | ND | | 12.5 | 12.7 | | ug/L | | 101 | 70 - 148 |
| Dibromomethane | ND | | 12.5 | 11.6 | | ug/L | | 93 | 70 - 130 |
| Dichlorodifluoromethane | ND | | 12.5 | 14.5 | | ug/L | | 116 | 25 - 142 |
| Ethylbenzene | ND | | 12.5 | 12.7 | | ug/L | | 102 | 70 - 130 |
| Hexachlorobutadiene | ND | | 12.5 | 13.5 | | ug/L | | 108 | 10 - 150 |
| Isopropylbenzene | ND | | 12.5 | 13.7 | | ug/L | | 110 | 70 - 132 |
| m,p-Xylene | ND | | 12.5 | 13.2 | | ug/L | | 106 | 70 - 133 |
| Methylene Chloride | ND | | 12.5 | 13.7 | | ug/L | | 110 | 52 - 130 |
| Naphthalene | ND | | 12.5 | 14.0 | | ug/L | | 112 | 60 - 140 |
| n-Butylbenzene | ND | | 12.5 | 14.0 | | ug/L | | 112 | 61 - 149 |
| N-Propylbenzene | ND | | 12.5 | 13.3 | | ug/L | | 106 | 66 - 135 |
| o-Xylene | ND | | 12.5 | 13.9 | | ug/L | | 111 | 70 - 133 |
| p-Isopropyltoluene | ND | | 12.5 | 14.0 | | ug/L | | 112 | 70 - 130 |
| sec-Butylbenzene | ND | | 12.5 | 13.6 | | ug/L | | 109 | 67 - 134 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-239073-A-6 MS**
**Matrix: Water**
**Analysis Batch: 542648**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Styrene | ND | | 12.5 | 12.6 | | ug/L | | 100 | 29 - 150 |
| tert-Butylbenzene | ND | | 12.5 | 13.3 | | ug/L | | 106 | 70 - 130 |
| Tetrachloroethene | ND | | 12.5 | 13.8 | | ug/L | | 110 | 70 - 137 |
| Toluene | ND | | 12.5 | 12.5 | | ug/L | | 100 | 70 - 130 |
| trans-1,2-Dichloroethene | ND | | 12.5 | 14.6 | | ug/L | | 117 | 70 - 130 |
| trans-1,3-Dichloropropene | ND | | 12.5 | 11.6 | | ug/L | | 93 | 70 - 138 |
| Trichloroethene | 2.6 | | 12.5 | 15.3 | | ug/L | | 101 | 70 - 130 |
| Trichlorofluoromethane | ND | | 12.5 | 13.8 | | ug/L | | 111 | 60 - 150 |
| Vinyl chloride | ND | | 12.5 | 13.1 | | ug/L | | 105 | 50 - 137 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *93* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *91* | | *80 - 120* |
| *Dibromofluoromethane (Surr)* | *110* | | *76 - 132* |
| *Toluene-d8 (Surr)* | *101* | | *80 - 128* |

**Lab Sample ID: 440-239073-B-6 MSD**
**Matrix: Water**
**Analysis Batch: 542648**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 12.5 | 15.1 | | ug/L | | 121 | 60 - 149 | 1 | 20 |
| 1,1,1-Trichloroethane | ND | | 12.5 | 14.1 | | ug/L | | 113 | 70 - 130 | 2 | 20 |
| 1,1,2,2-Tetrachloroethane | ND | | 12.5 | 12.6 | | ug/L | | 101 | 63 - 130 | 2 | 30 |
| 1,1,2-Trichloroethane | ND | | 12.5 | 11.8 | | ug/L | | 95 | 70 - 130 | 2 | 25 |
| 1,1-Dichloroethane | ND | | 12.5 | 14.0 | | ug/L | | 112 | 65 - 130 | 2 | 20 |
| 1,1-Dichloroethene | 0.51 | J | 12.5 | 15.2 | | ug/L | | 118 | 70 - 130 | 1 | 20 |
| 1,1-Dichloropropene | ND | | 12.5 | 13.4 | | ug/L | | 107 | 64 - 130 | 1 | 20 |
| 1,2,3-Trichlorobenzene | ND | | 12.5 | 15.2 | | ug/L | | 122 | 60 - 140 | 3 | 20 |
| 1,2,3-Trichloropropane | ND | | 12.5 | 12.4 | | ug/L | | 99 | 60 - 130 | 0 | 30 |
| 1,2,4-Trichlorobenzene | ND | | 12.5 | 15.5 | | ug/L | | 124 | 60 - 140 | 3 | 20 |
| 1,2,4-Trimethylbenzene | ND | | 12.5 | 14.0 | | ug/L | | 112 | 70 - 130 | 2 | 25 |
| 1,2-Dibromo-3-Chloropropane | ND | | 12.5 | 12.3 | | ug/L | | 98 | 48 - 140 | 4 | 30 |
| 1,2-Dibromoethane (EDB) | ND | | 12.5 | 11.7 | | ug/L | | 93 | 70 - 131 | 1 | 25 |
| 1,2-Dichlorobenzene | 0.29 | J | 12.5 | 14.8 | | ug/L | | 116 | 70 - 130 | 3 | 20 |
| 1,2-Dichloroethane | ND | | 12.5 | 11.3 | | ug/L | | 90 | 56 - 146 | 2 | 20 |
| 1,2-Dichloropropane | ND | | 12.5 | 11.4 | | ug/L | | 91 | 69 - 130 | 0 | 20 |
| 1,3,5-Trimethylbenzene | ND | | 12.5 | 14.4 | | ug/L | | 115 | 70 - 130 | 4 | 20 |
| 1,3-Dichlorobenzene | ND | | 12.5 | 13.7 | | ug/L | | 109 | 70 - 130 | 3 | 20 |
| 1,3-Dichloropropane | ND | | 12.5 | 11.1 | | ug/L | | 89 | 70 - 130 | 0 | 25 |
| 1,4-Dichlorobenzene | 0.29 | J | 12.5 | 13.5 | | ug/L | | 106 | 70 - 130 | 1 | 20 |
| 2,2-Dichloropropane | ND | | 12.5 | 15.7 | | ug/L | | 126 | 69 - 138 | 1 | 25 |
| 2-Chlorotoluene | ND | | 12.5 | 13.7 | | ug/L | | 109 | 70 - 130 | 3 | 20 |
| 4-Chlorotoluene | ND | | 12.5 | 13.1 | | ug/L | | 105 | 70 - 130 | 2 | 20 |
| Benzene | ND | | 12.5 | 12.8 | | ug/L | | 102 | 66 - 130 | 1 | 20 |
| Bromobenzene | ND | | 12.5 | 13.3 | | ug/L | | 106 | 70 - 130 | 2 | 20 |
| Bromochloromethane | ND | | 12.5 | 14.7 | | ug/L | | 118 | 70 - 130 | 1 | 25 |
| Bromodichloromethane | ND | | 12.5 | 12.1 | | ug/L | | 97 | 70 - 138 | 5 | 20 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-239073-B-6 MSD**
**Matrix: Water**
**Analysis Batch: 542648**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromoform | ND | | 12.5 | 11.9 | | ug/L | | 95 | 59 - 150 | 2 | 25 |
| Bromomethane | ND | | 12.5 | 13.9 | | ug/L | | 111 | 62 - 131 | 2 | 25 |
| Carbon tetrachloride | 0.73 | J | 12.5 | 15.1 | | ug/L | | 115 | 60 - 150 | 2 | 25 |
| Chlorobenzene | ND | | 12.5 | 12.8 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| Chloroethane | ND | | 12.5 | 13.4 | | ug/L | | 107 | 68 - 130 | 0 | 25 |
| Chloroform | 66 | | 12.5 | 83.0 | 4 | ug/L | | 138 | 70 - 130 | 4 | 20 |
| Chloromethane | ND | | 12.5 | 11.7 | | ug/L | | 93 | 39 - 144 | 2 | 25 |
| cis-1,2-Dichloroethene | ND | | 12.5 | 13.7 | | ug/L | | 109 | 70 - 130 | 1 | 20 |
| cis-1,3-Dichloropropene | ND | | 12.5 | 12.5 | | ug/L | | 100 | 70 - 133 | 0 | 20 |
| Dibromochloromethane | ND | | 12.5 | 12.5 | | ug/L | | 100 | 70 - 148 | 1 | 25 |
| Dibromomethane | ND | | 12.5 | 11.3 | | ug/L | | 91 | 70 - 130 | 3 | 25 |
| Dichlorodifluoromethane | ND | | 12.5 | 14.9 | | ug/L | | 119 | 25 - 142 | 2 | 30 |
| Ethylbenzene | ND | | 12.5 | 12.7 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| Hexachlorobutadiene | ND | | 12.5 | 14.0 | | ug/L | | 112 | 10 - 150 | 4 | 20 |
| Isopropylbenzene | ND | | 12.5 | 14.0 | | ug/L | | 112 | 70 - 132 | 2 | 20 |
| m,p-Xylene | ND | | 12.5 | 13.2 | | ug/L | | 106 | 70 - 133 | 0 | 25 |
| Methylene Chloride | ND | | 12.5 | 14.2 | | ug/L | | 114 | 52 - 130 | 4 | 20 |
| Naphthalene | ND | | 12.5 | 13.9 | | ug/L | | 112 | 60 - 140 | 0 | 30 |
| n-Butylbenzene | ND | | 12.5 | 14.2 | | ug/L | | 113 | 61 - 149 | 1 | 20 |
| N-Propylbenzene | ND | | 12.5 | 13.6 | | ug/L | | 109 | 66 - 135 | 3 | 20 |
| o-Xylene | ND | | 12.5 | 14.1 | | ug/L | | 113 | 70 - 133 | 1 | 20 |
| p-Isopropyltoluene | ND | | 12.5 | 14.6 | | ug/L | | 117 | 70 - 130 | 4 | 20 |
| sec-Butylbenzene | ND | | 12.5 | 14.0 | | ug/L | | 112 | 67 - 134 | 3 | 20 |
| Styrene | ND | | 12.5 | 12.6 | | ug/L | | 101 | 29 - 150 | 1 | 35 |
| tert-Butylbenzene | ND | | 12.5 | 13.7 | | ug/L | | 109 | 70 - 130 | 3 | 20 |
| Tetrachloroethene | ND | | 12.5 | 14.3 | | ug/L | | 115 | 70 - 137 | 4 | 20 |
| Toluene | ND | | 12.5 | 12.7 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| trans-1,2-Dichloroethene | ND | | 12.5 | 14.9 | | ug/L | | 119 | 70 - 130 | 2 | 20 |
| trans-1,3-Dichloropropene | ND | | 12.5 | 11.7 | | ug/L | | 94 | 70 - 138 | 1 | 25 |
| Trichloroethene | 2.6 | | 12.5 | 15.6 | | ug/L | | 104 | 70 - 130 | 2 | 20 |
| Trichlorofluoromethane | ND | | 12.5 | 14.0 | | ug/L | | 112 | 60 - 150 | 1 | 25 |
| Vinyl chloride | ND | | 12.5 | 13.1 | | ug/L | | 105 | 50 - 137 | 0 | 30 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *92* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *93* | | *80 - 120* |
| *Dibromofluoromethane (Surr)* | *108* | | *76 - 132* |
| *Toluene-d8 (Surr)* | *100* | | *80 - 128* |

