

REPORT OF GROUNDWATER MONITORING ACTIVITIES JUNE 2022

Bozeman Landfill Bozeman, Montana

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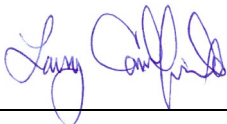


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ACRONYMS/ABBREVIATIONS

Acronyms/Abbreviations	Definition
AVD	Absolute Value Difference
ARM	Administrative Rules of Montana
bgs	Below Ground Surface
btoc	Below Top of Casing
DO	Dissolved Oxygen
DEQ	Montana Department of Environmental Quality
GPS	Groundwater Protection Standard
HHS	Montana Numeric Water Quality Human Health Standard
ORP	Oxidation Reduction Potential
MCL	Maximum Contaminant Level
MDL	Method Detection Limit
mg/L	Milligrams per Liter
POC	Point of Compliance
PQL	Practical Quantitation Limit
PVC	Polyvinyl Chloride
QA/QC	Quality Assurance/Quality Control
RPD	Relative Percent Difference
USEPA	United States Environmental Protection Agency
ug/L	Micrograms per Liter
VOC	Volatile Organic Compound

1.0 INTRODUCTION

Tetra Tech completed the required semi-annual groundwater monitoring events at the Bozeman Landfill in June 2022 (**Figure 1**). Semi-annual monitoring events are generally conducted early summer (typically June) and early winter (late November or early December). Tetra Tech personnel conducted this monitoring event and reporting in accordance with Task Order, 2022 - 2023 Groundwater and Perimeter Methane Monitoring, dated June 30, 2022 and the Groundwater Sampling and Analysis Plan dated November 12, 2015, as amended by Tetra Tech (2020) and subsequently approved by the Montana Department of Environmental Quality (DEQ) (DEQ, 2020).

Methods used during monitoring activities are presented in **Section 2.0**. Figures and Tables presenting site location, monitoring sites, selected analytical results, and field data are attached. **Appendix A** provides graphs depicting selected groundwater data over time for several wells. **Appendix B** contains groundwater sampling logs and field notes. **Appendix C** contains copies of the laboratory reports. **Appendix D** contains the Data Review, Verification, & Validation Reports for the June sample set. **Appendix E** provides supporting data for different aspects of the statistical analysis.

2.0 METHODS

Groundwater sampling occurred on June 21 and 22, 2022 at the monitoring wells and locations shown in **Figure 2**. A schedule of monitoring activities and list of analytical constituents for the June monitoring event are presented in **Tables 1** and **2**.

Monitoring activities included measurement of water levels and field parameters, purging and sampling of monitoring wells, sampling of one water supply well (Valley View Vet Well), and a surface water spring (McIlhattan Seep).

2.1 WATER LEVEL AND FIELD PARAMETER MEASUREMENTS

Water levels were measured using an electric well probe that was routinely decontaminated before use at each monitoring well. Depth to water measurements were made from the north quadrant of the polyvinyl chloride (PVC) collar of each monitoring well and are expressed as being below top of casing (btoc).

Other field parameters, including temperature, pH, specific conductivity, dissolved oxygen (DO, measured in milligrams per liter) and oxidation reduction potential (ORP, measured in millivolts) were measured. Field parameters were measured in grab samples collected from the monitoring wells during purging, in purge water during pumping of wells, and when possible, downhole in the wells following purging and sampling with a bailer. In the case of McIlhattan Seep (spring), the multimeter probe was completely submersed in the spring flow at the sampling location. All measurements were recorded on groundwater sampling logs (**Appendix B**).

2.2 GROUNDWATER SAMPLING

Water samples were collected from each monitoring well or monitoring site in accordance with the Groundwater Monitoring Sampling and Analysis Plan. In general, the following sampling procedures were used:

- Monitoring wells were purged using dedicated submersible pump(s) and tubing or dedicated polyethylene bailers.
- A minimum of three well casing volumes were removed from wells that had suitable recovery, with the objective of sampling “formation” water. Wells with poor recovery were bailed dry and allowed to recover prior to sampling and field parameter measurement. Exceptions to purging three casing volumes are noted in the sampling logs (**Appendix B**).
- Field parameters were measured in each casing volume removed from the well, except for wells with poor recovery.
- Samples collected for laboratory analysis were transferred into appropriate labeled containers and preserved as necessary.
- Pertinent information (sample date, time, well location, personnel, etc.) was recorded on groundwater monitoring logs (**Appendix B**).
- Samples were packed in ice-filled coolers and shipped with Chain-of-Custody forms to the analytical laboratory. Chain-of-Custody forms for the sampling event are included with the laboratory report in **Appendix C**.
- Monitoring activities at the McIlhattan Seep (**Figure 2**) consisted of filling a disposable bailer where the spring begins flowing at ground surface, filtering for metals analysis, and directly filling the sample bottles.

During this semi-annual monitoring event, samples were collected from 24 sites along with four quality assurance/quality control samples (i.e., three field duplicates and one trip blank). Analyses varied between wells but generally consisted of volatile organic compounds (VOCs), and nitrogen (as NO₂ + NO₃) as listed in **Tables 1** and **2**. Analytical methods are specified in the laboratory analytical report (**Appendix C**).

The analytical laboratory was contracted to furnish sample containers, preservatives, and trip blanks and to analyze the water samples. For each monitoring event, one trip blank (identified as “Trip Blank”) was prepared and consisted of de-ionized water. Upon receipt of the samples at the laboratory, the trip blank was analyzed for VOCs (in accordance with Method 8260 MSV Low Level) listed in Appendix I to 40 CFR Part 258 contained in ARM 17.50.1306(7), including dichlorodifluoromethane.

Each duplicate sample was collected at the same time the natural sample was collected from each well. The duplicate samples were analyzed for the same constituents as the corresponding natural sample.

Field parameter measurements and laboratory analytical results were entered into the project groundwater database. A statistical analysis was performed on selected constituents and wells following DEQ guidance to determine statistical significance.

3.0 DATA PRESENTATION AND ANALYSIS

June 2022 groundwater monitoring results are summarized in this section. Figures and Tables cited in the report are presented at the end of the text. Charts detailing selected constituent concentrations and groundwater levels over time are presented in **Appendix A**.

3.1 GROUNDWATER OCCURRENCE AND MOVEMENT

Depth to Groundwater and Seasonal Variation

Depth to groundwater was consistent with previous June monitoring events and ranged between approximately 1.6 feet btoc in well MW-10 near the western margin of the site, 13 feet btoc in wells LF-2 and LF-3, 56 feet btoc in well MW-12, and 114 feet btoc in well MW-5 at the eastern margin of the site.

Groundwater levels/elevations are presented in **Table 3. Chart A-1** (in **Appendix A**) depicts changes and trends in groundwater levels since 1994 in monitoring wells MW-5, MW-8A, and MW-12 that are oriented in a line roughly spanning the upgradient and downgradient extents of the site. Groundwater elevations in these wells experienced an overall decline between 2011 and 2015-2017 before increasing through 2018-2020 then appear to resume a downward trend at wells MW-5 and MW-12.

Groundwater Flow Direction and Hydraulic Gradient

Groundwater elevations were generally consistent with those measured during previous monitoring events and indicate that groundwater flows toward the southwest beneath the Unlined Closed Cell (**Figure 3**). Flow direction shifts to the west-southwest between the Lined Closed Cell and well MW-10, at the western margin of the site.

The groundwater gradients at the site were:

- 5.4% beneath the unlined closed cell (wells MW-15 and MW-12)
- 2.2% beneath the lined closed cell (wells MW-11 and MW-13).
- 1.8% in the area south of the site (wells MW-24 and MW-27)

Groundwater flow directions and gradients are consistent with previous monitoring events.

3.2 GROUNDWATER QUALITY

The following sections discuss results of analyses of inorganic constituents and VOCs. The discussion compares constituent concentrations to United States Environmental Protection Agency's (USEPA) Groundwater Protection Standard (GPS). Alternatively, the GPS may also be equal to the USEPA regulatory levels or Maximum Contaminant Level (MCL) and/or the Montana Numeric Water Quality Human Health Standard (HHS).

3.2.1 Organic Constituents

The VOC analysis (8260B MSV Low Level method) measures concentrations of 58 constituents (**Appendix C**). Twenty VOC constituents were detected and included the same constituents detected during previous monitoring events. A summary of detected VOCs, at each site, is presented in **Table 4** and a historical summary of selected VOCs is presented in **Table 5. Figures**

4 through 8 display concentrations of benzene, tetrachloroethene, trichloroethene, and vinyl chloride at each well monitored in June 2022.

The Montana HHS for vinyl chloride is 0.2 µg/L (with the annotation Health Advisory or HA) while the USEPA MCL for vinyl chloride is 2 µg/L. Exceedances of vinyl chloride standards were limited to MW-12 (3.93 mg/L) and MW-13 (4.09 mg/L). No exceedances of standards for other VOCs were observed.

Evaluation of VOC results generally indicate detections of the same VOC constituents as in previous monitoring events. Long-term trend charts for selected monitoring wells are presented in **Appendix A (Charts A-2 to A-6)**. These charts present selected VOC constituent concentration changes through time, both before and after start-up of the first landfill gas (LFG) extraction system, and the following upgraded LFG extraction system. A more detailed statistical analysis of VOC and inorganic constituent trends and comparison to GPSs are provided in **Section 5**.

3.2.2 Inorganic Constituents

Inorganic constituents (chloride, sulfate, and nitrate + nitrite as nitrogen) were measured in samples collected from select monitoring locations listed in **Table 1**. These data are provided in the analytical laboratory report (**Appendix C**) and summarized below.

Samples for chloride and sulfate analyses were collected from thirteen wells. These constituents do not have regulatory limits in groundwater but are analyzed to evaluate whether landfill leachate is reporting to groundwater. The monitoring stations where these constituents are of note are listed below:

- At the unlined closed cell chloride concentrations were 4.3 mg/L at upgradient wells MW-5 and MW-15. Concentrations at cross-gradient wells were 45.9 mg/L (MW-17) and 60.5 mg/L (MW-20). At down-gradient wells chloride concentrations were 40.9 mg/L (MW-12) and 117 mg/L (MW-18).
- Sulfate concentrations in the vicinity of the unlined cell follow similar trends compared to chlorine concentrations with low sulfate concentrations at upgradient wells MW-5 (9.2 mg/L) and MW-15 (10.9 mg/L), slightly greater concentrations (16.6 mg/L to 67.5 mg/L) at cross-gradient and down-gradient wells MW-17, MW-18, and MW-20.
- Chloride and sulfate concentrations in the vicinity of the lined closed cell decreased between upgradient well MW-12 (chloride = 40.9 mg/L; sulfate = 31.0 mg/L) and down-gradient wells MW-4 and MW-13 (chloride = 32.1 mg/L and 36.3 mg/L; sulfate 15.3 mg/L and 21.1 mg/L).

Samples for nitrogen analysis (nitrate + nitrite as N) were collected from 14 wells and the McIlhatten Seep. Nitrogen in groundwater has an MCL of 10 mg/L. Concentrations of nitrogen are summarized below:

- The concentration of nitrogen in well MW-8A was 25.2 mg/L, which exceeded the regulatory standard.
- Locations where nitrogen concentrations regularly exceed 5 mg/L are limited to wells MW-8A, MW-11, MW-27, and the McIlhatten Seep.

- Concentrations in upgradient wells MW-5 and MW-15 the nitrate + nitrite, as N concentrations ranged from 2.8 to 3.4 mg/L.

4.0 DATA VALIDATION

The data validation process is used to determine the adequacy and quality of laboratory analytical data for the Bozeman Landfill. The objective of data validation is to identify unreliable or invalid laboratory measurements and qualify that data for interpretive use. These validations were performed in accordance with Tetra Tech's Groundwater Monitoring Sampling and Analysis Plan (Tetra Tech, 2015) and guidelines prepared by the USEPA (1999, 2004, and 2017). This section also summarizes the Data Review, Verification, & Validation Report for the sample sets presented in this report (**Appendix D**).

The data validation indicates that analytical results reported in this document meet data quality objectives in the SAP (Tetra Tech, 2015); therefore, they are valid, reliable, and qualified for interpretive use.

4.1 FIELD QA/QC

Analytical results were evaluated using three field duplicate samples and one trip blank sample as discussed below.

Field Duplicates

Duplicate samples (labeled DUP-1, DUP-2, and DUP-3) were collected from wells MW-4 (DUP-1), MW-6 (DUP-2), and MW-12 (DUP-3).

Duplicates were shipped with the natural samples the analytical laboratory for analysis of VOCs and inorganic constituents.

Field duplicate results aid in the assessment of sampling and analytical precision. Analytical results for the natural and duplicate samples collected were evaluated using the following criteria:

- The Relative Percent Difference (RPD) between the two samples was calculated when both values of the natural/duplicate pair were greater than five times the Practical Quantitation Limit (PQL) for a given analyte.
- The Absolute Value Difference (AVD) between the natural and duplicate sample for a given analyte was calculated when one or both values were less than five times the PQL.
- The RPD or AVD was not calculated for values of the natural/duplicate pair that were equal, or if one or both values were below the PQL.

RPDs are calculated by dividing the difference between the two reported values for a given constituent by the average of the two reported values. Analytical results of constituents where the RPD was greater than 20 percent are considered estimated concentrations.

AVDs are calculated by subtracting the results of the two reported values for a given constituent. If the difference exceeds the PQL, then results for this constituent are considered estimated.

Results of comparison of field duplicates with their natural samples indicated the following:

DUP-1 and MW-4 Samples

- The RPD was calculated for 1,1,1,-trichloroethane and exceeded 20% (153 %).

DUP-2 and MW-6 Samples

- The RPD was calculated for 1,1,1,-trichloroethane and exceeded 20% (130 %).

DUP-3 and MW-12 Samples

- The RPD was calculated for vinyl chloride and exceeded 20% (20.5 %).

Concentrations of these constituents were flagged as estimates in the project monitoring database.

Trip Blanks

One trip blank was provided and analyzed. The samples were analyzed for VOCs (Method 8260B).

A trip blank consists of deionized water containerized by the laboratory and shipped to Tetra Tech's Bozeman, Montana office with the sample containers. Trip blanks are kept in field coolers during sampling and shipped back to the laboratory with the samples upon conclusion of field activities. Analytical results of the trip blank sample(s) were reviewed to determine if any constituent was measured in the sample(s) at detectable concentrations. The results are as follows:

- No constituents were detected in the trip blank.

4.2 LABORATORY QA/QC

The analytical laboratory received groundwater samples on June 29, 2022. Chain-of-Custody documents accompanied the samples from collection to receipt at the laboratory. All samples were properly preserved and analyzed within the respective holding time for each analyte (unless otherwise noted on the report via a qualifier). More information is provided in the Data Review, Verification, & Validation Report contained in **Appendix D**.

Some parameters were analyzed between one to four days beyond the specified holding time due to delays during shipping. These parameters are noted in the analytical laboratory report and, while the data are consistent with previous monitoring events, they are additionally flagged as potentially low-biased estimates in the project database.

Review of all other laboratory quality assurance indicators showed all analyses followed published quality assurance/quality control (QA/QC) criteria and within the laboratory precision and accuracy guidelines. Laboratory QA/QC issues are listed in the laboratory report and mostly pertain to matrix spikes, method blanks, and lab duplicates. The laboratory report indicates that calibration standards had been used, calibration verification had been conducted, laboratory controls were in place and analyzed, laboratory duplicates were used, and laboratory spikes documented.

5.0 STATISTICAL ANALYSIS OF WATER QUALITY DATA

The City completed the first of two corrective measures assessments for the Bozeman Landfill in November 1995. A landfill gas extraction system was installed as the preferred alternative in the first corrective measures assessment and has been operated at the site from December 1997 to July 2016. A second corrective measure began operation in August 2016 and is currently in operation. This corrective measure consists of an expanded landfill gas extraction system, a soil vapor extraction system, and a groundwater and vadose zone air injection system as described in Tetra Tech's Construction Completion Report (March 2018).

According to ARM 17.50.1310(5)(b), remedies selected because of the corrective measures assessment are considered complete when concentrations of all constituents listed in ARM 17.50.1307 have not exceeded the GPSs for a period of three consecutive years based on statistical analysis of the data.

As indicated in the discussion above, there are exceedances of regulatory standards at the site. Of those constituents listed in ARM 17.50.1307, the following constituents have equaled or exceeded regulatory standards at the Bozeman Landfill on at least a single occasion in the last five years (2018-2022):

- Tetrachloroethene
- Methylene Chloride
- Vinyl Chloride
- Nitrate+Nitrite as N

The dataset was also screened for VOCs using the double quantification rule. This quasi-statistical rule is often used in detection monitoring to confirm an exceedance in a dataset that is predominantly populated with non-detect values. In this instance, the double quantification rule was used to identify well-constituent pairs that exhibit quantified measurements (i.e., at or above the PQL) in two consecutive sampling events within the last five years. Besides those listed above, the following constituents were identified in the VOC screening process:

- *1,1-Dichloroethane*
- *1,2-Dichloropropane*
- *Acetone*
- *Chloroethane*
- *Cis-1,2-Dichloroethene*
- *Trichloroethene*
- *1,4-Dichlorobenzene*
- *2-Propanol*
- *Benzene*
- *Dichlorodifluoromethane*
- *Tetrahydrofuran*
- *Trichlorofluoromethane*

Those constituents with GPSs were evaluated to determine if they are present at statistically significant concentrations above the GPS. Constituents without a GPS are *italicized* in the bulleted list above. In accordance with MCA 17.50.1307(8), constituents identified in the Appendix II list (40 CFR Part 258) for which GPSs have not been promulgated, shall use background concentrations in the place of a GPS. Because these are VOCs, the background concentration would be zero; however, laboratories cannot accurately report concentrations below the PQL. Therefore, PQLs

were used as the compliance limit. Constituents not identified in the Appendix II list for which GPSs have not been promulgated were evaluated using trend tests. Additionally, trend tests were used to evaluate metals and groundwater quality parameters (i.e., chloride and sulfate). Selection and description of the statistical tests employed are described below, as are the results. Supporting data for different aspects of the statistical analysis are provided in **Appendix E**.

5.1 STATISTICAL ANALYSIS APPROACH

To conform with the U.S. Environmental Protection Agency's Statistical Analysis of Groundwater Monitoring Data at Resource Conservation and Recovery Act (RCRA) Facilities – Unified Guidance (USEPA, 2009), Tetra Tech has updated the statistical approach for the analysis of groundwater samples collected at the Bozeman Landfill. Sanitas™ Statistical Software (Sanitas, 2013) was used to perform the statistical evaluation.

The proportion of parameter concentrations reported below the method detection limit (MDL) (non-detects) and the statistical distribution of observed data were evaluated when considering the appropriate statistical method. Given the need for intrawell evaluation, which is appropriate for hydrogeologic systems exhibiting natural variability, monitoring program status (corrective action), and the relatively large data set, the statistical method referred to as “confidence intervals” is appropriate for the statistical analyses. This method is endorsed by USEPA because it provides a flexible and statistically accurate method to test how a parameter estimated from a single sample location compares to a fixed numerical limit (USEPA, 2009). Parametric confidence intervals were calculated for data sets that have an identifiable (normal, log-normal, etc.) distribution. Non-parametric confidence intervals were calculated for datasets in which the distribution cannot be determined. The latter method is commonly used when the data set contains a substantial proportion of non-detect values. Confidence intervals are discussed in more detail in the following section.

Confidence intervals cannot be used to evaluate groundwater concentrations for compounds that do not have an associated GPS (MCL, HHS, etc.) or an alternative numerical limit. In instances where GPSs have not been promulgated and the compounds are not identified in the Appendix II list, Mann-Kendall/Sen's Slope tests were performed to evaluate the data for trends. This statistical test is an intrawell non-parametric evaluation of the change in concentration levels over time. To remove any artificial trends introduced by changes to reporting limits over time, the tests were run by replacing historic non-detected values with current-day reporting limits. Metals, chloride, and sulfate data were also evaluated using Mann-Kendall/Sen's Slope tests.

5.2 STATISTICAL METHOD – CONFIDENCE INTERVALS

A confidence interval is constructed from sample data and is designed to contain the mean concentration of an analyte, with a designated level of confidence. This confidence interval is then compared to a GPS. In corrective action, the test determines whether concentrations have decreased below a compliance level. Therefore, in corrective action monitoring, the upper confidence level (UCL) is of most importance as it is compared to the GPS. This approach is the recommended statistical strategy in compliance/assessment and corrective action monitoring by the USEPA (USEPA, 2009).

5.2.1 Distribution and Censored Data

The distribution of the data is evaluated by applying the Shapiro-Wilk or Shapiro-Francia test of normality to the raw data or, when applicable to the Ladder of Powers (Helsel & Hirsch, 1992) transformed data. If less than 15-percent of the observations are non-detects, these will be replaced with one-half the PQL prior to running the normality test and constructing the confidence intervals. If more than 15-percent but less than 50-percent of the data are below the detection limit, the data's sample mean and standard deviation are adjusted according to the method of Kaplan-Meier (USEPA, 2009). If more than 50-percent of the data are below the detection limit, these values are replaced with one-half the MDL and a non-parametric confidence interval is constructed. Estimated data (flagged with a "J"), in which the concentration is reported to be between the MDL and PQL, were treated as valid measurements and were not substituted per the unified guidance (USEPA, 2009).

5.2.2 Parametric Confidence Intervals

To construct a parametric confidence interval, it is preferable to have eight or more measurements. The mean, " \bar{X} ", and the standard deviation of the sample concentration values are calculated separately for each compliance well (monitoring point). For each well, the confidence interval is calculated as:

$$\bar{X} \pm t_{(1-\alpha, n-1)} \frac{S}{\sqrt{n}}$$

Where: "S" is the compliance well's standard deviation, "n" is the number of observations for the compliance point; and " $t_{(1-\alpha, n-1)}$ " is obtained from the Student's t-distribution table (USEPA, 1989) with (n-1) degrees of freedom.

The confidence intervals were constructed with a 99-percent confidence level. If the UCL is above the GPS (the interval overlaps the compliance limit), there is statistically significant evidence of noncompliance.

5.2.3 Non-Parametric Confidence Intervals

For non-parametric confidence intervals, the interval is constructed around the median of the sample concentration dataset with a 98-percent confidence level. The procedure requires at least seven observations. The observations are ordered from smallest to largest and unique ranks are assigned separately within the monitoring point dataset. The critical values of the order statistics are determined as follows:

- If the minimum seven observations are used, the critical values are the first and seventh values.
- Otherwise, the smallest integer, "M", is found such that the cumulative binomial distribution with parameters n (sample size) and probability of success (p = 0.5) is at least 0.99. The exact confidence coefficients for sample sizes up to 11 are given by the EPA (Table 6-3; USEPA, 1989). For larger samples, take as an approximation the nearest integer value to:

$$M = \frac{n}{2} + 1 + Z_{(1-\alpha)} \sqrt{\frac{n}{4}}$$

Where “ $Z_{(1-\alpha)}$ ” is 1- α percentile from the normal distribution table (Table 4, Appendix B; USEPA, 1989). Once “M” has been determined, (n+1-M) is computed and the confidence limits are taken as the order statistics, X(M) and X(n+1-M). “X” is the ordered list of values in the dataset. If the upper limit, X(n+1-M), exceeds the compliance limit, there is statistically significant evidence of non-compliance.

5.3 RESULTS AND DISCUSSION

Confidence intervals were constructed for the constituents with concentrations that have exceeded GPSs in the past five years, and for those constituents identified by the VOC screening process. Trend tests were also used to evaluate inorganic data and VOCs identified during the screening process that do not have GPSs and are not on the Appendix II list.

Outputs of the statistical testing results are contained in **Appendix E**. The statistical evaluations that were performed and reported below constitute the statistical basis for demonstrating the regulatory compliance status of the Bozeman Landfill.

5.3.1 Confidence Interval Results

Confidence intervals were constructed for 14 VOCs and nitrate+nitrite (see **Appendix E**). For the following constituent/well pairs, there was statistically significant evidence of exceedances of the GPSs:

- 1,1-Dichloroethane: MW-6, MW-7A, MW-12, MW-13, MW-17
- Acetone: MW-18
- Methylene Chloride: MW-17
- Tetrachloroethene: MW-17 and MW-20
- Vinyl chloride: MW-12, MW-13, and MW-18
- Nitrate+Nitrite: MW-8A

This list is consistent with past observed exceedances of GPSs, with the exception of acetone. A GPS has not been promulgated for either acetone or 1,1-dichloroethane, and therefore their respective PQLs were used as the compliance limits. Thus, any confirmed detection (concentrations above the PQL) will exceed the compliance limit. Trend analyses were conducted to further evaluate the VOC exceedances listed above. A discussion of those findings is presented below.

5.3.2 Trend Test Results

A 98-percent confidence level was used for the trend analyses. Increasing trends were identified in the datasets for the following inorganic compounds:

- Chloride: LF-3 and MW-13
- Nitrate+Nitrite: LF-3, MW-8A, and McIlhattan Seep
- Sulfate: LF-3, MW-6, MW-12, and MW-13

The inorganic results indicate increasing trends of constituents commonly found in landfill leachate. Concentrations for chloride, sulfate, and nitrate+nitrite for June 2022 are presented on **Figure 8**.

No organic constituents exhibited detrimental trends. Furthermore, the trend analyses for methylene chloride, tetrachloroethene, and vinyl chloride (the VOCs with statistically significant exceedances of GPSs) showed non-significant or decreasing trends in concentrations for those datasets. Outputs for the trend analyses are presented in **Appendix E**.

6.0 SUMMARY

The following summarizes data, calculations, and interpretations resulting from the groundwater monitoring event:

- The range in depth to first interception of groundwater (in monitoring wells) was between 1.6 feet btoc in well MW-10 near the western margin of the site and 114 feet btoc in well MW-5 at the eastern margin of the site.
- Groundwater elevations at the landfill were generally consistent with groundwater elevations measured in previous monitoring events and indicate a southwest groundwater flow beneath the Unlined Closed Cell. In the southwest portion of the site (vicinity of wells MW-4 and MW-27), groundwater flow shifts to a west-southwest direction.
- Twenty VOC constituents were detected and included the same constituents detected in previous groundwater monitoring events at the site. Exceedances of USEPA regulatory levels and/or Montana HHS were limited to vinyl chloride at MW-12 (3.93 mg/L) and MW-13 (4.09 mg/L). For inorganic constituents, only nitrate+nitrite as N exceeded the USEPA and Montana GPS of 10 mg/L in well MW-8A.
- Statistical evaluations using confidence intervals were completed for the dataset as described in **Section 5.3.1**. Statistically significant evidence of exceedances of GPSs were identified for the following constituent/well pairs: 1,1-dichloroethane: MW-6, MW-7A, MW-12, MW-13, MW-17; acetone: MW-18; methylene chloride: MW-17; tetrachloroethene: MW-17 and MW-20; vinyl chloride: MW-12, MW-13, and MW-18; and nitrate+nitrite: MW-8A. However, it should be noted, that for the VOC datasets, the reported concentrations exhibit non-significant or decreasing trends.
- Trend analyses were conducted for the dataset as described in **Section 5.3.2**. Statistically significant increasing trends were identified for the following constituent/well pairs: chloride: LF-3 and MW-13; nitrate+nitrite: LF-3, MW-8A, and McIlhattan Seep; and sulfate: LF-3, MW-6, MW-12, and MW-13.

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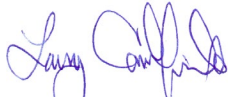
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- Tetra Tech, 2020.** Request to Reduce Frequency of Groundwater Sampling for Metals and Anions (Sulfate/Chloride) Bozeman Landfill – License #196. Memo submitted to Montana DEQ on November 16, 2020.
- Tetra Tech, 2018.** FINAL – Construction Completion Report, Bozeman Landfill LFG/SVE/AI and Treatment System. Report submitted to City of Bozeman and Montana DEQ. March.
- Tetra Tech, 2015.** Groundwater Monitoring Sampling and Analysis Plan, City of Bozeman Sanitary Landfill. Plan submitted to City of Bozeman and Montana DEQ. November 12.
- USEPA, 2017.** *U.S. EPA National Functional Guidelines for Organic Superfund Methods Data Review*. Office of Superfund Remediation and Technology Innovation. OLEM 9355.0-136, EPA-540-R-2017-002. January.
- USEPA, 2004.** *U.S. EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*. Office of Emergency and Remedial Response. October.
- USEPA, 1999.** *U.S. EPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*. Office of Emergency and Remedial Response. October.
- USEPA, 2009.** *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Unified Guidance*. Office of Resource Conservation and Recovery, United States Environmental Protection Agency. March.

ONLINE REFERENCE:

U.S. EPA Maximum Contaminant Levels

<http://water.epa.gov/drink/contaminants/>

Montana DEQ Solid Waste Program Laws and Rules:

<http://www.deq.mt.gov/SolidWaste/LawsRules.mcpX>

TABLES

Table 1 – June Groundwater Monitoring Schedule

Monitoring Well or Location	Depth to Water	Field Parameters ¹	VOCs ²	Chloride and Sulfate	Nitrate+Nitrite as Nitrogen
LF-2	Annually	Annually	Annually		Annually
LF-3	Annually	Annually	Annually	Annually	Annually
MW-4*	Annually	Annually	Annually	Annually	Annually
MW-5*	Annually	Annually	Annually	Annually	Annually
MW-6*	Annually	Annually	Annually	Annually	Annually
MW-6B	2-Year ³				
MW-7A	Annually	Annually	Annually		Annually
MW-7B	2-Year ³				
MW-8A*	Annually	Annually	Annually	Annually	Annually
MW-8B	2-Year ³				
MW-8C	2-Year ³				
MW-9A	Annually	Annually	Annually	Annually	Annually
MW-9B	2-Year ³				
MW-10	Annually	Annually	Annually		Annually
MW-11	Annually	Annually	Annually		Annually
MW-12	Annually	Annually	Annually	Annually	Annually
MW-13	Annually	Annually	Annually	Annually	Annually
MW-15*	Annually	Annually	Annually	Annually	Annually
MW-17	Annually	Annually	Annually	Annually	
MW-18	Annually	Annually	Annually	Annually	
MW-19	Annually	Annually	Annually		
MW-20	Annually	Annually	Annually	Annually	
MW-21	Annually	Annually	Annually		
MW-22	Annually	Annually	Annually		
MW-23	Annually	Annually	Annually		
MW-24	Annually	Annually	Annually		
MW-27	Annually	Annually	Annually	Annually	Annually
Mclhattan Seep	Annually	Annually	Annually		Annually
Valley View Vet Well	Annually	Annually	Annually		
Field Duplicates (3 per event)			Annually	Annually	Annually
Trip Blank (1 per event)			Annually		

¹ Field parameters include pH, specific conductivity, dissolved oxygen, and oxidation-reduction potential.

² VOCs = Volatile organic compounds as listed in **Table 3**.

³ 2-Year = Parameter measured every second year beginning in June 2021.

* Point of Compliance.

Table 2 – Volatile Organic Compounds Required for Groundwater Monitoring

Parameter ¹	Parameter ¹
1,1,1,2-Tetrachloroethane	Bromodichloromethane
1,1,1-Trichloroethane	Bromoform
1,1,2,2-Tetrachloroethane	Chloroform
1,1,2-Trichloroethane	Chloromethane
1,1,2-Trichlorotrifluoroethane	Cyclohexane
1,1-Dichloroethane	Dibromochloromethane
1,1-Dichloroethene	Dibromomethane
1,2,3-Trichloropropane	Dichlorodifluoromethane
1,2,4-Trimethylbenzene	Ethylbenzene
1,2-Dibromo-3-chloropropane	Iodomethane
1,2-Dibromoethane (EDB)	Isopropylbenzene (Cumene)
1,2-Dichlorobenzene	Methyl-tert-butyl ether
1,2-Dichloroethane	Methylene Chloride
1,2-Dichloropropane	Styrene
1,4-Dichlorobenzene	Tetrachloroethene
1,4-Dioxane (p-Dioxane)	Tetrahydrofuran
2-Butanone (MEK)	Toluene
2-Hexanone	Trichloroethene
2-Propanol	Trichlorofluoromethane
4-Methyl-2-pentanone (MIBK)	Vinyl acetate
Acetone	Vinyl chloride
Acrylonitrile	Xylene (Total)
Benzene	cis-1,2-Dichloroethene
Bromochloromethane	cis-1,3-Dichloropropene
Bromodichloromethane	n-Hexane
Bromoform	n-Propylbenzene
Bromomethane	trans-1,2-Dichloroethene
Carbon disulfide	trans-1,3-Dichloropropene
Carbon tetrachloride	trans-1,4-Dichloro-2-butene
Chlorobenzene	1,2-Dichloroethane-d4 (S)
Chloroethane	Toluene-d8 (S)
Bromochloromethane	4-Bromofluorobenzene (S)

¹ Volatile Organic Compounds analyzed using Method 8260 (low level).

TABLE 3 (Continued)
Groundwater Levels
Bozeman Landfill, Bozeman Montana

MEASURING POINT ELEVATION (in feet above mean sea level)														
Well No.	4810.03		4772.36		4724.94		4778.01		4704.56		4693.62		4689.79	
	MW-17		MW-18		MW-19		MW-20		MW-21		MW-22		MW-23	
Monitoring Event	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV
March-14	75.60	4734.43	47.23	4725.13	21.23	4703.71	53.20	4724.81	9.39	4695.17	3.81	4689.81	5.49	4684.30
August-14	76.12	4733.91	47.89	4724.47	22.05	4702.89	54.14	4723.87	9.77	4694.79	4.86	4688.76	6.28	4683.51
December-14	75.84	4734.19	47.42	4724.94	22.07	4702.87	53.38	4724.63	10.17	4694.39	4.83	4688.79	6.24	4683.55
June-15	76.50	4733.53	48.02	4724.34	22.15	4702.79	54.23	4723.78	9.58	4694.98	4.55	4689.07	5.83	4683.96
December-15	76.85	4733.18	47.85	4724.51	22.30	4702.64	54.60	4723.41	10.70	4693.86	5.23	4688.39	6.56	4683.23
June-16	77.40	4732.63	47.90	4724.46	22.10	4702.84	54.67	4723.34	9.62	4694.94	4.41	4689.21	5.73	4684.06
December-16	79.35	4730.68	47.89	4724.47	22.09	4702.85	56.24	4721.77	NM	--	NM	--	NM	--
June-17	77.35	4732.68	47.45	4724.91	21.75	4703.19	54.61	4723.40	9.09	4695.47	3.98	4689.64	5.32	4684.47
December-17	77.68	4732.35	48.15	4724.21	22.12	4702.82	54.68	4723.33	10.51	4694.05	4.77	4688.85	5.92	4683.87
August-18	77.10	4732.93	47.81	4724.55	22.02	4702.92	54.92	4723.09	9.67	4694.89	4.50	4689.12	5.92	4683.87
November-18	76.43	4733.60	47.44	4724.92	22.05	4702.89	54.03	4723.98	10.42	4694.14	4.96	4688.66	6.22	4683.57
June-19	76.08	4733.95	46.56	4725.80	21.67	4703.27	53.37	4724.64	8.29	4696.27	3.83	4689.79	5.40	4684.39
December-19	75.89	4734.14	46.91	4725.45	21.94	4703.00	53.41	4724.60	10.08	4694.48	4.72	4688.90	6.10	4683.69
June-20	76.04	4733.99	47.68	4724.68	22.06	4702.88	54.60	4723.41	9.18	4695.38	4.20	4689.42	5.62	4684.17
December-20	75.82	4734.21	47.03	4725.33	22.00	4702.94	53.43	4724.58	10.72	4693.84	5.17	4688.45	6.56	4683.23
June-21	76.28	4733.75	47.95	4724.41	22.21	4702.73	54.69	4723.32	9.41	4695.15	4.62	4689.00	6.13	4683.66
December-21	75.92	4734.11	47.37	4724.99	22.13	4702.81	53.85	4724.16	11.23	4693.33	5.49	4688.13	6.65	4683.14
June-22	76.25	4733.78	47.00	4725.36	21.80	4703.14	54.06	4723.95	8.65	4695.91	3.75	4689.87	5.25	4684.54

DTW : Depth to water below measuring point (feet)
ELEV : Groundwater elevation above mean sea level (feet). Well locations shown on Figure 2.
Blank cell denotes no data

TABLE 3 (Continued)
Groundwater Levels
Bozeman Landfill, Bozeman Montana

MEASURING POINT ELEVATION (in feet above mean sea level)														
Well No.	4804.52		4775.45		4732.82		4729.45		--		--		--	
	MW-24		MW-25		MW-26		MW-27							
Monitoring Event	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV						
March-14	74.50	4730.02	50.22	4725.23	14.41	4718.41	--	--	--	--	--	--	--	--
August-14	75.45	4729.07	50.75	4724.70	14.79	4718.03	--	--	--	--	--	--	--	--
December-14	74.90	4729.62	50.72	4724.73	15.03	4717.79	19.73	4709.72	--	--	--	--	--	--
June-15	75.70	4728.82	50.95	4724.50	14.89	4717.93	19.89	4709.56	--	--	--	--	--	--
December-15	75.90	4728.62	51.06	4724.39	15.14	4717.68	--	--	--	--	--	--	--	--
June-16	76.80	4727.72	51.00	4724.45	14.69	4718.13	19.75	4709.70	--	--	--	--	--	--
December-16	76.30	4728.22	51.23	4724.22	15.18	4717.64	19.75	4709.70	--	--	--	--	--	--
June-17	76.45	4728.07	50.78	4724.67	14.43	4718.39	19.41	4710.04	--	--	--	--	--	--
December-17	76.53	4727.99	50.78	4724.67	14.50	4718.32	19.74	4709.71	--	--	--	--	--	--
August-18	76.39	4728.13	50.88	4724.57	14.68	4718.14	19.91	4709.54	--	--	--	--	--	--
November-18	75.53	4728.99	51.00	4724.45	14.87	4717.95	19.71	4709.74	--	--	--	--	--	--
June-19	76.20	4728.32	50.19	4725.26	14.42	4718.40	19.38	4710.07	--	--	--	--	--	--
December-19	74.85	4729.67	50.63	4724.82	14.86	4717.96	19.69	4709.76	--	--	--	--	--	--
June-20	75.48	4729.04	50.59	4724.86	14.63	4718.19	19.83	4709.62	--	--	--	--	--	--
December-20	74.68	4729.84	--	--	--	--	19.65	4709.80	--	--	--	--	--	--
June-21	75.84	4728.68	--	--	--	--	19.97	4709.48	--	--	--	--	--	--
December-21	75.28	4729.24	50.95	4724.50	15.24	4717.58	19.72	4709.73	--	--	--	--	--	--
June-22	75.45	4729.07	50.95	4724.50	--	--	19.55	4709.90	--	--	--	--	--	--

DTW : Depth to water below measuring point (feet)
ELEV : Groundwater elevation above mean sea level (feet). Well locations shown on Figure 2.
Blank cell denotes no data

TABLE 4
Summary of Volatile Organic Compound Detections
June 2022 Groundwater Monitoring
Bozeman Landfill, Bozeman, Montana


Analyte	Sampling Site																												
	LF-2	LF-3	MW-4	MW-5	MW-6	MW-7A	MW-8A	MW-9A	MW-10	MW-11	MW-12	MW-13	MW-15	MW-17	MW-18	MW-19	MW-20	MW-21	MW-22	MW-23	MW-24	MW-25 ¹	MW-26 ¹	MW-27	McL-HATTAN SEEP	SHOP WELL ¹	VET CLINIC WELL	TRIP BLANK 1	
	June 21 and 22, 2022																												
1,1,1,2-Tetrachloroethane																													
1,1,1-Trichloroethane			10.8		6.04	4.19	3.08	2.44				2.03	1.73																
1,1,2,2-Tetrachloroethane																													
1,1,2-Trichloroethane																													
1,1,2-Trichlorotrifluoroethane																													
1,1-Dichloroethane			0.595		1.29	2.32	0.122 J	0.521			0.803	1.01																	
1,1-Dichloroethene																													
1,2,3-Trichloropropane																													
1,2,4-Trimethylbenzene																													
1,2-Dibromo3chloropropane																													
1,2-Dibromoethane (EDB)																													
1,2-Dichlorobenzene											0.108 J																		
1,2-Dichloroethane	0.488 J		0.239 J		0.153 J	0.183 J	0.0977 J	0.102 J				0.119 J																	
1,2-Dichloropropane															0.384 J														
1,4-Dichlorobenzene					0.187 J						0.472 J	0.548			0.216 J														
1,4-Dioxane (p-Dioxane)	68.3 J										6.51 J				4.76 J														
2-Butanone (MEK)																													
2-Hexanone																													
2-Propanol																													
4-Methyl-2-pentanone (MIBK)																													
Acetone																													
Acrylonitrile																													
Benzene					0.149 J	0.263 J					0.423 J	0.476 J																	
Bromochloromethane																													
Bromodichloromethane																													
Bromoform																													
Bromomethane																													
Carbon disulfide																													
Carbon tetrachloride													0.173 J																
Chlorobenzene											0.198 J	0.197 J																	
Chloroethane					0.745 J	0.440 J																							
Chloroform																		0.185 J											
Chloromethane																													
cis-1,2-Dichloroethene	0.223 J	0.915	0.570		1.73	0.712	0.537	0.750	0.192 J		3.18	1.01		6.83	0.381 J											0.178 J			
cis-1,3-Dichloropropene																													
Cyclohexane																													
Dibromochloromethane																													
Dibromomethane																													
Dichlorodifluoromethane										0.909 J																			
Ethylbenzene																													
Iodomethane																													
Isopropylbenzene (Cumene)																													
Methylene Chloride															1.01 J														
Methyl-tert-butyl ether																													
n-Hexane																													
n-Propylbenzene																													
Styrene																													
Tetrachloroethene	0.407 J	1.01	0.616		1.29	0.340 J	0.864							4.25		0.591	2.71					0.558			0.75	0.423 J			
Tetrahydrofuran					1.32 J						1.31 J	1.23 J			2.09 J														
Toluene																													
trans-1,2-Dichloroethene																													
trans-1,3-Dichloropropene																													
trans-1,4-Dichloro-2-butene																													
Trichloroethene		0.278 J	0.350 J		0.291 J	1.63	0.227 J	0.769	0.212 J		0.306 J	0.441 J		1.71	0.199 J		0.194 J									0.199 J			
Trichlorofluoromethane										0.883 J																			
Vinyl acetate																													
Vinyl chloride					0.780	0.391 J					3.93	4.09																	
Xylene (Total)																													

Notes: Concentrations in micrograms per liter (µg/L)
Bolded Values - Constituent concentration exceeding USEPA Drinking Water Standards, Maximum Contaminant Level (Vinyl Chloride) and/or Montana Human Health Standard
Reference - 2019, DEQ, Circular DEQ-7 Montana Numeric Water Quality Standards, June.
Blank record and/or field - Analyte Not Detected above minimum detection limit (MDL)
J - Estimated Concentration (less than analytical practical quantitation limit or PQL but greater than the analytical MDL)
1: Wells MW-25, MW-26, and Shop Well not scheduled for sampling in June.

TABLE 5
Summary of Selected Volatile Organic Compounds
Bozeman Landfill
Bozeman, Montana

Sampling Location	Sampling Date	LABORATORY PARAMETERS							
		Benzene (µg/L)	Cis 1,2-dichloro-ethene (µg/L)	Methylene Chloride (µg/L)	1,1-Dichloro-ethane (µg/L)	Chloro-methane (µg/L)	Tetrachloro-ethene (µg/L)	Trichloro-ethene (µg/L)	Vinyl chloride (µg/L)
HHS		5	70	5	NA	NA	5	5	2
LF-2	12/6/2010	U 1	U 1	U 1	U 1	U 1	1.3	U 1	U 1
	6/14/2011	U 0.038	U 0.08	U 2	U 0.072	U 0.021	1.1	U 0.05	U 0.049
	12/5/2011	U 0.047	0.27	U 5	U 0.072	U 0.13	1.4	J 0.23	U 0.16
	6/4/2012	J 0.12	J 0.25	U 2	U 0.072	U 0.13	1.9	J 0.31	U 0.16
	12/6/2012	U 0.047	J 0.15	U 2	U 0.072	U 0.13	1.1	J 0.14	U 0.16
	6/12/2013	U 0.24	U 0.23	U 2	U 0.25	U 0.5	0.86	J 0.12	U 0.2
	12/18/2013	U 0.24	J 0.29	U 2	U 0.25	U 0.5	0.83	J 0.15	U 0.1
	3/27/2014	U 0.24	J 0.37	U 2	U 0.25	U 0.5	0.89	J 0.16	U 0.1
	8/21/2014	U 0.073	U 0.11	U 2	U 0.077	U 0.34	1.2	J 0.13	U 0.082
	12/10/2014	U 0.073	U 0.11	U 2	U 0.087	U 0.34	0.98	J 0.31	U 0.082
	6/15/2015	U 0.21	J 0.36	U 0.56	U 0.22	U 0.64	0.67	J 0.23	U 0.081
	12/1/2015	U 0.21	J 0.37	U 0.56	U 0.22	U 0.64	0.75	J 0.19	U 0.081
	6/15/2016	U 0.21	J 0.48	U 0.56	U 0.22	U 0.64	0.72	U 0.14	U 0.081
	8/25/2016	U 0.042	J 0.44	U 0.097	U 0.055	U 0.08	0.84	J 0.12	U 0.084
	11/28/2016	U 0.042	J 0.36	U 0.097	U 0.055	U 0.08	0.65	J 0.14	U 0.098
	4/17/2017	U 0.042	J 0.29	U 0.097	U 0.055	U 0.08	0.62	U 0.044	U 0.098
	6/16/2017	U 0.042	J 0.48	U 0.097	U 0.055	U 0.08	0.76	J 0.094	U 0.098
	9/20/2017	U 0.13	J 0.48	U 1.2	U 0.14	U 1.1	0.73	U 0.18	U 0.096
	11/29/2017	U 0.13	0.55	U 1.2	U 0.14	U 1.1	0.96	U 0.18	U 0.096
	3/27/2018	U 0.13	J 0.36	U 1.2	U 0.14	U 1.1	0.74	U 0.18	U 0.096
	8/20/2018	U 0.1	J 0.4	U 0.98	U 0.17	U 0.16	1.1	U 0.15	U 0.092
	10/16/2018	U 0.1	J 0.42	U 0.98	U 0.17	J 0.52	0.8	U 0.15	U 0.092
	11/27/2018	U 0.1	J 0.42	U 0.98	U 0.17	U 0.16	0.73	U 0.15	U 0.092

Notes: µg/L - micrograms per liter
HHS - Human Health Standard (EPA Maximum Contaminant Level or HHS in Circular DEQ-7, Montana Numeric WQ Stds, June 2019)
NA - Not Applicable U - Less than

 - Value greater than the HHS
Vinyl Chloride concentration highlighted only if greater than 2 micrograms per liter (EPA Maximum Contaminant Level). Montana HHS is greater than 0.2 micrograms per liter (not highlighted).

-- - Not collected/analyzed

J Analyte detected below the reporting limit, therefore result is an estimate.
Other QA/QC data flags are defined in analytical laboratory report.

TABLE 5
Summary of Selected Volatile Organic Compounds
Bozeman Landfill
Bozeman, Montana

Sampling Location	Sampling Date	LABORATORY PARAMETERS							
		Benzene (µg/L)	Cis 1,2-dichloro-ethene (µg/L)	Methylene Chloride (µg/L)	1,1-Dichloro-ethane (µg/L)	Chloro-methane (µg/L)	Tetrachloro-ethene (µg/L)	Trichloro-ethene (µg/L)	Vinyl chloride (µg/L)
HHS		5	70	5	NA	NA	5	5	2
LF-2	3/27/2019	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	J 0.42	U 0.15	U 0.092
	6/12/2019	U 0.1	J 0.27	U 0.98	U 0.17	U 0.16	0.65	U 0.15	U 0.092
	9/24/2019	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	J 0.48	U 0.15	U 0.092
	12/3/2019	U 0.1	J 0.26	U 0.98	U 0.17	U 0.48	0.67	U 0.15	U 0.092
	3/23/2020	U 0.12	U 0.2	U 2	U 0.14	U 0.16	0.6	U 0.11	U 0.098
	6/23/2020	U 0.12	J 0.39	U 2	U 0.14	U 0.16	0.63	U 0.11	U 0.098
	9/21/2020	U 0.0941	J 0.275	U 0.43	U 0.1	U 0.96	0.526	U 0.19	U 0.234
	12/1/2020	U 0.0941	J 0.365	U 0.43	U 0.1	UL0.96	0.615	U 0.19	U 0.234
	3/19/2021	U 0.0941	J 0.308	U 0.43	U 0.1	U 0.96	J 0.439	U 0.19	U 0.234
	6/22/2021	U 0.0941	J 0.214	U 0.43	U 0.1	U 0.96	J 0.486	U 0.19	U 0.234
	12/15/2021	U 0.0941	J 0.288	U 0.43	U 0.1	U 0.96	J 0.399	U 0.19	U 0.234
	6/21/2022	U 0.0941	J- 0.223	UL0.43	UJ- 0.1	UR1.0.96	J 0.407	UJ- 0.19	UJ 0.234
LF-3	1/18/1994	U 2	U 1	U 5	U 1	U 1	5	1	U 1
	6/27/1994	U 1	U 1	U 5	U 1	U 1	5	1	U 1
	2/1/1995	U 1	U 1	U 5	U 1	U 1	5	1	U 1
	6/28/1995	U 1	U 1	U 1	U 1	U 1	3	1	U 1
	11/28/1995	U 1	U 1	U 5	U 1	U 1	6	2	U 1
	6/25/1996	U 1	1	U 5	U 1	U 1	6	2	U 1
	12/11/1996	U 1	U* 1	U 5	U 1	U 1	5	2	U 1
	6/19/1997	U 1	1	U 1	U 1	U 2	6	2	U 2
	12/15/1997	U 1	1	U 5	U 1	U 1	2	6	U 1
	3/24/1998	U 1	1	U 5	U 1	U 1	7	2	U 1
	6/29/1998	U 1	U 1	<(2) 5	(2) U 1	< (2) 1	6	3	U 1

Notes: µg/L - micrograms per liter
HHS - Human Health Standard (EPA Maximum Contaminant Level or HHS in Circular DEQ-7, Montana Numeric WQ Stds, June 2019)
NA - Not Applicable U - Less than

- Value greater than the HHS

Vinyl Chloride concentration highlighted only if greater than 2 micrograms per liter (EPA Maximum Contaminant Level). Montana HHS is greater than 0.2 micrograms per liter (not highlighted).


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TABLE 5
Summary of Selected Volatile Organic Compounds
Bozeman Landfill
Bozeman, Montana

Sampling Location	Sampling Date	LABORATORY PARAMETERS							
		Benzene (µg/L)	Cis 1,2-dichloro-ethene (µg/L)	Methylene Chloride (µg/L)	1,1-Dichloro-ethane (µg/L)	Chloro-methane (µg/L)	Tetrachloro-ethene (µg/L)	Trichloro-ethene (µg/L)	Vinyl chloride (µg/L)
HHS		5	70	5	NA	NA	5	5	2
LF-3	9/29/1998	U 1	1	11	U 1	U 1	7	3	U 1
	12/14/1998	U 1	1	UB 5	U 1	U 1	6	6	U 1
	3/15/1999	U 1	U 1	U 5	U 1		6	2	U 1
	6/22/1999	U 1	U 1	U 5	U 1	U 1	4	1	U 1
	9/13/1999	U 1	U 1	U 5	U 1	U 1	4	1	U 1
	12/13/1999	U 1	U 1	U 5	U 1	U 1	5	2	U 1
	3/22/2000	U 1	U 1	U 5	U 1	U 1	5	2	U 1
	6/7/2000	U 1	U 1	U 5	U 1	U 1	4	1	U 1
	9/22/2000	U 1	U 1	U 5	U 1	U 1	4	1	U 1
	11/28/2000	U 1	U 1	U 5	U 1	U 1	4	1	U 1
	3/22/2001	U 1	1	U 5	U 1	U 1	5	1	U 1
	6/11/2001	U 1	1	U 5	U 1	U 1	5	2	U 1
	9/19/2001	U 1	1	U(1,3) 5	U 1	1	5	3	U 1
	12/17/2001	U 1	1	U 5	U 1	U 1	6	2	U 1
	3/25/2002	U 1	1	U 5	U 1	2	6	1	U 1
	6/13/2002	U 1	1	U 5	U 1	U 1	5	1	U 1
	9/24/2002	U 1	1	UJR 5	U 1	U 1	5	1	U 1
	12/12/2002	U 1	1	U 5	U 1	U 1	6	1	U 1
	3/24/2003	U 1	1	U 5	U 1	U 1	5	1	U 1
	6/9/2003	U 1	1	U 5	U 1	U 1	5	1	U 1
	9/25/2003	U 1	1	U 5	U 1	U 1	5	1	U 1
	12/4/2003	U 1	U 1	U 5	U 1	U 1	4	1	UJF% 1
	3/25/2004	U 1	1	U 5	U 1	U 1	4	U 1	U 1

Notes: µg/L - micrograms per liter
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 - Value greater than the HHS

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TABLE 5
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		Benzene (µg/L)	Cis 1,2-dichloro-ethene (µg/L)	Methylene Chloride (µg/L)	1,1-Dichloro-ethane (µg/L)	Chloro-methane (µg/L)	Tetrachloro-ethene (µg/L)	Trichloro-ethene (µg/L)	Vinyl chloride (µg/L)
HHS		5	70	5	NA	NA	5	5	2
LF-3	6/9/2004	U 1	1	U 5	U 1	U 1	4	U 1	U 1
	9/9/2004	U 1	U 1	U 5	U 1	U 1	4	U 1	U 1
	12/6/2004	U 1	U 1	U 5	U 1	U 1	4	U 1	U 1
	3/29/2005	U 1	U 1	U 5	U 1	U 1	3	U 1	U 1
	6/16/2005	U 1	U 1	U 5	U 1	U 1	3	U 1	U 1
	9/20/2005	U 1	U 1	BU 5	U 1	U 1	3	U 1	U 1
	12/13/2005	U 1	U 1	U 5	U 1	U 1	3	U 1	U 1
	3/16/2006	U 1	U 1	U 5	U 1	U 1	3	U 1	U 1
	6/12/2006	U 0.5	0.8	U 5	U 1	U 1	2.7	0.5	U 0.5
	9/20/2006	U 0.5	0.6	U 5	U 1	U 1	2.3	U 0.5	U 0.5
	12/5/2006	U 0.5	0.7	U 5	U 1	U 1	2.7	U 0.5	U 0.5
	3/13/2007	U 0.5	0.8	U 5	U 1	U 1	2.7	0.6	U 0.5
	6/21/2007	U 0.5	0.9	U 5	U 1	U 1	2.6	0.6	UJF% 0.5
	12/11/2007	U 0.5	0.8	U 5	U 1	U 1	2.5	0.6	U 0.5
	6/25/2008	U 0.5	1	U 5	U 1	U 1	2.9	0.7	U 0.5
	12/8/2008	U 1	1.6	U 4	U 1	U 1	3.9	1.1	U 0.4
	6/2/2009	U 0.5	1.5	U 2	U 0.5	U 2	4.5	1	U 0.2
	12/10/2009	U 0.5	1.8	UB 2	U 0.5	U 2	4.4	1	U 0.2
	6/16/2010	U 0.5	2.1	30.4	U 0.5	U 0.5	4.4	1.1	U 0.5
	12/6/2010	U 1	1.2	U 1	U 1	U 1	3.9	U 1	U 1
	6/13/2011	U 0.038	1.9	U 2	J 0.11	J 0.11	3.9	0.96	U 0.049
	12/6/2011	U 0.047	1.8	U 5	U 0.072	U 0.13	3.8	0.9	U 0.16
	6/4/2012	J 0.053	1.9	U 2	J 0.086	U 0.13	4.1	0.94	U 0.16

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HHS		5	70	5	NA	NA	5	5	2
LF-3	12/6/2012	U 0.047	1.8	U 2	J 0.14	U 0.13	3.8	0.88	U 0.16
	6/12/2013	U 0.24	2.3	U 2	U 0.25	U 0.5	4.2	1	U 0.2
	12/18/2013	U 0.24	2.2	U 2	U 0.25	U 0.5	3.4	0.78	U 0.1
	3/26/2014	U 0.24	2	U 2	U 0.25	U 0.5	2.4	0.61	U 0.1
	8/20/2014	U 0.073	2.4	U 2	U 0.077	U 0.34	5.5	1.1	U 0.082
	12/10/2014	U 0.073	3.4	U 2	U 0.087	U 0.34	4.2	0.94	U 0.082
	6/15/2015	U 0.21	2.1	U 0.56	U 0.22	U 0.64	3.9	0.82	U 0.081
	12/1/2015	U 0.21	2.4	U 0.56	U 0.22	U 0.64	3.8	0.94	U 0.081
	6/15/2016	U 0.21	2.7	U 0.56	U 0.22	U 0.64	3.6	0.76	U 0.081
	8/25/2016	U 0.042	2.9	U 0.097	U 0.055	U 0.08	4.1	0.94	U 0.084
	11/28/2016	U 0.042	2.5	U 0.097	U 0.055	U 0.08	3.9	0.71	U 0.098
	4/17/2017	U 0.042	2.7	U 0.097	U 0.055	U 0.08	3.3	0.88	U 0.098
	6/15/2017	U 0.042	2.4	U 0.097	U 0.055	U 0.08	2.9	0.88	U 0.098
	9/20/2017	U 0.13	2.3	U 1.2	U 0.14	U 1.1	3.4	0.82	U 0.096
	11/29/2017	U 0.13	2.3	U 1.2	U 0.14	U 1.1	3.4	0.7	U 0.096
	3/27/2018	U 0.13	2	U 1.2	U 0.14	U 1.1	3.4	0.88	U 0.096
	8/20/2018	U 0.1	2.3	U 0.98	U 0.17	U 0.16	3.5	0.93	U 0.092
	10/16/2018	U 0.1	2.1	U 0.98	U 0.17	J 0.71	2.9	0.82	U 0.092
	11/27/2018	U 0.1	1.7	U 0.98	U 0.17	U 0.16	3	0.7	U 0.092
	3/27/2019	39.9	1.3	U 0.98	U 0.17	U 0.16	1.8	0.45	U 0.092
	6/12/2019	U 0.1	1.5	U 0.98	U 0.17	U 0.16	2.4	0.58	U 0.092
	9/24/2019	U 0.1	1.4	U 0.98	U 0.17	U 0.48	1.9	0.49	U 0.092
	12/3/2019	U 0.1	1.3	U 0.98	U 0.17	U 0.48	2.4	0.62	U 0.092

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 - Value greater than the HHS
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		Benzene (µg/L)	Cis 1,2-dichloro-ethene (µg/L)	Methylene Chloride (µg/L)	1,1-Dichloro-ethane (µg/L)	Chloro-methane (µg/L)	Tetrachloro-ethene (µg/L)	Trichloro-ethene (µg/L)	Vinyl chloride (µg/L)
HHS		5	70	5	NA	NA	5	5	2
LF-3	3/23/2020	U 0.12	1.4	U 2	U 0.14	U 0.16	1.8	0.46	U 0.098
	6/23/2020	U 0.12	1.3	U 2	U 0.14	U 0.16	1.8	0.49	U 0.098
	9/21/2020	U 0.0941	0.995	U 0.43	U 0.1	U 0.96	1.7	J 0.488	U 0.234
	12/1/2020	U 0.0941	1.08	U 0.43	J 0.104	UL0.96	1.74	J 0.495	U 0.234
	3/19/2021	U 0.0941	1.07	U 0.43	U 0.1	U 0.96	1.56	J 0.481	U 0.234
	6/22/2021	U 0.0941	0.73	U 0.43	U 0.1	U 0.96	1.32	J 0.383	U 0.234
	12/14/2021	U 0.0941	0.785	U 0.43	U 0.1	U 0.96	1.44	J 0.321	U 0.234
	6/22/2022	U 0.0941	J- 0.915	U 0.43	UJ- 0.1	U 0.96	J- 1.01	UJ- 0.278	UJ- 0.234
MW-4	1/18/1994	U 2	U 1	U 5	2	U 1	4	2	U 1
	6/27/1994	U 1	U 1	U* 5	2	U 1	4	2	U 1
	1/31/1995	U 1	U 1	U* 5	1	U 1	3	2	U 1
	6/27/1995	U 1	U 1	JX 1	1	U 1	2	1	U 1
	11/28/1995	U 1	U 1	U* 5	1	U 1	3	1	U 1
	6/25/1996	U 1	U 1	U 5	1	U 1	3	2	U 1
	12/11/1996	U 1	U* 1	U 5	U 1	U 1	2	1	U 1
	6/19/1997	U 1	U 1	U 1	U 1	U 2	2	U 1	U 2
	12/15/1997	U 1	U 1	U 5	U 1	U 1	U 1	1	U 1
	6/29/1998	U 1	<(2) 1	<(5) 5	U 1	< (2) 1	2	1	U 1
	12/14/1998	U 1	U 1	UB 5	U 1	U 1	2	2	U 1
	6/22/1999	U 1	U 1	U 5	U 1	U 1	U 1	1	U 1
	12/13/1999	U 1	U 1	U 5	U 1	U 1	2	1	U 1
	6/7/2000	U 1	U 1	U 5	U 1	U 1	U 1	1	U 1
	11/28/2000	U 1	U 1	U 5	U 1	U 1	1	1	U 1

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HHS		5	70	5	NA	NA	5	5	2
MW-4	6/11/2001	U 1	U 1	U 5	U 1	U 1	2	1	U 1
	12/17/2001	U 1	1	U 5	U 1	U 1	1	1	U 1
	6/13/2002	U 1	U 1	U 5	U 1	U 1	1	1	U 1
	12/11/2002	U 1	U 1	U 5	U 1	U 1	1	U 1	U 1
	6/9/2003	U 1	U 1	U 5	U 1	U 1	1	U 1	U 1
	12/4/2003	U 1	U 1	U 5	U 1	U 1	U 1	U 1	UJF% 1
	6/9/2004	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/6/2004	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/16/2005	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/14/2005	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/12/2006	U 0.5	U 0.5	U 5	U 1	U 1	0.5	U 0.5	U 0.5
	12/5/2006	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	U 0.5	U 0.5
	6/19/2007	U 0.5	U 0.5	U 5	U 1	U 1	0.6	U 0.5	UJF% 0.5
	12/11/2007	U 0.5	U 0.5	U 5	U 1	U 1	0.5	U 0.5	U 0.5
	6/23/2008	U 0.5	U 0.5	U 5	U 1	U 1	0.5	U 0.5	U 0.5
	12/8/2008	U 1	U 1	U 4	U 1	U 1	U 1	U 1	U 0.4
	6/1/2009	U 0.5	U 0.5	U 2	U 0.5	U 2	J 0.98	J 0.54	U 0.2
	12/10/2009	U 0.5	U 0.5	UB 2	U 0.5	U 2	J 0.83	J 0.56	U 0.2
	6/15/2010	U 0.5	0.51	27.6	U 0.5	U 0.5	0.85	0.66	U 0.5
	12/7/2010	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1
	6/13/2011	U 0.038	J 0.49	U 2	J 0.24	J 0.097	0.78	0.66	U 0.049
	12/7/2011	U 0.047	J 0.4	U 5	J 0.25	U 0.13	0.87	0.64	U 0.16
	6/4/2012	J 0.51	J 0.48	U 2	J 0.25	U 0.13	1.2	0.86	U 0.16

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HHS		5	70	5	NA	NA	5	5	2
MW-4	12/4/2012	U 0.047	J 0.45	U 2	J 0.29	U 0.13	1.1	0.79	U 0.16
	6/10/2013	U 0.24	J 0.5	U 2	J 0.42	U 0.5	1.1	0.97	U 0.2
	12/16/2013	U 0.24	J 0.47	U 2	J 0.45	U 0.5	1	0.77	U 0.1
	3/26/2014	U 0.24	0.53	U 2	J 0.45	U 0.5	1	0.86	U 0.1
	8/20/2014	U 0.073	J 0.4	U 2	U 0.077	U 0.34	1.6	0.89	U 0.082
	12/8/2014	U 0.073	U 0.11	U 2	U 0.087	U 0.34	1.2	1	U 0.082
	6/16/2015	U 0.21	U 0.25	U 0.56	J 0.45	U 0.64	1.2	0.78	U 0.081
	11/30/2015	U 0.21	J 0.48	U 0.56	U 0.22	U 0.64	1.1	0.73	U 0.081
	6/14/2016	U 0.21	J 0.43	U 0.56	J 0.28	U 0.64	1	0.74	U 0.081
	11/29/2016	U 0.042	J 0.45	U 0.097	U 0.055	U 0.08	0.88	0.65	U 0.098
	6/14/2017	U 0.042	0.55	U 0.097	U 0.055	U 0.08	0.79	0.64	U 0.098
	11/30/2017	U 0.13	0.59	U 1.2	U 0.14	U 1.1	1	0.57	U 0.096
	8/20/2018	U 0.1	0.58	U 0.98	J 0.37	J 0.41	1	0.59	U 0.092
	11/29/2018	U 0.1	0.54	U 0.98	J 0.31	U 0.16	0.81	0.49	U 0.092
	6/12/2019	U 0.1	0.59	U 0.98	U 0.17	U 0.16	0.79	0.43	U 0.092
	12/2/2019	U 0.1	0.61	U 0.98	J 0.26	U 0.48	0.88	J 0.38	U 0.092
	6/22/2020	U 0.12	0.61	U 2	J 0.36	U 0.16	0.82	0.5	U 0.098
	11/30/2020	U 0.0941	0.6	U 0.43	J 0.369	UL0 0.96	0.842	J 0.466	U 0.234
	6/21/2021	U 0.0941	J 0.492	U 0.43	J 0.317	U 0.96	0.674	J 0.439	U 0.234
	12/13/2021	U 0.0941	0.508	U 0.43	J 0.346	U 0.96	0.825	J 0.398	U 0.234
	6/21/2022	U 0.0941	0.57	UL0 0.43	0.595	UR1 0.96	0.616	UJ- 0.35	UJ 0.234
MW-5	1/17/1994	U 2	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/27/1994	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1

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 - Value greater than the HHS

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HHS		5	70	5	NA	NA	5	5	2
MW-5	1/31/1995	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/27/1995	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1
	11/27/1995	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/25/1996	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/11/1996	U 1	U 1	U 5	U 1	U* 1	U 1	U 1	U 1
	6/19/1997	U 1	U 1	U 1	U 1	U 2	U 1	U 1	U 2
	12/15/1997	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/29/1998	U 1	U 1	U 5	U 1	1	U 1	U 1	U 1
	12/14/1998	U 1	U 1	UB 5	U 1	U 1	U 1	U 1	U 1
	6/22/1999	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/13/1999	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/7/2000	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	11/28/2000	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/11/2001	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/17/2001	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/13/2002	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/11/2002	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/9/2003	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/3/2003	U 1	U 1	U 5	U 1	U 1	U 1	U 1	UJF% 1
	6/9/2004	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/6/2004	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/16/2005	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/14/2005	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1

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TABLE 5
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Bozeman, Montana

Sampling Location	Sampling Date	LABORATORY PARAMETERS							
		Benzene (µg/L)	Cis 1,2-dichloro-ethene (µg/L)	Methylene Chloride (µg/L)	1,1-Dichloro-ethane (µg/L)	Chloro-methane (µg/L)	Tetrachloro-ethene (µg/L)	Trichloro-ethene (µg/L)	Vinyl chloride (µg/L)
HHS		5	70	5	NA	NA	5	5	2
MW-5	6/12/2006	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	U 0.5	U 0.5
	12/5/2006	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	U 0.5	U 0.5
	6/19/2007	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	U 0.5	UJF% 0.5
	12/11/2007	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	U 0.5	U 0.5
	6/23/2008	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	U 0.5	U 0.5
	12/8/2008	U 1	U 1	U 4	U 1	U 1	U 1	U 1	U 0.4
	6/1/2009	U 0.5	U 0.5	U 2	U 0.5	U 2	U 0.5	U 0.5	U 0.2
	12/3/2009	U 0.5	U 0.5	UB 2	U 0.5	U 2	U 0.5	U 0.5	U 0.2
	6/14/2010	U 0.5	U 0.5	38.3	U 0.5	U 0.5	U 0.5	U 0.5	U 0.5
	12/6/2010	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1
	6/13/2011	J 0.07	U 0.08	U 2	U 0.072	J 0.057	U 0.041	U 0.05	U 0.049
	12/6/2011	U 0.047	U 0.08	U 5	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
	6/4/2012	J 0.073	U 0.08	U 2	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
	12/4/2012	U 0.047	U 0.08	U 2	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
	6/10/2013	U 0.24	U 0.23	U 2	U 0.25	U 0.5	U 0.25	U 0.12	U 0.2
	12/16/2013	2.1	U 0.23	U 2	U 0.25	U 0.5	U 0.25	U 0.13	U 0.1
	8/21/2014	6.2	U 0.11	U 2	U 0.077	U 0.34	U 0.099	U 0.084	U 0.082
	12/9/2014	U 0.073	U 0.11	U 2	U 0.087	U 0.34	U 0.12	U 0.084	U 0.082
	6/16/2015	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	U 0.19	U 0.14	U 0.081
	11/30/2015	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	U 0.19	U 0.14	U 0.081
	6/14/2016	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	U 0.19	U 0.14	U 0.081
	11/29/2016	U 0.042	U 0.12	U 0.097	U 0.055	U 0.08	U 0.13	U 0.044	U 0.098
	6/15/2017	U 0.042	U 0.12	U 0.097	U 0.055	U 0.08	U 0.13	U 0.044	U 0.098

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HHS		5	70	5	NA	NA	5	5	2
MW-5	11/30/2017	U 0.13	U 0.2	U 1.2	U 0.14	U 1.1	U 0.16	U 0.18	U 0.096
	8/20/2018	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	U 0.17	U 0.15	U 0.092
	11/28/2018	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	U 0.17	U 0.15	U 0.092
	6/10/2019	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	U 0.17	U 0.15	U 0.092
	12/2/2019	U 0.1	U 0.15	U 0.98	U 0.17	U 0.48	U 0.17	U 0.15	U 0.092
	6/22/2020	1.4	U 0.2	U 2	U 0.14	J 0.24	U 0.093	U 0.11	U 0.098
	11/30/2020	J 0.173	U 0.126	U 0.43	U 0.1	UL 0.96	U 0.3	U 0.19	U 0.234
	6/21/2021	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	U 0.234
	12/13/2021	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	U 0.234
	6/23/2022	UJ- 0.0941	UJ- 0.126	UJ- 0.43	UJ- 0.1	UJ- 0.96	UJ- 0.3	UJ- 0.19	UJ- 0.234
MW-6	8/3/1993	U 1	2.3	U 1	1.7	U 1	U 1	5.1	3.7
	1/18/1994	U 2	2	U 5	U 1	U 1	1	5	6
	6/28/1994	U 1	3	U 5	3	U 1	1	6	8
	2/1/1995	U* 1	3	U 5	3	U 1	1	5	12
	6/27/1995	U 1	2	U 1	U 1	U 1	U 1	3	9
	11/28/1995	U 1	1	U 5	2	U 1	1	3	6
	6/25/1996	U 1	U* 1	U 5	2	1	1	2	11
	12/11/1996	U 1	U 1	U 5	2	U 1	U* 1	2	11
	6/19/1997	U 1	U 1	U 1	U 1	U 2	1	U 1	U 2
	12/16/1997	U 1	U 1	U 5	2	U 1	2	U 1	14
	3/23/1998	U 1	U 1	U 5	2	U 1	U 1	2	13
	6/29/1998	U 1	<(2) 1	U 5	1	U 1	<(2) 1	1	15
	9/29/1998	U 1	U 1	U 5	1	U 1	U 1	1	9

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HHS		5	70	5	NA	NA	5	5	2
MW-6	3/15/1999	U 1	U 1	U 5	U 1		U 1	1	9
	6/22/1999	U 1	U 1	U 5	U 1	U 1	U 1	U 1	9
	9/13/1999	U 1	U 1	U 5	U 1	U 1	U 1	U 1	9
	12/13/1999	U 1	U 1	U 5	U 1	U 1	U 1	U 1	10
	3/22/2000	U 1	U 1	U 5	U 1	U 1	U 1	U 1	4
	6/7/2000	U 1	U 1	U 5	U 1	U 1	U 1	U 1	3
	9/22/2000	U 1	U 1	U 5	U 1	U 1	U 1	U 1	3
	11/28/2000	U 1	U 1	U 5	U 1	U 1	U 1	U 1	3
	3/21/2001	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/11/2001	U 1	U 1	U 5	U 1	U 1	U 1	1	U 1
	9/19/2001	U 1	U 1	U(1,3)5	U 1	U 1	U 1	U 1	U 1
	12/18/2001	U 1	U 1	U 5	1	U 1	U 1	1	U 1
	3/25/2002	U 1	1	U 5	U 1	U 1	U 1	2	U 1
	6/13/2002	U 1	U 1	U 5	U 1	U 1	U 1	1	U 1
	9/24/2002	U 1	1	UJR 5	U 1	U 1	U 1	1	U 1
	12/12/2002	U 1	2	U 5	1	U 1	U 1	2	U 1
	3/24/2003	U 1	U 1	U 5	U 1	U 1	U 1	1	U 1
	6/9/2003	U 1	1	U 5	U 1	U 1	U 1	2	U 1
	9/25/2003	U 1	2	U 5	U 1	U 1	U 1	2	U 1
	12/4/2003	U 1	1	U 5	U 1	U 1	U 1	2	UJF% 1
	3/24/2004	U 1	2	U 5	1	U 1	U 1	2	U 1
	6/8/2004	U 1	2	U 5	U 1	U 1	U 1	2	U 1
	9/9/2004	U 1	1	U 5	U 1	U 1	U 1	2	U 1

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HHS		5	70	5	NA	NA	5	5	2
MW-6	12/7/2004	U 1	2	U 5	U 1	U 1	U 1	2	U 1
	3/29/2005	U 1	2	U 5	1	U 1	U 1	2	U 1
	6/16/2005	U 1	1	U 5	1	U 1	2	2	U 1
	9/20/2005	U 1	2	BU 5	U 1	U 1	U 1	3	U 1
	12/14/2005	U 1	1	U 5	1	U 1	2	2	U 1
	3/16/2006	U 1	U 1	U 5	U 1	U 1	2	1	U 1
	6/13/2006	U 0.5	0.8	U 5	1.1	U 1	2.5	1.1	U 0.5
	9/21/2006	U 0.5	1.8	U 5	U 1	U 1	0.9	2.2	U 0.5
	12/6/2006	U 0.5	1.5	U 5	1	U 1	1.8	1.6	U 0.5
	3/15/2007	U 0.5	1	U 5	1	U 1	1.4	1	U 0.5
	6/20/2007	U 0.5	0.8	U 5	U 1	U 1	1.1	1	UJF% 0.5
	12/10/2007	U 0.5	1.8	U 5	1.1	U 1	1.3	1.9	U 0.5
	6/24/2008	U 0.5	0.8	U 5	U 1	U 1	0.9	0.8	U 0.5
	12/9/2008	U 1	1.8	U 4	1.4	U 1	1.7	2.2	U 0.4
	6/2/2009	U 0.5	1.4	U 2	1.1	U 2	J 0.88	1.3	U 0.2
	12/9/2009	U 0.5	1.8	UB 2	1.3	U 2	1.7	1.8	2.1
	6/15/2010	U 0.5	1.5	19.1	1.1	U 0.5	1.3	1.4	2.4
	12/7/2010	U 1	2.2	U 1	1.1	U 1	1	1.5	5.3
	6/13/2011	J 0.31	1.3	U 2	0.94	U 0.021	0.78	0.96	5.2
	12/5/2011	U 0.047	1	U 5	0.89	U 0.13	1.5	0.88	1.2
	6/5/2012	J 0.21	2.5	U 2	1.1	U 0.13	0.93	1.1	1.8
	12/4/2012	J 0.12	2.1	U 2	0.95	U 0.13	0.97	0.79	1.5
	6/10/2013	U 0.24	2.3	U 2	1.2	U 0.5	0.8	0.82	0.65

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HHS		5	70	5	NA	NA	5	5	2
MW-6	12/16/2013	U 0.24	2.9	U 2	1.3	U 0.5	0.64	0.66	1.2
	8/20/2014	J 0.15	2	U 2	1	U 0.34	0.69	0.63	0.74
	12/9/2014	U 0.073	1.9	U 2	1.3	U 0.34	1	0.77	0.82
	6/17/2015	U 0.21	1.1	U 0.56	0.91	U 0.64	0.79	0.51	0.58
	12/2/2015	U 0.21	2.1	U 0.56	0.82	U 0.64	0.57	0.5	0.9
	6/15/2016	U 0.21	2.1	U 0.56	1.1	U 0.64	0.53	J 0.32	0.23
	11/29/2016	J 0.05	2.3	U 0.097	1.1	U 0.08	0.59	0.44	0.4
	6/14/2017	U 0.042	1.8	U 0.097	1.2	U 0.08	0.6	0.44	0.21
	12/1/2017	U 0.13	2.1	U 1.2	0.98	U 1.1	0.82	0.42	0.49
	8/20/2018	J 0.14	1.6	U 0.98	0.94	J 0.2	0.7	0.45	0.74
	11/29/2018	J 0.21	1.6	U 0.98	0.83	U 0.16	J 0.48	J 0.37	2.1
	6/13/2019	J 0.18	1.8	U 0.98	0.81	U 0.16	J 0.41	J 0.27	1.5
	12/3/2019	J 0.19	1.6	U 0.98	0.87	U 0.48	J 0.31	J 0.26	1.8
	6/23/2020	J 0.19	1.8	U 2	1.3	U 0.16	J 0.43	0.41	1.6
	12/1/2020	J 0.264	1.9	U 0.43	1.38	UL0.96	J 0.331	J 0.332	2.38
	6/21/2021	J 0.175	1.45	U 0.43	1.06	U 0.96	U 0.3	J 0.258	1.29
	12/13/2021	J 0.14	1.7	U 0.43	1.15	U 0.96	U 0.3	J 0.291	1.24
	6/21/2022	J 0.149	1.73	UL0.43	1.29	UR1.96	U 0.3	UJ- 0.291	J 0.78
MW-6B	6/5/2012	U 0.047	U 0.08	U 2	U 0.5	U 0.13	U 0.16	U 0.11	U 0.16
	12/4/2012	U 0.047	U 0.08	U 2	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
	6/10/2013	U 0.24	U 0.23	U 2	U 0.25	U 0.5	U 0.25	U 0.12	U 0.2
	12/16/2013	U 0.24	U 0.23	U 2	U 0.25	U 0.5	U 0.25	U 0.13	U 0.1
	6/17/2015	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	U 0.19	U 0.14	U 0.081

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HHS		5	70	5	NA	NA	5	5	2
MW-6B	6/14/2017	U 0.042	U 0.12	U 0.097	U 0.055	U 0.08	U 0.13	U 0.044	U 0.098
	6/13/2019	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	U 0.17	U 0.15	U 0.092
MW-7A	1/18/1994	U 2	U 1	12	6	U 1	27	4	U 1
	6/28/1994	U* 1	U 1	18	7	U 1	32	5	U 1
	2/1/1995	U 1	U 1	14	6	U 1	24	4	1
	6/27/1995	2	U 1	JX 17	6	U 1	13	5	U 1
	11/27/1995	U* 1	U 1	10	4	U 1	17	4	1
	6/25/1996	2	U* 1	15	5	U 1	16	6	4
	12/11/1996	U* 1	U 1	10	3	U 1	10	4	2
	6/20/1997	2	U 1	15	4	U 2	13	5	7
	12/16/1997	2	1	JX 18	5	U 1	5	13	5
	3/23/1998	2	U 1	14	4	U 1	11	4	4
	6/30/1998	2	1	15	4	U 1	11	4	6
	9/29/1998	2	1	19	4	U 1	11	4	3
	12/14/1998	2	1	B 21	5	U 1	11	11	4
	3/15/1999	2	U 1	14	4		10	3	3
	6/22/1999	2	U 1	U 5	4	U 5	6	3	4
	9/13/1999	2	U 1	U 5	3	U 1	8	3	3
	12/14/1999	1	U 1	U 5	3	U 1	7	2	2
	3/22/2000	1	U 1	U 5	3	U 1	9	3	2
	6/7/2000	U 1	U 1	U 5	3	U 1	7	U 1	3
	9/22/2000	U 1	U 1	U 5	3	U 1	7	2	3
	11/28/2000	U 1	U 1	U 5	3	U 1	7	2	3

Notes: µg/L - micrograms per liter
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HHS		5	70	5	NA	NA	5	5	2
MW-7A	3/21/2001	U 1	U 1	U 5	4	U 1	11	3	2
	6/11/2001	1	U 1	U 5	4	U 1	12	3	3
	9/19/2001	U 1	U 1	U(1,3) 5	3	U 1	8	2	U 1
	12/17/2001	U 1	U 1	U 5	5	U 1	11	3	2
	3/25/2002	U 1	U 1	U 5	3	U 1	9	2	1
	6/13/2002	U 1	U 1	U 5	5	U 1	10	3	2
	9/24/2002	U 1	U 1	UJR 5	3	U 1	8	2	1
	12/12/2002	U 1	U 1	U 5	5	U 1	12	3	1
	3/24/2003	U 1	U 1	U 5	3	U 1	9	2	U 1
	6/10/2003	U 1	U 1	U 5	3	U 1	9	2	U 1
	9/25/2003	U 1	U 1	U 5	3	U 1	8	2	U 1
	12/4/2003	U 1	U 1	U 5	4	U 1	7	2	UJF% 1
	3/24/2004	U 1	U 1	U 5	2	U 1	4	U 1	U 1
	6/8/2004	U 1	U 1	U 5	2	U 1	6	1	U 1
	9/9/2004	U 1	U 1	U 5	1	U 1	5	U 1	U 1
	12/7/2004	U 1	U 1	U 5	2	U 1	6	1	U 1
	3/29/2005	U 1	U 1	U 5	1	U 1	3	U 1	U 1
	6/17/2005	U 1	U 1	U 5	2	U 1	6	1	U 1
	9/20/2005	U 1	U 1	BU 5	1	U 1	3	U 1	U 1
	12/14/2005	U 1	U 1	U 5	1	U 1	4	U 1	U 1
	3/16/2006	U 1	U 1	U 5	U 1	U 1	2	U 1	U 1
	6/13/2006	U 0.5	U 0.5	U 5	1.6	U 1	4.2	0.7	U 0.5
	9/21/2006	U 0.5	U 0.5	U 5	U 1	U 1	2.7	U 0.5	U 0.5

Notes: µg/L - micrograms per liter
HHS - Human Health Standard (EPA Maximum Contaminant Level or HHS in Circular DEQ-7, Montana Numeric WQ Stds, June 2019)
NA - Not Applicable U - Less than

 - Value greater than the HHS
Vinyl Chloride concentration highlighted only if greater than 2 micrograms per liter (EPA Maximum Contaminant Level). Montana HHS is greater than 0.2 micrograms per liter (not highlighted).


-- - Not collected/analyzed

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TABLE 5
Summary of Selected Volatile Organic Compounds
Bozeman Landfill
Bozeman, Montana

Sampling Location	Sampling Date	LABORATORY PARAMETERS							
		Benzene (µg/L)	Cis 1,2-dichloro-ethene (µg/L)	Methylene Chloride (µg/L)	1,1-Dichloro-ethane (µg/L)	Chloro-methane (µg/L)	Tetrachloro-ethene (µg/L)	Trichloro-ethene (µg/L)	Vinyl chloride (µg/L)
HHS		5	70	5	NA	NA	5	5	2
MW-7A	12/7/2006	U 0.5	U 0.5	U 5	U 1	U 1	1.7	U 0.5	U 0.5
	3/15/2007	U 0.5	U 0.5	U 5	1	U 1	2.2	U 0.5	U 0.5
	6/20/2007	0.5	U 0.5	U 5	U 1	U 1	2.3	0.6	UJF% 0.5
	12/10/2007	U 0.5	U 0.5	U 5	1.3	U 1	2.4	0.5	U 0.5
	6/24/2008	U 0.5	U 0.5	U 5	1.5	U 1	3.5	0.7	U 0.5
	12/10/2008	U 1	U 1	U 4	2.9	U 1	5.5	1.3	0.53
	6/2/2009	U 0.5	U 0.5	U 2	1.6	U 2	4	J 0.81	U 0.2
	12/9/2009	U 0.5	U 0.5	UB 2	3.1	U 2	5.6	1.4	0.57
	6/16/2010	U 0.5	U 0.5	30.2	1.7	U 0.5	3.4	0.83	U 0.5
	12/7/2010	U 1	U 1	U 1	4.3	U 1	8.6	1.9	U 1
	6/14/2011	0.52	J 0.41	U 2	4.6	U 0.021	7.9	2	0.7
	12/6/2011	0.72	0.67	U 5	5.3	U 0.13	8.3	2.3	0.88
	6/5/2012	0.91	0.94	U 2	6.5	U 0.13	12	3	1.1
	12/5/2012	0.56	0.7	U 2	4.6	U 0.13	7.7	2	0.71
	6/12/2013	J 0.28	0.54	U 2	3.6	U 0.5	5	1.4	J 0.25
	12/17/2013	U 0.24	J 0.47	U 2	3.3	U 0.5	3.9	1.1	0.22
	8/20/2014	J 0.21	0.71	U 2	2.8	U 0.34	6.9	1.8	U 0.082
	12/9/2014	J 0.37	U 0.11	U 2	4.7	U 0.34	7	1.7	0.56
	6/16/2015	J 0.23	U 0.25	U 0.56	3.8	U 0.64	5.3	1.6	J 0.27
	12/2/2015	U 0.21	0.54	U 0.56	2.5	U 0.64	3.9	1.4	0.22
	6/15/2016	J 0.26	0.57	U 0.56	2.9	U 0.64	3.3	1.5	0.25
	11/30/2016	J 0.098	J 0.3	U 0.097	1.6	U 0.08	2.1	0.98	J 0.18
	6/15/2017	J 0.19	0.71	U 0.097	3.1	U 0.08	2.5	2.1	0.43

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HHS		5	70	5	NA	NA	5	5	2
MW-7A	12/1/2017	U 0.13	0.5	U 1.2	1.8	U 1.1	1.9	1.5	J 0.17
	8/23/2018	J 0.36	0.94	U 0.98	2.9	U 0.16	2.3	3	0.5
	11/28/2018	J 0.18	0.66	U 0.98	2	U 0.16	1.8	2	0.29
	6/10/2019	U 0.1	J 0.3	U 0.98	1.5	U 0.16	1.3	1.2	J 0.1
	12/2/2019	J 0.19	0.57	U 0.98	2	U 0.48	1.6	1.7	0.36
	6/22/2020	J 0.18	0.65	U 2	2.5	U 0.16	1.4	2	0.24
	11/30/2020	J 0.204	0.641	U 0.43	2.92	UL0 0.96	1.44	1.96	J 0.45
	6/21/2021	J 0.116	J 0.298	U 0.43	1.42	U 0.96	0.817	1.17	U 0.234
	12/13/2021	J 0.164	J 0.487	U 0.43	1.94	U 0.96	1.24	1.22	J 0.469
	6/21/2022	J 0.263	0.712	UL0 0.43	2.32	UR1 0.96	1.29	1.63	J 0.391
MW-7B	8/3/1993	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1
	1/18/1994	U 2	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/28/1994	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	2/1/1995	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/27/1995	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1
	12/6/2011	U 0.047	U 0.08	U 5	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
	6/5/2012	U 0.047	U 0.08	U 2	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
	6/16/2015	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	U 0.19	U 0.14	U 0.081
	6/15/2017	U 0.042	U 0.12	U 0.097	U 0.055	U 0.08	U 0.13	U 0.044	U 0.098
	6/10/2019	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	U 0.17	U 0.15	U 0.092
MW-8A	1/19/1994	U 2	U 1	U 5	U 1	U 1	5	1	U 1
	6/28/1994	U 1	1	U 5	U 1	U 1	4	3	U 1

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		Benzene (µg/L)	Cis 1,2-dichloro-ethene (µg/L)	Methylene Chloride (µg/L)	1,1-Dichloro-ethane (µg/L)	Chloro-methane (µg/L)	Tetrachloro-ethene (µg/L)	Trichloro-ethene (µg/L)	Vinyl chloride (µg/L)
HHS		5	70	5	NA	NA	5	5	2
MW-8A	2/1/1995	U 1	1	U 5	1	U 1	4	3	U 1
	6/27/1995	U 1	1	U 1	1	U 1	2	3	U 1
	11/28/1995	U 1	1	U* 5	2	U 1	3	3	U 1
	6/25/1996	U 1	2	U 5	2	U 1	3	3	U 1
	12/12/1996	U 1	1	U 5	1	U 1	2	3	U 1
	6/19/1997	U 1	1	U 1	1	U 2	2	2	U 2
	12/16/1997	U 1	3	U 5	1	U 1	3	3	U 1
	6/30/1998	U 1	4	<(2) 5	2	U 1	4	5	U 1
	12/15/1998	U 1	5	UB 5	1	U 1	4	4	U 1
	6/22/1999	U 1	3	U 5	U 1	U 1	2	3	U 1
	12/14/1999	U 1	3	U 5	U 1	U 1	2	3	U 1
	6/8/2000	U 1	2	U 5	U 1	U 1	2	3	U 1
	11/29/2000	U 1	2	U 5	U 1	U 1	2	2	U 1
	6/12/2001	U 1	1	U 5	U 1	U 1	2	2	U 1
	12/18/2001	U 1	U 1	U 5	U 1	U 1	1	1	U 1
	6/14/2002	U 1	U 1	U 5	U 1	U 1	1	1	U 1
	12/13/2002	U 1	U 1	U 5	U 1	U 1	1	U 1	U 1
	6/10/2003	U 1	U 1	U 5	U 1	U 1	1	U 1	U 1
	12/3/2003	U 1	U 1	U 5	U 1	U 1	U 1	U 1	UJF% 1
	6/8/2004	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/7/2004	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/16/2005	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/14/2005	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1

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Sampling Location	Sampling Date	LABORATORY PARAMETERS							
		Benzene (µg/L)	Cis 1,2-dichloro-ethene (µg/L)	Methylene Chloride (µg/L)	1,1-Dichloro-ethane (µg/L)	Chloro-methane (µg/L)	Tetrachloro-ethene (µg/L)	Trichloro-ethene (µg/L)	Vinyl chloride (µg/L)
HHS		5	70	5	NA	NA	5	5	2
MW-8A	6/13/2006	U 0.5	U 0.5	U 5	U 1	U 1	0.7	U 0.5	U 0.5
	12/6/2006	U 0.5	U 0.5	U 5	U 1	U 1	0.7	U 0.5	U 0.5
	6/20/2007	U 0.5	U 0.5	U 5	U 1	U 1	0.8	U 0.5	UJF% 0.5
	12/10/2007	U 0.5	U 0.5	U 5	U 1	U 1	0.6	U 0.5	U 0.5
	6/24/2008	U 0.5	U 0.5	U 5	U 1	U 1	0.6	U 0.5	U 0.5
	12/9/2008	U 1	U 1	U 4	U 1	U 1	U 1	U 1	U 0.4
	6/1/2009	U 0.5	U 0.5	U 2	U 0.5	U 2	J 0.86	U 0.5	U 0.2
	12/9/2009	U 0.5	U 0.5	UB 2	U 0.5	U 2	J 0.85	U 0.5	U 0.2
	6/15/2010	U 0.5	U 0.5	20	U 0.5	U 0.5	0.81	U 0.5	U 0.5
	12/7/2010	U 1	U 1	U 1	U 1	U 1	1.3	U 1	U 1
	6/14/2011	U 0.038	U 0.08	U 2	U 0.072	U 0.021	0.64	J 0.28	U 0.049
	12/5/2011	U 0.047	J 0.42	U 5	U 0.072	U 0.13	0.6	J 0.3	U 0.16
	6/5/2012	U 0.047	J 0.46	U 2	U 0.072	U 0.13	0.8	J 0.35	U 0.16
	12/4/2012	U 0.047	0.62	U 2	U 0.072	U 0.13	0.65	J 0.28	U 0.16
	6/12/2013	U 0.24	0.77	U 2	U 0.25	U 0.5	0.68	J 0.33	U 0.2
	12/16/2013	U 0.24	0.96	U 2	U 0.25	U 0.5	0.63	J 0.34	U 0.1
	3/27/2014	U 0.24	0.95	U 2	U 0.25	U 0.5	0.65	J 0.35	U 0.1
	8/20/2014	U 0.073	1.2	U 2	U 0.077	U 0.34	1.3	J 0.36	U 0.082
	12/8/2014	U 0.073	1.4	U 2	U 0.087	U 0.34	0.99	0.58	U 0.082
	6/17/2015	U 0.21	0.65	U 0.56	U 0.22	U 0.64	0.84	J 0.38	U 0.081
	12/2/2015	U 0.21	1.1	U 0.56	U 0.22	U 0.64	0.84	J 0.37	U 0.081
	6/14/2016	U 0.21	1	U 0.56	U 0.22	U 0.64	0.81	J 0.39	U 0.081
	11/29/2016	U 0.042	1.2	U 0.097	U 0.055	U 0.08	0.84	0.41	U 0.098

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HHS		5	70	5	NA	NA	5	5	2
MW-8A	6/14/2017	U 0.042	1.3	U 0.097	U 0.055	U 0.08	0.7	J 0.32	U 0.098
	12/1/2017	U 0.13	1.2	U 1.2	U 0.14	U 1.1	0.95	J 0.35	U 0.096
	8/23/2018	U 0.1	0.63	U 0.98	U 0.17	U 0.16	0.7	U 0.15	U 0.092
	11/28/2018	U 0.1	0.59	U 0.98	U 0.17	U 0.16	0.69	J 0.21	U 0.092
	6/12/2019	U 0.1	0.52	U 0.98	U 0.17	U 0.16	0.52	U 0.15	U 0.092
	12/2/2019	U 0.1	0.51	U 0.98	U 0.17	U 0.48	0.56	U 0.15	U 0.092
	6/22/2020	U 0.12	0.63	U 2	U 0.14	U 0.16	J 0.44	J 0.15	U 0.098
	11/30/2020	U 0.0941	0.627	U 0.43	U 0.1	UL0.96	0.532	J 0.218	U 0.234
	6/21/2021	U 0.0941	J 0.357	U 0.43	U 0.1	U 0.96	J 0.37	U 0.19	U 0.234
	12/14/2021	U 0.0941	J 0.492	U 0.43	U 0.1	U 0.96	J 0.495	U 0.19	U 0.234
	6/21/2022	U 0.0941	0.537	UL0.43	J 0.122	UR1.96	J 0.34	J 0.227	UJ 0.234
MW-8B	2/1/1995	U 1	2	U 5	1	U 1	4	3	U 1
	12/5/2011	U 0.047	J 0.29	U 5	U 0.072	U 0.13	0.81	J 0.43	U 0.16
	6/5/2012	J 0.056	J 0.23	U 2	U 0.072	U 0.13	0.83	J 0.38	U 0.16
	6/17/2015	U 0.21	J 0.29	U 0.56	U 0.22	U 0.64	0.78	J 0.38	U 0.081
	6/14/2017	U 0.042	1.2	U 0.097	U 0.055	U 0.08	0.72	J 0.33	U 0.098
	6/12/2019	U 0.1	0.95	U 0.98	U 0.17	U 0.16	0.68	J 0.24	U 0.092
MW-8C	6/5/2012	J 0.064	U 0.08	U 2	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
	12/4/2012	U 0.047	U 0.08	U 2	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
	6/12/2013	U 0.24	U 0.23	U 2	U 0.25	U 0.5	U 0.25	U 0.12	U 0.2
	12/16/2013	U 0.24	U 0.23	U 2	U 0.25	U 0.5	U 0.25	U 0.13	U 0.1
	6/17/2015	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	U 0.19	U 0.14	U 0.081

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HHS		5	70	5	NA	NA	5	5	2
MW-8C	6/14/2017	U 0.042	U 0.12	U 0.097	U 0.055	U 0.08	U 0.13	U 0.044	U 0.098
	6/12/2019	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	U 0.17	U 0.15	U 0.092
MW-9A	1/18/1994	U 2	U 1	U 5	2	U 1	4	2	U 1
	6/27/1994	U 1	U 1	U 5	2	U 1	5	2	U 1
	1/31/1995	U 1	U* 1	U 5	1	U 1	4	2	U 1
	6/27/1995	U 1	U 1	U 1	1	U 1	2	U 1	U 1
	11/28/1995	U 1	U 1	U* 5	1	U 1	3	1	U 1
	6/25/1996	U 1	U 1	U 5	U* 1	U 1	2	U* 1	U 1
	12/11/1996	U 1	U 1	U 5	U 1	U 1	2	U* 1	U 1
	6/19/1997	U 1	U 1	U 1	U 1	U 2	1	U 1	U 2
	12/16/1997	U 1	U 1	U 5	U 1	U 1	U 1	1	U 1
	6/29/1998	U 1	U 1	5	(2) U 1	< (2) 1	1	U(2) 1	U 1
	12/14/1998	U 1	U 1	UB 5	U 1	U 1	1	1	U 1
	6/22/1999	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/13/1999	U 1	U 1	U 5	U 1	U 1	1	U 1	U 1
	6/7/2000	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	11/28/2000	U 1	U 1	U 5	U 1	U 1	2	U 1	U 1
	6/11/2001	U 1	U 1	U 5	1	U 1	2	1	U 1
	12/17/2001	U 1	U 1	U 5	U 1	U 1	2	1	U 1
	6/13/2002	U 1	1	U 5	U 1	U 1	2	1	U 1
	12/12/2002	U 1	1	U 5	U 1	U 1	2	1	U 1
	6/9/2003	U 1	U 1	U 5	U 1	U 1	1	U 1	U 1
	12/4/2003	U 1	U 1	U 5	U 1	U 1	1	U 1	UJF% 1

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HHS - Human Health Standard (EPA Maximum Contaminant Level or HHS in Circular DEQ-7, Montana Numeric WQ Stds, June 2019)
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HHS		5	70	5	NA	NA	5	5	2
MW-9A	6/8/2004	U 1	U 1	U 5	U 1	U 1	1	U 1	U 1
	12/7/2004	U 1	U 1	U 5	U 1	U 1	1	U 1	U 1
	6/16/2005	U 1	U 1	U 5	U 1	U 1	1	U 1	U 1
	12/14/2005	U 1	U 1	U 5	U 1	U 1	1	U 1	U 1
	6/13/2006	U 0.5	0.5	U 5	U 1	U 1	1	0.5	U 0.5
	12/6/2006	U 0.5	U 0.5	U 5	U 1	U 1	0.9	0.5	U 0.5
	6/20/2007	U 0.5	U 0.5	U 5	U 1	U 1	0.8	0.5	UJF% 0.5
	12/10/2007	U 0.5	U 0.5	U 5	U 1	U 1	0.6	U 0.5	U 0.5
	6/24/2008	U 0.5	U 0.5	U 5	U 1	U 1	0.7	U 0.5	U 0.5
	12/9/2008	U 1	U 1	U 4	U 1	U 1	U 1	U 1	U 0.4
	6/1/2009	U 0.5	U 0.5	U 2	U 0.5	U 2	1.2	J 0.55	U 0.2
	12/4/2009	U 0.5	J 0.62	UB 2	U 0.5	U 2	1.2	J 0.71	U 0.2
	6/15/2010	U 0.5	0.59	17.7	U 0.5	U 0.5	1.1	0.71	U 0.5
	12/7/2010	U 1	U 1	U 1	U 1	U 1	1.1	U 1	U 1
	6/14/2011	U 0.038	J 0.44	U 2	J 0.18	U 0.021	0.95	0.64	U 0.049
	12/5/2011	U 0.047	J 0.48	U 5	J 0.28	U 0.13	0.95	0.75	U 0.16
	6/4/2012	J 0.066	J 0.47	U 2	J 0.27	U 0.13	1.4	0.95	U 0.16
	12/4/2012	U 0.047	J 0.46	U 2	J 0.31	U 0.13	1.2	0.78	U 0.16
	6/10/2013	U 0.24	0.54	U 2	J 0.4	U 0.5	1.4	0.95	U 0.2
	12/17/2013	U 0.24	0.68	U 2	J 0.42	U 0.5	1.2	0.85	U 0.1
	8/20/2014	U 0.073	J 0.37	U 2	U 0.077	U 0.34	1.7	0.82	U 0.082
	12/8/2014	U 0.073	U 0.11	U 2	0.51	U 0.34	1.6	1.4	U 0.082
	6/16/2015	U 0.21	U 0.25	U 0.56	J 0.44	U 0.64	1.5	0.88	U 0.081

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TABLE 5
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Bozeman Landfill
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Sampling Location	Sampling Date	LABORATORY PARAMETERS							
		Benzene (µg/L)	Cis 1,2-dichloro-ethene (µg/L)	Methylene Chloride (µg/L)	1,1-Dichloro-ethane (µg/L)	Chloro-methane (µg/L)	Tetrachloro-ethene (µg/L)	Trichloro-ethene (µg/L)	Vinyl chloride (µg/L)
HHS		5	70	5	NA	NA	5	5	2
MW-9A	11/30/2015	U 0.21	0.64	U 0.56	J 0.37	U 0.64	1.3	0.92	U 0.081
	6/14/2016	U 0.21	0.64	U 0.56	J 0.38	U 0.64	1.4	0.97	U 0.081
	11/29/2016	U 0.042	0.75	U 0.097	J 0.4	U 0.08	1.1	0.9	U 0.098
	6/14/2017	U 0.042	0.75	U 0.097	J 0.43	U 0.08	1.1	1.1	U 0.098
	11/30/2017	U 0.13	0.91	U 1.2	J 0.46	U 1.1	1.5	0.88	U 0.096
	8/20/2018	U 0.1	0.73	U 0.98	J 0.39	J 0.24	1.4	0.79	U 0.092
	11/29/2018	U 0.1	0.76	U 0.98	J 0.38	U 0.16	1.3	0.82	U 0.092
	6/10/2019	U 0.1	0.66	U 0.98	J 0.29	U 0.16	1.3	0.67	U 0.092
	12/2/2019	U 0.1	0.76	U 0.98	J 0.36	U 0.48	1.3	0.65	U 0.092
	6/22/2020	U 0.12	0.75	U 2	J 0.43	U 0.16	1.3	0.65	U 0.098
	11/30/2020	U 0.0941	0.81	U 0.43	J 0.476	UL0.96	1.21	0.738	U 0.234
	6/21/2021	U 0.0941	0.556	U 0.43	J 0.361	U 0.96	0.923	0.536	U 0.234
	12/13/2021	U 0.0941	0.697	U 0.43	J 0.419	U 0.96	1.1	0.566	U 0.234
	6/21/2022	U 0.0941	0.75	UL0.43	0.521	UR1.96	0.864	0.769	UJ 0.234
MW-9B	1/31/1995	U 1	U* 1	U 5	U* 1	U 1	4	2	U 1
	12/5/2011	U 0.047	0.67	U 5	J 0.28	U 0.13	1.2	1.1	U 0.16
	6/4/2012	J 0.052	0.53	U 2	J 0.19	U 0.13	1.4	1	U 0.16
	6/16/2015	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	1	0.94	U 0.081
	6/14/2017	U 0.042	0.66	U 0.097	U 0.055	U 0.08	0.91	0.69	U 0.098
	6/10/2019	U 0.1	0.68	U 0.98	U 0.17	U 0.16	0.93	0.61	U 0.092
MW-10	6/27/1994	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	2/2/1995	U 1	U 1	U 5	U 1	U 1	U 1	1	U 1

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HHS		5	70	5	NA	NA	5	5	2
MW-10	6/28/1995	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1
	11/28/1995	U 1	U 1	U* 5	U 1	U 1	U* 1	U* 1	U 1
	6/26/1996	U 1	U 1	U 5	U 1	U 1	U 1	U* 1	U 1
	12/12/1996	U 1	U 1	U 5	U 1	U* 1	U 1	U* 1	U 1
	6/20/1997	U 1	U 1	U 1	U 1	U 2	U 1	U 1	U 2
	12/17/1997	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/29/1998	U 1	U 1	U(3) 5	U 1	3	U 1	1	U 1
	12/15/1998	U 1	U 1	UB 5	U 1	U 1	U 1	U 1	U 1
	6/23/1999	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/13/1999	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/8/2000	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	11/29/2000	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/12/2001	U 1	U 1	U 5	U 1	U 1	U 1	1	U 1
	12/18/2001	U 1	U 1	U 5	U 1	U 1	U 1	1	U 1
	6/14/2002	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/12/2002	U 1	U 1	U 5	U 1	U 1	U 1	1	U 1
	6/10/2003	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/3/2003	U 1	U 1	U 5	U 1	U 1	U 1	1	UJF% 1
	6/8/2004	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/6/2004	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/17/2005	U 1	U 1	B U 5	U 1	U 1	U 1	U 1	U 1
	12/13/2005	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/13/2006	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	0.6	U 0.5

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HHS		5	70	5	NA	NA	5	5	2
MW-10	12/6/2006	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	0.6	U 0.5
	6/19/2007	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	0.7	UJF% 0.5
	12/10/2007	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	0.6	U 0.5
	6/26/2008	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	U 0.5	U 0.5
	12/9/2008	U 1	U 1	U 4	U 1	U 1	U 1	U 1	U 0.4
	6/2/2009	U 0.5	U 0.5	U 2	U 0.5	U 2	U 0.5	J 0.66	U 0.2
	12/4/2009	U 0.5	U 0.5	UB 2	U 0.5	U 2	U 0.5	J 0.82	U 0.2
	6/16/2010	U 0.5	U 0.5	42.4	U 0.5	U 0.5	U 0.5	0.78	U 0.5
	12/6/2010	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1
	6/14/2011	U 0.038	U 0.08	U 2	U 0.072	U 0.021	U 0.041	0.7	U 0.049
	12/6/2011	U 0.047	J 0.26	U 5	U 0.072	U 0.13	U 0.16	0.57	U 0.16
	6/4/2012	J 0.093	J 0.2	U 2	U 0.072	U 0.13	U 0.16	0.58	U 0.16
	12/5/2012	U 0.047	J 0.17	U 2	U 0.072	U 0.13	U 0.16	J 0.5	U 0.16
	6/12/2013	U 0.24	U 0.23	U 2	U 0.25	U 0.5	U 0.25	J 0.39	U 0.2
	3/27/2014	U 0.24	U 0.23	U 2	U 0.25	U 0.5	U 0.25	J 0.33	U 0.1
	8/21/2014	U 0.073	J 0.18	U 2	U 0.077	U 0.34	U 0.099	0.49	U 0.082
	12/10/2014	U 0.073	U 0.11	U 2	U 0.087	U 0.34	U 0.12	0.67	U 0.082
	6/15/2015	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	U 0.19	J 0.39	U 0.081
	12/1/2015	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	U 0.19	0.52	U 0.081
	6/16/2016	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	U 0.19	J 0.4	U 0.081
	11/28/2016	U 0.042	J 0.25	U 0.097	U 0.055	U 0.08	U 0.13	0.45	U 0.098
	6/16/2017	U 0.042	J 0.19	U 0.097	U 0.055	U 0.08	U 0.13	J 0.33	U 0.098
	11/29/2017	U 0.13	J 0.43	U 1.2	U 0.14	U 1.1	U 0.16	J 0.4	U 0.096

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HHS		5	70	5	NA	NA	5	5	2
MW-10	8/22/2018	U 0.1	J 0.19	U 0.98	U 0.17	J 0.48	U 0.17	J 0.39	U 0.092
	11/27/2018	U 0.1	J 0.23	U 0.98	U 0.17	U 0.16	U 0.17	J 0.32	U 0.092
	6/12/2019	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	U 0.17	J 0.3	U 0.092
	12/3/2019	U 0.1	J 0.27	U 0.98	U 0.17	U 0.48	U 0.17	J 0.25	U 0.092
	6/23/2020	U 0.12	U 0.2	U 2	U 0.14	U 0.16	U 0.093	J 0.29	U 0.098
	12/2/2020	U 0.0941	J 0.204	U 0.43	U 0.1	UL0.96	U 0.3	J 0.344	U 0.234
	6/21/2021	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	U 0.234
	12/14/2021	U 0.0941	J 0.201	U 0.43	U 0.1	U 0.96	U 0.3	J 0.271	U 0.234
	6/22/2022	U 0.0941	JJ- 0.192	U 0.43	UJ- 0.1	U 0.96	U 0.3	UJ- 0.212	UJ 0.234
MW-11	11/27/1995	U 1	U 1	U* 5	U 1	U 1	U 1	U 1	U 1
	6/26/1996	U 1	U 1	U 5	U 1	U* 1	U 1	U 1	U 1
	12/12/1996	U 1	U 1	U 5	U 1	U* 1	U 1	U 1	U 1
	6/19/1997	U 1	U 1	U 1	U 1	U 2	U 1	U 1	U 2
	12/16/1997	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/30/1998	U 1	U 1	U(3) 5	U 1	U(3) 1	U 1	U 1	U 1
	12/14/1998	U 1	U 1	UB 5	U 1	U 1	U 1	U 1	U 1
	6/22/1999	U 1	U 1	U 5	U 1	1	U 1	U 1	U 1
	12/14/1999	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/8/2000	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	11/29/2000	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/12/2001	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/18/2001	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/14/2002	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1

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HHS		5	70	5	NA	NA	5	5	2
MW-11	12/13/2002	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/10/2003	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/3/2003	U 1	U 1	U 5	U 1	U 1	U 1	U 1	UJF% 1
	6/8/2004	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/6/2004	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/16/2005	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/13/2005	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/13/2006	U 0.5	U 0.5	U 5	U 1	U 1	0.6	U 0.5	U 0.5
	12/6/2006	U 0.5	U 0.5	U 5	U 1	U 1	0.6	U 0.5	U 0.5
	6/20/2007	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	U 0.5	UJF% 0.5
	12/10/2007	U 0.5	U 0.5	U 2	U 1	U 1	U 0.5	U 0.5	U 0.5
	6/24/2008	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	U 0.5	U 0.5
	12/9/2008	U 1	U 1	U 4	U 1	U 1	U 1	U 1	U 0.4
	6/1/2009	U 0.5	U 0.5	U 2	U 0.5	U 2	U 0.5	U 0.5	U 0.2
	12/4/2009	U 0.5	U 0.5	UB 2	U 0.5	U 2	J 0.54	U 0.5	U 0.2
	6/15/2010	U 0.5	U 0.5	27.7	U 0.5	U 0.5	U 0.5	U 0.5	U 0.5
	12/7/2010	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1
	6/14/2011	U 0.038	U 0.08	U 2	U 0.072	U 0.021	U 0.041	U 0.05	U 0.049
	12/5/2011	U 0.047	U 0.08	U 5	U 0.072	U 0.13	J 0.25	U 0.11	U 0.16
	6/4/2012	U 0.047	U 0.08	U 2	U 0.072	U 0.13	J 0.32	U 0.11	U 0.16
	12/5/2012	U 0.047	U 0.08	U 2	J 0.2	U 0.13	J 0.34	U 0.11	U 0.16
	6/12/2013	U 0.24	U 0.23	U 2	J 0.28	U 0.5	J 0.38	U 0.12	U 0.2
	12/17/2013	U 0.24	U 0.23	U 2	J 0.31	U 0.5	J 0.41	U 0.13	U 0.1

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HHS		5	70	5	NA	NA	5	5	2
MW-11	8/19/2014	U 0.073	U 0.11	U 2	U 0.077	U 0.34	J 0.36	U 0.084	U 0.082
	12/8/2014	U 0.073	U 0.11	U 2	U 0.087	U 0.34	J 0.37	U 0.084	U 0.082
	6/17/2015	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	J 0.26	U 0.14	U 0.081
	12/2/2015	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	J 0.25	U 0.14	U 0.081
	6/14/2016	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	U 0.19	U 0.14	U 0.081
	11/29/2016	U 0.042	U 0.12	U 0.097	U 0.055	U 0.08	J 0.2	U 0.044	U 0.098
	6/14/2017	U 0.042	U 0.12	U 0.097	U 0.055	U 0.08	U 0.13	U 0.044	U 0.098
	12/4/2017	U 0.13	U 0.2	U 1.2	U 0.14	U 1.1	U 0.16	U 0.18	U 0.096
	8/22/2018	U 0.1	U 0.15	U 0.98	U 0.17	J 0.68	J 0.33	U 0.15	U 0.092
	11/28/2018	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	J 0.2	U 0.15	U 0.092
	6/10/2019	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	U 0.17	U 0.15	U 0.092
	12/2/2019	U 0.1	U 0.15	U 0.98	U 0.17	U 0.48	U 0.17	U 0.15	U 0.092
	6/22/2020	U 0.12	U 0.2	U 2	U 0.14	U 0.16	U 0.093	U 0.11	U 0.098
	11/30/2020	U 0.0941	U 0.126	U 0.43	U 0.1	UL0.96	U 0.3	U 0.19	U 0.234
	6/21/2021	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	U 0.234
	12/15/2021	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	U 0.234
	6/22/2022	U 0.0941	U 0.126	U 0.43	UJ- 0.1	U 0.96	U 0.3	UJ- 0.19	UJ 0.234
MW-12	11/27/1995	9	12	U* 5	4	U 1	1	11	50
	6/26/1996	11	10	U 5	5	U* 1	U* 1	9	81
	12/12/1996	7	6	U 5	4	U 1	U* 1	9	49
	6/20/1997	8	2	U 1	3	U 2	U 1	2	99
	12/16/1997	6	1	U 5	3	U 1	1	U 1	48
	3/24/1998	5	U 1	U 5	3	U 1	U 1	1	44

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Bozeman, Montana

Sampling Location	Sampling Date	LABORATORY PARAMETERS							
		Benzene (µg/L)	Cis 1,2-dichloro-ethene (µg/L)	Methylene Chloride (µg/L)	1,1-Dichloro-ethane (µg/L)	Chloro-methane (µg/L)	Tetrachloro-ethene (µg/L)	Trichloro-ethene (µg/L)	Vinyl chloride (µg/L)
HHS		5	70	5	NA	NA	5	5	2
MW-12	6/30/1998	4	U(3) 1	U(3) 5	2	U 1	U 1	U(3) 1	43
	9/29/1998	3	U 1	U 5	2	U 1	U 1	1	29
	12/15/1998	3	U 1	UB 5	2	U 1	U 1	U 1	22
	3/17/1999	2	U 1	U 5	1	U 1	U 1	U 1	22
	6/23/1999	2	U 1	U 5	U 1	U 1	U 1	U 1	23
	9/13/1999	2	U 1	U 5	U 1	U 1	U 1	U 1	25
	12/14/1999	2	U 1	U 5	U 1	U 1	U 1	U 1	25
	3/22/2000	1	U 1	U 5	U 1	U 1	U 1	U 1	16
	6/8/2000	1	U 1	U 5	U 1	U 1	U 1	U 1	27
	9/22/2000	2	U 1	U 5	1	U 1	U 1	U 1	33
	11/29/2000	2	U 1	U 5	U 1	U 1	U 1	U 1	29
	3/21/2001	2	U 1	U 5	1	U 1	U 1	U 1	19
	6/12/2001	1	U 1	U 5	U 1	U 1	U 1	1	18
	9/19/2001	1	1	U(1,3) 5	U 1	U 1	U 1	1	16
	12/18/2001	2	2	U 5	1	U 1	U 1	2	20
	3/25/2002	1	2	U 5	1	U 1	U 1	3	21
	6/14/2002	1	2	U 5	U 1	U 1	U 1	2	22
	9/24/2002	1	3	UJR 5	U 1	U 1	U 1	3	15
	12/13/2002	1	4	U 5	U 1	U 1	U 1	4	22
	3/24/2003	1	4	U 5	U 1	U 1	U 1	5	16
	6/10/2003	1	5	U 5	U 1	U 1	U 1	6	14
	9/25/2003	1	6	U 5	1	U 1	U 1	8	19
	12/4/2003	2	6	U 5	1	U 1	U 1	8	JF% 27

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HHS		5	70	5	NA	NA	5	5	2
MW-12	3/24/2004	2	7	U 5	1	U 1	U 1	8	24
	6/8/2004	1	7	U 5	1	U 1	U 1	7	15
	9/9/2004	1	7	U 5	1	U 1	U 1	9	17
	12/7/2004	1	7	U 5	1	U 1	U 1	8	16
	3/29/2005	1	7	U 5	1	U 1	U 1	7	19
	6/17/2005	U 1	7	B U 5	1	U 1	1	8	16
	9/20/2005	1	7	BU 5	1	U 1	1	7	12
	12/14/2005	U 1	6	U 5	1	U 1	1	6	15
	3/16/2006	U 1	6	U 5	U 1	U 1	1	6	19
	6/13/2006	1.2	8.3	U 5	1	U 1	1.2	6.8	13
	9/21/2006	0.8	5.9	U 5	U 1	U 1	1.5	6.3	12.5
	12/7/2006	0.5	3.6	U 5	U 1	U 1	U 0.5	2.8	4.4
	3/15/2007	0.9	7.4	U 5	1	U 1	3	7	11.5
	6/21/2007	1	8.2	U 5	U 1	U 1	1.8	6.5	JF% 21
	12/11/2007	0.9	10	U 5	1.2	U 1	1.2	7.5	19
	6/25/2008	0.9	7.1	U 5	U 1	U 1	0.6	5.1	16
	12/10/2008	1.5	7.7	U 4	U 1	U 1	U 1	5.7	13.3
	6/2/2009	1.9	8	U 2	J 0.91	U 2	U 0.5	5.1	19.7
	12/9/2009	2.5	11.6	UB 2	1.2	U 2	U 0.5	6.7	26.4
	6/15/2010	2.2	9.6	22.3	1.1	U 0.5	U 0.5	4.4	27.4
	12/7/2010	1.8	11.3	U 1	1.5	U 1	U 1	4.5	J 30.4
	6/14/2011	2	4.4	U 2	1.4	U 0.021	U 0.041	1.9	J 24.9
	12/6/2011	2.1	9.6	U 5	1.7	U 0.13	U 0.16	4.3	17.4

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HHS		5	70	5	NA	NA	5	5	2
MW-12	6/5/2012	2	10.8	U 2	2	U 0.13	U 0.16	3.5	20.7
	12/5/2012	1.5	9.1	U 2	1.7	U 0.13	U 0.16	1.5	21.2
	6/12/2013	1.4	11.1	U 2	1.9	U 0.5	U 0.25	1	17.7
	12/17/2013	1.5	6.6	U 2	1.5	U 0.5	U 0.25	0.42	22.4
	3/27/2014	1.7	3.9	U 2	1.2	U 0.5	U 0.25	J 0.25	19.7
	8/19/2014	1.1	7.2	U 2	0.99	U 0.34	U 0.099	J 0.29	10.7
	12/8/2014	1.3	5.5	U 2	1	U 0.34	U 0.12	U 0.084	17
	6/17/2015	1	6.8	U 0.56	0.87	J 0.9	U 0.19	J 0.26	10.5
	12/2/2015	1.2	6.5	U 0.56	1.1	U 0.64	U 0.19	U 0.14	11
	6/14/2016	1.1	8.3	U 0.56	1.1	U 0.64	U 0.19	U 0.14	10.5
	8/25/2016	1.2	9.8	U 0.097	1.1	U 0.08	U 0.13	U 0.051	10.2
	11/29/2016	0.9	6.2	U 0.097	1.1	U 0.08	U 0.13	U 0.044	7.9
	4/17/2017	0.72	7.4	U 0.097	1.1	U 0.08	U 0.13	U 0.044	8.7
	6/14/2017	0.7	6.1	U 0.097	1.1	U 0.08	U 0.13	U 0.044	9
	9/20/2017	0.79	8	U 1.2	0.9	U 1.1	U 0.16	U 0.18	5.9
	12/4/2017	0.78	6.3	U 1.2	0.98	U 1.1	U 0.16	U 0.18	6.3
	3/27/2018	0.74	7.7	U 1.2	0.74	U 1.1	U 0.16	U 0.18	5.3
	8/22/2018	1	6.9	U 0.98	1.2	U 0.16	U 0.17	J 0.21	9.4
	10/16/2018	0.64	5.1	U 0.98	0.94	U 0.16	U 0.17	U 0.15	8.7
	11/28/2018	0.54	5.4	U 0.98	0.96	U 0.16	U 0.17	J 0.29	10
	3/27/2019	0.86	8.5	U 0.98	1.5	U 0.16	U 0.17	J 0.32	9.7
	6/10/2019	0.82	6.8	U 0.98	1.7	U 0.16	U 0.17	0.73	15.1
	9/23/2019	0.57	8.7	U 0.98	1.5	U 0.16	U 0.17	J 0.39	6.4

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HHS		5	70	5	NA	NA	5	5	2
MW-12	12/2/2019	0.6	9.1	U 0.98	1.6	U 0.48	U 0.17	0.8	8.3
	3/23/2020	0.52	8.6	U 2	2.1	U 0.16	U 0.093	0.79	11.2
	6/22/2020	0.65	10.3	U 2	2.2	U 0.16	U 0.093	1.1	7.6
	9/21/2020	0.616	8.35	U 0.43	1.75	U 0.96	U 0.3	J 0.477	4.92
	12/1/2020	0.516	6.17	U 0.43	1.8	UL0.96	U 0.3	0.57	5.94
	3/19/2021	0.515	6.51	U 0.43	1.74	U 0.96	U 0.3	0.73	6.51
	6/21/2021	J 0.418	6.19	U 0.43	1.4	U 0.96	U 0.3	0.69	5.95
	12/15/2021	J 0.221	3.3	U 0.43	0.909	U 0.96	U 0.3	J 0.24	2.29
	6/22/2022	J 0.423	3.18	U 0.43	J- 0.803	U 0.96	U 0.3	J- 0.306	J 3.93
MW-13	11/28/1995	1	U 1	U* 5	2	U 1	U* 1	2	21
	6/25/1996	1	U* 1	U 5	3	U 1	U* 1	1	41
	12/11/1996	1	U* 1	U 5	2	U 1	U 1	U 1	28
	6/20/1997	U 1	1	U 1	1	U 2	1	2	26
	12/16/1997	1	U 1	U 5	2	U 1	2	U 1	29
	3/23/1998	1	U 1	U 5	2	U 1	U 1	1	29
	6/30/1998	1	(3) U 1	U 5	1	U 1	(3) U 1	1	34
	9/29/1998	1	U 1	U 5	1	U 1	U 1	1	24
	12/14/1998	1	U 1	UB 5	1	U 1	U 1	U 1	24
	3/15/1999	U 1	U 1	6	U 1	U 1	U 1	U 1	19
	6/23/1999	U 1	U 1	U 5	U 1	U 1	U 1	U 1	23
	9/13/1999	U 1	U 1	U 5	U 1	U 1	U 1	U 1	26
	12/14/1999	U 1	U 1	U 5	U 1	U 1	U 1	U 1	27
	3/22/2000	U 1	U 1	U 5	U 1	U 1	U 1	U 1	18

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HHS		5	70	5	NA	NA	5	5	2
MW-13	6/8/2000	U 1	U 1	U 5	U 1	U 1	U 1	U 1	23
	9/22/2000	U 1	U 1	U 5	U 1	U 1	U 1	U 1	24
	11/29/2000	U 1	U 1	U 5	U 1	U 1	U 1	U 1	22
	3/21/2001	U 1	U 1	U 5	U 1	U 1	U 1	U 1	15
	6/12/2001	1	U 1	U 5	U 1	U 1	U 1	U 1	19
	9/19/2001	U 1	U 1	U(1,3) 5	U 1	U 1	U 1	U 1	12
	12/18/2001	U 1	U 1	U 5	1	U 1	U 1	U 1	10
	3/25/2002	U 1	U 1	U 5	U 1	U 1	U 1	U 1	11
	6/13/2002	U 1	U 1	U 5	1	U 1	U 1	U 1	12
	9/24/2002	U 1	U 1	UJR 5	U 1	U 1	U 1	U 1	10
	12/13/2002	U 1	U 1	U 5	1	U 1	U 1	U 1	12
	3/24/2003	U 1	U 1	U 5	U 1	U 1	U 1	U 1	8
	6/10/2003	U 1	U 1	U 5	U 1	U 1	U 1	U 1	7
	9/25/2003	U 1	U 1	U 5	U 1	U 1	U 1	U 1	13
	12/4/2003	U 1	U 1	U 5	1	U 1	U 1	U 1	JF% 15
	3/24/2004	U 1	U 1	U 5	1	U 1	U 1	U 1	13
	6/8/2004	U 1	U 1	U 5	U 1	U 1	U 1	U 1	8
	9/9/2004	U 1	U 1	U 5	1	U 1	U 1	U 1	11
	12/7/2004	U 1	U 1	U 5	1	U 1	U 1	U 1	9
	3/29/2005	U 1	U 1	U 5	1	U 1	U 1	U 1	11
	6/17/2005	U 1	U 1	U 5	1	U 1	U 1	U 1	9
	9/20/2005	U 1	U 1	BU 5	1	U 1	U 1	U 1	8
	12/14/2005	U 1	U 1	U 5	1	U 1	U 1	U 1	9

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HHS		5	70	5	NA	NA	5	5	2
MW-13	3/16/2006	U 1	U 1	U 5	U 1	U 1	U 1	U 1	11
	6/13/2006	0.6	0.7	U 5	U 1	U 1	U 0.5	U 0.5	7.1
	9/21/2006	0.6	U 0.5	U 5	U 1	U 1	U 0.5	U 0.5	7.6
	12/7/2006	0.5	0.7	U 5	U 1	U 1	U 0.5	U 0.5	9.7
	3/15/2007	U 0.5	0.8	U 5	1	U 1	U 0.5	U 0.5	9.6
	6/20/2007	0.6	1	U 5	1	U 1	U 0.5	0.6	JF% 20
	12/11/2007	0.6	0.9	U 5	1.2	U 1	U 0.5	U 0.5	18
	6/24/2008	U 0.5	0.8	U 5	U 1	U 1	U 0.5	0.5	15
	12/10/2008	U 1	1.3	U 4	1.3	U 1	U 1	U 1	20.2
	6/2/2009	J 0.53	1.1	U 2	J 0.96	U 2	U 0.5	J 0.61	14.6
	12/9/2009	J 0.69	1.1	UB 2	1.2	U 2	U 0.5	J 0.61	22.5
	6/16/2010	0.68	1.1	36.3	1	U 0.5	U 0.5	0.55	19.9
	12/7/2010	U 1	U 1	U 1	1.1	U 1	U 1	U 1	J 23.8
	6/15/2011	0.61	0.99	U 2	0.96	U 0.021	J 0.25	0.55	J 17.9
	12/7/2011	0.79	1	U 5	1	U 0.13	J 0.29	0.5	17.7
	6/6/2012	0.69	1.1	U 2	0.98	U 0.13	J 0.33	J 0.46	19.3
	12/5/2012	0.66	1.1	U 2	1.1	U 0.13	J 0.23	J 0.41	20.9
	6/12/2013	0.72	1.2	U 2	1.5	U 0.5	J 0.26	J 0.36	21.1
	12/17/2013	0.59	1.1	U 2	1.5	U 0.5	U 0.25	J 0.32	18.9
	3/27/2014	0.68	1.1	U 2	1.5	U 0.5	U 0.25	J 0.31	17.1
	8/19/2014	0.59	0.82	U 2	0.83	U 0.34	J 0.25	0.45	11.7
	12/9/2014	U 0.073	U 0.11	U 2	U 0.087	U 0.34	J 0.14	0.41	16.7
	6/16/2015	0.6	J 0.27	U 0.56	0.89	U 0.64	J 0.23	J 0.34	11.6

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HHS		5	70	5	NA	NA	5	5	2
MW-13	12/2/2015	J 0.46	0.77	U 0.56	0.8	U 0.64	J 0.21	J 0.35	9
	6/15/2016	0.67	1	U 0.56	1.1	U 0.64	U 0.19	J 0.39	11.2
	11/30/2016	J 0.46	0.92	U 0.097	0.95	U 0.08	U 0.13	J 0.37	8.4
	6/15/2017	0.51	1.2	U 0.097	1.1	U 0.08	U 0.13	0.61	9.7
	12/1/2017	0.51	1.1	U 1.2	0.93	U 1.1	U 0.16	J 0.39	6.7
	8/23/2018	0.57	1	U 0.98	0.84	J 0.69	J 0.31	0.49	6.1
	11/29/2018	0.61	0.81	U 0.98	0.73	U 0.16	U 0.17	J 0.31	8.7
	6/10/2019	0.51	0.93	U 0.98	0.83	U 0.16	U 0.17	J 0.21	9.7
	12/2/2019	0.53	0.95	U 0.98	U 0.17	U 0.48	U 0.17	J 0.26	10.2
	6/22/2020	J 0.45	1.2	U 2	1.1	U 0.16	U 0.093	J 0.35	8.2
	11/30/2020	0.546	1.18	U 0.43	1.43	U 0.96	U 0.3	J 0.327	8.9
	6/21/2021	J 0.497	0.972	U 0.43	1.07	U 0.96	U 0.3	J 0.347	8.13
	12/13/2021	0.508	1.06	U 0.43	1.23	U 0.96	U 0.3	J 0.336	8.06
	6/21/2022	J 0.476	1.01	UL0.43	1.01	UR1.096	U 0.3	J 0.441	J 4.09
MW-14	3/22/2001	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/11/2001	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/12/2002	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/9/2003	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/3/2003	U 1	U 1	U 5	U 1	U 1	U 1	U 1	UJF% 1
	6/8/2004	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/6/2004	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/16/2005	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/14/2005	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1

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Sampling Location	Sampling Date	LABORATORY PARAMETERS							
		Benzene (µg/L)	Cis 1,2-dichloro-ethene (µg/L)	Methylene Chloride (µg/L)	1,1-Dichloro-ethane (µg/L)	Chloro-methane (µg/L)	Tetrachloro-ethene (µg/L)	Trichloro-ethene (µg/L)	Vinyl chloride (µg/L)
HHS		5	70	5	NA	NA	5	5	2
MW-14	6/13/2006	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	U 0.5	U 0.5
	12/7/2006	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	U 0.5	U 0.5
	6/21/2007	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	U 0.5	UJF% 0.5
	12/11/2007	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	U 0.5	U 0.5
	6/25/2008	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	U 0.5	U 0.5
	12/10/2008	U 1	U 1	U 4	U 1	U 1	U 1	U 1	U 0.4
	6/3/2009	U 0.5	U 0.5	U 2	U 0.5	U 2	U 0.5	U 0.5	U 0.2
	12/10/2009	U 0.5	U 0.5	UB 2	U 0.5	U 2	U 0.5	U 0.5	U 0.2
	6/15/2010	U 0.5	U 0.5	19.7	U 0.5	U 0.5	U 0.5	U 0.5	U 0.5
	12/6/2010	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1
	6/15/2011	U 0.038	U 0.08	U 2	U 0.072	U 0.021	U 0.041	U 0.05	U 0.049
	12/5/2011	U 0.047	U 0.08	U 5	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
	6/4/2012	U 0.047	U 0.08	U 2	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
	12/17/2013	U 0.24	U 0.23	U 2	U 0.25	J 0.96	U 0.25	U 0.13	U 0.1
	12/10/2014	U 0.073	U 0.11	U 2	U 0.087	U 0.34	U 0.12	U 0.084	U 0.082
MW-15	10/8/2001	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/11/2002	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/10/2003	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/3/2003	U 1	U 1	U 5	U 1	U 1	U 1	U 1	UJF% 1
	6/8/2004	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/6/2004	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/16/2005	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/14/2005	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1

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HHS		5	70	5	NA	NA	5	5	2
MW-15	6/12/2006	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	U 0.5	U 0.5
	12/5/2006	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	U 0.5	U 0.5
	6/19/2007	U 0.5	U 0.5	U 5	U 1	1.2	U 0.5	U 0.5	UJF% 0.5
	12/10/2007	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	U 0.5	U 0.5
	6/23/2008	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	U 0.5	U 0.5
	12/8/2008	U 1	U 1	U 4	U 1	U 1	U 1	U 1	U 0.4
	6/1/2009	U 0.5	U 0.5	U 2	U 0.5	U 2	U 0.5	U 0.5	U 0.2
	12/4/2009	U 0.5	U 0.5	UB 2	U 0.5	U 2	U 0.5	U 0.5	U 0.2
	6/14/2010	U 0.5	U 0.5	32.9	U 0.5	U 0.5	U 0.5	U 0.5	U 0.5
	12/6/2010	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1
	6/13/2011	U 0.038	U 0.08	U 2	U 0.072	U 0.021	U 0.041	U 0.05	U 0.049
	12/6/2011	U 0.047	U 0.08	U 5	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
	6/4/2012	U 0.047	U 0.08	U 2	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
	12/5/2012	U 0.047	U 0.08	U 2	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
	6/10/2013	U 0.24	U 0.23	U 2	U 0.25	U 0.5	U 0.25	U 0.12	U 0.2
	12/16/2013	U 0.24	U 0.23	U 2	U 0.25	U 0.5	U 0.25	U 0.13	U 0.1
	3/27/2014	U 0.24	U 0.23	U 2	U 0.25	U 0.5	U 0.25	U 0.13	U 0.1
	8/20/2014	U 0.073	U 0.11	U 2	U 0.077	U 0.34	U 0.099	U 0.084	U 0.082
	12/10/2014	U 0.073	U 0.11	U 2	U 0.087	U 0.34	U 0.12	U 0.084	U 0.082
	6/16/2015	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	U 0.19	U 0.14	U 0.081
	11/30/2015	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	U 0.19	U 0.14	U 0.081
	6/14/2016	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	U 0.19	U 0.14	U 0.081
	11/29/2016	U 0.042	U 0.12	U 0.097	U 0.055	U 0.08	U 0.13	U 0.044	U 0.098

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HHS		5	70	5	NA	NA	5	5	2
MW-15	6/15/2017	U 0.042	U 0.12	U 0.097	U 0.055	U 0.08	U 0.13	U 0.044	U 0.098
	11/30/2017	U 0.13	U 0.2	U 1.2	U 0.14	U 1.1	U 0.16	U 0.18	U 0.096
	8/20/2018	U 0.1	U 0.15	U 0.98	U 0.17	J 0.61	U 0.17	U 0.15	U 0.092
	11/28/2018	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	U 0.17	U 0.15	U 0.092
	6/10/2019	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	U 0.17	U 0.15	U 0.092
	12/2/2019	U 0.1	U 0.15	U 0.98	U 0.17	U 0.48	U 0.17	U 0.15	U 0.092
	6/22/2020	U 0.12	U 0.2	U 2	U 0.14	U 0.16	U 0.093	U 0.11	U 0.098
	11/30/2020	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	U 0.234
	6/21/2021	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	U 0.234
	12/13/2021	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	U 0.234
	6/21/2022	U 0.0941	U 0.126	UL0.43	U 0.1	UR1.06	U 0.3	U 0.19	UJ 0.234
MW-16	6/4/2012	U 0.047	3.4	U 2	1.4	U 0.13	2.2	2.9	U 0.16
	12/4/2012	U 0.047	3.4	U 2	1	U 0.13	1.2	2	U 0.16
	6/10/2013	U 0.24	4.3	U 2	1.5	U 0.5	1.4	2.1	U 0.2
	12/17/2013	U 0.24	4.3	U 2	1.5	U 0.5	1	1.4	U 0.1
MW-17	3/25/2014	J 0.38	24.5	J 5	0.57	U 0.5	15.9	5.9	1.5
	5/1/2014	J 0.079	27.6	5.1	0.74	U 0.34	16	5.8	2.3
	8/19/2014	J 0.098	27.4	4.7	0.63	U 0.34	24.8	7.4	1
	12/9/2014	J 0.34	33	4.2	U 0.087	U 0.34	21.8	7.7	1.5
	6/17/2015	U 0.21	22	4.5	0.6	U 0.64	15.7	5.4	0.93
	12/2/2015	U 0.21	16.3	J 2.9	J 0.36	U 0.64	12.5	4.4	0.45
	6/14/2016	U 0.21	9.3	J 2.1	U 0.22	U 0.64	7	2.5	0.26

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HHS		5	70	5	NA	NA	5	5	2
MW-17	8/25/2016	U 0.042	5.6	J 0.34	U 0.055	U 0.08	4	1.4	J 0.14
	11/30/2016	U 0.042	8.4	J 1.5	U 0.055	U 0.08	3.2	1.4	U 0.098
	4/18/2017	U 0.042	6.5	J 0.23	U 0.055	U 0.08	4.5	2	U 0.098
	6/14/2017	U 0.042	7.4	J 0.57	U 0.055	U 0.08	3.8	2	U 0.098
	9/20/2017	U 0.13	4.9	U 1.2	U 0.14	U 1.1	3.7	1.5	U 0.096
	12/4/2017	U 0.13	5.6	U 1.2	U 0.14	U 1.1	3.8	1.6	U 0.096
	3/27/2018	U 0.13	6	U 1.2	U 0.14	U 1.1	4	1.7	U 0.096
	8/21/2018	U 0.1	16.2	6.2	0.55	U 0.16	3.5	2.1	U 0.092
	10/16/2018	U 0.1	17.2	7.7	0.59	U 0.16	4.5	2.6	J 0.13
	11/28/2018	U 0.1	18.7	9.4	0.79	U 0.16	6.2	3.2	0.35
	3/27/2019	U 0.1	25.4	14.6	0.89	U 0.16	8.9	3.6	0.43
	6/13/2019	U 0.1	27.5	14.2	0.93	U 0.16	10	4.7	0.56
	9/23/2019	U 0.1	21.4	12.6	0.81	U 0.16	6.7	3.9	0.3
	12/2/2019	U 0.1	24.4	12.3	0.85	U 0.48	8.9	4.4	0.3
	3/23/2020	U 0.12	21.2	8.4	0.72	U 0.16	8.5	3.8	0.29
	6/23/2020	U 0.12	21.6	6.9	0.81	U 0.16	9.8	4.2	0.36
	9/21/2020	U 0.0941	15.1	4.11	0.549	U 0.96	8.87	3.65	U 0.234
	12/1/2020	U 0.0941	15.6	3.6	0.672	U 0.96	8.04	3.28	U 0.234
	3/19/2021	U 0.0941	14	2.82	0.524	U 0.96	7.59	3.16	U 0.234
	6/22/2021	U 0.0941	11.1	J 1.82	J 0.398	U 0.96	7.45	2.92	U 0.234
	12/14/2021	U 0.0941	9.82	J 1.61	J 0.325	U 0.96	5.72	1.96	U 0.234
	6/22/2022	U 0.0941	6.83	J 1.01	UJ- 0.226	U 0.96	4.25	1.71	UJ 0.234
MW-18	5/2/2014	0.66	18.5	U 2	0.56	U 0.34	0.87	J 0.38	3.3

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HHS		5	70	5	NA	NA	5	5	2
MW-18	8/20/2014	1.3	19	U 2	0.65	U 0.34	0.94	0.49	2.5
	12/9/2014	1.3	17.1	U 2	U 0.087	U 0.34	0.51	0.5	3.9
	6/16/2015	1.1	13.4	U 0.56	J 0.37	U 0.64	J 0.23	0.47	3.2
	12/2/2015	0.93	9.6	U 0.56	J 0.34	U 0.64	U 0.19	0.42	3.9
	6/14/2016	0.94	6.8	U 0.56	U 0.22	U 0.64	U 0.19	J 0.29	3.5
	8/25/2016	1.2	7.2	U 0.097	U 0.055	U 0.08	U 0.13	J 0.3	5
	11/30/2016	0.85	4.1	U 0.097	U 0.055	U 0.08	U 0.13	J 0.35	4.1
	4/18/2017	1.1	4.3	U 0.097	U 0.055	U 0.08	U 0.13	J 0.27	5.4
	6/15/2017	J 0.48	1.5	U 0.097	U 0.055	U 0.08	U 0.13	J 0.3	2.1
	9/21/2017	0.61	2.5	U 1.2	U 0.14	U 1.1	U 0.16	J 0.32	2.4
	12/4/2017	0.78	2.4	U 1.2	U 0.14	U 1.1	U 0.16	J 0.29	3.9
	3/27/2018	0.71	2.2	U 1.2	U 0.14	U 1.1	U 0.16	J 0.25	3.9
	8/21/2018	J 0.41	1.1	U 0.98	U 0.17	U 0.16	U 0.17	U 0.15	1.5
	10/16/2018	0.6	1.5	U 0.98	U 0.17	J 0.47	U 0.17	J 0.29	2.7
	11/28/2018	0.67	1.7	U 0.98	U 0.17	U 0.16	U 0.17	J 0.32	3.8
	3/27/2019	1.2	1.9	U 0.98	U 0.17	U 0.16	U 0.17	J 0.27	4.6
	6/10/2019	J 0.18	J 0.16	U 0.98	U 0.17	U 0.16	U 0.17	U 0.15	0.47
	9/23/2019	J 0.42	0.84	U 0.98	U 0.17	U 0.16	U 0.17	U 0.15	1.8
	12/3/2019	J 0.45	1	U 0.98	U 0.17	U 0.48	U 0.17	U 0.15	2.2
	3/23/2020	J 0.45	1.2	U 2	U 0.14	U 0.16	U 0.093	U 0.11	2.7
	6/22/2020	J 0.31	1.2	U 2	U 0.14	U 0.16	U 0.093	J 0.24	1.5
	9/21/2020	0.525	0.784	U 0.43	U 0.1	U 0.96	U 0.3	J 0.218	2.38
	12/1/2020	J 0.436	0.712	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	1.91

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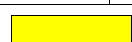
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HHS		5	70	5	NA	NA	5	5	2
MW-18	3/19/2021	J 0.354	0.704	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	1.72
	6/22/2021	J 0.271	0.634	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	U 0.234
	12/14/2021	J 0.251	0.55	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	1.4
	6/22/2022	U 0.0941	J 0.381	U 0.43	U 0.1	U 0.96	U 0.3	J 0.199	UJ 0.234
MW-19	3/26/2014	J 0.24	U 0.23	U 2	U 0.25	U 0.5	0.77	U 0.13	U 0.1
	5/1/2014	U 0.073	U 0.11	U 2	U 0.077	U 0.34	0.8	U 0.084	U 0.2
	8/20/2014	J 0.14	U 0.11	U 2	U 0.077	U 0.34	1.2	U 0.084	U 0.082
	12/10/2014	U 0.073	U 0.11	U 2	U 0.087	U 0.34	1.1	U 0.084	U 0.082
	6/18/2015	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	0.87	U 0.14	U 0.081
	12/1/2015	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	0.9	U 0.14	U 0.081
	6/15/2016	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	0.72	U 0.14	U 0.081
	11/28/2016	U 0.042	U 0.12	U 0.097	U 0.055	U 0.08	0.76	U 0.044	U 0.098
	6/15/2017	J 0.15	U 0.12	U 0.097	U 0.055	U 0.08	0.72	U 0.044	U 0.098
	11/29/2017	U 0.13	U 0.2	U 1.2	U 0.14	U 1.1	0.88	U 0.18	U 0.096
	8/20/2018	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	0.73	U 0.15	U 0.092
	11/27/2018	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	0.68	U 0.15	U 0.092
	6/12/2019	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	0.82	U 0.15	U 0.092
	12/4/2019	J 0.11	U 0.15	U 0.98	U 0.17	U 0.48	0.68	U 0.15	U 0.092
	6/23/2020	U 0.12	U 0.2	U 2	U 0.14	U 0.16	0.66	U 0.11	U 0.098
	12/1/2020	J 0.113	U 0.126	U 0.43	U 0.1	U 0.96	0.716	U 0.19	U 0.234
	6/22/2021	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	0.515	U 0.19	U 0.234
	12/14/2021	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	0.628	U 0.19	U 0.234
	6/22/2022	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	0.591	U 0.19	UJ 0.234

Notes: µg/L - micrograms per liter
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NA - Not Applicable U - Less than

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Sampling Location	Sampling Date	LABORATORY PARAMETERS							
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HHS		5	70	5	NA	NA	5	5	2
MW-20	3/25/2014	U 0.24	J 0.32	U 2	U 0.25	U 0.5	10.6	J 0.34	U 0.1
	5/2/2014	J 0.69	J 0.15	U 2	U 0.077	U 0.34	9.4	J 0.33	U 0.2
	8/19/2014	J 0.14	0.95	U 2	U 0.077	U 0.34	14.5	0.76	U 0.082
	12/9/2014	U 0.073	1	U 2	U 0.087	U 0.34	13.8	0.91	U 0.082
	6/17/2015	U 0.21	0.8	U 0.56	U 0.22	U 0.64	9.6	0.55	U 0.081
	12/1/2015	U 0.21	1.2	U 0.56	U 0.22	U 0.64	11.7	0.7	U 0.081
	6/15/2016	U 0.21	0.91	U 0.56	U 0.22	U 0.64	9.9	0.66	U 0.081
	8/25/2016	U 0.042	0.7	U 0.097	U 0.055	U 0.08	11.5	0.55	U 0.084
	11/30/2016	U 0.042	J 0.43	U 0.097	U 0.055	U 0.08	7.3	J 0.39	U 0.098
	4/17/2017	U 0.042	J 0.44	U 0.097	U 0.055	U 0.08	6.5	J 0.4	U 0.098
	6/15/2017	U 0.042	J 0.43	U 0.097	U 0.055	U 0.08	8.5	0.47	U 0.098
	9/21/2017	U 0.13	J 0.29	U 1.2	U 0.14	U 1.1	6.7	J 0.39	U 0.096
	12/4/2017	U 0.13	J 0.32	U 1.2	U 0.14	U 1.1	5.7	J 0.22	U 0.096
	3/27/2018	U 0.13	U 0.2	U 1.2	U 0.14	U 1.1	8.1	J 0.39	U 0.096
	8/22/2018	U 0.1	U 0.15	U 0.98	U 0.17	J 0.33	8.3	J 0.34	U 0.092
	10/16/2018	U 0.1	J 0.16	U 0.98	U 0.17	J 0.24	7.4	0.41	U 0.092
	11/27/2018	U 0.1	J 0.25	U 0.98	U 0.17	U 0.16	6.7	J 0.32	U 0.092
	3/27/2019	U 0.1	J 0.18	U 0.98	U 0.17	U 0.16	6.5	J 0.22	U 0.092
	6/13/2019	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	7.1	J 0.27	U 0.092
	9/23/2019	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	3.8	U 0.15	U 0.092
	12/3/2019	U 0.1	U 0.15	U 0.98	U 0.17	U 0.48	6.8	J 0.16	U 0.092
	3/23/2020	U 0.12	J 0.23	U 2	U 0.14	U 0.16	6.7	J 0.17	U 0.098
	6/23/2020	U 0.12	U 0.2	U 2	U 0.14	U 0.16	5	J 0.2	U 0.098

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HHS		5	70	5	NA	NA	5	5	2
MW-20	9/22/2020	U 0.0941	J 0.183	U 0.43	U 0.1	U 0.96	4.41	JL0 0.208	U 0.234
	12/1/2020	U 0.0941	J 0.255	U 0.43	U 0.1	U 0.96	5.06	J 0.267	U 0.234
	3/19/2021	U 0.0941	J 0.22	U 0.43	U 0.1	U 0.96	3.69	J 0.245	U 0.234
	6/22/2021	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	4.51	U 0.19	U 0.234
	12/14/2021	U 0.0941	J 0.19	U 0.43	U 0.1	U 0.96	4.08	U 0.19	U 0.234
	6/22/2022	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	2.71	J 0.194	UJ 0.234
MW-21	3/28/2014	U 0.24	U 0.23	U 2	U 0.25	U 0.5	U 0.25	U 0.13	U 0.1
	5/1/2014	U 0.073	U 0.11	U 2	U 0.077	U 0.34	U 0.099	U 0.084	U 0.2
	8/20/2014	J 0.18	U 0.11	U 2	U 0.077	U 0.34	U 0.099	U 0.084	U 0.082
	12/10/2014	U 0.073	U 0.11	U 2	U 0.087	U 0.34	U 0.12	U 0.084	U 0.082
	12/1/2015	J 0.24	U 0.25	U 0.56	U 0.22	U 0.64	U 0.19	U 0.14	U 0.081
	11/28/2017	J 0.13	U 0.2	U 1.2	U 0.14	U 1.1	U 0.16	U 0.18	U 0.096
	11/27/2018	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	U 0.17	U 0.15	U 0.092
	12/4/2019	U 0.1	U 0.15	U 0.98	U 0.17	U 0.48	U 0.17	U 0.15	U 0.092
	12/2/2020	J 0.113	U 0.126	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	U 0.234
	6/22/2021	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	U 0.234
	12/15/2021	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	U 0.234
	6/22/2022	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	UJ 0.234
MW-22	3/27/2014	J 0.33	U 0.23	U 2	U 0.25	U 0.5	U 0.25	U 0.13	U 0.1
	5/1/2014	U 0.073	U 0.11	U 2	U 0.077	U 0.34	U 0.099	U 0.084	U 0.2
	8/20/2014	J 0.46	U 0.11	U 2	U 0.077	U 0.34	U 0.099	U 0.084	U 0.082
	12/10/2014	J 0.32	U 0.11	U 2	U 0.087	U 0.34	U 0.12	U 0.084	U 0.082

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HHS		5	70	5	NA	NA	5	5	2
MW-22	12/1/2015	J 0.22	U 0.25	U 0.56	U 0.22	U 0.64	U 0.19	U 0.14	U 0.081
	11/28/2017	U 0.13	U 0.2	U 1.2	U 0.14	U 1.1	U 0.16	U 0.18	U 0.096
	11/27/2018	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	U 0.17	U 0.15	U 0.092
	12/4/2019	J 0.13	U 0.15	U 0.98	U 0.17	U 0.48	U 0.17	U 0.15	U 0.092
	12/2/2020	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	U 0.234
	6/22/2021	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	U 0.234
	12/15/2021	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	U 0.234
	6/22/2022	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	UJ 0.234
MW-23	3/27/2014	J 0.24	U 0.23	U 2	U 0.25	U 0.5	U 0.25	U 0.13	U 0.1
	5/1/2014	J 0.2	U 0.11	U 2	U 0.077	U 0.34	U 0.099	U 0.084	U 0.2
	8/20/2014	U 0.073	U 0.11	U 2	U 0.077	U 0.34	U 0.099	U 0.084	U 0.082
	12/10/2014	J 0.33	U 0.11	U 2	U 0.087	U 0.34	U 0.12	U 0.084	U 0.082
	12/1/2015	J 0.32	U 0.25	U 0.56	U 0.22	U 0.64	U 0.19	U 0.14	U 0.081
	11/28/2017	J 0.24	U 0.2	U 1.2	U 0.14	U 1.1	U 0.16	U 0.18	U 0.096
	11/27/2018	J 0.22	U 0.15	U 0.98	U 0.17	U 0.16	U 0.17	U 0.15	U 0.092
	12/4/2019	J 0.2	U 0.15	U 0.98	U 0.17	U 0.48	U 0.17	U 0.15	U 0.092
	12/2/2020	J 0.16	U 0.126	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	U 0.234
	6/22/2021	J 0.142	U 0.126	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	U 0.234
	12/15/2021	J 0.12	U 0.126	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	U 0.234
	6/22/2022	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	UJ 0.234
MW-24	3/25/2014	U 0.24	U 0.23	U 2	U 0.25	U 0.5	J 0.3	U 0.13	U 0.1
	5/2/2014	U 0.073	U 0.11	U 2	U 0.077	U 0.34	J 0.36	U 0.084	U 0.2

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HHS		5	70	5	NA	NA	5	5	2
MW-24	8/21/2014	U 0.073	U 0.11	U 2	U 0.077	U 0.34	0.57	U 0.084	U 0.082
	12/8/2014	U 0.073	U 0.11	U 2	U 0.087	U 0.34	1.7	U 0.084	U 0.082
	6/18/2015	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	1.1	U 0.14	U 0.081
	12/1/2015	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	1	U 0.14	U 0.081
	6/16/2016	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	0.66	U 0.14	U 0.081
	8/25/2016	U 0.042	U 0.12	U 0.097	U 0.055	U 0.08	0.56	U 0.051	U 0.084
	11/28/2016	U 0.042	U 0.12	U 0.097	U 0.055	U 0.08	1.1	U 0.044	U 0.098
	6/15/2017	U 0.042	U 0.12	U 0.097	U 0.055	U 0.08	1.2	U 0.044	U 0.098
	11/28/2017	U 0.13	U 0.2	U 1.2	U 0.14	U 1.1	1.7	U 0.18	U 0.096
	8/22/2018	U 0.1	U 0.15	U 0.98	U 0.17	J 0.95	2.8	U 0.15	U 0.092
	11/27/2018	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	3	U 0.15	U 0.092
	6/13/2019	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	2	U 0.15	U 0.092
	12/3/2019	U 0.1	U 0.15	U 0.98	U 0.17	U 0.48	0.8	U 0.15	U 0.092
	6/23/2020	U 0.12	U 0.2	U 2	U 0.14	U 0.16	J 0.37	U 0.11	U 0.098
	12/2/2020	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	0.755	U 0.19	U 0.234
	6/22/2021	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	0.726	U 0.19	U 0.234
	12/14/2021	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	0.852	U 0.19	U 0.234
	6/22/2022	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	0.558	U 0.19	UJ 0.234
MW-25	5/2/2014	U 0.073	U 0.11	U 2	U 0.077	U 0.34	U 0.099	U 0.084	U 0.2
	8/21/2014	U 0.073	U 0.11	U 2	U 0.077	U 0.34	U 0.099	U 0.084	U 0.082
	12/8/2014	U 0.073	U 0.11	U 2	U 0.087	U 0.34	U 0.12	U 0.084	U 0.082
	11/28/2017	U 0.13	U 0.2	U 1.2	U 0.14	U 1.1	U 0.16	U 0.18	U 0.096
	12/3/2019	U 0.1	U 0.15	U 0.98	U 0.17	U 0.48	U 0.17	U 0.15	U 0.092

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HHS		5	70	5	NA	NA	5	5	2
MW-26	3/27/2014	U 0.24	U 0.23	U 2	U 0.25	U 0.5	U 0.25	U 0.13	U 0.1
	5/1/2014	U 0.073	U 0.11	U 2	U 0.077	U 0.34	U 0.099	U 0.084	U 0.2
	8/21/2014	U 0.073	U 0.11	U 2	U 0.077	U 0.34	U 0.099	U 0.084	U 0.082
	12/11/2014	U 0.073	U 0.11	U 2	U 0.087	U 0.34	U 0.12	U 0.084	U 0.082
	11/28/2017	U 0.13	U 0.2	U 1.2	U 0.14	U 1.1	U 0.16	U 0.18	U 0.096
	12/3/2019	U 0.1	U 0.15	U 0.98	U 0.17	U 0.48	U 0.17	U 0.15	U 0.092
MW-27	1/16/2015	J 0.083	U 0.11	U 2	U 0.087	U 0.34	1.2	U 0.084	U 0.082
	6/18/2015	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	1.4	U 0.14	U 0.081
	6/15/2016	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	1.1	U 0.14	U 0.081
	11/28/2016	U 0.042	U 0.12	U 0.097	U 0.055	U 0.08	0.96	U 0.044	U 0.098
	6/19/2017	U 0.042	U 0.12	U 0.097	U 0.055	U 0.08	0.91	U 0.044	U 0.098
	11/29/2017	U 0.13	U 0.2	U 1.2	U 0.14	U 1.1	1.1	U 0.18	U 0.096
	8/22/2018	U 0.1	U 0.15	U 0.98	U 0.17	J 0.74	0.99	U 0.15	U 0.092
	11/27/2018	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	1.1	U 0.15	U 0.092
	6/13/2019	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	1	U 0.15	U 0.092
	12/4/2019	U 0.1	U 0.15	U 0.98	U 0.17	U 0.48	1.4	U 0.15	U 0.092
	6/24/2020	U 0.12	U 0.2	U 2	U 0.14	U 0.16	1.1	U 0.11	U 0.098
	12/1/2020	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	1.09	U 0.19	U 0.234
	6/22/2021	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	0.992	U 0.19	U 0.234
	12/14/2021	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	1.13	U 0.19	U 0.234
	6/22/2022	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	0.75	U 0.19	UJ 0.234
McILHATTAN SEEP	1/19/1994	U 2	U 1	U 5	U 1	U 1	U 1	U 1	U 1

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HHS		5	70	5	NA	NA	5	5	2
McILHATTAN SEEP	1/19/1994	U 2	1	U 5	U 1	U 1	4	3	U 1
	6/27/1994	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/27/1994	U 1	U 1	U 5	U 1	U 1	5	1	U 1
	1/31/1995	U 1	U* 1	U 5	U* 1	U 1	4	1	U 1
	6/28/1995	U 1	U 1	U 1	U 1	U 1	3	2	U 1
	11/28/1995	U 1	U 1	U* 5	U* 1	U 1	5	1	U 1
	6/26/1996	U 1	U 1	U 5	U 1	U* 1	2	U* 1	U 1
	12/12/1996	U 1	U* 1	U 5	U* 1	U* 1	3	U* 1	U 1
	6/20/1997	U 1	U 1	U 1	U 1	U 2	U 1	U 1	U 2
	12/17/1997	U 1	U 1	U 5	U 1	U 1	1	4	U 1
	6/29/1998	U 1	U(3) 1	8	U(3) 1	U(3) 1	3	1	U 1
	12/15/1998	U 1	U 1	UB 5	U 1	U 1	4	4	U 1
	6/23/1999	U 1	U 1	U 5	U 1	U 1	2	1	U 1
	12/14/1999	U 1	U 1	U 5	U 1	U 1	3	2	U 1
	6/7/2000	U 1	U 1	U 5	U 1	U 1	3	1	U 1
	11/29/2000	U 1	U 1	U 5	U 1	U 1	3	1	U 1
	6/12/2001	U 1	U 1	U 5	U 1	U 1	3	1	U 1
	12/18/2001	U 1	U 1	U 5	U 1	U 1	3	1	U 1
	6/14/2002	U 1	U 1	U 5	U 1	U 1	2	U 1	U 1
	12/12/2002	U 1	U 1	U 5	U 1	U 1	4	1	U 1
	6/10/2003	U 1	U 1	U 5	U 1	U 1	3	U 1	U 1
	12/3/2003	U 1	U 1	U 5	U 1	U 1	2	U 1	UJF% 1
	6/8/2004	U 1	U 1	U 5	U 1	U 1	2	U 1	U 1

Notes: µg/L - micrograms per liter
HHS - Human Health Standard (EPA Maximum Contaminant Level or HHS in Circular DEQ-7, Montana Numeric WQ Stds, June 2019)
NA - Not Applicable U - Less than

 - Value greater than the HHS
Vinyl Chloride concentration highlighted only if greater than 2 micrograms per liter (EPA Maximum Contaminant Level). Montana HHS is greater than 0.2 micrograms per liter (not highlighted).


-- - Not collected/analyzed

J Analyte detected below the reporting limit, therefore result is an estimate.
Other QA/QC data flags are defined in analytical laboratory report.

TABLE 5
Summary of Selected Volatile Organic Compounds
Bozeman Landfill
Bozeman, Montana

Sampling Location	Sampling Date	LABORATORY PARAMETERS							
		Benzene (µg/L)	Cis 1,2-dichloro-ethene (µg/L)	Methylene Chloride (µg/L)	1,1-Dichloro-ethane (µg/L)	Chloro-methane (µg/L)	Tetrachloro-ethene (µg/L)	Trichloro-ethene (µg/L)	Vinyl chloride (µg/L)
HHS		5	70	5	NA	NA	5	5	2
McILHATTAN SEEP	12/6/2004	U 1	U 1	U 5	U 1	U 1	3	U 1	U 1
	6/17/2005	U 1	U 1	U 5	U 1	U 1	2	U 1	U 1
	12/14/2005	U 1	U 1	U 5	U 1	U 1	2	U 1	U 1
	6/12/2006	U 0.5	U 0.5	U 5	U 1	U 1	1.4	U 0.5	U 0.5
	12/7/2006	U 0.5	U 0.5	U 5	U 1	U 1	1.8	0.5	U 0.5
	6/19/2007	U 0.5	U 0.5	U 5	U 1	U 1	0.6	U 0.5	UJF% 0.5
	12/10/2007	U 0.5	U 0.5	U 5	U 1	U 1	1.3	U 0.5	U 0.5
	6/26/2008	U 0.5	U 0.5	U 5	U 1	U 1	0.6	U 0.5	U 0.5
	12/9/2008	U 1	U 1	U 4	U 1	U 1	1.4	U 1	U 0.4
	6/2/2009	U 0.5	U 0.5	U 2	U 0.5	U 2	1.1	U 0.5	U 0.2
	12/4/2009	U 0.5	U 0.5	UB 2	U 0.5	U 2	1.6	U 0.5	U 0.2
	6/16/2010	U 0.5	U 0.5	40.4	U 0.5	U 0.5	1.2	U 0.5	U 0.5
	12/6/2010	U 1	U 1	U 1	U 1	U 1	1.2	U 1	U 1
	6/14/2011	U 0.038	U 0.08	U 2	U 0.072	J 0.061	0.73	J 0.26	U 0.049
	12/6/2011	U 0.047	J 0.13	U 5	U 0.072	U 0.13	1.1	J 0.3	U 0.16
	6/5/2012	U 0.047	J 0.19	U 2	U 0.072	U 0.13	1.1	J 0.32	U 0.16
	12/5/2012	U 0.047	J 0.23	U 2	U 0.072	U 0.13	1.2	J 0.32	U 0.16
	6/12/2013	U 0.24	J 0.3	U 2	U 0.25	U 0.5	1.3	0.41	U 0.2
	12/18/2013	U 0.24	J 0.32	U 2	U 0.25	J 0.7	1.2	J 0.39	U 0.1
	3/28/2014	U 0.24	U 0.23	U 2	U 0.25	U 0.5	1.2	0.41	U 0.1
	8/21/2014	U 0.073	J 0.26	U 2	U 0.077	U 0.34	1.7	J 0.3	U 0.082
	12/10/2014	U 0.073	U 0.11	U 2	U 0.087	U 0.34	U 0.12	U 0.084	U 0.082
	6/15/2015	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	1.2	J 0.37	U 0.081

Notes: µg/L - micrograms per liter
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Vinyl Chloride concentration highlighted only if greater than 2 micrograms per liter (EPA Maximum Contaminant Level). Montana HHS is greater than 0.2 micrograms per liter (not highlighted).


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HHS		5	70	5	NA	NA	5	5	2
McILHATTAN SEEP	12/1/2015	U 0.21	J 0.34	U 0.56	U 0.22	U 0.64	1.2	0.41	U 0.081
	6/16/2016	U 0.21	J 0.39	U 0.56	U 0.22	U 0.64	0.95	J 0.3	U 0.081
	11/28/2016	U 0.042	J 0.39	U 0.097	U 0.055	U 0.08	1	J 0.26	U 0.098
	6/16/2017	U 0.042	J 0.32	U 0.097	U 0.055	U 0.08	0.87	J 0.35	U 0.098
	11/29/2017	U 0.13	J 0.37	U 1.2	U 0.14	U 1.1	1	J 0.22	U 0.096
	8/22/2018	U 0.1	J 0.36	U 0.98	U 0.17	J 0.52	0.96	J 0.25	U 0.092
	11/27/2018	U 0.1	J 0.32	U 0.98	U 0.17	U 0.16	0.83	J 0.25	U 0.092
	6/12/2019	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	0.59	U 0.15	U 0.092
	12/3/2019	U 0.1	J 0.19	U 0.98	U 0.17	U 0.48	0.75	U 0.15	U 0.092
	6/23/2020	U 0.12	J 0.28	U 2	U 0.14	U 0.16	0.69	U 0.11	U 0.098
	12/2/2020	U 0.0941	J 0.186	U 0.43	U 0.1	U 0.96	0.623	U 0.19	U 0.234
	6/22/2021	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	J 0.492	U 0.19	U 0.234
	12/14/2021	U 0.0941	J 0.172	U 0.43	U 0.1	U 0.96	0.62	U 0.19	U 0.234
	6/22/2022	U 0.0941	J 0.178	U 0.43	U 0.1	U 0.96	J 0.423	J 0.199	UJ 0.234
SHOP WELL	6/13/2011	U 0.038	1	U 2	1.6	U 0.021	3.8	2.3	J 0.13
	12/7/2011	U 0.047	0.95	U 5	1.7	U 0.13	3.9	2.2	U 0.16
	6/4/2012	U 0.047	0.64	U 2	1.2	U 0.13	3.7	1.7	U 0.16
	12/4/2012	U 0.047	0.86	U 2	1.7	J 0.21	4.5	2.1	U 0.16
	6/10/2013	U 0.24	0.65	U 2	1.9	U 0.5	4.4	1.7	U 0.2
	12/16/2013	U 0.24	1.5	U 2	3.7	U 0.5	7.3	3	U 0.1
	8/19/2014	U 0.073	1	U 2	2.1	U 0.34	8.7	2.5	U 0.082
	12/8/2014	U 0.073	U 0.11	U 2	2.2	U 0.34	7.2	U 0.084	U 0.082
	12/1/2017	U 0.13	1.1	U 1.2	2.3	U 1.1	5.6	2	U 0.096

Notes: µg/L - micrograms per liter
HHS - Human Health Standard (EPA Maximum Contaminant Level or HHS in Circular DEQ-7, Montana Numeric WQ Stds, June 2019)
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TABLE 5
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Bozeman Landfill
Bozeman, Montana

Sampling Location	Sampling Date	LABORATORY PARAMETERS							
		Benzene (µg/L)	Cis 1,2-dichloro-ethene (µg/L)	Methylene Chloride (µg/L)	1,1-Dichloro-ethane (µg/L)	Chloro-methane (µg/L)	Tetrachloro-ethene (µg/L)	Trichloro-ethene (µg/L)	Vinyl chloride (µg/L)
HHS		5	70	5	NA	NA	5	5	2
SHOP WELL	12/3/2019	U 0.1	1.1	U 0.98	1.8	U 0.48	5.8	1.8	U 0.092
	12/13/2021	U 0.0941	1.18	U 0.43	2.28	U 0.96	5.07	1.49	U 0.234
SNOWFILL WELL	12/10/2014	U 0.073	U 0.11	U 2	U 0.087	U 0.34	U 0.12	U 0.084	U 0.082
VET CLINIC WELL	1/19/1994	U 2	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/28/1994	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	1/31/1995	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/28/1995	U 1	U 1	U 1	U 1	U 1	4	2	U 1
	11/28/1995	U 1	U 1	U* 5	U 1	U 1	U 1	U 1	U 1
	6/26/1996	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/12/1996	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/20/1997	U 1	U 1	U 1	U 1	U 2	U 1	U 1	U 2
	12/17/1997	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/30/1998	U 1	U 1	U(3) 5	U 1	U 1	U 1	U 1	U 1
	12/15/1998	U 1	U 1	UB 5	U 1	U 1	U 1	U 1	U 1
	6/23/1999	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/14/1999	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/7/2000	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	11/28/2000	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/12/2001	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/18/2001	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/14/2002	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/12/2002	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1

Notes: µg/L - micrograms per liter
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Sampling Location	Sampling Date	LABORATORY PARAMETERS							
		Benzene (µg/L)	Cis 1,2-dichloro-ethene (µg/L)	Methylene Chloride (µg/L)	1,1-Dichloro-ethane (µg/L)	Chloro-methane (µg/L)	Tetrachloro-ethene (µg/L)	Trichloro-ethene (µg/L)	Vinyl chloride (µg/L)
HHS		5	70	5	NA	NA	5	5	2
VET CLINIC WELL	6/10/2003	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/4/2003	U 1	U 1	U 5	U 1	U 1	U 1	U 1	UJF% 1
	6/8/2004	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/6/2004	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/17/2005	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	12/14/2005	U 1	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	6/12/2006	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	U 0.5	U 0.5
	12/7/2006	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	U 0.5	U 0.5
	6/21/2007	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	U 0.5	UJF% 0.5
	12/12/2007	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	U 0.5	U 0.5
	6/25/2008	U 0.5	U 0.5	U 5	U 1	U 1	U 0.5	U 0.5	U 0.5
	12/9/2008	U 1	U 1	U 4	U 1	U 1	U 1	U 1	U 0.4
	6/2/2009	U 0.5	U 0.5	U 2	U 0.5	U 2	U 0.5	U 0.5	U 0.2
	12/10/2009	U 0.5	U 0.5	UB 2	U 0.5	U 2	U 0.5	U 0.5	U 0.2
	6/16/2010	U 0.5	U 0.5	38.1	U 0.5	U 0.5	U 0.5	U 0.5	U 0.5
	12/8/2010	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1
	6/15/2011	U 0.038	U 0.08	U 2	U 0.072	U 0.021	U 0.041	U 0.05	U 0.049
	12/7/2011	U 0.047	U 0.08	U 5	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
	6/5/2012	U 0.047	U 0.08	U 2	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
	12/6/2012	U 0.047	U 0.08	U 2	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
	6/12/2013	U 0.24	U 0.23	U 2	U 0.25	U 0.5	U 0.25	U 0.12	U 0.2
	12/18/2013	U 0.24	U 0.23	U 2	U 0.25	U 0.5	U 0.25	U 0.13	U 0.1
	8/21/2014	U 0.073	U 0.11	U 2	U 0.077	U 0.34	U 0.099	U 0.084	U 0.082

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Sampling Location	Sampling Date	LABORATORY PARAMETERS							
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HHS		5	70	5	NA	NA	5	5	2
VET CLINIC WELL	12/10/2014	U 0.073	U 0.11	U 2	U 0.087	U 0.34	U 0.12	U 0.084	U 0.082
	6/15/2015	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	U 0.19	U 0.14	U 0.081
	12/1/2015	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	U 0.19	U 0.14	U 0.081
	6/16/2016	U 0.21	U 0.25	U 0.56	U 0.22	U 0.64	U 0.19	U 0.14	U 0.081
	11/28/2016	U 0.042	U 0.12	U 0.097	U 0.055	U 0.08	U 0.13	U 0.044	U 0.098
	6/16/2017	U 0.042	U 0.12	U 0.097	U 0.055	U 0.08	U 0.13	U 0.044	U 0.098
	11/29/2017	U 0.13	U 0.2	U 1.2	U 0.14	U 1.1	U 0.16	U 0.18	U 0.096
	8/22/2018	U 0.1	U 0.15	U 0.98	U 0.17	J 1.2	U 0.17	U 0.15	U 0.092
	11/27/2018	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	U 0.17	U 0.15	U 0.092
	6/12/2019	U 0.1	U 0.15	U 0.98	U 0.17	U 0.16	U 0.17	U 0.15	U 0.092
	12/3/2019	U 0.1	U 0.15	U 0.98	U 0.17	U 0.48	U 0.17	U 0.15	U 0.092
	6/23/2020	U 0.12	U 0.2	U 2	U 0.14	U 0.16	U 0.093	U 0.11	U 0.098
	12/2/2020	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	U 0.234
	6/22/2021	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	U 0.234
	12/14/2021	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	U 0.234
	6/22/2022	U 0.0941	U 0.126	U 0.43	U 0.1	U 0.96	U 0.3	U 0.19	U 0.234

Notes: µg/L - micrograms per liter
HHS - Human Health Standard (EPA Maximum Contaminant Level or HHS in Circular DEQ-7, Montana Numeric WQ Stds, June 2019)
NA - Not Applicable U - Less than

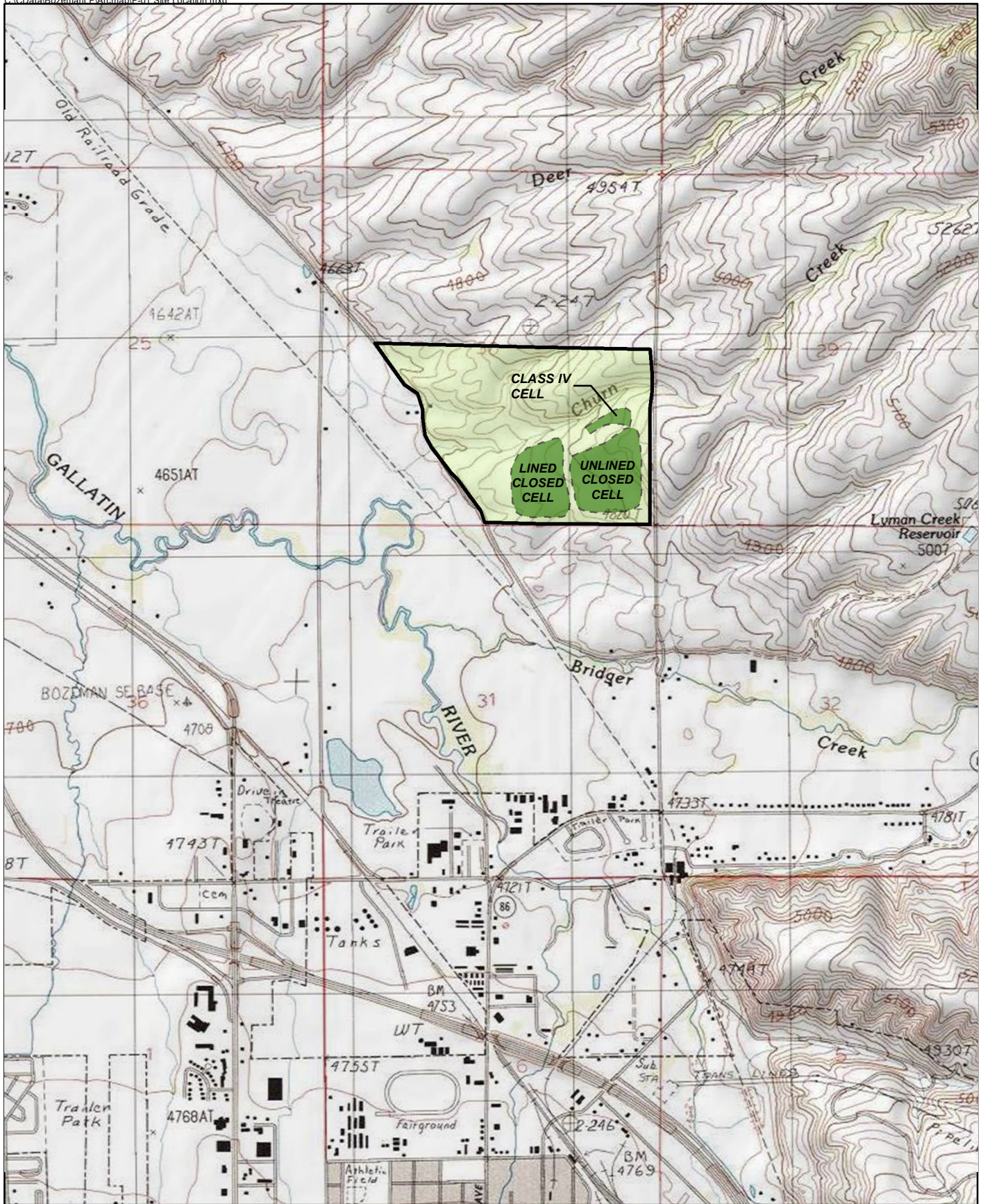
- Value greater than the HHS

Vinyl Chloride concentration highlighted only if greater than 2 micrograms per liter (EPA Maximum Contaminant Level). Montana HHS is greater than 0.2 micrograms per liter (not highlighted).

-- - Not collected/analyzed

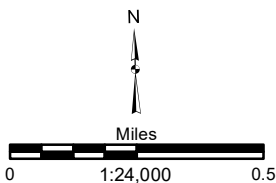
J Analyte detected below the reporting limit, therefore result is an estimate.
Other QA/QC data flags are defined in analytical laboratory report.