**Lab Sample ID: MB 440-542722/7**
**Matrix: Water**
**Analysis Batch: 542722**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| 1,1,1-Trichloroethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| 1,1,2-Trichloroethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-542722/7**
**Matrix: Water**
**Analysis Batch: 542722**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| 1,1-Dichloroethene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| 1,1-Dichloropropene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 5.0 | 0.40 | ug/L | | | 04/26/19 10:31 | 1 |
| 1,2,3-Trichloropropane | ND | | 10 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 5.0 | 0.40 | ug/L | | | 04/26/19 10:31 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | 0.50 | ug/L | | | 04/26/19 10:31 | 1 |
| 1,2-Dibromoethane (EDB) | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| 1,2-Dichlorobenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| 1,2-Dichloroethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| 1,2-Dichloropropane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| 1,3-Dichlorobenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| 1,3-Dichloropropane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| 1,4-Dichlorobenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| 2,2-Dichloropropane | ND | | 2.0 | 0.40 | ug/L | | | 04/26/19 10:31 | 1 |
| 2-Chlorotoluene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| 4-Chlorotoluene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| Benzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| Bromobenzene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| Bromochloromethane | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| Bromodichloromethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| Bromoform | ND | | 5.0 | 0.40 | ug/L | | | 04/26/19 10:31 | 1 |
| Bromomethane | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| Carbon tetrachloride | ND | | 1.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| Chlorobenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| Chloroethane | ND | | 5.0 | 0.40 | ug/L | | | 04/26/19 10:31 | 1 |
| Chloroform | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| Chloromethane | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| cis-1,2-Dichloroethene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| cis-1,3-Dichloropropene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| Dibromochloromethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| Dibromomethane | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| Dichlorodifluoromethane | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| Dimethyl disulfide | ND | | 2.0 | 1.0 | ug/L | | | 04/26/19 10:31 | 1 |
| Ethylbenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| Hexachlorobutadiene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| Isopropylbenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| m,p-Xylene | ND | | 2.0 | 0.50 | ug/L | | | 04/26/19 10:31 | 1 |
| Methylene Chloride | ND | | 2.0 | 1.1 | ug/L | | | 04/26/19 10:31 | 1 |
| Naphthalene | ND | | 5.0 | 0.40 | ug/L | | | 04/26/19 10:31 | 1 |
| n-Butylbenzene | ND | | 5.0 | 0.40 | ug/L | | | 04/26/19 10:31 | 1 |
| N-Propylbenzene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| o-Xylene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| p-Isopropyltoluene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| sec-Butylbenzene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| Styrene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| tert-Butylbenzene | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-542722/7**
**Matrix: Water**
**Analysis Batch: 542722**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| Toluene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| trans-1,2-Dichloroethene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| trans-1,3-Dichloropropene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| Trichloroethene | ND | | 2.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| Trichlorofluoromethane | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |
| Vinyl chloride | ND | | 5.0 | 0.25 | ug/L | | | 04/26/19 10:31 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *93* | | *70 - 130* | | *04/26/19 10:31* | *1* |
| *4-Bromofluorobenzene (Surr)* | *91* | | *80 - 120* | | *04/26/19 10:31* | *1* |
| *Dibromofluoromethane (Surr)* | *107* | | *76 - 132* | | *04/26/19 10:31* | *1* |
| *Toluene-d8 (Surr)* | *103* | | *80 - 128* | | *04/26/19 10:31* | *1* |

**Lab Sample ID: LCS 440-542722/5**
**Matrix: Water**
**Analysis Batch: 542722**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 10.0 | 11.3 | | ug/L | | 113 | 60 - 141 |
| 1,1,1-Trichloroethane | 10.0 | 9.95 | | ug/L | | 100 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | 10.0 | 8.97 | | ug/L | | 90 | 63 - 130 |
| 1,1,2-Trichloroethane | 10.0 | 8.74 | | ug/L | | 87 | 70 - 130 |
| 1,1-Dichloroethane | 10.0 | 9.64 | | ug/L | | 96 | 64 - 130 |
| 1,1-Dichloroethene | 10.0 | 9.79 | | ug/L | | 98 | 70 - 130 |
| 1,1-Dichloropropene | 10.0 | 9.15 | | ug/L | | 92 | 70 - 130 |
| 1,2,3-Trichlorobenzene | 10.0 | 11.3 | | ug/L | | 113 | 60 - 140 |
| 1,2,3-Trichloropropane | 10.0 | 8.46 | J | ug/L | | 85 | 63 - 130 |
| 1,2,4-Trichlorobenzene | 10.0 | 11.5 | | ug/L | | 115 | 60 - 140 |
| 1,2,4-Trimethylbenzene | 10.0 | 10.2 | | ug/L | | 102 | 70 - 135 |
| 1,2-Dibromo-3-Chloropropane | 10.0 | 8.43 | | ug/L | | 84 | 52 - 140 |
| 1,2-Dibromoethane (EDB) | 10.0 | 8.64 | | ug/L | | 86 | 70 - 130 |
| 1,2-Dichlorobenzene | 10.0 | 10.9 | | ug/L | | 109 | 70 - 130 |
| 1,2-Dichloroethane | 10.0 | 8.18 | | ug/L | | 82 | 57 - 138 |
| 1,2-Dichloropropane | 10.0 | 8.30 | | ug/L | | 83 | 67 - 130 |
| 1,3,5-Trimethylbenzene | 10.0 | 10.4 | | ug/L | | 104 | 70 - 136 |
| 1,3-Dichlorobenzene | 10.0 | 10.2 | | ug/L | | 102 | 70 - 130 |
| 1,3-Dichloropropane | 10.0 | 8.34 | | ug/L | | 83 | 70 - 130 |
| 1,4-Dichlorobenzene | 10.0 | 9.99 | | ug/L | | 100 | 70 - 130 |
| 2,2-Dichloropropane | 10.0 | 11.3 | | ug/L | | 113 | 68 - 141 |
| 2-Chlorotoluene | 10.0 | 9.86 | | ug/L | | 99 | 70 - 130 |
| 4-Chlorotoluene | 10.0 | 9.65 | | ug/L | | 97 | 70 - 130 |
| Benzene | 10.0 | 9.16 | | ug/L | | 92 | 68 - 130 |
| Bromobenzene | 10.0 | 9.67 | | ug/L | | 97 | 70 - 130 |
| Bromochloromethane | 10.0 | 10.3 | | ug/L | | 103 | 70 - 130 |
| Bromodichloromethane | 10.0 | 8.55 | | ug/L | | 86 | 70 - 132 |
| Bromoform | 10.0 | 9.00 | | ug/L | | 90 | 60 - 148 |
| Bromomethane | 10.0 | 8.70 | | ug/L | | 87 | 64 - 139 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-542722/5**
**Matrix: Water**
**Analysis Batch: 542722**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Carbon tetrachloride | 10.0 | 9.87 | | ug/L | | 99 | 60 - 150 |
| Chlorobenzene | 10.0 | 9.62 | | ug/L | | 96 | 70 - 130 |
| Chloroethane | 10.0 | 8.67 | | ug/L | | 87 | 64 - 135 |
| Chloroform | 10.0 | 9.86 | | ug/L | | 99 | 70 - 130 |
| Chloromethane | 10.0 | 6.65 | | ug/L | | 66 | 47 - 140 |
| cis-1,2-Dichloroethene | 10.0 | 9.65 | | ug/L | | 97 | 70 - 133 |
| cis-1,3-Dichloropropene | 10.0 | 9.28 | | ug/L | | 93 | 70 - 133 |
| Dibromochloromethane | 10.0 | 9.46 | | ug/L | | 95 | 69 - 145 |
| Dibromomethane | 10.0 | 8.14 | | ug/L | | 81 | 70 - 130 |
| Dichlorodifluoromethane | 10.0 | 7.11 | | ug/L | | 71 | 29 - 150 |
| Ethylbenzene | 10.0 | 9.54 | | ug/L | | 95 | 70 - 130 |
| Hexachlorobutadiene | 10.0 | 10.7 | | ug/L | | 107 | 10 - 150 |
| Isopropylbenzene | 10.0 | 10.3 | | ug/L | | 103 | 70 - 136 |
| m,p-Xylene | 10.0 | 9.87 | | ug/L | | 99 | 70 - 130 |
| Methylene Chloride | 10.0 | 9.79 | | ug/L | | 98 | 52 - 130 |
| Naphthalene | 10.0 | 10.3 | | ug/L | | 103 | 60 - 140 |
| n-Butylbenzene | 10.0 | 10.3 | | ug/L | | 103 | 65 - 150 |
| N-Propylbenzene | 10.0 | 9.98 | | ug/L | | 100 | 67 - 139 |
| o-Xylene | 10.0 | 10.4 | | ug/L | | 104 | 70 - 130 |
| p-Isopropyltoluene | 10.0 | 10.7 | | ug/L | | 107 | 70 - 132 |
| sec-Butylbenzene | 10.0 | 10.2 | | ug/L | | 102 | 70 - 138 |
| Styrene | 10.0 | 9.68 | | ug/L | | 97 | 70 - 134 |
| tert-Butylbenzene | 10.0 | 9.94 | | ug/L | | 99 | 70 - 130 |
| Tetrachloroethene | 10.0 | 9.97 | | ug/L | | 100 | 70 - 130 |
| Toluene | 10.0 | 9.24 | | ug/L | | 92 | 70 - 130 |
| trans-1,2-Dichloroethene | 10.0 | 10.2 | | ug/L | | 102 | 70 - 130 |
| trans-1,3-Dichloropropene | 10.0 | 8.84 | | ug/L | | 88 | 70 - 132 |
| Trichloroethene | 10.0 | 9.55 | | ug/L | | 96 | 70 - 130 |
| Trichlorofluoromethane | 10.0 | 9.05 | | ug/L | | 91 | 60 - 150 |
| Vinyl chloride | 10.0 | 7.84 | | ug/L | | 78 | 59 - 133 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *90* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *90* | | *80 - 120* |
| *Dibromofluoromethane (Surr)* | *106* | | *76 - 132* |
| *Toluene-d8 (Surr)* | *100* | | *80 - 128* |

**Lab Sample ID: 440-238715-L-2 MS**
**Matrix: Water**
**Analysis Batch: 542722**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 2500 | 2820 | | ug/L | | 113 | 60 - 149 |
| 1,1,1-Trichloroethane | ND | | 2500 | 2540 | | ug/L | | 102 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | ND | | 2500 | 2260 | | ug/L | | 90 | 63 - 130 |
| 1,1,2-Trichloroethane | ND | | 2500 | 2180 | | ug/L | | 87 | 70 - 130 |
| 1,1-Dichloroethane | ND | | 2500 | 2610 | | ug/L | | 105 | 65 - 130 |
| 1,1-Dichloroethene | ND | | 2500 | 2790 | | ug/L | | 112 | 70 - 130 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-238715-L-2 MS**
**Matrix: Water**
**Analysis Batch: 542722**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | ND | | 2500 | 2480 | | ug/L | | 99 | 64 - 130 |
| 1,2,3-Trichlorobenzene | ND | | 2500 | 2860 | | ug/L | | 115 | 60 - 140 |
| 1,2,3-Trichloropropane | ND | | 2500 | 2110 | J | ug/L | | 84 | 60 - 130 |
| 1,2,4-Trichlorobenzene | ND | | 2500 | 2850 | | ug/L | | 114 | 60 - 140 |
| 1,2,4-Trimethylbenzene | ND | | 2500 | 2610 | | ug/L | | 104 | 70 - 130 |
| 1,2-Dibromo-3-Chloropropane | ND | | 2500 | 2170 | | ug/L | | 87 | 48 - 140 |
| 1,2-Dibromoethane (EDB) | ND | | 2500 | 2160 | | ug/L | | 87 | 70 - 131 |
| 1,2-Dichlorobenzene | ND | | 2500 | 2720 | | ug/L | | 109 | 70 - 130 |
| 1,2-Dichloroethane | ND | | 2500 | 2100 | | ug/L | | 84 | 56 - 146 |
| 1,2-Dichloropropane | ND | | 2500 | 2160 | | ug/L | | 86 | 69 - 130 |
| 1,3,5-Trimethylbenzene | ND | | 2500 | 2630 | | ug/L | | 105 | 70 - 130 |
| 1,3-Dichlorobenzene | ND | | 2500 | 2600 | | ug/L | | 104 | 70 - 130 |
| 1,3-Dichloropropane | ND | | 2500 | 2100 | | ug/L | | 84 | 70 - 130 |
| 1,4-Dichlorobenzene | ND | | 2500 | 2560 | | ug/L | | 103 | 70 - 130 |
| 2,2-Dichloropropane | ND | | 2500 | 2940 | | ug/L | | 117 | 69 - 138 |
| 2-Chlorotoluene | ND | | 2500 | 2540 | | ug/L | | 102 | 70 - 130 |
| 4-Chlorotoluene | ND | | 2500 | 2390 | | ug/L | | 95 | 70 - 130 |
| Benzene | ND | | 2500 | 2420 | | ug/L | | 97 | 66 - 130 |
| Bromobenzene | ND | | 2500 | 2440 | | ug/L | | 98 | 70 - 130 |
| Bromochloromethane | ND | | 2500 | 2700 | | ug/L | | 108 | 70 - 130 |
| Bromodichloromethane | ND | | 2500 | 2270 | | ug/L | | 91 | 70 - 138 |
| Bromoform | ND | | 2500 | 2180 | | ug/L | | 87 | 59 - 150 |
| Bromomethane | ND | | 2500 | 2560 | | ug/L | | 102 | 62 - 131 |
| Carbon tetrachloride | ND | | 2500 | 2580 | | ug/L | | 103 | 60 - 150 |
| Chlorobenzene | ND | | 2500 | 2410 | | ug/L | | 97 | 70 - 130 |
| Chloroethane | ND | | 2500 | 2540 | | ug/L | | 102 | 68 - 130 |
| Chloroform | 440 | J | 2500 | 2960 | | ug/L | | 101 | 70 - 130 |
| Chloromethane | ND | | 2500 | 2130 | | ug/L | | 85 | 39 - 144 |
| cis-1,2-Dichloroethene | 6600 | | 2500 | 9300 | | ug/L | | 108 | 70 - 130 |
| cis-1,3-Dichloropropene | ND | | 2500 | 2370 | | ug/L | | 95 | 70 - 133 |
| Dibromochloromethane | ND | | 2500 | 2310 | | ug/L | | 92 | 70 - 148 |
| Dibromomethane | ND | | 2500 | 2110 | | ug/L | | 84 | 70 - 130 |
| Dichlorodifluoromethane | ND | | 2500 | 2620 | | ug/L | | 105 | 25 - 142 |
| Ethylbenzene | ND | | 2500 | 2430 | | ug/L | | 97 | 70 - 130 |
| Hexachlorobutadiene | ND | | 2500 | 2640 | | ug/L | | 106 | 10 - 150 |
| Isopropylbenzene | ND | | 2500 | 2550 | | ug/L | | 102 | 70 - 132 |
| m,p-Xylene | ND | | 2500 | 2540 | | ug/L | | 102 | 70 - 133 |
| Methylene Chloride | ND | | 2500 | 2670 | | ug/L | | 107 | 52 - 130 |
| Naphthalene | ND | | 2500 | 2500 | | ug/L | | 100 | 60 - 140 |
| n-Butylbenzene | ND | | 2500 | 2650 | | ug/L | | 106 | 61 - 149 |
| N-Propylbenzene | ND | | 2500 | 2480 | | ug/L | | 99 | 66 - 135 |
| o-Xylene | ND | | 2500 | 2680 | | ug/L | | 107 | 70 - 133 |
| p-Isopropyltoluene | ND | | 2500 | 2720 | | ug/L | | 109 | 70 - 130 |
| sec-Butylbenzene | ND | | 2500 | 2580 | | ug/L | | 103 | 67 - 134 |
| Styrene | ND | | 2500 | 2510 | | ug/L | | 100 | 29 - 150 |
| tert-Butylbenzene | ND | | 2500 | 2520 | | ug/L | | 101 | 70 - 130 |
| Tetrachloroethene | ND | | 2500 | 2650 | | ug/L | | 106 | 70 - 137 |
| Toluene | ND | | 2500 | 2390 | | ug/L | | 96 | 70 - 130 |
| trans-1,2-Dichloroethene | ND | | 2500 | 2820 | | ug/L | | 113 | 70 - 130 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-238715-L-2 MS**
**Matrix: Water**
**Analysis Batch: 542722**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,3-Dichloropropene | ND | | 2500 | 2200 | | ug/L | | 88 | 70 - 138 |
| Trichloroethene | 8400 | | 2500 | 11200 | | ug/L | | 110 | 70 - 130 |
| Trichlorofluoromethane | ND | | 2500 | 2630 | | ug/L | | 105 | 60 - 150 |
| Vinyl chloride | ND | | 2500 | 2320 | | ug/L | | 93 | 50 - 137 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *90* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *92* | | *80 - 120* |
| *Dibromofluoromethane (Surr)* | *108* | | *76 - 132* |
| *Toluene-d8 (Surr)* | *100* | | *80 - 128* |