FIGURES

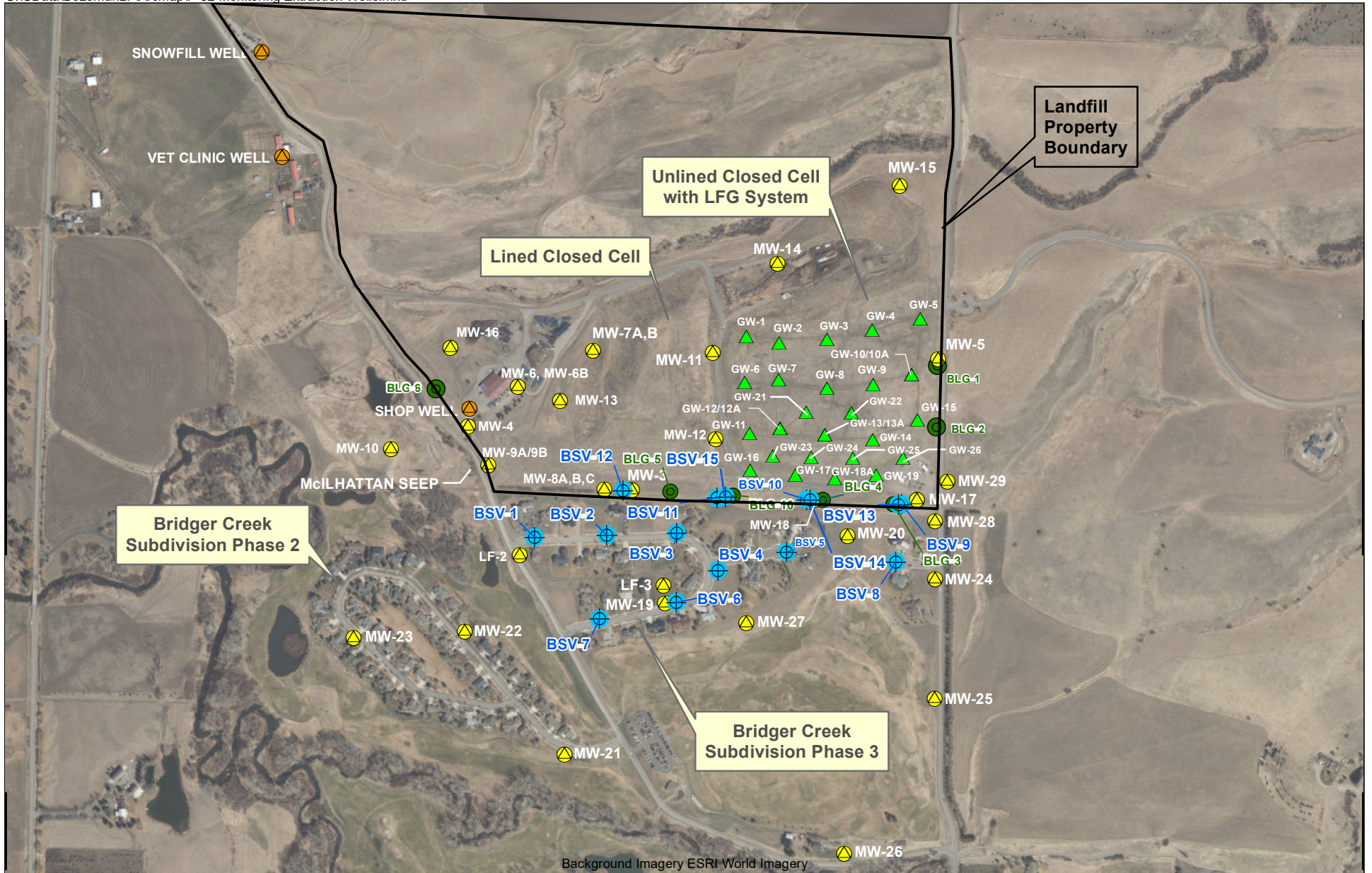


114-710326H.600
9/28/2022

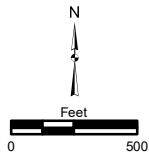
Background Image ESRI USA_Topo



Site Location Map
Bozeman Landfill
Bozeman, Montana
Figure 1

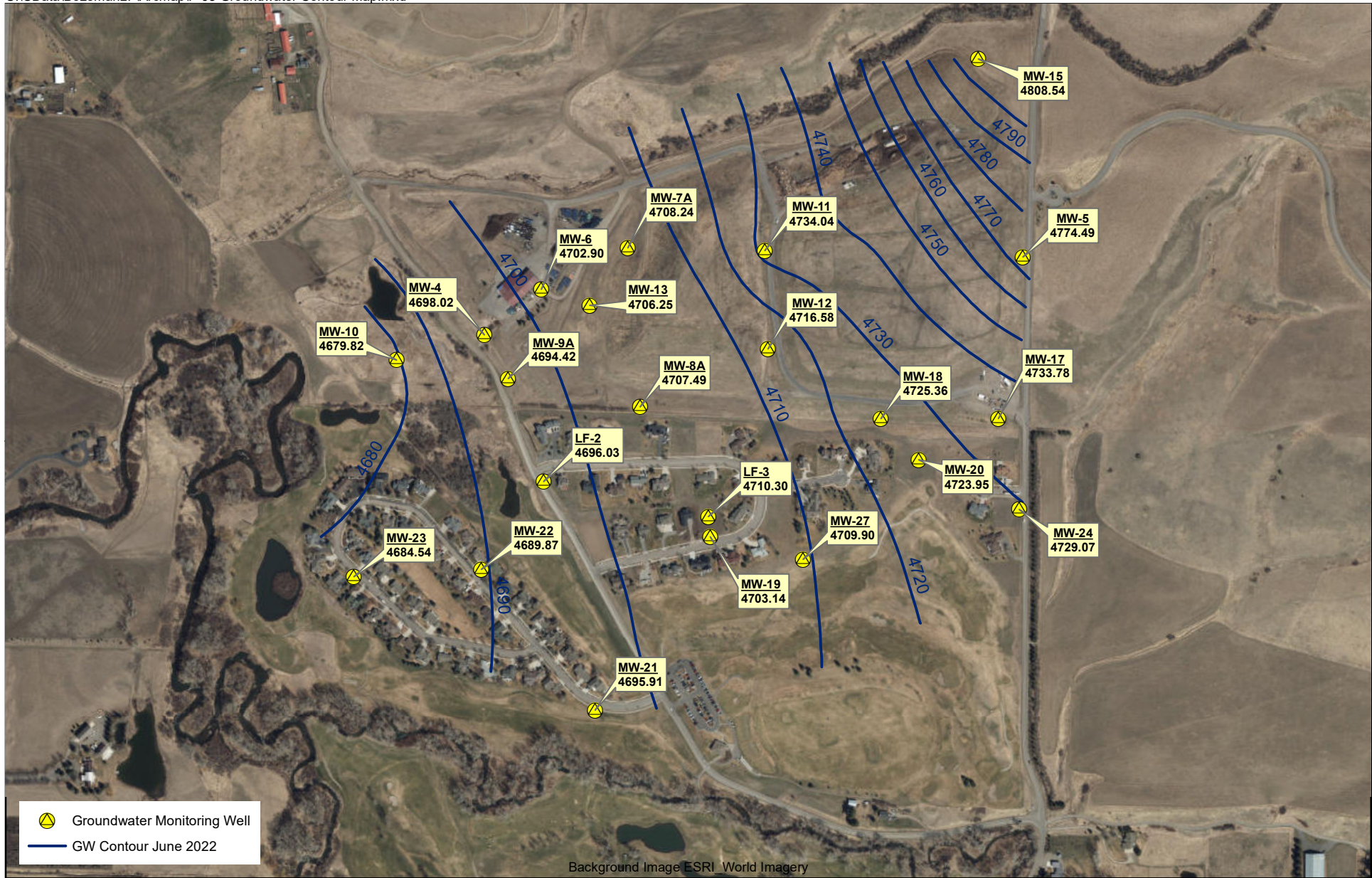


114-710326H.600
9/28/2022

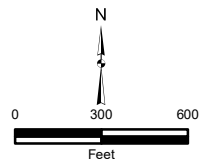


-  Soil Gas Probe
-  Groundwater Monitoring Well
-  Water Supply Well
-  Methane Monitoring Well
-  Landfill Gas (LFG) Extraction Well

**Site Plan with Monitoring Stations
and Extraction Wells
Bozeman Landfill
Bozeman, Montana
FIGURE 2**

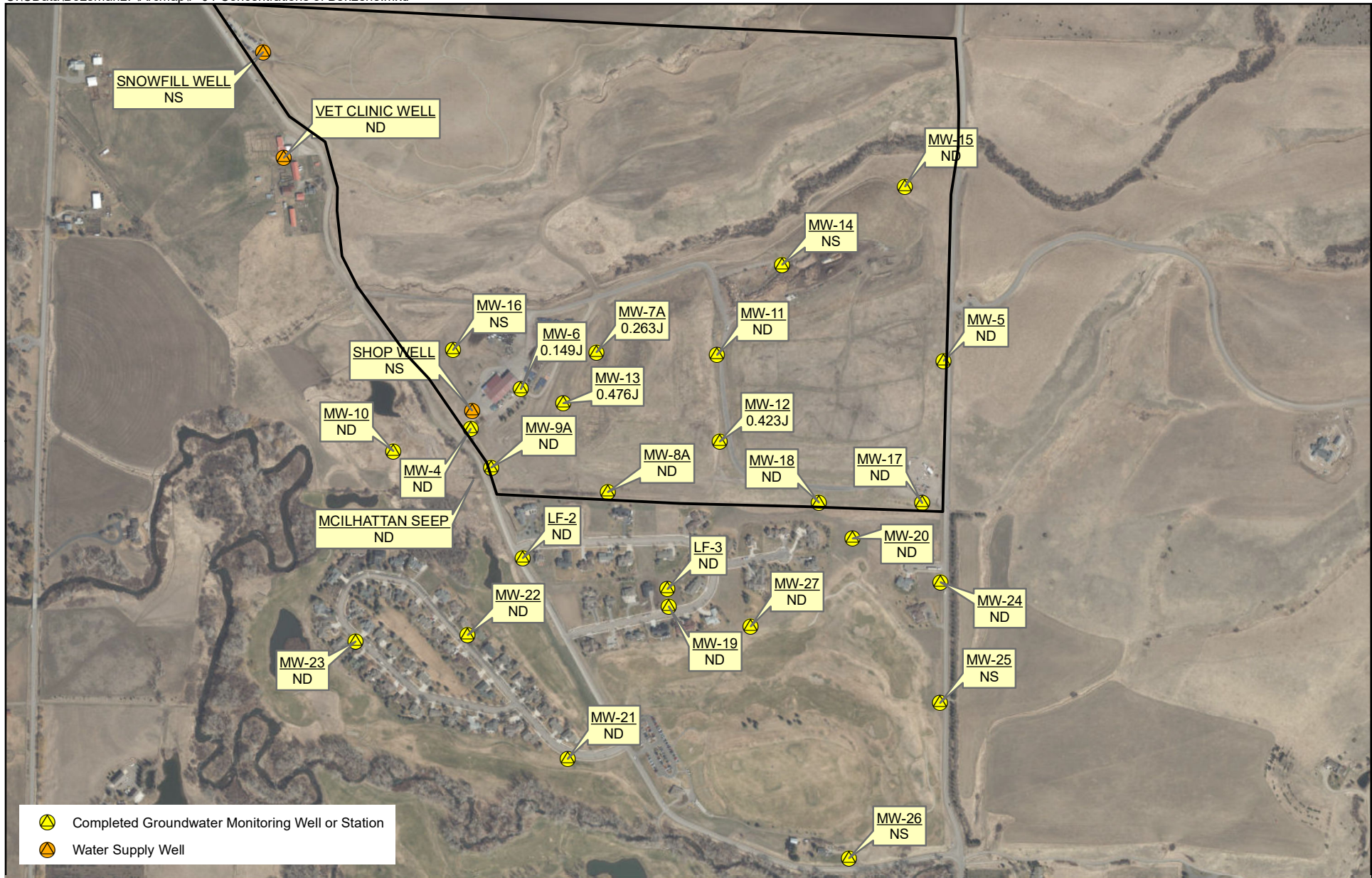


114-710326H.600
9/30/2022

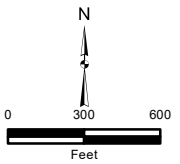


NOTE:
All well locations are approximate.
Only those wells used for preparation of groundwater contour map are shown

Groundwater Contour Map
June 2022
Bozeman Landfill
Bozeman, Montana
FIGURE 3

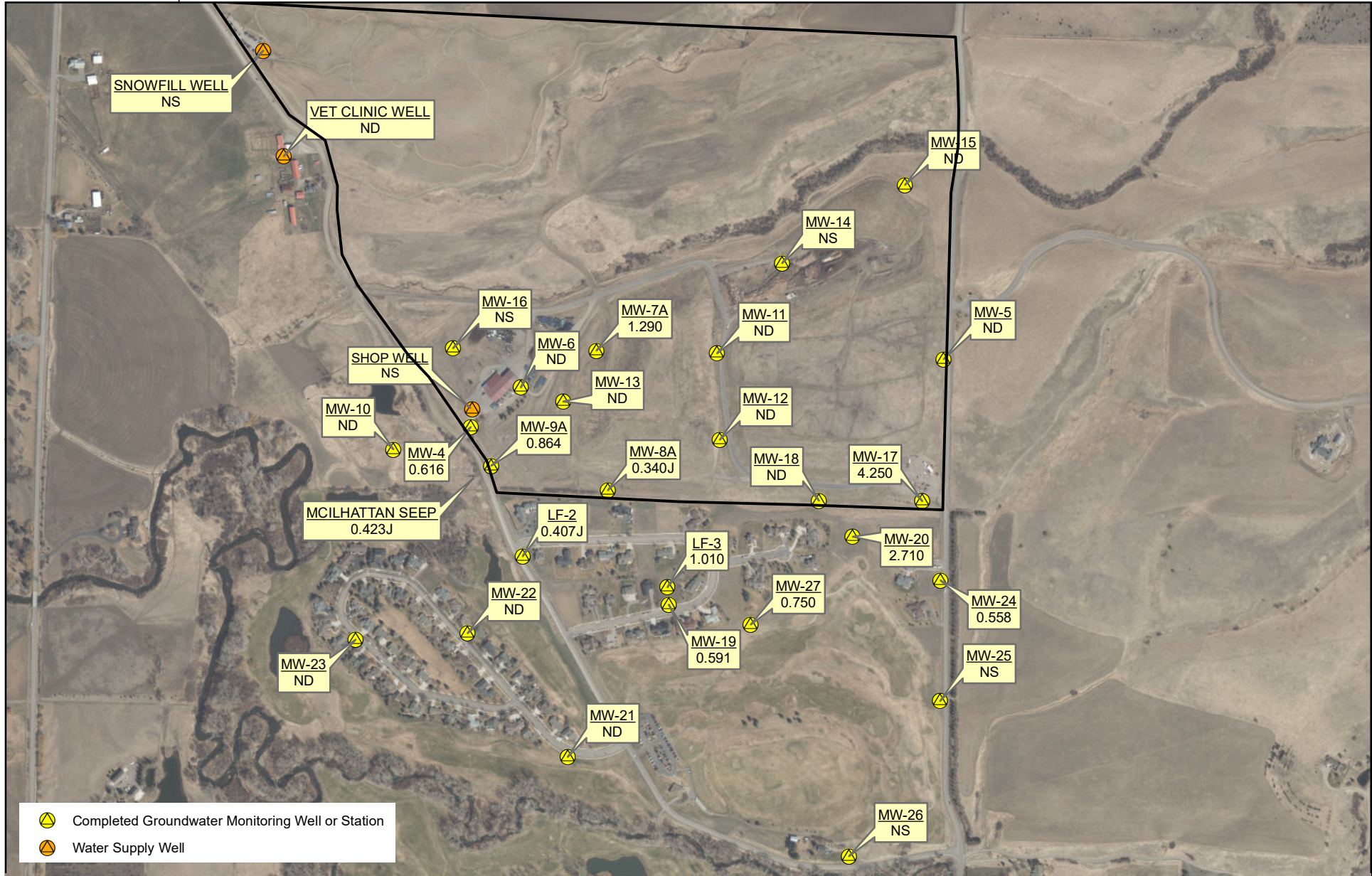


114-710326H.600
9/28/2022

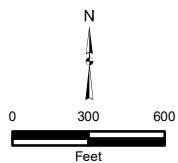


NOTE:
All well locations are approximate
June 2022 Benzene Concentration
J: Indicates Estimated Concentration (less than analytical practical quantitation limit)
Concentration in micrograms per liter
ND: Not Detected Above Minimum Detection Limit
NS: Not Sampled
Bolded concentrations of constituent indicate exceedance of groundwater protection standard

**Concentrations of Benzene in
Groundwater
June 2022
Bozeman Landfill
Bozeman, Montana
FIGURE 4**

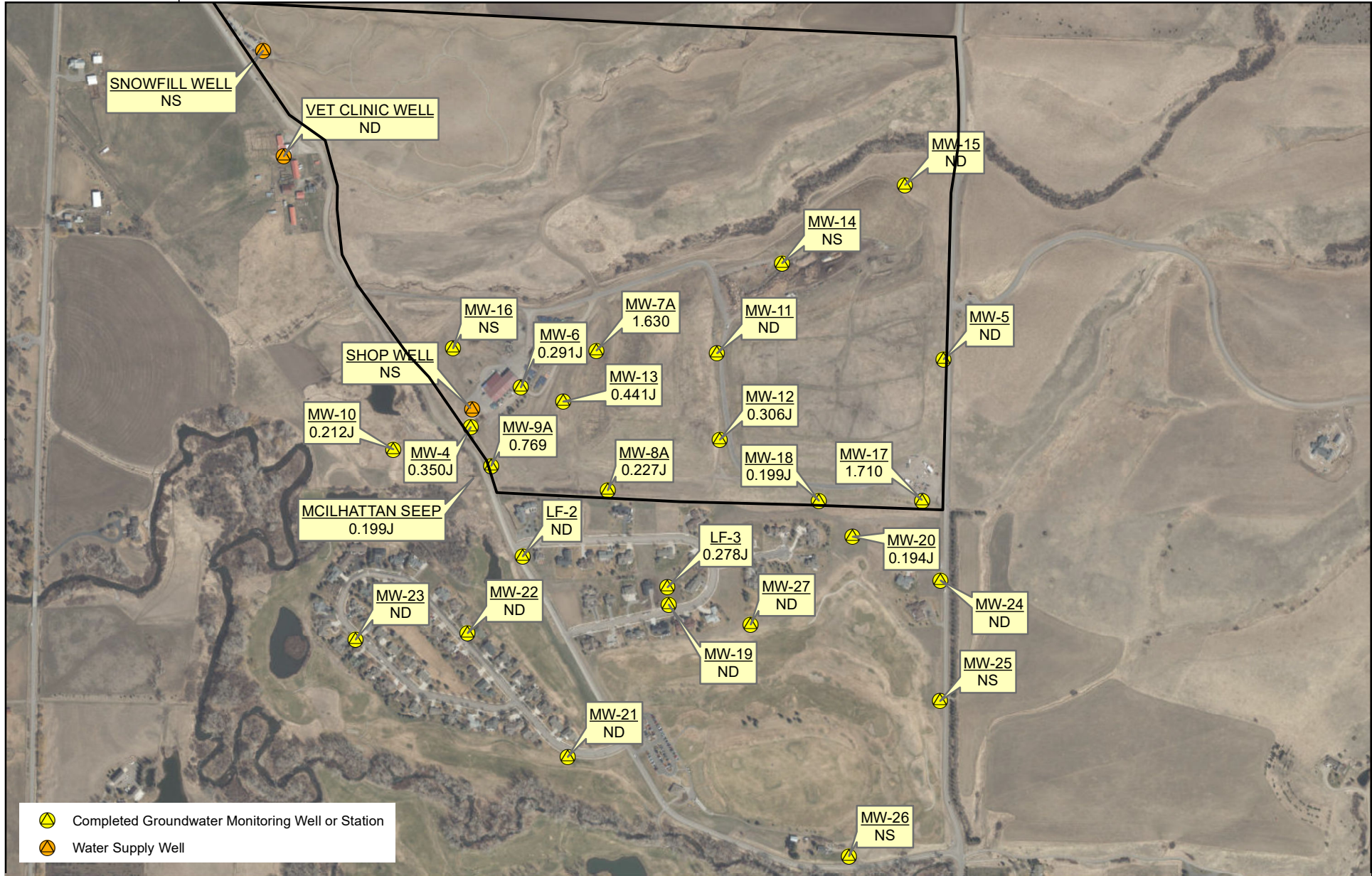


114-710326H.600
9/28/2022

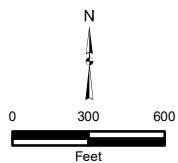


NOTE:
All well locations are approximate
June 2022 Tetrachloroethene Concentration
J: Indicates Estimated Concentration (less than analytical practical quantitation limit)
Concentration in micrograms per liter
ND: Not Detected Above Minimum Detection Limit
NS: Not Sampled
Bolded concentrations of constituent indicate exceedance of groundwater protection standard

**Concentrations of Tetrachloroethene in
Groundwater
June 2022
Bozeman Landfill
Bozeman, Montana
FIGURE 5**

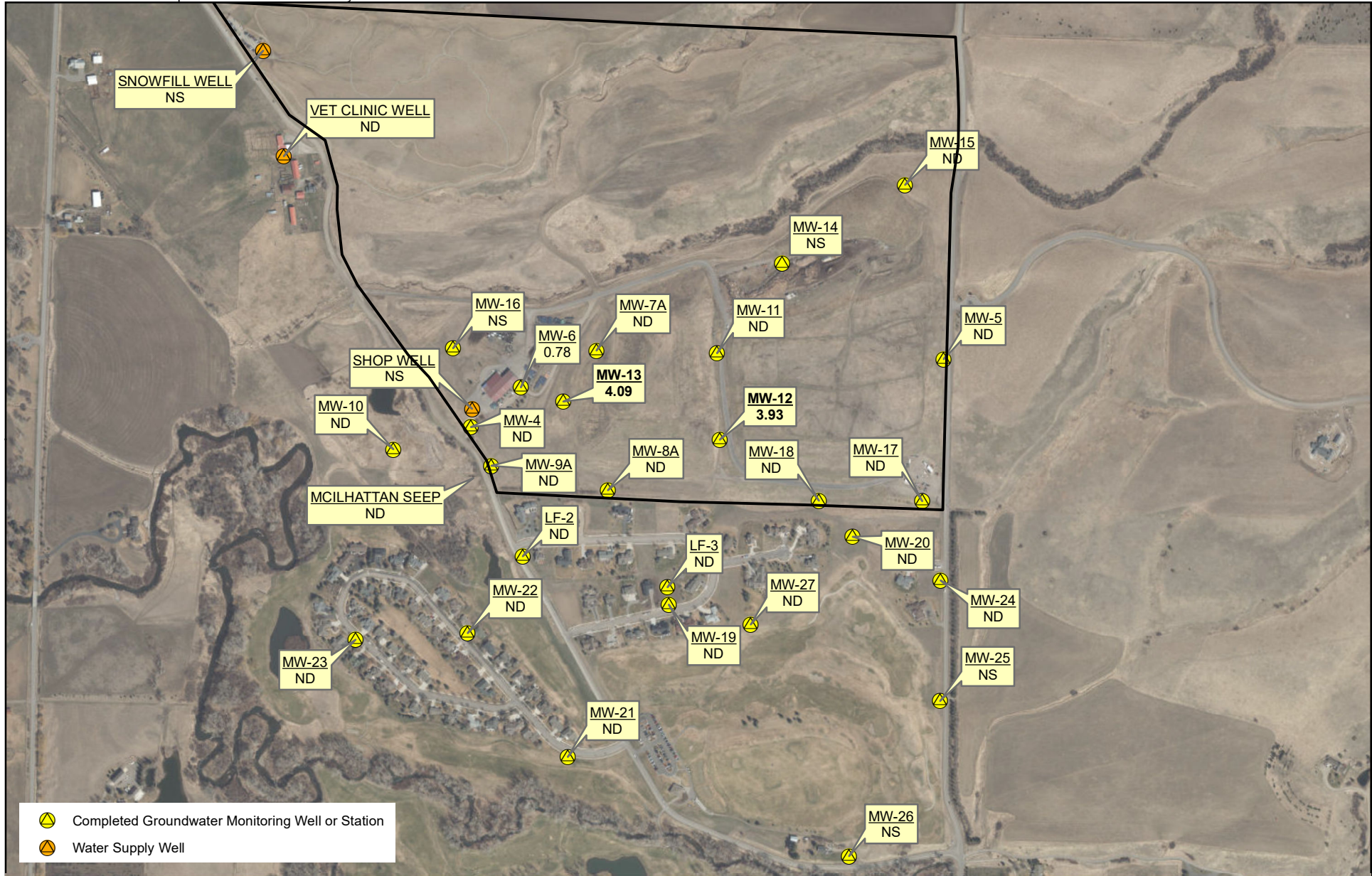


114-710326H.600
9/28/2022

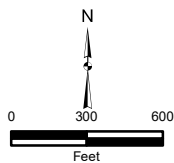


NOTE:
All well locations are approximate
June 2022 Trichloroethene Concentration
J: Indicates Estimated Concentration (less than analytical practical quantitation limit)
Concentration in micrograms per liter
ND: Not Detected Above Minimum Detection Limit
NS: Not Sampled
Bolded concentrations of constituent indicate exceedance of groundwater protection standard

**Concentrations of Trichloroethene in
Groundwater
June 2022
Bozeman Landfill
Bozeman, Montana
FIGURE 6**

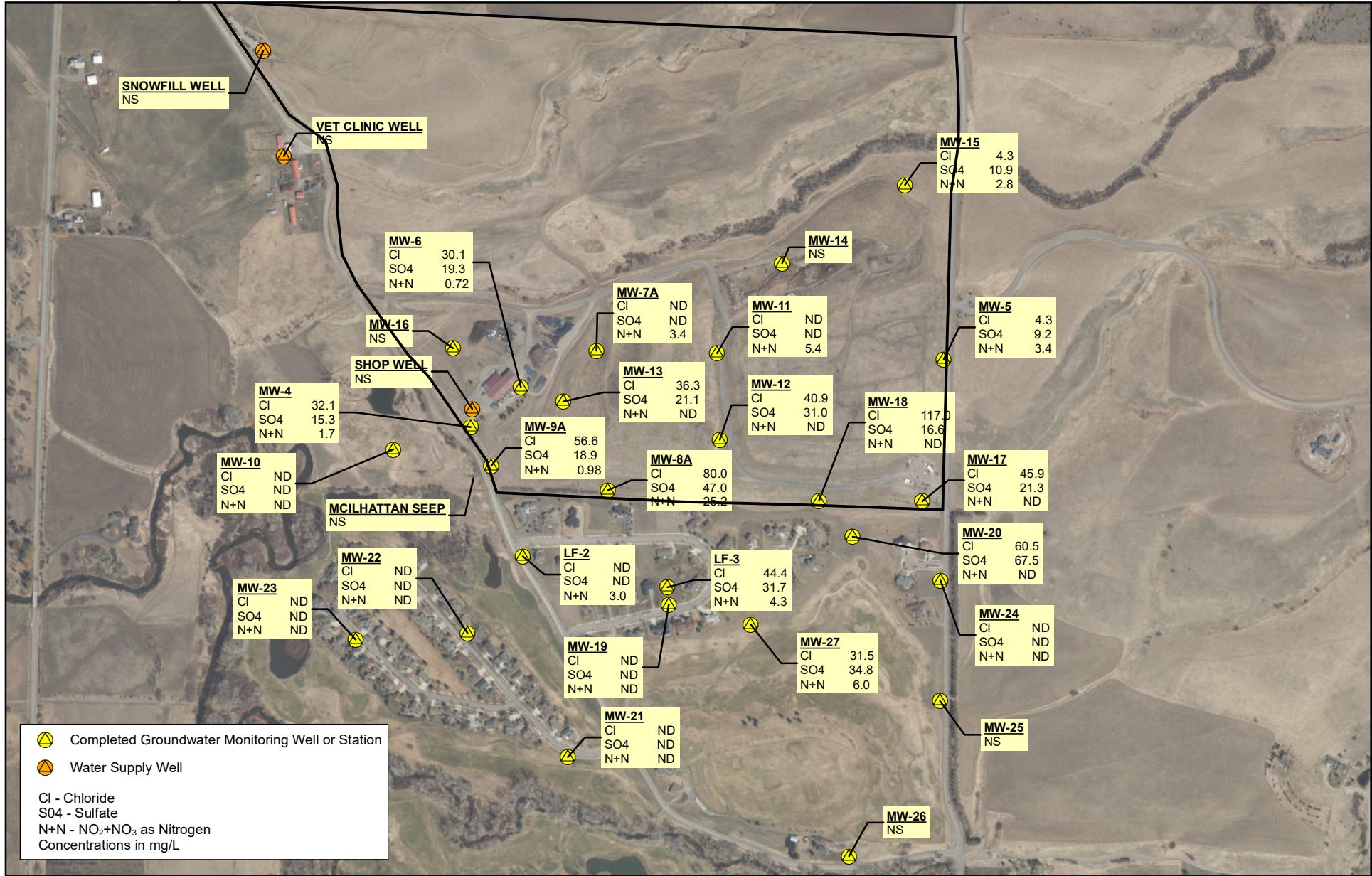


114-710326H.600
9/28/2022

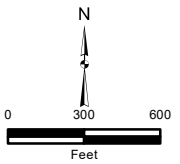


NOTE:
All well locations are approximate
June 2022 Vinyl Chloride Concentration
J: Indicates Estimated Concentration (less than analytical practical quantitation limit)
Concentration in micrograms per liter
ND: Not Detected Above Minimum Detection Limit
NS: Not Sampled
Bolded concentrations of constituent indicate exceedance of groundwater protection standard

**Concentrations of Vinyl Chloride in
Groundwater
June 2022
Bozeman Landfill
Bozeman, Montana
FIGURE 7**



114-710326H.600
9/28/2022



NOTE:
All well locations are approximate
Jun 2022 Chloride, Sulfate and Nitrogen Concentrations
J: Indicates Estimated Concentration (less than analytical practical quantitation limit)
ND: Not Detected Above Minimum Detection Limit
NS: Not Sampled
Bolded concentrations of constituent indicate exceedance of groundwater protection standard

**Concentrations of Chloride, Sulfate and Nitrogen in Groundwater
June 2022
Bozeman Landfill
Bozeman, Montana
FIGURE 8**

APPENDIX A – GROUNDWATER DATA OVER TIME

CHART A-1
Groundwater Elevations Through Time

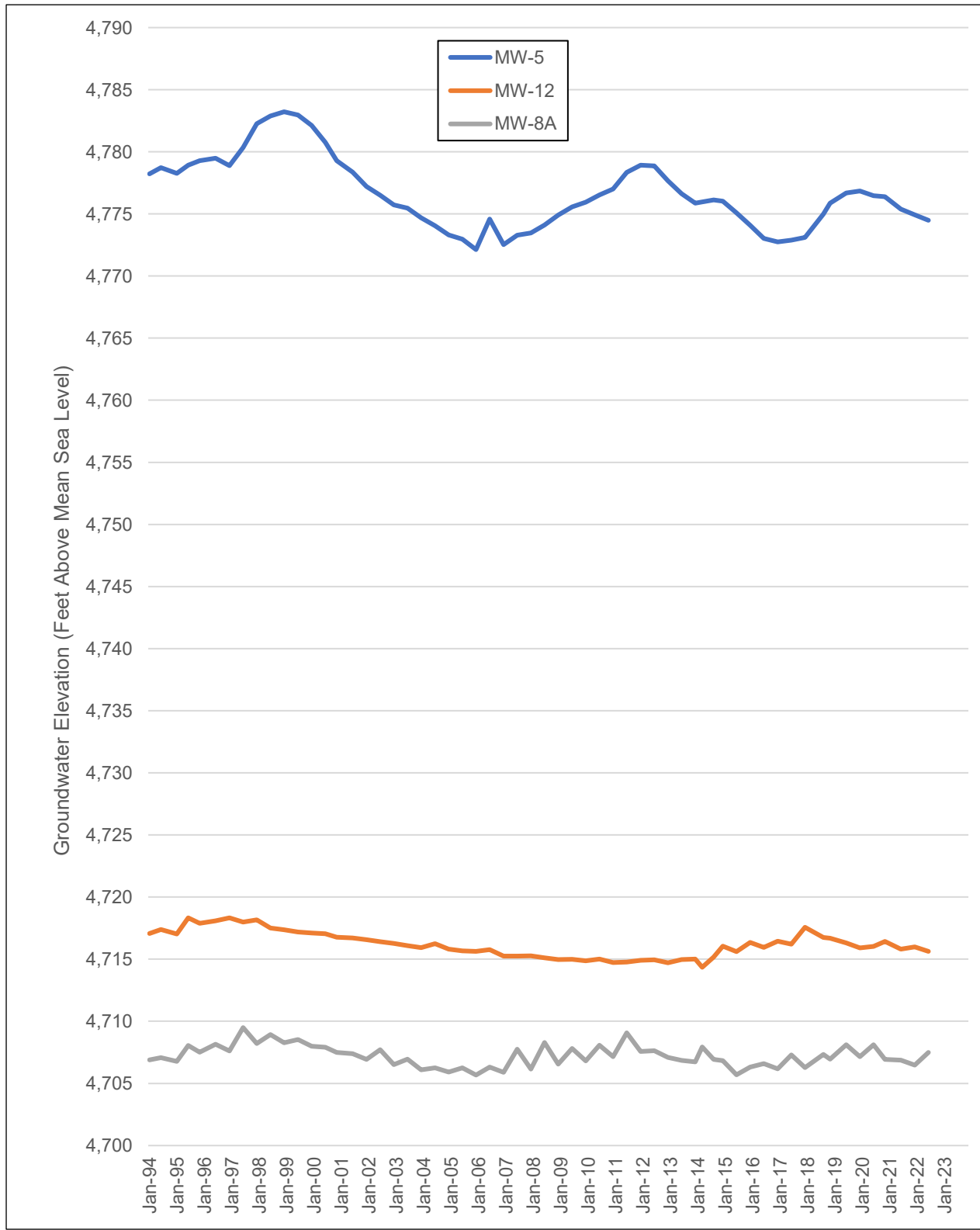


CHART A-2
MW-12 Volatile Organic Compound Concentrations and Groundwater Elevation Over Time

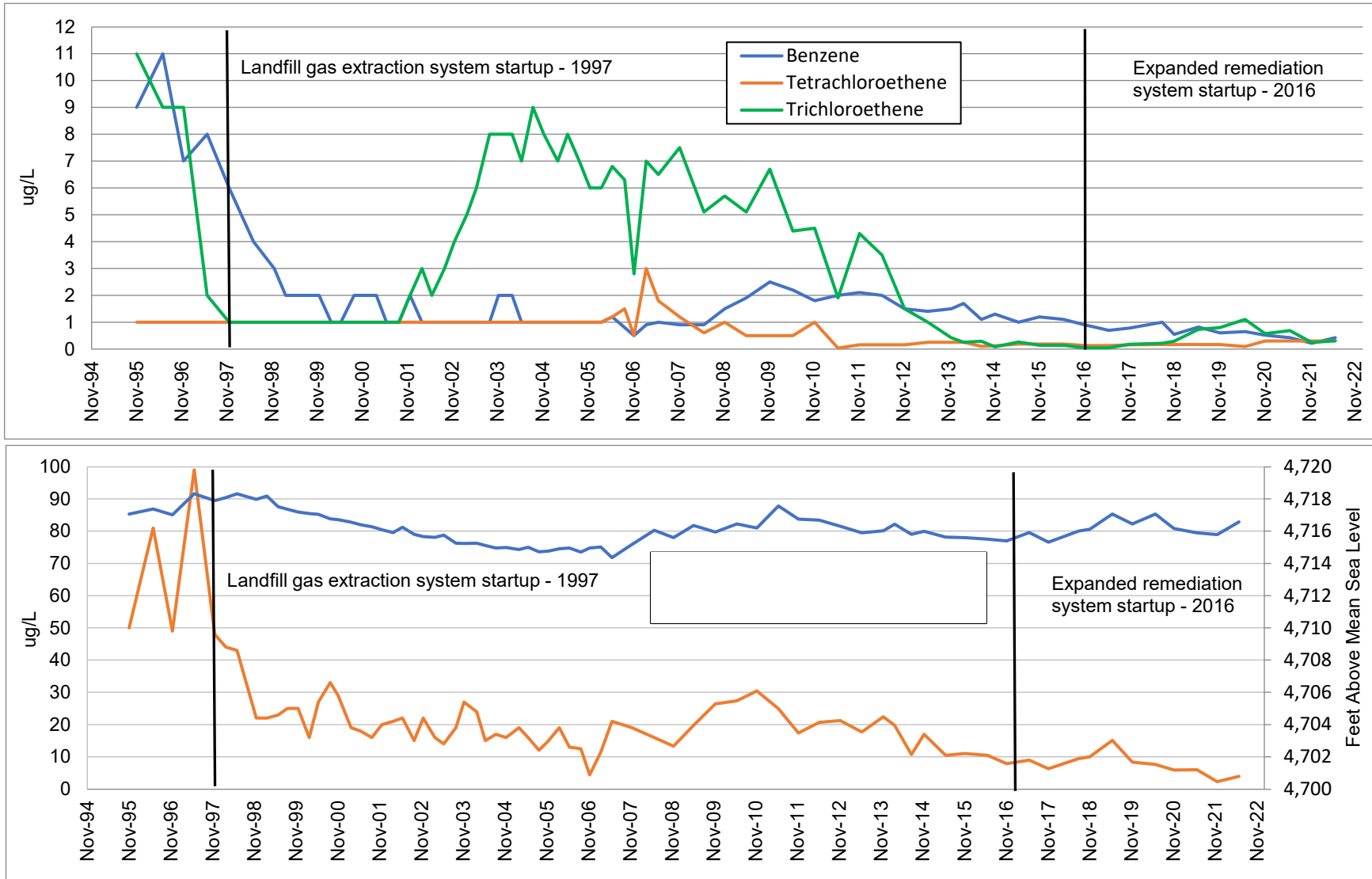


CHART A-3
MW-13 Volatile Organic Compound Concentrations and Groundwater Elevation Over Time

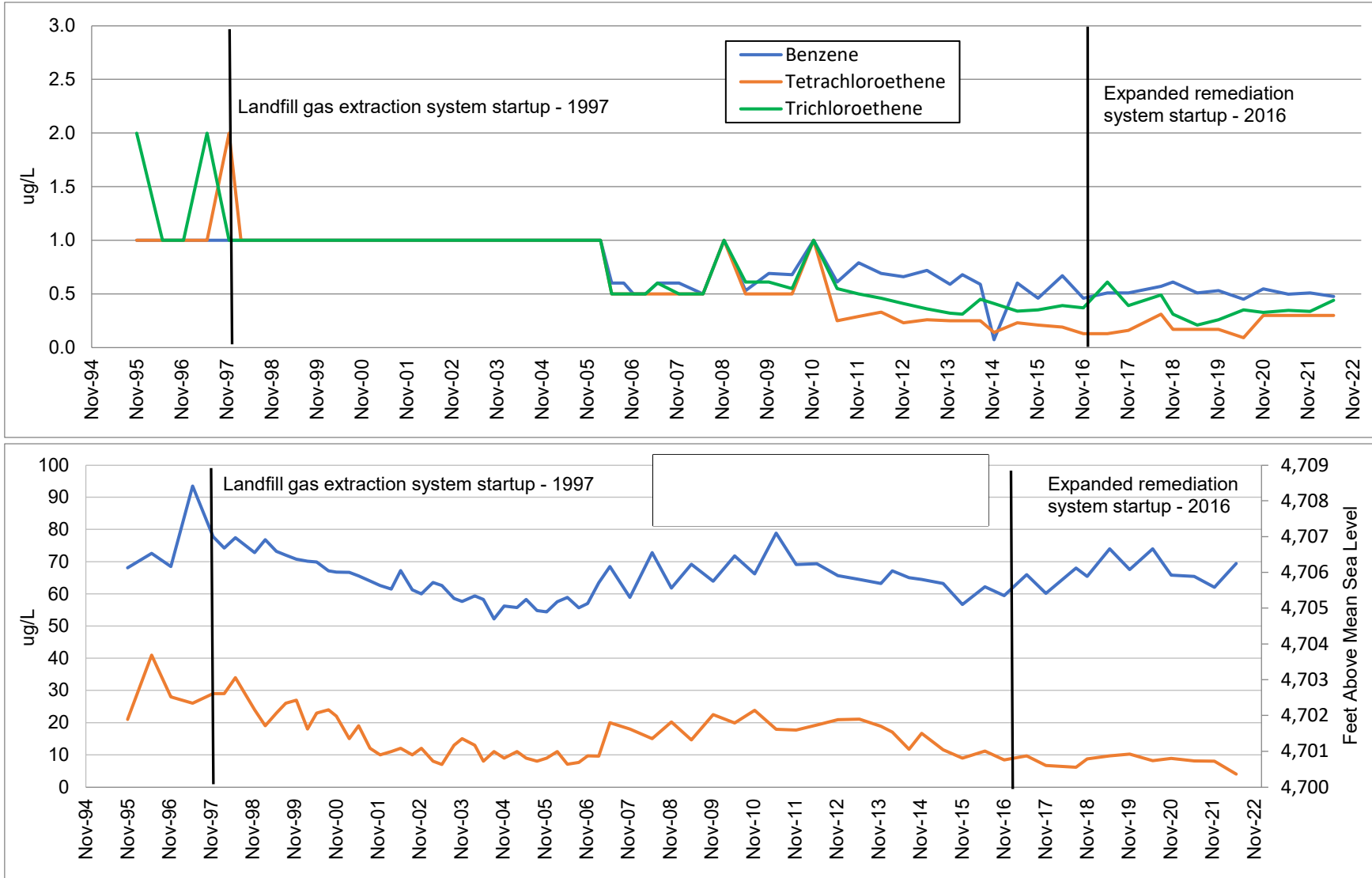


CHART A-4
MW-6 Volatile Organic Compound Concentrations and Groundwater Elevation Over Time

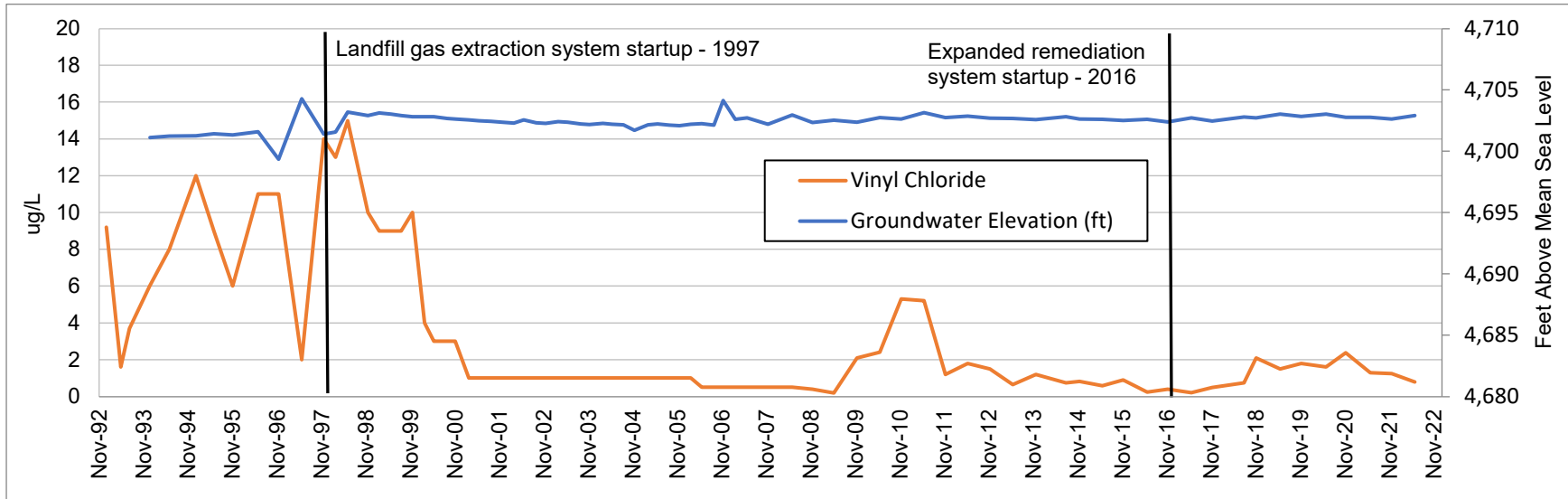
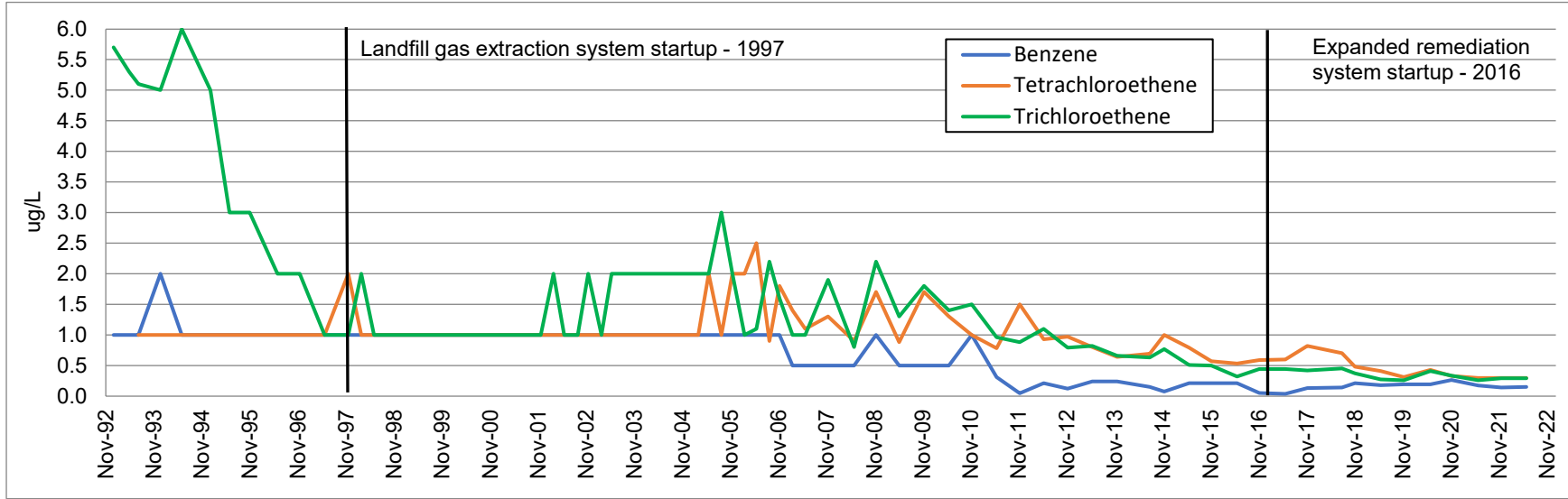


CHART A-5
MW-8A Volatile Organic Compound Concentrations and Groundwater Elevation Over Time

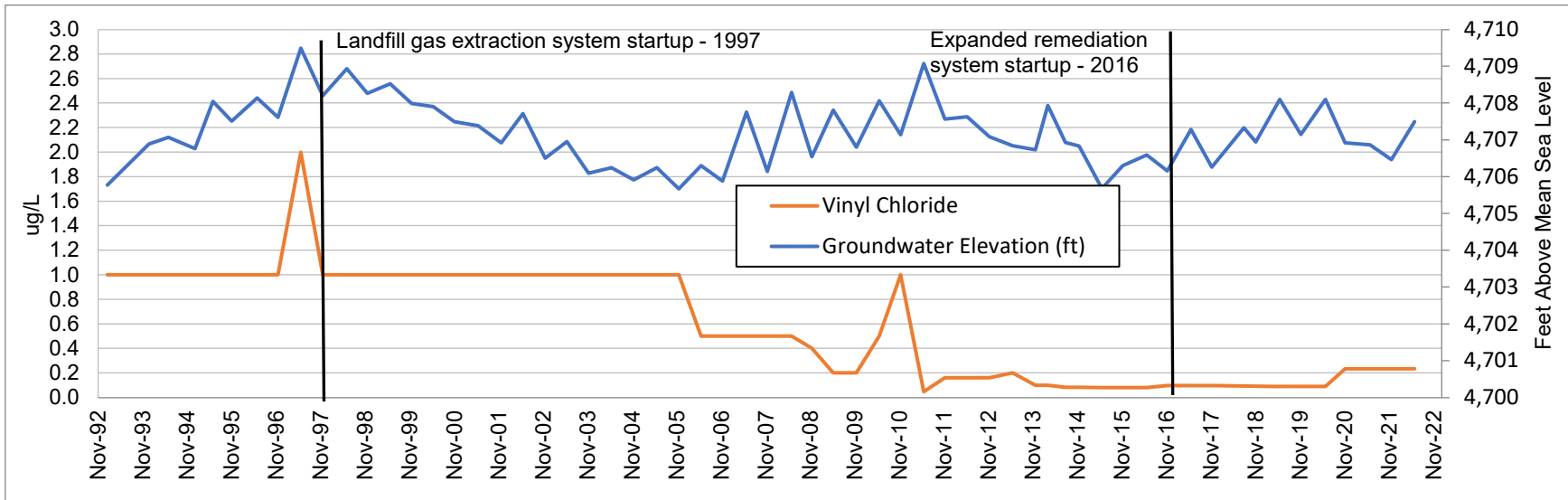
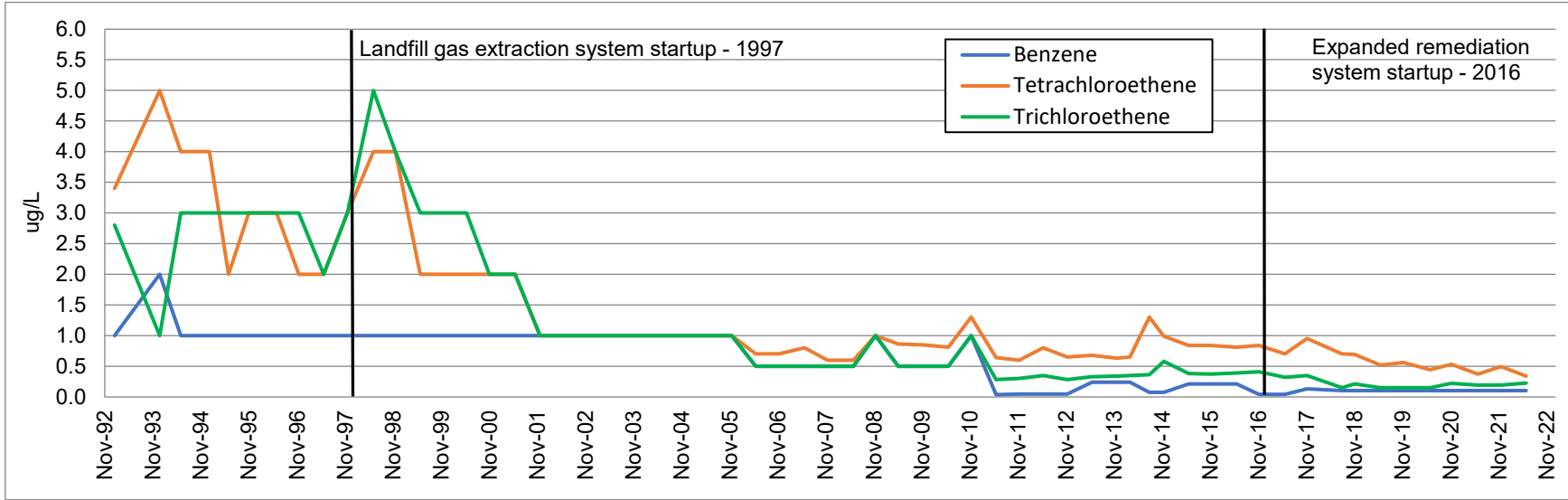
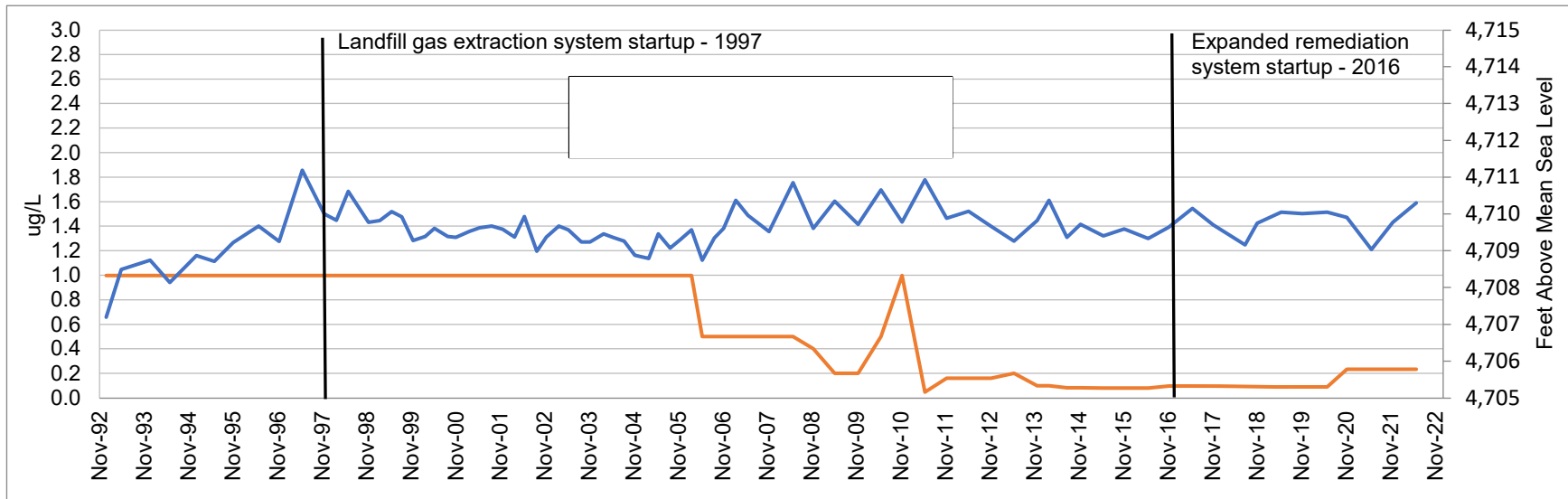
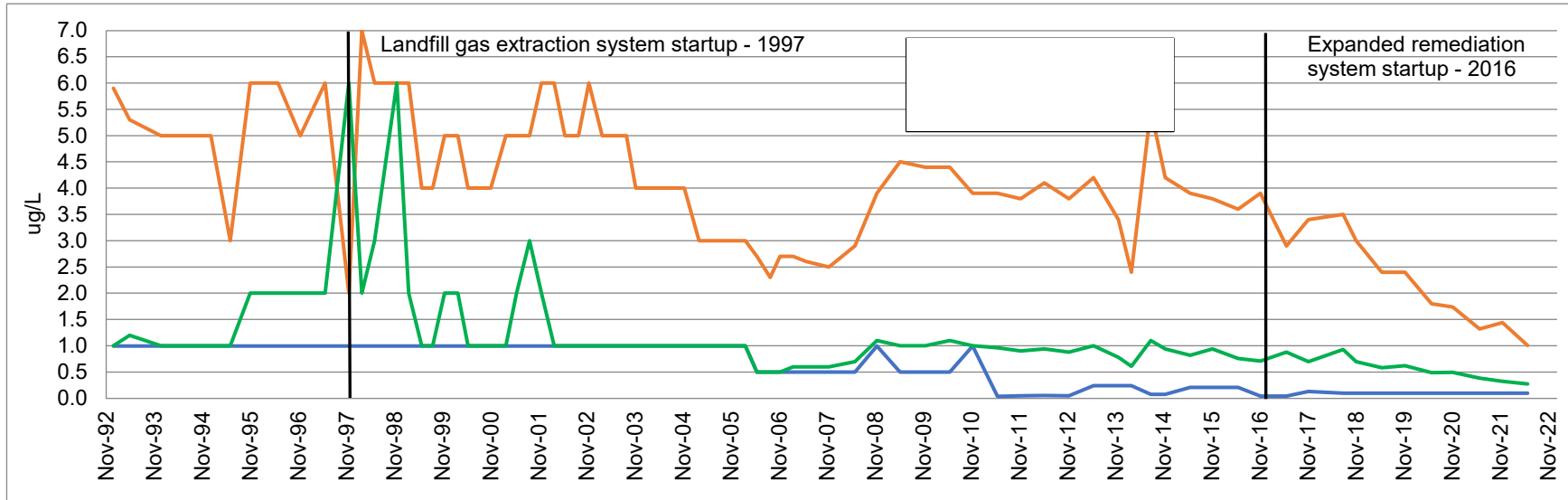


CHART A-6
LF-3 Volatile Organic Compound Concentrations and Groundwater Elevation Over Time



APPENDIX B – SAMPLING LOGS AND FIELD NOTES

Groundwater Sampling Log

Project: B2N Landfill Sample Date: 6-21-22 Sample Time: 17:30 Well ID: LF-2
 Personnel: SM MM Weather: Hot & sunny
 Casing Diameter/Type: 4" Measuring Point Description: TOL
 Well Depth (feet below measuring point): 19.6 Depth to Water: 13.47 ft water
 Screen: _____ Depth to Product _____
 J-TUBE: YES or NO If yes indicate the depth below static water the tube was raised to Before Sampling: _____

WELL EVACUATION

Method: Mechanical Bailer, Galvanized Bailer, PVC Bailer, Disp. Polyethylene Bailer, SST Bailer, Submersible Pump, Low Flow, Per Pump
6.13 Ft. water x _____ gal./ft * = one casing volume 4.0 gals. x 3 = purge volume 12 gals.
 SCH 40 Pipe * 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Any Well C feet in radius = 3.14 x R²

Water Quality: _____ ODOR: YES or NO SHEEN: YES or NO
 Comments: _____

EVACUATION DATA

Time	Gallons	Temperature	pH	SC	ORP	DO
	<u>4</u>	<u>9.97</u>	<u>6.72</u>	<u>667</u>	<u>-147.0</u>	<u>11.0</u>
	<u>8</u>	<u>9.61</u>	<u>7.08</u>	<u>653</u>	<u>-138.4</u>	<u>10.6</u>
	<u>12</u>	<u>10.11</u>	<u>7.28</u>	<u>650</u>	<u>-134.3</u>	<u>10.1</u>
<i>Downhole</i>		<u>9.04</u>	<u>7.24</u>	<u>651</u>	<u>-134.7</u>	<u>9.82</u>

WELL SAMPLING

Sampling Method: Disposable Poly Bailer, Submersible Pump, Low Flow, Per Pump Sample Type: Natural, Duplicate, Field Blank

Parameter	Sample Container	Preservative
<input type="checkbox"/> BTEX	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> MTBE	Extracted from BTEX VOA	Hydrochloric acid
<input type="checkbox"/> GRO as Gasoline	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> DRO as Diesel	(2) 1-liter amber glass	Sulfuric acid
<input type="checkbox"/> Methane	(2) 40 ml VOA	None
<input type="checkbox"/> Sulfate	(1) 250 ml poly plastic	None
<input type="checkbox"/> HACH	(1) 1-liter poly plastic	None
<input type="checkbox"/> Lead	(1) 125 ml poly plastic	Nitric acid Filtered: <input type="checkbox"/> Yes, <input type="checkbox"/> No
<input type="checkbox"/> VPH	(3) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> EPH	(2) 1-liter amber glass	Hydrochloric acid
<input type="checkbox"/> PAHs	(2) 1-liter amber glass	None
<input checked="" type="checkbox"/> VOC'S	(4) 40 ml VOA	Hydrochloric acid

IBI's	Sample Container	Preservative	Filtered:
<input type="checkbox"/> Sulfate	(1) 125 ml poly plastic	Sulfuric	
<input type="checkbox"/> Sulfide	(1) 125 ml poly plastic	None	
<input checked="" type="checkbox"/> Nitrate	(1) 125 ml poly plastic	None	
<input type="checkbox"/> Methane/Ethane/Ethane	(1) 125 ml poly plastic	Sulfide	
<input type="checkbox"/> Iron, Manganese	(1) 125 ml poly plastic	Nitric	<input type="checkbox"/> Yes, <input type="checkbox"/> No

Laboratory: Quanterra, Microseeps, STL, Northern Analytical, Gulf Coast, Other _____ Chain-of-Custody: Yes, No

Meter	Serial No.	Calibration Date	Decontamination	
pH	<u>YSI 550 (Boe)</u>	<u>6-21-22</u>	Potable Water: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Nitric Acid: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
SC	<u>↓</u>	_____	Liquinox: Yes <input type="checkbox"/> No <input type="checkbox"/>	DI Water: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
ORP	_____	_____	Methanol: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
DO	_____	_____		

Comments: _____

Groundwater Sampling Log

Project: Ben Landfill Sample Date: 6-22-22 Sample Time: 9:30 Well ID: LF-3
 Personnel: SM MM Weather: Sunny
 Casing Diameter/Type: 4" Measuring Point Description: TOC
 Well Depth (feet below measuring point): 37.5 Depth to Water: 13.29 ft water
 Screen: _____ Depth to Product _____
 J-TUBE: YES or NO _____ If yes indicate the depth below static water the tube was raised to Before Sampling: _____

WELL EVACUATION

Method: Mechanical Bailer, Galvanized Bailer, PVC Bailer, Disp. Polyethylene Bailer, SST Bailer, Submersible Pump, Low Flow, Peri Pump
24,21 Ft. water x 0.653 gal./ft. = one casing volume 15.8 gals. x 3 = purge volume 47.4 gals.
 SCH 40 Pipe * 2" well = 0.183 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Any Well C feet in radius = 3.14 x R²
 Water Quality: _____ ODOR: YES or NO _____ SHEEN: YES or NO _____
 Comments: 2 GPM stat @ 8:55

EVACUATION DATA

Time	Gallons	Temperature	pH	SC	ORP	DO
<u>9:03</u>	<u>16</u>	<u>9.69</u>	<u>7.71</u>	<u>771</u>	<u>-144.7</u>	<u>9.23</u>
<u>9:11</u>	<u>32</u>	<u>9.72</u>	<u>7.69</u>	<u>771</u>	<u>-148.7</u>	<u>9.09</u>
<u>9:19</u>	<u>48</u>	<u>9.72</u>	<u>7.69</u>	<u>771</u>	<u>-152.2</u>	<u>9.01</u>

WELL SAMPLING

Sampling Method: Disposable Poly Bailer, Submersible Pump, Low Flow, Peri Pump _____ Sample Type: Natural, Duplicate, Field Blank

Parameter	Sample Container	Preservative
<input type="checkbox"/> BTEX	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> MTBE	Extracted from BTEX VOA	Hydrochloric acid
<input type="checkbox"/> GRO as Gasoline	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> DRO as Diesel	(2) 1-liter amber glass	Sulfuric acid
<input type="checkbox"/> Methane	(2) 40 ml VOA	None
<input checked="" type="checkbox"/> Sulfate/C	(1) 250 ml poly plastic	None
<input type="checkbox"/> HACH	(1) 1-liter poly plastic	None
<input type="checkbox"/> Lead	(1) 125 ml poly plastic	Nitric acid
<input type="checkbox"/> VPH	(3) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> EPH	(2) 1-liter amber glass	Hydrochloric acid
<input type="checkbox"/> PAHs	(2) 1-liter amber glass	None
<input checked="" type="checkbox"/> VOC'S	(4) 40 ml VOA	Hydrochloric acid

Filtered: Yes, No

IBI's	Sample Container	Preservative
<input type="checkbox"/> Sulfate	(1) 125 ml poly plastic	Sulfuric
<input checked="" type="checkbox"/> Sulfide	(1) 125 ml poly plastic	None
<input checked="" type="checkbox"/> Nitrate	(1) 125 ml poly plastic	None
<input type="checkbox"/> Methane/Ethene/Ethane	(1) 125 ml poly plastic	Sulfide
<input type="checkbox"/> Iron,Manganese	(1) 125 ml poly plastic	Nitric

Filtered: Yes, No

Laboratory: Quanterra, Microseeps, STL, Northern Analytical Gulf Coast: Other _____ Chain-of-Custody: Yes, No

Meter	Serial No.	Calibration Date	Decontamination
pH	<u>YSI-556 (B02)</u>	<u>6-22-22</u>	Potable Water: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
SC	↓	_____	Liquinox: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
ORP	_____	_____	DI Water: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
DO	_____	_____	Methanol: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Comments: _____

Groundwater Sampling Log

Project: BEN Landfill Sample Date: 6-21-22 Sample Time: 13:30 Well ID: MW-4
 Personnel: SM MM Weather: Sunny & Hot
 Casing Diameter/Type: 4" Measuring Point Description: TOC
 Well Depth (feet below measuring point): 38.0 Depth to Water: 19.85 ft water
 Screen: _____ Depth to Product: _____
 J-TUBE: YES or NO If yes indicate the depth below static water the tube was raised to Before Sampling: _____

WELL EVACUATION

Method: Mechanical Bailer, Galvanized Bailer, PVC Bailer, Disp. Polyethylene Bailer, SST Bailer, Submersible Pump, Low Flow, Perli Pump
18.14 FL water x 0.653 gal./ft = one casing volume 11.85 gals. x 3 = purge volume 35.6 gals.
 SCH 40 Pipe * 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Any Well C feet in radius = 3.14 x R²

Water Quality: _____ ODOB: YES or NO SHEEN: YES or NO

Comments: 2 GPM Start @ 13:00

DVP-1 collect here 1345

EVACUATION DATA

Time	Gallons	Temperature	pH	SC	ORP	DO
<u>13:06</u>	<u>12</u>	<u>9.44</u>	<u>7.37</u>	<u>891</u>	<u>-62.9</u>	<u>3.61</u>
<u>13:12</u>	<u>24</u>	<u>9.32</u>	<u>7.35</u>	<u>908</u>	<u>-88.5</u>	—
<u>13:18</u>	<u>36</u>	<u>9.27</u>	<u>7.54</u>	<u>920</u>	<u>-122.2</u>	<u>3.57</u>

WELL SAMPLING

Sampling Method: Disposable Poly Bailer, Submersible Pump, Low Flow, Perli Pump Sample Type: Natural, Duplicate, Field Blank

Parameter	Sample Container	Preservative
<input type="checkbox"/> BTEX	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> MTBE	Extracted from BTEX VOA	Hydrochloric acid
<input type="checkbox"/> GRO as Gasoline	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> DRO as Diesel	(2) 1-liter amber glass	Sulfuric acid
<input checked="" type="checkbox"/> Methane	(2) 40 ml VOA	None
<input checked="" type="checkbox"/> Sulfate /Cl	(1) 250 ml poly plastic	None
<input type="checkbox"/> HACH	(1) 1-liter poly plastic	None
<input type="checkbox"/> Lead	(1) 125 ml poly plastic	Nitric acid Filtered: <input type="checkbox"/> Yes, <input type="checkbox"/> No
<input type="checkbox"/> VPH	(3) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> EPH	(2) 1-liter amber glass	Hydrochloric acid
<input checked="" type="checkbox"/> PAHs	(2) 1-liter amber glass	None
<input checked="" type="checkbox"/> VOC'S	(4) 40 ml VOA	Hydrochloric acid

IBI's	Sample Container	Preservative	Filtered:
<input type="checkbox"/> Sulfate	(1) 125 ml poly plastic	Sulfuric	<input type="checkbox"/> Yes, <input type="checkbox"/> No
<input checked="" type="checkbox"/> Sulfide	(1) 125 ml poly plastic	None	
<input checked="" type="checkbox"/> Nitrate	(1) 125 ml poly plastic	None	
<input type="checkbox"/> Methane/Ethene/Ethane	(1) 125 ml poly plastic	Sulfide	
<input type="checkbox"/> Iron, Manganese	(1) 125 ml poly plastic	Nitric	

Laboratory: Quanterra, Microseeps, STL, Northern Analytical, Gulf Coast, Other: _____ Chain-of-Custody: Yes, No

Meter	Serial No.	Calibration Date	Decontamination			
pH	<u>YSI-556(Bne)</u>	<u>6-21-22</u>	Potable Water: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Nitric Acid: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
SC	↓		Liquinox: Yes <input type="checkbox"/> No <input type="checkbox"/>	DI Water: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
ORP			Methanol: Yes <input type="checkbox"/> No <input type="checkbox"/>			
DO						

Comments: _____

Groundwater Sampling Log

Project: BZn Landfil Sample Date: 6-23-22 Sample Time: 10:00 Well ID: MW-5
 Personnel: SM [unclear] Weather: Hazy Sunny
 Casing Diameter/Type: 2" Measuring Point Description: TC
 Well Depth (feet below measuring point): 160.0 Depth to Water: 114.49 ft water
 Screen: _____ Depth to Product _____
 J-TUBE: YES or NO If yes indicate the depth below static water the tube was raised to Before Sampling: _____

WELL EVACUATION

Method: Mechanical Bailer, Galvanized Bailer, PVC Bailer, Disp. Polyethylene Bailer, SST Bailer, Submersible Pump, Low Flow, Peril Pump
45.5 Ft. water x _____ gal./ft. = one casing volume 7.4 gals. x 3 = purge volume 22.2 gals.
 SCH 40 Pipe * 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Any Well C feet in radius = 3.14 x R²

Water Quality: _____ ODOR: YES or NO SHEEN: YES or NO

Comments: 0.3 GPM stat @ 9:22

EVACUATION DATA

Time	Gallons	Temperature	pH	SC	ORP	DO
<u>9:47</u>	<u>7.5</u>	<u>12.18</u>	<u>7.24</u>	<u>496</u>	<u>-121.5</u>	<u>8.28</u>
	<u>15.0</u>					
	<u>22.5</u>					
<u>Pump failed for second t.</u>						

After pump failed to purge @ 5 gallons, replaced with another deconvol pump. It also failed after 1 gallon. Returned w/ another vehicle in hopes that sinner alternator would run pump. Pump failed after 3 gallons. waited for well to recharge, sample, parameters read.
 Total purge = 9 gallons

→ this took place over 3 days. **WELL SAMPLING**

Sampling Method: Disposable Poly Bailer, Submersible Pump, Low Flow, Peril Pump Sample Type: Natural, Duplicate, Field Blank

Parameter	Sample Container	Preservative
<input type="checkbox"/> BTEX	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> MTBE	Extracted from BTEX VOA	Hydrochloric acid
<input type="checkbox"/> GRO as Gasoline	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> DRO as Diesel	(2) 1-liter amber glass	Sulfuric acid
<input checked="" type="checkbox"/> Methane	(2) 40 ml VOA	None
<input checked="" type="checkbox"/> Sulfate / Cl	(1) 250 ml poly plastic	None
<input type="checkbox"/> HACH	(1) 1-liter poly plastic	None
<input type="checkbox"/> Lead	(1) 125 ml poly plastic	Nitric acid
<input type="checkbox"/> VPH	(3) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> EPH	(2) 1-liter amber glass	Hydrochloric acid
<input checked="" type="checkbox"/> PAHs	(2) 1-liter amber glass	None
<input checked="" type="checkbox"/> VOC'S	(4) 40 ml VOA	Hydrochloric acid

IBI's	Sample Container	Preservative	Filtered:
<input type="checkbox"/> Sulfate	(1) 125 ml poly plastic	Sulfuric	<input type="checkbox"/> Yes, <input type="checkbox"/> No
<input type="checkbox"/> Sulfide	(1) 125 ml poly plastic	None	
<input checked="" type="checkbox"/> Nitrate	(1) 125 ml poly plastic	None	
<input type="checkbox"/> Methane/Ethane/Ethane	(1) 125 ml poly plastic	Sulfide	
<input type="checkbox"/> Iron, Manganese	(1) 125 ml poly plastic	Nitric	<input type="checkbox"/> Yes, <input type="checkbox"/> No

Laboratory: Quanterra, Microseeps, STL, Northern Analytical Gulf Coast: Other _____ Chain-of-Custody: Yes, No

Meter	Serial No.	Calibration Date	Decontamination
pH	<u>YSI-550 (Boz)</u>	<u>6-23-22</u>	Potable Water: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
SC			Liquinox: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
ORP			DI Water: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
DO			Methanol: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Comments: _____

Groundwater Sampling Log

Project: BZn Landfill Sample Date: 6-21-22 Sample Time: 14:45 Well ID: MW-6
 Personnel: SM MM Weather: Hazy & Sunny
 Casing Diameter/Type: 2" Measuring Point Description: TAC
 Well Depth (feet below measuring point): 58.0 Depth to Water: 31.24 ft water
 Screen: _____ Depth to Product: _____
 J-TUBE: YES or NO If yes indicate the depth below static water the tube was raised to Before Sampling: _____

WELL EVACUATION

Method: Mechanical Bailer, Galvanized Bailer, PVC Bailer, Disp. Polyethylene Bailer, SST Bailer, Submersible Pump, Low Flow, Peri Pump
26.76 Ft. water x 0.163 gal./ft = one casing volume 4.3 gals. x 3 = purge volume 12.13 gals.
 SCH 40 Pipe * 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Any Well C feet in radius = 3.14 x R²

Water Quality: _____ ODOB: YES or NO SHEEN: YES or NO

Comments: DUP-2 collected here 15:00
pumped @ 2GPM

Time	Gallons	Temperature F	EVACUATION DATA			
			pH	SC µS/cm	ORP mV	DO mg/l
<u>14:38</u>	<u>4.5</u>	<u>11.39</u>	<u>6.81</u>	<u>733</u>	<u>-148.7</u>	<u>5.56</u>
<u>14:36</u>	<u>9.0</u>	<u>11.14</u>	<u>6.92</u>	<u>896</u>	<u>-165.7</u>	<u>3.47</u>
<u>14:40</u>	<u>13</u>	<u>11.05</u>	<u>6.93</u>	<u>943</u>	<u>-172.6</u>	<u>2.91</u>

WELL SAMPLING

Sampling Method: Disposable Poly Bailer, Submersible Pump, Low Flow, Peri Pump Sample Type: Natural, Duplicate, Field Blank

Parameter	Sample Container	Preservative
<input type="checkbox"/> BTEX	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> MTBE	Extracted from BTEX VOA	Hydrochloric acid
<input type="checkbox"/> GRO as Gasoline	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> DRO as Diesel	(2) 1-liter amber glass	Sulfuric acid
<input type="checkbox"/> Methane	(2) 40 ml VOA	None
<input checked="" type="checkbox"/> Sulfate	(1) 250 ml poly plastic	None
<input type="checkbox"/> HACH	(1) 1-liter poly plastic	None
<input type="checkbox"/> Lead	(1) 125 ml poly plastic	Nitric acid
<input type="checkbox"/> VPH	(3) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> EPH	(2) 1-liter amber glass	Hydrochloric acid
<input type="checkbox"/> PAHs	(2) 1-liter amber glass	None
<input checked="" type="checkbox"/> VOC'S	(4) 40 ml VOA	Hydrochloric acid

IBI's	Sample Container	Preservative	Filtered:
<input type="checkbox"/> Sulfate	(1) 125 ml poly plastic	Sulfuric	[] Yes, [] No
<input type="checkbox"/> Sulfide	(1) 125 ml poly plastic	None	
<input type="checkbox"/> Nitrate	(1) 125 ml poly plastic	None	
<input checked="" type="checkbox"/> Methane/Ethane/Ethane	(1) 125 ml poly plastic	Sulfide	
<input type="checkbox"/> Iron, Manganese	(1) 125 ml poly plastic	Nitric	

Laboratory: Quanterra, Microseeps, STL, Northern Analytical, Gulf Coast, Other: _____ Chain-of-Custody: Yes, No

Meter	Serial No.	Calibration Date	Decontamination	
pH	<u>KSI-556 (Boz)</u>	<u>6-21-22</u>	Potable Water: Yes [] No <input checked="" type="checkbox"/>	Nitric Acid: Yes [] No <input checked="" type="checkbox"/>
SC	_____	_____	Liquinox: Yes [] No []	DI Water: Yes <input checked="" type="checkbox"/> No []
ORP	_____	_____	Methanol: Yes [] No []	
DO	_____	_____		

Comments: _____

Groundwater Sampling Log

Project: BEH Landfill Sample Date: 6-21-22 Sample Time: 15:30 Well ID: MW-7A
 Personnel: SM MM Weather: Sunny / Hot
 Casing Diameter/Type: 2" Measuring Point Description: TWC
 Well Depth (feet below measuring point): 65.9 Depth to Water: 56.40 ft water
 Screen: _____ Depth to Product: _____
 J-TUBE: YES or NO _____ If yes indicate the depth below static water the tube was raised to Before Sampling: _____

WELL EVACUATION

Method: Mechanical Bailer, Galvanized Bailer, PVC Bailer, Disp. Polyethylene Bailer, SST Bailer, Submersible Pump, Low Flow, Peri Pump
9.5 Ft. water x _____ gal. / ft = one casing volume 6.5 gals. x 3 = purge volume 4.5 gals.
 SCH 40 Pipe * 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Any Well C feet in radius = 3.14 x R² C

Water Quality: _____ ODOR: YES or NO _____ SHEEN: YES or NO _____
 Comments: DTW in MW-7B = 56.51'

EVACUATION DATA

Time	Gallons	Temperature F	pH	mg/cm SC	mV ORP	mg/l DO
	<u>1.5</u>	<u>11.85</u>	<u>6.95</u>	<u>547</u>	<u>-146.6</u>	<u>7.04</u>
	<u>3.9</u>	<u>11.55</u>	<u>6.75</u>	<u>631</u>	<u>-133.9</u>	<u>6.23</u>
	<u>4.5</u>	<u>11.18</u>	<u>6.71</u>	<u>742</u>	<u>-145.5</u>	<u>6.03</u>
<u>Downdraw =</u>		<u>10.73</u>	<u>6.55</u>	<u>732</u>	<u>-152.7</u>	<u>4.38</u>

WELL SAMPLING

Sampling Method: Disposable Poly Bailer, Submersible Pump, Low Flow, Peri Pump Sample Type: Natural, Duplicate, Field Blank

Parameter	Sample Container	Preservative
<input type="checkbox"/> BTEX	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> MTBE	Extracted from BTEX VOA	Hydrochloric acid
<input type="checkbox"/> GRO as Gasoline	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> DRO as Diesel	(2) 1-liter amber glass	Sulfuric acid
<input type="checkbox"/> Methane	(2) 40 ml VOA	None
<input type="checkbox"/> Sulfate	(1) 250 ml poly plastic	None
<input type="checkbox"/> HACH	(1) 1-liter poly plastic	None
<input type="checkbox"/> Lead	(1) 125 ml poly plastic	Nitric acid
<input type="checkbox"/> VPH	(3) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> EPH	(2) 1-liter amber glass	Hydrochloric acid
<input type="checkbox"/> PAHs	(2) 1-liter amber glass	None
<input checked="" type="checkbox"/> VOC'S	(4) 40 ml VOA	Hydrochloric acid

Filtered: Yes, No

IBI's	Sample Container	Preservative	Filtered:
<input type="checkbox"/> Sulfate	(1) 125 ml poly plastic	Sulfuric	<input type="checkbox"/> Yes, <input type="checkbox"/> No
<input type="checkbox"/> Sulfide	(1) 125 ml poly plastic	None	
<input checked="" type="checkbox"/> Nitrate	(1) 125 ml poly plastic	None	
<input type="checkbox"/> Methane/Ethene/Ethane	(1) 125 ml poly plastic	Sulfide	
<input type="checkbox"/> Iron, Manganese	(1) 125 ml poly plastic	Nitric	

Laboratory: Quanterra, Microseeps, STL, Northern Analytical, Gulf Coast, Other: _____ Chain-of-Custody: Yes, No

Meter	Serial No.	Calibration Date	Decontamination	
pH	<u>KSI-556 (BOE)</u>	<u>6-21-22</u>	Potable Water: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Nitric Acid: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
SC	<u>↓</u>		Liquinox: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	DI Water: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
ORP			Methanol: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
DO				

Comments: _____

Groundwater Sampling Log

Project: BZen Landfill Sample Date: 6-21-22 Sample Time: 12:30 Well ID: MW-8A
 Personnel: SM MM Weather: Sunny & Hot
 Casing Diameter/Type: 2" Measuring Point Description: IDC
 Well Depth (feet below measuring point): 56.0 Depth to Water: 47.09 ft water
 Screen: _____ Depth to Product: _____
 J-TUBE: YES or NO If yes indicate the depth below static water the tube was raised to Before Sampling: _____

WELL EVACUATION

Method: Mechanical Bailer, Galvanized Bailer, PVC Bailer, Disp. Polyethylene Bailer, SST Bailer, Submersible Pump, Low Flow, Perli Pump
8.91 Ft. water x 0.163 gal./ft. = one casing volume 1.45 gals. x 3 = purge volume 4.3 gals.
 SCH 40 Pipe * 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Any Well C feet in radius = 3.14 x R²

Water Quality: _____ ODOR: YES or NO SHEEN: YES or NO
 Comments: DTW in MW-8B = 47.38
MW-8C = 42.81

EVACUATION DATA

Time	Gallons	Temperature	pH	SC	ORP	DO
	<u>1.5</u>	<u>9.45</u>	<u>7.32</u>	<u>1147</u>	<u>3.7</u>	<u>10.2</u>
	<u>3.5</u>	<u>9.18</u>	<u>7.42</u>	<u>1173</u>	<u>1.3</u>	<u>9.8</u>
	<u>4.5</u>	<u>9.29</u>	<u>7.49</u>	<u>1174</u>	<u>-4.7</u>	<u>10.26</u>
<u>Dawn hole</u>		<u>8.96</u>	<u>7.43</u>	<u>1187</u>	<u>-8.2</u>	<u>8.38</u>

WELL SAMPLING

Sampling Method: Disposable Poly Bailer, Submersible Pump, Low Flow, Perli Pump Sample Type: Natural, Duplicate, Field Blank

Parameter	Sample Container	Preservative
<input type="checkbox"/> BTEX	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> MTBE	Extracted from BTEX VOA	Hydrochloric acid
<input type="checkbox"/> GRO as Gasoline	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> DRO as Diesel	(2) 1-liter amber glass	Sulfuric acid
<input type="checkbox"/> Methane	(2) 40 ml VOA	None
<input checked="" type="checkbox"/> Sulfate	(1) 250 ml poly plastic	None
<input type="checkbox"/> HACH	(1) 1-liter poly plastic	None
<input type="checkbox"/> Lead	(1) 125 ml poly plastic	Nitric acid
<input type="checkbox"/> VPH	(3) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> EPH	(2) 1-liter amber glass	Hydrochloric acid
<input checked="" type="checkbox"/> PAHs	(2) 1-liter amber glass	None
<input checked="" type="checkbox"/> VOC'S	(4) 40 ml VOA	Hydrochloric acid

Filtered: Yes, No

IBI's	Sample Container	Preservative
<input type="checkbox"/> Sulfate	(1) 125 ml poly plastic	Sulfuric
<input type="checkbox"/> Sulfide	(1) 125 ml poly plastic	None
<input checked="" type="checkbox"/> Nitrate	(1) 125 ml poly plastic	None
<input type="checkbox"/> Methane/Ethane/Ethane	(1) 125 ml poly plastic	Sulfide
<input type="checkbox"/> Iron/Manganese	(1) 125 ml poly plastic	Nitric

Filtered: Yes, No

Laboratory: Quanterra, Microseeps, STL, Northern Analytical, Gulf Coast: Other _____ Chain-of-Custody: Yes, No

Meter	Serial No.	Calibration Date	Decontamination			
pH	<u>YSI-556 (Boz)</u>	<u>6-22-22</u>	Potable Water: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Nitric Acid: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
SC			Liquinox: Yes <input type="checkbox"/> No <input type="checkbox"/>	DI Water: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
ORP			Methanol: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
DO						

Comments: _____

Groundwater Sampling Log

Project: B2N Landfill Sample Date: 6-21-22 Sample Time: 14:00 Well ID: MW-9A
 Personnel: SM MM Weather: Hot Sunny
 Casing Diameter/Type: 2" Measuring Point Description: 90'
 Well Depth (feet below measuring point): 39.0' Depth to Water: 27.69 ft water
 Screen: _____ Depth to Product: _____
 J-TUBE: YES or NO If yes indicate the depth below static water the tube was raised to Before Sampling: _____

WELL EVACUATION

Method: Mechanical Bailer, Galvanized Bailer, PVC Bailer, Disp. Polyethylene Bailer, SST Bailer, Submersible Pump, Low Flow, Peril Pump
11.31 Fl. water x _____ gal./ft. * = one casing volume 1.8 gals. x 3 = purge volume 5.5 gals.
 SCH 40 Pipe * 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Any Well C feet in radius = 3.14 x R²
 Water Quality: _____ ODOR: YES or NO SHEEN: YES or NO
 Comments: DFW in MW-9B = 27.90

EVACUATION DATA

Time	Gallons	Temperature	pH	SC	ORP	DO
	<u>2</u>	<u>10.84</u>	<u>6.93</u>	<u>1132</u>	<u>-129.3</u>	<u>6.35</u>
	<u>4</u>	<u>9.77</u>	<u>7.06</u>	<u>1131</u>	<u>-138.8</u>	<u>4.81</u>
	<u>6</u>	<u>Bailer dry @ 5 gallon, 910 hrs to recharge</u>				
		<u>9.46</u>	<u>7.31</u>	<u>1134</u>	<u>-169</u>	<u>1.47</u>
					<u>-172.8</u>	

Downhole

WELL SAMPLING

Sampling Method: Disposable Poly Bailer, Submersible Pump, Low Flow, Peril Pump Sample Type: Natural, Duplicate, Field Blank

Parameter	Sample Container	Preservative
<input type="checkbox"/> BTEX	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> MTBE	Extracted from BTEX VOA	Hydrochloric acid
<input type="checkbox"/> GRO as Gasoline	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> DRO as Diesel	(2) 1-liter amber glass	Sulfuric acid
<input type="checkbox"/> Methane	(2) 40 ml VOA	None
<input checked="" type="checkbox"/> Sulfate/C	(1) 250 ml poly plastic	None
<input type="checkbox"/> HACH	(1) 1-liter poly plastic	None
<input type="checkbox"/> Lead	(1) 125 ml poly plastic	Nitric acid Filtered: <input type="checkbox"/> Yes, <input type="checkbox"/> No
<input type="checkbox"/> VPH	(3) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> EPH	(2) 1-liter amber glass	Hydrochloric acid
<input type="checkbox"/> PAHs	(2) 1-liter amber glass	None
<input checked="" type="checkbox"/> VOC'S	(4) 40 ml VOA	Hydrochloric acid

IBI's	Sample Container	Preservative	Filtered:
<input type="checkbox"/> Sulfate	(1) 125 ml poly plastic	Sulfuric	<input type="checkbox"/> Yes, <input type="checkbox"/> No
<input type="checkbox"/> Sulfide	(1) 125 ml poly plastic	None	
<input checked="" type="checkbox"/> Nitrate	(1) 125 ml poly plastic	None	
<input type="checkbox"/> Methane/Ethane/Ethane	(1) 125 ml poly plastic	Sulfide	
<input type="checkbox"/> Iron, Manganese	(1) 125 ml poly plastic	Nitric	

Laboratory: Quanterra, Microseeps, STL, Northern Analytical, Gulf Coast, Other: _____ Chain-of-Custody: Yes, No

Meter	Serial No.	Calibration Date	Decontamination			
pH	<u>KSI 550 (BOE)</u>	<u>6-21-22</u>	Potable Water: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Nitric Acid: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
SC	<u>J</u>		Liquinox: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	DI Water: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
ORP			Methanol: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
DO	<u>J</u>					

Comments: _____

Groundwater Sampling Log

Project: Ben Landfill Sample Date: 6-22-22 Sample Time: 10:30 Well ID: MW-10
 Personnel: SM MM Weather: Sunny
 Casing Diameter/Type: 2" Measuring Point Description: TOL
 Well Depth (feet below measuring point): 14.5" Depth to Water: 1.61 ft water
 Screen: _____ Depth to Product: _____
 J-TUBE: YES or NO If yes indicate the depth below static water the tube was raised to Before Sampling: _____

WELL EVACUATION

Method: Mechanical Bailer, Galvanized Bailer, PVC Bailer, Disp. Polyethylene Bailer, SST Bailer, Submersible Pump, Low Flow, Peri Pump
12.89 Ft. water x 0.163 gal./ft. = one casing volume 2.1 gals. x 3 = purge volume _____ gals.

SCH 40 Pipe * 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Any Well C feet in radius = 3.14 x R² x C

Water Quality: _____ ODOR: YES or NO SHEEN: YES or NO

Comments: _____

EVACUATION DATA

Time	Gallons	Temperature	pH	SC	ORP	DO
	2.1	7.44	7.14	1067	-183.6	—
	4.2	6.90	7.49	1071	-200.1	3.02
	6.5	6.52	7.70	1076	-203.3	2.89
		6.15	7.73	1075	-225.2	1.04

Downhole

WELL SAMPLING

Sampling Method: Disposable Poly Bailer, Submersible Pump, Low Flow, Peri Pump Sample Type: Natural, Duplicate, Field Blank

Parameter	Sample Container	Preservative
<input type="checkbox"/> BTEX	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> MTBE	Extracted from BTEX VOA	Hydrochloric acid
<input type="checkbox"/> GRO as Gasoline	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> DRO as Diesel	(2) 1-liter amber glass	Sulfuric acid
<input type="checkbox"/> Methane	(2) 40 ml VOA	None
<input type="checkbox"/> Sulfate	(1) 250 ml poly plastic	None
<input type="checkbox"/> HACH	(1) 1-liter poly plastic	None
<input type="checkbox"/> Lead	(1) 125 ml poly plastic	Nitric acid
<input type="checkbox"/> VPH	(3) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> EPH	(2) 1-liter amber glass	Hydrochloric acid
<input checked="" type="checkbox"/> PAHs	(2) 1-liter amber glass	None
<input checked="" type="checkbox"/> VOC'S	(4) 40 ml VOA	Hydrochloric acid

IBI's	Sample Container	Preservative	Filtered:
<input type="checkbox"/> Sulfate	(1) 125 ml poly plastic	Sulfuric	
<input type="checkbox"/> Sulfide	(1) 125 ml poly plastic	None	
<input checked="" type="checkbox"/> Nitrate	(1) 125 ml poly plastic	None	
<input checked="" type="checkbox"/> Methane/Ethene/Ethane	(1) 125 ml poly plastic	Sulfide	
<input type="checkbox"/> Iron, Manganese	(1) 125 ml poly plastic	Nitric	[] Yes, [] No

Laboratory: Quanterra, Microseeps, STL, Northern Analytical, Gulf Coast, Other: _____ Chain-of-Custody: [] Yes, [] No

Meter	Serial No.	Calibration Date	Decontamination	
pH	<u>YSI-556 (B92)</u>	<u>6-22-22</u>	Potable Water: Yes [] No <input checked="" type="checkbox"/>	Nitric Acid: Yes [] No <input checked="" type="checkbox"/>
SC	↓	↓	Liquinox: Yes <input checked="" type="checkbox"/> No []	DI Water: Yes <input checked="" type="checkbox"/> No []
ORP	↓	↓	Methanol: Yes <input checked="" type="checkbox"/> No []	
DO	↓	↓		

Comments: _____

Groundwater Sampling Log

Project: Ben Landfill Sample Date: 6-22-22 Sample Time: 13:00 Well ID: MW-11
 Personnel: SM MM Weather: Hot / Sunny
 Casing Diameter/Type: 2" Measuring Point Description: TOC
 Well Depth (feet below measuring point): 70.0 Depth to Water: 51.45 ft water
 Screen: _____ Depth to Product _____
 J-TUBE: YES or NO If yes indicate the depth below static water the tube was raised to Before Sampling: _____

WELL EVACUATION

Method: Mechanical Bailer, Galvanized Bailer, PVC Bailer, Disp. Polyethylene Bailer, SST Bailer, Submersible Pump, Low Flow, Peri Pump
18.54 Fl. water x 8 gal./ft = one casing volume 3 gals. x 3 = purge volume 9 gals.
 SCH 40 Pipe * 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Any Well C feet in radius = 3.14 x R²
 Water Quality: _____ ODOR: YES or NO SHEEN: YES or NO
 Comments: _____

EVACUATION DATA

Time	Gallons	Temperature	pH	SC	ORP	DO
	3	11.85	6.47	857	-95.0	5.73
	6	10.90	6.85	863	-89.7	4.74
	9	11.10	7.14	863	-131.9	7.22
			7.18			
<i>Downhole</i>		10.26	7.11	863	-148.0	2.87

WELL SAMPLING

Sampling Method: Disposable Poly Bailer, Submersible Pump, Low Flow, Peri Pump Sample Type: Natural, Duplicate, Field Blank

Parameter	Sample Container	Preservative
<input type="checkbox"/> BTEX	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> MTBE	Extracted from BTEX VOA	Hydrochloric acid
<input type="checkbox"/> GRO as Gasoline	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> DRO as Diesel	(2) 1-liter amber glass	Sulfuric acid
<input type="checkbox"/> Methane	(2) 40 ml VOA	None
<input checked="" type="checkbox"/> Sulfate	(1) 250 ml poly plastic	None
<input type="checkbox"/> HACH	(1) 1-liter poly plastic	None
<input type="checkbox"/> Lead	(1) 125 ml poly plastic	Nitric acid
<input type="checkbox"/> VPH	(3) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> EPH	(2) 1-liter amber glass	Hydrochloric acid
<input type="checkbox"/> PAHs	(2) 1-liter amber glass	None
<input checked="" type="checkbox"/> VOC'S	(4) 40 ml VOA	Hydrochloric acid

IBI's	Sample Container	Preservative	Filtered:
<input type="checkbox"/> Sulfate	(1) 125 ml poly plastic	Sulfuric	<input type="checkbox"/> Yes, <input type="checkbox"/> No
<input checked="" type="checkbox"/> Sulfide	(1) 125 ml poly plastic	None	
<input checked="" type="checkbox"/> Nitrate	(1) 125 ml poly plastic	None	
<input type="checkbox"/> Methane/Ethene/Ethane	(1) 125 ml poly plastic	Sulfide	
<input type="checkbox"/> Iron, Manganese	(1) 125 ml poly plastic	Nitric	

Laboratory: Quanterra, Microseeps, STL, Northern Analytical Gulf Coast: Other _____ Chain-of-Custody: Yes, No

Meter	Serial No.	Calibration Date	Decontamination
pH	<u>YSE-596 (B/E)</u>	<u>6-22-22</u>	Potable Water: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
SC			Liquinox: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
ORP			Methanol: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
DO			Nitric Acid: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
			DI Water: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Comments: _____

Groundwater Sampling Log

Project: Ben Landfill Sample Date: 6-22-22 Sample Time: 14:00 Well ID: MW-12
 Personnel: SM MM Weather: _____
 Casing Diameter/Type: 2" Measuring Point Description: _____
 Well Depth (feet below measuring point): 65.8 Depth to Water: 55.57 ft water
 Screen: _____ Depth to Product: _____
 J-TUBE: YES or NO If yes indicate the depth below static water the tube was raised to Before Sampling: _____

WELL EVACUATION

Method: Mechanical Bailer, Galvanized Bailer, PVC Bailer, Disp. Polyethylene Bailer, SST Bailer, Submersible Pump, Low Flow, Peristaltic Pump
 Fl. water x 10.23 gal. ft * = one casing volume 1.7 gals. x 3 = purge volume 5.0 gals.
 SCH 40 Pipe * 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Any Well C feet in radius = 3.14 x R²

Water Quality: _____ ODOR: YES or NO SHEEN: YES or NO
 Comments: DVP-3 collected here @ 14:15

EVACUATION DATA

Time	Gallons	Temperature	pH	SC	ORP	DO
	<u>1.7</u>	<u>12.91</u>	<u>4.51</u>	<u>1185</u>	<u>-153.9</u>	<u>2.92</u>
	3.4					
	5.0					
	<u>Bailed dry @ 3.2 gallons, allowed to recharge then sampled</u>					
		<u>12.43</u>	<u>5.99</u>	<u>1104</u>	<u>-137</u>	<u>0.78</u>
					<u>-151.7</u>	

Downhole

WELL SAMPLING

Sampling Method: Disposable Poly Bailer, Submersible Pump, Low Flow, Peristaltic Pump Sample Type: Natural, Duplicate, Field Blank

Parameter	Sample Container	Preservative
<input type="checkbox"/> BTEX	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> MTBE	Extracted from BTEX VOA	Hydrochloric acid
<input type="checkbox"/> GRO as Gasoline	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> DRO as Diesel	(2) 1-liter amber glass	Sulfuric acid
<input type="checkbox"/> Methane	(2) 40 ml VOA	None
<input checked="" type="checkbox"/> Sulfate/Cl	(1) 250 ml poly plastic	None
<input type="checkbox"/> HACH	(1) 1-liter poly plastic	None
<input type="checkbox"/> Lead	(1) 125 ml poly plastic	Nitric acid
<input type="checkbox"/> VPH	(3) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> EPH	(2) 1-liter amber glass	Hydrochloric acid
<input type="checkbox"/> PAHs	(2) 1-liter amber glass	None
<input checked="" type="checkbox"/> VOC'S	(4) 40 ml VOA	Hydrochloric acid

IBI's	Sample Container	Preservative	Filtered:
<input type="checkbox"/> Sulfate	(1) 125 ml poly plastic	Sulfuric	
<input type="checkbox"/> Sulfide	(1) 125 ml poly plastic	None	
<input checked="" type="checkbox"/> Nitrate	(1) 125 ml poly plastic	None	
<input type="checkbox"/> Methane/Ethene/Ethane	(1) 125 ml poly plastic	Sulfide	
<input type="checkbox"/> Iron, Manganese	(1) 125 ml poly plastic	Nitric	[] Yes, [] No

Laboratory: Quanterra, Microseeps, STL, Northern Analytical, Gulf Coast, Other: _____ Chain-of-Custody: Yes, No

Meter	Serial No.	Calibration Date	Decontamination	
pH	<u>YSI 556 (B12)</u>	<u>6-22-22</u>	Potable Water: Yes [] No <input checked="" type="checkbox"/>	Nitric Acid: Yes [] No <input checked="" type="checkbox"/>
SC			Liquinox: Yes <input checked="" type="checkbox"/> No []	DI Water: Yes <input checked="" type="checkbox"/> No []
ORP			Methanol: Yes <input checked="" type="checkbox"/> No []	
DO				

Comments: _____

Groundwater Sampling Log

Project: BEN Landfill Sample Date: 6-21-22 Sample Time: 16:00 Well ID: MW-13
 Personnel: SM MM Weather: Hot & Sunny
 Casing Diameter/Type: 2" Measuring Point Description: Ta
 Well Depth (feet below measuring point): 61.3 Depth to Water: 43.25 ft water
 Screen: _____ Depth to Product: _____
 J-TUBE: YES or NO If yes indicate the depth below static water the tube was raised to Before Sampling: _____

WELL EVACUATION

Method: Mechanical Bailer, Galvanized Bailer, PVC Bailer, Disp. Polyethylene Bailer, SST Bailer, Submersible Pump, Low Flow, Peril Pump
18.05 Ft. water x 0.163 gal./ft. = one casing volume 2.9 gals. x 3 = purge volume 8.8 gals.
 SCH 40 Pipe * 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Any Well C feet in radius = $3.14 \times R^2$

Water Quality: _____ ODOR: YES or NO SHEEN: YES or NO
 Comments: _____

EVACUATION DATA

Time	Gallons	Temperature	pH	SC	ORP	DO
	3	12.56	6.39	1127	-158.9	3.82
	6	12.18	6.49	1140	-162.3	3.274
	9	12.16	6.52	1140	-167.9	3.13
Downhole		11.76	6.44	1136	-199. -204.6	0.67

WELL SAMPLING

Sampling Method: Disposable Poly Bailer, Submersible Pump, Low Flow, Peril Pump Sample Type: Natural, Duplicate, Field Blank

Parameter	Sample Container	Preservative
<input type="checkbox"/> BTEX	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> MTBE	Extracted from BTEX VOA	Hydrochloric acid
<input type="checkbox"/> GRO as Gasoline	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> DRO as Diesel	(2) 1-liter amber glass	Sulfuric acid
<input checked="" type="checkbox"/> Methane	(2) 40 ml VOA	None
<input checked="" type="checkbox"/> Sulfate	(1) 250 ml poly plastic	None
<input type="checkbox"/> HACH	(1) 1-liter poly plastic	None
<input type="checkbox"/> Lead	(1) 125 ml poly plastic	Nitric acid Filtered: <input type="checkbox"/> Yes, <input type="checkbox"/> No
<input type="checkbox"/> VPH	(3) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> EPH	(2) 1-liter amber glass	Hydrochloric acid
<input type="checkbox"/> PAHs	(2) 1-liter amber glass	None
<input checked="" type="checkbox"/> VOC'S	(4) 40 ml VOA	Hydrochloric acid

IBI's	Sample Container	Preservative	Filtered:
<input type="checkbox"/> Sulfate	(1) 125 ml poly plastic	Sulfuric	<input type="checkbox"/> Yes, <input type="checkbox"/> No
<input type="checkbox"/> Sulfide	(1) 125 ml poly plastic	None	
<input checked="" type="checkbox"/> Nitrate	(1) 125 ml poly plastic	None	
<input type="checkbox"/> Methane/Ethene/Ethane	(1) 125 ml poly plastic	Sulfide	
<input type="checkbox"/> Iron, Manganese	(1) 125 ml poly plastic	Nitric	

Laboratory: Quanterra, Microseeps, STL, Northern Analytical Gulf Coast: Other _____ Chain-of-Custody: Yes, No

Meter	Serial No.	Calibration Date	Decontamination
pH	<u>YSI 556 (Boz)</u>	<u>6-21-22</u>	Potable Water: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Nitric Acid: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
SC	_____	_____	Liquinox: Yes <input type="checkbox"/> No <input type="checkbox"/> DI Water: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
ORP	_____	_____	Methanol: Yes <input type="checkbox"/> No <input type="checkbox"/>
DO	_____	_____	

Comments: _____

Groundwater Sampling Log

Project: BEN Landfill Sample Date: 6.21.22 Sample Time: 11:00 Well ID: MW-15
 Personnel: SM MM Weather: SUNNY
 Casing Diameter/Type: 2" Measuring Point Description: TOC
 Well Depth (feet below measuring point): 72.5 ft Depth to Water: 48.17 ft water
 Screen: _____ Depth to Product: _____
 J-TUBE: YES or NO If yes indicate the depth below static water the tube was raised to Before Sampling: _____

WELL EVACUATION

Method: Mechanical Bailer, Galvanized Bailer, PVC Bailer, Disp. Polyethylene Bailer, SST Bailer, Submersible Pump, Low Flow, Peril Pump
24.33 Fl. water x 0.163 gal./ft = one casing volume 4.0 gals. x 3 = purge volume 12 gals.
 SCH 40 Pipe * 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Any Well C feet in radius = 3.14 x R² x C

Water Quality: _____ ODOR: YES or NO SHEEN: YES or NO
 Comments: _____

EVACUATION DATA

Time	Gallons	Temperature F	pH	SC ^{us/cm}	ORP ^{mv}	DO ^{mg/L}
	4	9.15	7.67	454	44.9	10.7
	8	8.42	7.47	472	32.1	12.2
	12	8.30	7.39	476	21.9	9.74
<i>Down hole</i>		7.94	7.26	481	21.0	9.33

WELL SAMPLING

Sampling Method: Disposable Poly Bailer, Submersible Pump, Low Flow, Peril Pump Sample Type: Natural, Duplicate, Field Blank

Parameter	Sample Container	Preservative
<input type="checkbox"/> BTEX	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> MTBE	Extracted from BTEX VOA	Hydrochloric acid
<input type="checkbox"/> GRO as Gasoline	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> DRO as Diesel	(2) 1-liter amber glass	Sulfuric acid
<input type="checkbox"/> Methane	(2) 40 ml VOA	None
<input checked="" type="checkbox"/> Sulfate/C	(1) 250 ml poly plastic	None
<input type="checkbox"/> HACH	(1) 1-liter poly plastic	None
<input type="checkbox"/> Lead	(1) 125 ml poly plastic	Nitric acid Filtered: <input type="checkbox"/> Yes, <input type="checkbox"/> No
<input type="checkbox"/> VPH	(3) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> EPH	(2) 1-liter amber glass	Hydrochloric acid
<input type="checkbox"/> PAHs	(2) 1-liter amber glass	None
<input checked="" type="checkbox"/> VOC'S	(4) 40 ml VOA	Hydrochloric acid

IBI's	Sample Container	Preservative	Filtered:
<input type="checkbox"/> Sulfate	(1) 125 ml poly plastic	Sulfuric	<input type="checkbox"/> Yes, <input type="checkbox"/> No
<input type="checkbox"/> Sulfide	(1) 125 ml poly plastic	None	
<input checked="" type="checkbox"/> Nitrate	(1) 125 ml poly plastic	None	
<input type="checkbox"/> Methane/Ethene/Ethane	(1) 125 ml poly plastic	Sulfide	
<input type="checkbox"/> Iron, Manganese	(1) 125 ml poly plastic	Nitric	

Laboratory: Quanterra, Microseeps, STL, Northern Analytical, Gulf Coast, Other: _____ Chain-of-Custody: Yes, No

Meter	Serial No.	Calibration Date	Decontamination
pH	<u>KSI-596 (Boz)</u>	<u>6-21-22</u>	Potable Water: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
SC	<u>↓</u>		Nitric Acid: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
ORP			Liquinox: Yes <input type="checkbox"/> No <input type="checkbox"/>
DO			Methanol: Yes <input type="checkbox"/> No <input type="checkbox"/>
			DI Water: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Comments: _____

Groundwater Sampling Log

Project: Benlandfill Sample Date: 6-22-22 Sample Time: 15:30 Well ID: MW-17
 Personnel: SM MM Weather: HOT & SUNNY
 Casing Diameter/Type: 2" Measuring Point Description: TOC
 Well Depth (feet below measuring point): 85.0 Depth to Water: 76.25 ft water
 Screen: _____ Depth to Product _____
 J-TUBE: YES or NO _____ If yes indicate the depth below static water the tube was raised to Before Sampling: _____

WELL EVACUATION

Method: Mechanical Bailer, Galvanized Bailer, PVC Bailer, Disp. Polyethylene Bailer, SST Bailer, Submersible Pump, Low Flow, Perl Pump
0.15 Ft. water x 0.163 gal./ft. = one casing volume 1.4 gals. x 3 = purge volume 4.3 gals.
 SCH 40 Pipe * 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Any Well C feet in radius = 3.14 x R² C
 Water Quality: _____ ODOR: YES or NO _____ SHEEN: YES or NO _____
 Comments: _____

EVACUATION DATA

Time	Gallons	Temperature	pH	SC	ORP	DO
	<u>1.4</u>	<u>10.55</u>	<u>6.06</u>	<u>1226</u>	<u>-87.0</u>	<u>10.83</u>
	<u>2.8</u>	<u>9.95</u>	<u>6.78</u>	<u>1054</u>	<u>-94.5</u>	<u>10.56</u>
	<u>4.3</u>					
<u>Bailed dry @ 3.5 gallons, recharged, sample!</u>						
<u>Downhole not possible</u>						

WELL SAMPLING

Sampling Method: Disposable Poly Bailer, Submersible Pump, Low Flow, Perl Pump Sample Type: Natural, Duplicates, Field Blank

Parameter	Sample Container	Preservative
<input type="checkbox"/> BTEX	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> MTBE	Extracted from BTEX VOA	Hydrochloric acid
<input type="checkbox"/> GRO as Gasoline	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> DRO as Diesel	(2) 1-liter amber glass	Sulfuric acid
<input type="checkbox"/> Methane	(2) 40 ml VOA	None
<input checked="" type="checkbox"/> Sulfate /C	(1) 250 ml poly plastic	None
<input type="checkbox"/> HACH	(1) 1-liter poly plastic	None
<input type="checkbox"/> Lead	(1) 125 ml poly plastic	Nitric acid
<input type="checkbox"/> VPH	(3) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> EPH	(2) 1-liter amber glass	Hydrochloric acid
<input type="checkbox"/> PAHs	(2) 1-liter amber glass	None
<input checked="" type="checkbox"/> VOC'S	(4) 40 ml VOA	Hydrochloric acid

Filtered: Yes, No

IBI's	Sample Container	Preservative	Filtered:
<input type="checkbox"/> Sulfate	(1) 125 ml poly plastic	Sulfuric	<input type="checkbox"/> Yes, <input type="checkbox"/> No
<input type="checkbox"/> Sulfide	(1) 125 ml poly plastic	None	
<input type="checkbox"/> Nitrate	(1) 125 ml poly plastic	None	
<input type="checkbox"/> Methane/Ethane/Ethane	(1) 125 ml poly plastic	Sulfide	
<input type="checkbox"/> Iron,Manganese	(1) 125 ml poly plastic	Nitric	

Laboratory: Quanterra, Microseeps, STL, Northern Analytical, Gulf Coast, Other _____ Chain-of-Custody: Yes, No

Meter	Serial No.	Calibration Date	Decontamination	
pH	<u>YSI-556 (B12)</u>	<u>6-22-22</u>	Potable Water: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Nitric Acid: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
SC	<u>↓</u>		Liquinox: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	DI Water: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
ORP			Methanol: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
DO				

Comments: _____

Groundwater Sampling Log

Project: Ben Landfill Sample Date: 6-22-22 Sample Time: 14:30 Well ID: MW-18
 Personnel: SM MM Weather: Hot / Sunny
 Casing Diameter/Type: 2" Measuring Point Description: 4 TOC
 Well Depth (feet below measuring point): 59.1' Depth to Water: 47.00 ft water
 Screen: _____ Depth to Product: _____
 J-TUBE: YES or NO If yes indicate the depth below static water the tube was raised to Before Sampling: _____

WELL EVACUATION

Method: Mechanical Bailer, Galvanized Bailer, PVC Bailer, Disp. Polyethylene Bailer, SST Bailer, Submersible Pump, Low Flow, Peri Pump
12.1 Ft. water x 0.163 gal./ft. = one casing volume 2 gals. x 3 = purge volume 6 gals.
 SCH 40 Pipe * 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Any Well C feet in radius = 3.14 x R² x H
 Water Quality: _____ ODOR: YES or NO SHEEN: YES or NO

Comments: _____

EVACUATION DATA

Time	Gallons	Temperature	pH	SC	ORP	DO
	<u>2</u>	<u>17.41</u>	<u>6.14</u>	<u>1332</u>	<u>-119.3</u>	<u>1.33</u>
	<u>4</u>					
	<u>6</u>	<u>Bailed dr. @ 3 gallons, allowed to recharge then sampled.</u>				
		<u>15.36</u>	<u>6.08</u>	<u>1455</u>	<u>0.39</u>	<u>-208.2</u>

Double

WELL SAMPLING

Sampling Method: Disposable Poly Bailer, Submersible Pump, Low Flow, Peri Pump Sample Type: Natural, Duplicate, Field Blank

Parameter	Sample Container	Preservative
<input type="checkbox"/> BTEX	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> MTBE	Extracted from BTEX VOA	Hydrochloric acid
<input type="checkbox"/> GRO as Gasoline	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> DRO as Diesel	(2) 1-liter amber glass	Sulfuric acid
<input type="checkbox"/> Methane	(2) 40 ml VOA	None
<input checked="" type="checkbox"/> Sulfate (K)	(1) 250 ml poly plastic	None
<input type="checkbox"/> HACH	(1) 1-liter poly plastic	None
<input type="checkbox"/> Lead	(1) 125 ml poly plastic	Nitric acid Filtered: <input type="checkbox"/> Yes, <input type="checkbox"/> No
<input type="checkbox"/> VPH	(3) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> EPH	(2) 1-liter amber glass	Hydrochloric acid
<input type="checkbox"/> PAHs	(2) 1-liter amber glass	None
<input checked="" type="checkbox"/> VOC'S	(4) 40 ml VOA	Hydrochloric acid

IBI's	Sample Container	Preservative	Filtered:
<input type="checkbox"/> Sulfate	(1) 125 ml poly plastic	Sulfuric	<input type="checkbox"/> Yes, <input type="checkbox"/> No
<input type="checkbox"/> Sulfide	(1) 125 ml poly plastic	None	
<input type="checkbox"/> Nitrate	(1) 125 ml poly plastic	None	
<input type="checkbox"/> Methane/Ethene/Ethane	(1) 125 ml poly plastic	Sulfide	
<input type="checkbox"/> Iron/Manganese	(1) 125 ml poly plastic	Nitric	

Laboratory: Quanterra, Microseeps, STL, Northern Analytical, Gulf Coast, Other: _____ Chain-of-Custody: Yes, No

Meter	Serial No.	Calibration Date	Decontamination	
pH	<u>YSI 550 (Baz)</u>	<u>6-22-22</u>	Potable Water: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Nitric Acid: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
SC	_____	_____	Liquinox: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	DI Water: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
ORP	_____	_____	Methanol: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
DO	_____	_____		

Comments: _____

Groundwater Sampling Log

Project: Ben Landfill Sample Date: 6-22-22 Sample Time: 8:30 Well ID: MW-19
 Personnel: SM MM Weather: SUNNY
 Casing Diameter/Type: 2" Measuring Point Description: 90C
 Well Depth (feet below measuring point): 30.5' Depth to Water: 21.90' ft water
 Screen: _____ Depth to Product: _____
 J-TUBE: YES or NO If yes indicate the depth below static water the tube was raised to Before Sampling: _____

WELL EVACUATION

Method: Mechanical Bailer, Galvanized Bailer, PVC Bailer, Disp. Polyethylene Bailer, SST Bailer, Submersible Pump, Low Flow, Perli Pump
8.7 Ft. water x 1.4 gal./ft = one casing volume 1.4 gals. x 3 = purge volume 4.3 gals.
 SCH 40 Pipe * 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Any Well C feet in radius = 3.14 x R²
 Water Quality: _____ ODOR: YES or NO SHEEN: YES or NO
 Comments: _____

EVACUATION DATA

Time	Gallons	Temperature	pH	SC	ORP	DO
	<u>1.5</u>	<u>8.87</u>	<u>7.82</u>	<u>850</u>	<u>-120.1</u>	<u>10.6</u>
	<u>3.0</u>	<u>8.90</u>	<u>7.10</u>	<u>837</u>	<u>-120.9</u>	<u>10.3</u>
	<u>4.5</u>	<u>8.88</u>	<u>7.73</u>	<u>842</u>	<u>-120.2</u>	<u>10.4</u>
		<u>8.83</u>	<u>7.63</u>	<u>788</u>	<u>-124.0</u>	<u>10.24</u>

Downhole

WELL SAMPLING

Sampling Method: Disposable Poly Bailer, Submersible Pump, Low Flow, Perli Pump Sample Type: Natural, Duplicate, Field Blank

Parameter	Sample Container	Preservative
<input type="checkbox"/> BTEX	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> MTBE	Extracted from BTEX VOA	Hydrochloric acid
<input type="checkbox"/> GRO as Gasoline	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> DRO as Diesel	(2) 1-liter amber glass	Sulfuric acid
<input type="checkbox"/> Methane	(2) 40 ml VOA	None
<input type="checkbox"/> Sulfate	(1) 250 ml poly plastic	None
<input type="checkbox"/> HACH	(1) 1-liter poly plastic	None
<input type="checkbox"/> Lead	(1) 125 ml poly plastic	Nitric acid
<input type="checkbox"/> VPH	(3) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> EPH	(2) 1-liter amber glass	Hydrochloric acid
<input type="checkbox"/> PAHs	(2) 1-liter amber glass	None
<input checked="" type="checkbox"/> VOC'S	(4) 40 ml VOA	Hydrochloric acid

IBI's	Sample Container	Preservative
<input type="checkbox"/> Sulfate	(1) 125 ml poly plastic	Sulfuric
<input type="checkbox"/> Sulfide	(1) 125 ml poly plastic	None
<input type="checkbox"/> Nitrate	(1) 125 ml poly plastic	None
<input type="checkbox"/> Methane/Ethene/Ethane	(1) 125 ml poly plastic	Sulfide
<input type="checkbox"/> Iron, Manganese	(1) 125 ml poly plastic	Nitric

Laboratory: Quanterra, Microseps, STL, Northern Analytical, Gulf Coast, Other: _____ Chain-of-Custody: Yes, No

Meter	Serial No.	Calibration Date	Decontamination			
pH	<u>VSE-556 (Boz)</u>	<u>6-22-22</u>	Potable Water: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Nitric Acid: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
SC	<u> </u>	<u> </u>	Liquinox: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	DI Water: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
ORP	<u> </u>	<u> </u>	Methanol: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
DO	<u> </u>	<u> </u>				

Comments: _____

Groundwater Sampling Log

Project: B2N Landfill Sample Date: 6-22-22 Sample Time: 16:15 Well ID: MW-2D
 Personnel: SM MM Weather: Hot & Sunny
 Casing Diameter/Type: 2 Measuring Point Description: FOC
 Well Depth (feet below measuring point): 6510 Depth to Water: 54.06 ft water
 Screen: _____ Depth to Product: _____
 J-TUBE: YES or NO If yes indicate the depth below static water the tube was raised to Before Sampling: _____

WELL EVACUATION

Method: Mechanical Bailer, Galvanized Bailer, PVC Bailer, Disp. Polyethylene Bailer, SST Bailer, Submersible Pump, Low Flow, Peril Pump
10.94 Ft. water x _____ gal./ft. = one casing volume 1.8 gals. x 3 = purge volume 5.3 gals.
 SCH 40 Pipe * 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Any Well C feet in radius = 3.14 x R²
 Water Quality: _____ ODOR: YES or NO SHEEN: YES or NO
 Comments: _____

EVACUATION DATA

Time	Gallons	Temperature °C	pH	SC	ORP	DO
	<u>1.8</u>	<u>10.45</u>	<u>6.48</u>	<u>940</u>	<u>-82.9</u>	<u>110.2</u>
	<u>3.6</u>					
	<u>5.4</u>					
	<u>Bailer dry @ 2.5 gallons, recharged, then sample!</u>					
<u>Downhole</u>		<u>9.45</u>	<u>6.50</u>	<u>999</u>	<u>-99.1</u>	<u>11.51</u>

WELL SAMPLING

Sampling Method: Disposable Poly Bailer, Submersible Pump, Low Flow, Peril Pump Sample Type: Natural, Duplicate, Field Blank

Parameter	Sample Container	Preservative
<input type="checkbox"/> BTEX	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> MTBE	Extracted from BTEX VOA	Hydrochloric acid
<input type="checkbox"/> GRO as Gasoline	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> DRO as Diesel	(2) 1-liter amber glass	Sulfuric acid
<input type="checkbox"/> Methane	(2) 40 ml VOA	None
<input checked="" type="checkbox"/> Sulfate / Cl	(1) 250 ml poly plastic	None
<input type="checkbox"/> HACH	(1) 1-liter poly plastic	None
<input type="checkbox"/> Lead	(1) 125 ml poly plastic	Nitric acid Filtered: <input type="checkbox"/> Yes, <input type="checkbox"/> No
<input type="checkbox"/> VPH	(3) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> EPH	(2) 1-liter amber glass	Hydrochloric acid
<input type="checkbox"/> PAHs	(2) 1-liter amber glass	None
<input checked="" type="checkbox"/> VOC'S	(4) 40 ml VOA	Hydrochloric acid

IBI's	Sample Container	Preservative	Filtered:
<input type="checkbox"/> Sulfate	(1) 125 ml poly plastic	Sulfuric	
<input type="checkbox"/> Sulfide	(1) 125 ml poly plastic	None	
<input type="checkbox"/> Nitrate	(1) 125 ml poly plastic	None	
<input type="checkbox"/> Methane/Ethane/Ethane	(1) 125 ml poly plastic	Sulfide	
<input type="checkbox"/> Iron, Manganese	(1) 125 ml poly plastic	Nitric	<input type="checkbox"/> Yes, <input type="checkbox"/> No

Laboratory: Quanterra, Microseeps, STL, Northern Analytical, Gulf Coast, Other: _____ Chain-of-Custody: Yes, No

Meter	Serial No.	Calibration Date	Decontamination
pH	<u>YSI 550 (Boe)</u>	<u>6-22-22</u>	Potable Water: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
SC			Liquinox: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
ORP			DI Water: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
DO			Methanol: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Comments: _____

Groundwater Sampling Log

Project: B2N Landfill Sample Date: 6-22-22 Sample Time: 18:00 Well ID: MW-21
 Personnel: SM MM Weather: Hot & sunny
 Casing Diameter/Type: 2" Measuring Point Description: TOC
 Well Depth (feet below measuring point): 17.5 Depth to Water: 8.65 ft water
 Screen: _____ Depth to Product: _____
 J-TUBE: YES or NO If yes indicate the depth below static water the tube was raised to Before Sampling: _____

WELL EVACUATION

Method: Mechanical Bailer, Galvanized Bailer, PVC Bailer, Disp. Polyethylene Bailer, SST Bailer, Submersible Pump, Low Flow, Peri Pump
8.85 Ft. water x 0.163 gal./ft. = one casing volume 1.4 gals. x 3 = purge volume 4.3 gals.
 SCH 40 Pipe * 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.811 gal./ft. Any Well C feet in radius = 3.14 x R²
 Water Quality: _____ ODOR: YES or NO SHEEN: YES or NO

Comments: _____

EVACUATION DATA

Time	Gallons	Temperature	pH	SC	ORP	DO
	<u>1.4</u>	<u>8.13</u>	<u>7.09</u>	<u>502</u>	<u>6.67</u>	<u>-175.6</u>
	<u>2.8</u>	<u>7.70</u>	<u>7.45</u>	<u>498</u>	<u>6.78</u>	<u>-176.5</u>
	<u>4.3</u>	<u>7.57</u>	<u>7.79</u>	<u>492</u>	<u>7.22</u>	<u>-185.9</u>
<u>Down hole</u>		<u>7.86</u>	<u>7.87</u>	<u>486</u>	<u>5.98</u>	<u>-194.4</u>

WELL SAMPLING

Sampling Method: Disposable Poly Bailer, Submersible Pump, Low Flow, Peri Pump Sample Type: Natural, Duplicate, Field Blank

Parameter	Sample Container	Preservative
<input type="checkbox"/> BTEX	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> MTBE	Extracted from BTEX VOA	Hydrochloric acid
<input type="checkbox"/> GRO as Gasoline	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> DRO as Diesel	(2) 1-liter amber glass	Sulfuric acid
<input type="checkbox"/> Methane	(2) 40 ml VOA	None
<input type="checkbox"/> Sulfate	(1) 250 ml poly plastic	None
<input type="checkbox"/> HACH	(1) 1-liter poly plastic	None
<input type="checkbox"/> Lead	(1) 125 ml poly plastic	Nitric acid
<input type="checkbox"/> VPH	(3) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> EPH	(2) 1-liter amber glass	Hydrochloric acid
<input checked="" type="checkbox"/> PAHs	(2) 1-liter amber glass	None
<input checked="" type="checkbox"/> VOC'S	(4) 40 ml VOA	Hydrochloric acid

IBI's	Sample Container	Preservative	Filtered:
<input type="checkbox"/> Sulfate	(1) 125 ml poly plastic	Sulfuric	<input type="checkbox"/> Yes, <input type="checkbox"/> No
<input type="checkbox"/> Sulfide	(1) 125 ml poly plastic	None	
<input type="checkbox"/> Nitrate	(1) 125 ml poly plastic	None	
<input type="checkbox"/> Methane/Ethene/Ethane	(1) 125 ml poly plastic	Sulfide	
<input type="checkbox"/> Iron, Manganese	(1) 125 ml poly plastic	Nitric	

Laboratory: Quanterra, Microseeps, STL, Northern Analytical, Gulf Coast, Other: _____ Chain-of-Custody: Yes, No

Meter: YSI-556 (Boz) Serial No. 6-22-22 Calibration Date
 Decontamination: Potable Water: Yes No Nitric Acid: Yes No
 Liquinox: Yes No DI Water: Yes No
 Methanol: Yes No

Comments: _____

Groundwater Sampling Log

Project: B&N Landfill Sample Date: 6-22-22 Sample Time: 17:15 Well ID: MW-22
 Personnel: SM MM Weather: Hot & Sunny
 Casing Diameter/Type: 2" Measuring Point Description: _____
 Well Depth (feet below measuring point): 13' Depth to Water: 3.75 ft water
 Screen: _____ Depth to Product: _____
 J-TUBE: YES or NO _____ if yes indicate the depth below static water the tube was raised to Before Sampling: _____

WELL EVACUATION

Method: Mechanical Bailer, Galvanized Bailer, PVC Bailer, Disp. Polyethylene Bailer, SST Bailer, Submersible Pump, Low Flow, Peril Pump
9.25 Fl. water x 0.163 gal./ft. = one casing volume 1.05 gals. x 3 = purge volume 4.5 gals.
 SCH 40 Pipe * 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.811 gal./ft. Any Well C feet in radius = 3.14 x R²
 Water Quality: _____ ODOR: YES or NO _____ SHEEN: YES or NO _____
 Comments: _____

EVACUATION DATA

Downhole

Time	Gallons	Temperature	pH	SC	ORP	DO
	<u>1.5</u>	<u>10.08</u>	<u>6.66</u>	<u>749</u>	<u>-124.9</u>	<u>6.42</u>
	<u>3.0</u>	<u>9.57</u>	<u>7.16</u>	<u>747</u>	<u>-148.1</u>	<u>6.60</u>
	<u>4.5</u>	<u>9.57</u>	<u>7.39</u>	<u>743</u>	<u>-150.4</u>	<u>6.51</u>
		<u>8.82</u>	<u>7.58</u>	<u>741</u>	<u>-161.9</u>	<u>5.49</u>

WELL SAMPLING

Sampling Method: Disposable Poly Bailer, Submersible Pump, Low Flow, Peril Pump Sample Type: Natural, Duplicate, Field Blank

Parameter	Sample Container	Preservative
<input type="checkbox"/> BTEX	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> MTBE	Extracted from BTEX VOA	Hydrochloric acid
<input type="checkbox"/> GRO as Gasoline	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> DRO as Diesel	(2) 1-liter amber glass	Sulfuric acid
<input type="checkbox"/> Methane	(2) 40 ml VOA	None
<input type="checkbox"/> Sulfate	(1) 250 ml poly plastic	None
<input type="checkbox"/> HACH	(1) 1-liter poly plastic	None
<input type="checkbox"/> Lead	(1) 125 ml poly plastic	Nitric acid
<input type="checkbox"/> VPH	(3) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> EPH	(2) 1-liter amber glass	Hydrochloric acid
<input type="checkbox"/> PAHs	(2) 1-liter amber glass	None
<input checked="" type="checkbox"/> VOC'S	(4) 40 ml VOA	Hydrochloric acid

IBI's	Sample Container	Preservative	Filtered:
<input type="checkbox"/> Sulfate	(1) 125 ml poly plastic	Sulfuric	
<input type="checkbox"/> Sulfide	(1) 125 ml poly plastic	None	
<input type="checkbox"/> Nitrate	(1) 125 ml poly plastic	None	
<input type="checkbox"/> Methane/Ethene/Ethane	(1) 125 ml poly plastic	Sulfide	
<input type="checkbox"/> Iron, Manganese	(1) 125 ml poly plastic	Nitric	<input type="checkbox"/> Yes, <input type="checkbox"/> No

Laboratory: Quanterra, Microseeps, STL, Northern Analytical, Gulf Coast, Other: _____ Chain-of-Custody: Yes, No

Meter	Serial No.	Calibration Date	Decontamination	
pH	<u>YSI 556 (Boz)</u>	<u>6-22-22</u>	Potable Water: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Nitric Acid: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
SC			Liquinox: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	DI Water: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
ORP			Methanol: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
DO				

Comments: _____

Groundwater Sampling Log

Project: BEN Landfill Sample Date: 6.22.22 Sample Time: 17:30 Well ID: MW-23
 Personnel: SM MM Weather: Hot & Sunny
 Casing Diameter/Type: 2" Measuring Point Description: TOC
 Well Depth (feet below measuring point): 15.5' Depth to Water: 5.25' ft water
 Screen: _____ Depth to Product: _____
 J-TUBE: YES or NO _____ If yes indicate the depth below static water the tube was raised to Before Sampling: _____

WELL EVACUATION

Method: Mechanical Bailer, Galvanized Bailer, PVC Bailer, Disp. Polyethylene Bailer, SST Bailer, Submersible Pump, Low Flow, Peril Pump
10.25 Ft. water x 0.163 gal./ft. = one casing volume 1.7 gals. x 3 = purge volume 5.0 gals.
 SCH 40 Pipe * 2" well = 0.183 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Any Well C feet in radius = 3.14 x R²

Water Quality: _____ ODOR: YES or NO _____ SHEEN: YES or NO _____
 Comments: _____

EVACUATION DATA

Time	Gallons	Temperature °C	pH	uS/cm SC	mV ORP	mg/L DO
	<u>1.7</u>	<u>10.54</u>	<u>6.99</u>	<u>550</u>	<u>-164.9</u>	<u>5.63</u>
	<u>3.4</u>	<u>10.34</u>	<u>7.29</u>	<u>545</u>	<u>-176.4</u>	<u>5.75</u>
	<u>5.0</u>	<u>10.07</u>	<u>7.43</u>	<u>545</u>	<u>-180.8</u>	<u>5.16</u>
<u>Downhole</u>		<u>9.55</u>	<u>7.52</u>	<u>546</u>	<u>-185.7</u>	<u>4.53</u>

WELL SAMPLING

Sampling Method: Disposable Poly Bailer, Submersible Pump, Low Flow, Peril Pump Sample Type: Natural, Duplicate, Field Blank

Parameter	Sample Container	Preservative
<input type="checkbox"/> BTEX	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> MTBE	Extracted from BTEX VOA	Hydrochloric acid
<input type="checkbox"/> GRO as Gasoline	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> DRO as Diesel	(2) 1-liter amber glass	Sulfuric acid
<input type="checkbox"/> Methane	(2) 40 ml VOA	None
<input type="checkbox"/> Sulfate	(1) 250 ml poly plastic	None
<input type="checkbox"/> HACH	(1) 1-liter poly plastic	None
<input type="checkbox"/> Lead	(1) 125 ml poly plastic	Nitric acid
<input type="checkbox"/> VPH	(3) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> EPH	(2) 1-liter amber glass	Hydrochloric acid
<input type="checkbox"/> PAHs	(2) 1-liter amber glass	None
<input checked="" type="checkbox"/> VOC'S	(4) 40 ml VOA	Hydrochloric acid

Filtered: Yes, No

IBI's	Sample Container	Preservative	Filtered:
<input type="checkbox"/> Sulfate	(1) 125 ml poly plastic	Sulfuric	<input type="checkbox"/> Yes, <input type="checkbox"/> No
<input type="checkbox"/> Sulfide	(1) 125 ml poly plastic	None	
<input type="checkbox"/> Nitrate	(1) 125 ml poly plastic	None	
<input type="checkbox"/> Methane/Ethane/Ethane	(1) 125 ml poly plastic	Sulfide	
<input type="checkbox"/> Iron, Manganese	(1) 125 ml poly plastic	Nitric	<input type="checkbox"/> Yes, <input type="checkbox"/> No

Laboratory: Quanterra, Microseeps, STL, Northern Analytical, Gulf Coast: Other _____ Chain-of-Custody: Yes, No

Meter	Serial No.	Calibration Date	Decontamination	
pH	<u>YSI 556 (BOE)</u>	<u>6.22.22</u>	Potable Water: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Nitric Acid: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
SC	<u>↓</u>	<u> </u>	Liquinox: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	DI Water: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
ORP	<u> </u>	<u> </u>	Methanol: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
DO	<u> </u>	<u> </u>		

Comments: _____

Groundwater Sampling Log

Project: Ben Landfill Sample Date: 6-22-22 Sample Time: 16:45 Well ID: MW-24
 Personnel: SM MM Weather: Hot sunny
 Casing Diameter/Type: 2" Measuring Point Description: TOC
 Well Depth (feet below measuring point): 80.5 Depth to Water: 75.45 ft water
 Screen: _____ Depth to Product: _____
 J-TUBE: YES or NO If yes indicate the depth below static water the tube was raised to Before Sampling: _____

WELL EVACUATION

Method: Mechanical Bailer, Galvanized Bailer, PVC Bailer, Disp. Polyethylene Bailer, SST Bailer, Submersible Pump, Low Flow, Peri Pump
5.05 Ft. water x 0.163 gal./ft. = one casing volume 0.8 gals. x 3 = purge volume 2.5 gals.
 SCH 40 Pipe * 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Any Well C feet in radius = 3.14 x R²
 Water Quality: _____ ODOR: YES or NO SHEEN: YES or NO

Comments: _____

EVACUATION DATA

Time	Gallons	Temperature °C	pH	SC	ORP	DO
	<u>0.8</u>	<u>9.82</u>	<u>6.61</u>	<u>656</u>	<u>-104.4</u>	<u>11.71</u>
	<u>4.6</u>					
	<u>2.5</u>					
	<u>Bailed dry @ 1 gal, recharged, sampled</u>					

WELL SAMPLING

Sampling Method: Disposable Poly Bailer, Submersible Pump, Low Flow, Peri Pump Sample Type: Natural, Duplicate, Field Blank

Parameter	Sample Container	Preservative
<input type="checkbox"/> BTEX	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> MTBE	Extracted from BTEX VOA	Hydrochloric acid
<input type="checkbox"/> GRO as Gasoline	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> DRO as Diesel	(2) 1-liter amber glass	Sulfuric acid
<input type="checkbox"/> Methane	(2) 40 ml VOA	None
<input type="checkbox"/> Sulfate	(1) 250 ml poly plastic	None
<input type="checkbox"/> HACH	(1) 1-liter poly plastic	None
<input type="checkbox"/> Lead	(1) 125 ml poly plastic	Nitric acid
<input type="checkbox"/> VPH	(3) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> EPH	(2) 1-liter amber glass	Hydrochloric acid
<input type="checkbox"/> PAHs	(2) 1-liter amber glass	None
<input checked="" type="checkbox"/> VOC'S	(4) 40 ml VOA	Hydrochloric acid

IBI's	Sample Container	Preservative	Filtered:
<input type="checkbox"/> Sulfate	(1) 125 ml poly plastic	Sulfuric	
<input type="checkbox"/> Sulfide	(1) 125 ml poly plastic	None	
<input type="checkbox"/> Nitrate	(1) 125 ml poly plastic	None	
<input type="checkbox"/> Methane/Ethane/Ethane	(1) 125 ml poly plastic	Sulfide	
<input type="checkbox"/> Iron, Manganese	(1) 125 ml poly plastic	Nitric	<input type="checkbox"/> Yes, <input type="checkbox"/> No

Laboratory: Quanterra, Microseeps, STL, Northern Analytical Gulf Coast: Other _____ Chain-of-Custody: Yes, No

Meter	Serial No.	Calibration Date	Decontamination	
pH	<u>YSI 550 (B12)</u>	<u>6-22-22</u>	Potable Water: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Nitric Acid: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
SC	<u> </u>	<u> </u>	Liquinox: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	DI Water: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
ORP	<u> </u>	<u> </u>	Methanol: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
DO	<u> </u>	<u> </u>		

Comments: _____

Groundwater Sampling Log

Project: Ben Landfill Sample Date: 6-22-22 Sample Time: 8:00 Well ID: MW-27
 Personnel: SM MM Weather: SUNNY
 Casing Diameter/Type: 2" Measuring Point Description: TDC
 Well Depth (feet below measuring point): 27' Depth to Water: 19.55 ft water
 Screen: _____ Depth to Product: _____
 J-TUBE: YES or NO If yes indicate the depth below static water the tube was raised to Before Sampling: _____

WELL EVACUATION

Method: Mechanical Bailer, Galvanized Bailer, PVC Bailer, Disp. Polyethylene Bailer, SST Bailer, Submersible Pump, Low Flow, Peril Pump
7.45 Fl. water x 0.163 gal./ft. = one casing volume 1.2 gals. x 3 = purge volume 3.6 gals.
 SCH 40 Pipe * 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.811 gal./ft. Any Well C feet in radius = 3.14 x R²

Water Quality: _____ ODOR: YES or NO SHEEN: YES or NO

Comments: _____

EVACUATION DATA

Time	Gallons	Temperature	pH	SC	ORP	DO
	<u>1.2</u>	<u>9.48</u>	<u>7.14</u>	<u>789</u>	<u>-148.5</u>	<u>—</u>
	<u>2.4</u>	<u>8.71</u>	<u>7.01</u>	<u>791</u>	<u>-94.9</u>	<u>11.3</u>
	<u>3.6</u>	<u>8.62</u>	<u>7.30</u>	<u>792</u>	<u>-99.6</u>	<u>11.0</u>
		<u>8.50</u>	<u>7.56</u>	<u>791</u>	<u>-97.7</u>	<u>10.75</u>

Downside

WELL SAMPLING

Sampling Method: Disposable Poly Bailer, Submersible Pump, Low Flow, Peril Pump Sample Type: Natural, Duplicate, Field Blank

Parameter	Sample Container	Preservative
<input type="checkbox"/> BTEX	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> MTBE	Extracted from BTEX VOA	Hydrochloric acid
<input type="checkbox"/> GRO as Gasoline	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> DRO as Diesel	(2) 1-liter amber glass	Sulfuric acid
<input type="checkbox"/> Methane	(2) 40 ml VOA	None
<input checked="" type="checkbox"/> Sulfate/C	(1) 250 ml poly plastic	None
<input type="checkbox"/> HACH	(1) 1-liter poly plastic	None
<input type="checkbox"/> Lead	(1) 125 ml poly plastic	Nitric acid
<input type="checkbox"/> VPH	(3) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> EPH	(2) 1-liter amber glass	Hydrochloric acid
<input type="checkbox"/> PAHs	(2) 1-liter amber glass	None
<input checked="" type="checkbox"/> VOC'S	(4) 40 ml VOA	Hydrochloric acid

Filtered: Yes, No

IBI's	Sample Container	Preservative	Filtered:
<input type="checkbox"/> Sulfate	(1) 125 ml poly plastic	Sulfuric	<input type="checkbox"/> Yes, <input type="checkbox"/> No
<input type="checkbox"/> Sulfide	(1) 125 ml poly plastic	None	
<input checked="" type="checkbox"/> Nitrate	(1) 125 ml poly plastic	None	
<input checked="" type="checkbox"/> Methane/Ethene/Ethane	(1) 125 ml poly plastic	Sulfide	
<input type="checkbox"/> Iron, Manganese	(1) 125 ml poly plastic	Nitric	<input type="checkbox"/> Yes, <input type="checkbox"/> No

Laboratory: Quanterra, Microseeps, STL, Northern Analytical Gulf Coast: Other _____ Chain-of-Custody: Yes, No

Meter	Serial No.	Calibration Date	Decontamination
pH	<u>YSI-556 (Boe)</u>	<u>6-22-22</u>	Potable Water: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
SC			Nitric Acid: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
ORP			Liquinox: Yes <input type="checkbox"/> No <input type="checkbox"/>
DO			Methanol: Yes <input type="checkbox"/> No <input type="checkbox"/>
			DI Water: Yes <input type="checkbox"/> No <input type="checkbox"/>

Comments: _____

Groundwater Sampling Log

Project: Ben Landfill Sample Date: 6-22-22 Sample Time: 10:15 Well ID: Mc Seep
 Personnel: SM MM Weather: Sunny
 Casing Diameter/Type: NA Measuring Point Description: NA
 Well Depth (feet below measuring point): NA Depth to Water: NA ft water
 Screen: _____ Depth to Product: _____
 J-TUBE: YES or NO If yes indicate the depth below static water the tube was raised to Before Sampling: _____

WELL EVACUATION

Method: Mechanical Bailer, Galvanized Bailer, PVC Bailer, Disp. Polyethylene Bailer, SST Bailer, Submersible Pump, Low Flow, Perl Pump
 _____ Ft. water x _____ gal./ft. = one casing volume _____ gals. x 3 = purge volume _____ gals.

SCH 40 Pipe * 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.811 gal./ft. Any Well C feet in radius = 3.14 x R²

Water Quality: _____ ODOR: YES or NO SHEEN: YES or NO

Comments: _____

EVACUATION DATA

Time	Gallons	Temperature	pH	SC	ORP	DO
		<u>8.13</u>	<u>7.68</u>	<u>1031</u>	<u>-174.0</u>	<u>7.65</u>

WELL SAMPLING

Sampling Method: Disposable Poly Bailer, Submersible Pump, Low Flow, Perl Pump Sample Type: Natural, Duplicate, Field Blank

Parameter	Sample Container	Preservative
<input type="checkbox"/> BTEX	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> MTBE	Extracted from BTEX VOA	Hydrochloric acid
<input type="checkbox"/> GRO as Gasoline	(2) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> DRO as Diesel	(2) 1-liter amber glass	Sulfuric acid
<input type="checkbox"/> Methane	(2) 40 ml VOA	None
<input type="checkbox"/> Sulfate	(1) 250 ml poly plastic	None
<input type="checkbox"/> HACH	(1) 1-liter poly plastic	None
<input type="checkbox"/> Lead	(1) 125 ml poly plastic	Nitric acid
<input type="checkbox"/> VPH	(3) 40 ml VOA	Hydrochloric acid
<input type="checkbox"/> EPH	(2) 1-liter amber glass	Hydrochloric acid
<input type="checkbox"/> PAHs	(2) 1-liter amber glass	None
<input checked="" type="checkbox"/> VOC'S	(4) 40 ml VOA	Hydrochloric acid

Filtered: Yes, No

IBI's	Sample Container	Preservative	Filtered:
<input type="checkbox"/> Sulfate	(1) 125 ml poly plastic	Sulfuric	<input type="checkbox"/> Yes, <input type="checkbox"/> No
<input type="checkbox"/> Sulfide	(1) 125 ml poly plastic	None	
<input checked="" type="checkbox"/> Nitrate	(1) 125 ml poly plastic	None	
<input checked="" type="checkbox"/> Methane/Ethene/Ethane	(1) 125 ml poly plastic	Sulfide	
<input type="checkbox"/> Iron, Manganese	(1) 125 ml poly plastic	Nitric	<input type="checkbox"/> Yes, <input type="checkbox"/> No

Laboratory: Quanterra, Microseeps, STL, Northern Analytical, Gulf Coast, Other: _____ Chain-of-Custody: Yes, No

Meter	Serial No.	Calibration Date	Decontamination	
pH	<u>YSI 556 (Baz)</u>	<u>6-22-22</u>	Potable Water: Yes <input type="checkbox"/> No <input type="checkbox"/>	Nitric Acid: Yes <input type="checkbox"/> No <input type="checkbox"/>
SC	_____	_____	Liquinox: Yes <input type="checkbox"/> No <input type="checkbox"/>	DI Water: Yes <input type="checkbox"/> No <input type="checkbox"/>
ORP	_____	_____	Methanol: Yes <input type="checkbox"/> No <input type="checkbox"/>	
DO	_____	_____		

Comments: _____

Groundwater Sampling Log

Project: Ben Landfill Sample Date: 6-22-22 Sample Time: 10:30 Well ID: vet well
 Personnel: SM MM Weather: NA Applicable - indoors
 Casing Diameter/Type: NA Measuring Point Description: NA
 Well Depth (feet below measuring point): _____ Depth to Water: NA ft water
 Screen: _____ Depth to Product: _____
 J-TUBE: YES or NO If yes indicate the depth below static water the tube was raised to Before Sampling: _____

WELL EVACUATION

Method: Mechanical Bailer, Galvanized Bailer, PVC Bailer, Disp. Polyethylene Bailer, SST Bailer, Submersible Pump, Low Flow, Peri Pump
 _____ Ft. water x _____ gal./ft. = one casing volume _____ gals. x 3 = purge volume _____ gals.

SCH 40 Pipe * 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.811 gal./ft. Any Well C feet in radius = 3.14 x R² x C

Water Quality: _____ ODOR: YES or NO SHEEN: YES or NO

Comments: well allowed to run 5 minutes then sampled from
known faucet

EVACUATION DATA

Time	Gallons	Temperature	pH	SC	ORP	DO
		9.93	7.75	539	-181.5	9.82

WELL SAMPLING

Sampling Method: Disposable Poly Bailer, Submersible Pump, Low Flow, Peri Pump Sample Type: Natural, Duplicate, Field Blank

Parameter	Sample Container	Preservative	
<input type="checkbox"/> BTEX	(2) 40 ml VOA	Hydrochloric acid	
<input type="checkbox"/> MTBE	Extracted from BTEX VOA	Hydrochloric acid	
<input type="checkbox"/> GRO as Gasoline	(2) 40 ml VOA	Hydrochloric acid	
<input type="checkbox"/> DRO as Diesel	(2) 1-liter amber glass	Sulfuric acid	
<input type="checkbox"/> Methane	(2) 40 ml VOA	None	
<input type="checkbox"/> Sulfate	(1) 250 ml poly plastic	None	
<input type="checkbox"/> HACH	(1) 1-liter poly plastic	None	
<input type="checkbox"/> Lead	(1) 125 ml poly plastic	Nitric acid	Filtered: <input type="checkbox"/> Yes, <input type="checkbox"/> No
<input type="checkbox"/> VPH	(3) 40 ml VOA	Hydrochloric acid	
<input type="checkbox"/> EPH	(2) 1-liter amber glass	Hydrochloric acid	
<input type="checkbox"/> PAHs	(2) 1-liter amber glass	None	
<input checked="" type="checkbox"/> VOC'S	(4) 40 ml VOA	Hydrochloric acid	

IBI's	Sample Container	Preservative	
<input type="checkbox"/> Sulfate	(1) 125 ml poly plastic	Sulfuric	
<input type="checkbox"/> Sulfide	(1) 125 ml poly plastic	None	
<input checked="" type="checkbox"/> Nitrate	(1) 125 ml poly plastic	None	
<input checked="" type="checkbox"/> Methane/Ethene/Ethane	(1) 125 ml poly plastic	Sulfide	
<input type="checkbox"/> Iron, Manganese	(1) 125 ml poly plastic	Nitric	Filtered: <input type="checkbox"/> Yes, <input type="checkbox"/> No

Laboratory: Quanterra, Microseeps, STL, Northern Analytical, Gulf Coast, Other: _____ Chain-of-Custody: Yes, No

Meter	Serial No.	Calibration Date	Decontamination
pH	<u>YSI 556 (BIE)</u>	<u>6-22-22</u>	Potable Water: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
SC	<u>↓</u>	<u>↓</u>	Nitric Acid: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
ORP	<u>↓</u>	<u>↓</u>	Liquinox: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
DO	<u>↓</u>	<u>↓</u>	Methanol: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
			DI Water: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Comments: _____

APPENDIX C – LABORATORY ANALYTICAL REPORTS

July 18, 2022

Shane Matolyak
Tetra Tech
851 Bridger Drive
Suite 4
Bozeman, MT 59715

RE: Project: 114-710326G.400 Bozeman Landfi
Pace Project No.: 10614797

Dear Shane Matolyak:

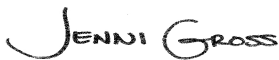
Enclosed are the analytical results for sample(s) received by the laboratory on June 29, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace National - Mt. Juliet
- Pace Analytical Services - Minneapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jennifer Gross
jennifer.gross@pacelabs.com
(612)607-1700
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 114-710326G.400 Bozeman Landfi
Pace Project No.: 10614797

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab

A2LA Certification #: 2926.01*
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009*
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014*
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605*
Georgia Certification #: 959
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086*
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064*
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137*
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240*
Mississippi Certification #: MN00064

Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081*
New Jersey Certification #: MN002
New York Certification #: 11647*
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification (A2LA) #: R-036
North Dakota Certification (MN) #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Ohio VAP Certification (1800) #: CL110*
Oklahoma Certification #: 9507*
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001*
Pennsylvania Certification #: 68-00563*
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192*
Utah Certification #: MN00064*
Vermont Certification #: VT-027053137
Virginia Certification #: 460163*
Washington Certification #: C486*
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01
USDA Permit #: P330-19-00208
Please Note: Applicable air certifications are denoted with an asterisk ().

Pace Analytical Services National

12065 Lebanon Road, Mt. Juliet, TN 37122

Alabama Certification #: 40660
Alaska Certification 17-026
Arizona Certification #: AZ0612
Arkansas Certification #: 88-0469
California Certification #: 2932
Canada Certification #: 1461.01
Colorado Certification #: TN00003
Connecticut Certification #: PH-0197
DOD Certification: #1461.01
EPA# TN00003
Florida Certification #: E87487
Georgia DW Certification #: 923
Georgia Certification: NELAP
Idaho Certification #: TN00003
Illinois Certification #: 200008

Indiana Certification #: C-TN-01
Iowa Certification #: 364
Kansas Certification #: E-10277
Kentucky UST Certification #: 16
Kentucky Certification #: 90010
Louisiana Certification #: AI30792
Louisiana DW Certification #: LA180010
Maine Certification #: TN0002
Maryland Certification #: 324
Massachusetts Certification #: M-TN003
Michigan Certification #: 9958
Minnesota Certification #: 047-999-395
Mississippi Certification #: TN00003
Missouri Certification #: 340
Montana Certification #: CERT0086
Nebraska Certification #: NE-OS-15-05

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Pace Analytical Services National

Nevada Certification #: TN-03-2002-34

New Hampshire Certification #: 2975

New Jersey Certification #: TN002

New Mexico DW Certification

New York Certification #: 11742

North Carolina Aquatic Toxicity Certification #: 41

North Carolina Drinking Water Certification #: 21704

North Carolina Environmental Certificate #: 375

North Dakota Certification #: R-140

Ohio VAP Certification #: CL0069

Oklahoma Certification #: 9915

Oregon Certification #: TN200002

Pennsylvania Certification #: 68-02979

Rhode Island Certification #: LAO00356

South Carolina Certification #: 84004

South Dakota Certification

Tennessee DW/Chem/Micro Certification #: 2006

Texas Certification #: T 104704245-17-14

Texas Mold Certification #: LAB0152

USDA Soil Permit #: P330-15-00234

Utah Certification #: TN00003

Virginia Certification #: VT2006

Vermont Dept. of Health: ID# VT-2006

Virginia Certification #: 460132

Washington Certification #: C847

West Virginia Certification #: 233

Wisconsin Certification #: 998093910

Wyoming UST Certification #: via A2LA 2926.01

A2LA-ISO 17025 Certification #: 1461.01

A2LA-ISO 17025 Certification #: 1461.02

AIHA-LAP/LLC EMLAP Certification #:100789

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10614797001	LF-2	Water	06/21/22 17:30	06/29/22 08:50
10614797002	LF-3	Water	06/22/22 09:30	06/29/22 08:50
10614797003	MW-4	Water	06/21/22 13:30	06/29/22 08:50
10614797004	MW-5	Water	06/23/22 10:00	06/29/22 08:50
10614797005	MW-6	Water	06/21/22 14:45	06/29/22 08:50
10614797006	MW-7A	Water	06/21/22 15:30	06/29/22 08:50
10614797007	MW-8A	Water	06/21/22 12:30	06/29/22 08:50
10614797008	MW-9A	Water	06/21/22 14:00	06/29/22 08:50
10614797009	MW-10	Water	06/22/22 10:30	06/29/22 08:50
10614797010	MW-11	Water	06/22/22 13:00	06/29/22 08:50
10614797011	MW-12	Water	06/22/22 14:00	06/29/22 08:50
10614797012	MW-13	Water	06/21/22 16:00	06/29/22 08:50
10614797013	MW-15	Water	06/21/22 11:00	06/29/22 08:50
10614797014	MW-17	Water	06/22/22 15:30	06/29/22 08:50
10614797015	MW-18	Water	06/22/22 14:30	06/29/22 08:50
10614797016	MW-19	Water	06/22/22 08:30	06/29/22 08:50
10614797017	MW-20	Water	06/22/22 16:15	06/29/22 08:50
10614797018	MW-21	Water	06/22/22 18:00	06/29/22 08:50
10614797019	MW-22	Water	06/22/22 17:15	06/29/22 08:50
10614797020	MW-23	Water	06/22/22 17:30	06/29/22 08:50
10614797021	MW-24	Water	06/22/22 16:45	06/29/22 08:50
10614797022	MW-27	Water	06/22/22 08:00	06/29/22 08:50
10614797023	McIlhattan Seep	Water	06/22/22 10:15	06/29/22 08:50
10614797024	Vet Well	Water	06/22/22 10:30	06/29/22 08:50
10614797025	DUP-1	Water	06/21/22 13:45	06/29/22 08:50
10614797026	DUP-2	Water	06/21/22 15:00	06/29/22 08:50
10614797027	DUP-3	Water	06/22/22 14:15	06/29/22 08:50
10614797028	Trip Blank	Water	06/21/22 00:00	06/29/22 08:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 114-710326G.400 Bozeman Landfi
Pace Project No.: 10614797

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10614797001	LF-2	EPA 8260B	ACG, ADM	63	PAN
		EPA 353.2	JFP	1	PASI-M
10614797002	LF-3	EPA 8260B	JAH, JHH	63	PAN
		EPA 300.0	KEO	2	PASI-M
		EPA 353.2	JFP	1	PASI-M
10614797003	MW-4	EPA 8260B	ACG, ADM	63	PAN
		EPA 300.0	KEO	2	PASI-M
		EPA 353.2	JFP	1	PASI-M
10614797004	MW-5	EPA 8260B	JHH	63	PAN
		EPA 300.0	KEO	2	PASI-M
		EPA 353.2	JFP	1	PASI-M
10614797005	MW-6	EPA 8260B	ACG, ADM	63	PAN
		EPA 300.0	KEO	2	PASI-M
		EPA 353.2	JFP	1	PASI-M
10614797006	MW-7A	EPA 8260B	ACG, ADM	63	PAN
		EPA 353.2	JFP	1	PASI-M
10614797007	MW-8A	EPA 8260B	ACG, ADM	63	PAN
		EPA 300.0	KEO	2	PASI-M
		EPA 353.2	JFP	1	PASI-M
10614797008	MW-9A	EPA 8260B	ACG, ADM	63	PAN
		EPA 300.0	KEO	2	PASI-M
		EPA 353.2	JFP	1	PASI-M
10614797009	MW-10	EPA 8260B	JAH, JHH	63	PAN
		EPA 353.2	JFP	1	PASI-M
10614797010	MW-11	EPA 8260B	JAH	63	PAN
		EPA 353.2	JFP	1	PASI-M
10614797011	MW-12	EPA 8260B	JAH	63	PAN
		EPA 300.0	KEO	2	PASI-M
		EPA 353.2	JFP	1	PASI-M
10614797012	MW-13	EPA 8260B	ACG, ADM	63	PAN
		EPA 300.0	KEO	2	PASI-M
		EPA 353.2	JFP	1	PASI-M
10614797013	MW-15	EPA 8260B	ACG, ADM	63	PAN
		EPA 300.0	KEO	2	PASI-M
		EPA 353.2	JFP	1	PASI-M
10614797014	MW-17	EPA 8260B	JAH	63	PAN
		EPA 300.0	KEO	2	PASI-M

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 114-710326G.400 Bozeman Landfi
Pace Project No.: 10614797

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10614797015	MW-18	EPA 8260B	JAH	63	PAN
		EPA 300.0	KEO	2	PASI-M
10614797016	MW-19	EPA 8260B	JAH	63	PAN
10614797017	MW-20	EPA 8260B	JAH	63	PAN
		EPA 300.0	KEO	2	PASI-M
10614797018	MW-21	EPA 8260B	JAH	63	PAN
10614797019	MW-22	EPA 8260B	JAH	63	PAN
10614797020	MW-23	EPA 8260B	JAH	63	PAN
10614797021	MW-24	EPA 8260B	JAH	63	PAN
10614797022	MW-27	EPA 8260B	JAH	63	PAN
		EPA 300.0	KEO	2	PASI-M
		EPA 353.2	JFP	1	PASI-M
10614797023	McIlhhattan Seep	EPA 8260B	JAH	63	PAN
		EPA 353.2	JFP	1	PASI-M
10614797024	Vet Well	EPA 8260B	JAH	63	PAN
10614797025	DUP-1	EPA 8260B	ACG, ADM	63	PAN
		EPA 300.0	KEO	2	PASI-M
		EPA 353.2	JFP	1	PASI-M
10614797026	DUP-2	EPA 8260B	ACG, ADM	63	PAN
		EPA 300.0	KEO	2	PASI-M
		EPA 353.2	JFP	1	PASI-M
10614797027	DUP-3	EPA 8260B	JAH	63	PAN
		EPA 300.0	KEO	2	PASI-M
		EPA 353.2	JFP	1	PASI-M
10614797028	Trip Blank	EPA 8260B	ACG, ADM	63	PAN

PAN = Pace National - Mt. Juliet

PASI-M = Pace Analytical Services - Minneapolis

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Date: July 18, 2022

L1511120-21 (MW-24) - 8260B analysis was analyzed from headspace vial.

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Method: EPA 8260B

Description: VOA (GC/MS) 8260B

Client: Tetra Tech, Inc. - MT

Date: July 18, 2022

General Information:

28 samples were analyzed for EPA 8260B by Pace National Mt. Juliet. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

C4: The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Data is likely to show a low bias concerning the result.

- MW-5 (Lab ID: 10614797004)

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

H3: Sample was received or analysis requested beyond the recognized method holding time.

- DUP-1 (Lab ID: 10614797025)
- DUP-2 (Lab ID: 10614797026)
- DUP-3 (Lab ID: 10614797027)
- LF-2 (Lab ID: 10614797001)
- LF-3 (Lab ID: 10614797002)
- MW-10 (Lab ID: 10614797009)
- MW-11 (Lab ID: 10614797010)
- MW-12 (Lab ID: 10614797011)
- MW-13 (Lab ID: 10614797012)
- MW-15 (Lab ID: 10614797013)
- MW-17 (Lab ID: 10614797014)
- MW-18 (Lab ID: 10614797015)
- MW-19 (Lab ID: 10614797016)
- MW-20 (Lab ID: 10614797017)
- MW-21 (Lab ID: 10614797018)
- MW-22 (Lab ID: 10614797019)
- MW-23 (Lab ID: 10614797020)
- MW-24 (Lab ID: 10614797021)
- MW-27 (Lab ID: 10614797022)
- MW-4 (Lab ID: 10614797003)
- MW-5 (Lab ID: 10614797004)
- MW-6 (Lab ID: 10614797005)
- MW-7A (Lab ID: 10614797006)
- MW-8A (Lab ID: 10614797007)
- MW-9A (Lab ID: 10614797008)
- McIlhattan Seep (Lab ID: 10614797023)
- Trip Blank (Lab ID: 10614797028)
- Vet Well (Lab ID: 10614797024)

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Method: EPA 8260B

Description: VOA (GC/MS) 8260B

Client: Tetra Tech, Inc. - MT

Date: July 18, 2022

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: 1890171

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

- LCS (Lab ID: R3811543-1)
 - Trichlorofluoromethane
- LCSD (Lab ID: R3811543-2)
 - Chloroform
 - Methylene Chloride
 - Trichlorofluoromethane
 - n-Propylbenzene

R1: RPD value was outside control limits.

- LCSD (Lab ID: R3811543-2)
 - Chloromethane

QC Batch: 1890552

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

- LCS (Lab ID: R3812676-2)
 - Bromobenzene
 - n-Propylbenzene

QC Batch: 1891832

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

- LCS (Lab ID: R3812602-1)
 - Acetone
- LCS (Lab ID: R3812602-2)
 - 1,4-Dioxane (p-Dioxane)
 - 2-Propanol

QC Batch: 1892380

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

- LCS (Lab ID: R3814131-1)
 - 1,1,1-Trichloroethane
- LCS (Lab ID: R3814131-3)
 - 1,4-Dioxane (p-Dioxane)

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Method: EPA 8260B

Description: VOA (GC/MS) 8260B

Client: Tetra Tech, Inc. - MT

Date: July 18, 2022

QC Batch: 1892380

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

- 2-Propanol

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 1891832

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- LCS (Lab ID: R3812602-2)
 - 1,4-Dioxane (p-Dioxane)
 - 2-Propanol

QC Batch: 1892380

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- LCS (Lab ID: R3814131-3)
 - 1,4-Dioxane (p-Dioxane)
 - 2-Propanol

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Method: EPA 300.0

Description: 300.0 IC Anions

Client: Tetra Tech, Inc. - MT

Date: July 18, 2022

General Information:

16 samples were analyzed for EPA 300.0 by Pace Analytical Services Minneapolis. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 827084

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10615583001,10615583002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 4381700)
 - Chloride
 - Sulfate

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Method: EPA 353.2

Description: 353.2 Nitrate + Nitrite

Client: Tetra Tech, Inc. - MT

Date: July 18, 2022

General Information:

18 samples were analyzed for EPA 353.2 by Pace Analytical Services Minneapolis. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: LF-2 **Lab ID: 10614797001** Collected: 06/21/22 17:30 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/05/22 17:42	07/05/22 17:42	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/05/22 17:42	07/05/22 17:42	107-13-1	
Benzene	<0.0941	ug/L	0.500	0.0941	1	07/05/22 17:42	07/05/22 17:42	71-43-2	
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/05/22 17:42	07/05/22 17:42	108-86-1	
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/05/22 17:42	07/05/22 17:42	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/05/22 17:42	07/05/22 17:42	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/05/22 17:42	07/05/22 17:42	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/05/22 17:42	07/05/22 17:42	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/05/22 17:42	07/05/22 17:42	75-15-0	
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/05/22 17:42	07/05/22 17:42	56-23-5	
Chlorobenzene	<0.117	ug/L	0.500	0.117	1	07/05/22 17:42	07/05/22 17:42	108-90-7	
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/05/22 17:42	07/05/22 17:42	124-48-1	
Chloroethane	<0.192	ug/L	2.50	0.192	1	07/05/22 17:42	07/05/22 17:42	75-00-3	
Chloroform	<0.111	ug/L	0.500	0.111	1	07/05/22 17:42	07/05/22 17:42	67-66-3	L0
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/05/22 17:42	07/05/22 17:42	74-87-3	R1
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/05/22 17:42	07/05/22 17:42	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/05/22 17:42	07/05/22 17:42	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/05/22 17:42	07/05/22 17:42	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/05/22 17:42	07/05/22 17:42	74-95-3	
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/05/22 17:42	07/05/22 17:42	95-50-1	
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/05/22 17:42	07/05/22 17:42	541-73-1	
1,4-Dichlorobenzene	<0.120	ug/L	0.500	0.120	1	07/05/22 17:42	07/05/22 17:42	106-46-7	
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/05/22 17:42	07/05/22 17:42	75-71-8	
1,1-Dichloroethane	<0.100	ug/L	0.500	0.100	1	07/07/22 00:53	07/07/22 00:53	75-34-3	H3
1,2-Dichloroethane	0.488J	ug/L	0.500	0.0819	1	07/05/22 17:42	07/05/22 17:42	107-06-2	J
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/07/22 00:53	07/07/22 00:53	75-35-4	H3
cis-1,2-Dichloroethene	0.223J	ug/L	0.500	0.126	1	07/07/22 00:53	07/07/22 00:53	156-59-2	H3,J
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/05/22 17:42	07/05/22 17:42	156-60-5	
1,2-Dichloropropane	<0.149	ug/L	0.500	0.149	1	07/05/22 17:42	07/05/22 17:42	78-87-5	
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/05/22 17:42	07/05/22 17:42	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/05/22 17:42	07/05/22 17:42	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/05/22 17:42	07/05/22 17:42	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/05/22 17:42	07/05/22 17:42	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/05/22 17:42	07/05/22 17:42	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/05/22 17:42	07/05/22 17:42	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/05/22 17:42	07/05/22 17:42	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/05/22 17:42	07/05/22 17:42	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/05/22 17:42	07/05/22 17:42	78-93-3	
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/05/22 17:42	07/05/22 17:42	75-09-2	L0
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/05/22 17:42	07/05/22 17:42	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/05/22 17:42	07/05/22 17:42	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/05/22 17:42	07/05/22 17:42	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/05/22 17:42	07/05/22 17:42	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/05/22 17:42	07/05/22 17:42	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/05/22 17:42	07/05/22 17:42	79-34-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: LF-2 **Lab ID: 10614797001** Collected: 06/21/22 17:30 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/05/22 17:42	07/05/22 17:42	76-13-1	
Tetrachloroethene	0.407J	ug/L	0.500	0.300	1	07/05/22 17:42	07/05/22 17:42	127-18-4	J
Tetrahydrofuran	<0.929	ug/L	5.00	0.929	1	07/05/22 17:42	07/05/22 17:42	109-99-9	
Toluene	<0.278	ug/L	0.500	0.278	1	07/05/22 17:42	07/05/22 17:42	108-88-3	
1,1,1-Trichloroethane	<0.149	ug/L	0.500	0.149	1	07/07/22 00:53	07/07/22 00:53	71-55-6	H3
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/05/22 17:42	07/05/22 17:42	79-00-5	
Trichloroethene	<0.190	ug/L	0.500	0.190	1	07/07/22 00:53	07/07/22 00:53	79-01-6	H3
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/05/22 17:42	07/05/22 17:42	75-69-4	L0
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/05/22 17:42	07/05/22 17:42	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/05/22 17:42	07/05/22 17:42	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/05/22 17:42	07/05/22 17:42	108-05-4	
Vinyl chloride	<0.234	ug/L	0.500	0.234	1	07/05/22 17:42	07/05/22 17:42	75-01-4	
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/05/22 17:42	07/05/22 17:42	1330-20-7	
1,4-Dioxane (p-Dioxane)	68.3J	ug/L	100	2.83	1	07/05/22 17:42	07/05/22 17:42	123-91-1	J
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/05/22 17:42	07/05/22 17:42	67-63-0	
Surrogates									
Toluene-d8 (S)	107	%	80.0-120		1	07/05/22 17:42	07/05/22 17:42	2037-26-5	
Toluene-d8 (S)	105	%	80.0-120		1	07/07/22 00:53	07/07/22 00:53	2037-26-5	
4-Bromofluorobenzene (S)	105	%	77.0-126		1	07/05/22 17:42	07/05/22 17:42	460-00-4	
4-Bromofluorobenzene (S)	96.4	%	77.0-126		1	07/07/22 00:53	07/07/22 00:53	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70.0-130		1	07/05/22 17:42	07/05/22 17:42	17060-07-0	
1,2-Dichloroethane-d4 (S)	95.1	%	70.0-130		1	07/07/22 00:53	07/07/22 00:53	17060-07-0	
353.2 Nitrate + Nitrite									
Analytical Method: EPA 353.2									
Pace Analytical Services - Minneapolis									
Nitrogen, NO2 plus NO3	3.0	mg/L	0.10	0.031	1		07/06/22 11:05		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Sample Project No.: 10614797

Sample: LF-3 Lab ID: 10614797002 Collected: 06/22/22 09:30 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/06/22 16:05	07/06/22 16:05	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/06/22 16:05	07/06/22 16:05	107-13-1	
Benzene	<0.0941	ug/L	0.500	0.0941	1	07/06/22 16:05	07/06/22 16:05	71-43-2	
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/06/22 16:05	07/06/22 16:05	108-86-1	L0
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/06/22 16:05	07/06/22 16:05	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/06/22 16:05	07/06/22 16:05	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/06/22 16:05	07/06/22 16:05	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/06/22 16:05	07/06/22 16:05	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/06/22 16:05	07/06/22 16:05	75-15-0	
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/06/22 16:05	07/06/22 16:05	56-23-5	
Chlorobenzene	<0.117	ug/L	0.500	0.117	1	07/06/22 16:05	07/06/22 16:05	108-90-7	
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/06/22 16:05	07/06/22 16:05	124-48-1	
Chloroethane	<0.192	ug/L	2.50	0.192	1	07/06/22 16:05	07/06/22 16:05	75-00-3	
Chloroform	<0.111	ug/L	0.500	0.111	1	07/06/22 16:05	07/06/22 16:05	67-66-3	
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/06/22 16:05	07/06/22 16:05	74-87-3	
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/06/22 16:05	07/06/22 16:05	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/06/22 16:05	07/06/22 16:05	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/06/22 16:05	07/06/22 16:05	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/06/22 16:05	07/06/22 16:05	74-95-3	
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/06/22 16:05	07/06/22 16:05	95-50-1	
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/06/22 16:05	07/06/22 16:05	541-73-1	
1,4-Dichlorobenzene	<0.120	ug/L	0.500	0.120	1	07/06/22 16:05	07/06/22 16:05	106-46-7	
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/06/22 16:05	07/06/22 16:05	75-71-8	
1,1-Dichloroethane	<0.100	ug/L	0.500	0.100	1	07/11/22 13:08	07/11/22 13:08	75-34-3	H3
1,2-Dichloroethane	<0.0819	ug/L	0.500	0.0819	1	07/11/22 13:08	07/11/22 13:08	107-06-2	H3
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/11/22 13:08	07/11/22 13:08	75-35-4	H3
cis-1,2-Dichloroethene	0.915	ug/L	0.500	0.126	1	07/11/22 13:08	07/11/22 13:08	156-59-2	H3
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/06/22 16:05	07/06/22 16:05	156-60-5	
1,2-Dichloropropane	<0.149	ug/L	0.500	0.149	1	07/06/22 16:05	07/06/22 16:05	78-87-5	
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/06/22 16:05	07/06/22 16:05	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/06/22 16:05	07/06/22 16:05	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/06/22 16:05	07/06/22 16:05	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/06/22 16:05	07/06/22 16:05	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/06/22 16:05	07/06/22 16:05	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/06/22 16:05	07/06/22 16:05	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/06/22 16:05	07/06/22 16:05	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/06/22 16:05	07/06/22 16:05	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/11/22 13:08	07/11/22 13:08	78-93-3	H3
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/06/22 16:05	07/06/22 16:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/06/22 16:05	07/06/22 16:05	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/06/22 16:05	07/06/22 16:05	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/06/22 16:05	07/06/22 16:05	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/06/22 16:05	07/06/22 16:05	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/06/22 16:05	07/06/22 16:05	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/06/22 16:05	07/06/22 16:05	79-34-5	

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: LF-3 **Lab ID: 10614797002** Collected: 06/22/22 09:30 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/06/22 16:05	07/06/22 16:05	76-13-1	
Tetrachloroethene	1.01	ug/L	0.500	0.300	1	07/11/22 13:08	07/11/22 13:08	127-18-4	H3
Tetrahydrofuran	<0.929	ug/L	5.00	0.929	1	07/06/22 16:05	07/06/22 16:05	109-99-9	
Toluene	<0.278	ug/L	0.500	0.278	1	07/11/22 13:08	07/11/22 13:08	108-88-3	H3
1,1,1-Trichloroethane	<0.149	ug/L	0.500	0.149	1	07/11/22 13:08	07/11/22 13:08	71-55-6	H3,L0
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/06/22 16:05	07/06/22 16:05	79-00-5	
Trichloroethene	0.278J	ug/L	0.500	0.190	1	07/11/22 13:08	07/11/22 13:08	79-01-6	H3,J
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/06/22 16:05	07/06/22 16:05	75-69-4	
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/06/22 16:05	07/06/22 16:05	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/06/22 16:05	07/06/22 16:05	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/06/22 16:05	07/06/22 16:05	108-05-4	
Vinyl chloride	<0.234	ug/L	0.500	0.234	1	07/11/22 13:08	07/11/22 13:08	75-01-4	H3
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/06/22 16:05	07/06/22 16:05	1330-20-7	
1,4-Dioxane (p-Dioxane)	<2.83	ug/L	100	2.83	1	07/11/22 13:08	07/11/22 13:08	123-91-1	H3,L0
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/11/22 13:08	07/11/22 13:08	67-63-0	H3,L0
Surrogates									
Toluene-d8 (S)	97.4	%	80.0-120		1	07/06/22 16:05	07/06/22 16:05	2037-26-5	
Toluene-d8 (S)	103	%	80.0-120		1	07/11/22 13:08	07/11/22 13:08	2037-26-5	
4-Bromofluorobenzene (S)	85.7	%	77.0-126		1	07/06/22 16:05	07/06/22 16:05	460-00-4	
4-Bromofluorobenzene (S)	106	%	77.0-126		1	07/11/22 13:08	07/11/22 13:08	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70.0-130		1	07/06/22 16:05	07/06/22 16:05	17060-07-0	
1,2-Dichloroethane-d4 (S)	121	%	70.0-130		1	07/11/22 13:08	07/11/22 13:08	17060-07-0	
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Minneapolis									
Chloride	44.4	mg/L	1.2	0.39	1		07/09/22 10:44	16887-00-6	
Sulfate	31.7	mg/L	1.2	0.43	1		07/09/22 10:44	14808-79-8	
353.2 Nitrate + Nitrite									
Analytical Method: EPA 353.2									
Pace Analytical Services - Minneapolis									
Nitrogen, NO2 plus NO3	4.3	mg/L	0.20	0.063	2		07/06/22 11:19		

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Sample Project No.: 10614797

Sample: MW-4 Lab ID: 10614797003 Collected: 06/21/22 13:30 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/05/22 18:01	07/05/22 18:01	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/05/22 18:01	07/05/22 18:01	107-13-1	
Benzene	<0.0941	ug/L	0.500	0.0941	1	07/05/22 18:01	07/05/22 18:01	71-43-2	
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/05/22 18:01	07/05/22 18:01	108-86-1	
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/05/22 18:01	07/05/22 18:01	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/05/22 18:01	07/05/22 18:01	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/05/22 18:01	07/05/22 18:01	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/05/22 18:01	07/05/22 18:01	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/05/22 18:01	07/05/22 18:01	75-15-0	
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/05/22 18:01	07/05/22 18:01	56-23-5	
Chlorobenzene	<0.117	ug/L	0.500	0.117	1	07/05/22 18:01	07/05/22 18:01	108-90-7	
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/05/22 18:01	07/05/22 18:01	124-48-1	
Chloroethane	<0.192	ug/L	2.50	0.192	1	07/05/22 18:01	07/05/22 18:01	75-00-3	
Chloroform	<0.111	ug/L	0.500	0.111	1	07/05/22 18:01	07/05/22 18:01	67-66-3	L0
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/05/22 18:01	07/05/22 18:01	74-87-3	R1
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/05/22 18:01	07/05/22 18:01	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/05/22 18:01	07/05/22 18:01	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/05/22 18:01	07/05/22 18:01	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/05/22 18:01	07/05/22 18:01	74-95-3	
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/05/22 18:01	07/05/22 18:01	95-50-1	
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/05/22 18:01	07/05/22 18:01	541-73-1	
1,4-Dichlorobenzene	<0.120	ug/L	0.500	0.120	1	07/05/22 18:01	07/05/22 18:01	106-46-7	
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/05/22 18:01	07/05/22 18:01	75-71-8	
1,1-Dichloroethane	0.595	ug/L	0.500	0.100	1	07/05/22 18:01	07/05/22 18:01	75-34-3	
1,2-Dichloroethane	0.239J	ug/L	0.500	0.0819	1	07/05/22 18:01	07/05/22 18:01	107-06-2	J
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/07/22 01:14	07/07/22 01:14	75-35-4	H3
cis-1,2-Dichloroethene	0.570	ug/L	0.500	0.126	1	07/05/22 18:01	07/05/22 18:01	156-59-2	
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/05/22 18:01	07/05/22 18:01	156-60-5	
1,2-Dichloropropane	<0.149	ug/L	0.500	0.149	1	07/05/22 18:01	07/05/22 18:01	78-87-5	
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/05/22 18:01	07/05/22 18:01	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/05/22 18:01	07/05/22 18:01	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/05/22 18:01	07/05/22 18:01	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/05/22 18:01	07/05/22 18:01	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/05/22 18:01	07/05/22 18:01	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/05/22 18:01	07/05/22 18:01	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/05/22 18:01	07/05/22 18:01	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/05/22 18:01	07/05/22 18:01	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/05/22 18:01	07/05/22 18:01	78-93-3	
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/05/22 18:01	07/05/22 18:01	75-09-2	L0
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/05/22 18:01	07/05/22 18:01	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/05/22 18:01	07/05/22 18:01	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/05/22 18:01	07/05/22 18:01	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/05/22 18:01	07/05/22 18:01	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/05/22 18:01	07/05/22 18:01	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/05/22 18:01	07/05/22 18:01	79-34-5	