**Lab Sample ID: 440-238715-L-2 MSD**
**Matrix: Water**
**Analysis Batch: 542722**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 2500 | 2760 | | ug/L | | 110 | 60 - 149 | 2 | 20 |
| 1,1,1-Trichloroethane | ND | | 2500 | 2420 | | ug/L | | 97 | 70 - 130 | 5 | 20 |
| 1,1,2,2-Tetrachloroethane | ND | | 2500 | 2240 | | ug/L | | 90 | 63 - 130 | 1 | 30 |
| 1,1,2-Trichloroethane | ND | | 2500 | 2170 | | ug/L | | 87 | 70 - 130 | 0 | 25 |
| 1,1-Dichloroethane | ND | | 2500 | 2500 | | ug/L | | 100 | 65 - 130 | 5 | 20 |
| 1,1-Dichloroethene | ND | | 2500 | 2650 | | ug/L | | 106 | 70 - 130 | 5 | 20 |
| 1,1-Dichloropropene | ND | | 2500 | 2380 | | ug/L | | 95 | 64 - 130 | 4 | 20 |
| 1,2,3-Trichlorobenzene | ND | | 2500 | 2860 | | ug/L | | 114 | 60 - 140 | 0 | 20 |
| 1,2,3-Trichloropropane | ND | | 2500 | 2140 | J | ug/L | | 86 | 60 - 130 | 2 | 30 |
| 1,2,4-Trichlorobenzene | ND | | 2500 | 2890 | | ug/L | | 115 | 60 - 140 | 1 | 20 |
| 1,2,4-Trimethylbenzene | ND | | 2500 | 2560 | | ug/L | | 102 | 70 - 130 | 2 | 25 |
| 1,2-Dibromo-3-Chloropropane | ND | | 2500 | 2130 | | ug/L | | 85 | 48 - 140 | 2 | 30 |
| 1,2-Dibromoethane (EDB) | ND | | 2500 | 2180 | | ug/L | | 87 | 70 - 131 | 1 | 25 |
| 1,2-Dichlorobenzene | ND | | 2500 | 2690 | | ug/L | | 107 | 70 - 130 | 1 | 20 |
| 1,2-Dichloroethane | ND | | 2500 | 2050 | | ug/L | | 82 | 56 - 146 | 2 | 20 |
| 1,2-Dichloropropane | ND | | 2500 | 2140 | | ug/L | | 86 | 69 - 130 | 1 | 20 |
| 1,3,5-Trimethylbenzene | ND | | 2500 | 2620 | | ug/L | | 105 | 70 - 130 | 1 | 20 |
| 1,3-Dichlorobenzene | ND | | 2500 | 2530 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| 1,3-Dichloropropane | ND | | 2500 | 2140 | | ug/L | | 86 | 70 - 130 | 2 | 25 |
| 1,4-Dichlorobenzene | ND | | 2500 | 2470 | | ug/L | | 99 | 70 - 130 | 4 | 20 |
| 2,2-Dichloropropane | ND | | 2500 | 2840 | | ug/L | | 114 | 69 - 138 | 3 | 25 |
| 2-Chlorotoluene | ND | | 2500 | 2520 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| 4-Chlorotoluene | ND | | 2500 | 2420 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| Benzene | ND | | 2500 | 2350 | | ug/L | | 94 | 66 - 130 | 3 | 20 |
| Bromobenzene | ND | | 2500 | 2480 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| Bromochloromethane | ND | | 2500 | 2630 | | ug/L | | 105 | 70 - 130 | 3 | 25 |
| Bromodichloromethane | ND | | 2500 | 2260 | | ug/L | | 90 | 70 - 138 | 1 | 20 |
| Bromoform | ND | | 2500 | 2180 | | ug/L | | 87 | 59 - 150 | 0 | 25 |
| Bromomethane | ND | | 2500 | 2520 | | ug/L | | 101 | 62 - 131 | 2 | 25 |
| Carbon tetrachloride | ND | | 2500 | 2420 | | ug/L | | 97 | 60 - 150 | 7 | 25 |
| Chlorobenzene | ND | | 2500 | 2370 | | ug/L | | 95 | 70 - 130 | 2 | 20 |
| Chloroethane | ND | | 2500 | 2440 | | ug/L | | 97 | 68 - 130 | 4 | 25 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-238715-L-2 MSD**
**Matrix: Water**
**Analysis Batch: 542722**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloroform | 440 | J | 2500 | 2860 | | ug/L | | 97 | 70 - 130 | 3 | 20 |
| Chloromethane | ND | | 2500 | 2040 | | ug/L | | 82 | 39 - 144 | 4 | 25 |
| cis-1,2-Dichloroethene | 6600 | | 2500 | 8900 | | ug/L | | 92 | 70 - 130 | 4 | 20 |
| cis-1,3-Dichloropropene | ND | | 2500 | 2380 | | ug/L | | 95 | 70 - 133 | 0 | 20 |
| Dibromochloromethane | ND | | 2500 | 2370 | | ug/L | | 95 | 70 - 148 | 3 | 25 |
| Dibromomethane | ND | | 2500 | 2120 | | ug/L | | 85 | 70 - 130 | 0 | 25 |
| Dichlorodifluoromethane | ND | | 2500 | 2520 | | ug/L | | 101 | 25 - 142 | 4 | 30 |
| Ethylbenzene | ND | | 2500 | 2400 | | ug/L | | 96 | 70 - 130 | 2 | 20 |
| Hexachlorobutadiene | ND | | 2500 | 2600 | | ug/L | | 104 | 10 - 150 | 2 | 20 |
| Isopropylbenzene | ND | | 2500 | 2480 | | ug/L | | 99 | 70 - 132 | 3 | 20 |
| m,p-Xylene | ND | | 2500 | 2460 | | ug/L | | 99 | 70 - 133 | 3 | 25 |
| Methylene Chloride | ND | | 2500 | 2560 | | ug/L | | 102 | 52 - 130 | 4 | 20 |
| Naphthalene | ND | | 2500 | 2520 | | ug/L | | 101 | 60 - 140 | 1 | 30 |
| n-Butylbenzene | ND | | 2500 | 2540 | | ug/L | | 101 | 61 - 149 | 4 | 20 |
| N-Propylbenzene | ND | | 2500 | 2470 | | ug/L | | 99 | 66 - 135 | 1 | 20 |
| o-Xylene | ND | | 2500 | 2590 | | ug/L | | 104 | 70 - 133 | 3 | 20 |
| p-Isopropyltoluene | ND | | 2500 | 2660 | | ug/L | | 106 | 70 - 130 | 2 | 20 |
| sec-Butylbenzene | ND | | 2500 | 2520 | | ug/L | | 101 | 67 - 134 | 2 | 20 |
| Styrene | ND | | 2500 | 2440 | | ug/L | | 98 | 29 - 150 | 3 | 35 |
| tert-Butylbenzene | ND | | 2500 | 2480 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| Tetrachloroethene | ND | | 2500 | 2550 | | ug/L | | 102 | 70 - 137 | 4 | 20 |
| Toluene | ND | | 2500 | 2370 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| trans-1,2-Dichloroethene | ND | | 2500 | 2640 | | ug/L | | 106 | 70 - 130 | 7 | 20 |
| trans-1,3-Dichloropropene | ND | | 2500 | 2240 | | ug/L | | 90 | 70 - 138 | 2 | 25 |
| Trichloroethene | 8400 | | 2500 | 10700 | | ug/L | | 90 | 70 - 130 | 5 | 20 |
| Trichlorofluoromethane | ND | | 2500 | 2500 | | ug/L | | 100 | 60 - 150 | 5 | 25 |
| Vinyl chloride | ND | | 2500 | 2230 | | ug/L | | 89 | 50 - 137 | 4 | 30 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *89* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *93* | | *80 - 120* |
| *Dibromofluoromethane (Surr)* | *105* | | *76 - 132* |
| *Toluene-d8 (Surr)* | *100* | | *80 - 128* |

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-541200/1-A**
**Matrix: Water**
**Analysis Batch: 541577**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 541200**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2,2'-Dichlorobenzil & 4,4'-Dichlorobenzil | ND | | 10 | 4.5 | ug/L | | 04/18/19 12:42 | 04/20/19 12:25 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2,4,6-Tribromophenol (Surr)* | *87* | | *40 - 120* | *04/18/19 12:42* | *04/20/19 12:25* | *1* |
| *2-Fluorobiphenyl* | *79* | | *50 - 120* | *04/18/19 12:42* | *04/20/19 12:25* | *1* |
| *2-Fluorophenol (Surr)* | *75* | | *30 - 120* | *04/18/19 12:42* | *04/20/19 12:25* | *1* |

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-541200/1-A**
**Matrix: Water**
**Analysis Batch: 541577**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 541200**

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Nitrobenzene-d5 (Surr) | 78 | | 45 - 120 | 04/18/19 12:42 | 04/20/19 12:25 | 1 |
| Phenol-d6 (Surr) | 77 | | 35 - 120 | 04/18/19 12:42 | 04/20/19 12:25 | 1 |
| Terphenyl-d14 (Surr) | 93 | | 10 - 150 | 04/18/19 12:42 | 04/20/19 12:25 | 1 |

**Lab Sample ID: LCS 440-541200/2-A**
**Matrix: Water**
**Analysis Batch: 541577**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 541200**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 2,2'-Dichlorobenzil & 4,4'-Dichlorobenzil | 100 | 75.8 | | ug/L | | 76 | 43 - 121 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| 2,4,6-Tribromophenol (Surr) | 98 | | 40 - 120 |
| 2-Fluorobiphenyl | 79 | | 50 - 120 |
| 2-Fluorophenol (Surr) | 65 | | 30 - 120 |
| Nitrobenzene-d5 (Surr) | 76 | | 45 - 120 |
| Phenol-d6 (Surr) | 67 | | 35 - 120 |
| Terphenyl-d14 (Surr) | 87 | | 10 - 150 |

**Lab Sample ID: LCSD 440-541200/3-A**
**Matrix: Water**
**Analysis Batch: 541577**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 541200**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 2,2'-Dichlorobenzil & 4,4'-Dichlorobenzil | 100 | 79.1 | | ug/L | | 79 | 43 - 121 | 4 | 35 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| 2,4,6-Tribromophenol (Surr) | 98 | | 40 - 120 |
| 2-Fluorobiphenyl | 84 | | 50 - 120 |
| 2-Fluorophenol (Surr) | 72 | | 30 - 120 |
| Nitrobenzene-d5 (Surr) | 78 | | 45 - 120 |
| Phenol-d6 (Surr) | 75 | | 35 - 120 |
| Terphenyl-d14 (Surr) | 91 | | 10 - 150 |

## Method: 8081A - Organochlorine Pesticides (GC)

**Lab Sample ID: MB 440-540366/1-A**
**Matrix: Water**
**Analysis Batch: 540610**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 540366**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.0050 | 0.0015 | ug/L | | 04/15/19 10:40 | 04/16/19 14:31 | 1 |
| alpha-BHC | ND | | 0.0050 | 0.0025 | ug/L | | 04/15/19 10:40 | 04/16/19 14:31 | 1 |
| beta-BHC | ND | | 0.010 | 0.0040 | ug/L | | 04/15/19 10:40 | 04/16/19 14:31 | 1 |
| Chlordane | ND | | 0.10 | 0.080 | ug/L | | 04/15/19 10:40 | 04/16/19 14:31 | 1 |
| 2,4'-DDD | ND | | 0.10 | 0.020 | ug/L | | 04/15/19 10:40 | 04/16/19 14:31 | 1 |
| 4,4'-DDD | ND | | 0.10 | 0.0040 | ug/L | | 04/15/19 10:40 | 04/16/19 14:31 | 1 |

## Method: 8081A - Organochlorine Pesticides (GC) (Continued)

**Lab Sample ID: MB 440-540366/1-A**
**Matrix: Water**
**Analysis Batch: 540610**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 540366**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2,4'-DDE | ND | | 0.10 | 0.020 | ug/L | | 04/15/19 10:40 | 04/16/19 14:31 | 1 |
| 4,4'-DDE | ND | | 0.10 | 0.0030 | ug/L | | 04/15/19 10:40 | 04/16/19 14:31 | 1 |
| 2,4'-DDT | ND | | 0.10 | 0.020 | ug/L | | 04/15/19 10:40 | 04/16/19 14:31 | 1 |
| 4,4'-DDT | ND | | 0.10 | 0.0040 | ug/L | | 04/15/19 10:40 | 04/16/19 14:31 | 1 |
| delta-BHC | ND | | 0.20 | 0.0035 | ug/L | | 04/15/19 10:40 | 04/16/19 14:31 | 1 |
| Dieldrin | ND | | 0.0050 | 0.0020 | ug/L | | 04/15/19 10:40 | 04/16/19 14:31 | 1 |
| Endosulfan I | ND | | 0.10 | 0.0030 | ug/L | | 04/15/19 10:40 | 04/16/19 14:31 | 1 |
| Endosulfan II | ND | | 0.10 | 0.0020 | ug/L | | 04/15/19 10:40 | 04/16/19 14:31 | 1 |
| Endosulfan sulfate | ND | | 0.20 | 0.0030 | ug/L | | 04/15/19 10:40 | 04/16/19 14:31 | 1 |
| Endrin | ND | | 0.10 | 0.0020 | ug/L | | 04/15/19 10:40 | 04/16/19 14:31 | 1 |
| Endrin aldehyde | ND | | 0.10 | 0.0020 | ug/L | | 04/15/19 10:40 | 04/16/19 14:31 | 1 |
| Endrin ketone | ND | | 0.10 | 0.0070 | ug/L | | 04/15/19 10:40 | 04/16/19 14:31 | 1 |
| gamma-BHC (Lindane) | ND | | 0.10 | 0.0030 | ug/L | | 04/15/19 10:40 | 04/16/19 14:31 | 1 |
| Heptachlor | ND | | 0.010 | 0.0030 | ug/L | | 04/15/19 10:40 | 04/16/19 14:31 | 1 |
| Heptachlor epoxide | ND | | 0.0050 | 0.0025 | ug/L | | 04/15/19 10:40 | 04/16/19 14:31 | 1 |
| Methoxychlor | ND | | 0.10 | 0.0035 | ug/L | | 04/15/19 10:40 | 04/16/19 14:31 | 1 |
| Toxaphene | ND | | 5.0 | 0.25 | ug/L | | 04/15/19 10:40 | 04/16/19 14:31 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl (Surr)* | *71* | | *28 - 108* | *04/15/19 10:40* | *04/16/19 14:31* | *1* |
| *Tetrachloro-m-xylene* | *52* | | *10 - 123* | *04/15/19 10:40* | *04/16/19 14:31* | *1* |

**Lab Sample ID: LCS 440-540366/2-A**
**Matrix: Water**
**Analysis Batch: 540610**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 540366**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Aldrin | 0.250 | 0.137 | | ug/L | | 55 | 37 - 115 |
| alpha-BHC | 0.250 | 0.180 | | ug/L | | 72 | 44 - 115 |
| beta-BHC | 0.250 | 0.166 | | ug/L | | 66 | 46 - 121 |
| 2,4'-DDD | 0.250 | 0.165 | | ug/L | | 66 | 10 - 150 |
| 4,4'-DDD | 0.250 | 0.172 | | ug/L | | 69 | 50 - 128 |
| 2,4'-DDE | 0.250 | 0.164 | | ug/L | | 66 | 10 - 150 |
| 4,4'-DDE | 0.250 | 0.179 | | ug/L | | 72 | 49 - 121 |
| 2,4'-DDT | 0.250 | 0.174 | | ug/L | | 69 | 10 - 150 |
| 4,4'-DDT | 0.250 | 0.185 | | ug/L | | 74 | 41 - 140 |
| delta-BHC | 0.250 | 0.180 | J | ug/L | | 72 | 32 - 129 |
| Dieldrin | 0.250 | 0.172 | | ug/L | | 69 | 39 - 126 |
| Endosulfan I | 0.250 | 0.174 | | ug/L | | 70 | 47 - 115 |
| Endosulfan II | 0.250 | 0.172 | | ug/L | | 69 | 47 - 120 |
| Endosulfan sulfate | 0.250 | 0.167 | J | ug/L | | 67 | 48 - 126 |
| Endrin | 0.250 | 0.175 | | ug/L | | 70 | 43 - 127 |
| Endrin aldehyde | 0.250 | 0.159 | | ug/L | | 64 | 43 - 120 |
| Endrin ketone | 0.250 | 0.161 | | ug/L | | 64 | 47 - 123 |
| gamma-BHC (Lindane) | 0.250 | 0.176 | | ug/L | | 70 | 45 - 116 |
| Heptachlor | 0.250 | 0.169 | | ug/L | | 68 | 37 - 115 |
| Heptachlor epoxide | 0.250 | 0.171 | | ug/L | | 68 | 41 - 129 |
| Methoxychlor | 0.250 | 0.181 | | ug/L | | 72 | 44 - 141 |

## Method: 8081A - Organochlorine Pesticides (GC) (Continued)

**Lab Sample ID: LCS 440-540366/2-A**
**Matrix: Water**
**Analysis Batch: 540610**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 540366**

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| DCB Decachlorobiphenyl (Surr) | 64 | | 28 - 108 |
| Tetrachloro-m-xylene | 52 | | 10 - 123 |

**Lab Sample ID: 440-238680-G-5-A MS**
**Matrix: Water**
**Analysis Batch: 540610**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 540366**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.243 | 0.133 | | ug/L | | 55 | 35 - 120 |
| alpha-BHC | 0.0074 | | 0.243 | 0.168 | | ug/L | | 66 | 40 - 120 |
| beta-BHC | 0.0099 | J | 0.243 | 0.182 | | ug/L | | 71 | 50 - 120 |
| 2,4'-DDD | ND | | 0.243 | 0.186 | | ug/L | | 77 | 50 - 125 |
| 4,4'-DDD | ND | | 0.243 | 0.197 | | ug/L | | 81 | 50 - 125 |
| 2,4'-DDE | ND | | 0.243 | 0.173 | | ug/L | | 71 | 45 - 125 |
| 4,4'-DDE | ND | | 0.243 | 0.195 | | ug/L | | 80 | 45 - 125 |
| 2,4'-DDT | ND | | 0.243 | 0.193 | | ug/L | | 80 | 50 - 125 |
| 4,4'-DDT | ND | | 0.243 | 0.209 | | ug/L | | 86 | 50 - 125 |
| delta-BHC | 0.0041 | J p | 0.243 | 0.196 | | ug/L | | 79 | 50 - 120 |
| Dieldrin | ND | | 0.243 | 0.188 | | ug/L | | 78 | 50 - 120 |
| Endosulfan I | ND | | 0.243 | 0.185 | | ug/L | | 76 | 50 - 120 |
| Endosulfan II | ND | | 0.243 | 0.193 | | ug/L | | 80 | 50 - 125 |
| Endosulfan sulfate | ND | | 0.243 | 0.190 | | ug/L | | 78 | 55 - 125 |
| Endrin | ND | | 0.243 | 0.193 | | ug/L | | 80 | 50 - 120 |
| Endrin aldehyde | ND | | 0.243 | 0.179 | | ug/L | | 74 | 45 - 125 |
| Endrin ketone | ND | | 0.243 | 0.181 | | ug/L | | 74 | 50 - 125 |
| gamma-BHC (Lindane) | 0.018 | J | 0.243 | 0.189 | | ug/L | | 70 | 40 - 120 |
| Heptachlor | ND | | 0.243 | 0.202 | | ug/L | | 83 | 40 - 120 |
| Heptachlor epoxide | ND | | 0.243 | 0.180 | | ug/L | | 74 | 50 - 120 |
| Methoxychlor | ND | | 0.243 | 0.207 | | ug/L | | 85 | 55 - 125 |

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| DCB Decachlorobiphenyl (Surr) | 74 | | 28 - 108 |
| Tetrachloro-m-xylene | 47 | | 10 - 123 |