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-4 **Lab ID: 10614797003** Collected: 06/21/22 13:30 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/05/22 18:01	07/05/22 18:01	76-13-1	
Tetrachloroethene	0.616	ug/L	0.500	0.300	1	07/05/22 18:01	07/05/22 18:01	127-18-4	
Tetrahydrofuran	<0.929	ug/L	5.00	0.929	1	07/05/22 18:01	07/05/22 18:01	109-99-9	
Toluene	<0.278	ug/L	0.500	0.278	1	07/05/22 18:01	07/05/22 18:01	108-88-3	
1,1,1-Trichloroethane	10.8	ug/L	0.500	0.149	1	07/05/22 18:01	07/05/22 18:01	71-55-6	
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/05/22 18:01	07/05/22 18:01	79-00-5	
Trichloroethene	0.350J	ug/L	0.500	0.190	1	07/07/22 01:14	07/07/22 01:14	79-01-6	H3,J
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/05/22 18:01	07/05/22 18:01	75-69-4	LO
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/05/22 18:01	07/05/22 18:01	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/05/22 18:01	07/05/22 18:01	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/05/22 18:01	07/05/22 18:01	108-05-4	
Vinyl chloride	<0.234	ug/L	0.500	0.234	1	07/05/22 18:01	07/05/22 18:01	75-01-4	
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/05/22 18:01	07/05/22 18:01	1330-20-7	
1,4-Dioxane (p-Dioxane)	<2.83	ug/L	100	2.83	1	07/05/22 18:01	07/05/22 18:01	123-91-1	
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/05/22 18:01	07/05/22 18:01	67-63-0	
Surrogates									
Toluene-d8 (S)	106	%	80.0-120		1	07/05/22 18:01	07/05/22 18:01	2037-26-5	
Toluene-d8 (S)	104	%	80.0-120		1	07/07/22 01:14	07/07/22 01:14	2037-26-5	
4-Bromofluorobenzene (S)	102	%	77.0-126		1	07/05/22 18:01	07/05/22 18:01	460-00-4	
4-Bromofluorobenzene (S)	95.8	%	77.0-126		1	07/07/22 01:14	07/07/22 01:14	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70.0-130		1	07/05/22 18:01	07/05/22 18:01	17060-07-0	
1,2-Dichloroethane-d4 (S)	94.1	%	70.0-130		1	07/07/22 01:14	07/07/22 01:14	17060-07-0	
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Minneapolis									
Chloride	32.1	mg/L	1.2	0.39	1		07/09/22 10:58	16887-00-6	
Sulfate	15.3	mg/L	1.2	0.43	1		07/09/22 10:58	14808-79-8	
353.2 Nitrate + Nitrite									
Analytical Method: EPA 353.2									
Pace Analytical Services - Minneapolis									
Nitrogen, NO2 plus NO3	1.7	mg/L	0.10	0.031	1		07/06/22 11:08		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-5 **Lab ID: 10614797004** Collected: 06/23/22 10:00 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/08/22 14:19	07/08/22 14:19	67-64-1	H3,L0
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/08/22 14:19	07/08/22 14:19	107-13-1	H3
Benzene	<0.0941	ug/L	0.500	0.0941	1	07/08/22 14:19	07/08/22 14:19	71-43-2	H3
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/08/22 14:19	07/08/22 14:19	108-86-1	H3
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/08/22 14:19	07/08/22 14:19	75-27-4	H3
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/08/22 14:19	07/08/22 14:19	74-97-5	H3
Bromoform	<0.129	ug/L	0.500	0.129	1	07/08/22 14:19	07/08/22 14:19	75-25-2	H3
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/08/22 14:19	07/08/22 14:19	74-83-9	H3
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/08/22 14:19	07/08/22 14:19	75-15-0	H3
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/08/22 14:19	07/08/22 14:19	56-23-5	H3
Chlorobenzene	<0.117	ug/L	0.500	0.117	1	07/08/22 14:19	07/08/22 14:19	108-90-7	H3
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/08/22 14:19	07/08/22 14:19	124-48-1	H3
Chloroethane	<0.192	ug/L	2.50	0.192	1	07/08/22 14:19	07/08/22 14:19	75-00-3	H3
Chloroform	<0.111	ug/L	0.500	0.111	1	07/08/22 14:19	07/08/22 14:19	67-66-3	H3
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/08/22 14:19	07/08/22 14:19	74-87-3	H3
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/08/22 14:19	07/08/22 14:19	110-82-7	H3
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/08/22 14:19	07/08/22 14:19	96-12-8	H3
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/08/22 14:19	07/08/22 14:19	106-93-4	H3
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/08/22 14:19	07/08/22 14:19	74-95-3	H3
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/08/22 14:19	07/08/22 14:19	95-50-1	H3
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/08/22 14:19	07/08/22 14:19	541-73-1	H3
1,4-Dichlorobenzene	<0.120	ug/L	0.500	0.120	1	07/08/22 14:19	07/08/22 14:19	106-46-7	H3
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/08/22 14:19	07/08/22 14:19	75-71-8	H3
1,1-Dichloroethane	<0.100	ug/L	0.500	0.100	1	07/08/22 14:19	07/08/22 14:19	75-34-3	H3
1,2-Dichloroethane	<0.0819	ug/L	0.500	0.0819	1	07/08/22 14:19	07/08/22 14:19	107-06-2	H3
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/08/22 14:19	07/08/22 14:19	75-35-4	H3
cis-1,2-Dichloroethene	<0.126	ug/L	0.500	0.126	1	07/08/22 14:19	07/08/22 14:19	156-59-2	H3
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/08/22 14:19	07/08/22 14:19	156-60-5	H3
1,2-Dichloropropane	<0.149	ug/L	0.500	0.149	1	07/08/22 14:19	07/08/22 14:19	78-87-5	H3
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/08/22 14:19	07/08/22 14:19	10061-01-5	H3
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/08/22 14:19	07/08/22 14:19	10061-02-6	H3
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/08/22 14:19	07/08/22 14:19	110-57-6	H3
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/08/22 14:19	07/08/22 14:19	100-41-4	H3
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/08/22 14:19	07/08/22 14:19	591-78-6	H3
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/08/22 14:19	07/08/22 14:19	110-54-3	H3
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/08/22 14:19	07/08/22 14:19	74-88-4	H3
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/08/22 14:19	07/08/22 14:19	98-82-8	H3
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/08/22 14:19	07/08/22 14:19	78-93-3	H3
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/08/22 14:19	07/08/22 14:19	75-09-2	H3
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/08/22 14:19	07/08/22 14:19	108-10-1	H3
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/08/22 14:19	07/08/22 14:19	1634-04-4	H3
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/08/22 14:19	07/08/22 14:19	103-65-1	H3
Styrene	<0.118	ug/L	0.500	0.118	1	07/08/22 14:19	07/08/22 14:19	100-42-5	H3
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/08/22 14:19	07/08/22 14:19	630-20-6	H3
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/08/22 14:19	07/08/22 14:19	79-34-5	H3

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-5 **Lab ID: 10614797004** Collected: 06/23/22 10:00 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/08/22 14:19	07/08/22 14:19	76-13-1	H3
Tetrachloroethene	<0.300	ug/L	0.500	0.300	1	07/08/22 14:19	07/08/22 14:19	127-18-4	H3
Tetrahydrofuran	<0.929	ug/L	5.00	0.929	1	07/08/22 14:19	07/08/22 14:19	109-99-9	H3
Toluene	<0.278	ug/L	0.500	0.278	1	07/08/22 14:19	07/08/22 14:19	108-88-3	H3
1,1,1-Trichloroethane	<0.149	ug/L	0.500	0.149	1	07/08/22 14:19	07/08/22 14:19	71-55-6	H3
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/08/22 14:19	07/08/22 14:19	79-00-5	H3
Trichloroethene	<0.190	ug/L	0.500	0.190	1	07/08/22 14:19	07/08/22 14:19	79-01-6	H3
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/08/22 14:19	07/08/22 14:19	75-69-4	H3
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/08/22 14:19	07/08/22 14:19	96-18-4	H3
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/08/22 14:19	07/08/22 14:19	95-63-6	H3
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/08/22 14:19	07/08/22 14:19	108-05-4	C4,H3
Vinyl chloride	<0.234	ug/L	0.500	0.234	1	07/08/22 14:19	07/08/22 14:19	75-01-4	H3
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/08/22 14:19	07/08/22 14:19	1330-20-7	H3
1,4-Dioxane (p-Dioxane)	<2.83	ug/L	100	2.83	1	07/08/22 14:19	07/08/22 14:19	123-91-1	H3,L0
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/08/22 14:19	07/08/22 14:19	67-63-0	H3,L0
Surrogates									
Toluene-d8 (S)	103	%	80.0-120		1	07/08/22 14:19	07/08/22 14:19	2037-26-5	
4-Bromofluorobenzene (S)	105	%	77.0-126		1	07/08/22 14:19	07/08/22 14:19	460-00-4	
1,2-Dichloroethane-d4 (S)	115	%	70.0-130		1	07/08/22 14:19	07/08/22 14:19	17060-07-0	
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Minneapolis									
Chloride	4.3	mg/L	1.2	0.39	1		07/09/22 11:13	16887-00-6	
Sulfate	9.2	mg/L	1.2	0.43	1		07/09/22 11:13	14808-79-8	
353.2 Nitrate + Nitrite									
Analytical Method: EPA 353.2									
Pace Analytical Services - Minneapolis									
Nitrogen, NO2 plus NO3	3.4	mg/L	0.10	0.031	1		07/06/22 11:11		

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Sample Project No.: 10614797

Sample: MW-6 **Lab ID: 10614797005** Collected: 06/21/22 14:45 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/05/22 18:21	07/05/22 18:21	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/05/22 18:21	07/05/22 18:21	107-13-1	
Benzene	0.149J	ug/L	0.500	0.0941	1	07/05/22 18:21	07/05/22 18:21	71-43-2	J
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/05/22 18:21	07/05/22 18:21	108-86-1	
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/05/22 18:21	07/05/22 18:21	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/05/22 18:21	07/05/22 18:21	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/05/22 18:21	07/05/22 18:21	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/05/22 18:21	07/05/22 18:21	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/05/22 18:21	07/05/22 18:21	75-15-0	
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/05/22 18:21	07/05/22 18:21	56-23-5	
Chlorobenzene	<0.117	ug/L	0.500	0.117	1	07/05/22 18:21	07/05/22 18:21	108-90-7	
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/05/22 18:21	07/05/22 18:21	124-48-1	
Chloroethane	0.745J	ug/L	2.50	0.192	1	07/05/22 18:21	07/05/22 18:21	75-00-3	J
Chloroform	<0.111	ug/L	0.500	0.111	1	07/05/22 18:21	07/05/22 18:21	67-66-3	L0
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/05/22 18:21	07/05/22 18:21	74-87-3	R1
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/05/22 18:21	07/05/22 18:21	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/05/22 18:21	07/05/22 18:21	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/05/22 18:21	07/05/22 18:21	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/05/22 18:21	07/05/22 18:21	74-95-3	
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/05/22 18:21	07/05/22 18:21	95-50-1	
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/05/22 18:21	07/05/22 18:21	541-73-1	
1,4-Dichlorobenzene	0.187J	ug/L	0.500	0.120	1	07/05/22 18:21	07/05/22 18:21	106-46-7	J
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/05/22 18:21	07/05/22 18:21	75-71-8	
1,1-Dichloroethane	1.29	ug/L	0.500	0.100	1	07/05/22 18:21	07/05/22 18:21	75-34-3	
1,2-Dichloroethane	0.153J	ug/L	0.500	0.0819	1	07/05/22 18:21	07/05/22 18:21	107-06-2	J
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/07/22 01:35	07/07/22 01:35	75-35-4	H3
cis-1,2-Dichloroethene	1.73	ug/L	0.500	0.126	1	07/05/22 18:21	07/05/22 18:21	156-59-2	
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/05/22 18:21	07/05/22 18:21	156-60-5	
1,2-Dichloropropane	<0.149	ug/L	0.500	0.149	1	07/05/22 18:21	07/05/22 18:21	78-87-5	
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/05/22 18:21	07/05/22 18:21	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/05/22 18:21	07/05/22 18:21	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/05/22 18:21	07/05/22 18:21	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/05/22 18:21	07/05/22 18:21	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/05/22 18:21	07/05/22 18:21	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/05/22 18:21	07/05/22 18:21	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/05/22 18:21	07/05/22 18:21	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/05/22 18:21	07/05/22 18:21	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/05/22 18:21	07/05/22 18:21	78-93-3	
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/05/22 18:21	07/05/22 18:21	75-09-2	L0
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/05/22 18:21	07/05/22 18:21	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/05/22 18:21	07/05/22 18:21	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/05/22 18:21	07/05/22 18:21	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/05/22 18:21	07/05/22 18:21	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/05/22 18:21	07/05/22 18:21	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/05/22 18:21	07/05/22 18:21	79-34-5	

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-6 **Lab ID: 10614797005** Collected: 06/21/22 14:45 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/05/22 18:21	07/05/22 18:21	76-13-1	
Tetrachloroethene	<0.300	ug/L	0.500	0.300	1	07/05/22 18:21	07/05/22 18:21	127-18-4	
Tetrahydrofuran	<0.929	ug/L	5.00	0.929	1	07/05/22 18:21	07/05/22 18:21	109-99-9	
Toluene	<0.278	ug/L	0.500	0.278	1	07/05/22 18:21	07/05/22 18:21	108-88-3	
1,1,1-Trichloroethane	6.04	ug/L	0.500	0.149	1	07/05/22 18:21	07/05/22 18:21	71-55-6	
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/05/22 18:21	07/05/22 18:21	79-00-5	
Trichloroethene	0.291J	ug/L	0.500	0.190	1	07/07/22 01:35	07/07/22 01:35	79-01-6	H3,J
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/05/22 18:21	07/05/22 18:21	75-69-4	LO
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/05/22 18:21	07/05/22 18:21	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/05/22 18:21	07/05/22 18:21	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/05/22 18:21	07/05/22 18:21	108-05-4	
Vinyl chloride	0.780	ug/L	0.500	0.234	1	07/05/22 18:21	07/05/22 18:21	75-01-4	
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/05/22 18:21	07/05/22 18:21	1330-20-7	
1,4-Dioxane (p-Dioxane)	<2.83	ug/L	100	2.83	1	07/05/22 18:21	07/05/22 18:21	123-91-1	
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/05/22 18:21	07/05/22 18:21	67-63-0	
Surrogates									
Toluene-d8 (S)	106	%	80.0-120		1	07/05/22 18:21	07/05/22 18:21	2037-26-5	
Toluene-d8 (S)	104	%	80.0-120		1	07/07/22 01:35	07/07/22 01:35	2037-26-5	
4-Bromofluorobenzene (S)	106	%	77.0-126		1	07/05/22 18:21	07/05/22 18:21	460-00-4	
4-Bromofluorobenzene (S)	95.7	%	77.0-126		1	07/07/22 01:35	07/07/22 01:35	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	70.0-130		1	07/05/22 18:21	07/05/22 18:21	17060-07-0	
1,2-Dichloroethane-d4 (S)	94.8	%	70.0-130		1	07/07/22 01:35	07/07/22 01:35	17060-07-0	
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Minneapolis									
Chloride	30.1	mg/L	1.2	0.39	1		07/09/22 11:27	16887-00-6	
Sulfate	19.3	mg/L	1.2	0.43	1		07/09/22 11:27	14808-79-8	
353.2 Nitrate + Nitrite									
Analytical Method: EPA 353.2									
Pace Analytical Services - Minneapolis									
Nitrogen, NO2 plus NO3	0.72	mg/L	0.10	0.031	1		07/06/22 11:12		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-7A Lab ID: 10614797006 Collected: 06/21/22 15:30 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/05/22 18:40	07/05/22 18:40	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/05/22 18:40	07/05/22 18:40	107-13-1	
Benzene	0.263J	ug/L	0.500	0.0941	1	07/05/22 18:40	07/05/22 18:40	71-43-2	J
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/05/22 18:40	07/05/22 18:40	108-86-1	
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/05/22 18:40	07/05/22 18:40	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/05/22 18:40	07/05/22 18:40	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/05/22 18:40	07/05/22 18:40	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/05/22 18:40	07/05/22 18:40	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/05/22 18:40	07/05/22 18:40	75-15-0	
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/05/22 18:40	07/05/22 18:40	56-23-5	
Chlorobenzene	<0.117	ug/L	0.500	0.117	1	07/05/22 18:40	07/05/22 18:40	108-90-7	
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/05/22 18:40	07/05/22 18:40	124-48-1	
Chloroethane	0.440J	ug/L	2.50	0.192	1	07/05/22 18:40	07/05/22 18:40	75-00-3	J
Chloroform	<0.111	ug/L	0.500	0.111	1	07/05/22 18:40	07/05/22 18:40	67-66-3	L0
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/05/22 18:40	07/05/22 18:40	74-87-3	R1
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/05/22 18:40	07/05/22 18:40	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/05/22 18:40	07/05/22 18:40	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/05/22 18:40	07/05/22 18:40	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/05/22 18:40	07/05/22 18:40	74-95-3	
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/05/22 18:40	07/05/22 18:40	95-50-1	
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/05/22 18:40	07/05/22 18:40	541-73-1	
1,4-Dichlorobenzene	<0.120	ug/L	0.500	0.120	1	07/05/22 18:40	07/05/22 18:40	106-46-7	
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/05/22 18:40	07/05/22 18:40	75-71-8	
1,1-Dichloroethane	2.32	ug/L	0.500	0.100	1	07/05/22 18:40	07/05/22 18:40	75-34-3	
1,2-Dichloroethane	0.183J	ug/L	0.500	0.0819	1	07/05/22 18:40	07/05/22 18:40	107-06-2	J
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/07/22 01:55	07/07/22 01:55	75-35-4	H3
cis-1,2-Dichloroethene	0.712	ug/L	0.500	0.126	1	07/05/22 18:40	07/05/22 18:40	156-59-2	
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/05/22 18:40	07/05/22 18:40	156-60-5	
1,2-Dichloropropane	<0.149	ug/L	0.500	0.149	1	07/05/22 18:40	07/05/22 18:40	78-87-5	
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/05/22 18:40	07/05/22 18:40	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/05/22 18:40	07/05/22 18:40	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/05/22 18:40	07/05/22 18:40	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/05/22 18:40	07/05/22 18:40	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/05/22 18:40	07/05/22 18:40	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/05/22 18:40	07/05/22 18:40	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/05/22 18:40	07/05/22 18:40	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/05/22 18:40	07/05/22 18:40	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/05/22 18:40	07/05/22 18:40	78-93-3	
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/05/22 18:40	07/05/22 18:40	75-09-2	L0
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/05/22 18:40	07/05/22 18:40	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/05/22 18:40	07/05/22 18:40	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/05/22 18:40	07/05/22 18:40	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/05/22 18:40	07/05/22 18:40	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/05/22 18:40	07/05/22 18:40	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/05/22 18:40	07/05/22 18:40	79-34-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-7A **Lab ID: 10614797006** Collected: 06/21/22 15:30 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/05/22 18:40	07/05/22 18:40	76-13-1	
Tetrachloroethene	1.29	ug/L	0.500	0.300	1	07/05/22 18:40	07/05/22 18:40	127-18-4	
Tetrahydrofuran	1.32J	ug/L	5.00	0.929	1	07/05/22 18:40	07/05/22 18:40	109-99-9	J
Toluene	<0.278	ug/L	0.500	0.278	1	07/05/22 18:40	07/05/22 18:40	108-88-3	
1,1,1-Trichloroethane	4.19	ug/L	0.500	0.149	1	07/05/22 18:40	07/05/22 18:40	71-55-6	
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/05/22 18:40	07/05/22 18:40	79-00-5	
Trichloroethene	1.63	ug/L	0.500	0.190	1	07/05/22 18:40	07/05/22 18:40	79-01-6	
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/05/22 18:40	07/05/22 18:40	75-69-4	LO
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/05/22 18:40	07/05/22 18:40	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/05/22 18:40	07/05/22 18:40	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/05/22 18:40	07/05/22 18:40	108-05-4	
Vinyl chloride	0.391J	ug/L	0.500	0.234	1	07/05/22 18:40	07/05/22 18:40	75-01-4	J
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/05/22 18:40	07/05/22 18:40	1330-20-7	
1,4-Dioxane (p-Dioxane)	<2.83	ug/L	100	2.83	1	07/05/22 18:40	07/05/22 18:40	123-91-1	
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/05/22 18:40	07/05/22 18:40	67-63-0	
Surrogates									
Toluene-d8 (S)	105	%	80.0-120		1	07/05/22 18:40	07/05/22 18:40	2037-26-5	
Toluene-d8 (S)	106	%	80.0-120		1	07/07/22 01:55	07/07/22 01:55	2037-26-5	
4-Bromofluorobenzene (S)	107	%	77.0-126		1	07/05/22 18:40	07/05/22 18:40	460-00-4	
4-Bromofluorobenzene (S)	95.1	%	77.0-126		1	07/07/22 01:55	07/07/22 01:55	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70.0-130		1	07/05/22 18:40	07/05/22 18:40	17060-07-0	
1,2-Dichloroethane-d4 (S)	94.9	%	70.0-130		1	07/07/22 01:55	07/07/22 01:55	17060-07-0	
353.2 Nitrate + Nitrite									
Analytical Method: EPA 353.2									
Pace Analytical Services - Minneapolis									
Nitrogen, NO2 plus NO3	3.4	mg/L	0.10	0.031	1		07/06/22 11:13		

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Sample Project No.: 10614797

Sample: MW-8A **Lab ID: 10614797007** Collected: 06/21/22 12:30 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/05/22 18:59	07/05/22 18:59	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/05/22 18:59	07/05/22 18:59	107-13-1	
Benzene	<0.0941	ug/L	0.500	0.0941	1	07/05/22 18:59	07/05/22 18:59	71-43-2	
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/05/22 18:59	07/05/22 18:59	108-86-1	
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/05/22 18:59	07/05/22 18:59	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/05/22 18:59	07/05/22 18:59	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/05/22 18:59	07/05/22 18:59	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/05/22 18:59	07/05/22 18:59	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/05/22 18:59	07/05/22 18:59	75-15-0	
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/05/22 18:59	07/05/22 18:59	56-23-5	
Chlorobenzene	<0.117	ug/L	0.500	0.117	1	07/05/22 18:59	07/05/22 18:59	108-90-7	
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/05/22 18:59	07/05/22 18:59	124-48-1	
Chloroethane	<0.192	ug/L	2.50	0.192	1	07/05/22 18:59	07/05/22 18:59	75-00-3	
Chloroform	<0.111	ug/L	0.500	0.111	1	07/05/22 18:59	07/05/22 18:59	67-66-3	L0
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/05/22 18:59	07/05/22 18:59	74-87-3	R1
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/05/22 18:59	07/05/22 18:59	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/05/22 18:59	07/05/22 18:59	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/05/22 18:59	07/05/22 18:59	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/05/22 18:59	07/05/22 18:59	74-95-3	
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/05/22 18:59	07/05/22 18:59	95-50-1	
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/05/22 18:59	07/05/22 18:59	541-73-1	
1,4-Dichlorobenzene	<0.120	ug/L	0.500	0.120	1	07/05/22 18:59	07/05/22 18:59	106-46-7	
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/05/22 18:59	07/05/22 18:59	75-71-8	
1,1-Dichloroethane	<0.122J	ug/L	0.500	0.100	1	07/05/22 18:59	07/05/22 18:59	75-34-3	J
1,2-Dichloroethane	0.0977J	ug/L	0.500	0.0819	1	07/05/22 18:59	07/05/22 18:59	107-06-2	J
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/07/22 02:16	07/07/22 02:16	75-35-4	H3
cis-1,2-Dichloroethene	0.537	ug/L	0.500	0.126	1	07/05/22 18:59	07/05/22 18:59	156-59-2	
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/05/22 18:59	07/05/22 18:59	156-60-5	
1,2-Dichloropropane	<0.149	ug/L	0.500	0.149	1	07/05/22 18:59	07/05/22 18:59	78-87-5	
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/05/22 18:59	07/05/22 18:59	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/05/22 18:59	07/05/22 18:59	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/05/22 18:59	07/05/22 18:59	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/05/22 18:59	07/05/22 18:59	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/05/22 18:59	07/05/22 18:59	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/05/22 18:59	07/05/22 18:59	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/05/22 18:59	07/05/22 18:59	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/05/22 18:59	07/05/22 18:59	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/05/22 18:59	07/05/22 18:59	78-93-3	
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/05/22 18:59	07/05/22 18:59	75-09-2	L0
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/05/22 18:59	07/05/22 18:59	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/05/22 18:59	07/05/22 18:59	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/05/22 18:59	07/05/22 18:59	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/05/22 18:59	07/05/22 18:59	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/05/22 18:59	07/05/22 18:59	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/05/22 18:59	07/05/22 18:59	79-34-5	

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-8A **Lab ID: 10614797007** Collected: 06/21/22 12:30 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/05/22 18:59	07/05/22 18:59	76-13-1	
Tetrachloroethene	0.340J	ug/L	0.500	0.300	1	07/05/22 18:59	07/05/22 18:59	127-18-4	J
Tetrahydrofuran	<0.929	ug/L	5.00	0.929	1	07/05/22 18:59	07/05/22 18:59	109-99-9	
Toluene	<0.278	ug/L	0.500	0.278	1	07/05/22 18:59	07/05/22 18:59	108-88-3	
1,1,1-Trichloroethane	3.08	ug/L	0.500	0.149	1	07/05/22 18:59	07/05/22 18:59	71-55-6	
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/05/22 18:59	07/05/22 18:59	79-00-5	
Trichloroethene	0.227J	ug/L	0.500	0.190	1	07/05/22 18:59	07/05/22 18:59	79-01-6	J
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/05/22 18:59	07/05/22 18:59	75-69-4	LO
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/05/22 18:59	07/05/22 18:59	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/05/22 18:59	07/05/22 18:59	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/05/22 18:59	07/05/22 18:59	108-05-4	
Vinyl chloride	<0.234	ug/L	0.500	0.234	1	07/05/22 18:59	07/05/22 18:59	75-01-4	
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/05/22 18:59	07/05/22 18:59	1330-20-7	
1,4-Dioxane (p-Dioxane)	<2.83	ug/L	100	2.83	1	07/05/22 18:59	07/05/22 18:59	123-91-1	
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/05/22 18:59	07/05/22 18:59	67-63-0	
Surrogates									
Toluene-d8 (S)	103	%	80.0-120		1	07/05/22 18:59	07/05/22 18:59	2037-26-5	
Toluene-d8 (S)	106	%	80.0-120		1	07/07/22 02:16	07/07/22 02:16	2037-26-5	
4-Bromofluorobenzene (S)	98.9	%	77.0-126		1	07/05/22 18:59	07/05/22 18:59	460-00-4	
4-Bromofluorobenzene (S)	95.8	%	77.0-126		1	07/07/22 02:16	07/07/22 02:16	460-00-4	
1,2-Dichloroethane-d4 (S)	113	%	70.0-130		1	07/05/22 18:59	07/05/22 18:59	17060-07-0	
1,2-Dichloroethane-d4 (S)	95.0	%	70.0-130		1	07/07/22 02:16	07/07/22 02:16	17060-07-0	
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Minneapolis									
Chloride	80.0	mg/L	1.2	0.39	1		07/09/22 11:42	16887-00-6	
Sulfate	47.0	mg/L	1.2	0.43	1		07/09/22 11:42	14808-79-8	
353.2 Nitrate + Nitrite									
Analytical Method: EPA 353.2									
Pace Analytical Services - Minneapolis									
Nitrogen, NO2 plus NO3	25.2	mg/L	1.0	0.31	10		07/06/22 11:27		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Sample Project No.: 10614797

Sample: MW-9A Lab ID: 10614797008 Collected: 06/21/22 14:00 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/05/22 19:18	07/05/22 19:18	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/05/22 19:18	07/05/22 19:18	107-13-1	
Benzene	<0.0941	ug/L	0.500	0.0941	1	07/05/22 19:18	07/05/22 19:18	71-43-2	
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/05/22 19:18	07/05/22 19:18	108-86-1	
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/05/22 19:18	07/05/22 19:18	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/05/22 19:18	07/05/22 19:18	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/05/22 19:18	07/05/22 19:18	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/05/22 19:18	07/05/22 19:18	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/05/22 19:18	07/05/22 19:18	75-15-0	
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/05/22 19:18	07/05/22 19:18	56-23-5	
Chlorobenzene	<0.117	ug/L	0.500	0.117	1	07/05/22 19:18	07/05/22 19:18	108-90-7	
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/05/22 19:18	07/05/22 19:18	124-48-1	
Chloroethane	<0.192	ug/L	2.50	0.192	1	07/05/22 19:18	07/05/22 19:18	75-00-3	
Chloroform	<0.111	ug/L	0.500	0.111	1	07/05/22 19:18	07/05/22 19:18	67-66-3	L0
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/05/22 19:18	07/05/22 19:18	74-87-3	R1
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/05/22 19:18	07/05/22 19:18	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/05/22 19:18	07/05/22 19:18	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/05/22 19:18	07/05/22 19:18	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/05/22 19:18	07/05/22 19:18	74-95-3	
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/05/22 19:18	07/05/22 19:18	95-50-1	
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/05/22 19:18	07/05/22 19:18	541-73-1	
1,4-Dichlorobenzene	<0.120	ug/L	0.500	0.120	1	07/05/22 19:18	07/05/22 19:18	106-46-7	
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/05/22 19:18	07/05/22 19:18	75-71-8	
1,1-Dichloroethane	0.521	ug/L	0.500	0.100	1	07/05/22 19:18	07/05/22 19:18	75-34-3	
1,2-Dichloroethane	0.102J	ug/L	0.500	0.0819	1	07/05/22 19:18	07/05/22 19:18	107-06-2	J
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/07/22 02:37	07/07/22 02:37	75-35-4	H3
cis-1,2-Dichloroethene	0.750	ug/L	0.500	0.126	1	07/05/22 19:18	07/05/22 19:18	156-59-2	
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/05/22 19:18	07/05/22 19:18	156-60-5	
1,2-Dichloropropane	<0.149	ug/L	0.500	0.149	1	07/05/22 19:18	07/05/22 19:18	78-87-5	
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/05/22 19:18	07/05/22 19:18	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/05/22 19:18	07/05/22 19:18	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/05/22 19:18	07/05/22 19:18	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/05/22 19:18	07/05/22 19:18	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/05/22 19:18	07/05/22 19:18	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/05/22 19:18	07/05/22 19:18	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/05/22 19:18	07/05/22 19:18	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/05/22 19:18	07/05/22 19:18	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/05/22 19:18	07/05/22 19:18	78-93-3	
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/05/22 19:18	07/05/22 19:18	75-09-2	L0
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/05/22 19:18	07/05/22 19:18	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/05/22 19:18	07/05/22 19:18	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/05/22 19:18	07/05/22 19:18	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/05/22 19:18	07/05/22 19:18	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/05/22 19:18	07/05/22 19:18	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/05/22 19:18	07/05/22 19:18	79-34-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-9A **Lab ID: 10614797008** Collected: 06/21/22 14:00 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/05/22 19:18	07/05/22 19:18	76-13-1	
Tetrachloroethene	0.864	ug/L	0.500	0.300	1	07/05/22 19:18	07/05/22 19:18	127-18-4	
Tetrahydrofuran	<0.929	ug/L	5.00	0.929	1	07/05/22 19:18	07/05/22 19:18	109-99-9	
Toluene	<0.278	ug/L	0.500	0.278	1	07/05/22 19:18	07/05/22 19:18	108-88-3	
1,1,1-Trichloroethane	2.44	ug/L	0.500	0.149	1	07/05/22 19:18	07/05/22 19:18	71-55-6	
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/05/22 19:18	07/05/22 19:18	79-00-5	
Trichloroethene	0.769	ug/L	0.500	0.190	1	07/05/22 19:18	07/05/22 19:18	79-01-6	
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/05/22 19:18	07/05/22 19:18	75-69-4	LO
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/05/22 19:18	07/05/22 19:18	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/05/22 19:18	07/05/22 19:18	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/05/22 19:18	07/05/22 19:18	108-05-4	
Vinyl chloride	<0.234	ug/L	0.500	0.234	1	07/05/22 19:18	07/05/22 19:18	75-01-4	
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/05/22 19:18	07/05/22 19:18	1330-20-7	
1,4-Dioxane (p-Dioxane)	<2.83	ug/L	100	2.83	1	07/05/22 19:18	07/05/22 19:18	123-91-1	
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/05/22 19:18	07/05/22 19:18	67-63-0	
Surrogates									
Toluene-d8 (S)	107	%	80.0-120		1	07/05/22 19:18	07/05/22 19:18	2037-26-5	
Toluene-d8 (S)	107	%	80.0-120		1	07/07/22 02:37	07/07/22 02:37	2037-26-5	
4-Bromofluorobenzene (S)	102	%	77.0-126		1	07/05/22 19:18	07/05/22 19:18	460-00-4	
4-Bromofluorobenzene (S)	97.1	%	77.0-126		1	07/07/22 02:37	07/07/22 02:37	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70.0-130		1	07/05/22 19:18	07/05/22 19:18	17060-07-0	
1,2-Dichloroethane-d4 (S)	95.4	%	70.0-130		1	07/07/22 02:37	07/07/22 02:37	17060-07-0	
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Minneapolis									
Chloride	56.6	mg/L	1.2	0.39	1		07/09/22 11:56	16887-00-6	
Sulfate	18.9	mg/L	1.2	0.43	1		07/09/22 11:56	14808-79-8	
353.2 Nitrate + Nitrite									
Analytical Method: EPA 353.2									
Pace Analytical Services - Minneapolis									
Nitrogen, NO2 plus NO3	0.98	mg/L	0.10	0.031	1		07/06/22 11:22		

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Sample Project No.: 10614797

Sample: MW-10 Lab ID: 10614797009 Collected: 06/22/22 10:30 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/06/22 16:26	07/06/22 16:26	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/06/22 16:26	07/06/22 16:26	107-13-1	
Benzene	<0.0941	ug/L	0.500	0.0941	1	07/06/22 16:26	07/06/22 16:26	71-43-2	
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/06/22 16:26	07/06/22 16:26	108-86-1	L0
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/06/22 16:26	07/06/22 16:26	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/06/22 16:26	07/06/22 16:26	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/06/22 16:26	07/06/22 16:26	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/06/22 16:26	07/06/22 16:26	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/06/22 16:26	07/06/22 16:26	75-15-0	
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/06/22 16:26	07/06/22 16:26	56-23-5	
Chlorobenzene	<0.117	ug/L	0.500	0.117	1	07/06/22 16:26	07/06/22 16:26	108-90-7	
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/06/22 16:26	07/06/22 16:26	124-48-1	
Chloroethane	<0.192	ug/L	2.50	0.192	1	07/06/22 16:26	07/06/22 16:26	75-00-3	
Chloroform	<0.111	ug/L	0.500	0.111	1	07/06/22 16:26	07/06/22 16:26	67-66-3	
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/06/22 16:26	07/06/22 16:26	74-87-3	
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/06/22 16:26	07/06/22 16:26	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/06/22 16:26	07/06/22 16:26	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/06/22 16:26	07/06/22 16:26	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/06/22 16:26	07/06/22 16:26	74-95-3	
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/06/22 16:26	07/06/22 16:26	95-50-1	
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/06/22 16:26	07/06/22 16:26	541-73-1	
1,4-Dichlorobenzene	<0.120	ug/L	0.500	0.120	1	07/06/22 16:26	07/06/22 16:26	106-46-7	
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/06/22 16:26	07/06/22 16:26	75-71-8	
1,1-Dichloroethane	<0.100	ug/L	0.500	0.100	1	07/11/22 13:27	07/11/22 13:27	75-34-3	H3
1,2-Dichloroethane	<0.0819	ug/L	0.500	0.0819	1	07/11/22 13:27	07/11/22 13:27	107-06-2	H3
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/11/22 13:27	07/11/22 13:27	75-35-4	H3
cis-1,2-Dichloroethene	0.192J	ug/L	0.500	0.126	1	07/11/22 13:27	07/11/22 13:27	156-59-2	H3,J
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/06/22 16:26	07/06/22 16:26	156-60-5	
1,2-Dichloropropane	<0.149	ug/L	0.500	0.149	1	07/06/22 16:26	07/06/22 16:26	78-87-5	
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/06/22 16:26	07/06/22 16:26	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/06/22 16:26	07/06/22 16:26	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/06/22 16:26	07/06/22 16:26	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/06/22 16:26	07/06/22 16:26	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/06/22 16:26	07/06/22 16:26	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/06/22 16:26	07/06/22 16:26	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/06/22 16:26	07/06/22 16:26	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/06/22 16:26	07/06/22 16:26	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/06/22 16:26	07/06/22 16:26	78-93-3	
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/06/22 16:26	07/06/22 16:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/06/22 16:26	07/06/22 16:26	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/06/22 16:26	07/06/22 16:26	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/06/22 16:26	07/06/22 16:26	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/06/22 16:26	07/06/22 16:26	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/06/22 16:26	07/06/22 16:26	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/06/22 16:26	07/06/22 16:26	79-34-5	

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-10 **Lab ID: 10614797009** Collected: 06/22/22 10:30 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/06/22 16:26	07/06/22 16:26	76-13-1	
Tetrachloroethene	<0.300	ug/L	0.500	0.300	1	07/06/22 16:26	07/06/22 16:26	127-18-4	
Tetrahydrofuran	<0.929	ug/L	5.00	0.929	1	07/06/22 16:26	07/06/22 16:26	109-99-9	
Toluene	<0.278	ug/L	0.500	0.278	1	07/06/22 16:26	07/06/22 16:26	108-88-3	
1,1,1-Trichloroethane	<0.149	ug/L	0.500	0.149	1	07/11/22 13:27	07/11/22 13:27	71-55-6	H3,L0
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/06/22 16:26	07/06/22 16:26	79-00-5	
Trichloroethene	0.212J	ug/L	0.500	0.190	1	07/11/22 13:27	07/11/22 13:27	79-01-6	H3,J
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/06/22 16:26	07/06/22 16:26	75-69-4	
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/06/22 16:26	07/06/22 16:26	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/06/22 16:26	07/06/22 16:26	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/06/22 16:26	07/06/22 16:26	108-05-4	
Vinyl chloride	<0.234	ug/L	0.500	0.234	1	07/06/22 16:26	07/06/22 16:26	75-01-4	
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/06/22 16:26	07/06/22 16:26	1330-20-7	
1,4-Dioxane (p-Dioxane)	<2.83	ug/L	100	2.83	1	07/11/22 13:27	07/11/22 13:27	123-91-1	H3,L0
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/06/22 16:26	07/06/22 16:26	67-63-0	
Surrogates									
Toluene-d8 (S)	99.1	%	80.0-120		1	07/06/22 16:26	07/06/22 16:26	2037-26-5	
Toluene-d8 (S)	104	%	80.0-120		1	07/11/22 13:27	07/11/22 13:27	2037-26-5	
4-Bromofluorobenzene (S)	87.3	%	77.0-126		1	07/06/22 16:26	07/06/22 16:26	460-00-4	
4-Bromofluorobenzene (S)	109	%	77.0-126		1	07/11/22 13:27	07/11/22 13:27	460-00-4	
1,2-Dichloroethane-d4 (S)	120	%	70.0-130		1	07/06/22 16:26	07/06/22 16:26	17060-07-0	
1,2-Dichloroethane-d4 (S)	120	%	70.0-130		1	07/11/22 13:27	07/11/22 13:27	17060-07-0	
353.2 Nitrate + Nitrite									
Analytical Method: EPA 353.2									
Pace Analytical Services - Minneapolis									
Nitrogen, NO2 plus NO3	<0.031	mg/L	0.10	0.031	1		07/06/22 11:23		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-11 **Lab ID: 10614797010** Collected: 06/22/22 13:00 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/06/22 16:46	07/06/22 16:46	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/06/22 16:46	07/06/22 16:46	107-13-1	
Benzene	<0.0941	ug/L	0.500	0.0941	1	07/06/22 16:46	07/06/22 16:46	71-43-2	
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/06/22 16:46	07/06/22 16:46	108-86-1	L0
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/06/22 16:46	07/06/22 16:46	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/06/22 16:46	07/06/22 16:46	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/06/22 16:46	07/06/22 16:46	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/06/22 16:46	07/06/22 16:46	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/06/22 16:46	07/06/22 16:46	75-15-0	
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/06/22 16:46	07/06/22 16:46	56-23-5	
Chlorobenzene	<0.117	ug/L	0.500	0.117	1	07/06/22 16:46	07/06/22 16:46	108-90-7	
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/06/22 16:46	07/06/22 16:46	124-48-1	
Chloroethane	<0.192	ug/L	2.50	0.192	1	07/06/22 16:46	07/06/22 16:46	75-00-3	
Chloroform	<0.111	ug/L	0.500	0.111	1	07/06/22 16:46	07/06/22 16:46	67-66-3	
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/06/22 16:46	07/06/22 16:46	74-87-3	
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/06/22 16:46	07/06/22 16:46	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/06/22 16:46	07/06/22 16:46	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/06/22 16:46	07/06/22 16:46	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/06/22 16:46	07/06/22 16:46	74-95-3	
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/06/22 16:46	07/06/22 16:46	95-50-1	
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/06/22 16:46	07/06/22 16:46	541-73-1	
1,4-Dichlorobenzene	<0.120	ug/L	0.500	0.120	1	07/06/22 16:46	07/06/22 16:46	106-46-7	
Dichlorodifluoromethane	0.909J	ug/L	2.50	0.374	1	07/06/22 16:46	07/06/22 16:46	75-71-8	J
1,1-Dichloroethane	<0.100	ug/L	0.500	0.100	1	07/09/22 11:50	07/09/22 11:50	75-34-3	H3
1,2-Dichloroethane	<0.0819	ug/L	0.500	0.0819	1	07/06/22 16:46	07/06/22 16:46	107-06-2	
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/09/22 11:50	07/09/22 11:50	75-35-4	H3
cis-1,2-Dichloroethene	<0.126	ug/L	0.500	0.126	1	07/06/22 16:46	07/06/22 16:46	156-59-2	
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/06/22 16:46	07/06/22 16:46	156-60-5	
1,2-Dichloropropane	<0.149	ug/L	0.500	0.149	1	07/06/22 16:46	07/06/22 16:46	78-87-5	
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/06/22 16:46	07/06/22 16:46	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/06/22 16:46	07/06/22 16:46	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/06/22 16:46	07/06/22 16:46	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/06/22 16:46	07/06/22 16:46	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/06/22 16:46	07/06/22 16:46	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/06/22 16:46	07/06/22 16:46	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/06/22 16:46	07/06/22 16:46	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/06/22 16:46	07/06/22 16:46	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/06/22 16:46	07/06/22 16:46	78-93-3	
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/06/22 16:46	07/06/22 16:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/06/22 16:46	07/06/22 16:46	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/06/22 16:46	07/06/22 16:46	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/06/22 16:46	07/06/22 16:46	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/06/22 16:46	07/06/22 16:46	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/06/22 16:46	07/06/22 16:46	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/06/22 16:46	07/06/22 16:46	79-34-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-11 **Lab ID: 10614797010** Collected: 06/22/22 13:00 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/06/22 16:46	07/06/22 16:46	76-13-1	
Tetrachloroethene	<0.300	ug/L	0.500	0.300	1	07/06/22 16:46	07/06/22 16:46	127-18-4	
Tetrahydrofuran	<0.929	ug/L	5.00	0.929	1	07/06/22 16:46	07/06/22 16:46	109-99-9	
Toluene	<0.278	ug/L	0.500	0.278	1	07/06/22 16:46	07/06/22 16:46	108-88-3	
1,1,1-Trichloroethane	<0.149	ug/L	0.500	0.149	1	07/09/22 11:50	07/09/22 11:50	71-55-6	H3
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/06/22 16:46	07/06/22 16:46	79-00-5	
Trichloroethene	<0.190	ug/L	0.500	0.190	1	07/09/22 11:50	07/09/22 11:50	79-01-6	H3
Trichlorofluoromethane	0.883J	ug/L	2.50	0.160	1	07/06/22 16:46	07/06/22 16:46	75-69-4	J
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/06/22 16:46	07/06/22 16:46	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/06/22 16:46	07/06/22 16:46	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/06/22 16:46	07/06/22 16:46	108-05-4	
Vinyl chloride	<0.234	ug/L	0.500	0.234	1	07/06/22 16:46	07/06/22 16:46	75-01-4	
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/06/22 16:46	07/06/22 16:46	1330-20-7	
1,4-Dioxane (p-Dioxane)	<2.83	ug/L	100	2.83	1	07/06/22 16:46	07/06/22 16:46	123-91-1	
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/06/22 16:46	07/06/22 16:46	67-63-0	
Surrogates									
Toluene-d8 (S)	101	%	80.0-120		1	07/06/22 16:46	07/06/22 16:46	2037-26-5	
Toluene-d8 (S)	100	%	80.0-120		1	07/09/22 11:50	07/09/22 11:50	2037-26-5	
4-Bromofluorobenzene (S)	86.3	%	77.0-126		1	07/06/22 16:46	07/06/22 16:46	460-00-4	
4-Bromofluorobenzene (S)	98.6	%	77.0-126		1	07/09/22 11:50	07/09/22 11:50	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70.0-130		1	07/06/22 16:46	07/06/22 16:46	17060-07-0	
1,2-Dichloroethane-d4 (S)	103	%	70.0-130		1	07/09/22 11:50	07/09/22 11:50	17060-07-0	
353.2 Nitrate + Nitrite									
Analytical Method: EPA 353.2									
Pace Analytical Services - Minneapolis									
Nitrogen, NO2 plus NO3	5.4	mg/L	0.50	0.16	5		07/06/22 11:37		

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-12 Lab ID: 10614797011 Collected: 06/22/22 14:00 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/06/22 17:07	07/06/22 17:07	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/06/22 17:07	07/06/22 17:07	107-13-1	
Benzene	0.423J	ug/L	0.500	0.0941	1	07/06/22 17:07	07/06/22 17:07	71-43-2	J
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/06/22 17:07	07/06/22 17:07	108-86-1	L0
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/06/22 17:07	07/06/22 17:07	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/06/22 17:07	07/06/22 17:07	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/06/22 17:07	07/06/22 17:07	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/06/22 17:07	07/06/22 17:07	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/06/22 17:07	07/06/22 17:07	75-15-0	
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/06/22 17:07	07/06/22 17:07	56-23-5	
Chlorobenzene	0.198J	ug/L	0.500	0.117	1	07/06/22 17:07	07/06/22 17:07	108-90-7	J
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/06/22 17:07	07/06/22 17:07	124-48-1	
Chloroethane	<0.192	ug/L	2.50	0.192	1	07/06/22 17:07	07/06/22 17:07	75-00-3	
Chloroform	<0.111	ug/L	0.500	0.111	1	07/06/22 17:07	07/06/22 17:07	67-66-3	
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/06/22 17:07	07/06/22 17:07	74-87-3	
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/06/22 17:07	07/06/22 17:07	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/06/22 17:07	07/06/22 17:07	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/06/22 17:07	07/06/22 17:07	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/06/22 17:07	07/06/22 17:07	74-95-3	
1,2-Dichlorobenzene	0.108J	ug/L	0.500	0.107	1	07/06/22 17:07	07/06/22 17:07	95-50-1	J
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/06/22 17:07	07/06/22 17:07	541-73-1	
1,4-Dichlorobenzene	0.472J	ug/L	0.500	0.120	1	07/06/22 17:07	07/06/22 17:07	106-46-7	J
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/06/22 17:07	07/06/22 17:07	75-71-8	
1,1-Dichloroethane	0.803	ug/L	0.500	0.100	1	07/09/22 12:10	07/09/22 12:10	75-34-3	H3
1,2-Dichloroethane	<0.0819	ug/L	0.500	0.0819	1	07/06/22 17:07	07/06/22 17:07	107-06-2	
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/09/22 12:10	07/09/22 12:10	75-35-4	H3
cis-1,2-Dichloroethene	3.18	ug/L	0.500	0.126	1	07/06/22 17:07	07/06/22 17:07	156-59-2	
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/06/22 17:07	07/06/22 17:07	156-60-5	
1,2-Dichloropropane	<0.149	ug/L	0.500	0.149	1	07/06/22 17:07	07/06/22 17:07	78-87-5	
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/06/22 17:07	07/06/22 17:07	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/06/22 17:07	07/06/22 17:07	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/06/22 17:07	07/06/22 17:07	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/06/22 17:07	07/06/22 17:07	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/06/22 17:07	07/06/22 17:07	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/06/22 17:07	07/06/22 17:07	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/06/22 17:07	07/06/22 17:07	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/06/22 17:07	07/06/22 17:07	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/06/22 17:07	07/06/22 17:07	78-93-3	
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/06/22 17:07	07/06/22 17:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/06/22 17:07	07/06/22 17:07	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/06/22 17:07	07/06/22 17:07	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/06/22 17:07	07/06/22 17:07	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/06/22 17:07	07/06/22 17:07	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/06/22 17:07	07/06/22 17:07	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/06/22 17:07	07/06/22 17:07	79-34-5	

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-12 **Lab ID: 10614797011** Collected: 06/22/22 14:00 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/06/22 17:07	07/06/22 17:07	76-13-1	
Tetrachloroethene	<0.300	ug/L	0.500	0.300	1	07/06/22 17:07	07/06/22 17:07	127-18-4	
Tetrahydrofuran	1.31J	ug/L	5.00	0.929	1	07/06/22 17:07	07/06/22 17:07	109-99-9	J
Toluene	<0.278	ug/L	0.500	0.278	1	07/06/22 17:07	07/06/22 17:07	108-88-3	
1,1,1-Trichloroethane	<0.149	ug/L	0.500	0.149	1	07/09/22 12:10	07/09/22 12:10	71-55-6	H3
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/06/22 17:07	07/06/22 17:07	79-00-5	
Trichloroethene	0.306J	ug/L	0.500	0.190	1	07/09/22 12:10	07/09/22 12:10	79-01-6	H3,J
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/06/22 17:07	07/06/22 17:07	75-69-4	
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/06/22 17:07	07/06/22 17:07	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/06/22 17:07	07/06/22 17:07	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/06/22 17:07	07/06/22 17:07	108-05-4	
Vinyl chloride	3.93	ug/L	0.500	0.234	1	07/06/22 17:07	07/06/22 17:07	75-01-4	
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/06/22 17:07	07/06/22 17:07	1330-20-7	
1,4-Dioxane (p-Dioxane)	6.51J	ug/L	100	2.83	1	07/06/22 17:07	07/06/22 17:07	123-91-1	J
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/06/22 17:07	07/06/22 17:07	67-63-0	
Surrogates									
Toluene-d8 (S)	105	%	80.0-120		1	07/06/22 17:07	07/06/22 17:07	2037-26-5	
Toluene-d8 (S)	96.0	%	80.0-120		1	07/09/22 12:10	07/09/22 12:10	2037-26-5	
4-Bromofluorobenzene (S)	87.1	%	77.0-126		1	07/06/22 17:07	07/06/22 17:07	460-00-4	
4-Bromofluorobenzene (S)	91.9	%	77.0-126		1	07/09/22 12:10	07/09/22 12:10	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70.0-130		1	07/06/22 17:07	07/06/22 17:07	17060-07-0	
1,2-Dichloroethane-d4 (S)	104	%	70.0-130		1	07/09/22 12:10	07/09/22 12:10	17060-07-0	
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Minneapolis									
Chloride	40.9	mg/L	1.2	0.39	1		07/09/22 12:11	16887-00-6	
Sulfate	31.0	mg/L	1.2	0.43	1		07/09/22 12:11	14808-79-8	
353.2 Nitrate + Nitrite									
Analytical Method: EPA 353.2									
Pace Analytical Services - Minneapolis									
Nitrogen, NO2 plus NO3	0.044J	mg/L	0.10	0.031	1		07/06/22 11:25		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-13 Lab ID: 10614797012 Collected: 06/21/22 16:00 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/05/22 19:37	07/05/22 19:37	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/05/22 19:37	07/05/22 19:37	107-13-1	
Benzene	0.476J	ug/L	0.500	0.0941	1	07/05/22 19:37	07/05/22 19:37	71-43-2	J
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/05/22 19:37	07/05/22 19:37	108-86-1	
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/05/22 19:37	07/05/22 19:37	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/05/22 19:37	07/05/22 19:37	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/05/22 19:37	07/05/22 19:37	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/05/22 19:37	07/05/22 19:37	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/05/22 19:37	07/05/22 19:37	75-15-0	
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/05/22 19:37	07/05/22 19:37	56-23-5	
Chlorobenzene	0.197J	ug/L	0.500	0.117	1	07/05/22 19:37	07/05/22 19:37	108-90-7	J
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/05/22 19:37	07/05/22 19:37	124-48-1	
Chloroethane	<0.192	ug/L	2.50	0.192	1	07/05/22 19:37	07/05/22 19:37	75-00-3	
Chloroform	<0.111	ug/L	0.500	0.111	1	07/05/22 19:37	07/05/22 19:37	67-66-3	L0
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/05/22 19:37	07/05/22 19:37	74-87-3	R1
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/05/22 19:37	07/05/22 19:37	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/05/22 19:37	07/05/22 19:37	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/05/22 19:37	07/05/22 19:37	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/05/22 19:37	07/05/22 19:37	74-95-3	
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/05/22 19:37	07/05/22 19:37	95-50-1	
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/05/22 19:37	07/05/22 19:37	541-73-1	
1,4-Dichlorobenzene	0.548	ug/L	0.500	0.120	1	07/05/22 19:37	07/05/22 19:37	106-46-7	
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/05/22 19:37	07/05/22 19:37	75-71-8	
1,1-Dichloroethane	1.01	ug/L	0.500	0.100	1	07/05/22 19:37	07/05/22 19:37	75-34-3	
1,2-Dichloroethane	0.119J	ug/L	0.500	0.0819	1	07/05/22 19:37	07/05/22 19:37	107-06-2	J
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/07/22 02:57	07/07/22 02:57	75-35-4	H3
cis-1,2-Dichloroethene	1.01	ug/L	0.500	0.126	1	07/05/22 19:37	07/05/22 19:37	156-59-2	
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/05/22 19:37	07/05/22 19:37	156-60-5	
1,2-Dichloropropane	<0.149	ug/L	0.500	0.149	1	07/05/22 19:37	07/05/22 19:37	78-87-5	
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/05/22 19:37	07/05/22 19:37	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/05/22 19:37	07/05/22 19:37	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/05/22 19:37	07/05/22 19:37	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/05/22 19:37	07/05/22 19:37	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/05/22 19:37	07/05/22 19:37	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/05/22 19:37	07/05/22 19:37	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/05/22 19:37	07/05/22 19:37	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/05/22 19:37	07/05/22 19:37	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/05/22 19:37	07/05/22 19:37	78-93-3	
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/05/22 19:37	07/05/22 19:37	75-09-2	L0
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/05/22 19:37	07/05/22 19:37	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/05/22 19:37	07/05/22 19:37	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/05/22 19:37	07/05/22 19:37	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/05/22 19:37	07/05/22 19:37	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/05/22 19:37	07/05/22 19:37	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/05/22 19:37	07/05/22 19:37	79-34-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-13 **Lab ID: 10614797012** Collected: 06/21/22 16:00 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/05/22 19:37	07/05/22 19:37	76-13-1	
Tetrachloroethene	<0.300	ug/L	0.500	0.300	1	07/05/22 19:37	07/05/22 19:37	127-18-4	
Tetrahydrofuran	1.23J	ug/L	5.00	0.929	1	07/05/22 19:37	07/05/22 19:37	109-99-9	J
Toluene	<0.278	ug/L	0.500	0.278	1	07/05/22 19:37	07/05/22 19:37	108-88-3	
1,1,1-Trichloroethane	2.03	ug/L	0.500	0.149	1	07/05/22 19:37	07/05/22 19:37	71-55-6	
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/05/22 19:37	07/05/22 19:37	79-00-5	
Trichloroethene	0.441J	ug/L	0.500	0.190	1	07/05/22 19:37	07/05/22 19:37	79-01-6	J
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/05/22 19:37	07/05/22 19:37	75-69-4	LO
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/05/22 19:37	07/05/22 19:37	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/05/22 19:37	07/05/22 19:37	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/05/22 19:37	07/05/22 19:37	108-05-4	
Vinyl chloride	4.09	ug/L	0.500	0.234	1	07/05/22 19:37	07/05/22 19:37	75-01-4	
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/05/22 19:37	07/05/22 19:37	1330-20-7	
1,4-Dioxane (p-Dioxane)	<2.83	ug/L	100	2.83	1	07/05/22 19:37	07/05/22 19:37	123-91-1	
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/05/22 19:37	07/05/22 19:37	67-63-0	
Surrogates									
Toluene-d8 (S)	106	%	80.0-120		1	07/05/22 19:37	07/05/22 19:37	2037-26-5	
Toluene-d8 (S)	106	%	80.0-120		1	07/07/22 02:57	07/07/22 02:57	2037-26-5	
4-Bromofluorobenzene (S)	105	%	77.0-126		1	07/05/22 19:37	07/05/22 19:37	460-00-4	
4-Bromofluorobenzene (S)	95.0	%	77.0-126		1	07/07/22 02:57	07/07/22 02:57	460-00-4	
1,2-Dichloroethane-d4 (S)	113	%	70.0-130		1	07/05/22 19:37	07/05/22 19:37	17060-07-0	
1,2-Dichloroethane-d4 (S)	96.4	%	70.0-130		1	07/07/22 02:57	07/07/22 02:57	17060-07-0	
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Minneapolis									
Chloride	36.3	mg/L	1.2	0.39	1		07/09/22 12:25	16887-00-6	
Sulfate	21.1	mg/L	1.2	0.43	1		07/09/22 12:25	14808-79-8	
353.2 Nitrate + Nitrite									
Analytical Method: EPA 353.2									
Pace Analytical Services - Minneapolis									
Nitrogen, NO2 plus NO3	<0.031	mg/L	0.10	0.031	1		07/06/22 11:26		

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-15 Lab ID: 10614797013 Collected: 06/21/22 11:00 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/05/22 19:56	07/05/22 19:56	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/05/22 19:56	07/05/22 19:56	107-13-1	
Benzene	<0.0941	ug/L	0.500	0.0941	1	07/05/22 19:56	07/05/22 19:56	71-43-2	
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/05/22 19:56	07/05/22 19:56	108-86-1	
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/05/22 19:56	07/05/22 19:56	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/05/22 19:56	07/05/22 19:56	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/05/22 19:56	07/05/22 19:56	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/05/22 19:56	07/05/22 19:56	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/05/22 19:56	07/05/22 19:56	75-15-0	
Carbon tetrachloride	0.173J	ug/L	0.500	0.128	1	07/05/22 19:56	07/05/22 19:56	56-23-5	J
Chlorobenzene	<0.117	ug/L	0.500	0.117	1	07/05/22 19:56	07/05/22 19:56	108-90-7	
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/05/22 19:56	07/05/22 19:56	124-48-1	
Chloroethane	<0.192	ug/L	2.50	0.192	1	07/05/22 19:56	07/05/22 19:56	75-00-3	
Chloroform	<0.111	ug/L	0.500	0.111	1	07/05/22 19:56	07/05/22 19:56	67-66-3	L0
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/05/22 19:56	07/05/22 19:56	74-87-3	R1
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/05/22 19:56	07/05/22 19:56	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/05/22 19:56	07/05/22 19:56	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/05/22 19:56	07/05/22 19:56	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/05/22 19:56	07/05/22 19:56	74-95-3	
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/05/22 19:56	07/05/22 19:56	95-50-1	
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/05/22 19:56	07/05/22 19:56	541-73-1	
1,4-Dichlorobenzene	<0.120	ug/L	0.500	0.120	1	07/05/22 19:56	07/05/22 19:56	106-46-7	
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/05/22 19:56	07/05/22 19:56	75-71-8	
1,1-Dichloroethane	<0.100	ug/L	0.500	0.100	1	07/05/22 19:56	07/05/22 19:56	75-34-3	
1,2-Dichloroethane	<0.0819	ug/L	0.500	0.0819	1	07/05/22 19:56	07/05/22 19:56	107-06-2	
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/07/22 03:18	07/07/22 03:18	75-35-4	H3
cis-1,2-Dichloroethene	<0.126	ug/L	0.500	0.126	1	07/05/22 19:56	07/05/22 19:56	156-59-2	
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/05/22 19:56	07/05/22 19:56	156-60-5	
1,2-Dichloropropane	<0.149	ug/L	0.500	0.149	1	07/05/22 19:56	07/05/22 19:56	78-87-5	
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/05/22 19:56	07/05/22 19:56	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/05/22 19:56	07/05/22 19:56	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/05/22 19:56	07/05/22 19:56	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/05/22 19:56	07/05/22 19:56	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/05/22 19:56	07/05/22 19:56	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/05/22 19:56	07/05/22 19:56	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/05/22 19:56	07/05/22 19:56	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/05/22 19:56	07/05/22 19:56	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/05/22 19:56	07/05/22 19:56	78-93-3	
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/05/22 19:56	07/05/22 19:56	75-09-2	L0
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/05/22 19:56	07/05/22 19:56	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/05/22 19:56	07/05/22 19:56	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/05/22 19:56	07/05/22 19:56	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/05/22 19:56	07/05/22 19:56	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/05/22 19:56	07/05/22 19:56	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/05/22 19:56	07/05/22 19:56	79-34-5	

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-15 **Lab ID: 10614797013** Collected: 06/21/22 11:00 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/05/22 19:56	07/05/22 19:56	76-13-1	
Tetrachloroethene	<0.300	ug/L	0.500	0.300	1	07/05/22 19:56	07/05/22 19:56	127-18-4	
Tetrahydrofuran	<0.929	ug/L	5.00	0.929	1	07/05/22 19:56	07/05/22 19:56	109-99-9	
Toluene	<0.278	ug/L	0.500	0.278	1	07/05/22 19:56	07/05/22 19:56	108-88-3	
1,1,1-Trichloroethane	1.73	ug/L	0.500	0.149	1	07/05/22 19:56	07/05/22 19:56	71-55-6	
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/05/22 19:56	07/05/22 19:56	79-00-5	
Trichloroethene	<0.190	ug/L	0.500	0.190	1	07/05/22 19:56	07/05/22 19:56	79-01-6	
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/05/22 19:56	07/05/22 19:56	75-69-4	LO
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/05/22 19:56	07/05/22 19:56	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/05/22 19:56	07/05/22 19:56	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/05/22 19:56	07/05/22 19:56	108-05-4	
Vinyl chloride	<0.234	ug/L	0.500	0.234	1	07/05/22 19:56	07/05/22 19:56	75-01-4	
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/05/22 19:56	07/05/22 19:56	1330-20-7	
1,4-Dioxane (p-Dioxane)	<2.83	ug/L	100	2.83	1	07/05/22 19:56	07/05/22 19:56	123-91-1	
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/05/22 19:56	07/05/22 19:56	67-63-0	
Surrogates									
Toluene-d8 (S)	106	%	80.0-120		1	07/05/22 19:56	07/05/22 19:56	2037-26-5	
Toluene-d8 (S)	105	%	80.0-120		1	07/07/22 03:18	07/07/22 03:18	2037-26-5	
4-Bromofluorobenzene (S)	105	%	77.0-126		1	07/05/22 19:56	07/05/22 19:56	460-00-4	
4-Bromofluorobenzene (S)	95.2	%	77.0-126		1	07/07/22 03:18	07/07/22 03:18	460-00-4	
1,2-Dichloroethane-d4 (S)	110	%	70.0-130		1	07/05/22 19:56	07/05/22 19:56	17060-07-0	
1,2-Dichloroethane-d4 (S)	96.3	%	70.0-130		1	07/07/22 03:18	07/07/22 03:18	17060-07-0	
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Minneapolis									
Chloride	4.3	mg/L	1.2	0.39	1		07/11/22 10:37	16887-00-6	
Sulfate	10.9	mg/L	1.2	0.43	1		07/11/22 10:37	14808-79-8	
353.2 Nitrate + Nitrite									
Analytical Method: EPA 353.2									
Pace Analytical Services - Minneapolis									
Nitrogen, NO2 plus NO3	2.8	mg/L	0.10	0.031	1		07/06/22 11:31		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-17 **Lab ID: 10614797014** Collected: 06/22/22 15:30 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/06/22 17:27	07/06/22 17:27	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/06/22 17:27	07/06/22 17:27	107-13-1	
Benzene	<0.0941	ug/L	0.500	0.0941	1	07/06/22 17:27	07/06/22 17:27	71-43-2	
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/06/22 17:27	07/06/22 17:27	108-86-1	L0
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/06/22 17:27	07/06/22 17:27	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/06/22 17:27	07/06/22 17:27	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/06/22 17:27	07/06/22 17:27	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/06/22 17:27	07/06/22 17:27	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/06/22 17:27	07/06/22 17:27	75-15-0	
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/06/22 17:27	07/06/22 17:27	56-23-5	
Chlorobenzene	<0.117	ug/L	0.500	0.117	1	07/06/22 17:27	07/06/22 17:27	108-90-7	
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/06/22 17:27	07/06/22 17:27	124-48-1	
Chloroethane	<0.192	ug/L	2.50	0.192	1	07/06/22 17:27	07/06/22 17:27	75-00-3	
Chloroform	<0.111	ug/L	0.500	0.111	1	07/06/22 17:27	07/06/22 17:27	67-66-3	
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/06/22 17:27	07/06/22 17:27	74-87-3	
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/06/22 17:27	07/06/22 17:27	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/06/22 17:27	07/06/22 17:27	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/06/22 17:27	07/06/22 17:27	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/06/22 17:27	07/06/22 17:27	74-95-3	
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/06/22 17:27	07/06/22 17:27	95-50-1	
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/06/22 17:27	07/06/22 17:27	541-73-1	
1,4-Dichlorobenzene	<0.120	ug/L	0.500	0.120	1	07/06/22 17:27	07/06/22 17:27	106-46-7	
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/06/22 17:27	07/06/22 17:27	75-71-8	
1,1-Dichloroethane	0.226J	ug/L	0.500	0.100	1	07/09/22 12:30	07/09/22 12:30	75-34-3	H3,J
1,2-Dichloroethane	<0.0819	ug/L	0.500	0.0819	1	07/06/22 17:27	07/06/22 17:27	107-06-2	
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/09/22 12:30	07/09/22 12:30	75-35-4	H3
cis-1,2-Dichloroethene	6.83	ug/L	0.500	0.126	1	07/06/22 17:27	07/06/22 17:27	156-59-2	
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/06/22 17:27	07/06/22 17:27	156-60-5	
1,2-Dichloropropane	0.384J	ug/L	0.500	0.149	1	07/06/22 17:27	07/06/22 17:27	78-87-5	J
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/06/22 17:27	07/06/22 17:27	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/06/22 17:27	07/06/22 17:27	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/06/22 17:27	07/06/22 17:27	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/06/22 17:27	07/06/22 17:27	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/06/22 17:27	07/06/22 17:27	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/06/22 17:27	07/06/22 17:27	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/06/22 17:27	07/06/22 17:27	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/06/22 17:27	07/06/22 17:27	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/06/22 17:27	07/06/22 17:27	78-93-3	
Methylene Chloride	1.01J	ug/L	2.50	0.430	1	07/06/22 17:27	07/06/22 17:27	75-09-2	J
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/06/22 17:27	07/06/22 17:27	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/06/22 17:27	07/06/22 17:27	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/06/22 17:27	07/06/22 17:27	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/06/22 17:27	07/06/22 17:27	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/06/22 17:27	07/06/22 17:27	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/06/22 17:27	07/06/22 17:27	79-34-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-17 **Lab ID: 10614797014** Collected: 06/22/22 15:30 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/06/22 17:27	07/06/22 17:27	76-13-1	
Tetrachloroethene	4.25	ug/L	0.500	0.300	1	07/06/22 17:27	07/06/22 17:27	127-18-4	
Tetrahydrofuran	<0.929	ug/L	5.00	0.929	1	07/06/22 17:27	07/06/22 17:27	109-99-9	
Toluene	<0.278	ug/L	0.500	0.278	1	07/06/22 17:27	07/06/22 17:27	108-88-3	
1,1,1-Trichloroethane	<0.149	ug/L	0.500	0.149	1	07/09/22 12:30	07/09/22 12:30	71-55-6	H3
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/06/22 17:27	07/06/22 17:27	79-00-5	
Trichloroethene	1.71	ug/L	0.500	0.190	1	07/06/22 17:27	07/06/22 17:27	79-01-6	
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/06/22 17:27	07/06/22 17:27	75-69-4	
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/06/22 17:27	07/06/22 17:27	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/06/22 17:27	07/06/22 17:27	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/06/22 17:27	07/06/22 17:27	108-05-4	
Vinyl chloride	<0.234	ug/L	0.500	0.234	1	07/06/22 17:27	07/06/22 17:27	75-01-4	
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/06/22 17:27	07/06/22 17:27	1330-20-7	
1,4-Dioxane (p-Dioxane)	<2.83	ug/L	100	2.83	1	07/06/22 17:27	07/06/22 17:27	123-91-1	
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/06/22 17:27	07/06/22 17:27	67-63-0	
Surrogates									
Toluene-d8 (S)	109	%	80.0-120		1	07/06/22 17:27	07/06/22 17:27	2037-26-5	
Toluene-d8 (S)	97.1	%	80.0-120		1	07/09/22 12:30	07/09/22 12:30	2037-26-5	
4-Bromofluorobenzene (S)	87.6	%	77.0-126		1	07/06/22 17:27	07/06/22 17:27	460-00-4	
4-Bromofluorobenzene (S)	77.1	%	77.0-126		1	07/09/22 12:30	07/09/22 12:30	460-00-4	
1,2-Dichloroethane-d4 (S)	113	%	70.0-130		1	07/06/22 17:27	07/06/22 17:27	17060-07-0	
1,2-Dichloroethane-d4 (S)	102	%	70.0-130		1	07/09/22 12:30	07/09/22 12:30	17060-07-0	
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Minneapolis									
Chloride	45.9	mg/L	1.2	0.39	1		07/11/22 11:05	16887-00-6	
Sulfate	21.3	mg/L	1.2	0.43	1		07/11/22 11:05	14808-79-8	

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-18 Lab ID: 10614797015 Collected: 06/22/22 14:30 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/06/22 17:47	07/06/22 17:47	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/06/22 17:47	07/06/22 17:47	107-13-1	
Benzene	<0.0941	ug/L	0.500	0.0941	1	07/06/22 17:47	07/06/22 17:47	71-43-2	
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/06/22 17:47	07/06/22 17:47	108-86-1	L0
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/06/22 17:47	07/06/22 17:47	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/06/22 17:47	07/06/22 17:47	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/06/22 17:47	07/06/22 17:47	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/06/22 17:47	07/06/22 17:47	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/06/22 17:47	07/06/22 17:47	75-15-0	
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/06/22 17:47	07/06/22 17:47	56-23-5	
Chlorobenzene	<0.117	ug/L	0.500	0.117	1	07/06/22 17:47	07/06/22 17:47	108-90-7	
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/06/22 17:47	07/06/22 17:47	124-48-1	
Chloroethane	<0.192	ug/L	2.50	0.192	1	07/06/22 17:47	07/06/22 17:47	75-00-3	
Chloroform	<0.111	ug/L	0.500	0.111	1	07/06/22 17:47	07/06/22 17:47	67-66-3	
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/06/22 17:47	07/06/22 17:47	74-87-3	
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/06/22 17:47	07/06/22 17:47	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/06/22 17:47	07/06/22 17:47	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/06/22 17:47	07/06/22 17:47	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/06/22 17:47	07/06/22 17:47	74-95-3	
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/06/22 17:47	07/06/22 17:47	95-50-1	
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/06/22 17:47	07/06/22 17:47	541-73-1	
1,4-Dichlorobenzene	0.216J	ug/L	0.500	0.120	1	07/06/22 17:47	07/06/22 17:47	106-46-7	J
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/06/22 17:47	07/06/22 17:47	75-71-8	
1,1-Dichloroethane	<0.100	ug/L	0.500	0.100	1	07/06/22 17:47	07/06/22 17:47	75-34-3	
1,2-Dichloroethane	<0.0819	ug/L	0.500	0.0819	1	07/06/22 17:47	07/06/22 17:47	107-06-2	
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/09/22 12:50	07/09/22 12:50	75-35-4	H3
cis-1,2-Dichloroethene	0.381J	ug/L	0.500	0.126	1	07/06/22 17:47	07/06/22 17:47	156-59-2	J
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/06/22 17:47	07/06/22 17:47	156-60-5	
1,2-Dichloropropane	<0.149	ug/L	0.500	0.149	1	07/06/22 17:47	07/06/22 17:47	78-87-5	
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/06/22 17:47	07/06/22 17:47	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/06/22 17:47	07/06/22 17:47	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/06/22 17:47	07/06/22 17:47	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/06/22 17:47	07/06/22 17:47	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/06/22 17:47	07/06/22 17:47	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/06/22 17:47	07/06/22 17:47	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/06/22 17:47	07/06/22 17:47	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/06/22 17:47	07/06/22 17:47	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/06/22 17:47	07/06/22 17:47	78-93-3	
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/06/22 17:47	07/06/22 17:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/06/22 17:47	07/06/22 17:47	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/06/22 17:47	07/06/22 17:47	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/06/22 17:47	07/06/22 17:47	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/06/22 17:47	07/06/22 17:47	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/06/22 17:47	07/06/22 17:47	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/06/22 17:47	07/06/22 17:47	79-34-5	

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-18 **Lab ID: 10614797015** Collected: 06/22/22 14:30 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/06/22 17:47	07/06/22 17:47	76-13-1	
Tetrachloroethene	<0.300	ug/L	0.500	0.300	1	07/06/22 17:47	07/06/22 17:47	127-18-4	
Tetrahydrofuran	2.09J	ug/L	5.00	0.929	1	07/06/22 17:47	07/06/22 17:47	109-99-9	J
Toluene	<0.278	ug/L	0.500	0.278	1	07/06/22 17:47	07/06/22 17:47	108-88-3	
1,1,1-Trichloroethane	<0.149	ug/L	0.500	0.149	1	07/09/22 12:50	07/09/22 12:50	71-55-6	H3
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/06/22 17:47	07/06/22 17:47	79-00-5	
Trichloroethene	0.199J	ug/L	0.500	0.190	1	07/06/22 17:47	07/06/22 17:47	79-01-6	J
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/06/22 17:47	07/06/22 17:47	75-69-4	
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/06/22 17:47	07/06/22 17:47	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/06/22 17:47	07/06/22 17:47	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/06/22 17:47	07/06/22 17:47	108-05-4	
Vinyl chloride	<0.234	ug/L	0.500	0.234	1	07/06/22 17:47	07/06/22 17:47	75-01-4	
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/06/22 17:47	07/06/22 17:47	1330-20-7	
1,4-Dioxane (p-Dioxane)	4.76J	ug/L	100	2.83	1	07/06/22 17:47	07/06/22 17:47	123-91-1	J
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/06/22 17:47	07/06/22 17:47	67-63-0	
Surrogates									
Toluene-d8 (S)	103	%	80.0-120		1	07/06/22 17:47	07/06/22 17:47	2037-26-5	
Toluene-d8 (S)	96.4	%	80.0-120		1	07/09/22 12:50	07/09/22 12:50	2037-26-5	
4-Bromofluorobenzene (S)	88.1	%	77.0-126		1	07/06/22 17:47	07/06/22 17:47	460-00-4	
4-Bromofluorobenzene (S)	85.5	%	77.0-126		1	07/09/22 12:50	07/09/22 12:50	460-00-4	
1,2-Dichloroethane-d4 (S)	115	%	70.0-130		1	07/06/22 17:47	07/06/22 17:47	17060-07-0	
1,2-Dichloroethane-d4 (S)	97.8	%	70.0-130		1	07/09/22 12:50	07/09/22 12:50	17060-07-0	
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Minneapolis									
Chloride	117	mg/L	2.4	0.77	2		07/11/22 20:24	16887-00-6	
Sulfate	16.6	mg/L	1.2	0.43	1		07/11/22 11:19	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Sample Project No.: 10614797

Sample: MW-19 Lab ID: 10614797016 Collected: 06/22/22 08:30 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/06/22 18:08	07/06/22 18:08	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/06/22 18:08	07/06/22 18:08	107-13-1	
Benzene	<0.0941	ug/L	0.500	0.0941	1	07/06/22 18:08	07/06/22 18:08	71-43-2	
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/06/22 18:08	07/06/22 18:08	108-86-1	L0
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/06/22 18:08	07/06/22 18:08	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/06/22 18:08	07/06/22 18:08	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/06/22 18:08	07/06/22 18:08	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/06/22 18:08	07/06/22 18:08	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/06/22 18:08	07/06/22 18:08	75-15-0	
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/06/22 18:08	07/06/22 18:08	56-23-5	
Chlorobenzene	<0.117	ug/L	0.500	0.117	1	07/06/22 18:08	07/06/22 18:08	108-90-7	
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/06/22 18:08	07/06/22 18:08	124-48-1	
Chloroethane	<0.192	ug/L	2.50	0.192	1	07/06/22 18:08	07/06/22 18:08	75-00-3	
Chloroform	<0.111	ug/L	0.500	0.111	1	07/06/22 18:08	07/06/22 18:08	67-66-3	
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/06/22 18:08	07/06/22 18:08	74-87-3	
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/06/22 18:08	07/06/22 18:08	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/06/22 18:08	07/06/22 18:08	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/06/22 18:08	07/06/22 18:08	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/06/22 18:08	07/06/22 18:08	74-95-3	
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/06/22 18:08	07/06/22 18:08	95-50-1	
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/06/22 18:08	07/06/22 18:08	541-73-1	
1,4-Dichlorobenzene	<0.120	ug/L	0.500	0.120	1	07/06/22 18:08	07/06/22 18:08	106-46-7	
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/06/22 18:08	07/06/22 18:08	75-71-8	
1,1-Dichloroethane	<0.100	ug/L	0.500	0.100	1	07/06/22 18:08	07/06/22 18:08	75-34-3	
1,2-Dichloroethane	<0.0819	ug/L	0.500	0.0819	1	07/06/22 18:08	07/06/22 18:08	107-06-2	
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/09/22 13:09	07/09/22 13:09	75-35-4	H3
cis-1,2-Dichloroethene	<0.126	ug/L	0.500	0.126	1	07/06/22 18:08	07/06/22 18:08	156-59-2	
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/06/22 18:08	07/06/22 18:08	156-60-5	
1,2-Dichloropropane	<0.149	ug/L	0.500	0.149	1	07/06/22 18:08	07/06/22 18:08	78-87-5	
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/06/22 18:08	07/06/22 18:08	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/06/22 18:08	07/06/22 18:08	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/06/22 18:08	07/06/22 18:08	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/06/22 18:08	07/06/22 18:08	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/06/22 18:08	07/06/22 18:08	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/06/22 18:08	07/06/22 18:08	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/06/22 18:08	07/06/22 18:08	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/06/22 18:08	07/06/22 18:08	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/06/22 18:08	07/06/22 18:08	78-93-3	
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/06/22 18:08	07/06/22 18:08	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/06/22 18:08	07/06/22 18:08	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/06/22 18:08	07/06/22 18:08	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/06/22 18:08	07/06/22 18:08	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/06/22 18:08	07/06/22 18:08	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/06/22 18:08	07/06/22 18:08	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/06/22 18:08	07/06/22 18:08	79-34-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-19 **Lab ID: 10614797016** Collected: 06/22/22 08:30 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/06/22 18:08	07/06/22 18:08	76-13-1	
Tetrachloroethene	0.591	ug/L	0.500	0.300	1	07/06/22 18:08	07/06/22 18:08	127-18-4	
Tetrahydrofuran	<0.929	ug/L	5.00	0.929	1	07/06/22 18:08	07/06/22 18:08	109-99-9	
Toluene	<0.278	ug/L	0.500	0.278	1	07/06/22 18:08	07/06/22 18:08	108-88-3	
1,1,1-Trichloroethane	<0.149	ug/L	0.500	0.149	1	07/09/22 13:09	07/09/22 13:09	71-55-6	H3
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/06/22 18:08	07/06/22 18:08	79-00-5	
Trichloroethene	<0.190	ug/L	0.500	0.190	1	07/06/22 18:08	07/06/22 18:08	79-01-6	
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/06/22 18:08	07/06/22 18:08	75-69-4	
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/06/22 18:08	07/06/22 18:08	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/06/22 18:08	07/06/22 18:08	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/06/22 18:08	07/06/22 18:08	108-05-4	
Vinyl chloride	<0.234	ug/L	0.500	0.234	1	07/06/22 18:08	07/06/22 18:08	75-01-4	
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/06/22 18:08	07/06/22 18:08	1330-20-7	
1,4-Dioxane (p-Dioxane)	<2.83	ug/L	100	2.83	1	07/06/22 18:08	07/06/22 18:08	123-91-1	
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/06/22 18:08	07/06/22 18:08	67-63-0	
Surrogates									
Toluene-d8 (S)	99.5	%	80.0-120		1	07/06/22 18:08	07/06/22 18:08	2037-26-5	
Toluene-d8 (S)	102	%	80.0-120		1	07/09/22 13:09	07/09/22 13:09	2037-26-5	
4-Bromofluorobenzene (S)	84.3	%	77.0-126		1	07/06/22 18:08	07/06/22 18:08	460-00-4	
4-Bromofluorobenzene (S)	92.8	%	77.0-126		1	07/09/22 13:09	07/09/22 13:09	460-00-4	
1,2-Dichloroethane-d4 (S)	115	%	70.0-130		1	07/06/22 18:08	07/06/22 18:08	17060-07-0	
1,2-Dichloroethane-d4 (S)	101	%	70.0-130		1	07/09/22 13:09	07/09/22 13:09	17060-07-0	

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Sample Project No.: 10614797

Sample: MW-20 **Lab ID: 10614797017** Collected: 06/22/22 16:15 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/06/22 18:28	07/06/22 18:28	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/06/22 18:28	07/06/22 18:28	107-13-1	
Benzene	<0.0941	ug/L	0.500	0.0941	1	07/06/22 18:28	07/06/22 18:28	71-43-2	
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/06/22 18:28	07/06/22 18:28	108-86-1	L0
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/06/22 18:28	07/06/22 18:28	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/06/22 18:28	07/06/22 18:28	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/06/22 18:28	07/06/22 18:28	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/06/22 18:28	07/06/22 18:28	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/06/22 18:28	07/06/22 18:28	75-15-0	
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/06/22 18:28	07/06/22 18:28	56-23-5	
Chlorobenzene	<0.117	ug/L	0.500	0.117	1	07/06/22 18:28	07/06/22 18:28	108-90-7	
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/06/22 18:28	07/06/22 18:28	124-48-1	
Chloroethane	<0.192	ug/L	2.50	0.192	1	07/06/22 18:28	07/06/22 18:28	75-00-3	
Chloroform	<0.111	ug/L	0.500	0.111	1	07/06/22 18:28	07/06/22 18:28	67-66-3	
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/06/22 18:28	07/06/22 18:28	74-87-3	
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/06/22 18:28	07/06/22 18:28	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/06/22 18:28	07/06/22 18:28	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/06/22 18:28	07/06/22 18:28	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/06/22 18:28	07/06/22 18:28	74-95-3	
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/06/22 18:28	07/06/22 18:28	95-50-1	
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/06/22 18:28	07/06/22 18:28	541-73-1	
1,4-Dichlorobenzene	<0.120	ug/L	0.500	0.120	1	07/06/22 18:28	07/06/22 18:28	106-46-7	
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/06/22 18:28	07/06/22 18:28	75-71-8	
1,1-Dichloroethane	<0.100	ug/L	0.500	0.100	1	07/06/22 18:28	07/06/22 18:28	75-34-3	
1,2-Dichloroethane	<0.0819	ug/L	0.500	0.0819	1	07/06/22 18:28	07/06/22 18:28	107-06-2	
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/09/22 13:29	07/09/22 13:29	75-35-4	H3
cis-1,2-Dichloroethene	<0.126	ug/L	0.500	0.126	1	07/06/22 18:28	07/06/22 18:28	156-59-2	
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/06/22 18:28	07/06/22 18:28	156-60-5	
1,2-Dichloropropane	<0.149	ug/L	0.500	0.149	1	07/06/22 18:28	07/06/22 18:28	78-87-5	
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/06/22 18:28	07/06/22 18:28	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/06/22 18:28	07/06/22 18:28	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/06/22 18:28	07/06/22 18:28	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/06/22 18:28	07/06/22 18:28	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/06/22 18:28	07/06/22 18:28	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/06/22 18:28	07/06/22 18:28	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/06/22 18:28	07/06/22 18:28	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/06/22 18:28	07/06/22 18:28	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/06/22 18:28	07/06/22 18:28	78-93-3	
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/06/22 18:28	07/06/22 18:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/06/22 18:28	07/06/22 18:28	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/06/22 18:28	07/06/22 18:28	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/06/22 18:28	07/06/22 18:28	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/06/22 18:28	07/06/22 18:28	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/06/22 18:28	07/06/22 18:28	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/06/22 18:28	07/06/22 18:28	79-34-5	

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-20 Lab ID: 10614797017 Collected: 06/22/22 16:15 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/06/22 18:28	07/06/22 18:28	76-13-1	
Tetrachloroethene	2.71	ug/L	0.500	0.300	1	07/06/22 18:28	07/06/22 18:28	127-18-4	
Tetrahydrofuran	<0.929	ug/L	5.00	0.929	1	07/06/22 18:28	07/06/22 18:28	109-99-9	
Toluene	<0.278	ug/L	0.500	0.278	1	07/06/22 18:28	07/06/22 18:28	108-88-3	
1,1,1-Trichloroethane	<0.149	ug/L	0.500	0.149	1	07/09/22 13:29	07/09/22 13:29	71-55-6	H3
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/06/22 18:28	07/06/22 18:28	79-00-5	
Trichloroethene	0.194J	ug/L	0.500	0.190	1	07/06/22 18:28	07/06/22 18:28	79-01-6	J
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/06/22 18:28	07/06/22 18:28	75-69-4	
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/06/22 18:28	07/06/22 18:28	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/06/22 18:28	07/06/22 18:28	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/06/22 18:28	07/06/22 18:28	108-05-4	
Vinyl chloride	<0.234	ug/L	0.500	0.234	1	07/06/22 18:28	07/06/22 18:28	75-01-4	
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/06/22 18:28	07/06/22 18:28	1330-20-7	
1,4-Dioxane (p-Dioxane)	<2.83	ug/L	100	2.83	1	07/06/22 18:28	07/06/22 18:28	123-91-1	
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/06/22 18:28	07/06/22 18:28	67-63-0	
Surrogates									
Toluene-d8 (S)	105	%	80.0-120		1	07/06/22 18:28	07/06/22 18:28	2037-26-5	
Toluene-d8 (S)	104	%	80.0-120		1	07/09/22 13:29	07/09/22 13:29	2037-26-5	
4-Bromofluorobenzene (S)	84.7	%	77.0-126		1	07/06/22 18:28	07/06/22 18:28	460-00-4	
4-Bromofluorobenzene (S)	75.9	%	77.0-126		1	07/09/22 13:29	07/09/22 13:29	460-00-4	SR
1,2-Dichloroethane-d4 (S)	116	%	70.0-130		1	07/06/22 18:28	07/06/22 18:28	17060-07-0	
1,2-Dichloroethane-d4 (S)	103	%	70.0-130		1	07/09/22 13:29	07/09/22 13:29	17060-07-0	
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Minneapolis									
Chloride	60.5	mg/L	1.2	0.39	1		07/11/22 11:33	16887-00-6	
Sulfate	67.5	mg/L	1.2	0.43	1		07/11/22 11:33	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Sample Project No.: 10614797

Sample: MW-21 **Lab ID: 10614797018** Collected: 06/22/22 18:00 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/06/22 18:48	07/06/22 18:48	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/06/22 18:48	07/06/22 18:48	107-13-1	
Benzene	<0.0941	ug/L	0.500	0.0941	1	07/06/22 18:48	07/06/22 18:48	71-43-2	
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/06/22 18:48	07/06/22 18:48	108-86-1	L0
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/06/22 18:48	07/06/22 18:48	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/06/22 18:48	07/06/22 18:48	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/06/22 18:48	07/06/22 18:48	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/06/22 18:48	07/06/22 18:48	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/06/22 18:48	07/06/22 18:48	75-15-0	
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/06/22 18:48	07/06/22 18:48	56-23-5	
Chlorobenzene	<0.117	ug/L	0.500	0.117	1	07/06/22 18:48	07/06/22 18:48	108-90-7	
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/06/22 18:48	07/06/22 18:48	124-48-1	
Chloroethane	<0.192	ug/L	2.50	0.192	1	07/06/22 18:48	07/06/22 18:48	75-00-3	
Chloroform	<0.111	ug/L	0.500	0.111	1	07/06/22 18:48	07/06/22 18:48	67-66-3	
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/06/22 18:48	07/06/22 18:48	74-87-3	
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/06/22 18:48	07/06/22 18:48	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/06/22 18:48	07/06/22 18:48	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/06/22 18:48	07/06/22 18:48	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/06/22 18:48	07/06/22 18:48	74-95-3	
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/06/22 18:48	07/06/22 18:48	95-50-1	
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/06/22 18:48	07/06/22 18:48	541-73-1	
1,4-Dichlorobenzene	<0.120	ug/L	0.500	0.120	1	07/06/22 18:48	07/06/22 18:48	106-46-7	
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/06/22 18:48	07/06/22 18:48	75-71-8	
1,1-Dichloroethane	<0.100	ug/L	0.500	0.100	1	07/06/22 18:48	07/06/22 18:48	75-34-3	
1,2-Dichloroethane	<0.0819	ug/L	0.500	0.0819	1	07/06/22 18:48	07/06/22 18:48	107-06-2	
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/09/22 13:49	07/09/22 13:49	75-35-4	H3
cis-1,2-Dichloroethene	<0.126	ug/L	0.500	0.126	1	07/06/22 18:48	07/06/22 18:48	156-59-2	
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/06/22 18:48	07/06/22 18:48	156-60-5	
1,2-Dichloropropane	<0.149	ug/L	0.500	0.149	1	07/06/22 18:48	07/06/22 18:48	78-87-5	
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/06/22 18:48	07/06/22 18:48	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/06/22 18:48	07/06/22 18:48	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/06/22 18:48	07/06/22 18:48	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/06/22 18:48	07/06/22 18:48	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/06/22 18:48	07/06/22 18:48	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/06/22 18:48	07/06/22 18:48	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/06/22 18:48	07/06/22 18:48	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/06/22 18:48	07/06/22 18:48	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/06/22 18:48	07/06/22 18:48	78-93-3	
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/06/22 18:48	07/06/22 18:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/06/22 18:48	07/06/22 18:48	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/06/22 18:48	07/06/22 18:48	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/06/22 18:48	07/06/22 18:48	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/06/22 18:48	07/06/22 18:48	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/06/22 18:48	07/06/22 18:48	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/06/22 18:48	07/06/22 18:48	79-34-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-21 **Lab ID: 10614797018** Collected: 06/22/22 18:00 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/06/22 18:48	07/06/22 18:48	76-13-1	
Tetrachloroethene	<0.300	ug/L	0.500	0.300	1	07/06/22 18:48	07/06/22 18:48	127-18-4	
Tetrahydrofuran	<0.929	ug/L	5.00	0.929	1	07/06/22 18:48	07/06/22 18:48	109-99-9	
Toluene	<0.278	ug/L	0.500	0.278	1	07/06/22 18:48	07/06/22 18:48	108-88-3	
1,1,1-Trichloroethane	<0.149	ug/L	0.500	0.149	1	07/09/22 13:49	07/09/22 13:49	71-55-6	H3
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/06/22 18:48	07/06/22 18:48	79-00-5	
Trichloroethene	<0.190	ug/L	0.500	0.190	1	07/06/22 18:48	07/06/22 18:48	79-01-6	
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/06/22 18:48	07/06/22 18:48	75-69-4	
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/06/22 18:48	07/06/22 18:48	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/06/22 18:48	07/06/22 18:48	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/06/22 18:48	07/06/22 18:48	108-05-4	
Vinyl chloride	<0.234	ug/L	0.500	0.234	1	07/06/22 18:48	07/06/22 18:48	75-01-4	
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/06/22 18:48	07/06/22 18:48	1330-20-7	
1,4-Dioxane (p-Dioxane)	<2.83	ug/L	100	2.83	1	07/06/22 18:48	07/06/22 18:48	123-91-1	
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/06/22 18:48	07/06/22 18:48	67-63-0	
Surrogates									
Toluene-d8 (S)	106	%	80.0-120		1	07/06/22 18:48	07/06/22 18:48	2037-26-5	
Toluene-d8 (S)	104	%	80.0-120		1	07/09/22 13:49	07/09/22 13:49	2037-26-5	
4-Bromofluorobenzene (S)	90.9	%	77.0-126		1	07/06/22 18:48	07/06/22 18:48	460-00-4	
4-Bromofluorobenzene (S)	87.5	%	77.0-126		1	07/09/22 13:49	07/09/22 13:49	460-00-4	
1,2-Dichloroethane-d4 (S)	113	%	70.0-130		1	07/06/22 18:48	07/06/22 18:48	17060-07-0	
1,2-Dichloroethane-d4 (S)	101	%	70.0-130		1	07/09/22 13:49	07/09/22 13:49	17060-07-0	