**Lab Sample ID: 440-238680-G-5-B MSD**
**Matrix: Water**
**Analysis Batch: 540610**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 540366**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.242 | 0.136 | | ug/L | | 56 | 35 - 120 | 2 | 30 |
| alpha-BHC | 0.0074 | | 0.242 | 0.174 | | ug/L | | 69 | 40 - 120 | 3 | 30 |
| beta-BHC | 0.0099 | J | 0.242 | 0.185 | | ug/L | | 73 | 50 - 120 | 2 | 30 |
| 2,4'-DDD | ND | | 0.242 | 0.187 | | ug/L | | 77 | 50 - 125 | 0 | 30 |
| 4,4'-DDD | ND | | 0.242 | 0.198 | | ug/L | | 82 | 50 - 125 | 1 | 30 |
| 2,4'-DDE | ND | | 0.242 | 0.174 | | ug/L | | 72 | 45 - 125 | 0 | 30 |
| 4,4'-DDE | ND | | 0.242 | 0.196 | | ug/L | | 81 | 45 - 125 | 0 | 30 |
| 2,4'-DDT | ND | | 0.242 | 0.193 | | ug/L | | 80 | 50 - 125 | 0 | 30 |
| 4,4'-DDT | ND | | 0.242 | 0.211 | | ug/L | | 87 | 50 - 125 | 1 | 30 |

## Method: 8081A - Organochlorine Pesticides (GC) (Continued)

**Lab Sample ID: 440-238680-G-5-B MSD**
**Matrix: Water**
**Analysis Batch: 540610**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 540366**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| delta-BHC | 0.0041 | J p | 0.242 | 0.200 | | ug/L | | 81 | 50 - 120 | 2 | 30 |
| Dieldrin | ND | | 0.242 | 0.189 | | ug/L | | 78 | 50 - 120 | 0 | 30 |
| Endosulfan I | ND | | 0.242 | 0.186 | | ug/L | | 77 | 50 - 120 | 1 | 30 |
| Endosulfan II | ND | | 0.242 | 0.194 | | ug/L | | 80 | 50 - 125 | 0 | 30 |
| Endosulfan sulfate | ND | | 0.242 | 0.191 | | ug/L | | 79 | 55 - 125 | 0 | 30 |
| Endrin | ND | | 0.242 | 0.194 | | ug/L | | 80 | 50 - 120 | 1 | 30 |
| Endrin aldehyde | ND | | 0.242 | 0.179 | | ug/L | | 74 | 45 - 125 | 0 | 30 |
| Endrin ketone | ND | | 0.242 | 0.182 | | ug/L | | 75 | 50 - 125 | 1 | 30 |
| gamma-BHC (Lindane) | 0.018 | J | 0.242 | 0.195 | | ug/L | | 73 | 40 - 120 | 3 | 30 |
| Heptachlor | ND | | 0.242 | 0.210 | | ug/L | | 87 | 40 - 120 | 4 | 30 |
| Heptachlor epoxide | ND | | 0.242 | 0.182 | | ug/L | | 75 | 50 - 120 | 1 | 30 |
| Methoxychlor | ND | | 0.242 | 0.209 | | ug/L | | 87 | 55 - 125 | 1 | 30 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *DCB Decachlorobiphenyl (Surr)* | *74* | | *28 - 108* |
| *Tetrachloro-m-xylene* | *49* | | *10 - 123* |

# QC Association Summary

Client: Montrose Chemical Company
Project/Site: Montrose Wells

Job ID: 440-238791-1
SDG: Henderson, NV

## GC/MS VOA

### Analysis Batch: 542646

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 440-238791-1 | MW-1-201090412 | Total/NA | Water | 8260B | |
| MB 440-542646/4 | Method Blank | Total/NA | Water | 8260B | |
| LCS 440-542646/14 | Lab Control Sample | Total/NA | Water | 8260B | |
| 440-238791-1 MS | MW-1-201090412 | Total/NA | Water | 8260B | |
| 440-238791-1 MSD | MW-1-201090412 | Total/NA | Water | 8260B | |

### Analysis Batch: 542648

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 440-238791-2 | MW-2-20190412 | Total/NA | Water | 8260B | |
| 440-238791-2 - DL | MW-2-20190412 | Total/NA | Water | 8260B | |
| 440-238791-3 | MW-3-20190412 | Total/NA | Water | 8260B | |
| 440-238791-3 - DL | MW-3-20190412 | Total/NA | Water | 8260B | |
| 440-238791-4 | MW-4-20190412 | Total/NA | Water | 8260B | |
| 440-238791-4 - DL | MW-4-20190412 | Total/NA | Water | 8260B | |
| MB 440-542648/7 | Method Blank | Total/NA | Water | 8260B | |
| LCS 440-542648/5 | Lab Control Sample | Total/NA | Water | 8260B | |
| 440-239073-A-6 MS | Matrix Spike | Total/NA | Water | 8260B | |
| 440-239073-B-6 MSD | Matrix Spike Duplicate | Total/NA | Water | 8260B | |

### Analysis Batch: 542722

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 440-238791-1 | MW-1-201090412 | Total/NA | Water | 8260B | |
| 440-238791-5 | TB-20190412 | Total/NA | Water | 8260B | |
| 440-238791-6 | PL-509-20190412 | Total/NA | Water | 8260B | |
| MB 440-542722/7 | Method Blank | Total/NA | Water | 8260B | |
| LCS 440-542722/5 | Lab Control Sample | Total/NA | Water | 8260B | |
| 440-238715-L-2 MS | Matrix Spike | Total/NA | Water | 8260B | |
| 440-238715-L-2 MSD | Matrix Spike Duplicate | Total/NA | Water | 8260B | |

## GC/MS Semi VOA

### Prep Batch: 541200

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 440-238791-1 | MW-1-201090412 | Total/NA | Water | 3520C | |
| 440-238791-2 | MW-2-20190412 | Total/NA | Water | 3520C | |
| 440-238791-3 | MW-3-20190412 | Total/NA | Water | 3520C | |
| 440-238791-4 | MW-4-20190412 | Total/NA | Water | 3520C | |
| MB 440-541200/1-A | Method Blank | Total/NA | Water | 3520C | |
| LCS 440-541200/2-A | Lab Control Sample | Total/NA | Water | 3520C | |
| LCSD 440-541200/3-A | Lab Control Sample Dup | Total/NA | Water | 3520C | |

### Analysis Batch: 541577

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 440-238791-1 | MW-1-201090412 | Total/NA | Water | 8270C | 541200 |
| 440-238791-2 | MW-2-20190412 | Total/NA | Water | 8270C | 541200 |
| 440-238791-3 | MW-3-20190412 | Total/NA | Water | 8270C | 541200 |
| 440-238791-4 | MW-4-20190412 | Total/NA | Water | 8270C | 541200 |
| MB 440-541200/1-A | Method Blank | Total/NA | Water | 8270C | 541200 |
| LCS 440-541200/2-A | Lab Control Sample | Total/NA | Water | 8270C | 541200 |
| LCSD 440-541200/3-A | Lab Control Sample Dup | Total/NA | Water | 8270C | 541200 |

# QC Association Summary

Client: Montrose Chemical Company
Project/Site: Montrose Wells

Job ID: 440-238791-1
SDG: Henderson, NV

## GC Semi VOA

### Prep Batch: 540366

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 440-238791-1 | MW-1-201090412 | Total/NA | Water | 3510C | |
| 440-238791-2 | MW-2-20190412 | Total/NA | Water | 3510C | |
| 440-238791-3 | MW-3-20190412 | Total/NA | Water | 3510C | |
| 440-238791-4 | MW-4-20190412 | Total/NA | Water | 3510C | |
| MB 440-540366/1-A | Method Blank | Total/NA | Water | 3510C | |
| LCS 440-540366/2-A | Lab Control Sample | Total/NA | Water | 3510C | |
| 440-238680-G-5-A MS | Matrix Spike | Total/NA | Water | 3510C | |
| 440-238680-G-5-B MSD | Matrix Spike Duplicate | Total/NA | Water | 3510C | |

### Analysis Batch: 540610

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 440-238791-1 | MW-1-201090412 | Total/NA | Water | 8081A | 540366 |
| 440-238791-2 | MW-2-20190412 | Total/NA | Water | 8081A | 540366 |
| 440-238791-3 | MW-3-20190412 | Total/NA | Water | 8081A | 540366 |
| 440-238791-4 | MW-4-20190412 | Total/NA | Water | 8081A | 540366 |
| MB 440-540366/1-A | Method Blank | Total/NA | Water | 8081A | 540366 |
| LCS 440-540366/2-A | Lab Control Sample | Total/NA | Water | 8081A | 540366 |
| 440-238680-G-5-A MS | Matrix Spike | Total/NA | Water | 8081A | 540366 |
| 440-238680-G-5-B MSD | Matrix Spike Duplicate | Total/NA | Water | 8081A | 540366 |

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

### GC Semi VOA

| Qualifier | Qualifier Description |
|---|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| p | The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

# Accreditation/Certification Summary

Client: Montrose Chemical Company
Project/Site: Montrose Wells

Job ID: 440-238791-1
SDG: Henderson, NV

## Laboratory: Eurofins TestAmerica, Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Nevada | State Program | 9 | CA015312018-1 | 07-31-19 |

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 8081A | 3510C | Water | 2,4'-DDD |
| 8081A | 3510C | Water | 2,4'-DDE |
| 8081A | 3510C | Water | 2,4'-DDT |
| 8081A | 3510C | Water | 4,4'-DDD |
| 8081A | 3510C | Water | 4,4'-DDE |
| 8081A | 3510C | Water | 4,4'-DDT |
| 8081A | 3510C | Water | Aldrin |
| 8081A | 3510C | Water | alpha-BHC |
| 8081A | 3510C | Water | beta-BHC |
| 8081A | 3510C | Water | Chlordane |
| 8081A | 3510C | Water | delta-BHC |
| 8081A | 3510C | Water | Dieldrin |
| 8081A | 3510C | Water | Endosulfan I |
| 8081A | 3510C | Water | Endosulfan II |
| 8081A | 3510C | Water | Endosulfan sulfate |
| 8081A | 3510C | Water | Endrin |
| 8081A | 3510C | Water | Endrin aldehyde |
| 8081A | 3510C | Water | Endrin ketone |
| 8081A | 3510C | Water | gamma-BHC (Lindane) |
| 8081A | 3510C | Water | Heptachlor |
| 8081A | 3510C | Water | Heptachlor epoxide |
| 8081A | 3510C | Water | Methoxychlor |
| 8081A | 3510C | Water | Toxaphene |
| 8260B | | Water | Dimethyl disulfide |
| 8270C | 3520C | Water | 2,2'-Dichlorobenzil & 4,4'-Dichlorobenzil |

Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
Phone 949.261.1022 fax 949.260.3299

TestAmerica
Las Vegas
219

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

| Client Contact | Project Manager: Joe Kelly, Ed Modiano | Site Contact: Kevin Paprocki | Date: 4/12/19 | COC No: |
|---|---|---|---|---|
| de maximis, Inc. | Tel/Fax: 619-546-8377 | Lab Contact: Danielle Roberts | Carrier: | ____ of ____ COCs |
| 1322 Scott St., Suite 101 | Analysis Turnaround Time | | | Job No. 89-43133-22 |
| San Diego, CA 92106 | Calendar (C) or Work Days (W)___ W___ | | | SDG No. |
| (619) 546-8377 Phone | TAT if different from Below_____ | | | |
| (619) 546-9980 Fax | ☒ 2 weeks | | | |
| Project Name: Montrose | ☐ 1 week | | | |
| Site: Henderson, NV | ☐ 2 days | | | |
| PO# | ☐ 1 day | | | |

| Sample Identification | Container Type | Sample Date | Sample Time | Preservation Type | Matrix | # of Containers | 8260B-HEND-Qnly | 8081A – Pesticides | 8270C – SVOC (4 4 Dichlorobenzil Only) | | | | | | VOC concentration > 500 ppb | MS/MSD REQUIRED | LEVEL 2A REQUIRED | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1-20190412 | Various | 4/12/19 | 1026 | 4°C | AQ | 7 | X | X | X | | | | | | X | | X | |
| MW-2-20190412 | Various | 4/12/19 | 0848 | 4°C | AQ | 7 | X | X | X | | | | | | X | | X | |
| MW-3-20190412 | Various | 4/12/19 | 0853 | 4°C | AQ | 7 | X | X | X | | | | | | X | | X | |
| MW-4-20190412 | Various | 4/12/19 | 1023 | 4°C | AQ | 7 | X | X | X | | | | | | X | | X | |
| TB-20190412 | VOA | 4/12/19 | 0640 | 4°C | AQ | 3 | X | | | | | | | | | | X | |
| PL-509-20190412 | VOA | 4/12/19 | 1030 | 4°C | AQ | 3 | X | | | | | | | | | | X | |

440-238791 Chain of Custody

4/19/19 8-7

* I attest to the validity and authenticity of this (these) sample(s). I am aware that tampering with or intentionally mislabeling the sample(s) location, date or time of collection may be considered fraud and subject to legal action (NAC445 0636)
Signature: Date

Preservation Used: 1= Ice, 2=HCl; 3=H2SO4; 4=HNO3; 5=NaOH; 6=Other_____

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**
☐ Return to Client ☐ Disposal by Lab Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Sample Int (circle one)
Intact: Y / N on ice: Y / N
temperature:

| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
|---|---|---|---|---|---|
| [signature] | Converse | 4/12/19 1305 | JAM | TALVS | 4-12-19 1310 |
| JAM | TALVS | 4/12/19 1600 | [signature] | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received by: Olga Quelas | Company: TALVS | Date/Time: 4/13/19 1050 |

1-8/22 IR-893. C/S TALVS FR 96 2.9 / 3.2
TH: 4766 5637 0606

# Login Sample Receipt Checklist

Client: Montrose Chemical Company

Job Number: 440-238791-1
SDG Number: Henderson, NV

**Login Number: 238791**
**List Number: 1**
**Creator: Bonta, Lucia F**

**List Source: Eurofins TestAmerica, Irvine**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | Not Present |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | N/A | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | False | Headspace larger than 1/4" in one or more vials, one vial with accpt. headspace |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Appendix **D**

## Low Flow Purge Sampling Forms

# Monitoring Well Low-Flow Purge/Sampling Form

Project: Montrose GW Sampling 2019

| | | | | | |
|---|---|---|---|---|---|
| Well ID: | MW-1 | Screened Interval (ft) | 84-104 | Well Diameter (in): | 4" |
| Date: | 4/12/2019 | Pump Intake Depth (ft) | 94 | Static Water Level (ft): | 53.19 |
| Sample ID | MW-1 | Purging/ Sample Device: | Portable | Total Well depth (ft): | 114.00 |
| Time: | 10:26 | PID Reading at TOC: | N/A | Water Column Length: | 60.81 |
| Dup ID: | N/A | Water Level Instrument : | Keck | Minimum Purge Volume: | - |
| Field Blank ID | N/A | WLI Serial #: | 2316 | Samplers Name: | Steve Preston |
| MS/MSD ID: | N/A | Water Quality Meter: | YSI PRO DSS | Optimal Pump Setting: | PSI 70 CPM 1 ID: 7 |
| Analysis: | Various | WQM Serial #: | 18L104824 | Low-Flow or Net Purge: | Low-Flow |
| | | WQM Cal. Date & Time: | 4/12/2019 7:45 | | |

| Time | Volume Purged | Flow Rate | Water Level (feet BTOC) | Specific Conductance (µS/m) | pH | Temp. | DO (mg/L) | ORP (mV) | Turbidity (NTU) | Salinity | TDS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Liters** | **ml/min** | **± 0.1 ft** | **3%** | **± 0.1** | **± 0.2** | **± 10%** | **± 10%** | **± 10%** | **%** | **g/L** |
| 10:04 | Pump | Start | | | | | | | | | |
| 10:09 | 0.5 | 100 | 53.25 | 1.262 | 7.71 | 21.5 | 9.25 | 46.7 | 1.49 | 0.62 | 1 |
| 10:12 | 0.8 | 100 | 53.35 | 1.261 | 7.68 | 22.1 | 8.87 | 46.8 | 1.36 | 0.63 | 1 |
| 10:15 | 1.1 | 100 | 53.48 | 1.260 | 7.66 | 22.3 | 8.60 | 47.0 | 0.99 | 0.63 | 1 |
| 10:18 | 1.4 | 100 | 53.51 | 1.260 | 7.62 | 22.8 | 8.56 | 47.6 | 0.97 | 0.63 | 1 |
| 10:21 | 1.7 | 100 | 53.58 | 1.265 | 7.59 | 22.9 | 8.55 | 48.1 | 0.91 | 0.63 | 1 |
| 10:24 | 2.0 | 100 | 53.63 | 1.265 | 7.56 | 22.8 | 8.49 | 48.6 | 0.89 | 0.63 | 1 |
| | | | | | | | | | | | |
| 10:26 | Sample | Start | | | | | | | | | |
| 11:21 | Sample | End | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Comments: Water is Clear.

Maximum permissable drawdown = 2.5 ft BTOC, water level not to draw down below 55.69 ft BTOC

Optimal drawdown for low-flow micropurge sampling is less than 0.3 ft at a flow rate of 0.1 to 1.0 L/min.

If drawdown exceeds 0.3 ft at a flow rate of 0.1 L/min....then attempt to achieve drawdown less than or equal to 25% of the available screen interval at flow rate equal to 0.1 to 1.0 L/min.

This is performed by subtracting pump intake and top of screen for fully submerged screens then multiplying by 25%, or subtracting the distance between pump intake and static water level and multiplying by 25% for water table wells with partly submerged screens.

# Monitoring Well Low-Flow Purge/Sampling Form

Project: Montrose GW Sampling 2019

| | | | | | |
|---|---|---|---|---|---|
| Well ID: | MW-2 | Screened Interval (ft) | 48-68 | Well Diameter (in): | 4" |
| Date: | 4/12/2019 | Pump Intake Depth (ft) | 58 | Static Water Level (ft): | 43.29 |
| Sample ID | MW-2 | Purging/ Sample Device: | Portable | Total Well depth (ft): | 67.20 |
| Time: | 08:48 | PID Reading at TOC: | N/A | Water Column Length: | 23.91 |
| Dup ID: | N/A | Water Level Instrument : | Keck | Minimum Purge Volume: | - |
| Field Blank ID | NA | WLI Serial #: | 2316 | Samplers Name: | Steve Preston |
| MS/MSD ID: | N/A | Water Quality Meter: | YSI PRO DSS | Optimal Pump Setting: | PSI 50 CPM 1 ID: 7 |
| Analysis: | Various | WQM Serial #: | 18L104824 | Low-Flow or Net Purge: | Low-Flow |
| | | WQM Cal. Date & Time: | 4/12/19 7:45 | | |

| Time | Volume Purged | Flow Rate | Water Level (feet BTOC) | Specific Conductance (µS/m) | pH | Temp. | DO (mg/L) | ORP (mV) | Turbidity (NTU) | Salinity | TDS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Liters | ml/min | ± 0.1 ft | 3% | ± 0.1 | ± 0.2 | ± 10% | ± 10% | ± 10% | % | g/L |
| 08:20 | Pump | Start | | | | | | | | | |
| 08:25 | 0.5 | 100 | 43.30 | 10.600 | 6.55 | 21.7 | 4.76 | 98.8 | 21.4 | 6.00 | 7 |
| 08:28 | 0.8 | 100 | 43.32 | 10.534 | 6.58 | 22.3 | 3.69 | 92.6 | 8.39 | 5.96 | 7 |
| 08:31 | 1.1 | 100 | 43.32 | 10.617 | 6.59 | 22.6 | 3.56 | 88.9 | 6.52 | 5.99 | 7 |
| 08:34 | 1.4 | 100 | 43.33 | 10.611 | 6.59 | 22.7 | 3.24 | 86.5 | 4.56 | 5.99 | 7 |
| 08:37 | 1.7 | 100 | 43.33 | 10.588 | 6.59 | 22.7 | 3.11 | 84.4 | 3.93 | 5.99 | 7 |
| 08:40 | 2.0 | 100 | 43.34 | 10.591 | 6.59 | 22.7 | 2.99 | 82.8 | 3.84 | 5.99 | 7 |
| 08:43 | 2.3 | 100 | 43.34 | 10.593 | 6.59 | 22.7 | 2.88 | 81.2 | 3.74 | 5.99 | 7 |
| 08:46 | 2.6 | 100 | 43.34 | 10.600 | 6.60 | 22.7 | 2.89 | 80.3 | 3.73 | 6.00 | 7 |
| | | | | | | | | | | | |
| 08:48 | Sample | Start | | | | | | | | | |
| 09:31 | Sample | End | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Comments: Water is Clear.