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Sample Project No.: 10614797

Sample: MW-22 Lab ID: 10614797019 Collected: 06/22/22 17:15 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/06/22 19:09	07/06/22 19:09	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/06/22 19:09	07/06/22 19:09	107-13-1	
Benzene	<0.0941	ug/L	0.500	0.0941	1	07/06/22 19:09	07/06/22 19:09	71-43-2	
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/06/22 19:09	07/06/22 19:09	108-86-1	L0
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/06/22 19:09	07/06/22 19:09	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/06/22 19:09	07/06/22 19:09	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/06/22 19:09	07/06/22 19:09	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/06/22 19:09	07/06/22 19:09	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/06/22 19:09	07/06/22 19:09	75-15-0	
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/06/22 19:09	07/06/22 19:09	56-23-5	
Chlorobenzene	<0.117	ug/L	0.500	0.117	1	07/06/22 19:09	07/06/22 19:09	108-90-7	
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/06/22 19:09	07/06/22 19:09	124-48-1	
Chloroethane	<0.192	ug/L	2.50	0.192	1	07/06/22 19:09	07/06/22 19:09	75-00-3	
Chloroform	0.185J	ug/L	0.500	0.111	1	07/06/22 19:09	07/06/22 19:09	67-66-3	J
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/06/22 19:09	07/06/22 19:09	74-87-3	
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/06/22 19:09	07/06/22 19:09	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/06/22 19:09	07/06/22 19:09	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/06/22 19:09	07/06/22 19:09	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/06/22 19:09	07/06/22 19:09	74-95-3	
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/06/22 19:09	07/06/22 19:09	95-50-1	
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/06/22 19:09	07/06/22 19:09	541-73-1	
1,4-Dichlorobenzene	<0.120	ug/L	0.500	0.120	1	07/06/22 19:09	07/06/22 19:09	106-46-7	
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/06/22 19:09	07/06/22 19:09	75-71-8	
1,1-Dichloroethane	<0.100	ug/L	0.500	0.100	1	07/06/22 19:09	07/06/22 19:09	75-34-3	
1,2-Dichloroethane	<0.0819	ug/L	0.500	0.0819	1	07/06/22 19:09	07/06/22 19:09	107-06-2	
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/09/22 14:09	07/09/22 14:09	75-35-4	H3
cis-1,2-Dichloroethene	<0.126	ug/L	0.500	0.126	1	07/06/22 19:09	07/06/22 19:09	156-59-2	
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/06/22 19:09	07/06/22 19:09	156-60-5	
1,2-Dichloropropane	<0.149	ug/L	0.500	0.149	1	07/06/22 19:09	07/06/22 19:09	78-87-5	
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/06/22 19:09	07/06/22 19:09	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/06/22 19:09	07/06/22 19:09	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/06/22 19:09	07/06/22 19:09	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/06/22 19:09	07/06/22 19:09	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/06/22 19:09	07/06/22 19:09	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/06/22 19:09	07/06/22 19:09	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/06/22 19:09	07/06/22 19:09	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/06/22 19:09	07/06/22 19:09	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/06/22 19:09	07/06/22 19:09	78-93-3	
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/06/22 19:09	07/06/22 19:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/06/22 19:09	07/06/22 19:09	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/06/22 19:09	07/06/22 19:09	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/06/22 19:09	07/06/22 19:09	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/06/22 19:09	07/06/22 19:09	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/06/22 19:09	07/06/22 19:09	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/06/22 19:09	07/06/22 19:09	79-34-5	

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-22 **Lab ID: 10614797019** Collected: 06/22/22 17:15 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/06/22 19:09	07/06/22 19:09	76-13-1	
Tetrachloroethene	<0.300	ug/L	0.500	0.300	1	07/06/22 19:09	07/06/22 19:09	127-18-4	
Tetrahydrofuran	<0.929	ug/L	5.00	0.929	1	07/06/22 19:09	07/06/22 19:09	109-99-9	
Toluene	<0.278	ug/L	0.500	0.278	1	07/06/22 19:09	07/06/22 19:09	108-88-3	
1,1,1-Trichloroethane	<0.149	ug/L	0.500	0.149	1	07/09/22 14:09	07/09/22 14:09	71-55-6	H3
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/06/22 19:09	07/06/22 19:09	79-00-5	
Trichloroethene	<0.190	ug/L	0.500	0.190	1	07/06/22 19:09	07/06/22 19:09	79-01-6	
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/06/22 19:09	07/06/22 19:09	75-69-4	
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/06/22 19:09	07/06/22 19:09	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/06/22 19:09	07/06/22 19:09	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/06/22 19:09	07/06/22 19:09	108-05-4	
Vinyl chloride	<0.234	ug/L	0.500	0.234	1	07/06/22 19:09	07/06/22 19:09	75-01-4	
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/06/22 19:09	07/06/22 19:09	1330-20-7	
1,4-Dioxane (p-Dioxane)	<2.83	ug/L	100	2.83	1	07/06/22 19:09	07/06/22 19:09	123-91-1	
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/06/22 19:09	07/06/22 19:09	67-63-0	
Surrogates									
Toluene-d8 (S)	100	%	80.0-120		1	07/06/22 19:09	07/06/22 19:09	2037-26-5	
Toluene-d8 (S)	100	%	80.0-120		1	07/09/22 14:09	07/09/22 14:09	2037-26-5	
4-Bromofluorobenzene (S)	86.2	%	77.0-126		1	07/06/22 19:09	07/06/22 19:09	460-00-4	
4-Bromofluorobenzene (S)	96.2	%	77.0-126		1	07/09/22 14:09	07/09/22 14:09	460-00-4	
1,2-Dichloroethane-d4 (S)	117	%	70.0-130		1	07/06/22 19:09	07/06/22 19:09	17060-07-0	
1,2-Dichloroethane-d4 (S)	106	%	70.0-130		1	07/09/22 14:09	07/09/22 14:09	17060-07-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Sample Project No.: 10614797

Sample: MW-23 **Lab ID: 10614797020** Collected: 06/22/22 17:30 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/06/22 19:30	07/06/22 19:30	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/06/22 19:30	07/06/22 19:30	107-13-1	
Benzene	<0.0941	ug/L	0.500	0.0941	1	07/06/22 19:30	07/06/22 19:30	71-43-2	
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/06/22 19:30	07/06/22 19:30	108-86-1	L0
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/06/22 19:30	07/06/22 19:30	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/06/22 19:30	07/06/22 19:30	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/06/22 19:30	07/06/22 19:30	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/06/22 19:30	07/06/22 19:30	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/06/22 19:30	07/06/22 19:30	75-15-0	
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/06/22 19:30	07/06/22 19:30	56-23-5	
Chlorobenzene	<0.117	ug/L	0.500	0.117	1	07/06/22 19:30	07/06/22 19:30	108-90-7	
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/06/22 19:30	07/06/22 19:30	124-48-1	
Chloroethane	<0.192	ug/L	2.50	0.192	1	07/06/22 19:30	07/06/22 19:30	75-00-3	
Chloroform	<0.111	ug/L	0.500	0.111	1	07/06/22 19:30	07/06/22 19:30	67-66-3	
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/06/22 19:30	07/06/22 19:30	74-87-3	
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/06/22 19:30	07/06/22 19:30	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/06/22 19:30	07/06/22 19:30	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/06/22 19:30	07/06/22 19:30	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/06/22 19:30	07/06/22 19:30	74-95-3	
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/06/22 19:30	07/06/22 19:30	95-50-1	
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/06/22 19:30	07/06/22 19:30	541-73-1	
1,4-Dichlorobenzene	<0.120	ug/L	0.500	0.120	1	07/06/22 19:30	07/06/22 19:30	106-46-7	
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/06/22 19:30	07/06/22 19:30	75-71-8	
1,1-Dichloroethane	<0.100	ug/L	0.500	0.100	1	07/06/22 19:30	07/06/22 19:30	75-34-3	
1,2-Dichloroethane	<0.0819	ug/L	0.500	0.0819	1	07/06/22 19:30	07/06/22 19:30	107-06-2	
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/09/22 14:29	07/09/22 14:29	75-35-4	H3
cis-1,2-Dichloroethene	<0.126	ug/L	0.500	0.126	1	07/06/22 19:30	07/06/22 19:30	156-59-2	
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/06/22 19:30	07/06/22 19:30	156-60-5	
1,2-Dichloropropane	<0.149	ug/L	0.500	0.149	1	07/06/22 19:30	07/06/22 19:30	78-87-5	
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/06/22 19:30	07/06/22 19:30	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/06/22 19:30	07/06/22 19:30	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/06/22 19:30	07/06/22 19:30	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/06/22 19:30	07/06/22 19:30	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/06/22 19:30	07/06/22 19:30	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/06/22 19:30	07/06/22 19:30	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/06/22 19:30	07/06/22 19:30	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/06/22 19:30	07/06/22 19:30	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/06/22 19:30	07/06/22 19:30	78-93-3	
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/06/22 19:30	07/06/22 19:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/06/22 19:30	07/06/22 19:30	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/06/22 19:30	07/06/22 19:30	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/06/22 19:30	07/06/22 19:30	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/06/22 19:30	07/06/22 19:30	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/06/22 19:30	07/06/22 19:30	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/06/22 19:30	07/06/22 19:30	79-34-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-23 **Lab ID: 10614797020** Collected: 06/22/22 17:30 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/06/22 19:30	07/06/22 19:30	76-13-1	
Tetrachloroethene	<0.300	ug/L	0.500	0.300	1	07/06/22 19:30	07/06/22 19:30	127-18-4	
Tetrahydrofuran	<0.929	ug/L	5.00	0.929	1	07/06/22 19:30	07/06/22 19:30	109-99-9	
Toluene	<0.278	ug/L	0.500	0.278	1	07/06/22 19:30	07/06/22 19:30	108-88-3	
1,1,1-Trichloroethane	<0.149	ug/L	0.500	0.149	1	07/09/22 14:29	07/09/22 14:29	71-55-6	H3
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/06/22 19:30	07/06/22 19:30	79-00-5	
Trichloroethene	<0.190	ug/L	0.500	0.190	1	07/06/22 19:30	07/06/22 19:30	79-01-6	
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/06/22 19:30	07/06/22 19:30	75-69-4	
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/06/22 19:30	07/06/22 19:30	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/06/22 19:30	07/06/22 19:30	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/06/22 19:30	07/06/22 19:30	108-05-4	
Vinyl chloride	<0.234	ug/L	0.500	0.234	1	07/06/22 19:30	07/06/22 19:30	75-01-4	
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/06/22 19:30	07/06/22 19:30	1330-20-7	
1,4-Dioxane (p-Dioxane)	<2.83	ug/L	100	2.83	1	07/06/22 19:30	07/06/22 19:30	123-91-1	
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/06/22 19:30	07/06/22 19:30	67-63-0	
Surrogates									
Toluene-d8 (S)	99.6	%	80.0-120		1	07/06/22 19:30	07/06/22 19:30	2037-26-5	
Toluene-d8 (S)	98.1	%	80.0-120		1	07/09/22 14:29	07/09/22 14:29	2037-26-5	
4-Bromofluorobenzene (S)	87.3	%	77.0-126		1	07/06/22 19:30	07/06/22 19:30	460-00-4	
4-Bromofluorobenzene (S)	92.8	%	77.0-126		1	07/09/22 14:29	07/09/22 14:29	460-00-4	
1,2-Dichloroethane-d4 (S)	116	%	70.0-130		1	07/06/22 19:30	07/06/22 19:30	17060-07-0	
1,2-Dichloroethane-d4 (S)	104	%	70.0-130		1	07/09/22 14:29	07/09/22 14:29	17060-07-0	

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Sample Project No.: 10614797

Sample: MW-24 Lab ID: 10614797021 Collected: 06/22/22 16:45 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/06/22 19:51	07/06/22 19:51	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/06/22 19:51	07/06/22 19:51	107-13-1	
Benzene	<0.0941	ug/L	0.500	0.0941	1	07/06/22 19:51	07/06/22 19:51	71-43-2	
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/06/22 19:51	07/06/22 19:51	108-86-1	L0
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/06/22 19:51	07/06/22 19:51	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/06/22 19:51	07/06/22 19:51	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/06/22 19:51	07/06/22 19:51	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/06/22 19:51	07/06/22 19:51	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/06/22 19:51	07/06/22 19:51	75-15-0	
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/06/22 19:51	07/06/22 19:51	56-23-5	
Chlorobenzene	<0.117	ug/L	0.500	0.117	1	07/06/22 19:51	07/06/22 19:51	108-90-7	
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/06/22 19:51	07/06/22 19:51	124-48-1	
Chloroethane	<0.192	ug/L	2.50	0.192	1	07/06/22 19:51	07/06/22 19:51	75-00-3	
Chloroform	<0.111	ug/L	0.500	0.111	1	07/06/22 19:51	07/06/22 19:51	67-66-3	
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/06/22 19:51	07/06/22 19:51	74-87-3	
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/06/22 19:51	07/06/22 19:51	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/06/22 19:51	07/06/22 19:51	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/06/22 19:51	07/06/22 19:51	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/06/22 19:51	07/06/22 19:51	74-95-3	
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/06/22 19:51	07/06/22 19:51	95-50-1	
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/06/22 19:51	07/06/22 19:51	541-73-1	
1,4-Dichlorobenzene	<0.120	ug/L	0.500	0.120	1	07/06/22 19:51	07/06/22 19:51	106-46-7	
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/06/22 19:51	07/06/22 19:51	75-71-8	
1,1-Dichloroethane	<0.100	ug/L	0.500	0.100	1	07/06/22 19:51	07/06/22 19:51	75-34-3	
1,2-Dichloroethane	<0.0819	ug/L	0.500	0.0819	1	07/06/22 19:51	07/06/22 19:51	107-06-2	
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/09/22 14:49	07/09/22 14:49	75-35-4	G3,H3
cis-1,2-Dichloroethene	<0.126	ug/L	0.500	0.126	1	07/06/22 19:51	07/06/22 19:51	156-59-2	
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/06/22 19:51	07/06/22 19:51	156-60-5	
1,2-Dichloropropane	<0.149	ug/L	0.500	0.149	1	07/06/22 19:51	07/06/22 19:51	78-87-5	
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/06/22 19:51	07/06/22 19:51	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/06/22 19:51	07/06/22 19:51	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/06/22 19:51	07/06/22 19:51	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/06/22 19:51	07/06/22 19:51	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/06/22 19:51	07/06/22 19:51	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/06/22 19:51	07/06/22 19:51	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/06/22 19:51	07/06/22 19:51	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/06/22 19:51	07/06/22 19:51	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/06/22 19:51	07/06/22 19:51	78-93-3	
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/06/22 19:51	07/06/22 19:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/06/22 19:51	07/06/22 19:51	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/06/22 19:51	07/06/22 19:51	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/06/22 19:51	07/06/22 19:51	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/06/22 19:51	07/06/22 19:51	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/06/22 19:51	07/06/22 19:51	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/06/22 19:51	07/06/22 19:51	79-34-5	

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-24 **Lab ID: 10614797021** Collected: 06/22/22 16:45 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/06/22 19:51	07/06/22 19:51	76-13-1	
Tetrachloroethene	0.558	ug/L	0.500	0.300	1	07/06/22 19:51	07/06/22 19:51	127-18-4	
Tetrahydrofuran	<0.929	ug/L	5.00	0.929	1	07/06/22 19:51	07/06/22 19:51	109-99-9	
Toluene	<0.278	ug/L	0.500	0.278	1	07/06/22 19:51	07/06/22 19:51	108-88-3	
1,1,1-Trichloroethane	<0.149	ug/L	0.500	0.149	1	07/09/22 14:49	07/09/22 14:49	71-55-6	G3,H3
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/06/22 19:51	07/06/22 19:51	79-00-5	
Trichloroethene	<0.190	ug/L	0.500	0.190	1	07/06/22 19:51	07/06/22 19:51	79-01-6	
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/06/22 19:51	07/06/22 19:51	75-69-4	
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/06/22 19:51	07/06/22 19:51	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/06/22 19:51	07/06/22 19:51	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/06/22 19:51	07/06/22 19:51	108-05-4	
Vinyl chloride	<0.234	ug/L	0.500	0.234	1	07/06/22 19:51	07/06/22 19:51	75-01-4	
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/06/22 19:51	07/06/22 19:51	1330-20-7	
1,4-Dioxane (p-Dioxane)	<2.83	ug/L	100	2.83	1	07/06/22 19:51	07/06/22 19:51	123-91-1	
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/06/22 19:51	07/06/22 19:51	67-63-0	
Surrogates									
Toluene-d8 (S)	101	%	80.0-120		1	07/06/22 19:51	07/06/22 19:51	2037-26-5	
Toluene-d8 (S)	110	%	80.0-120		1	07/09/22 14:49	07/09/22 14:49	2037-26-5	
4-Bromofluorobenzene (S)	86.1	%	77.0-126		1	07/06/22 19:51	07/06/22 19:51	460-00-4	
4-Bromofluorobenzene (S)	98.1	%	77.0-126		1	07/09/22 14:49	07/09/22 14:49	460-00-4	
1,2-Dichloroethane-d4 (S)	118	%	70.0-130		1	07/06/22 19:51	07/06/22 19:51	17060-07-0	
1,2-Dichloroethane-d4 (S)	105	%	70.0-130		1	07/09/22 14:49	07/09/22 14:49	17060-07-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Sample Project No.: 10614797

Sample: MW-27 Lab ID: 10614797022 Collected: 06/22/22 08:00 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/06/22 20:11	07/06/22 20:11	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/06/22 20:11	07/06/22 20:11	107-13-1	
Benzene	<0.0941	ug/L	0.500	0.0941	1	07/06/22 20:11	07/06/22 20:11	71-43-2	
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/06/22 20:11	07/06/22 20:11	108-86-1	L0
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/06/22 20:11	07/06/22 20:11	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/06/22 20:11	07/06/22 20:11	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/06/22 20:11	07/06/22 20:11	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/06/22 20:11	07/06/22 20:11	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/06/22 20:11	07/06/22 20:11	75-15-0	
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/06/22 20:11	07/06/22 20:11	56-23-5	
Chlorobenzene	<0.117	ug/L	0.500	0.117	1	07/06/22 20:11	07/06/22 20:11	108-90-7	
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/06/22 20:11	07/06/22 20:11	124-48-1	
Chloroethane	<0.192	ug/L	2.50	0.192	1	07/06/22 20:11	07/06/22 20:11	75-00-3	
Chloroform	<0.111	ug/L	0.500	0.111	1	07/06/22 20:11	07/06/22 20:11	67-66-3	
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/06/22 20:11	07/06/22 20:11	74-87-3	
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/06/22 20:11	07/06/22 20:11	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/06/22 20:11	07/06/22 20:11	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/06/22 20:11	07/06/22 20:11	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/06/22 20:11	07/06/22 20:11	74-95-3	
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/06/22 20:11	07/06/22 20:11	95-50-1	
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/06/22 20:11	07/06/22 20:11	541-73-1	
1,4-Dichlorobenzene	<0.120	ug/L	0.500	0.120	1	07/06/22 20:11	07/06/22 20:11	106-46-7	
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/06/22 20:11	07/06/22 20:11	75-71-8	
1,1-Dichloroethane	<0.100	ug/L	0.500	0.100	1	07/06/22 20:11	07/06/22 20:11	75-34-3	
1,2-Dichloroethane	<0.0819	ug/L	0.500	0.0819	1	07/06/22 20:11	07/06/22 20:11	107-06-2	
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/09/22 15:09	07/09/22 15:09	75-35-4	H3
cis-1,2-Dichloroethene	<0.126	ug/L	0.500	0.126	1	07/06/22 20:11	07/06/22 20:11	156-59-2	
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/06/22 20:11	07/06/22 20:11	156-60-5	
1,2-Dichloropropane	<0.149	ug/L	0.500	0.149	1	07/06/22 20:11	07/06/22 20:11	78-87-5	
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/06/22 20:11	07/06/22 20:11	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/06/22 20:11	07/06/22 20:11	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/06/22 20:11	07/06/22 20:11	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/06/22 20:11	07/06/22 20:11	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/06/22 20:11	07/06/22 20:11	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/06/22 20:11	07/06/22 20:11	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/06/22 20:11	07/06/22 20:11	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/06/22 20:11	07/06/22 20:11	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/06/22 20:11	07/06/22 20:11	78-93-3	
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/06/22 20:11	07/06/22 20:11	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/06/22 20:11	07/06/22 20:11	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/06/22 20:11	07/06/22 20:11	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/06/22 20:11	07/06/22 20:11	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/06/22 20:11	07/06/22 20:11	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/06/22 20:11	07/06/22 20:11	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/06/22 20:11	07/06/22 20:11	79-34-5	

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: MW-27 Lab ID: 10614797022 Collected: 06/22/22 08:00 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/06/22 20:11	07/06/22 20:11	76-13-1	
Tetrachloroethene	0.750	ug/L	0.500	0.300	1	07/06/22 20:11	07/06/22 20:11	127-18-4	
Tetrahydrofuran	<0.929	ug/L	5.00	0.929	1	07/06/22 20:11	07/06/22 20:11	109-99-9	
Toluene	<0.278	ug/L	0.500	0.278	1	07/06/22 20:11	07/06/22 20:11	108-88-3	
1,1,1-Trichloroethane	<0.149	ug/L	0.500	0.149	1	07/09/22 15:09	07/09/22 15:09	71-55-6	H3
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/06/22 20:11	07/06/22 20:11	79-00-5	
Trichloroethene	<0.190	ug/L	0.500	0.190	1	07/06/22 20:11	07/06/22 20:11	79-01-6	
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/06/22 20:11	07/06/22 20:11	75-69-4	
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/06/22 20:11	07/06/22 20:11	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/06/22 20:11	07/06/22 20:11	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/06/22 20:11	07/06/22 20:11	108-05-4	
Vinyl chloride	<0.234	ug/L	0.500	0.234	1	07/06/22 20:11	07/06/22 20:11	75-01-4	
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/06/22 20:11	07/06/22 20:11	1330-20-7	
1,4-Dioxane (p-Dioxane)	<2.83	ug/L	100	2.83	1	07/06/22 20:11	07/06/22 20:11	123-91-1	
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/06/22 20:11	07/06/22 20:11	67-63-0	
Surrogates									
Toluene-d8 (S)	96.3	%	80.0-120		1	07/06/22 20:11	07/06/22 20:11	2037-26-5	
Toluene-d8 (S)	95.0	%	80.0-120		1	07/09/22 15:09	07/09/22 15:09	2037-26-5	
4-Bromofluorobenzene (S)	85.9	%	77.0-126		1	07/06/22 20:11	07/06/22 20:11	460-00-4	
4-Bromofluorobenzene (S)	90.2	%	77.0-126		1	07/09/22 15:09	07/09/22 15:09	460-00-4	
1,2-Dichloroethane-d4 (S)	119	%	70.0-130		1	07/06/22 20:11	07/06/22 20:11	17060-07-0	
1,2-Dichloroethane-d4 (S)	105	%	70.0-130		1	07/09/22 15:09	07/09/22 15:09	17060-07-0	
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Minneapolis									
Chloride	31.5	mg/L	1.2	0.39	1		07/11/22 11:47	16887-00-6	
Sulfate	34.8	mg/L	1.2	0.43	1		07/11/22 11:47	14808-79-8	
353.2 Nitrate + Nitrite									
Analytical Method: EPA 353.2									
Pace Analytical Services - Minneapolis									
Nitrogen, NO2 plus NO3	6.0	mg/L	0.50	0.16	5		07/06/22 11:38		

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Sample Project No.: 10614797

Sample: **Mcllhattan Seep** Lab ID: **10614797023** Collected: 06/22/22 10:15 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/06/22 20:32	07/06/22 20:32	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/06/22 20:32	07/06/22 20:32	107-13-1	
Benzene	<0.0941	ug/L	0.500	0.0941	1	07/06/22 20:32	07/06/22 20:32	71-43-2	
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/06/22 20:32	07/06/22 20:32	108-86-1	L0
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/06/22 20:32	07/06/22 20:32	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/06/22 20:32	07/06/22 20:32	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/06/22 20:32	07/06/22 20:32	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/06/22 20:32	07/06/22 20:32	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/06/22 20:32	07/06/22 20:32	75-15-0	
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/06/22 20:32	07/06/22 20:32	56-23-5	
Chlorobenzene	<0.117	ug/L	0.500	0.117	1	07/06/22 20:32	07/06/22 20:32	108-90-7	
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/06/22 20:32	07/06/22 20:32	124-48-1	
Chloroethane	<0.192	ug/L	2.50	0.192	1	07/06/22 20:32	07/06/22 20:32	75-00-3	
Chloroform	<0.111	ug/L	0.500	0.111	1	07/06/22 20:32	07/06/22 20:32	67-66-3	
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/06/22 20:32	07/06/22 20:32	74-87-3	
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/06/22 20:32	07/06/22 20:32	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/06/22 20:32	07/06/22 20:32	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/06/22 20:32	07/06/22 20:32	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/06/22 20:32	07/06/22 20:32	74-95-3	
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/06/22 20:32	07/06/22 20:32	95-50-1	
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/06/22 20:32	07/06/22 20:32	541-73-1	
1,4-Dichlorobenzene	<0.120	ug/L	0.500	0.120	1	07/06/22 20:32	07/06/22 20:32	106-46-7	
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/06/22 20:32	07/06/22 20:32	75-71-8	
1,1-Dichloroethane	<0.100	ug/L	0.500	0.100	1	07/06/22 20:32	07/06/22 20:32	75-34-3	
1,2-Dichloroethane	<0.0819	ug/L	0.500	0.0819	1	07/06/22 20:32	07/06/22 20:32	107-06-2	
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/09/22 15:29	07/09/22 15:29	75-35-4	H3
cis-1,2-Dichloroethene	0.178J	ug/L	0.500	0.126	1	07/06/22 20:32	07/06/22 20:32	156-59-2	J
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/06/22 20:32	07/06/22 20:32	156-60-5	
1,2-Dichloropropane	<0.149	ug/L	0.500	0.149	1	07/06/22 20:32	07/06/22 20:32	78-87-5	
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/06/22 20:32	07/06/22 20:32	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/06/22 20:32	07/06/22 20:32	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/06/22 20:32	07/06/22 20:32	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/06/22 20:32	07/06/22 20:32	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/06/22 20:32	07/06/22 20:32	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/06/22 20:32	07/06/22 20:32	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/06/22 20:32	07/06/22 20:32	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/06/22 20:32	07/06/22 20:32	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/06/22 20:32	07/06/22 20:32	78-93-3	
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/06/22 20:32	07/06/22 20:32	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/06/22 20:32	07/06/22 20:32	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/06/22 20:32	07/06/22 20:32	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/06/22 20:32	07/06/22 20:32	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/06/22 20:32	07/06/22 20:32	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/06/22 20:32	07/06/22 20:32	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/06/22 20:32	07/06/22 20:32	79-34-5	

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: McIlhattan Seep **Lab ID: 10614797023** Collected: 06/22/22 10:15 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/06/22 20:32	07/06/22 20:32	76-13-1	
Tetrachloroethene	0.423J	ug/L	0.500	0.300	1	07/06/22 20:32	07/06/22 20:32	127-18-4	J
Tetrahydrofuran	<0.929	ug/L	5.00	0.929	1	07/06/22 20:32	07/06/22 20:32	109-99-9	
Toluene	<0.278	ug/L	0.500	0.278	1	07/06/22 20:32	07/06/22 20:32	108-88-3	
1,1,1-Trichloroethane	<0.149	ug/L	0.500	0.149	1	07/09/22 15:29	07/09/22 15:29	71-55-6	H3
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/06/22 20:32	07/06/22 20:32	79-00-5	
Trichloroethene	0.199J	ug/L	0.500	0.190	1	07/06/22 20:32	07/06/22 20:32	79-01-6	J
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/06/22 20:32	07/06/22 20:32	75-69-4	
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/06/22 20:32	07/06/22 20:32	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/06/22 20:32	07/06/22 20:32	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/06/22 20:32	07/06/22 20:32	108-05-4	
Vinyl chloride	<0.234	ug/L	0.500	0.234	1	07/06/22 20:32	07/06/22 20:32	75-01-4	
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/06/22 20:32	07/06/22 20:32	1330-20-7	
1,4-Dioxane (p-Dioxane)	<2.83	ug/L	100	2.83	1	07/06/22 20:32	07/06/22 20:32	123-91-1	
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/06/22 20:32	07/06/22 20:32	67-63-0	
Surrogates									
Toluene-d8 (S)	102	%	80.0-120		1	07/06/22 20:32	07/06/22 20:32	2037-26-5	
Toluene-d8 (S)	102	%	80.0-120		1	07/09/22 15:29	07/09/22 15:29	2037-26-5	
4-Bromofluorobenzene (S)	90.1	%	77.0-126		1	07/06/22 20:32	07/06/22 20:32	460-00-4	
4-Bromofluorobenzene (S)	97.6	%	77.0-126		1	07/09/22 15:29	07/09/22 15:29	460-00-4	
1,2-Dichloroethane-d4 (S)	116	%	70.0-130		1	07/06/22 20:32	07/06/22 20:32	17060-07-0	
1,2-Dichloroethane-d4 (S)	108	%	70.0-130		1	07/09/22 15:29	07/09/22 15:29	17060-07-0	
353.2 Nitrate + Nitrite									
Analytical Method: EPA 353.2									
Pace Analytical Services - Minneapolis									
Nitrogen, NO2 plus NO3	6.2	mg/L	0.50	0.16	5		07/06/22 11:39		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Sample Project No.: 10614797

Sample: Vet Well **Lab ID: 10614797024** Collected: 06/22/22 10:30 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/06/22 20:53	07/06/22 20:53	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/06/22 20:53	07/06/22 20:53	107-13-1	
Benzene	<0.0941	ug/L	0.500	0.0941	1	07/06/22 20:53	07/06/22 20:53	71-43-2	
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/06/22 20:53	07/06/22 20:53	108-86-1	L0
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/06/22 20:53	07/06/22 20:53	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/06/22 20:53	07/06/22 20:53	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/06/22 20:53	07/06/22 20:53	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/06/22 20:53	07/06/22 20:53	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/06/22 20:53	07/06/22 20:53	75-15-0	
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/06/22 20:53	07/06/22 20:53	56-23-5	
Chlorobenzene	<0.117	ug/L	0.500	0.117	1	07/06/22 20:53	07/06/22 20:53	108-90-7	
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/06/22 20:53	07/06/22 20:53	124-48-1	
Chloroethane	<0.192	ug/L	2.50	0.192	1	07/06/22 20:53	07/06/22 20:53	75-00-3	
Chloroform	<0.111	ug/L	0.500	0.111	1	07/06/22 20:53	07/06/22 20:53	67-66-3	
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/06/22 20:53	07/06/22 20:53	74-87-3	
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/06/22 20:53	07/06/22 20:53	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/06/22 20:53	07/06/22 20:53	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/06/22 20:53	07/06/22 20:53	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/06/22 20:53	07/06/22 20:53	74-95-3	
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/06/22 20:53	07/06/22 20:53	95-50-1	
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/06/22 20:53	07/06/22 20:53	541-73-1	
1,4-Dichlorobenzene	<0.120	ug/L	0.500	0.120	1	07/06/22 20:53	07/06/22 20:53	106-46-7	
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/06/22 20:53	07/06/22 20:53	75-71-8	
1,1-Dichloroethane	<0.100	ug/L	0.500	0.100	1	07/06/22 20:53	07/06/22 20:53	75-34-3	
1,2-Dichloroethane	<0.0819	ug/L	0.500	0.0819	1	07/06/22 20:53	07/06/22 20:53	107-06-2	
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/09/22 15:49	07/09/22 15:49	75-35-4	H3
cis-1,2-Dichloroethene	<0.126	ug/L	0.500	0.126	1	07/06/22 20:53	07/06/22 20:53	156-59-2	
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/06/22 20:53	07/06/22 20:53	156-60-5	
1,2-Dichloropropane	<0.149	ug/L	0.500	0.149	1	07/06/22 20:53	07/06/22 20:53	78-87-5	
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/06/22 20:53	07/06/22 20:53	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/06/22 20:53	07/06/22 20:53	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/06/22 20:53	07/06/22 20:53	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/06/22 20:53	07/06/22 20:53	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/06/22 20:53	07/06/22 20:53	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/06/22 20:53	07/06/22 20:53	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/06/22 20:53	07/06/22 20:53	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/06/22 20:53	07/06/22 20:53	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/06/22 20:53	07/06/22 20:53	78-93-3	
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/06/22 20:53	07/06/22 20:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/06/22 20:53	07/06/22 20:53	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/06/22 20:53	07/06/22 20:53	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/06/22 20:53	07/06/22 20:53	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/06/22 20:53	07/06/22 20:53	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/06/22 20:53	07/06/22 20:53	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/06/22 20:53	07/06/22 20:53	79-34-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: Vet Well **Lab ID: 10614797024** Collected: 06/22/22 10:30 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/06/22 20:53	07/06/22 20:53	76-13-1	
Tetrachloroethene	<0.300	ug/L	0.500	0.300	1	07/06/22 20:53	07/06/22 20:53	127-18-4	
Tetrahydrofuran	<0.929	ug/L	5.00	0.929	1	07/06/22 20:53	07/06/22 20:53	109-99-9	
Toluene	<0.278	ug/L	0.500	0.278	1	07/06/22 20:53	07/06/22 20:53	108-88-3	
1,1,1-Trichloroethane	<0.149	ug/L	0.500	0.149	1	07/09/22 15:49	07/09/22 15:49	71-55-6	H3
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/06/22 20:53	07/06/22 20:53	79-00-5	
Trichloroethene	<0.190	ug/L	0.500	0.190	1	07/06/22 20:53	07/06/22 20:53	79-01-6	
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/06/22 20:53	07/06/22 20:53	75-69-4	
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/06/22 20:53	07/06/22 20:53	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/06/22 20:53	07/06/22 20:53	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/06/22 20:53	07/06/22 20:53	108-05-4	
Vinyl chloride	<0.234	ug/L	0.500	0.234	1	07/06/22 20:53	07/06/22 20:53	75-01-4	
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/06/22 20:53	07/06/22 20:53	1330-20-7	
1,4-Dioxane (p-Dioxane)	<2.83	ug/L	100	2.83	1	07/06/22 20:53	07/06/22 20:53	123-91-1	
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/06/22 20:53	07/06/22 20:53	67-63-0	
Surrogates									
Toluene-d8 (S)	98.9	%	80.0-120		1	07/06/22 20:53	07/06/22 20:53	2037-26-5	
Toluene-d8 (S)	115	%	80.0-120		1	07/09/22 15:49	07/09/22 15:49	2037-26-5	
4-Bromofluorobenzene (S)	87.9	%	77.0-126		1	07/06/22 20:53	07/06/22 20:53	460-00-4	
4-Bromofluorobenzene (S)	106	%	77.0-126		1	07/09/22 15:49	07/09/22 15:49	460-00-4	
1,2-Dichloroethane-d4 (S)	113	%	70.0-130		1	07/06/22 20:53	07/06/22 20:53	17060-07-0	
1,2-Dichloroethane-d4 (S)	107	%	70.0-130		1	07/09/22 15:49	07/09/22 15:49	17060-07-0	

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Sample Project No.: 10614797

Sample: DUP-1 Lab ID: 10614797025 Collected: 06/21/22 13:45 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/05/22 20:15	07/05/22 20:15	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/05/22 20:15	07/05/22 20:15	107-13-1	
Benzene	<0.0941	ug/L	0.500	0.0941	1	07/05/22 20:15	07/05/22 20:15	71-43-2	
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/05/22 20:15	07/05/22 20:15	108-86-1	
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/05/22 20:15	07/05/22 20:15	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/05/22 20:15	07/05/22 20:15	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/05/22 20:15	07/05/22 20:15	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/05/22 20:15	07/05/22 20:15	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/05/22 20:15	07/05/22 20:15	75-15-0	
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/05/22 20:15	07/05/22 20:15	56-23-5	
Chlorobenzene	<0.117	ug/L	0.500	0.117	1	07/05/22 20:15	07/05/22 20:15	108-90-7	
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/05/22 20:15	07/05/22 20:15	124-48-1	
Chloroethane	<0.192	ug/L	2.50	0.192	1	07/05/22 20:15	07/05/22 20:15	75-00-3	
Chloroform	<0.111	ug/L	0.500	0.111	1	07/05/22 20:15	07/05/22 20:15	67-66-3	L0
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/05/22 20:15	07/05/22 20:15	74-87-3	R1
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/05/22 20:15	07/05/22 20:15	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/05/22 20:15	07/05/22 20:15	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/05/22 20:15	07/05/22 20:15	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/05/22 20:15	07/05/22 20:15	74-95-3	
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/05/22 20:15	07/05/22 20:15	95-50-1	
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/05/22 20:15	07/05/22 20:15	541-73-1	
1,4-Dichlorobenzene	<0.120	ug/L	0.500	0.120	1	07/05/22 20:15	07/05/22 20:15	106-46-7	
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/05/22 20:15	07/05/22 20:15	75-71-8	
1,1-Dichloroethane	0.441J	ug/L	0.500	0.100	1	07/05/22 20:15	07/05/22 20:15	75-34-3	J
1,2-Dichloroethane	<0.0819	ug/L	0.500	0.0819	1	07/05/22 20:15	07/05/22 20:15	107-06-2	
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/07/22 03:38	07/07/22 03:38	75-35-4	H3
cis-1,2-Dichloroethene	0.534	ug/L	0.500	0.126	1	07/05/22 20:15	07/05/22 20:15	156-59-2	
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/05/22 20:15	07/05/22 20:15	156-60-5	
1,2-Dichloropropane	<0.149	ug/L	0.500	0.149	1	07/05/22 20:15	07/05/22 20:15	78-87-5	
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/05/22 20:15	07/05/22 20:15	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/05/22 20:15	07/05/22 20:15	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/05/22 20:15	07/05/22 20:15	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/05/22 20:15	07/05/22 20:15	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/05/22 20:15	07/05/22 20:15	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/05/22 20:15	07/05/22 20:15	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/05/22 20:15	07/05/22 20:15	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/05/22 20:15	07/05/22 20:15	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/05/22 20:15	07/05/22 20:15	78-93-3	
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/05/22 20:15	07/05/22 20:15	75-09-2	L0
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/05/22 20:15	07/05/22 20:15	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/05/22 20:15	07/05/22 20:15	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/05/22 20:15	07/05/22 20:15	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/05/22 20:15	07/05/22 20:15	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/05/22 20:15	07/05/22 20:15	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/05/22 20:15	07/05/22 20:15	79-34-5	

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: DUP-1 **Lab ID: 10614797025** Collected: 06/21/22 13:45 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/05/22 20:15	07/05/22 20:15	76-13-1	
Tetrachloroethene	0.564	ug/L	0.500	0.300	1	07/05/22 20:15	07/05/22 20:15	127-18-4	
Tetrahydrofuran	<0.929	ug/L	5.00	0.929	1	07/05/22 20:15	07/05/22 20:15	109-99-9	
Toluene	<0.278	ug/L	0.500	0.278	1	07/05/22 20:15	07/05/22 20:15	108-88-3	
1,1,1-Trichloroethane	1.43	ug/L	0.500	0.149	1	07/05/22 20:15	07/05/22 20:15	71-55-6	
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/05/22 20:15	07/05/22 20:15	79-00-5	
Trichloroethene	0.481J	ug/L	0.500	0.190	1	07/05/22 20:15	07/05/22 20:15	79-01-6	J
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/05/22 20:15	07/05/22 20:15	75-69-4	LO
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/05/22 20:15	07/05/22 20:15	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/05/22 20:15	07/05/22 20:15	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/05/22 20:15	07/05/22 20:15	108-05-4	
Vinyl chloride	<0.234	ug/L	0.500	0.234	1	07/05/22 20:15	07/05/22 20:15	75-01-4	
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/05/22 20:15	07/05/22 20:15	1330-20-7	
1,4-Dioxane (p-Dioxane)	<2.83	ug/L	100	2.83	1	07/05/22 20:15	07/05/22 20:15	123-91-1	
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/05/22 20:15	07/05/22 20:15	67-63-0	
Surrogates									
Toluene-d8 (S)	106	%	80.0-120		1	07/05/22 20:15	07/05/22 20:15	2037-26-5	
Toluene-d8 (S)	104	%	80.0-120		1	07/07/22 03:38	07/07/22 03:38	2037-26-5	
4-Bromofluorobenzene (S)	106	%	77.0-126		1	07/05/22 20:15	07/05/22 20:15	460-00-4	
4-Bromofluorobenzene (S)	95.4	%	77.0-126		1	07/07/22 03:38	07/07/22 03:38	460-00-4	
1,2-Dichloroethane-d4 (S)	112	%	70.0-130		1	07/05/22 20:15	07/05/22 20:15	17060-07-0	
1,2-Dichloroethane-d4 (S)	95.5	%	70.0-130		1	07/07/22 03:38	07/07/22 03:38	17060-07-0	
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Minneapolis									
Chloride	27.5	mg/L	1.2	0.39	1		07/11/22 12:01	16887-00-6	
Sulfate	12.5	mg/L	1.2	0.43	1		07/11/22 12:01	14808-79-8	
353.2 Nitrate + Nitrite									
Analytical Method: EPA 353.2									
Pace Analytical Services - Minneapolis									
Nitrogen, NO2 plus NO3	1.6	mg/L	0.10	0.031	1		07/06/22 11:34		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Sample Project No.: 10614797

Sample: DUP-2 **Lab ID: 10614797026** Collected: 06/21/22 15:00 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/05/22 20:34	07/05/22 20:34	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/05/22 20:34	07/05/22 20:34	107-13-1	
Benzene	0.128J	ug/L	0.500	0.0941	1	07/05/22 20:34	07/05/22 20:34	71-43-2	J
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/05/22 20:34	07/05/22 20:34	108-86-1	
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/05/22 20:34	07/05/22 20:34	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/05/22 20:34	07/05/22 20:34	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/05/22 20:34	07/05/22 20:34	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/05/22 20:34	07/05/22 20:34	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/05/22 20:34	07/05/22 20:34	75-15-0	
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/05/22 20:34	07/05/22 20:34	56-23-5	
Chlorobenzene	<0.117	ug/L	0.500	0.117	1	07/05/22 20:34	07/05/22 20:34	108-90-7	
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/05/22 20:34	07/05/22 20:34	124-48-1	
Chloroethane	0.674J	ug/L	2.50	0.192	1	07/05/22 20:34	07/05/22 20:34	75-00-3	J
Chloroform	<0.111	ug/L	0.500	0.111	1	07/05/22 20:34	07/05/22 20:34	67-66-3	L0
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/05/22 20:34	07/05/22 20:34	74-87-3	R1
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/05/22 20:34	07/05/22 20:34	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/05/22 20:34	07/05/22 20:34	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/05/22 20:34	07/05/22 20:34	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/05/22 20:34	07/05/22 20:34	74-95-3	
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/05/22 20:34	07/05/22 20:34	95-50-1	
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/05/22 20:34	07/05/22 20:34	541-73-1	
1,4-Dichlorobenzene	<0.120	ug/L	0.500	0.120	1	07/05/22 20:34	07/05/22 20:34	106-46-7	
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/05/22 20:34	07/05/22 20:34	75-71-8	
1,1-Dichloroethane	1.22	ug/L	0.500	0.100	1	07/05/22 20:34	07/05/22 20:34	75-34-3	
1,2-Dichloroethane	<0.0819	ug/L	0.500	0.0819	1	07/05/22 20:34	07/05/22 20:34	107-06-2	
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/07/22 03:59	07/07/22 03:59	75-35-4	H3
cis-1,2-Dichloroethene	1.79	ug/L	0.500	0.126	1	07/05/22 20:34	07/05/22 20:34	156-59-2	
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/05/22 20:34	07/05/22 20:34	156-60-5	
1,2-Dichloropropane	<0.149	ug/L	0.500	0.149	1	07/05/22 20:34	07/05/22 20:34	78-87-5	
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/05/22 20:34	07/05/22 20:34	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/05/22 20:34	07/05/22 20:34	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/05/22 20:34	07/05/22 20:34	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/05/22 20:34	07/05/22 20:34	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/05/22 20:34	07/05/22 20:34	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/05/22 20:34	07/05/22 20:34	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/05/22 20:34	07/05/22 20:34	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/05/22 20:34	07/05/22 20:34	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/05/22 20:34	07/05/22 20:34	78-93-3	
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/05/22 20:34	07/05/22 20:34	75-09-2	L0
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/05/22 20:34	07/05/22 20:34	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/05/22 20:34	07/05/22 20:34	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/05/22 20:34	07/05/22 20:34	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/05/22 20:34	07/05/22 20:34	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/05/22 20:34	07/05/22 20:34	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/05/22 20:34	07/05/22 20:34	79-34-5	

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: DUP-2 **Lab ID: 10614797026** Collected: 06/21/22 15:00 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/05/22 20:34	07/05/22 20:34	76-13-1	
Tetrachloroethene	<0.300	ug/L	0.500	0.300	1	07/05/22 20:34	07/05/22 20:34	127-18-4	
Tetrahydrofuran	<0.929	ug/L	5.00	0.929	1	07/05/22 20:34	07/05/22 20:34	109-99-9	
Toluene	<0.278	ug/L	0.500	0.278	1	07/05/22 20:34	07/05/22 20:34	108-88-3	
1,1,1-Trichloroethane	1.28	ug/L	0.500	0.149	1	07/05/22 20:34	07/05/22 20:34	71-55-6	
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/05/22 20:34	07/05/22 20:34	79-00-5	
Trichloroethene	0.397J	ug/L	0.500	0.190	1	07/05/22 20:34	07/05/22 20:34	79-01-6	J
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/05/22 20:34	07/05/22 20:34	75-69-4	LO
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/05/22 20:34	07/05/22 20:34	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/05/22 20:34	07/05/22 20:34	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/05/22 20:34	07/05/22 20:34	108-05-4	
Vinyl chloride	0.625	ug/L	0.500	0.234	1	07/05/22 20:34	07/05/22 20:34	75-01-4	
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/05/22 20:34	07/05/22 20:34	1330-20-7	
1,4-Dioxane (p-Dioxane)	<2.83	ug/L	100	2.83	1	07/05/22 20:34	07/05/22 20:34	123-91-1	
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/05/22 20:34	07/05/22 20:34	67-63-0	
Surrogates									
Toluene-d8 (S)	103	%	80.0-120		1	07/05/22 20:34	07/05/22 20:34	2037-26-5	
Toluene-d8 (S)	105	%	80.0-120		1	07/07/22 03:59	07/07/22 03:59	2037-26-5	
4-Bromofluorobenzene (S)	99.9	%	77.0-126		1	07/05/22 20:34	07/05/22 20:34	460-00-4	
4-Bromofluorobenzene (S)	94.9	%	77.0-126		1	07/07/22 03:59	07/07/22 03:59	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70.0-130		1	07/05/22 20:34	07/05/22 20:34	17060-07-0	
1,2-Dichloroethane-d4 (S)	97.4	%	70.0-130		1	07/07/22 03:59	07/07/22 03:59	17060-07-0	
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Minneapolis									
Chloride	24.7	mg/L	1.2	0.39	1		07/11/22 12:15	16887-00-6	
Sulfate	15.3	mg/L	1.2	0.43	1		07/11/22 12:15	14808-79-8	
353.2 Nitrate + Nitrite									
Analytical Method: EPA 353.2									
Pace Analytical Services - Minneapolis									
Nitrogen, NO2 plus NO3	0.82	mg/L	0.10	0.031	1		07/06/22 11:35		

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Sample Project No.: 10614797

Sample: DUP-3 **Lab ID: 10614797027** Collected: 06/22/22 14:15 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/06/22 21:13	07/06/22 21:13	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/06/22 21:13	07/06/22 21:13	107-13-1	
Benzene	0.389J	ug/L	0.500	0.0941	1	07/06/22 21:13	07/06/22 21:13	71-43-2	J
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/06/22 21:13	07/06/22 21:13	108-86-1	L0
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/06/22 21:13	07/06/22 21:13	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/06/22 21:13	07/06/22 21:13	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/06/22 21:13	07/06/22 21:13	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/06/22 21:13	07/06/22 21:13	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/06/22 21:13	07/06/22 21:13	75-15-0	
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/06/22 21:13	07/06/22 21:13	56-23-5	
Chlorobenzene	0.215J	ug/L	0.500	0.117	1	07/06/22 21:13	07/06/22 21:13	108-90-7	J
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/06/22 21:13	07/06/22 21:13	124-48-1	
Chloroethane	<0.192	ug/L	2.50	0.192	1	07/06/22 21:13	07/06/22 21:13	75-00-3	
Chloroform	<0.111	ug/L	0.500	0.111	1	07/06/22 21:13	07/06/22 21:13	67-66-3	
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/06/22 21:13	07/06/22 21:13	74-87-3	
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/06/22 21:13	07/06/22 21:13	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/06/22 21:13	07/06/22 21:13	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/06/22 21:13	07/06/22 21:13	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/06/22 21:13	07/06/22 21:13	74-95-3	
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/06/22 21:13	07/06/22 21:13	95-50-1	
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/06/22 21:13	07/06/22 21:13	541-73-1	
1,4-Dichlorobenzene	0.440J	ug/L	0.500	0.120	1	07/06/22 21:13	07/06/22 21:13	106-46-7	J
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/06/22 21:13	07/06/22 21:13	75-71-8	
1,1-Dichloroethane	0.886	ug/L	0.500	0.100	1	07/06/22 21:13	07/06/22 21:13	75-34-3	
1,2-Dichloroethane	<0.0819	ug/L	0.500	0.0819	1	07/06/22 21:13	07/06/22 21:13	107-06-2	
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/09/22 16:09	07/09/22 16:09	75-35-4	H3
cis-1,2-Dichloroethene	3.09	ug/L	0.500	0.126	1	07/06/22 21:13	07/06/22 21:13	156-59-2	
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/06/22 21:13	07/06/22 21:13	156-60-5	
1,2-Dichloropropane	0.154J	ug/L	0.500	0.149	1	07/06/22 21:13	07/06/22 21:13	78-87-5	J
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/06/22 21:13	07/06/22 21:13	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/06/22 21:13	07/06/22 21:13	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/06/22 21:13	07/06/22 21:13	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/06/22 21:13	07/06/22 21:13	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/06/22 21:13	07/06/22 21:13	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/06/22 21:13	07/06/22 21:13	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/06/22 21:13	07/06/22 21:13	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/06/22 21:13	07/06/22 21:13	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/06/22 21:13	07/06/22 21:13	78-93-3	
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/06/22 21:13	07/06/22 21:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/06/22 21:13	07/06/22 21:13	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/06/22 21:13	07/06/22 21:13	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/06/22 21:13	07/06/22 21:13	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/06/22 21:13	07/06/22 21:13	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/06/22 21:13	07/06/22 21:13	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/06/22 21:13	07/06/22 21:13	79-34-5	

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: DUP-3 **Lab ID: 10614797027** Collected: 06/22/22 14:15 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/06/22 21:13	07/06/22 21:13	76-13-1	
Tetrachloroethene	<0.300	ug/L	0.500	0.300	1	07/06/22 21:13	07/06/22 21:13	127-18-4	
Tetrahydrofuran	1.37J	ug/L	5.00	0.929	1	07/06/22 21:13	07/06/22 21:13	109-99-9	J
Toluene	<0.278	ug/L	0.500	0.278	1	07/06/22 21:13	07/06/22 21:13	108-88-3	
1,1,1-Trichloroethane	<0.149	ug/L	0.500	0.149	1	07/09/22 16:09	07/09/22 16:09	71-55-6	H3
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/06/22 21:13	07/06/22 21:13	79-00-5	
Trichloroethene	0.359J	ug/L	0.500	0.190	1	07/06/22 21:13	07/06/22 21:13	79-01-6	J
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/06/22 21:13	07/06/22 21:13	75-69-4	
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/06/22 21:13	07/06/22 21:13	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/06/22 21:13	07/06/22 21:13	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/06/22 21:13	07/06/22 21:13	108-05-4	
Vinyl chloride	3.20	ug/L	0.500	0.234	1	07/06/22 21:13	07/06/22 21:13	75-01-4	
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/06/22 21:13	07/06/22 21:13	1330-20-7	
1,4-Dioxane (p-Dioxane)	<2.83	ug/L	100	2.83	1	07/06/22 21:13	07/06/22 21:13	123-91-1	
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/06/22 21:13	07/06/22 21:13	67-63-0	
Surrogates									
Toluene-d8 (S)	98.3	%	80.0-120		1	07/06/22 21:13	07/06/22 21:13	2037-26-5	
Toluene-d8 (S)	103	%	80.0-120		1	07/09/22 16:09	07/09/22 16:09	2037-26-5	
4-Bromofluorobenzene (S)	81.2	%	77.0-126		1	07/06/22 21:13	07/06/22 21:13	460-00-4	
4-Bromofluorobenzene (S)	87.5	%	77.0-126		1	07/09/22 16:09	07/09/22 16:09	460-00-4	
1,2-Dichloroethane-d4 (S)	116	%	70.0-130		1	07/06/22 21:13	07/06/22 21:13	17060-07-0	
1,2-Dichloroethane-d4 (S)	104	%	70.0-130		1	07/09/22 16:09	07/09/22 16:09	17060-07-0	
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Minneapolis									
Chloride	35.5	mg/L	1.2	0.39	1		07/11/22 12:29	16887-00-6	
Sulfate	26.2	mg/L	1.2	0.43	1		07/11/22 12:29	14808-79-8	
353.2 Nitrate + Nitrite									
Analytical Method: EPA 353.2									
Pace Analytical Services - Minneapolis									
Nitrogen, NO2 plus NO3	<0.031	mg/L	0.10	0.031	1		07/06/22 11:36		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Sample Project No.: 10614797

Sample: Trip Blank **Lab ID: 10614797028** Collected: 06/21/22 00:00 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
Acetone	<11.3	ug/L	25.0	11.3	1	07/05/22 21:50	07/05/22 21:50	67-64-1	
Acrylonitrile	<0.671	ug/L	5.00	0.671	1	07/05/22 21:50	07/05/22 21:50	107-13-1	
Benzene	<0.0941	ug/L	0.500	0.0941	1	07/05/22 21:50	07/05/22 21:50	71-43-2	
Bromobenzene	<0.118	ug/L	0.500	0.118	1	07/05/22 21:50	07/05/22 21:50	108-86-1	
Bromodichloromethane	<0.136	ug/L	0.500	0.136	1	07/05/22 21:50	07/05/22 21:50	75-27-4	
Bromochloromethane	<0.128	ug/L	0.500	0.128	1	07/05/22 21:50	07/05/22 21:50	74-97-5	
Bromoform	<0.129	ug/L	0.500	0.129	1	07/05/22 21:50	07/05/22 21:50	75-25-2	
Bromomethane	<0.605	ug/L	2.50	0.605	1	07/05/22 21:50	07/05/22 21:50	74-83-9	
Carbon disulfide	<0.0962	ug/L	0.500	0.0962	1	07/05/22 21:50	07/05/22 21:50	75-15-0	
Carbon tetrachloride	<0.128	ug/L	0.500	0.128	1	07/05/22 21:50	07/05/22 21:50	56-23-5	
Chlorobenzene	<0.117	ug/L	0.500	0.117	1	07/05/22 21:50	07/05/22 21:50	108-90-7	
Dibromochloromethane	<0.140	ug/L	0.500	0.140	1	07/05/22 21:50	07/05/22 21:50	124-48-1	
Chloroethane	<0.192	ug/L	2.50	0.192	1	07/05/22 21:50	07/05/22 21:50	75-00-3	
Chloroform	<0.111	ug/L	0.500	0.111	1	07/05/22 21:50	07/05/22 21:50	67-66-3	L0
Chloromethane	<0.960	ug/L	1.25	0.960	1	07/05/22 21:50	07/05/22 21:50	74-87-3	R1
Cyclohexane	<0.188	ug/L	1.00	0.188	1	07/05/22 21:50	07/05/22 21:50	110-82-7	
1,2-Dibromo-3-chloropropane	<0.276	ug/L	2.50	0.276	1	07/05/22 21:50	07/05/22 21:50	96-12-8	
1,2-Dibromoethane (EDB)	<0.126	ug/L	0.500	0.126	1	07/05/22 21:50	07/05/22 21:50	106-93-4	
Dibromomethane	<0.122	ug/L	0.500	0.122	1	07/05/22 21:50	07/05/22 21:50	74-95-3	
1,2-Dichlorobenzene	<0.107	ug/L	0.500	0.107	1	07/05/22 21:50	07/05/22 21:50	95-50-1	
1,3-Dichlorobenzene	<0.299	ug/L	0.500	0.299	1	07/05/22 21:50	07/05/22 21:50	541-73-1	
1,4-Dichlorobenzene	<0.120	ug/L	0.500	0.120	1	07/05/22 21:50	07/05/22 21:50	106-46-7	
Dichlorodifluoromethane	<0.374	ug/L	2.50	0.374	1	07/05/22 21:50	07/05/22 21:50	75-71-8	
1,1-Dichloroethane	<0.100	ug/L	0.500	0.100	1	07/05/22 21:50	07/05/22 21:50	75-34-3	
1,2-Dichloroethane	<0.0819	ug/L	0.500	0.0819	1	07/05/22 21:50	07/05/22 21:50	107-06-2	
1,1-Dichloroethene	<0.188	ug/L	0.500	0.188	1	07/07/22 04:20	07/07/22 04:20	75-35-4	H3
cis-1,2-Dichloroethene	<0.126	ug/L	0.500	0.126	1	07/05/22 21:50	07/05/22 21:50	156-59-2	
trans-1,2-Dichloroethene	<0.149	ug/L	0.500	0.149	1	07/05/22 21:50	07/05/22 21:50	156-60-5	
1,2-Dichloropropane	<0.149	ug/L	0.500	0.149	1	07/05/22 21:50	07/05/22 21:50	78-87-5	
cis-1,3-Dichloropropene	<0.111	ug/L	0.500	0.111	1	07/05/22 21:50	07/05/22 21:50	10061-01-5	
trans-1,3-Dichloropropene	<0.118	ug/L	0.500	0.118	1	07/05/22 21:50	07/05/22 21:50	10061-02-6	
trans-1,4-Dichloro-2-butene	<0.467	ug/L	5.00	0.467	1	07/05/22 21:50	07/05/22 21:50	110-57-6	
Ethylbenzene	<0.137	ug/L	0.500	0.137	1	07/05/22 21:50	07/05/22 21:50	100-41-4	
2-Hexanone	<0.787	ug/L	5.00	0.787	1	07/05/22 21:50	07/05/22 21:50	591-78-6	
n-Hexane	<0.749	ug/L	5.00	0.749	1	07/05/22 21:50	07/05/22 21:50	110-54-3	
Iodomethane	<0.554	ug/L	5.00	0.554	1	07/05/22 21:50	07/05/22 21:50	74-88-4	
Isopropylbenzene (Cumene)	<0.105	ug/L	0.500	0.105	1	07/05/22 21:50	07/05/22 21:50	98-82-8	
2-Butanone (MEK)	<1.19	ug/L	5.00	1.19	1	07/05/22 21:50	07/05/22 21:50	78-93-3	
Methylene Chloride	<0.430	ug/L	2.50	0.430	1	07/05/22 21:50	07/05/22 21:50	75-09-2	L0
4-Methyl-2-pentanone (MIBK)	<0.478	ug/L	5.00	0.478	1	07/05/22 21:50	07/05/22 21:50	108-10-1	
Methyl-tert-butyl ether	<0.101	ug/L	0.500	0.101	1	07/05/22 21:50	07/05/22 21:50	1634-04-4	
n-Propylbenzene	<0.0993	ug/L	0.500	0.0993	1	07/05/22 21:50	07/05/22 21:50	103-65-1	L0
Styrene	<0.118	ug/L	0.500	0.118	1	07/05/22 21:50	07/05/22 21:50	100-42-5	
1,1,1,2-Tetrachloroethane	<0.147	ug/L	0.500	0.147	1	07/05/22 21:50	07/05/22 21:50	630-20-6	
1,1,2,2-Tetrachloroethane	<0.133	ug/L	0.500	0.133	1	07/05/22 21:50	07/05/22 21:50	79-34-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Sample: Trip Blank **Lab ID: 10614797028** Collected: 06/21/22 00:00 Received: 06/29/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260B									
Analytical Method: EPA 8260B Preparation Method: 8260B									
Pace National - Mt. Juliet									
1,1,2-Trichlorotrifluoroethane	<0.180	ug/L	0.500	0.180	1	07/05/22 21:50	07/05/22 21:50	76-13-1	
Tetrachloroethene	<0.300	ug/L	0.500	0.300	1	07/05/22 21:50	07/05/22 21:50	127-18-4	
Tetrahydrofuran	<0.929	ug/L	5.00	0.929	1	07/05/22 21:50	07/05/22 21:50	109-99-9	
Toluene	<0.278	ug/L	0.500	0.278	1	07/05/22 21:50	07/05/22 21:50	108-88-3	
1,1,1-Trichloroethane	<0.149	ug/L	0.500	0.149	1	07/07/22 04:20	07/07/22 04:20	71-55-6	H3
1,1,2-Trichloroethane	<0.158	ug/L	0.500	0.158	1	07/05/22 21:50	07/05/22 21:50	79-00-5	
Trichloroethene	<0.190	ug/L	0.500	0.190	1	07/05/22 21:50	07/05/22 21:50	79-01-6	
Trichlorofluoromethane	<0.160	ug/L	2.50	0.160	1	07/05/22 21:50	07/05/22 21:50	75-69-4	L0
1,2,3-Trichloropropane	<0.237	ug/L	2.50	0.237	1	07/05/22 21:50	07/05/22 21:50	96-18-4	
1,2,4-Trimethylbenzene	<0.322	ug/L	0.500	0.322	1	07/05/22 21:50	07/05/22 21:50	95-63-6	
Vinyl acetate	<0.692	ug/L	5.00	0.692	1	07/05/22 21:50	07/05/22 21:50	108-05-4	
Vinyl chloride	<0.234	ug/L	0.500	0.234	1	07/05/22 21:50	07/05/22 21:50	75-01-4	
Xylene (Total)	<0.174	ug/L	1.50	0.174	1	07/05/22 21:50	07/05/22 21:50	1330-20-7	
1,4-Dioxane (p-Dioxane)	<2.83	ug/L	100	2.83	1	07/05/22 21:50	07/05/22 21:50	123-91-1	
2-Propanol	<1.65	ug/L	5.00	1.65	1	07/05/22 21:50	07/05/22 21:50	67-63-0	
Surrogates									
Toluene-d8 (S)	105	%	80.0-120		1	07/05/22 21:50	07/05/22 21:50	2037-26-5	
Toluene-d8 (S)	105	%	80.0-120		1	07/07/22 04:20	07/07/22 04:20	2037-26-5	
4-Bromofluorobenzene (S)	105	%	77.0-126		1	07/05/22 21:50	07/05/22 21:50	460-00-4	
4-Bromofluorobenzene (S)	96.4	%	77.0-126		1	07/07/22 04:20	07/07/22 04:20	460-00-4	
1,2-Dichloroethane-d4 (S)	115	%	70.0-130		1	07/05/22 21:50	07/05/22 21:50	17060-07-0	
1,2-Dichloroethane-d4 (S)	94.4	%	70.0-130		1	07/07/22 04:20	07/07/22 04:20	17060-07-0	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

QC Batch:	1890171	Analysis Method:	EPA 8260B
QC Batch Method:	8260B	Analysis Description:	VOA (GC/MS) 8260B
		Laboratory:	Pace National - Mt. Juliet

Associated Lab Samples: 10614797001, 10614797003, 10614797005, 10614797006, 10614797007, 10614797008, 10614797012, 10614797013, 10614797025, 10614797026, 10614797028

METHOD BLANK: R3811543-4 Matrix: Water

Associated Lab Samples: 10614797001, 10614797003, 10614797005, 10614797006, 10614797007, 10614797008, 10614797012, 10614797013, 10614797025, 10614797026, 10614797028

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Acetone	ug/L	<11.3	25.0	11.3	07/05/22 13:48	
Acrylonitrile	ug/L	<0.671	5.00	0.671	07/05/22 13:48	
Benzene	ug/L	<0.0941	0.500	0.0941	07/05/22 13:48	
Bromobenzene	ug/L	<0.118	0.500	0.118	07/05/22 13:48	
Bromodichloromethane	ug/L	<0.136	0.500	0.136	07/05/22 13:48	
Bromochloromethane	ug/L	<0.128	0.500	0.128	07/05/22 13:48	
Bromoform	ug/L	<0.129	0.500	0.129	07/05/22 13:48	
Bromomethane	ug/L	<0.605	2.50	0.605	07/05/22 13:48	
Carbon disulfide	ug/L	<0.0962	0.500	0.0962	07/05/22 13:48	
Carbon tetrachloride	ug/L	<0.128	0.500	0.128	07/05/22 13:48	
Chlorobenzene	ug/L	<0.117	0.500	0.117	07/05/22 13:48	
Dibromochloromethane	ug/L	<0.140	0.500	0.140	07/05/22 13:48	
Chloroethane	ug/L	<0.192	2.50	0.192	07/05/22 13:48	
Chloroform	ug/L	<0.111	0.500	0.111	07/05/22 13:48	
Chloromethane	ug/L	<0.960	1.25	0.960	07/05/22 13:48	
Cyclohexane	ug/L	<0.188	1.00	0.188	07/05/22 13:48	
1,2-Dibromo-3-chloropropane	ug/L	<0.276	2.50	0.276	07/05/22 13:48	
1,2-Dibromoethane (EDB)	ug/L	<0.126	0.500	0.126	07/05/22 13:48	
Dibromomethane	ug/L	<0.122	0.500	0.122	07/05/22 13:48	
1,2-Dichlorobenzene	ug/L	<0.107	0.500	0.107	07/05/22 13:48	
1,3-Dichlorobenzene	ug/L	<0.299	0.500	0.299	07/05/22 13:48	
1,4-Dichlorobenzene	ug/L	<0.120	0.500	0.120	07/05/22 13:48	
Dichlorodifluoromethane	ug/L	<0.374	2.50	0.374	07/05/22 13:48	
1,1-Dichloroethane	ug/L	<0.100	0.500	0.100	07/05/22 13:48	
1,2-Dichloroethane	ug/L	<0.0819	0.500	0.0819	07/05/22 13:48	
cis-1,2-Dichloroethene	ug/L	<0.126	0.500	0.126	07/05/22 13:48	
trans-1,2-Dichloroethene	ug/L	<0.149	0.500	0.149	07/05/22 13:48	
1,2-Dichloropropane	ug/L	<0.149	0.500	0.149	07/05/22 13:48	
cis-1,3-Dichloropropene	ug/L	<0.111	0.500	0.111	07/05/22 13:48	
trans-1,3-Dichloropropene	ug/L	<0.118	0.500	0.118	07/05/22 13:48	
trans-1,4-Dichloro-2-butene	ug/L	<0.467	5.00	0.467	07/05/22 13:48	
Ethylbenzene	ug/L	<0.137	0.500	0.137	07/05/22 13:48	
2-Hexanone	ug/L	<0.787	5.00	0.787	07/05/22 13:48	
n-Hexane	ug/L	<0.749	5.00	0.749	07/05/22 13:48	
Iodomethane	ug/L	<0.554	5.00	0.554	07/05/22 13:48	
Isopropylbenzene (Cumene)	ug/L	<0.105	0.500	0.105	07/05/22 13:48	
2-Butanone (MEK)	ug/L	<1.19	5.00	1.19	07/05/22 13:48	
Methylene Chloride	ug/L	<0.430	2.50	0.430	07/05/22 13:48	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.478	5.00	0.478	07/05/22 13:48	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

METHOD BLANK: R3811543-4

Matrix: Water

Associated Lab Samples: 10614797001, 10614797003, 10614797005, 10614797006, 10614797007, 10614797008, 10614797012, 10614797013, 10614797025, 10614797026, 10614797028

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methyl-tert-butyl ether	ug/L	<0.101	0.500	0.101	07/05/22 13:48	
n-Propylbenzene	ug/L	<0.0993	0.500	0.0993	07/05/22 13:48	
Styrene	ug/L	<0.118	0.500	0.118	07/05/22 13:48	
1,1,1,2-Tetrachloroethane	ug/L	<0.147	0.500	0.147	07/05/22 13:48	
1,1,2,2-Tetrachloroethane	ug/L	<0.133	0.500	0.133	07/05/22 13:48	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.180	0.500	0.180	07/05/22 13:48	
Tetrachloroethene	ug/L	<0.300	0.500	0.300	07/05/22 13:48	
Tetrahydrofuran	ug/L	<0.929	5.00	0.929	07/05/22 13:48	
Toluene	ug/L	<0.278	0.500	0.278	07/05/22 13:48	
1,1,1-Trichloroethane	ug/L	<0.149	0.500	0.149	07/05/22 13:48	
1,1,2-Trichloroethane	ug/L	<0.158	0.500	0.158	07/05/22 13:48	
Trichloroethene	ug/L	<0.190	0.500	0.190	07/05/22 13:48	
Trichlorofluoromethane	ug/L	<0.160	2.50	0.160	07/05/22 13:48	
1,2,3-Trichloropropane	ug/L	<0.237	2.50	0.237	07/05/22 13:48	
1,2,4-Trimethylbenzene	ug/L	<0.322	0.500	0.322	07/05/22 13:48	
Vinyl acetate	ug/L	<0.692	5.00	0.692	07/05/22 13:48	
Vinyl chloride	ug/L	<0.234	0.500	0.234	07/05/22 13:48	
Xylene (Total)	ug/L	<0.174	1.50	0.174	07/05/22 13:48	
1,4-Dioxane (p-Dioxane)	ug/L	<2.83	100	2.83	07/05/22 13:48	
2-Propanol	ug/L	<1.65	5.00	1.65	07/05/22 13:48	
Toluene-d8 (S)	%	108	80.0-120		07/05/22 13:48	
4-Bromofluorobenzene (S)	%	103	77.0-126		07/05/22 13:48	
1,2-Dichloroethane-d4 (S)	%	108	70.0-130		07/05/22 13:48	

LABORATORY CONTROL SAMPLE & LCSD: R3811543-1

R3811543-2

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Acetone	ug/L	25.0	28.7	33.4	115	134	19.0-160	15.1	27	
Acrylonitrile	ug/L	25.0	21.8	22.6	87.2	90.4	55.0-149	3.60	20	
Benzene	ug/L	5.00	5.09	5.40	102	108	70.0-123	5.91	20	
Bromobenzene	ug/L	5.00	5.78	5.93	116	119	73.0-121	2.56	20	
Bromodichloromethane	ug/L	5.00	5.31	5.78	106	116	75.0-120	8.48	20	
Bromochloromethane	ug/L	5.00	5.17	5.62	103	112	76.0-122	8.34	20	
Bromoform	ug/L	5.00	4.35	4.68	87.0	93.6	68.0-132	7.31	20	
Bromomethane	ug/L	5.00	4.88	5.54	97.6	111	10.0-160	12.7	25	
Carbon disulfide	ug/L	5.00	4.65	5.06	93.0	101	61.0-128	8.44	20	
Carbon tetrachloride	ug/L	5.00	5.31	5.98	106	120	68.0-126	11.9	20	
Chlorobenzene	ug/L	5.00	4.72	4.73	94.4	94.6	80.0-121	0.212	20	
Dibromochloromethane	ug/L	5.00	4.93	5.13	98.6	103	77.0-125	3.98	20	
Chloroethane	ug/L	5.00	4.22	4.67	84.4	93.4	47.0-150	10.1	20	
Chloroform	ug/L	5.00	5.42	6.11	108	122	73.0-120	12.0	20	L0
Chloromethane	ug/L	5.00	4.13	5.66	82.6	113	41.0-142	31.3	20	R1
Cyclohexane	ug/L	5.00	4.94	5.14	98.8	103	71.0-124	3.97	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

LABORATORY CONTROL SAMPLE & LCSD:		R3811543-1		R3811543-2						
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	5.00	4.18	4.71	83.6	94.2	58.0-134	11.9	20	
1,2-Dibromoethane (EDB)	ug/L	5.00	4.80	4.61	96.0	92.2	80.0-122	4.04	20	
Dibromomethane	ug/L	5.00	4.94	5.06	98.8	101	80.0-120	2.40	20	
1,2-Dichlorobenzene	ug/L	5.00	4.82	4.91	96.4	98.2	79.0-121	1.85	20	
1,3-Dichlorobenzene	ug/L	5.00	4.81	5.40	96.2	108	79.0-120	11.6	20	
1,4-Dichlorobenzene	ug/L	5.00	4.88	4.83	97.6	96.6	79.0-120	1.03	20	
Dichlorodifluoromethane	ug/L	5.00	5.36	6.03	107	121	51.0-149	11.8	20	
1,1-Dichloroethane	ug/L	5.00	4.92	5.25	98.4	105	70.0-126	6.49	20	
1,2-Dichloroethane	ug/L	5.00	5.00	5.35	100	107	70.0-128	6.76	20	
cis-1,2-Dichloroethene	ug/L	5.00	5.23	5.67	105	113	73.0-120	8.07	20	
trans-1,2-Dichloroethene	ug/L	5.00	5.42	5.41	108	108	73.0-120	0.185	20	
1,2-Dichloropropane	ug/L	5.00	4.49	4.66	89.8	93.2	77.0-125	3.72	20	
cis-1,3-Dichloropropene	ug/L	5.00	5.24	5.31	105	106	80.0-123	1.33	20	
trans-1,3-Dichloropropene	ug/L	5.00	5.10	5.23	102	105	78.0-124	2.52	20	
trans-1,4-Dichloro-2-butene	ug/L	5.00	5.11	4.66	102	93.2	33.0-144	9.21	20	
Ethylbenzene	ug/L	5.00	4.76	4.93	95.2	98.6	79.0-123	3.51	20	
2-Hexanone	ug/L	25.0	21.9	21.9	87.6	87.6	67.0-149	0.00	20	
n-Hexane	ug/L	5.00	3.85	4.18	77.0	83.6	57.0-133	8.22	20	
Iodomethane	ug/L	25.0	23.6	26.8	94.4	107	33.0-147	12.7	26	
Isopropylbenzene (Cumene)	ug/L	5.00	5.02	5.33	100	107	76.0-127	5.99	20	
2-Butanone (MEK)	ug/L	25.0	22.9	24.4	91.6	97.6	44.0-160	6.34	20	
Methylene Chloride	ug/L	5.00	5.23	6.05	105	121	67.0-120	14.5	20	LO
4-Methyl-2-pentanone (MIBK)	ug/L	25.0	21.8	21.8	87.2	87.2	68.0-142	0.00	20	
Methyl-tert-butyl ether	ug/L	5.00	5.65	6.04	113	121	68.0-125	6.67	20	
n-Propylbenzene	ug/L	5.00	5.85	6.23	117	125	77.0-124	6.29	20	LO
Styrene	ug/L	5.00	4.78	4.96	95.6	99.2	73.0-130	3.70	20	
1,1,1,2-Tetrachloroethane	ug/L	5.00	4.79	5.00	95.8	100	75.0-125	4.29	20	
1,1,2,2-Tetrachloroethane	ug/L	5.00	5.48	5.45	110	109	65.0-130	0.549	20	
1,1,2-Trichlorotrifluoroethane	ug/L	5.00	4.67	5.22	93.4	104	69.0-132	11.1	20	
Tetrachloroethene	ug/L	5.00	5.03	5.15	101	103	72.0-132	2.36	20	
Tetrahydrofuran	ug/L	5.00	4.75	4.92	95.0	98.4	41.0-146	3.52	20	
Toluene	ug/L	5.00	4.75	4.86	95.0	97.2	79.0-120	2.29	20	
1,1,1-Trichloroethane	ug/L	5.00	5.58	6.22	112	124	73.0-124	10.8	20	
1,1,2-Trichloroethane	ug/L	5.00	4.94	4.91	98.8	98.2	80.0-120	0.609	20	
Trichloroethene	ug/L	5.00	4.71	5.39	94.2	108	78.0-124	13.5	20	
Trichlorofluoromethane	ug/L	5.00	2.58	2.65	51.6	53.0	59.0-147	2.68	20	LO
1,2,3-Trichloropropane	ug/L	5.00	5.28	5.38	106	108	73.0-130	1.88	20	
1,2,4-Trimethylbenzene	ug/L	5.00	5.38	5.52	108	110	76.0-121	2.57	20	
Vinyl acetate	ug/L	25.0	20.4	20.8	81.6	83.2	11.0-160	1.94	20	
Vinyl chloride	ug/L	5.00	4.19	4.48	83.8	89.6	67.0-131	6.69	20	
Xylene (Total)	ug/L	15.0	14.3	15.2	95.3	101	79.0-123	6.10	20	
Toluene-d8 (S)	%				104	103	80.0-120			
4-Bromofluorobenzene (S)	%				104	101	77.0-126			
1,2-Dichloroethane-d4 (S)	%				110	113	70.0-130			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

LABORATORY CONTROL SAMPLE: R3811543-3

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	1000	1020	102	13.0-160	
2-Propanol	ug/L	50.0	70.5	141	10.0-160	
Toluene-d8 (S)	%			104	80.0-120	
4-Bromofluorobenzene (S)	%			101	77.0-126	
1,2-Dichloroethane-d4 (S)	%			110	70.0-130	

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QUALITY CONTROL DATA

Project: 114-710326G.400 Bozeman Landfi
Pace Project No.: 10614797

QC Batch:	1890552	Analysis Method:	EPA 8260B
QC Batch Method:	8260B	Analysis Description:	VOA (GC/MS) 8260B
		Laboratory:	Pace National - Mt. Juliet

Associated Lab Samples: 10614797002, 10614797009, 10614797010, 10614797011, 10614797014, 10614797015, 10614797016, 10614797017, 10614797018, 10614797019, 10614797020, 10614797021, 10614797022, 10614797023, 10614797024, 10614797027

METHOD BLANK: R3812676-3 Matrix: Water
Associated Lab Samples: 10614797002, 10614797009, 10614797010, 10614797011, 10614797014, 10614797015, 10614797016, 10614797017, 10614797018, 10614797019, 10614797020, 10614797021, 10614797022, 10614797023, 10614797024, 10614797027

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Acetone	ug/L	<11.3	25.0	11.3	07/06/22 14:16	
Acrylonitrile	ug/L	<0.671	5.00	0.671	07/06/22 14:16	
Benzene	ug/L	<0.0941	0.500	0.0941	07/06/22 14:16	
Bromobenzene	ug/L	<0.118	0.500	0.118	07/06/22 14:16	
Bromodichloromethane	ug/L	<0.136	0.500	0.136	07/06/22 14:16	
Bromochloromethane	ug/L	<0.128	0.500	0.128	07/06/22 14:16	
Bromoform	ug/L	<0.129	0.500	0.129	07/06/22 14:16	
Bromomethane	ug/L	<0.605	2.50	0.605	07/06/22 14:16	
Carbon disulfide	ug/L	<0.0962	0.500	0.0962	07/06/22 14:16	
Carbon tetrachloride	ug/L	<0.128	0.500	0.128	07/06/22 14:16	
Chlorobenzene	ug/L	<0.117	0.500	0.117	07/06/22 14:16	
Dibromochloromethane	ug/L	<0.140	0.500	0.140	07/06/22 14:16	
Chloroethane	ug/L	<0.192	2.50	0.192	07/06/22 14:16	
Chloroform	ug/L	<0.111	0.500	0.111	07/06/22 14:16	
Chloromethane	ug/L	<0.960	1.25	0.960	07/06/22 14:16	
Cyclohexane	ug/L	<0.188	1.00	0.188	07/06/22 14:16	
1,2-Dibromo-3-chloropropane	ug/L	<0.276	2.50	0.276	07/06/22 14:16	
1,2-Dibromoethane (EDB)	ug/L	<0.126	0.500	0.126	07/06/22 14:16	
Dibromomethane	ug/L	<0.122	0.500	0.122	07/06/22 14:16	
1,2-Dichlorobenzene	ug/L	<0.107	0.500	0.107	07/06/22 14:16	
1,3-Dichlorobenzene	ug/L	<0.299	0.500	0.299	07/06/22 14:16	
1,4-Dichlorobenzene	ug/L	<0.120	0.500	0.120	07/06/22 14:16	
Dichlorodifluoromethane	ug/L	<0.374	2.50	0.374	07/06/22 14:16	
1,1-Dichloroethane	ug/L	<0.100	0.500	0.100	07/06/22 14:16	
1,2-Dichloroethane	ug/L	<0.0819	0.500	0.0819	07/06/22 14:16	
cis-1,2-Dichloroethene	ug/L	<0.126	0.500	0.126	07/06/22 14:16	
trans-1,2-Dichloroethene	ug/L	<0.149	0.500	0.149	07/06/22 14:16	
1,2-Dichloropropane	ug/L	<0.149	0.500	0.149	07/06/22 14:16	
cis-1,3-Dichloropropene	ug/L	<0.111	0.500	0.111	07/06/22 14:16	
trans-1,3-Dichloropropene	ug/L	<0.118	0.500	0.118	07/06/22 14:16	
trans-1,4-Dichloro-2-butene	ug/L	<0.467	5.00	0.467	07/06/22 14:16	
Ethylbenzene	ug/L	<0.137	0.500	0.137	07/06/22 14:16	
2-Hexanone	ug/L	<0.787	5.00	0.787	07/06/22 14:16	
n-Hexane	ug/L	<0.749	5.00	0.749	07/06/22 14:16	
Iodomethane	ug/L	<0.554	5.00	0.554	07/06/22 14:16	
Isopropylbenzene (Cumene)	ug/L	<0.105	0.500	0.105	07/06/22 14:16	
2-Butanone (MEK)	ug/L	<1.19	5.00	1.19	07/06/22 14:16	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

METHOD BLANK: R3812676-3

Matrix: Water

Associated Lab Samples: 10614797002, 10614797009, 10614797010, 10614797011, 10614797014, 10614797015, 10614797016, 10614797017, 10614797018, 10614797019, 10614797020, 10614797021, 10614797022, 10614797023, 10614797024, 10614797027

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methylene Chloride	ug/L	<0.430	2.50	0.430	07/06/22 14:16	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.478	5.00	0.478	07/06/22 14:16	
Methyl-tert-butyl ether	ug/L	<0.101	0.500	0.101	07/06/22 14:16	
n-Propylbenzene	ug/L	<0.0993	0.500	0.0993	07/06/22 14:16	
Styrene	ug/L	<0.118	0.500	0.118	07/06/22 14:16	
1,1,1,2-Tetrachloroethane	ug/L	<0.147	0.500	0.147	07/06/22 14:16	
1,1,2,2-Tetrachloroethane	ug/L	<0.133	0.500	0.133	07/06/22 14:16	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.180	0.500	0.180	07/06/22 14:16	
Tetrachloroethene	ug/L	<0.300	0.500	0.300	07/06/22 14:16	
Tetrahydrofuran	ug/L	<0.929	5.00	0.929	07/06/22 14:16	
Toluene	ug/L	<0.278	0.500	0.278	07/06/22 14:16	
1,1,2-Trichloroethane	ug/L	<0.158	0.500	0.158	07/06/22 14:16	
Trichloroethene	ug/L	<0.190	0.500	0.190	07/06/22 14:16	
Trichlorofluoromethane	ug/L	<0.160	2.50	0.160	07/06/22 14:16	
1,2,3-Trichloropropane	ug/L	<0.237	2.50	0.237	07/06/22 14:16	
1,2,4-Trimethylbenzene	ug/L	<0.322	0.500	0.322	07/06/22 14:16	
Vinyl acetate	ug/L	<0.692	5.00	0.692	07/06/22 14:16	
Vinyl chloride	ug/L	<0.234	0.500	0.234	07/06/22 14:16	
Xylene (Total)	ug/L	<0.174	1.50	0.174	07/06/22 14:16	
1,4-Dioxane (p-Dioxane)	ug/L	<2.83	100	2.83	07/06/22 14:16	
2-Propanol	ug/L	<1.65	5.00	1.65	07/06/22 14:16	
Toluene-d8 (S)	%	98.5	80.0-120		07/06/22 14:16	
4-Bromofluorobenzene (S)	%	82.8	77.0-126		07/06/22 14:16	
1,2-Dichloroethane-d4 (S)	%	116	70.0-130		07/06/22 14:16	

LABORATORY CONTROL SAMPLE: R3812676-1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	1000	894	89.4	13.0-160	
2-Propanol	ug/L	50.0	34.5	69.0	10.0-160	
Toluene-d8 (S)	%			96.8	80.0-120	
4-Bromofluorobenzene (S)	%			88.4	77.0-126	
1,2-Dichloroethane-d4 (S)	%			125	70.0-130	

LABORATORY CONTROL SAMPLE: R3812676-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acetone	ug/L	25.0	23.6	94.4	19.0-160	
Acrylonitrile	ug/L	25.0	25.0	100	55.0-149	
Benzene	ug/L	5.00	4.75	95.0	70.0-123	
Bromobenzene	ug/L	5.00	6.65	133	73.0-121 L0	