Maximum permissable drawdown = 2.50 ft BTOC, water level not to draw down below 45.79 ft BTOC

Optimal drawdown for low-flow micropurge sampling is less than 0.3 ft at a flow rate of 0.1 to 1.0 L/min.

If drawdown exceeds 0.3 ft at a flow rate of 0.1 L/min....then attempt to achieve drawdown less than or equal to 25% of the available screen interval at flow rate equal to 0.1 to 1.0 L/min.

This is performed by subtracting pump intake and top of screen for fully submerged screens then multiplying by 25%, or subtracting the distance between pump intake and static water level and multiplying by 25% for water table wells with partly submerged screens.

# Monitoring Well Low-Flow Purge/Sampling Form

Project: Montrose GW Sampling 2019

| | | | | | |
|---|---|---|---|---|---|
| Well ID: | MW-3 | Screened Interval (ft) | 42-62 | Well Diameter (in): | 4" |
| Date: | 4/12/2019 | Pump Intake Depth (ft) | 52 | Static Water Level (ft): | 44.93 |
| Sample ID | MW-3 | Purging/ Sample Device: | Portable | Total Well depth (ft): | 62.78 |
| Time: | 08:53 | PID Reading at TOC: | N/A | Water Column Length: | 17.85 |
| Dup ID: | N/A | Water Level Instrument : | Solinst | Minimum Purge Volume: | - |
| Field Blank ID | N/A | WLI Serial #: | 200816 | Samplers Name: | Keith Houk |
| MS/MSD ID: | N/A | Water Quality Meter: | YSI556 | Optimal Pump Setting: | PSI 50 CPM 1 ID: 7 |
| Analysis: | Various | WQM Serial #: | 14C100352 | Low-Flow or Net Purge: | Low-Flow |
| | | WQM Cal. Date & Time: | 4/12/19 7:45 | | |

| Time | Volume Purged | Flow Rate | Water Level (feet BTOC) | Specific Conductance (µS/m) | pH | Temp. | DO (mg/L) | ORP (mV) | Turbidity (NTU) | Salinity | TDS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Liters** | **ml/min** | **± 0.1 ft** | **3%** | **± 0.1** | **± 0.2** | **± 10%** | **± 10%** | **± 10%** | **%** | **g/L** |
| 08:25 | Pump | Start | | | | | | | | | |
| 08:30 | 0.5 | 100 | 44.93 | 10.57 | 6.24 | 23.02 | 3.38 | -117.9 | 48.1 | 6.24 | 7.138 |
| 08:33 | 0.8 | 100 | 44.93 | 10.54 | 6.26 | 22.86 | 2.53 | -114.9 | 40.1 | 6.24 | 7.140 |
| 08:36 | 1.1 | 100 | 44.93 | 10.59 | 6.24 | 23.02 | 2.14 | -113.3 | 33.2 | 6.25 | 7.156 |
| 08:39 | 1.4 | 100 | 44.93 | 10.68 | 6.22 | 23.18 | 1.86 | -112.9 | 30.9 | 6.28 | 7.190 |
| 08:42 | 1.7 | 100 | 44.93 | 10.70 | 6.19 | 23.28 | 1.69 | -110.0 | 31.0 | 6.29 | 7.193 |
| 08:45 | 2.0 | 100 | 44.93 | 10.73 | 6.15 | 23.40 | 1.57 | -107.1 | 31.6 | 6.29 | 7.190 |
| 08:48 | 2.3 | 100 | 44.93 | 10.75 | 6.13 | 23.49 | 1.49 | -104.5 | 31.5 | 6.29 | 7.194 |
| 08:51 | 2.6 | 100 | 44.93 | 10.76 | 6.10 | 23.53 | 1.41 | -102.2 | 31.4 | 6.29 | 7.195 |
| | | | | | | | | | | | |
| 08:53 | Sample | Collected | | | | | | | | | |
| 09:18 | Sample | Complete | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Comments:

Maximum permissable drawdown = 1.77 ft BTOC, water level not to draw down below 46.70 ft BTOC

Optimal drawdown for low-flow micropurge sampling is less than 0.3 ft at a flow rate of 0.1 to 1.0 L/min.

If drawdown exceeds 0.3 ft at a flow rate of 0.1 L/min....then attempt to achieve drawdown less than or equal to 25% of the available screen interval at flow rate equal to 0.1 to 1.0 L/min.

This is performed by subtracting pump intake and top of screen for fully submerged screens then multiplying by 25%, or subtracting the distance between pump intake and static water level and multiplying by 25% for water table wells with partly submerged screens.

# Monitoring Well Low-Flow Purge/Sampling Form

Project: Montrose GW Sampling 2019

| | | | | | |
|---|---|---|---|---|---|
| Well ID: | MW-4 | Screened Interval (ft) | 46-56 | Well Diameter (in): | 4" |
| Date: | 4/12/2019 | Pump Intake Depth (ft) | 50 | Static Water Level (ft): | 44.19 |
| Sample ID | MW-4 | Purging/ Sample Device: | Portable | Total Well depth (ft): | 66.75 |
| Time: | 10:23 | PID Reading at TOC: | N/A | Water Column Length: | 22.56 |
| Dup ID: | N/A | Water Level Instrument : | Solinst | Minimum Purge Volume: | - |
| Field Blank ID | PL-509 | WLI Serial #: | 200816 | Samplers Name: | Keith Houk |
| MS/MSD ID: | N/A | Water Quality Meter: | YSI556 | Optimal Pump Setting: | PSI 40 CPM 1 ID: 10 |
| Analysis: | Various | WQM Serial #: | 14C100352 | Low-Flow or Net Purge: | Low-Flow |
| | | WQM Cal. Date & Time: | 4/12/19 7:45 | | |

| Time | Volume Purged | Flow Rate | Water Level (feet BTOC) | Specific Conductance (µS/m) | pH | Temp. | DO (mg/L) | ORP (mV) | Turbidity (NTU) | Salinity | TDS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Liters** | **ml/min** | **± 0.1 ft** | **3%** | **± 0.1** | **± 0.2** | **± 10%** | **± 10%** | **± 10%** | **%** | **g/L** |
| 9:55 | Pump | Start | | | | | | | | | |
| 10:00 | 0.5 | 100 | 44.19 | 5.41 | 6.19 | 23.03 | 4.73 | 0.3 | 6.34 | 3.04 | 3.655 |
| 10:03 | 0.8 | 100 | 44.19 | 5.40 | 6.10 | 23.16 | 4.50 | 21 | 3.6 | 3.03 | 3.637 |
| 10:06 | 1.1 | 100 | 44.19 | 5.40 | 6.03 | 23.33 | 4.26 | 35.4 | 1.73 | 3.02 | 3.628 |
| 10:09 | 1.4 | 100 | 44.19 | 5.40 | 5.99 | 23.39 | 4.13 | 46.1 | 1.09 | 3.02 | 3.625 |
| 10:12 | 1.7 | 100 | 44.19 | 5.41 | 5.95 | 23.50 | 4.10 | 55.2 | 0.68 | 3.01 | 3.623 |
| 10:15 | 2.0 | 100 | 44.19 | 5.41 | 5.92 | 23.57 | 4.06 | 62 | 0.74 | 3.01 | 3.622 |
| 10:18 | 2.3 | 100 | 44.19 | 5.43 | 5.89 | 23.61 | 4.02 | 63.3 | 0.71 | 3.01 | 3.623 |
| 10:21 | 2.6 | 100 | 44.19 | 5.44 | 5.88 | 26.65 | 4.00 | 63.4 | 0.69 | 3.01 | 3.623 |
| | | | | | | | | | | | |
| 10:23 | Sample | Collected | | | | | | | | | |
| 11:18 | Sample | Complete | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Comments: Field Blank PL-509 was collected at this well at 10:30

Maximum permissable drawdown = 1.00 ft BTOC, water level not to draw down below 45.19 ft BTOC

Optimal drawdown for low-flow micropurge sampling is less than 0.3 ft at a flow rate of 0.1 to 1.0 L/min.

If drawdown exceeds 0.3 ft at a flow rate of 0.1 L/min....then attempt to achieve drawdown less than or equal to 25% of the available screen interval at flow rate equal to 0.1 to 1.0 L/min.

This is performed by subtracting pump intake and top of screen for fully submerged screens then multiplying by 25%, or subtracting the distance between pump intake and static water level and multiplying by 25% for water table wells with partly submerged screens.