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QUALITY CONTROL DATA

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

LABORATORY CONTROL SAMPLE: R3812676-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/L	5.00	5.18	104	75.0-120	
Bromochloromethane	ug/L	5.00	5.02	100	76.0-122	
Bromoform	ug/L	5.00	4.86	97.2	68.0-132	
Bromomethane	ug/L	5.00	3.41	68.2	10.0-160	
Carbon disulfide	ug/L	5.00	4.23	84.6	61.0-128	
Carbon tetrachloride	ug/L	5.00	6.02	120	68.0-126	
Chlorobenzene	ug/L	5.00	4.38	87.6	80.0-121	
Dibromochloromethane	ug/L	5.00	4.98	99.6	77.0-125	
Chloroethane	ug/L	5.00	3.27	65.4	47.0-150	
Chloroform	ug/L	5.00	5.29	106	73.0-120	
Chloromethane	ug/L	5.00	4.30	86.0	41.0-142	
Cyclohexane	ug/L	5.00	4.93	98.6	71.0-124	
1,2-Dibromo-3-chloropropane	ug/L	5.00	4.22	84.4	58.0-134	
1,2-Dibromoethane (EDB)	ug/L	5.00	4.72	94.4	80.0-122	
Dibromomethane	ug/L	5.00	4.83	96.6	80.0-120	
1,2-Dichlorobenzene	ug/L	5.00	4.75	95.0	79.0-121	
1,3-Dichlorobenzene	ug/L	5.00	4.59	91.8	79.0-120	
1,4-Dichlorobenzene	ug/L	5.00	4.68	93.6	79.0-120	
Dichlorodifluoromethane	ug/L	5.00	5.50	110	51.0-149	
1,1-Dichloroethane	ug/L	5.00	5.02	100	70.0-126	
1,2-Dichloroethane	ug/L	5.00	5.32	106	70.0-128	
cis-1,2-Dichloroethene	ug/L	5.00	4.94	98.8	73.0-120	
trans-1,2-Dichloroethene	ug/L	5.00	4.56	91.2	73.0-120	
1,2-Dichloropropane	ug/L	5.00	4.83	96.6	77.0-125	
cis-1,3-Dichloropropene	ug/L	5.00	5.09	102	80.0-123	
trans-1,3-Dichloropropene	ug/L	5.00	5.45	109	78.0-124	
trans-1,4-Dichloro-2-butene	ug/L	5.00	3.18	63.6	33.0-144	
Ethylbenzene	ug/L	5.00	4.57	91.4	79.0-123	
2-Hexanone	ug/L	25.0	22.7	90.8	67.0-149	
n-Hexane	ug/L	5.00	4.87	97.4	57.0-133	
Iodomethane	ug/L	25.0	21.7	86.8	33.0-147	
Isopropylbenzene (Cumene)	ug/L	5.00	4.50	90.0	76.0-127	
2-Butanone (MEK)	ug/L	25.0	24.2	96.8	44.0-160	
Methylene Chloride	ug/L	5.00	4.90	98.0	67.0-120	
4-Methyl-2-pentanone (MIBK)	ug/L	25.0	23.4	93.6	68.0-142	
Methyl-tert-butyl ether	ug/L	5.00	5.27	105	68.0-125	
n-Propylbenzene	ug/L	5.00	6.62	132	77.0-124 L0	
Styrene	ug/L	5.00	4.69	93.8	73.0-130	
1,1,1,2-Tetrachloroethane	ug/L	5.00	4.71	94.2	75.0-125	
1,1,2,2-Tetrachloroethane	ug/L	5.00	5.88	118	65.0-130	
1,1,2-Trichlorotrifluoroethane	ug/L	5.00	5.01	100	69.0-132	
Tetrachloroethene	ug/L	5.00	5.05	101	72.0-132	
Tetrahydrofuran	ug/L	5.00	4.59	91.8	41.0-146	
Toluene	ug/L	5.00	4.74	94.8	79.0-120	
1,1,2-Trichloroethane	ug/L	5.00	4.78	95.6	80.0-120	
Trichloroethene	ug/L	5.00	4.38	87.6	78.0-124	
Trichlorofluoromethane	ug/L	5.00	5.24	105	59.0-147	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

LABORATORY CONTROL SAMPLE: R3812676-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,3-Trichloropropane	ug/L	5.00	5.87	117	73.0-130	
1,2,4-Trimethylbenzene	ug/L	5.00	5.27	105	76.0-121	
Vinyl acetate	ug/L	25.0	23.1	92.4	11.0-160	
Vinyl chloride	ug/L	5.00	3.77	75.4	67.0-131	
Xylene (Total)	ug/L	15.0	13.9	92.7	79.0-123	
Toluene-d8 (S)	%			102	80.0-120	
4-Bromofluorobenzene (S)	%			92.6	77.0-126	
1,2-Dichloroethane-d4 (S)	%			116	70.0-130	

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QUALITY CONTROL DATA

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

QC Batch:	1890850	Analysis Method:	EPA 8260B
QC Batch Method:	8260B	Analysis Description:	VOA (GC/MS) 8260B
		Laboratory:	Pace National - Mt. Juliet

Associated Lab Samples: 10614797001, 10614797003, 10614797005, 10614797006, 10614797007, 10614797008, 10614797012, 10614797013, 10614797025, 10614797026, 10614797028

METHOD BLANK: R3811757-2 Matrix: Water

Associated Lab Samples: 10614797001, 10614797003, 10614797005, 10614797006, 10614797007, 10614797008, 10614797012, 10614797013, 10614797025, 10614797026, 10614797028

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1-Dichloroethane	ug/L	<0.100	0.500	0.100	07/07/22 00:23	
1,1-Dichloroethene	ug/L	<0.188	0.500	0.188	07/07/22 00:23	
cis-1,2-Dichloroethene	ug/L	<0.126	0.500	0.126	07/07/22 00:23	
1,1,1-Trichloroethane	ug/L	<0.149	0.500	0.149	07/07/22 00:23	
Trichloroethene	ug/L	<0.190	0.500	0.190	07/07/22 00:23	
Toluene-d8 (S)	%	106	80.0-120		07/07/22 00:23	
4-Bromofluorobenzene (S)	%	97.8	77.0-126		07/07/22 00:23	
1,2-Dichloroethane-d4 (S)	%	93.7	70.0-130		07/07/22 00:23	

LABORATORY CONTROL SAMPLE: R3811757-1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethane	ug/L	5.00	4.45	89.0	70.0-126	
1,1-Dichloroethene	ug/L	5.00	5.00	100	71.0-124	
cis-1,2-Dichloroethene	ug/L	5.00	4.64	92.8	73.0-120	
1,1,1-Trichloroethane	ug/L	5.00	4.98	99.6	73.0-124	
Trichloroethene	ug/L	5.00	4.81	96.2	78.0-124	
Toluene-d8 (S)	%			106	80.0-120	
4-Bromofluorobenzene (S)	%			97.2	77.0-126	
1,2-Dichloroethane-d4 (S)	%			94.7	70.0-130	

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QUALITY CONTROL DATA

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

QC Batch: 1891832

Analysis Method: EPA 8260B

QC Batch Method: 8260B

Analysis Description: VOA (GC/MS) 8260B

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 10614797004

METHOD BLANK: R3812602-3

Matrix: Water

Associated Lab Samples: 10614797004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Acetone	ug/L	<11.3	25.0	11.3	07/08/22 10:29	
Acrylonitrile	ug/L	<0.671	5.00	0.671	07/08/22 10:29	
Benzene	ug/L	<0.0941	0.500	0.0941	07/08/22 10:29	
Bromobenzene	ug/L	<0.118	0.500	0.118	07/08/22 10:29	
Bromodichloromethane	ug/L	<0.136	0.500	0.136	07/08/22 10:29	
Bromochloromethane	ug/L	<0.128	0.500	0.128	07/08/22 10:29	
Bromoform	ug/L	<0.129	0.500	0.129	07/08/22 10:29	
Bromomethane	ug/L	<0.605	2.50	0.605	07/08/22 10:29	
Carbon disulfide	ug/L	<0.0962	0.500	0.0962	07/08/22 10:29	
Carbon tetrachloride	ug/L	<0.128	0.500	0.128	07/08/22 10:29	
Chlorobenzene	ug/L	<0.117	0.500	0.117	07/08/22 10:29	
Dibromochloromethane	ug/L	<0.140	0.500	0.140	07/08/22 10:29	
Chloroethane	ug/L	<0.192	2.50	0.192	07/08/22 10:29	
Chloroform	ug/L	<0.111	0.500	0.111	07/08/22 10:29	
Chloromethane	ug/L	<0.960	1.25	0.960	07/08/22 10:29	
Cyclohexane	ug/L	<0.188	1.00	0.188	07/08/22 10:29	
1,2-Dibromo-3-chloropropane	ug/L	<0.276	2.50	0.276	07/08/22 10:29	
1,2-Dibromoethane (EDB)	ug/L	<0.126	0.500	0.126	07/08/22 10:29	
Dibromomethane	ug/L	<0.122	0.500	0.122	07/08/22 10:29	
1,2-Dichlorobenzene	ug/L	<0.107	0.500	0.107	07/08/22 10:29	
1,3-Dichlorobenzene	ug/L	<0.299	0.500	0.299	07/08/22 10:29	
1,4-Dichlorobenzene	ug/L	<0.120	0.500	0.120	07/08/22 10:29	
Dichlorodifluoromethane	ug/L	<0.374	2.50	0.374	07/08/22 10:29	
1,1-Dichloroethane	ug/L	<0.100	0.500	0.100	07/08/22 10:29	
1,2-Dichloroethane	ug/L	<0.0819	0.500	0.0819	07/08/22 10:29	
1,1-Dichloroethene	ug/L	<0.188	0.500	0.188	07/08/22 10:29	
cis-1,2-Dichloroethene	ug/L	<0.126	0.500	0.126	07/08/22 10:29	
trans-1,2-Dichloroethene	ug/L	<0.149	0.500	0.149	07/08/22 10:29	
1,2-Dichloropropane	ug/L	<0.149	0.500	0.149	07/08/22 10:29	
cis-1,3-Dichloropropene	ug/L	<0.111	0.500	0.111	07/08/22 10:29	
trans-1,3-Dichloropropene	ug/L	<0.118	0.500	0.118	07/08/22 10:29	
trans-1,4-Dichloro-2-butene	ug/L	<0.467	5.00	0.467	07/08/22 10:29	
Ethylbenzene	ug/L	<0.137	0.500	0.137	07/08/22 10:29	
2-Hexanone	ug/L	<0.787	5.00	0.787	07/08/22 10:29	
n-Hexane	ug/L	<0.749	5.00	0.749	07/08/22 10:29	
Iodomethane	ug/L	<0.554	5.00	0.554	07/08/22 10:29	
Isopropylbenzene (Cumene)	ug/L	<0.105	0.500	0.105	07/08/22 10:29	
2-Butanone (MEK)	ug/L	<1.19	5.00	1.19	07/08/22 10:29	
Methylene Chloride	ug/L	<0.430	2.50	0.430	07/08/22 10:29	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.478	5.00	0.478	07/08/22 10:29	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

METHOD BLANK: R3812602-3

Matrix: Water

Associated Lab Samples: 10614797004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methyl-tert-butyl ether	ug/L	<0.101	0.500	0.101	07/08/22 10:29	
n-Propylbenzene	ug/L	<0.0993	0.500	0.0993	07/08/22 10:29	
Styrene	ug/L	<0.118	0.500	0.118	07/08/22 10:29	
1,1,1,2-Tetrachloroethane	ug/L	<0.147	0.500	0.147	07/08/22 10:29	
1,1,2,2-Tetrachloroethane	ug/L	<0.133	0.500	0.133	07/08/22 10:29	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.180	0.500	0.180	07/08/22 10:29	
Tetrachloroethene	ug/L	<0.300	0.500	0.300	07/08/22 10:29	
Tetrahydrofuran	ug/L	<0.929	5.00	0.929	07/08/22 10:29	
Toluene	ug/L	<0.278	0.500	0.278	07/08/22 10:29	
1,1,1-Trichloroethane	ug/L	<0.149	0.500	0.149	07/08/22 10:29	
1,1,2-Trichloroethane	ug/L	<0.158	0.500	0.158	07/08/22 10:29	
Trichloroethene	ug/L	<0.190	0.500	0.190	07/08/22 10:29	
Trichlorofluoromethane	ug/L	<0.160	2.50	0.160	07/08/22 10:29	
1,2,3-Trichloropropane	ug/L	<0.237	2.50	0.237	07/08/22 10:29	
1,2,4-Trimethylbenzene	ug/L	<0.322	0.500	0.322	07/08/22 10:29	
Vinyl acetate	ug/L	<0.692	5.00	0.692	07/08/22 10:29	
Vinyl chloride	ug/L	<0.234	0.500	0.234	07/08/22 10:29	
Xylene (Total)	ug/L	<0.174	1.50	0.174	07/08/22 10:29	
1,4-Dioxane (p-Dioxane)	ug/L	<2.83	100	2.83	07/08/22 10:29	
2-Propanol	ug/L	<1.65	5.00	1.65	07/08/22 10:29	
Toluene-d8 (S)	%	104	80.0-120		07/08/22 10:29	
4-Bromofluorobenzene (S)	%	104	77.0-126		07/08/22 10:29	
1,2-Dichloroethane-d4 (S)	%	112	70.0-130		07/08/22 10:29	

LABORATORY CONTROL SAMPLE: R3812602-1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acetone	ug/L	25.0	43.6	174	19.0-160	L0
Acrylonitrile	ug/L	25.0	26.9	108	55.0-149	
Benzene	ug/L	5.00	5.20	104	70.0-123	
Bromobenzene	ug/L	5.00	5.84	117	73.0-121	
Bromodichloromethane	ug/L	5.00	5.73	115	75.0-120	
Bromochloromethane	ug/L	5.00	5.35	107	76.0-122	
Bromoform	ug/L	5.00	4.61	92.2	68.0-132	
Bromomethane	ug/L	5.00	4.74	94.8	10.0-160	
Carbon disulfide	ug/L	5.00	5.62	112	61.0-128	
Carbon tetrachloride	ug/L	5.00	5.62	112	68.0-126	
Chlorobenzene	ug/L	5.00	4.72	94.4	80.0-121	
Dibromochloromethane	ug/L	5.00	5.06	101	77.0-125	
Chloroethane	ug/L	5.00	4.10	82.0	47.0-150	
Chloroform	ug/L	5.00	5.55	111	73.0-120	
Chloromethane	ug/L	5.00	4.00	80.0	41.0-142	
Cyclohexane	ug/L	5.00	5.18	104	71.0-124	
1,2-Dibromo-3-chloropropane	ug/L	5.00	4.89	97.8	58.0-134	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

LABORATORY CONTROL SAMPLE: R3812602-1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	5.00	4.82	96.4	80.0-122	
Dibromomethane	ug/L	5.00	5.28	106	80.0-120	
1,2-Dichlorobenzene	ug/L	5.00	4.84	96.8	79.0-121	
1,3-Dichlorobenzene	ug/L	5.00	5.00	100	79.0-120	
1,4-Dichlorobenzene	ug/L	5.00	4.92	98.4	79.0-120	
Dichlorodifluoromethane	ug/L	5.00	4.89	97.8	51.0-149	
1,1-Dichloroethane	ug/L	5.00	5.31	106	70.0-126	
1,2-Dichloroethane	ug/L	5.00	5.30	106	70.0-128	
1,1-Dichloroethene	ug/L	5.00	6.13	123	71.0-124	
cis-1,2-Dichloroethene	ug/L	5.00	5.62	112	73.0-120	
trans-1,2-Dichloroethene	ug/L	5.00	5.60	112	73.0-120	
1,2-Dichloropropane	ug/L	5.00	4.63	92.6	77.0-125	
cis-1,3-Dichloropropene	ug/L	5.00	5.36	107	80.0-123	
trans-1,3-Dichloropropene	ug/L	5.00	5.05	101	78.0-124	
trans-1,4-Dichloro-2-butene	ug/L	5.00	4.43	88.6	33.0-144	
Ethylbenzene	ug/L	5.00	4.89	97.8	79.0-123	
2-Hexanone	ug/L	25.0	23.5	94.0	67.0-149	
n-Hexane	ug/L	5.00	4.58	91.6	57.0-133	
Iodomethane	ug/L	25.0	26.8	107	33.0-147	
Isopropylbenzene (Cumene)	ug/L	5.00	5.13	103	76.0-127	
2-Butanone (MEK)	ug/L	25.0	27.6	110	44.0-160	
Methylene Chloride	ug/L	5.00	5.77	115	67.0-120	
4-Methyl-2-pentanone (MIBK)	ug/L	25.0	22.5	90.0	68.0-142	
Methyl-tert-butyl ether	ug/L	5.00	6.03	121	68.0-125	
n-Propylbenzene	ug/L	5.00	6.02	120	77.0-124	
Styrene	ug/L	5.00	4.93	98.6	73.0-130	
1,1,1,2-Tetrachloroethane	ug/L	5.00	4.70	94.0	75.0-125	
1,1,2,2-Tetrachloroethane	ug/L	5.00	5.55	111	65.0-130	
1,1,2-Trichlorotrifluoroethane	ug/L	5.00	5.34	107	69.0-132	
Tetrachloroethene	ug/L	5.00	4.81	96.2	72.0-132	
Tetrahydrofuran	ug/L	5.00	5.79	116	41.0-146	
Toluene	ug/L	5.00	4.78	95.6	79.0-120	
1,1,1-Trichloroethane	ug/L	5.00	6.18	124	73.0-124	
1,1,2-Trichloroethane	ug/L	5.00	4.81	96.2	80.0-120	
Trichloroethene	ug/L	5.00	4.97	99.4	78.0-124	
Trichlorofluoromethane	ug/L	5.00	4.69	93.8	59.0-147	
1,2,3-Trichloropropane	ug/L	5.00	5.77	115	73.0-130	
1,2,4-Trimethylbenzene	ug/L	5.00	5.46	109	76.0-121	
Vinyl acetate	ug/L	25.0	18.2	72.8	11.0-160	
Vinyl chloride	ug/L	5.00	4.28	85.6	67.0-131	
Xylene (Total)	ug/L	15.0	14.5	96.7	79.0-123	
Toluene-d8 (S)	%			101	80.0-120	
4-Bromofluorobenzene (S)	%			103	77.0-126	
1,2-Dichloroethane-d4 (S)	%			111	70.0-130	

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QUALITY CONTROL DATA

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

LABORATORY CONTROL SAMPLE: R3812602-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	1000	3260	326	13.0-160	E,L0
2-Propanol	ug/L	50.0	202	404	10.0-160	E,L0
Toluene-d8 (S)	%			107	80.0-120	
4-Bromofluorobenzene (S)	%			108	77.0-126	
1,2-Dichloroethane-d4 (S)	%			114	70.0-130	

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QUALITY CONTROL DATA

Project: 114-710326G.400 Bozeman Landfi

Project No.: 10614797

QC Batch: 1892205

Analysis Method: EPA 8260B

QC Batch Method: 8260B

Analysis Description: VOA (GC/MS) 8260B

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 10614797010, 10614797011, 10614797014, 10614797015, 10614797016, 10614797017, 10614797018, 10614797019, 10614797020, 10614797021, 10614797022, 10614797023, 10614797024, 10614797027

METHOD BLANK: R3813730-3

Matrix: Water

Associated Lab Samples: 10614797010, 10614797011, 10614797014, 10614797015, 10614797016, 10614797017, 10614797018, 10614797019, 10614797020, 10614797021, 10614797022, 10614797023, 10614797024, 10614797027

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1-Dichloroethane	ug/L	<0.100	0.500	0.100	07/09/22 10:19	
1,1-Dichloroethene	ug/L	<0.188	0.500	0.188	07/09/22 10:19	
1,1,1-Trichloroethane	ug/L	<0.149	0.500	0.149	07/09/22 10:19	
Trichloroethene	ug/L	<0.190	0.500	0.190	07/09/22 10:19	
Toluene-d8 (S)	%	98.9	80.0-120		07/09/22 10:19	
4-Bromofluorobenzene (S)	%	92	77.0-126		07/09/22 10:19	
1,2-Dichloroethane-d4 (S)	%	104	70.0-130		07/09/22 10:19	

LABORATORY CONTROL SAMPLE & LCSD: R3813730-1

R3813730-2

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1-Dichloroethane	ug/L	5.00	4.37	4.39	87.4	87.8	70.0-126	0.457	20	
1,1-Dichloroethene	ug/L	5.00	4.52	5.09	90.4	102	71.0-124	11.9	20	
1,1,1-Trichloroethane	ug/L	5.00	5.58	5.58	112	112	73.0-124	0.00	20	
Trichloroethene	ug/L	5.00	4.89	5.26	97.8	105	78.0-124	7.29	20	
Toluene-d8 (S)	%				94.6	95.8	80.0-120			
4-Bromofluorobenzene (S)	%				91.9	88.2	77.0-126			
1,2-Dichloroethane-d4 (S)	%				98.8	99.6	70.0-130			

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QUALITY CONTROL DATA

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

QC Batch: 1892380

Analysis Method: EPA 8260B

QC Batch Method: 8260B

Analysis Description: VOA (GC/MS) 8260B

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 10614797002, 10614797009

METHOD BLANK: R3814131-4

Matrix: Water

Associated Lab Samples: 10614797002, 10614797009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1-Dichloroethane	ug/L	<0.100	0.500	0.100	07/11/22 12:49	
1,2-Dichloroethane	ug/L	<0.0819	0.500	0.0819	07/11/22 12:49	
1,1-Dichloroethene	ug/L	<0.188	0.500	0.188	07/11/22 12:49	
cis-1,2-Dichloroethene	ug/L	<0.126	0.500	0.126	07/11/22 12:49	
2-Butanone (MEK)	ug/L	<1.19	5.00	1.19	07/11/22 12:49	
Tetrachloroethene	ug/L	<0.300	0.500	0.300	07/11/22 12:49	
Toluene	ug/L	<0.278	0.500	0.278	07/11/22 12:49	
1,1,1-Trichloroethane	ug/L	<0.149	0.500	0.149	07/11/22 12:49	
Trichloroethene	ug/L	<0.190	0.500	0.190	07/11/22 12:49	
Vinyl chloride	ug/L	<0.234	0.500	0.234	07/11/22 12:49	
1,4-Dioxane (p-Dioxane)	ug/L	77.9J	100	2.83	07/11/22 12:49	J
2-Propanol	ug/L	<1.65	5.00	1.65	07/11/22 12:49	
Toluene-d8 (S)	%	104	80.0-120		07/11/22 12:49	
4-Bromofluorobenzene (S)	%	108	77.0-126		07/11/22 12:49	
1,2-Dichloroethane-d4 (S)	%	122	70.0-130		07/11/22 12:49	

LABORATORY CONTROL SAMPLE & LCSD: R3814131-1

R3814131-2

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1-Dichloroethane	ug/L	5.00	5.44	5.38	109	108	70.0-126	1.11	20	
1,2-Dichloroethane	ug/L	5.00	5.59	5.56	112	111	70.0-128	0.538	20	
1,1-Dichloroethene	ug/L	5.00	5.57	5.58	111	112	71.0-124	0.179	20	
cis-1,2-Dichloroethene	ug/L	5.00	5.86	5.50	117	110	73.0-120	6.34	20	
2-Butanone (MEK)	ug/L	25.0	26.1	27.7	104	111	44.0-160	5.95	20	
Tetrachloroethene	ug/L	5.00	4.88	4.24	97.6	84.8	72.0-132	14.0	20	
Toluene	ug/L	5.00	4.82	4.44	96.4	88.8	79.0-120	8.21	20	
1,1,1-Trichloroethane	ug/L	5.00	6.51	6.21	130	124	73.0-124	4.72	20 L0	
Trichloroethene	ug/L	5.00	5.07	4.87	101	97.4	78.0-124	4.02	20	
Vinyl chloride	ug/L	5.00	4.80	4.23	96.0	84.6	67.0-131	12.6	20	
Toluene-d8 (S)	%				103	103	80.0-120			
4-Bromofluorobenzene (S)	%				101	107	77.0-126			
1,2-Dichloroethane-d4 (S)	%				119	119	70.0-130			

LABORATORY CONTROL SAMPLE: R3814131-3

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	1000	4420	442	13.0-160	E,L0

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

LABORATORY CONTROL SAMPLE: R3814131-3

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Propanol	ug/L	50.0	298	596	10.0-160	E,L0
Toluene-d8 (S)	%			105	80.0-120	
4-Bromofluorobenzene (S)	%			103	77.0-126	
1,2-Dichloroethane-d4 (S)	%			118	70.0-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 114-710326G.400 Bozeman Landfi
Pace Project No.: 10614797

QC Batch: 826931 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10614797002, 10614797003, 10614797004, 10614797005, 10614797007, 10614797008, 10614797011, 10614797012

METHOD BLANK: 4380871 Matrix: Water
Associated Lab Samples: 10614797002, 10614797003, 10614797004, 10614797005, 10614797007, 10614797008, 10614797011, 10614797012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.2	0.39	07/09/22 06:37	
Sulfate	mg/L	<0.43	1.2	0.43	07/09/22 06:37	

LABORATORY CONTROL SAMPLE: 4380872

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	48.2	96	90-110	
Sulfate	mg/L	50	49.3	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4380873 4380874

Parameter	Units	10614689002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	46.4	50	50	91.8	92.1	91	91	80-120	0	20	
Sulfate	mg/L	18.0	50	50	69.0	69.0	102	102	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4380877 4380878

Parameter	Units	10616027001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	87.5	50	50	131	131	86	87	80-120	0	20	
Sulfate	mg/L	9.1	50	50	61.1	61.2	104	104	80-120	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

QC Batch:	827084	Analysis Method:	EPA 300.0
QC Batch Method:	EPA 300.0	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Minneapolis
Associated Lab Samples:	10614797013, 10614797014, 10614797015, 10614797017, 10614797022, 10614797025, 10614797026, 10614797027		

METHOD BLANK:	4381698	Matrix:	Water
Associated Lab Samples:	10614797013, 10614797014, 10614797015, 10614797017, 10614797022, 10614797025, 10614797026, 10614797027		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.2	0.39	07/11/22 10:23	
Sulfate	mg/L	<0.43	1.2	0.43	07/11/22 10:23	

LABORATORY CONTROL SAMPLE: 4381699						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	53.1	106	90-110	
Sulfate	mg/L	50	54.5	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4381700												4381701	
Parameter	Units	10615583001		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Chloride	mg/L	17.3	50	50	53.1	62.9	72	91	80-120	17	20
Sulfate	mg/L	27.0	50	50	65.1	75.4	76	97	80-120	15	20	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4381702												4381703	
Parameter	Units	10615583002		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Chloride	mg/L	18.4	50	50	64.7	63.7	93	91	80-120	2	20
Sulfate	mg/L	23.9	50	50	70.7	69.5	93	91	80-120	2	20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 114-710326G.400 Bozeman Landfi
Pace Project No.: 10614797

QC Batch: 826181 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10614797001, 10614797002, 10614797003, 10614797004, 10614797005, 10614797006, 10614797007, 10614797008, 10614797009, 10614797010, 10614797011, 10614797012, 10614797013, 10614797022, 10614797023, 10614797025, 10614797026, 10614797027

METHOD BLANK: 4376255 Matrix: Water
Associated Lab Samples: 10614797001, 10614797002, 10614797003, 10614797004, 10614797005, 10614797006, 10614797007, 10614797008, 10614797009, 10614797010, 10614797011, 10614797012, 10614797013, 10614797022, 10614797023, 10614797025, 10614797026, 10614797027

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.031	0.10	0.031	07/06/22 11:41	

LABORATORY CONTROL SAMPLE: 4376256

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	0.94	94	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4376257 4376258

Parameter	Units	10615443011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.39	1	1	1.4	1.4	103	103	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4376259 4376260

Parameter	Units	10614797003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	1.7	1	1	2.7	2.7	105	102	90-110	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

WORKORDER QUALIFIERS

WO: 10614797

[1] L1511120-21 (MW-24) - 8260B analysis was analyzed from headspace vial.

ANALYTE QUALIFIERS

C4 The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Data is likely to show a low bias concerning the result.

E Analyte concentration exceeded the calibration range. The reported result is estimated.

G3 Analyzed from headspace vial.

H3 Sample was received or analysis requested beyond the recognized method holding time.

J Analyte detected below the reporting limit, therefore result is an estimate. This qualifier is also used for all TICs.

L0 Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

R1 RPD value was outside control limits.

SR Surrogate recovery was below laboratory control limits. Results may be biased low.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10614797001	LF-2	8260B	1890171	EPA 8260B	1890171
10614797001	LF-2	8260B	1890850	EPA 8260B	1890850
10614797002	LF-3	8260B	1890552	EPA 8260B	1890552
10614797002	LF-3	8260B	1892380	EPA 8260B	1892380
10614797003	MW-4	8260B	1890171	EPA 8260B	1890171
10614797003	MW-4	8260B	1890850	EPA 8260B	1890850
10614797004	MW-5	8260B	1891832	EPA 8260B	1891832
10614797005	MW-6	8260B	1890171	EPA 8260B	1890171
10614797005	MW-6	8260B	1890850	EPA 8260B	1890850
10614797006	MW-7A	8260B	1890171	EPA 8260B	1890171
10614797006	MW-7A	8260B	1890850	EPA 8260B	1890850
10614797007	MW-8A	8260B	1890171	EPA 8260B	1890171
10614797007	MW-8A	8260B	1890850	EPA 8260B	1890850
10614797008	MW-9A	8260B	1890171	EPA 8260B	1890171
10614797008	MW-9A	8260B	1890850	EPA 8260B	1890850
10614797009	MW-10	8260B	1890552	EPA 8260B	1890552
10614797009	MW-10	8260B	1892380	EPA 8260B	1892380
10614797010	MW-11	8260B	1890552	EPA 8260B	1890552
10614797010	MW-11	8260B	1892205	EPA 8260B	1892205
10614797011	MW-12	8260B	1890552	EPA 8260B	1890552
10614797011	MW-12	8260B	1892205	EPA 8260B	1892205
10614797012	MW-13	8260B	1890171	EPA 8260B	1890171
10614797012	MW-13	8260B	1890850	EPA 8260B	1890850
10614797013	MW-15	8260B	1890171	EPA 8260B	1890171
10614797013	MW-15	8260B	1890850	EPA 8260B	1890850
10614797014	MW-17	8260B	1890552	EPA 8260B	1890552
10614797014	MW-17	8260B	1892205	EPA 8260B	1892205
10614797015	MW-18	8260B	1890552	EPA 8260B	1890552
10614797015	MW-18	8260B	1892205	EPA 8260B	1892205
10614797016	MW-19	8260B	1890552	EPA 8260B	1890552
10614797016	MW-19	8260B	1892205	EPA 8260B	1892205
10614797017	MW-20	8260B	1890552	EPA 8260B	1890552
10614797017	MW-20	8260B	1892205	EPA 8260B	1892205

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10614797018	MW-21	8260B	1890552	EPA 8260B	1890552
10614797018	MW-21	8260B	1892205	EPA 8260B	1892205
10614797019	MW-22	8260B	1890552	EPA 8260B	1890552
10614797019	MW-22	8260B	1892205	EPA 8260B	1892205
10614797020	MW-23	8260B	1890552	EPA 8260B	1890552
10614797020	MW-23	8260B	1892205	EPA 8260B	1892205
10614797021	MW-24	8260B	1890552	EPA 8260B	1890552
10614797021	MW-24	8260B	1892205	EPA 8260B	1892205
10614797022	MW-27	8260B	1890552	EPA 8260B	1890552
10614797022	MW-27	8260B	1892205	EPA 8260B	1892205
10614797023	McIlhattan Seep	8260B	1890552	EPA 8260B	1890552
10614797023	McIlhattan Seep	8260B	1892205	EPA 8260B	1892205
10614797024	Vet Well	8260B	1890552	EPA 8260B	1890552
10614797024	Vet Well	8260B	1892205	EPA 8260B	1892205
10614797025	DUP-1	8260B	1890171	EPA 8260B	1890171
10614797025	DUP-1	8260B	1890850	EPA 8260B	1890850
10614797026	DUP-2	8260B	1890171	EPA 8260B	1890171
10614797026	DUP-2	8260B	1890850	EPA 8260B	1890850
10614797027	DUP-3	8260B	1890552	EPA 8260B	1890552
10614797027	DUP-3	8260B	1892205	EPA 8260B	1892205
10614797028	Trip Blank	8260B	1890171	EPA 8260B	1890171
10614797028	Trip Blank	8260B	1890850	EPA 8260B	1890850
10614797002	LF-3	EPA 300.0	826931		
10614797003	MW-4	EPA 300.0	826931		
10614797004	MW-5	EPA 300.0	826931		
10614797005	MW-6	EPA 300.0	826931		
10614797007	MW-8A	EPA 300.0	826931		
10614797008	MW-9A	EPA 300.0	826931		
10614797011	MW-12	EPA 300.0	826931		
10614797012	MW-13	EPA 300.0	826931		
10614797013	MW-15	EPA 300.0	827084		
10614797014	MW-17	EPA 300.0	827084		
10614797015	MW-18	EPA 300.0	827084		
10614797017	MW-20	EPA 300.0	827084		
10614797022	MW-27	EPA 300.0	827084		
10614797025	DUP-1	EPA 300.0	827084		
10614797026	DUP-2	EPA 300.0	827084		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 114-710326G.400 Bozeman Landfi

Pace Project No.: 10614797

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10614797027	DUP-3	EPA 300.0	827084		
10614797001	LF-2	EPA 353.2	826181		
10614797002	LF-3	EPA 353.2	826181		
10614797003	MW-4	EPA 353.2	826181		
10614797004	MW-5	EPA 353.2	826181		
10614797005	MW-6	EPA 353.2	826181		
10614797006	MW-7A	EPA 353.2	826181		
10614797007	MW-8A	EPA 353.2	826181		
10614797008	MW-9A	EPA 353.2	826181		
10614797009	MW-10	EPA 353.2	826181		
10614797010	MW-11	EPA 353.2	826181		
10614797011	MW-12	EPA 353.2	826181		
10614797012	MW-13	EPA 353.2	826181		
10614797013	MW-15	EPA 353.2	826181		
10614797022	MW-27	EPA 353.2	826181		
10614797023	McIlhattan Seep	EPA 353.2	826181		
10614797025	DUP-1	EPA 353.2	826181		
10614797026	DUP-2	EPA 353.2	826181		
10614797027	DUP-3	EPA 353.2	826181		

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: Tetra Tech		Report To: Shane Matolyak		Attention: Deb Lloyd	
Address: 851 Bridger Drive, Suite 6 Bozeman, MT 59715		Copy To:		Company Name: (same as Section A)	
Email To: shane.matolyak@tetrattech.com		Purchase Order No.:		Address:	
Phone: 406-582-8780 Fax: 406-582-8790		Project Name: Bozeman Landfill		Pace Quote Reference:	
Requested Due Date/TAT: 10 day		Project Number: 114-710326G.400		Pace Project Manager: Jennifer Gross	
				Pace Profile #: 21198	
				REGULATORY AGENCY	
				<input type="checkbox"/> NPDES <input checked="" type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER	
				<input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER	
				Site Location	
				STATE: MT	

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Requested Analysis Filtered (Y/N)			Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.		
					COMPOSITE START		COMPOSITE END/GRAB				Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Analysis Test	8260 LL VOCs*			353.2 N+N	300.0-Cl, SO4
					DATE	TIME	DATE	TIME																
1		LF-2	WT	G	6-21-22	17:30			4	1		3							X	X				001
2		LF-3			6-22-22	9:30			5	1		3							X	X	X			002
3		MW-4			6-21-22	13:30			5	1		3							X	X	X			003
4		MW-5			6-23-22	10:00			5	1		3							X	X	X			004
5		MW-6			6-21-22	14:45			5	1		3							X	X	X			005
6		MW-7A			6-21-22	15:30			4	1		3							X	X				006
7		MW-8A			6-21-22	12:30			5	1		3							X	X	X			007
8		MW-9A			6-21-22	14:00			5	1		3							X	X	X			008
9		MW-10			6-22-22	10:30			4	1		3							X	X				009
10		MW-11			6-22-22	13:00			4	1		3							X	X				010
11		MW-12			6-22-22	14:00			5	1		3							X	X	X			011
12		MW-13			6-21-22	16:00			5	1		3							X	X	X			012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS					
*8260 LL VOCs: SUB to PACE-TN	Shane Matolyak / T+	6-27-22	11:00	AM / Pace	6/29	8:50	1.0	3.5	1.4	Y	Y	Y
		6-28-22										

WO#: 10614797



SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER: Shane Matolyak		DATE Signed (MM/DD/YY): 6-27-22	
SIGNATURE of SAMPLER: <i>Shane Matolyak</i>			
Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:		<input type="checkbox"/> NPDES <input checked="" type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER _____ Site Location: MT STATE: _____	
Company: Tetra Tech		Report To: Shane Matolyak		Attention: Deb Lloyd			
Address: 851 Bridger Drive, Suite 6 Bozeman, MT 59715		Copy To:		Company Name: (same as Section A)			
Email To: shane.matolyak@tetratech.com		Purchase Order No.:		Address:			
Phone: 406-582-8780 Fax: 406-582-8790		Project Name: Bozeman Landfill		Pace Quote Reference:			
Requested Due Date/TAT: 10 day		Project Number: 114-7103266-400		Pace Project Manager: Jennifer Gross			
				Pace Profile #: 21198			

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives								Analysis Test ↓	Requested Analysis Filtered (Y/N)			Residual Chlorine (Y/N)	Face Project No./ Lab I.D.	
					COMPOSITE START		COMPOSITE END/GRAB				Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other		8260 LL VOCs*	353.2 N+N	300.0-Cl, SO4			
					DATE	TIME	DATE	TIME																	
1		MW-15	WT	G			6-21-22	11:00	5	1	1		3					X	X	X					013
2		MW-17					6-22-22	15:30	4	1			3					X		X					014
3		MW-19					6-22-22	14:30	4	1			3					X		X					015
4		MW-19					6-22-22	8:30	3				3					X							016
5		MW-20					6-22-22	16:15	3	1			3					X		X					017
6		MW-21					6-22-22	14:00	3				3					X							018
7		MW-22					6-22-22	17:15	3				3					X							019
8		MW-23					6-22-22	17:30	3				3					X							020
9		MW-24					6-22-22	16:45	3				3					X							021
10		MW-27					6-22-22	8:00	5	1	1		3					X	X	X					022
11		Mc Seep					6-22-22	10:15	3				3					X							023
12		vet Well					6-22-22	10:30	3				3					X							024

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS		
*8260 LL VOCs SUB to PACE-TN Please report "Mc Seep" as "McIllhattan Seep" on lab report.	Shane Matolyak / T4	6-27-22	11:00	pm / Pace	6-29	8:50			

SAMPLER NAME AND SIGNATURE				Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER: <i>Shane Matolyak</i>			DATE Signed (MM/DD/YY): <i>6-27-22</i>				
SIGNATURE of SAMPLER: <i>[Signature]</i>							

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:		Page: 3 of 3
Company: Tetra Tech		Report To: Shane Matolyak		Attention: Deb Lloyd		REGULATORY AGENCY <input type="checkbox"/> NPDES <input checked="" type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER _____
Address: 851 Bridger Drive, Suite 6 Bozeman, MT 59715		Copy To:		Company Name: (same as Section A)		
Email To: shane.matolyak@tetrattech.com		Purchase Order No.:		Address:		Site Location STATE: <u>MT</u>
Phone: 406-582-8780 Fax: 406-582-8790		Project Name: Bozeman Landfill		Pace Quote Reference:		
Requested Due Date/TAT: 10 day		Project Number: 114-7103266.400		Pace Project Manager: Jennifer Gross		
				Pace Profile #: 21198		

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE DRINKING WATER DW WATER WT WASTE WATER WW PRODUCT P SOIL/SOLID SL OIL OL WIPE WP AIR AR OTHER OT TISSUE TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives								Analysis Test Y/N	Requested Analysis Filtered (Y/N)				Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.			
					COMPOSITE START		COMPOSITE END/GRAB				Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other		8260 LL VOCs*	353.2 N+N	300.0-CI, SO4						
					DATE	TIME	DATE	TIME																				
1			DUP-1	WTG	6-21-22	1345			5	1	1		3					X	X	X				025				
2			DUP-2		6-21-22	1500			5	1	1		3					X	X	X				026				
3			DUP-3		6-22-22	1405			5	1	1		3					X	X	X				027				
4			Trip Blank		-	-			3				3					X						028				
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS						
*8260 LL VOCs: SUB to PACE-TN	Shane Matolyak / T	6-27-22	11:00	M Pace	6/29	8:50							
		6-28-22											

SAMPLER NAME AND SIGNATURE				Temp in °C	Received on ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER: Shane Matolyak		SIGNATURE of SAMPLER: <i>Shane Matolyak</i>					
		DATE Signed (MM/DD/YY): 6-27-22					



DC#_ Title: ENV-FRM-MIN4-0150 v05_Sample Condition Upon Receipt (SCUR)

Effective Date: 04/12/2022

Sample Condition Upon Receipt

Client Name: Tetra Tech

Project #:

WO#: 10614797

Courier: Fed Ex, UPS, USPS, Client, Pace, SpeeDee, Commercial

PM: JMG Due Date: 07/13/22 CLIENT: 11 Tetra-MT

Tracking Number:

See Exceptions ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? Yes No Seals Intact? Yes No Biological Tissue Frozen? Yes No N/A

Packing Material: Bubble Wrap, Bubble Bags, None, Other: Temp Blank? Yes No

Thermometer: T1(0461) T2(1336) T3(0459) T4(0254) T5(0489) T6(0235) T7(0042) 01339252/1710 122639816 140792808 Type of Ice: Wet Blue None Dry Melted

Did Samples Originate in West Virginia? Yes No Were All Container Temps Taken? Yes No N/A

Temp should be above freezing to 6°C Cooler Temp Read w/temp blank: 1.0/3.5/1.4 °C Average Corrected Temp (no temp blank only): °C Correction Factor: True Cooler Temp Corrected w/temp blank: 1.0/3.5/1.4 °C

USDA Regulated Soil: N/A, water sample/Other: Date/Initials of Person Examining Contents: 6/29/22 JTI Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. Did samples originate from a foreign source (internationally, including MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? Yes No Hawaii and Puerto Rico)? Yes No

If Yes to either question, fill out a Regulated Soil Checklist ENV-FRM-MIN4-0154 and include with SCUR/COC paperwork.

Table with 2 columns: Location (check one) and COMMENTS. Rows include Chain of Custody Present and Filled Out?, Chain of Custody Relinquished?, Sampler Name and/or Signature on COC?, Samples Arrived within Hold Time?, Short Hold Time Analysis (<72 hr)?, Rush Turn Around Time Requested?, Sufficient Volume?, Correct Containers Used?, Containers Intact?, Field Filtered Volume Received for Dissolved Tests?, Is sufficient information available to reconcile the samples to the COC?, All containers needing acid/base preservation have been checked?, Exception: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS, Headspace in Methyl Mercury Container?, Extra labels present on soil VOA or WIDRO containers?, Trip Blank Present?, Trip Blank Custody Seals Present?

CLIENT NOTIFICATION/RESOLUTION

Person Contacted: Shane Matolyak Date/Time: 6/29/22 Field Data Required? Yes No Comments/Resolution: Analyze -023 for N+N, bottle was provided.

Project Manager Review:

Date: 6/30/22

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: JTI 12



DC#_ Title: ENV-FRM-MIN4-0142 v01_Sample Condition Upon Receipt (SCUR) Exception Form

Effective Date: 02/25/2022

SCUR Exceptions:

Workorder #:

Out of Temp Sample IDs	Container Type	# of Containers	PM Notified? <input type="checkbox"/> Yes <input type="checkbox"/> No
			If yes, indicate who was contacted/date/time. If no, indicate reason why.
			Multiple Cooler Project? <input type="checkbox"/> Yes <input type="checkbox"/> No If you answered yes, fill out information to the left.

No Temp Blank		
Read Temp	Corrected Temp	Average Temp

Tracking Number/Temperature	
7772 4680 4645	1.0
7772 4680 4597	3.5
7772 4680 4645	1.4

Issue Type:	Container Type	# of Containers
Sample ID		
MC seep	BP35	1

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preserve	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance after addition? <input type="checkbox"/> Yes <input type="checkbox"/> No	Initials
								<input type="checkbox"/> Yes <input type="checkbox"/> No	
								<input type="checkbox"/> Yes <input type="checkbox"/> No	
								<input type="checkbox"/> Yes <input type="checkbox"/> No	
								<input type="checkbox"/> Yes <input type="checkbox"/> No	

Comments:
 - came w/ 1 BP35 container w/ ID: MC seep but not on COC
 - 2 VG9H of ID: MW-24 came broken
 - 1 VG9H of ID: Dup-1 came broken

Internal Transfer Chain of Custody



Samples Pre-Logged into eCOC.

State Of Origin: MT

Cert. Needed: Yes No

F186

Pace Analytical
www.pacelabs.com

Workorder: 10614797 Workorder Name: 114-710326G.400 Bozeman Landfi

Owner Received Date: 6/29/2022 Results Requested By: 7/14/2022

Report To		Subcontract To						Requested Analysis																
Jennifer Gross Pace Analytical Minnesota 1700 Elm Street Minneapolis, MN 55414 Phone (612)607-1700		Pace National 12065 Lebanon Rd Mt. Juliet, TN 37122 Phone (615) 758-5858																						
							Preserved Containers																	
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	VOCs					8260 Low Level VOCs (PACE-TN)													
																			LAB USE ONLY					
1	LF-2	PS	6/21/2022 17:30	10614797001	Water	3					X									21				
2	LF-3	PS	6/22/2022 09:30	10614797002	Water	3					X									22				
3	MW-4	PS	6/21/2022 13:30	10614797003	Water	3					X									23				
4	MW-5	PS	6/23/2022 10:00	10614797004	Water	3					X									24				
5	MW-6	PS	6/21/2022 14:45	10614797005	Water	3					X									25				
6	MW-7A	PS	6/21/2022 15:30	10614797006	Water	3					X									26				
7	MW-8A	PS	6/21/2022 12:30	10614797007	Water	3					X									27				
8	MW-9A	PS	6/21/2022 14:00	10614797008	Water	3					X									28				
9	MW-10	PS	6/22/2022 10:30	10614797009	Water	3					X									29				
10	MW-11	PS	6/22/2022 13:00	10614797010	Water	3					X									30				
11	MW-12	PS	6/22/2022 14:00	10614797011	Water	3					X									31				
12	MW-13	PS	6/21/2022 16:00	10614797012	Water	3					X									32				
13	MW-15	PS	6/21/2022 11:00	10614797013	Water	3					X									33				
14	MW-17	PS	6/22/2022 15:30	10614797014	Water	3					X									34				
15	MW-18	PS	6/22/2022 14:30	10614797015	Water	3					X									35				
16	MW-19	PS	6/22/2022 08:30	10614797016	Water	3					X									36				
17	MW-20	PS	6/22/2022 16:15	10614797017	Water	3					X									37				
18	MW-21	PS	6/22/2022 18:00	10614797018	Water	3					X									38				
19	MW-22	PS	6/22/2022 17:15	10614797019	Water	3					X									39				

U51120

Sample Receipt Checklist

COC Seal Present/Intact: Y N

COC Signed/Accurate: Y N

Bottles arrive intact: Y N

Correct bottles used: Y N

Sufficient volume sent: Y N

RAD Screen <0.5 mR/hr: Y N

IF Applicable VOA Zero Headspace: Y N

Pres. Correct/Check: Y N

Internal Transfer Chain of Custody



Samples Pre-Logged into eCOC.

State Of Origin: MT

Cert. Needed: Yes

No

Workorder: 10614797 Workorder Name: 114-710326G.400 Bozeman Landfi

Owner Received Date: 6/29/2022 Results Requested By: 7/14/2022

Report To		Subcontract To				Requested Analysis																
Jennifer Gross Pace Analytical Minnesota 1700 Elm Street Minneapolis, MN 55414 Phone (612)607-1700		Pace National 12065 Lebanon Rd Mt. Juliet, TN 37122 Phone (615) 758-5858																				
						Preserved Containers																
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	VOCs	Hg	Pb	Cd	Cr	Mn	Co	Ni	Fe	Zn	Cu	Mg	Ca	Na	K	LAB USE ONLY	
20	MW-23	PS	6/22/2022 17:30	10614797020	Water	3																
21	MW-24	PS	6/22/2022 16:45	10614797021	Water	3	12															
22	MW-27	PS	6/22/2022 08:00	10614797022	Water	3																
23	McIlhattan Seep	PS	6/22/2022 10:15	10614797023	Water	3																
24	Vet Well	PS	6/22/2022 10:30	10614797024	Water	3																
25	DUP-1	PS	6/21/2022 13:45	10614797025	Water	2																
26	DUP-2	PS	6/21/2022 15:00	10614797026	Water	3																
27	DUP-3	PS	6/22/2022 14:15	10614797027	Water	3																
28	Trip Blank	PS	6/21/2022 00:00	10614797028	Water	3	25															

U1511120

8260 Low Level VOCs (PACE-TN)

Transfers					Comments				
Released By	Date/Time	Received By	Date/Time						
ACE	7/14/2022	M. Smith	7/2/2022 0900						

Cooler Temperature on Receipt: °C Custody Seal or N Received on Ice or N Samples Intact Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.

0-84050-8 PRA7

5466 8885 (87)

APPENDIX D – DATA VALIDATION

DATA REVIEW, VERIFICATION, & VALIDATION REPORT

1. INTRODUCTION

General Project Information			
Project Name:	Bozeman Landfill	Date Validated:	10/28/2022
Tetra Tech Project Number:	114-710326H	Data Validated By:	Shane Matolyak, Tetra Tech
Sample Start and End Dates:	6/21/2022 – 6/23/2022	Laboratory Name:	Pace Analytical
Sample Matrix:	Aqueous	Laboratory Project ID#:	10614797
Analytical Parameters:	VOCs by Method 8260 (low), Anions (sulfate and chloride) by Method 300, and Nitrogen (as NO ₂ +NO ₃) by Method 353.2		
Name & Date of Approved SAP, QAPP, Work Plan, Etc.	Groundwater Monitoring Sampling and Analysis Plan for the Bozeman Landfill. Prepared for City of Bozeman by Tetra Tech. Dated November 12, 2015 (as amended in December 2020).		

2. LABORATORY METHODS AND SAMPLE HANDLING

Validation Criteria Used:

- X Groundwater Monitoring Sampling and Analysis Plan for the Bozeman Landfill. Prepared for City of Bozeman. Prepared by Tetra Tech. Dated November 12, 2015. As modified by Approval for Request to Reduce Frequency of Groundwater Sampling for Metals and Anions. Prepared Montana DEQ. December 9, 2020.
- X National Functional Guidelines for Organic Superfund Methods Data Review. OLEM 9355.0-136, EPA-540-R-2017-002. Dated January 2017.
- X National Functional Guidelines for Inorganic Superfund Methods Data Review. OLEM 9355.0-135, EPA-540-R-2017-001. Dated January 2017.

3. LIST OF SAMPLES VALIDATED IN THIS REPORT

List all samples in the sample delivery group that were validated in this report.

Validated Samples		
Field Sample ID#	Laboratory Sample ID#	Sample Type (Natural, Duplicate, Field Blank, Etc.)
LF-2	10614797001	Natural
LF-3	10614797002	Natural
MW-4	10614797003	Natural
MW-5	10614797004	Natural
MW-6	10614797005	Natural
MW-7A	10614797006	Natural
MW-8A	10614797007	Natural
MW-9A	10614797008	Natural
MW-10	10614797009	Natural
MW-11	10614797010	Natural
MW-12	10614797011	Natural
MW-13	10614797012	Natural
MW-15	10614797013	Natural
MW-17	10614797014	Natural
MW-18	10614797015	Natural
MW-19	10614797016	Natural
MW-20	10614797017	Natural

Validated Samples		
Field Sample ID#	Laboratory Sample ID#	Sample Type (Natural, Duplicate, Field Blank, Etc.)
MW-21	10614797018	Natural
MW-22	10614797019	Natural
MW-23	10614797020	Natural
MW-24	10614797021	Natural
MW-27	10614797022	Natural
Mclhatten Seep	10614797023	Natural
Valley View Vet Well (Vet Well)	10614797024	Natural
DUP 1	10614797025	Duplicate of MW-4
DUP 2	10614797026	Duplicate of MW-6
DUP 3	10614797027	Duplicate of MW-12
TRIP BLANK 1	10614797028	Trip blank

4. FIELD COMPLIANCE WITH PROJECT REQUIREMENTS

Were all the required samples collected as specified in the SAP/QAPP, and field and analytical methods? Discuss.

All samples were collected as per the SAP with the exception that sample MW-5 was not purged of three casing volumes of water. An obstruction in or damage to the well casing prevents proper insertion of the submersible pump and therefore a minimal volume of water could be purged from this well. Data for this well may not be representative of actual conditions in the aquifer during June 2022.

Use of disposable bailers and submersible pumps have been discontinued at the Bozeman Landfill beginning in December 2022. Passive diffusion samplers will be used to obtain unaerated samples representative of conditions in the aquifer and waste for all future monitoring events.

5. Data Qualifiers

Data qualifiers used for this project are those in the National Functional Guidelines and are listed below.

Data Evaluation Qualifiers	
Data Qualifier	Qualifier Description <i>(as per USEPA 2017 National Functional Guidelines)</i>
U	The analyte was analyzed for but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.
J	The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).
J+	The result is an estimated quantity that may be biased high due to associated laboratory QA/QC result being outside control limits.
J-	The result is an estimated quantity that may be biased low due to associated laboratory QA/QC result being outside control limits.
B	The analyte has been detected in the associated method blank.
M1	Matrix spike recovery exceeded QC limits.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

Laboratory-specific data qualifiers are provided in the analytical laboratory report. Laboratory qualifiers are for informational purposes and do not necessarily signify that the data requires qualification.

6. LABORATORY NARRATIVE, CHAIN-OF-CUSTODY, AND SAMPLE RECEIPT CHECKLIST

Was a laboratory narrative provided and were there any non-conformance issues with the analytical data? Identify and discuss.

The laboratory provided a general narrative that stated the results reported in the report conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

The analytical laboratory (Pace Analytical) listed multiple QC deviations or anomalies. These include:

General Information

C4: The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Data is likely to show a low bias concerning the result.

- MW-5 (Lab ID: 10614797004), vinyl acetate

Hold Time

H3: Sample was received or analysis requested beyond the recognized method holding time.

- All samples had analysis of at least one VOC analyte completed beyond the holding time.

Laboratory Control Samples

QC Batch: 1890171

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

- LCS (Lab ID: R3811543-1), trichlorofluoromethane
- LCSD (Lab ID: R3811543-2), chloroform, methylene chloride, trichlorofluoromethane, n-propylbenzene

R1: RPD value was outside control limits.

- LCSD (Lab ID: R3811543-2), chloromethane

QC Batch: 1890552

L0: Analyte recovery in LCS was outside QC limits.

- LCS (Lab ID: R3812676-2), bromobenzene, n-propylbenzene

QC Batch: 1891832

L0: Analyte recovery in LCS was outside QC limits.

- LCS (Lab ID: R3812602-1), acetone
- LCS (Lab ID: R3812602-2), 1,4-dioxane (p-dioxane), 2-propanol

QC Batch: 1892380

L0: Analyte recovery in LCS was outside QC limits.

- LCS (Lab ID: R3814131-1), 1,1,1-trichloroethane
- LCS (Lab ID: R3814131-3), 1,4-dioxane (p-dioxane)

- 2-propanol

Matrix Spike / Matrix Spike Duplicates

QC Batch: 1891832

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- LCS (Lab ID: R3812602-2) 1,4-dioxane (p-dioxane), 2-propanol

QC Batch: 1891832

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- LCS (Lab ID: R3814131-3) 1,4-dioxane (p-dioxane), 2-propanol

QC Batch: 827084

M1: Matrix spike recovery exceeded QC limits. Batch excepted based on laboratory control sample recovery.

- MS (Lab ID: 4381700) chloride, sulfate

Were sample Chain-of-Custody (COC) forms complete? Describe.

Yes. All required fields of the COC were completed and the forms signed by field and laboratory personnel.

Were any issues or discrepancies noted on the Sample Receipt Checklist (a.k.a. Non-Conformance Form)? Were samples received in a sealed cooler, good condition, at proper temperatures? Identify and discuss.

The Sample Condition Upon Receipt Form indicated the samples were received in good condition and at the correct temperature. Two of the three VOA vials for one sample and one vial for another sampler were received broken however the remaining vial(s) were suitable for analysis. No headspace was observed by the laboratory in any of the VOA vials of the sample set.

Were the requested analytical methods in compliance with project requirements (i.e., QAPP, SAP, etc.)? Explain and, if not in compliance, discuss how this affects the data.

Yes. The water samples were analyzed for, VOCs (analytical method 8260B), chloride and sulfate (analytical method 300.0), and nitrite plus nitrate (NO₂+NO₃) as nitrogen (analytical method 353.2).

7. LABORATORY COMPLIANCE WITH PROJECT REQUIREMENTS

Were samples analyzed within method-specified or technical holding times? Explain any exceptions and how this may affect the results.

No. One or more analytes were analyzed between one and four days beyond holding times for all samples due to internal shipping delays at the laboratory. This is not believed to have significantly affected results as the analytical data are consistent with previous monitoring events. These results are considered estimates, biased low, and are flagged with "J-".

Do the laboratory reports include all constituents requested to be analyzed on the CoC or under the QAPP, SAP, or other applicable document? Explain.

All samples were analyzed as required as per the SAP.

Were reported units appropriate for the associated sample matrix/matrices and method(s) of analyses? Explain.

Yes. The samples were analyzed by the methods specified in the SAP and data for anions and nitrogen were reported as milligrams per liter (mg/L) and for VOCs as micrograms per liter (ug/L). This was for comparison to standards/screening levels and previous results.

Were detection limits reported by the laboratory in accordance with the project requirements? Discuss and list.

All sample results were reported to the method detection limit. Nitrogen and chloride required dilutions as indicated in the laboratory report. These dilutions were from 5 to 10 times the volume of the natural sample. Reporting limits were adjusted accordingly. No qualification is required.

Results qualified by the laboratory based on the laboratory reporting limit. Discuss, as needed.

Results were qualified by the laboratory based on detection of concentrations between the MDL and PQL (qualified with a 'J'). If the analyte was detected in the associated method blank the data were qualified with a 'B'. Other data qualifiers are discussed in Sections 5 and 6. Qualified results are identified in the Analytical Results section of the analytical report.

8. LABORATORY QA/QC

8a. Continuing Calibration Verification (CCV) Standard

Was there indication from the laboratory that the initial or CCV results were within acceptable limits? Explain and include discussion on how any out-of-control results affect the accuracy of the data.

All criteria were within the method requirements.

8b. Laboratory Control Samples (LCSs)

Was the reference material used for the laboratory control standard (LCSs) the correct matrix and concentration? Explain and include a discussion on how any matrix differences affects the accuracy of the data.

Yes, all LCSs were of aqueous matrix consistent with analytical media analyzed and the concentration of analytes within the natural samples.

Was the total number of LCSs analyzed equal to at least 5% (1 in 20) of the total number of samples, or analyzed as required by the method? Explain.

Yes. Ten LCSs were analyzed for VOC samples, two for sulfate and chloride samples, and one for nitrogen samples.

Were LCSs prepared the same way as the associated samples? Explain and include a discussion of how any deviations affect the accuracy of the data.

Yes, the samples were prepared the same way as the associated samples.

Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within laboratory QC limits? Explain and discuss on how any out-of-control results affect the accuracy of the data.

All LCS percent recoveries were within control limits with the following exceptions.

QC Batch: 1890171

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

- LCS (Lab ID: R3811543-1), trichlorofluoromethane
- LCSD (Lab ID: R3811543-2), chloroform, methylene chloride, trichlorofluoromethane, n-propylbenzene

R1: RPD value was outside control limits.

- LCSD (Lab ID: R3811543-2), chloromethane

QC Batch: 1890552

L0: Analyte recovery in LCS was outside QC limits.

- LCS (Lab ID: R3812676-2), bromobenzene, n-propylbenzene

QC Batch: 1891832

L0: Analyte recovery in LCS was outside QC limits.

- LCS (Lab ID: R3812602-1), acetone
- LCS (Lab ID: R3812602-2), 1,4-dioxane (p-dioxane), 2-propanol

QC Batch: 1892380

L0: Analyte recovery in LCS was outside QC limits.

- LCS (Lab ID: R3814131-1), 1,1,1-trichloroethane
- LCS (Lab ID: R3814131-3), 1,4-dioxane (p-dioxane)

- 2-propanol

All of these analytes were below the PQL or MDL in all samples.

8c. Laboratory Blank Samples

Was the total number of method blank samples prepared equal to at least 5% (1 in 20) of the total number of samples, or analyzed as required by the method? Explain.

Yes. Two method blanks were analyzed for sulfate and chloride samples, six method blanks were analyzed for VOC samples, and one method blank was analyzed for nitrogen samples.

Were laboratory blank samples free of analyte contamination? Explain.

One method blank had a concentration of 1,4-dioxane that was above the MDL but below the PQL. This analyte was below the PQL in all natural samples. All other method blanks were free of analyte contamination.

8d. Matrix Spike / Matrix Spike Duplicates

What project-specific samples were used to prepare the MS and MSD samples?

Project-specific samples included (Lab ID nos.): 10614797003.

Non-project-specific samples included (Lab ID nos.): 10614689002, 10615443011, 10615583001, 10615583002, and 10616027001.

Was the total number of MS samples prepared equal to at least 5% (1 in 20) of the total number of samples, or analyzed as required by the method? Explain.

Yes. A total of six MSs were analyzed (not counting MSDs) which equates to 22% of the total number of samples submitted for analysis.

Were MS percent recoveries and all MS/MSD relative percent differences (RPDs) within data validation or laboratory QC limits? Explain and include a discussion on how this affects the data.

All matrix spike RPDs were within control limits with the following exceptions:

QC Batch: 827084

M1: Matrix spike recovery exceeded QC limits. Batch excepted based on laboratory control sample recovery.

- MS (Lab ID: 4381700) chloride, sulfate

No qualifications were made based on MS/MSD data alone, as all associated LCS/LCSD recoveries and RPDs were within control limits except as discussed in Section 8b.

8e. Laboratory Duplicates

Were laboratory duplicate RPD values within laboratory-specified limits? Explain and include discussion of how this affects the data.

All duplicate RPDs were within control limits with the following exceptions.

QC Batch: 1890171

R1: RPD value was outside control limits.

- LCSD (Lab ID: R3811543-2), chloromethane

This analyte was below the MDL in all samples.

8f. Surrogates

Were surrogate recoveries within laboratory QC limits? Explain and include discussion on how this affects the data.

All surrogate recoveries were within control limits.

9. FIELD QA/QC

9a. Trip and Field Blanks

Were the number of equipment, trip, or field blanks collected equal to at least 10% of the total number of samples, or as required by the project requirements, QAPP, or SAP? Explain and include how this affects the data.

One trip blank was analyzed, one for each cooler used to ship the samples as per the SAP. One cooler was used to ship all samples during this monitoring event.

Were the trip blank, field blank, and/or equipment blank samples free of analyte contamination? Explain and include discussion of how this affects the data.

Yes, the trip blank was free of analyte contamination.

9b. Field Duplicates

Were the field duplicates collected as required by the project requirements, QAPP or SAP? Include a table of duplicate samples. Explain and include discussion of how this affects the data.

Yes. Three field duplicates were analyzed per the SAP:

Duplicate	Natural Sample
DUP 1	MW-4
DUP 2	MW-6
DUP 3	MW-12

Were field duplicate RPD values within data validation QC limits? Explain and discuss how this affects the data.

QC limits were exceeded for 1,1,1-trichlorethane in two of the three duplicate samples (RPDs of 130% and 153%) and for vinyl chloride in one duplicate sample (RPD of 20.4%). Results for these analytes are flagged as estimates; "J" for detected results, "UJ" for non-detected results.

10. OTHER

Did EPA or other entities collect split samples? If so, explain how those results compare to the natural sample.

No.

Other comments or observations.

There are no other comments.

11. SUMMARY OF QUALIFIED DATA

The sample data qualified in this data validation effort is presented in the analytical laboratory report. The data qualifier 'J' denotes an estimated concentration which is the concentration between the MDL and PQL. Additional data qualifiers are listed and explained in Section 6.

12. DEVIATIONS FROM THE QAPP

List and discuss deviations from the QAPP identified during this review.

None.

13. ACCEPTABILITY AND USABILITY OF THE DATA

A review of the chain of custody forms and laboratory case narratives indicate that proper chain of custody was maintained. The appropriate preparation and analysis methods were performed on the samples based on the intended use of the data. The cooler temperatures were measured upon laboratory receipt and were within control limits. All samples were received preserved, in intact, and in good condition.

All samples had at least one analyte that was not analyzed within method holding time requirements. Laboratory quality control (QC) sample analyses performed for each analytical method are summarized as part of the laboratory analytical package.

The following Stage 2A verification and manual validation checks were performed as part of this project:

1. Requested methods were performed;
2. Method dates for handling, preparation and analysis were present, as appropriate;
3. Sample-related QC data and QC acceptance criteria were provided in the laboratory report and linked to the project samples including the field QC samples (trip blank);
4. Requested spike analytes were added, as appropriate;
5. Sample holding times were evaluated;
6. Frequency of QC samples was checked and considered appropriate; and
7. Sample results were evaluated by comparing holding times and sample-related QC data to EPA and project data validation guidelines.

Precision

Precision is the measure of agreement among individual measurements of the same property under similar conditions. Precision for this project has been expressed in terms of the relative percent difference (RPD) between two samples. Duplicate samples can be evaluated quantitatively for precision only when contaminants are detected in both the sample and the duplicate. Duplicates with RPDs within the control limits indicate adequate sampling practices and/or good analytical precision. Duplicates with RPDs outside the control limits may result from inappropriate sampling procedures, matrix interferences, or non-homogeneity of the sample matrix. In addition, poor precision can be attributed to deviations from the analytical methodology or to poor reproducibility of target analyte concentrations at or near the detection limits.

Precision was evaluated for this project by comparing field duplicate results, laboratory control sample/laboratory control sample duplicate (LCS/LCSD) RPD results, and matrix spike/matrix spike duplicate (MS/MSD) RPD results for project samples. Project-specific MS/MSDs were analyzed by the laboratory. However, if the laboratory duplicate or MS/MSD analysis was performed by the laboratory on samples for another client's project within the same method batch, any qualifiers applied to the data are not applicable to this project's samples. This is not the case in the December 2020 sample set.

All LCS/LCSD, laboratory duplicate, field duplicates, and MS/MSD RPDs for the sample set were within the QC limits or did not require qualification except as noted in Section 6.

Accuracy

The assessment of accuracy is evaluated by comparing the percent recoveries (%R) computed from the known concentration of analyte spikes and their recovered concentrations versus the analytical method acceptance criteria. Spike recoveries provide an indication of bias, where the reported data may either overestimate or underestimate the actual concentration of detected compounds and/or the detection limits. Accuracy was assessed using surrogate recovery data, LCS/LCSD recovery data, and MS/MSD recovery data for project samples. The LCS/LCSD, MS/MSD, surrogate recoveries, and internal standard response and retention times were within control limits except as noted in Section 6.

Representativeness

Representativeness of the environmental sample analytical data was assessed by evaluating holding times, trip blank, and laboratory method blank results.

- Holding Times. Some analytes were analyzed outside the method-required preparation and analytical holding times.
- Trip blanks were non-detect except as noted in Section 9a. No other blanks were collected.
- Laboratory method blanks were free of contamination.

Comparability

All samples were collected and handled using industry standard procedures and analyzed using appropriate EPA analytical methods. Sample results were reported in appropriate units. The analytical methods are considered acceptable for generating analytical data for the purpose of this project.

Completeness

Completeness is the quantitative measure of the amount of data obtained from a measurement process compared with the amount expected to be obtained under the conditions of measurement. The data collected during this project are considered 100 percent complete. The overall data quality objective for completeness for the sampling events is >90%.

Sensitivity

Reporting limits and method detection limits were below the screening levels, with exception of those reporting limits that were elevated due to sample matrix or dilution requirements. When a reporting limit exceeded the screening level, the corresponding MDL was evaluated. Data with MDLs below the screening levels required no further evaluation. If a compound was detected below the PQL, but above the MDL, the laboratory qualified the value as estimated and assigned a "J" qualifier. These laboratory-assigned "J" qualified results are considered estimated results as noted in the table above.

The laboratory assigned notations/qualifiers are often for informational purposes. These notations/qualifiers do not necessarily indicate that the results should be considered estimated but may help in evaluating whether results should be considered estimated through this data validation effort. However, exceptions include those samples that were specified by the laboratory to be estimated due to issues or concerns identified within the data package. There are no issues or concerns in this data package.

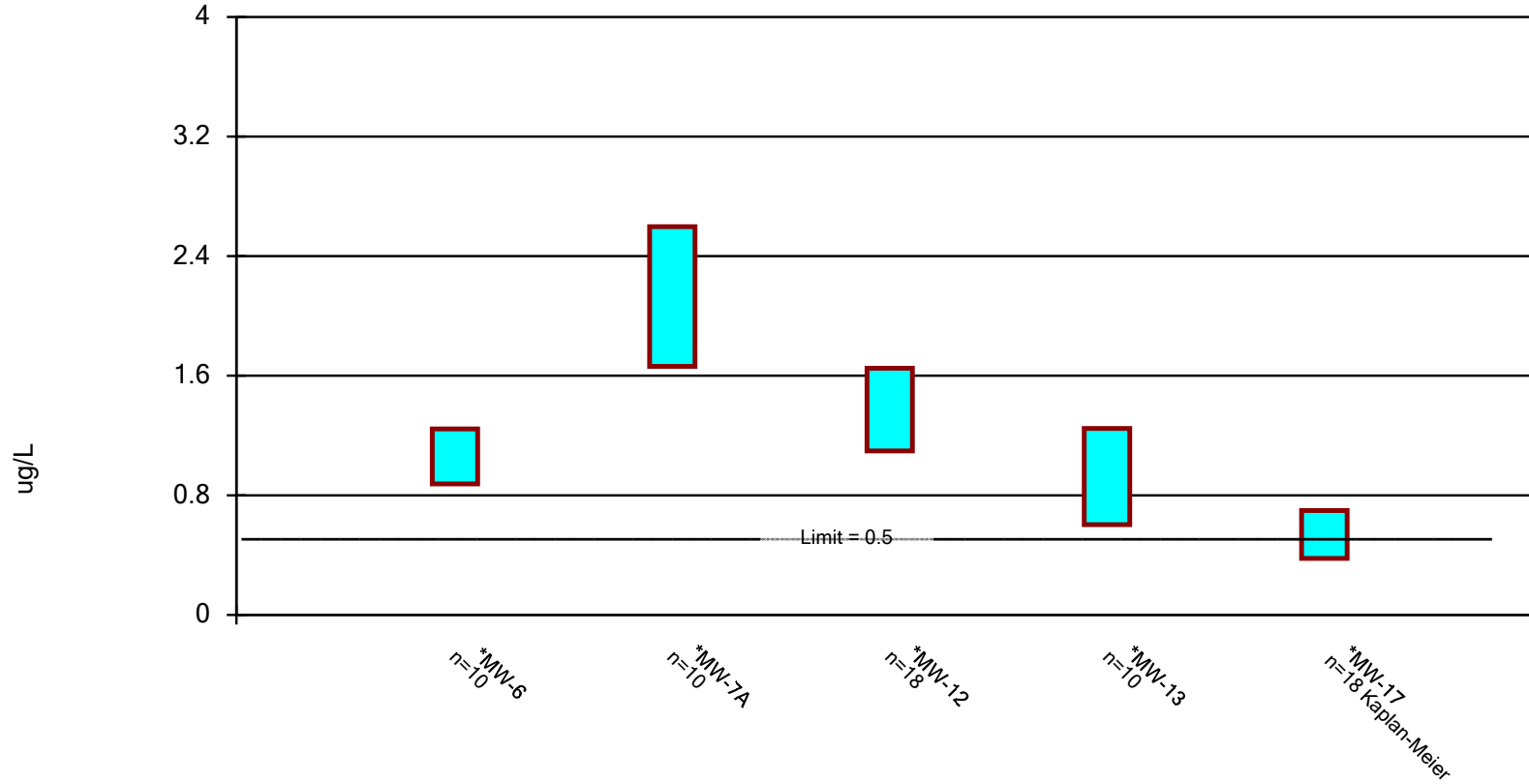
Summary

Overall the analytical data are considered acceptable and have met the quality control and quality assurance objectives and goals of this project. No data were rejected. All results, as qualified, are considered usable for meeting project objectives. Qualifications made during this project are discussed above.

APPENDIX E – STATISTICAL EVALUATION WORKSHEETS

Parametric Confidence Interval, Corrective Action Mode

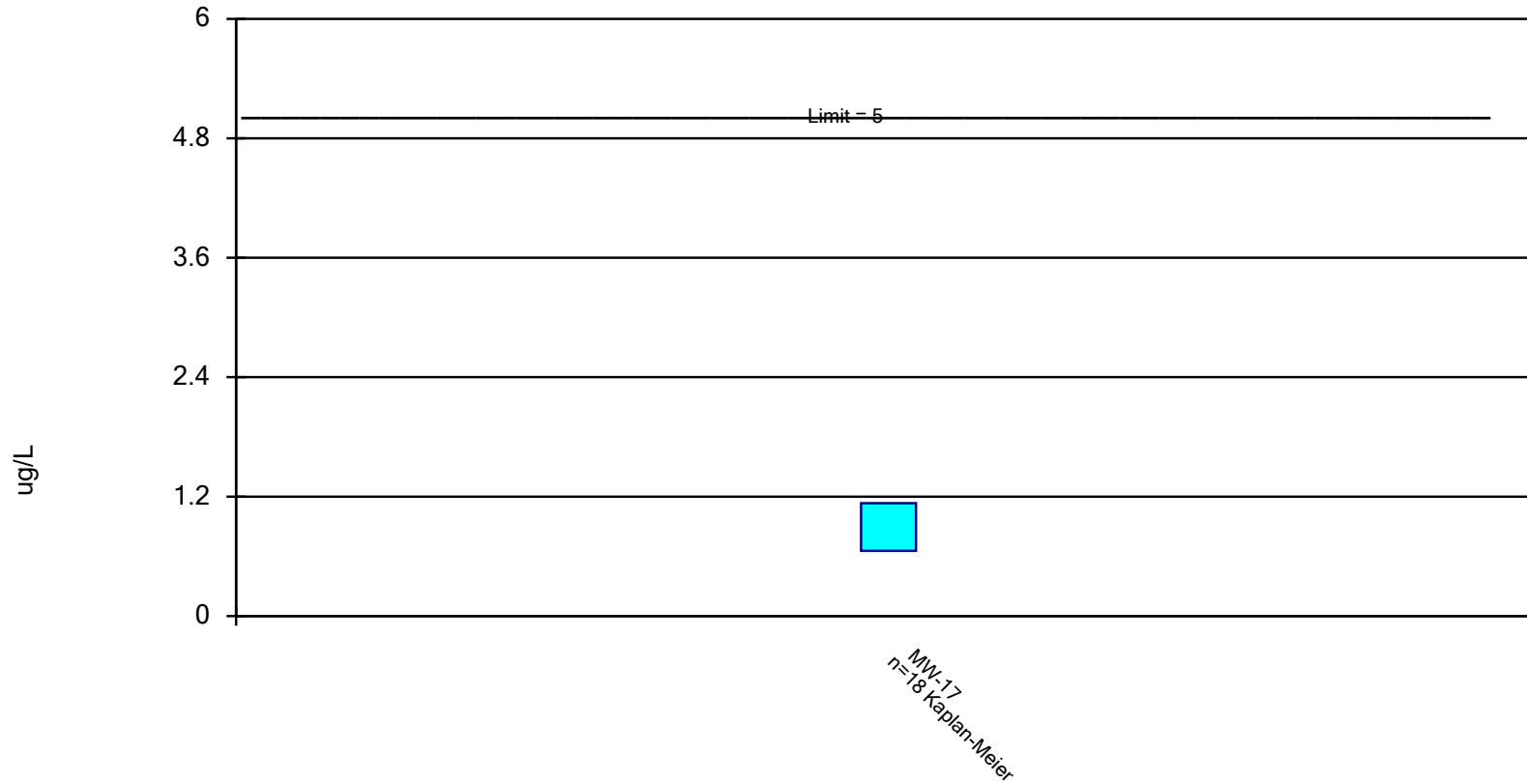
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: 1,1-Dichloroethane Analysis Run 11/18/2022 2:31 PM View: 2022.06 Dbl Quant Rule
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Parametric Confidence Interval, Corrective Action Mode

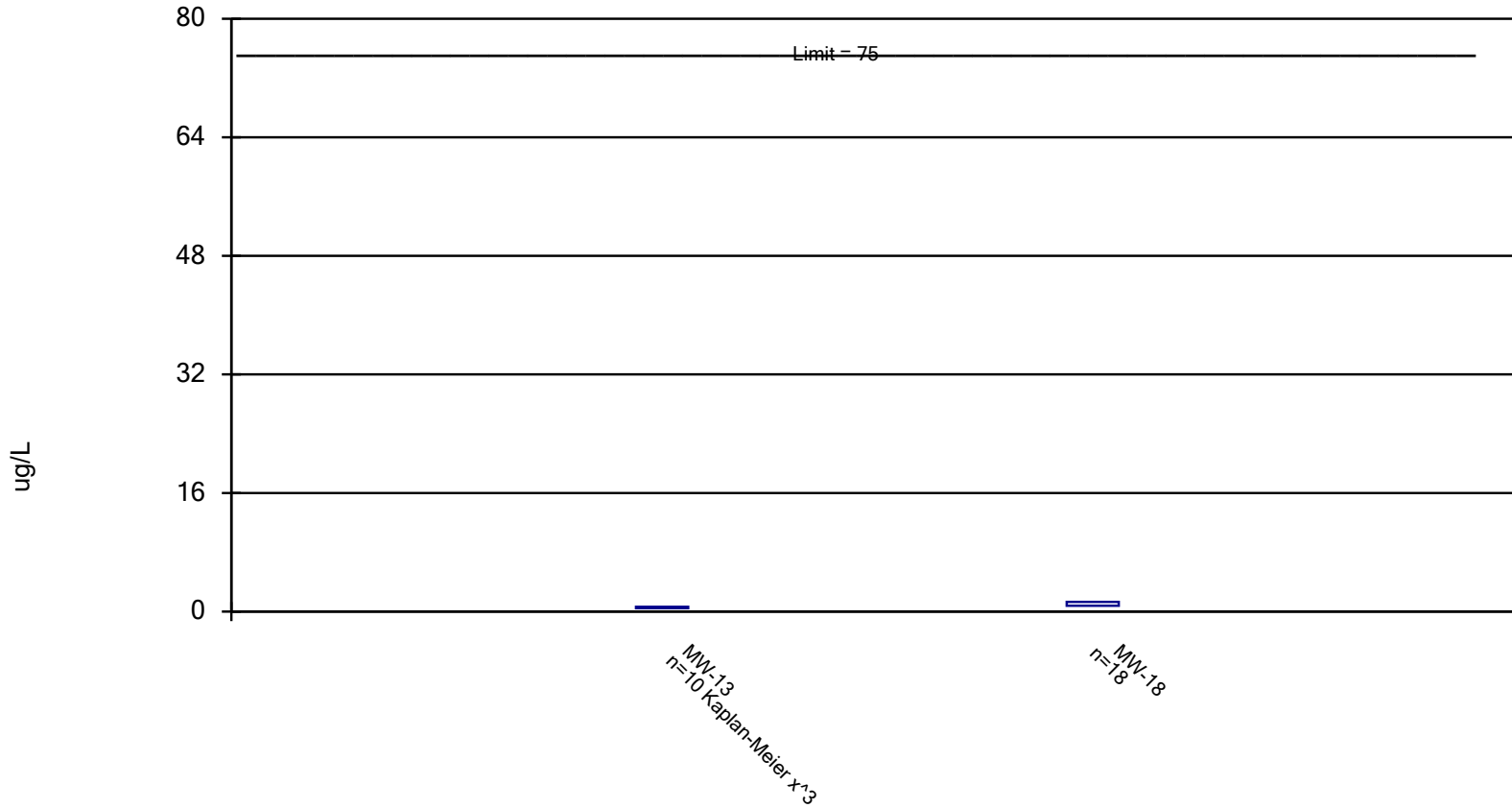
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: 1,2-Dichloropropane Analysis Run 11/18/2022 2:31 PM View: 2022.06 Dbl Quant Rule
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Parametric Confidence Interval, Corrective Action Mode

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



Constituent: 1,4-Dichlorobenzene

Bozeman Landfill

Analysis Run 11/18/2022 2:31 PM

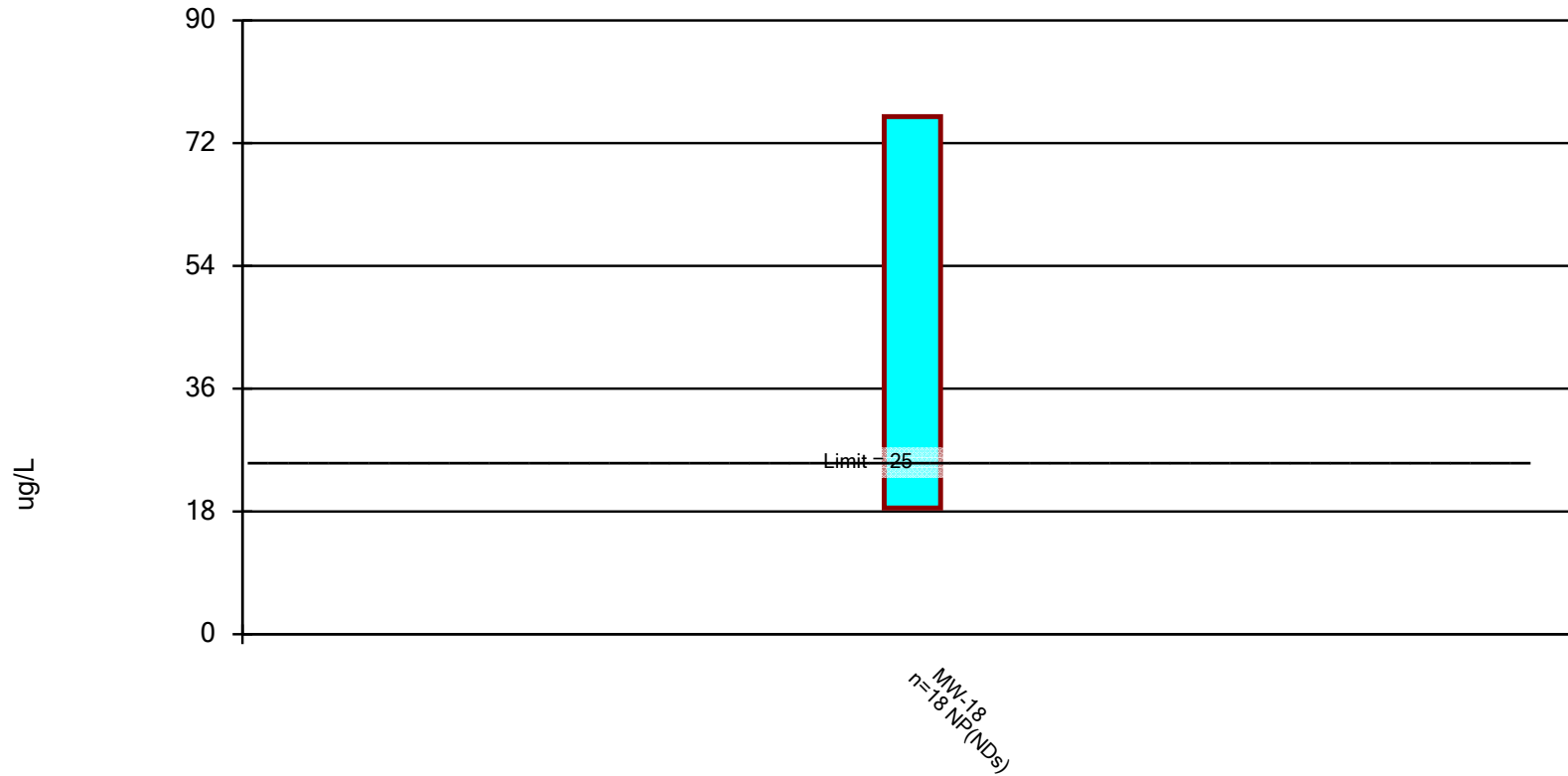
Client: Tetra Tech, Inc.

View: 2022.06 Dbl Quant Rule

Data: Bozeman Lf Organics

Non-Parametric Confidence Interval, Corrective Action Mode

Compliance limit is exceeded. Per-well alpha = 0.01.

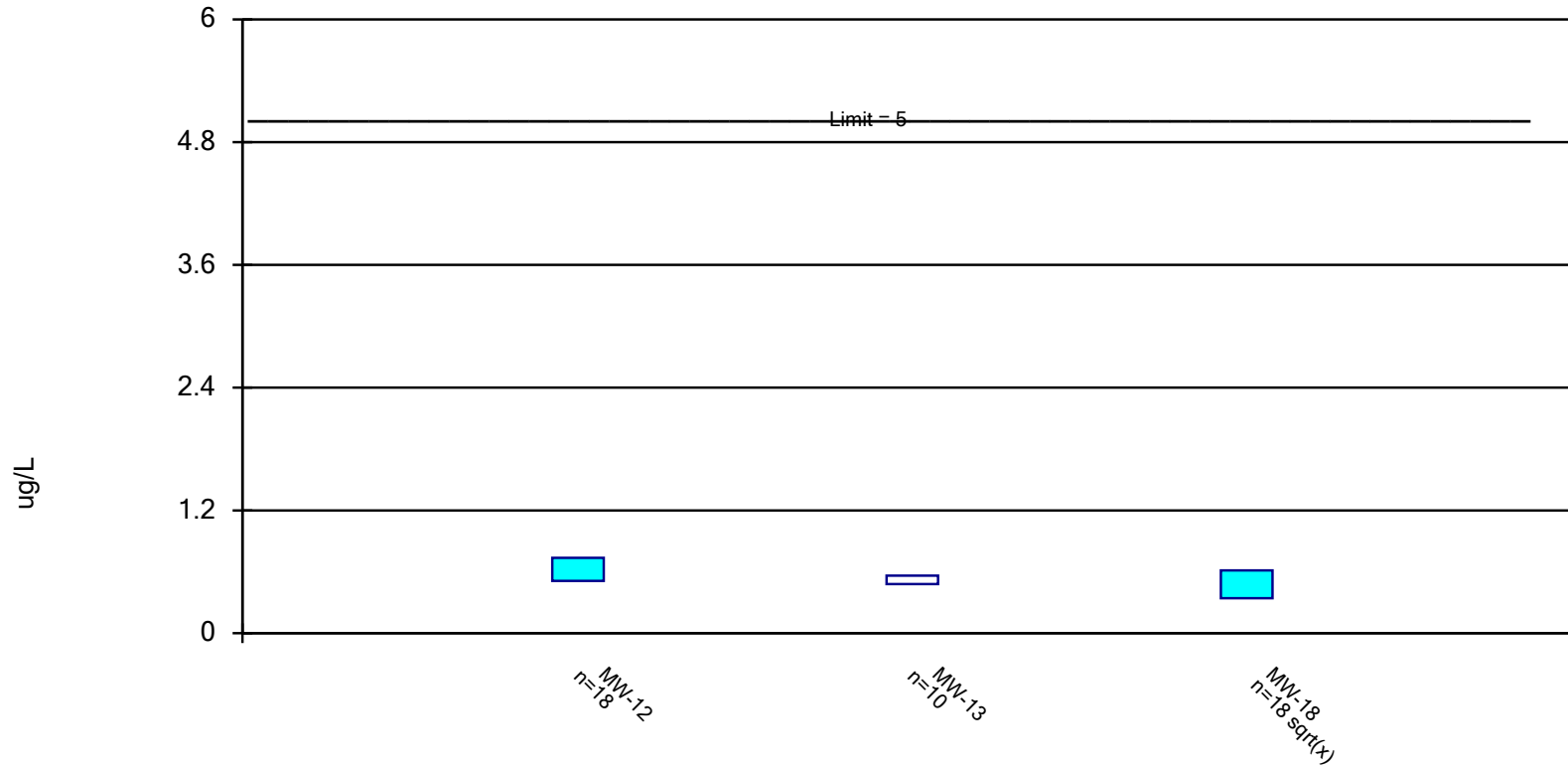


Constituent: Acetone Analysis Run 11/18/2022 2:31 PM View: 2022.06 Dbl Quant Rule

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Parametric Confidence Interval, Corrective Action Mode

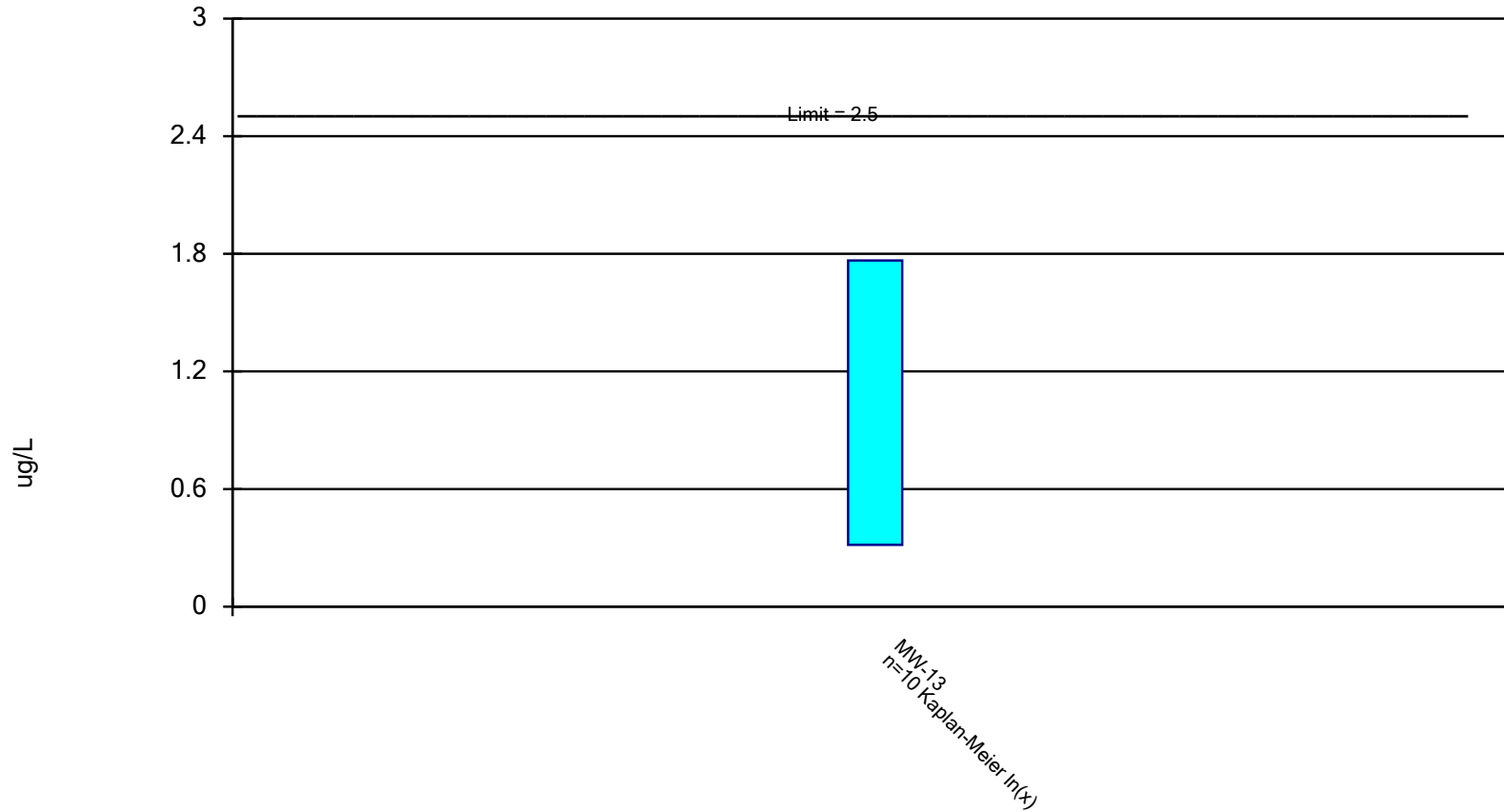
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Benzene Analysis Run 11/18/2022 2:31 PM View: 2022.06 Dbl Quant Rule
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Parametric Confidence Interval, Corrective Action Mode

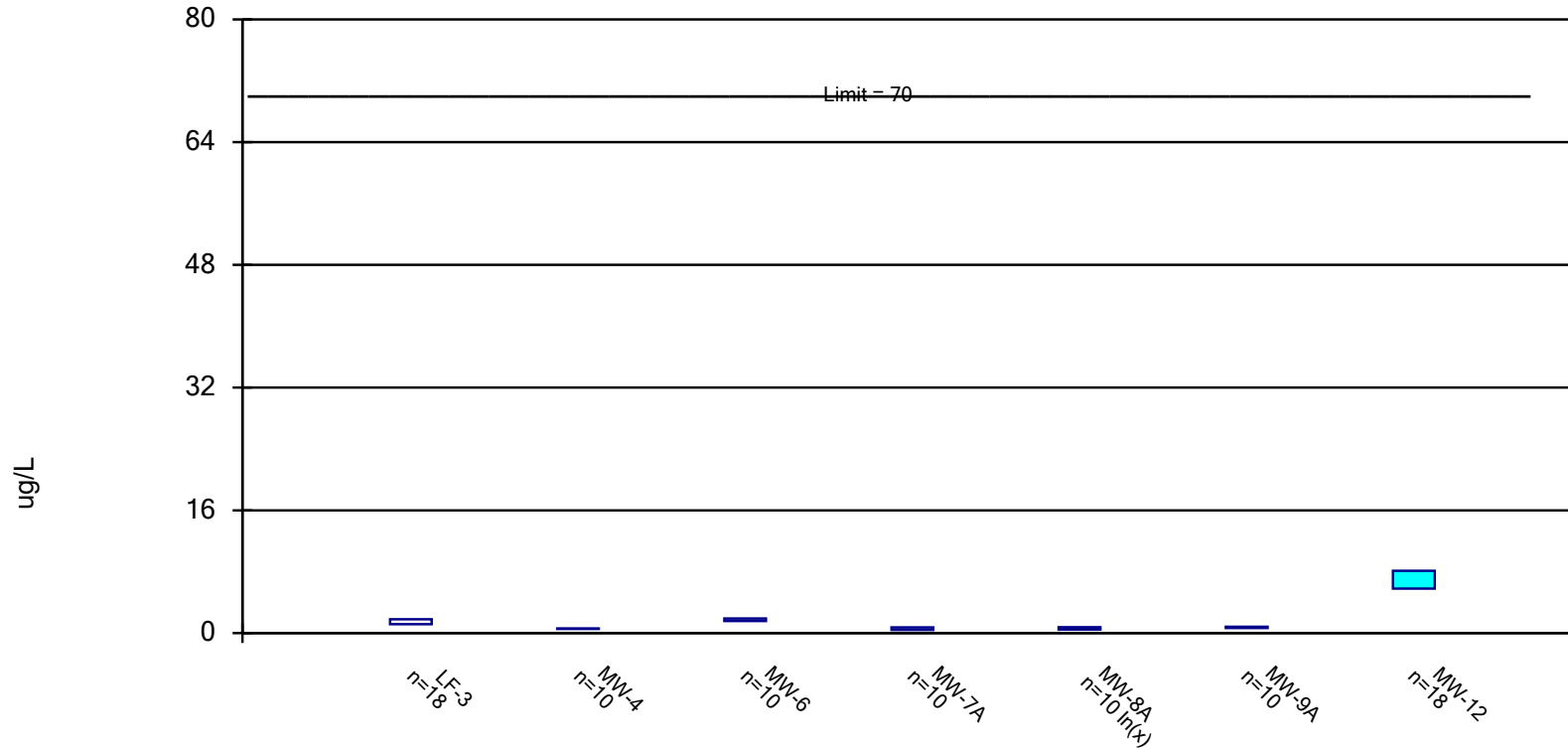
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Chloroethane Analysis Run 11/18/2022 2:31 PM View: 2022.06 Dbl Quant Rule
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Parametric Confidence Interval, Corrective Action Mode

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



Constituent: cis-1,2-Dichloroethene

Bozeman Landfill

Analysis Run 11/18/2022 2:31 PM

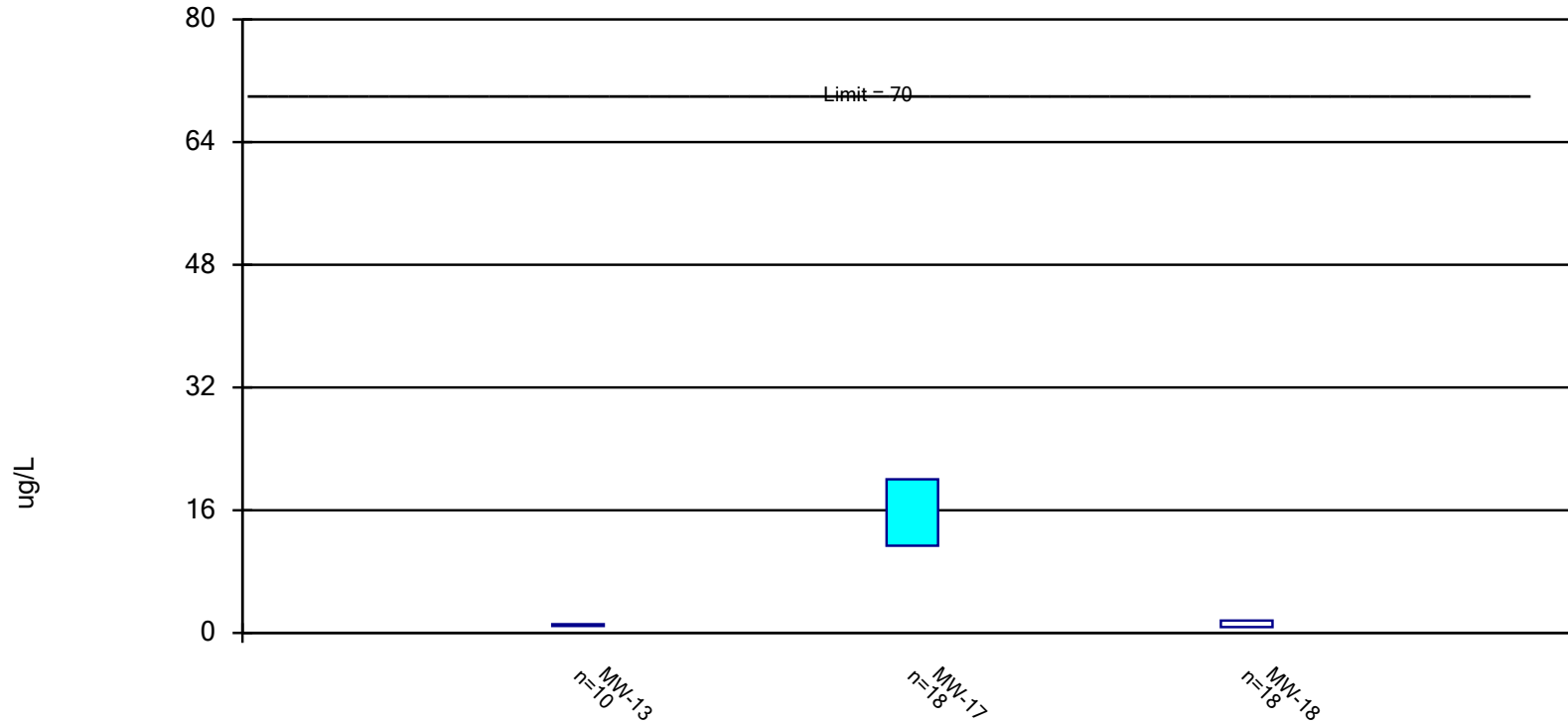
Client: Tetra Tech, Inc.

View: 2022.06 Dbl Quant Rule

Data: Bozeman Lf Organics

Parametric Confidence Interval, Corrective Action Mode

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



Constituent: cis-1,2-Dichloroethene

Bozeman Landfill

Analysis Run 11/18/2022 2:31 PM

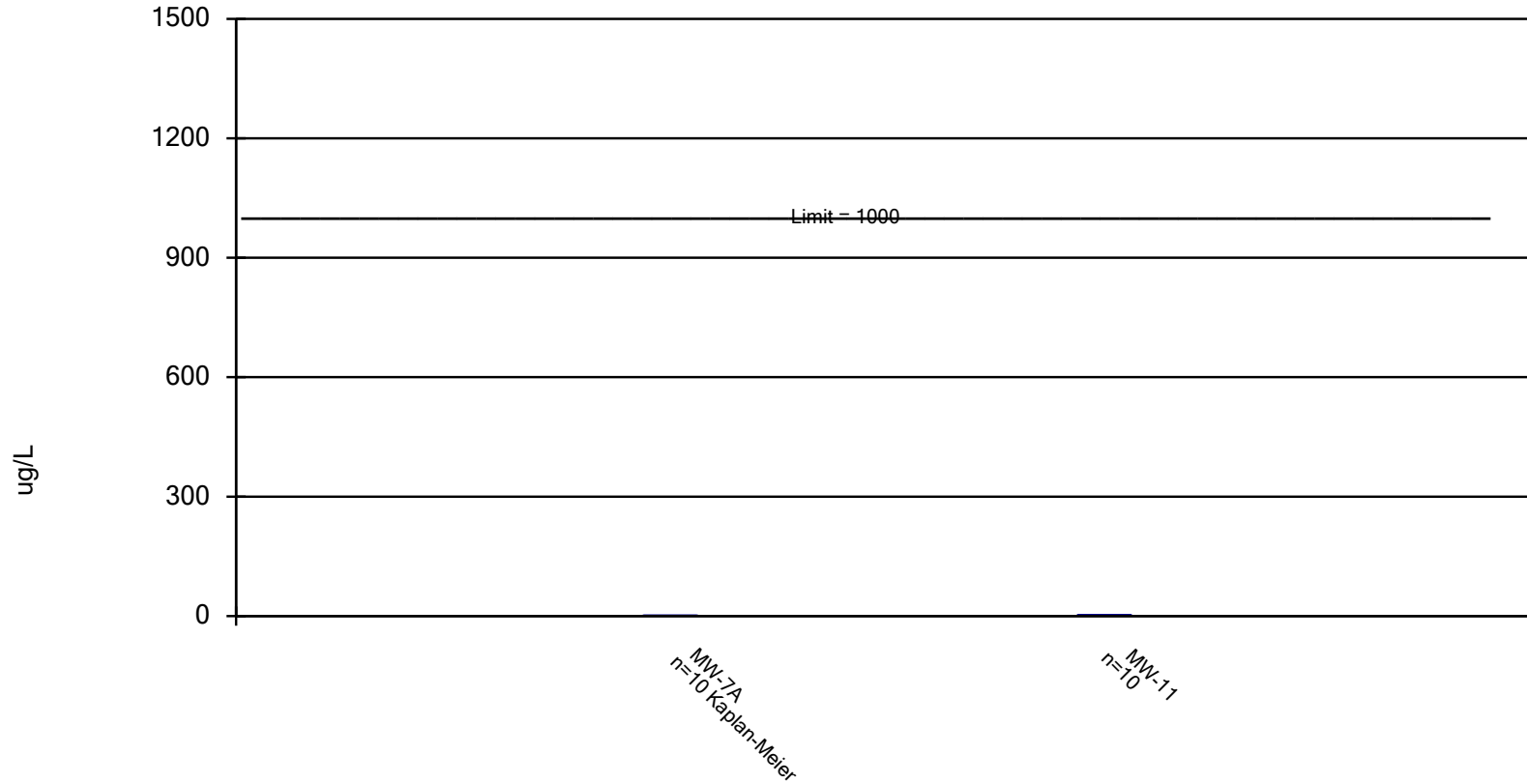
Client: Tetra Tech, Inc.

View: 2022.06 Dbl Quant Rule

Data: Bozeman Lf Organics

Parametric Confidence Interval, Corrective Action Mode

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

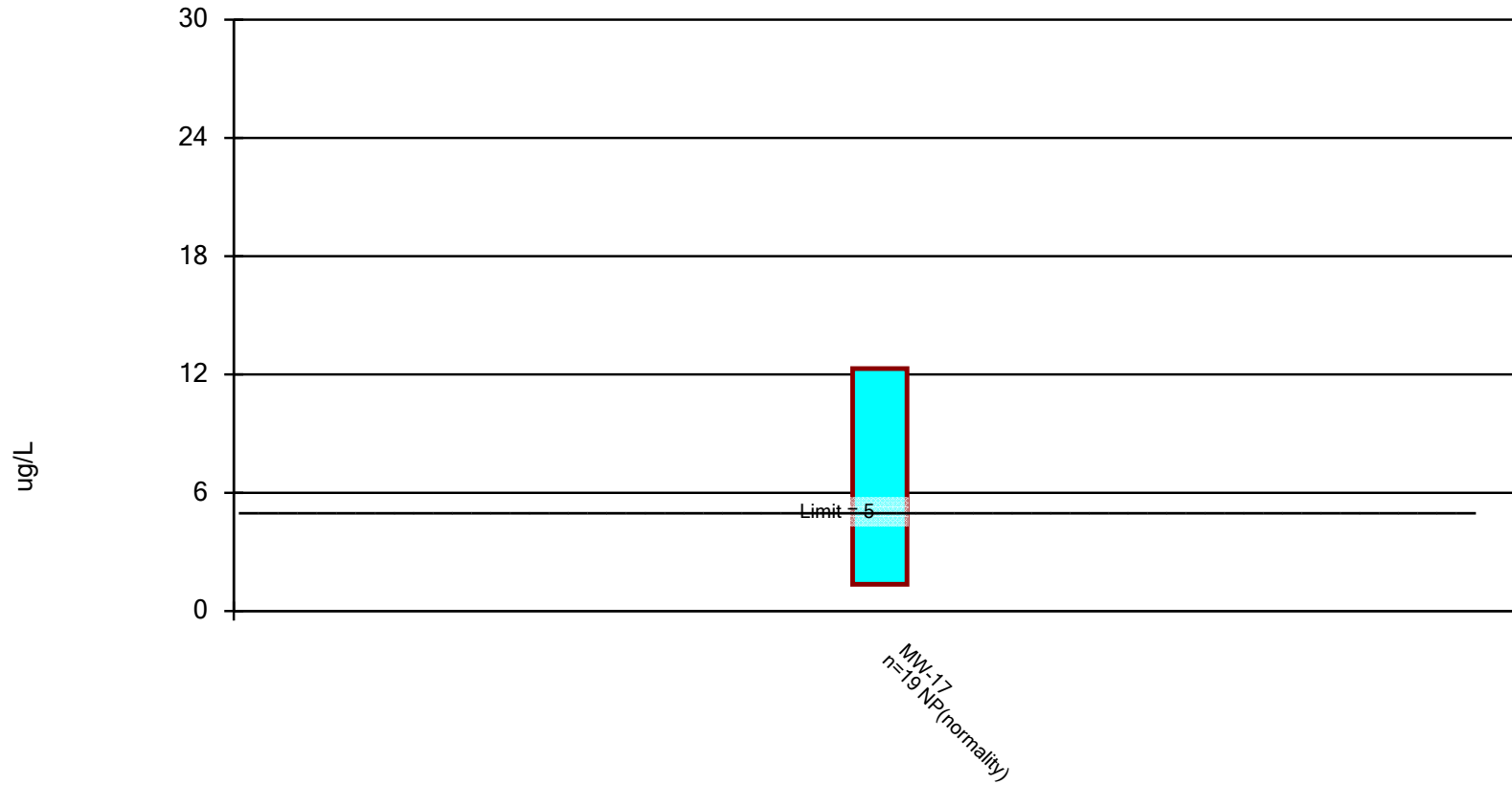


Constituent: Dichlorodifluoromethane

Bozeman Landfill Analysis Run 11/18/2022 2:31 PM View: 2022.06 Dbl Quant Rule
Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Non-Parametric Confidence Interval, Corrective Action Mode

Compliance limit is exceeded. Per-well alpha = 0.01.



Constituent: Methylene Chloride

Bozeman Landfill

Analysis Run 11/18/2022 2:31 PM

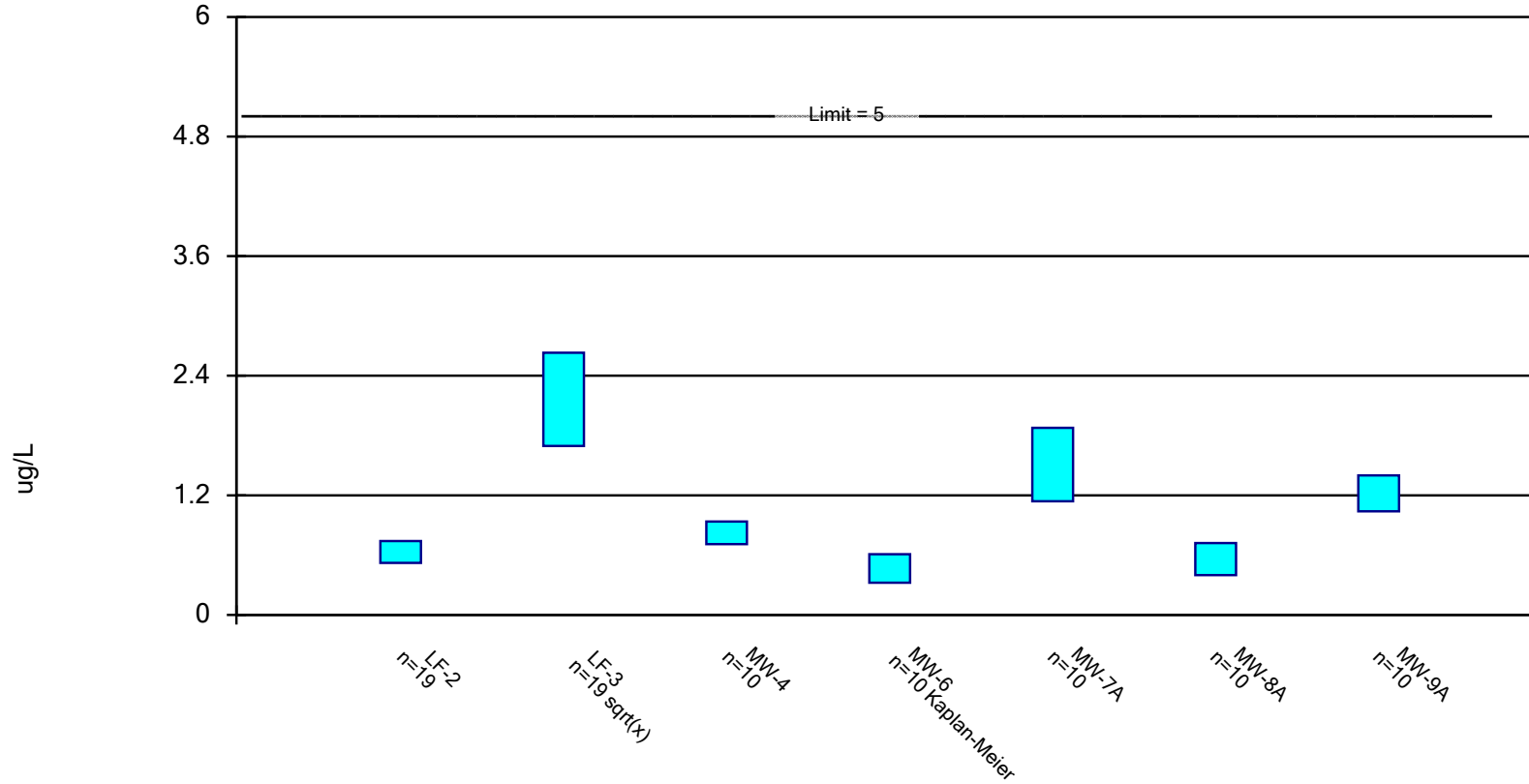
Client: Tetra Tech, Inc.

View: 2022.06 Dbl Quant Rule

Data: Bozeman Lf Organics

Parametric Confidence Interval, Corrective Action Mode

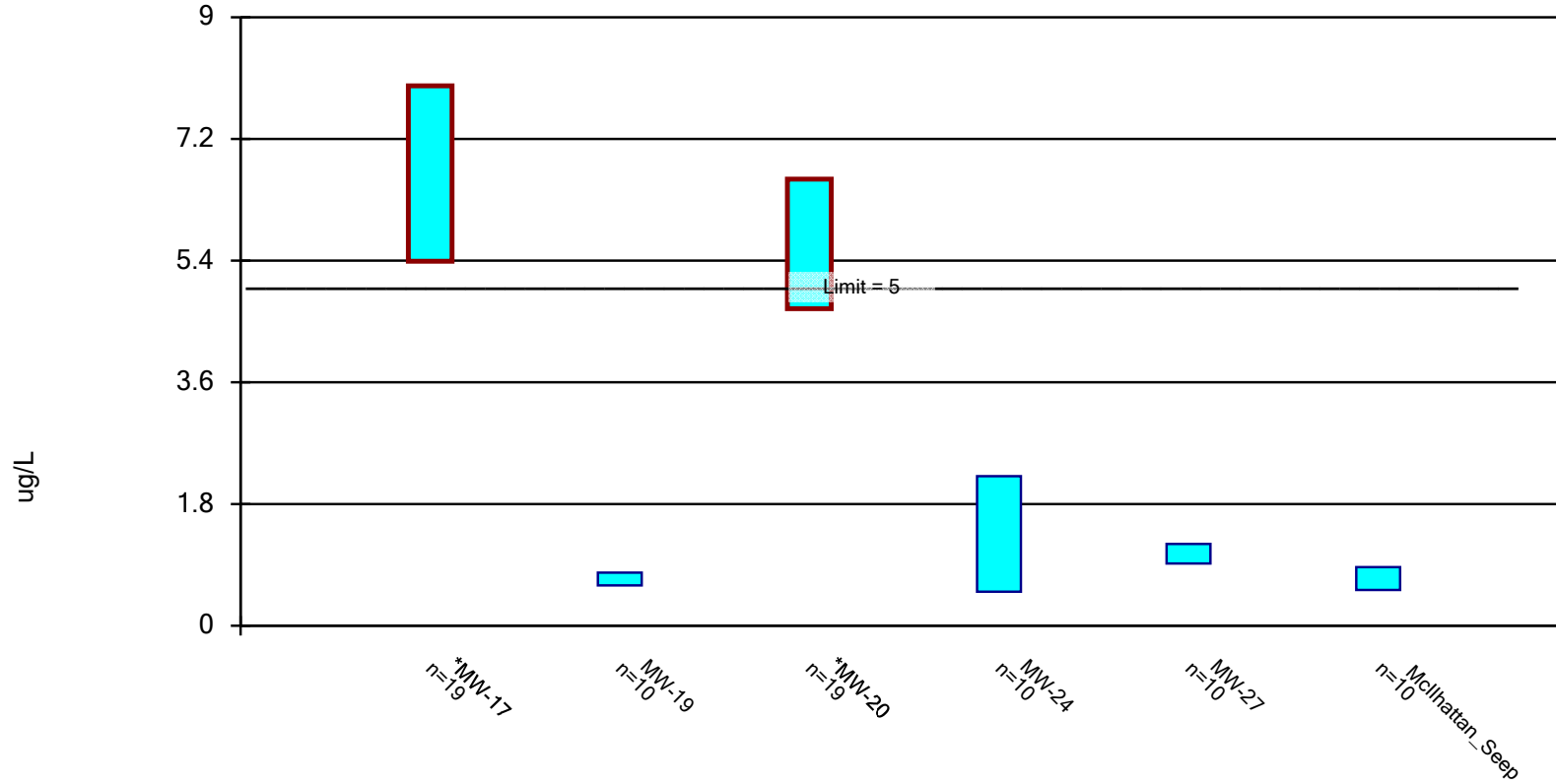
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Tetrachloroethene Analysis Run 11/18/2022 2:31 PM View: 2022.06 Dbl Quant Rule
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Parametric Confidence Interval, Corrective Action Mode

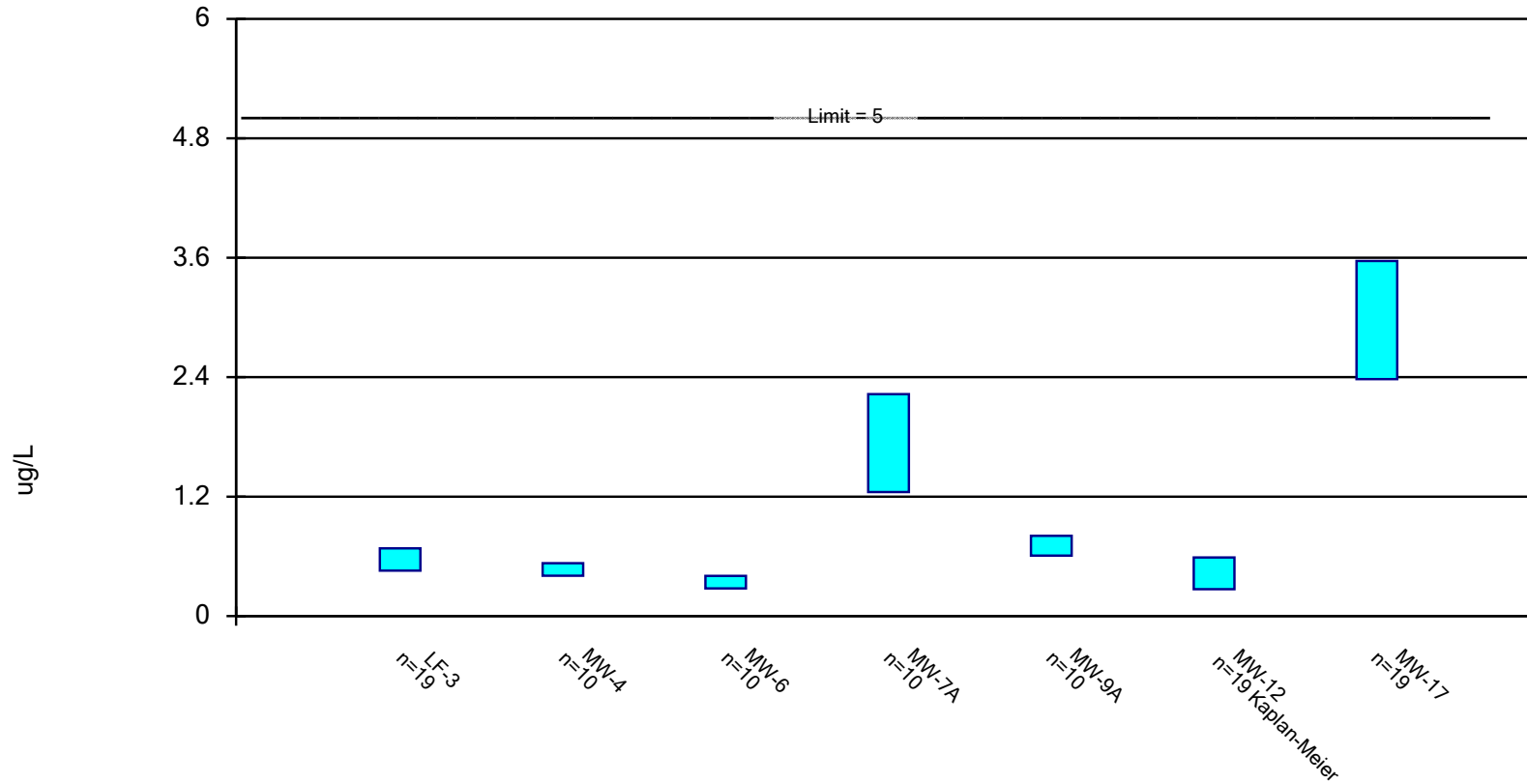
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Tetrachloroethene Analysis Run 11/18/2022 2:31 PM View: 2022.06 Dbl Quant Rule
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Parametric Confidence Interval, Corrective Action Mode

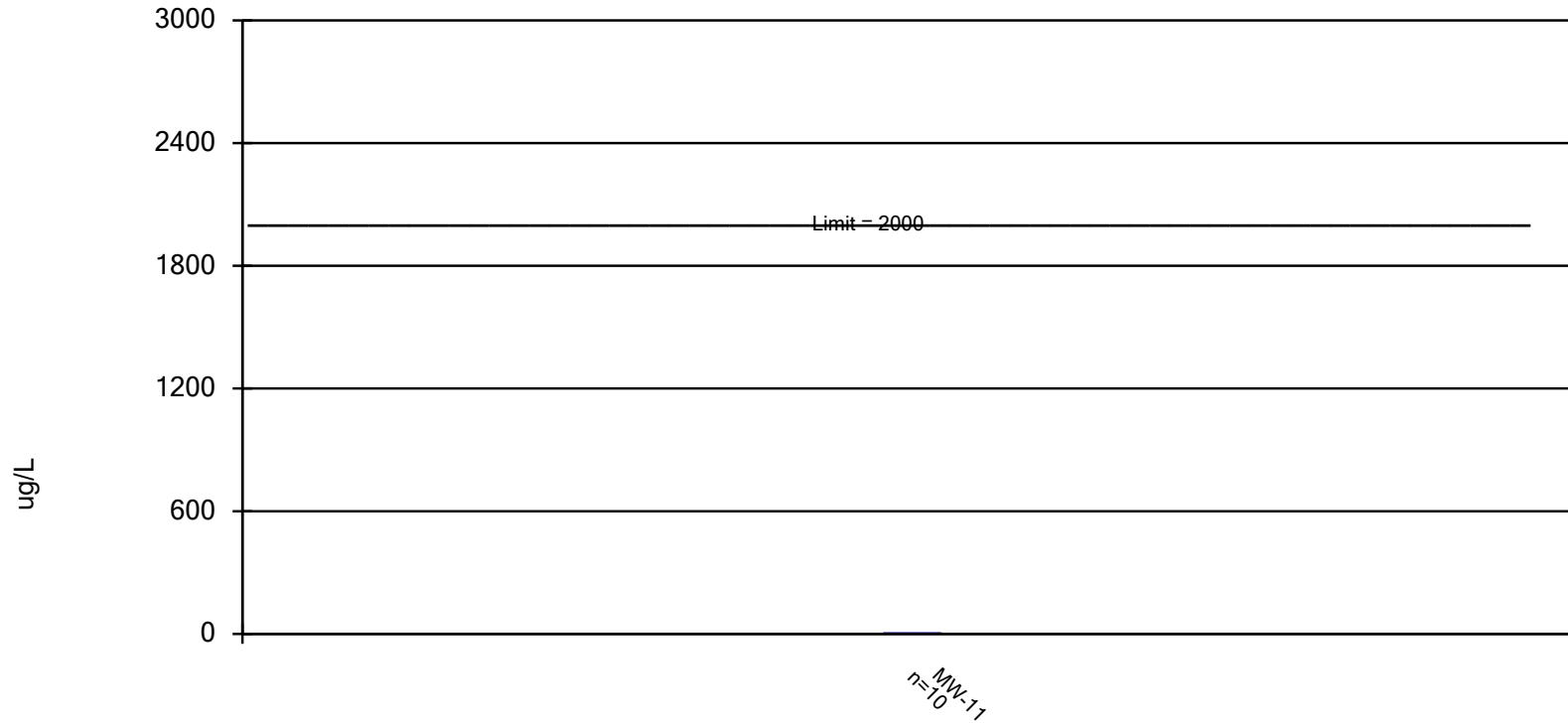
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Trichloroethene Analysis Run 11/18/2022 2:31 PM View: 2022.06 Dbl Quant Rule
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Parametric Confidence Interval, Corrective Action Mode

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



Constituent: Trichlorofluoromethane

Bozeman Landfill

Analysis Run_11/18/2022 2:31 PM

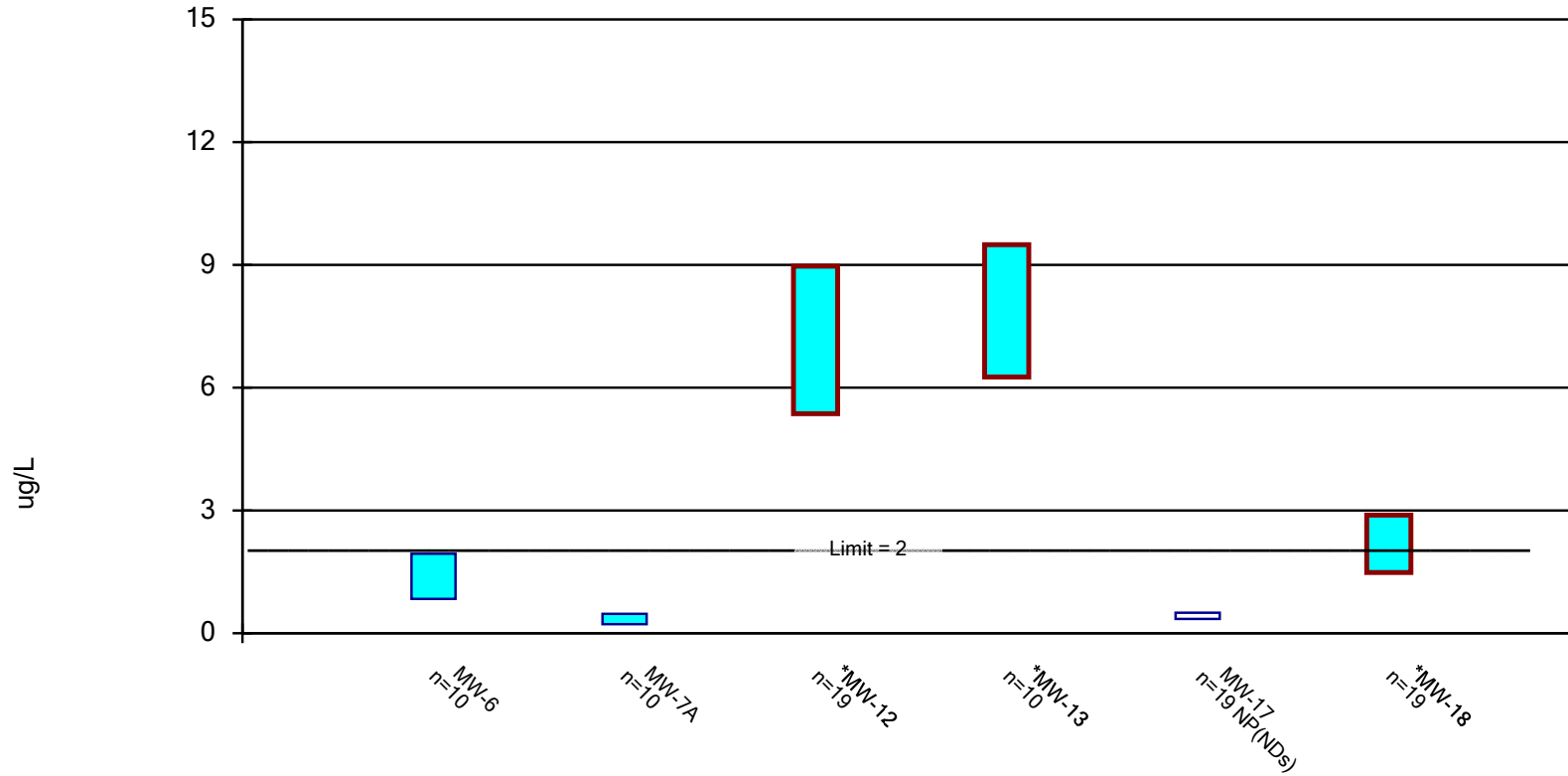
Client: Tetra Tech, Inc.

View: 2022.06 Dbl Quant Rule

Data: Bozeman Lf Organics

Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

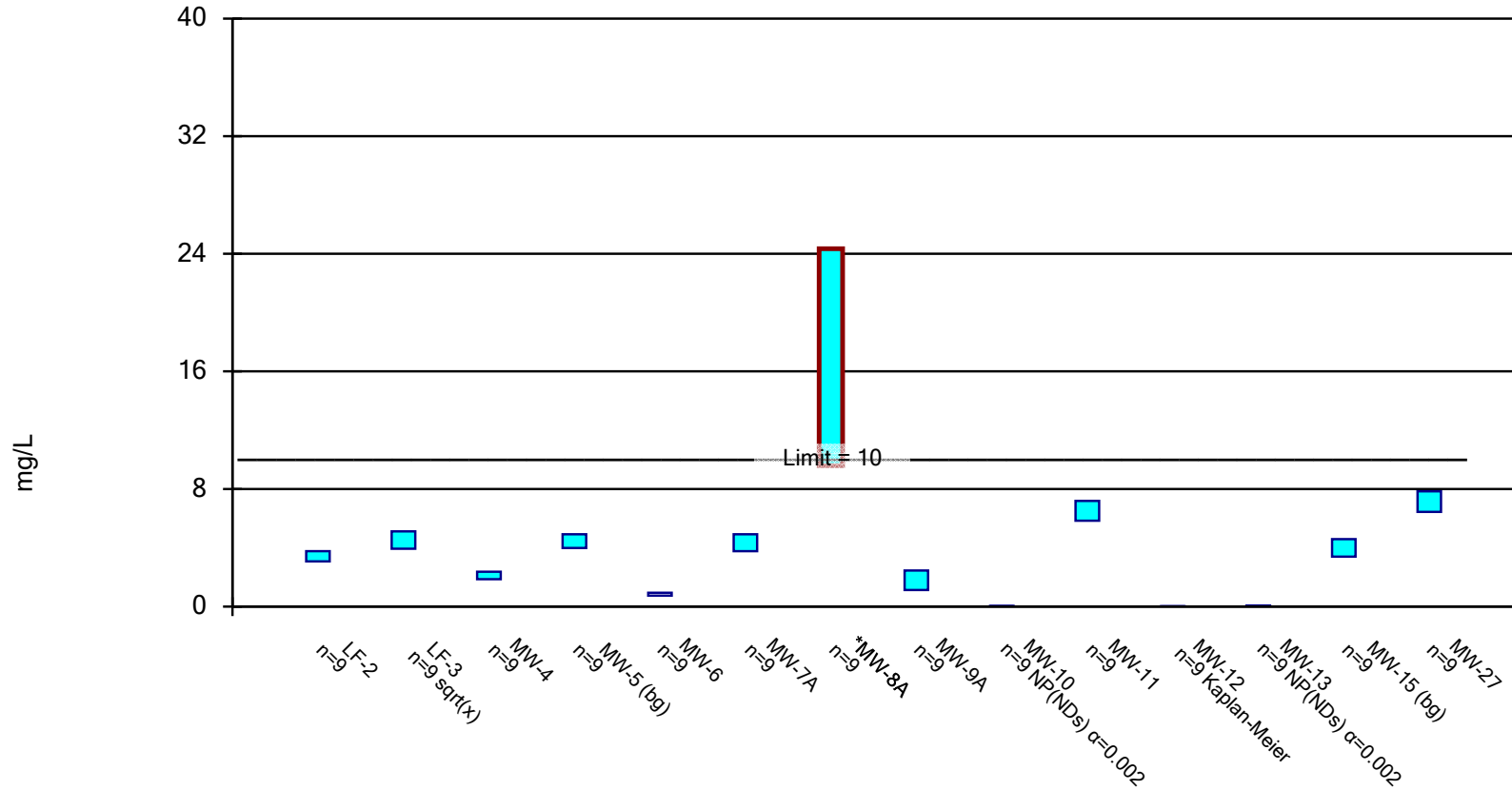
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Vinyl chloride Analysis Run 11/18/2022 2:31 PM View: 2022.06 Dbl Quant Rule
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

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

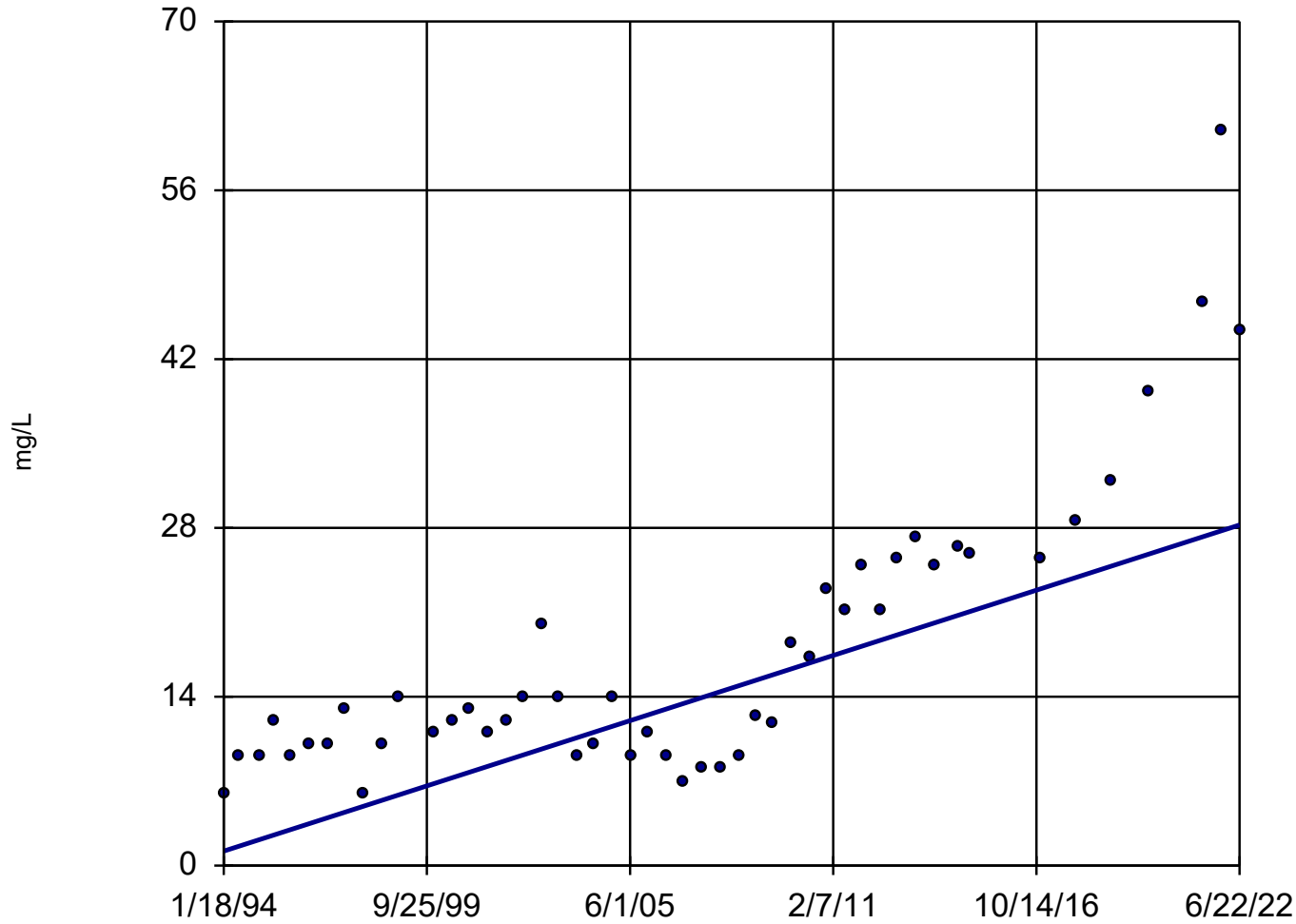


Constituent: Nitrogen, NO2 plus NO3 Analysis Run 11/22/2022 2:02 PM View: MW-8A Nitrates

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

LF-3



n = 49

Slope = 0.9508
units per year.

Mann-Kendall
normal approx. =
6.034
critical = 2.33

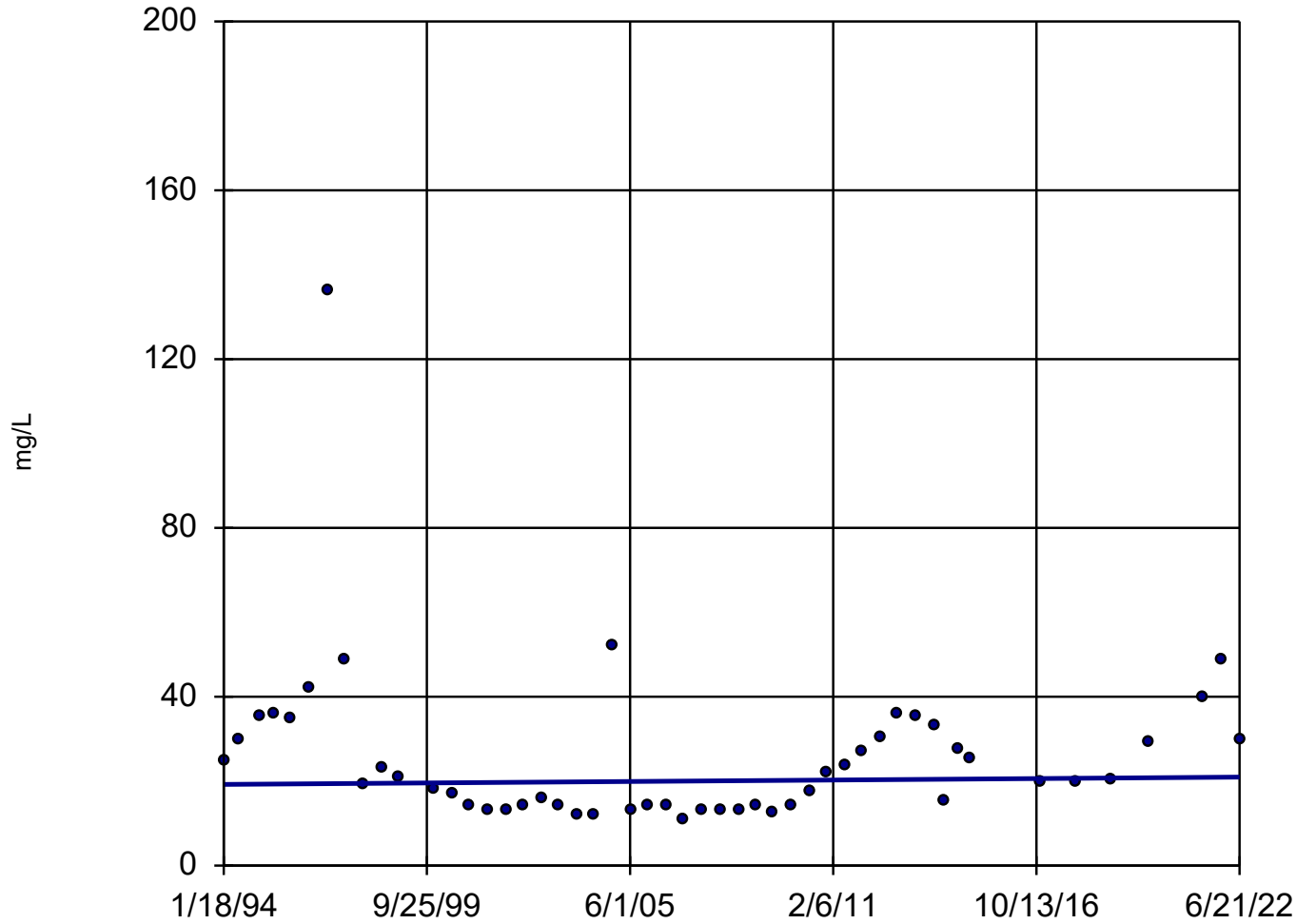
Increasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Chloride Analysis Run 11/22/2022 1:35 PM

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

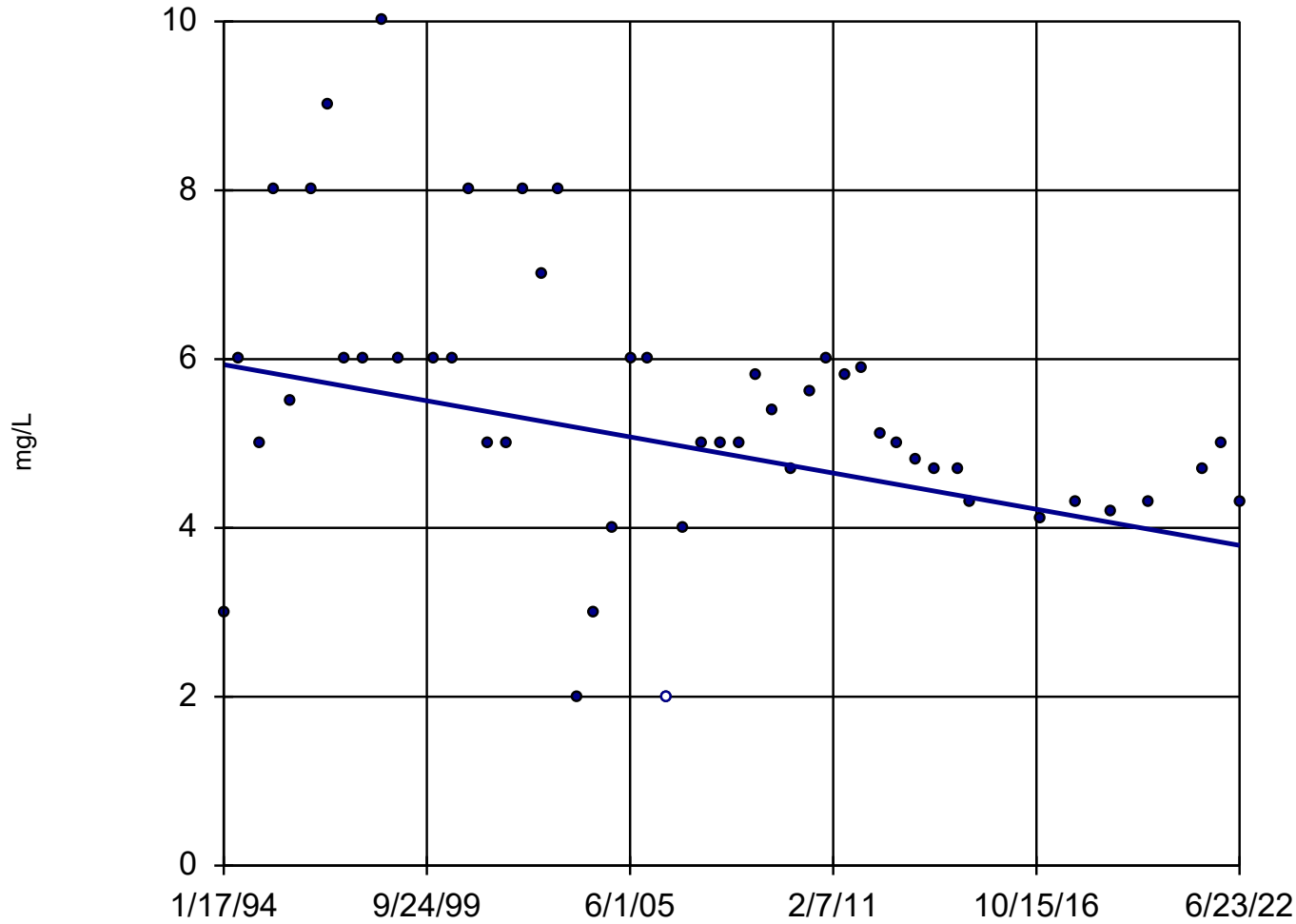
Sen's Slope Estimator

MW-4



Sen's Slope Estimator

MW-5 (bg)



n = 49

Slope = -0.07524
units per year.

Mann-Kendall
normal approx. =
-3.638
critical = -2.33

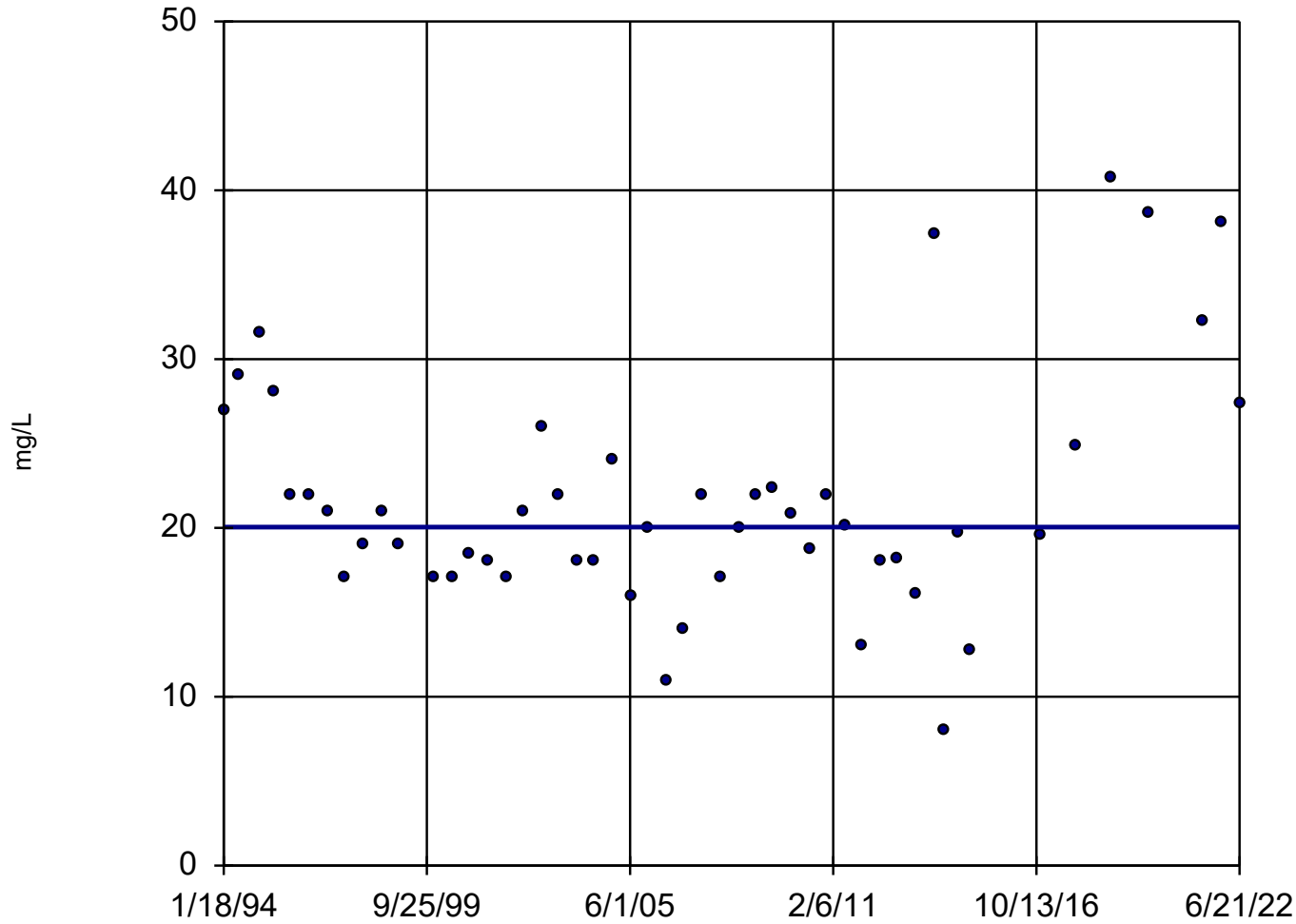
Decreasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Chloride Analysis Run 11/22/2022 1:35 PM

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-6



n = 50

Slope = 0
units per year.

Mann-Kendall
normal approx. =
0
critical = 2.33

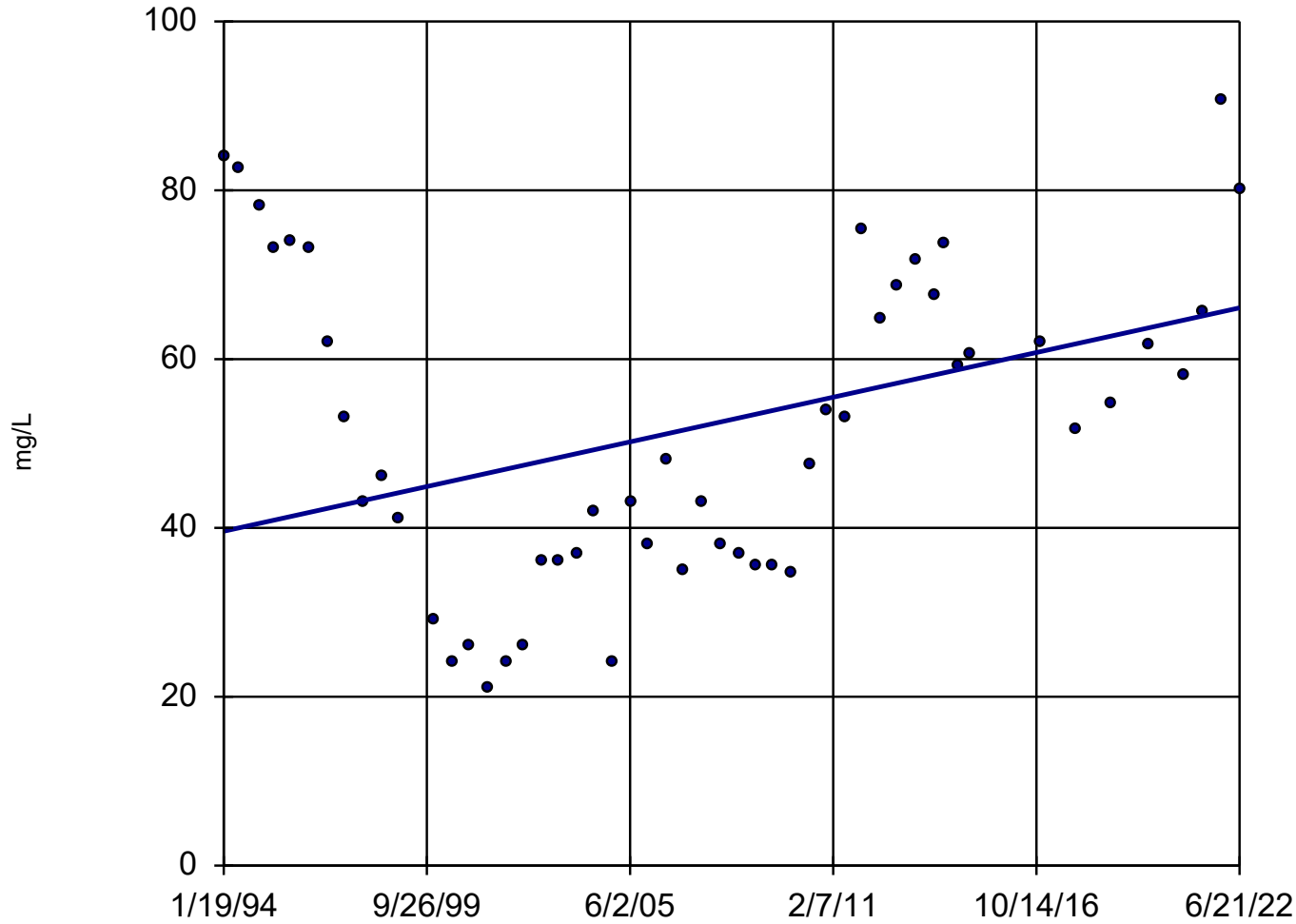
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Chloride Analysis Run 11/22/2022 1:35 PM

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-8A



n = 51

Slope = 0.9299
units per year.

Mann-Kendall
normal approx. =
1.731
critical = 2.33

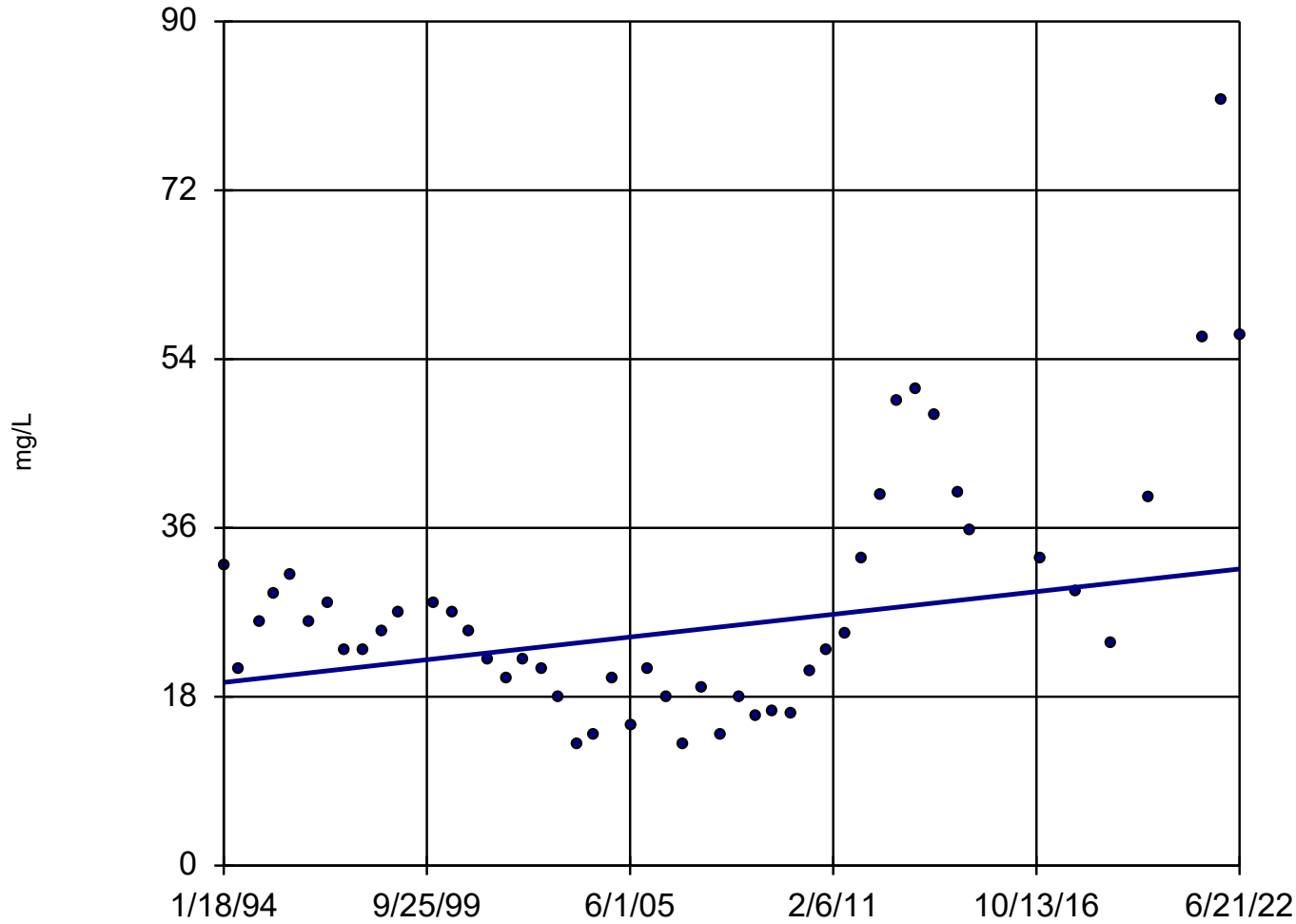
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Chloride Analysis Run 11/22/2022 1:35 PM

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-9A

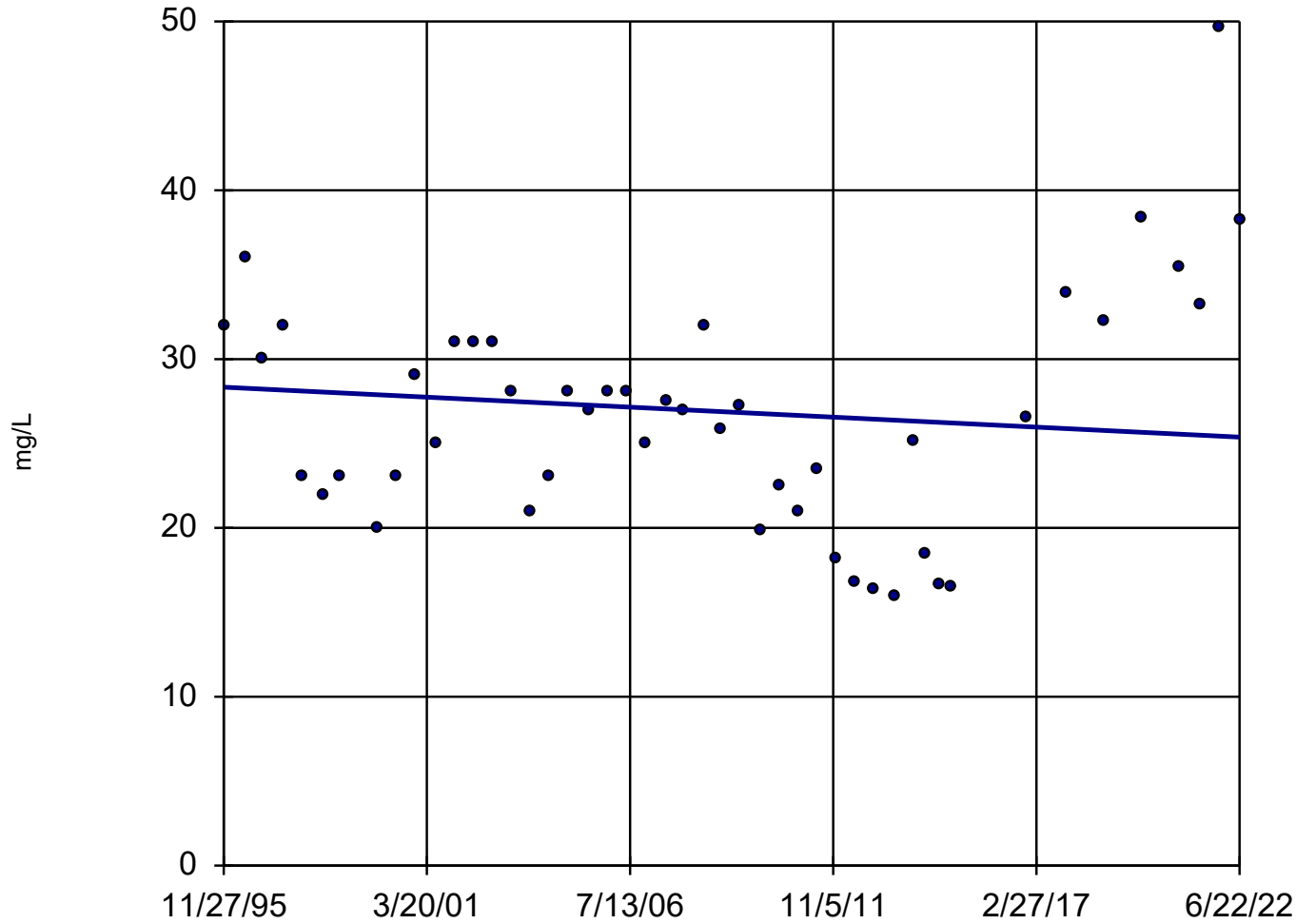


Constituent: Chloride Analysis Run 11/22/2022 1:35 PM

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-12

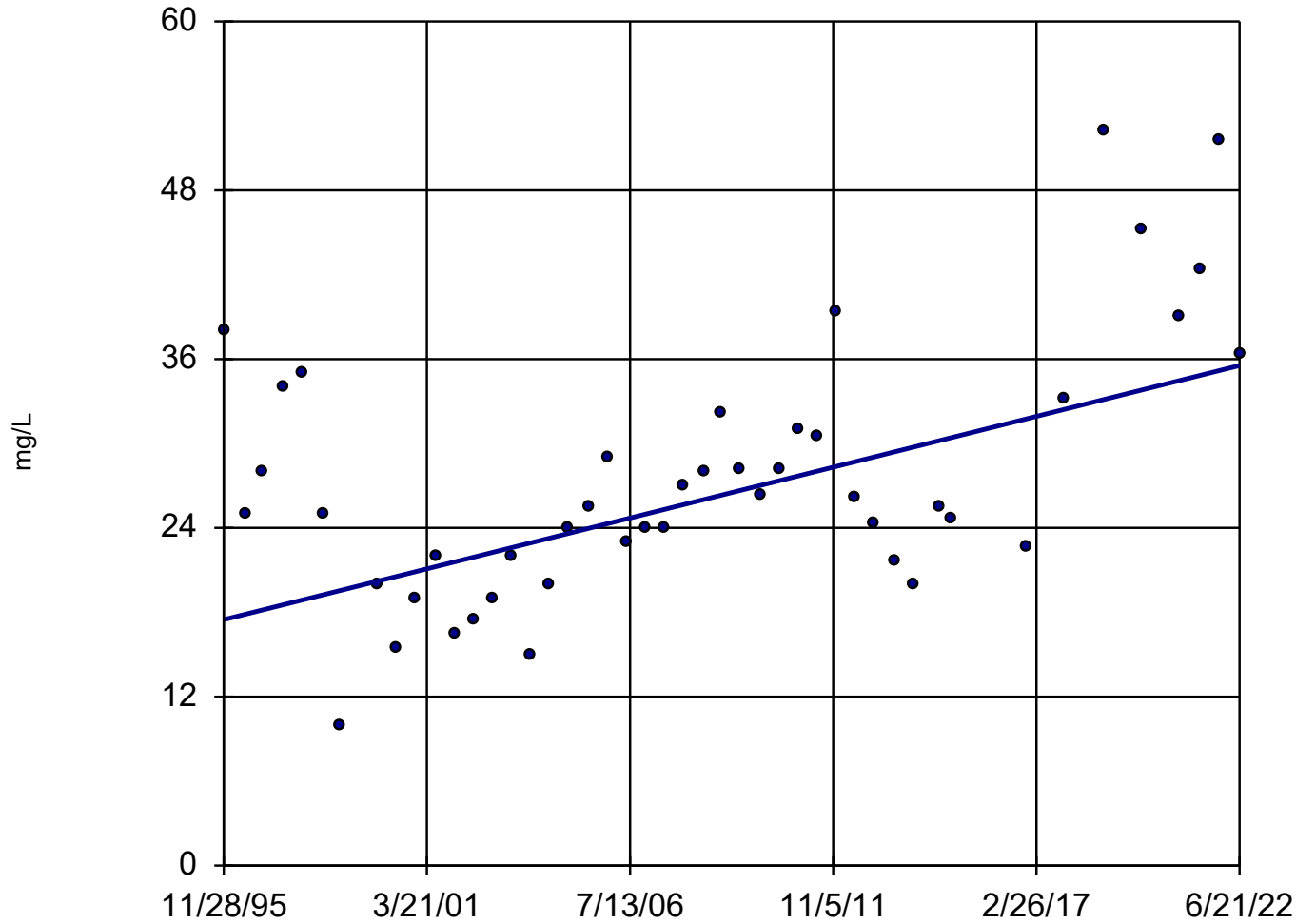


Constituent: Chloride Analysis Run 11/22/2022 1:35 PM

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

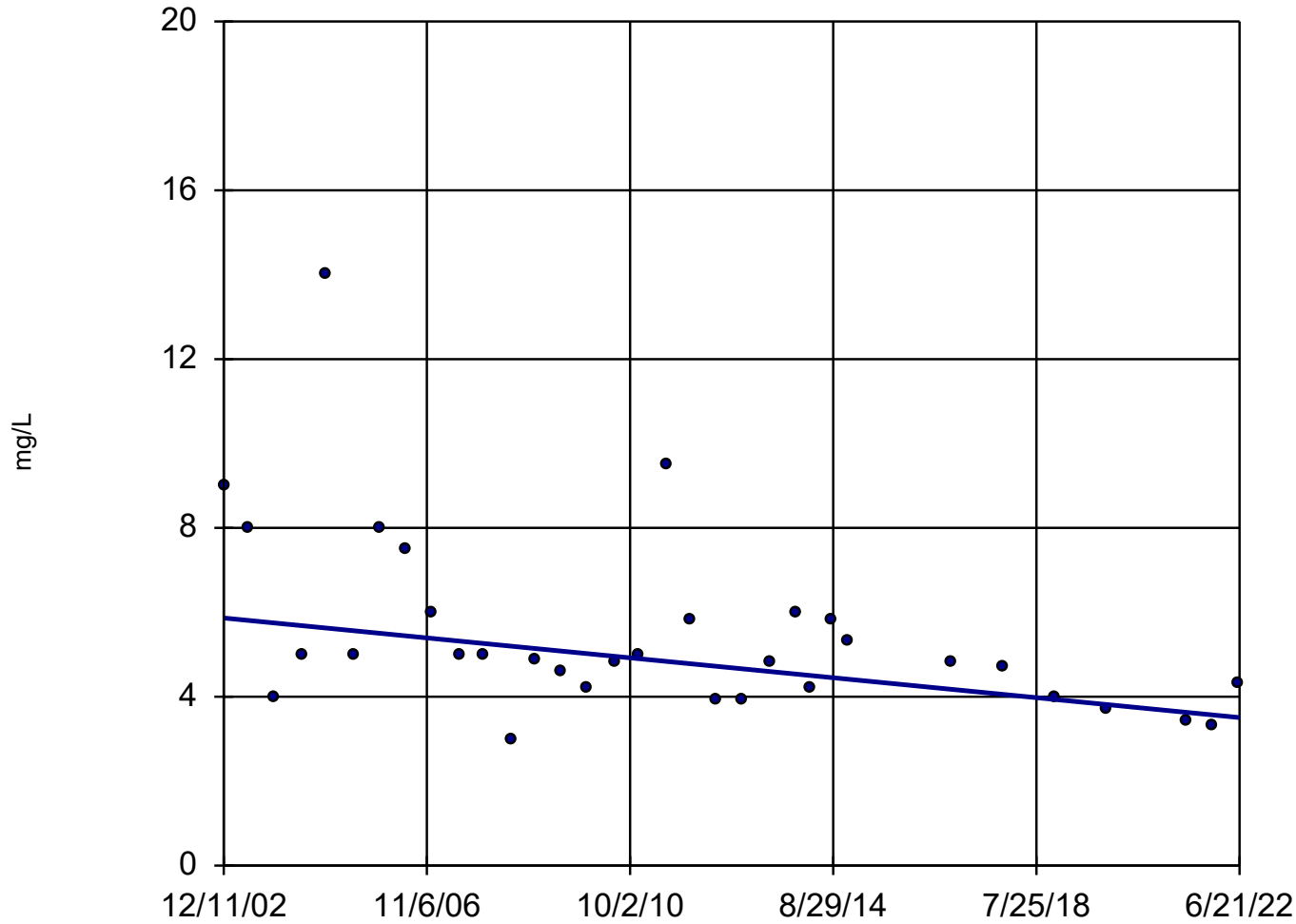
MW-13



Constituent: Chloride Analysis Run 11/22/2022 1:35 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-15 (bg)



n = 33

Slope = -0.1207
units per year.

Mann-Kendall
statistic = -215
critical = -151

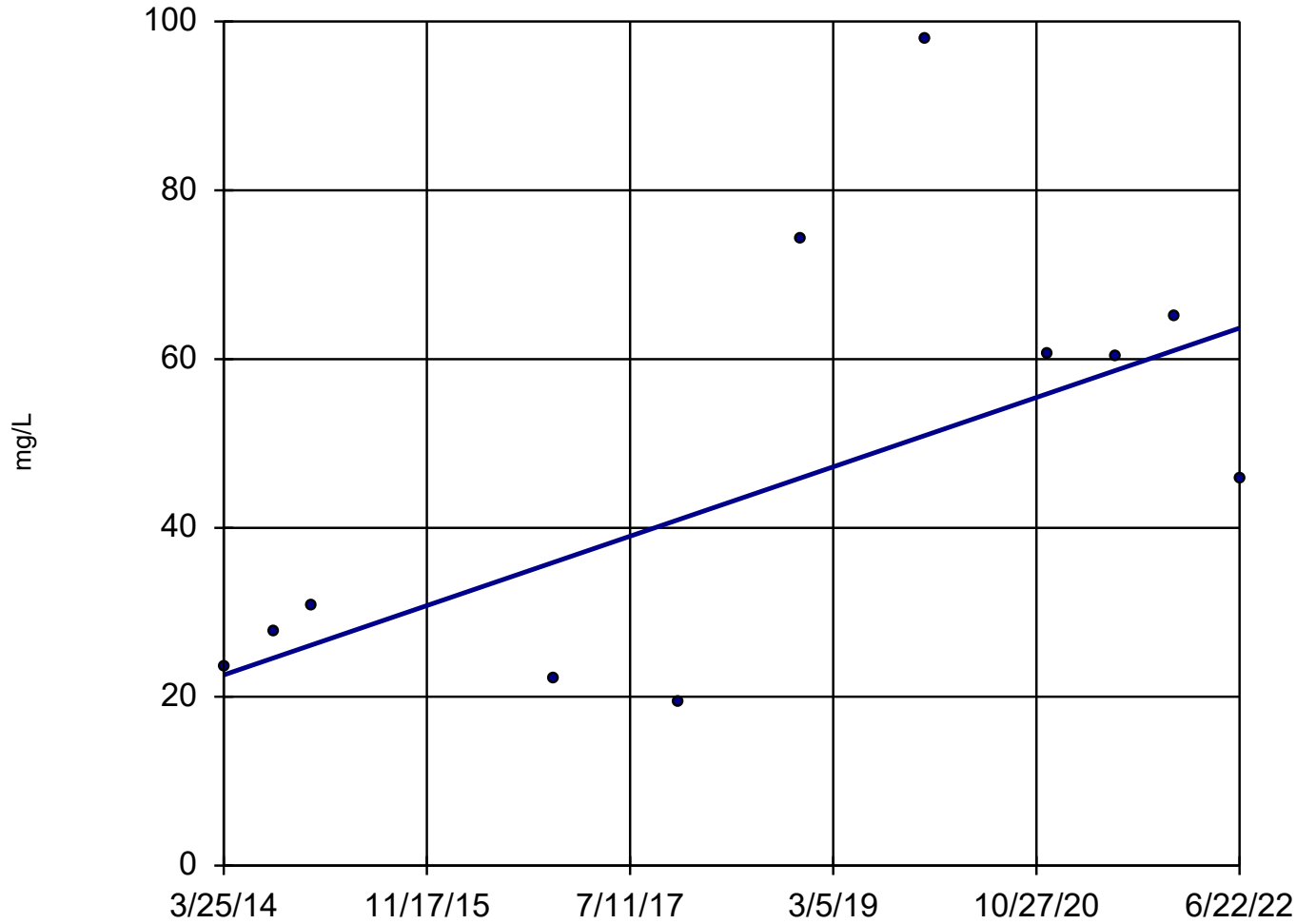
Decreasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Chloride Analysis Run 11/22/2022 1:35 PM

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-17



n = 11

Slope = 4.98
units per year.

Mann-Kendall
statistic = 17
critical = 31

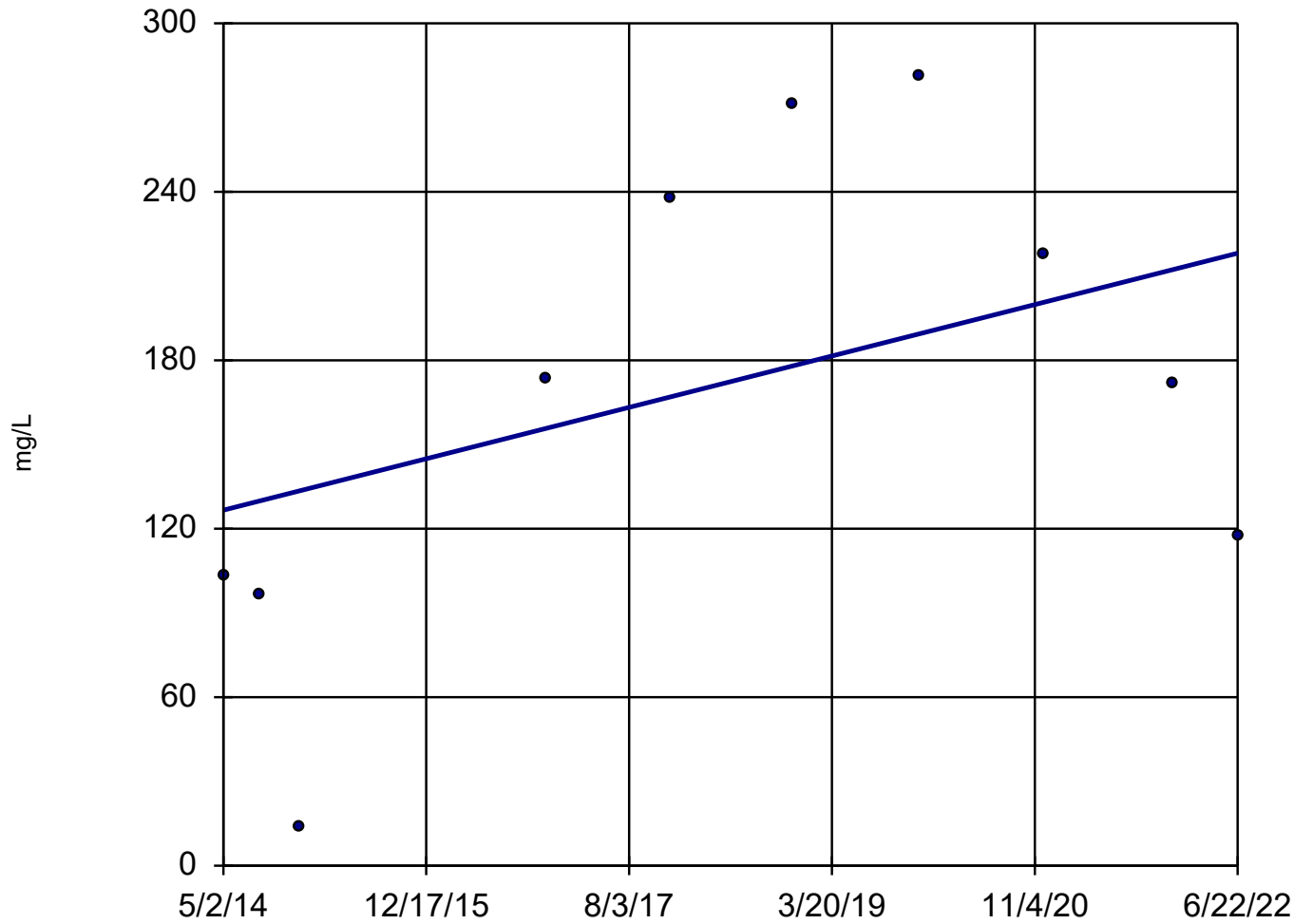
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Chloride Analysis Run 11/22/2022 1:35 PM

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-18



n = 10

Slope = 11.23
units per year.

Mann-Kendall
statistic = 11
critical = 27

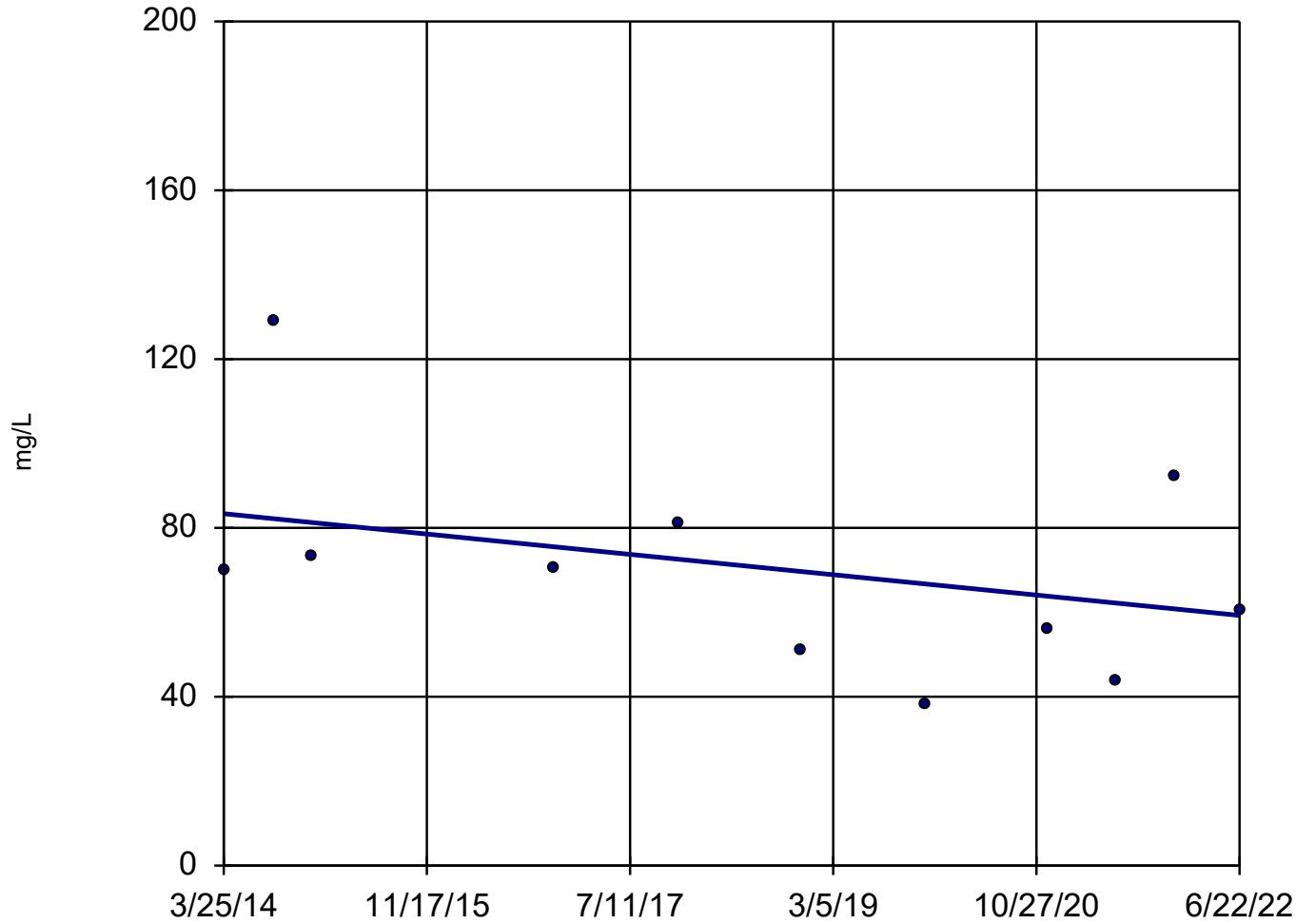
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Chloride Analysis Run 11/22/2022 1:35 PM

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-20



n = 11

Slope = -2.918
units per year.

Mann-Kendall
statistic = -13
critical = -31

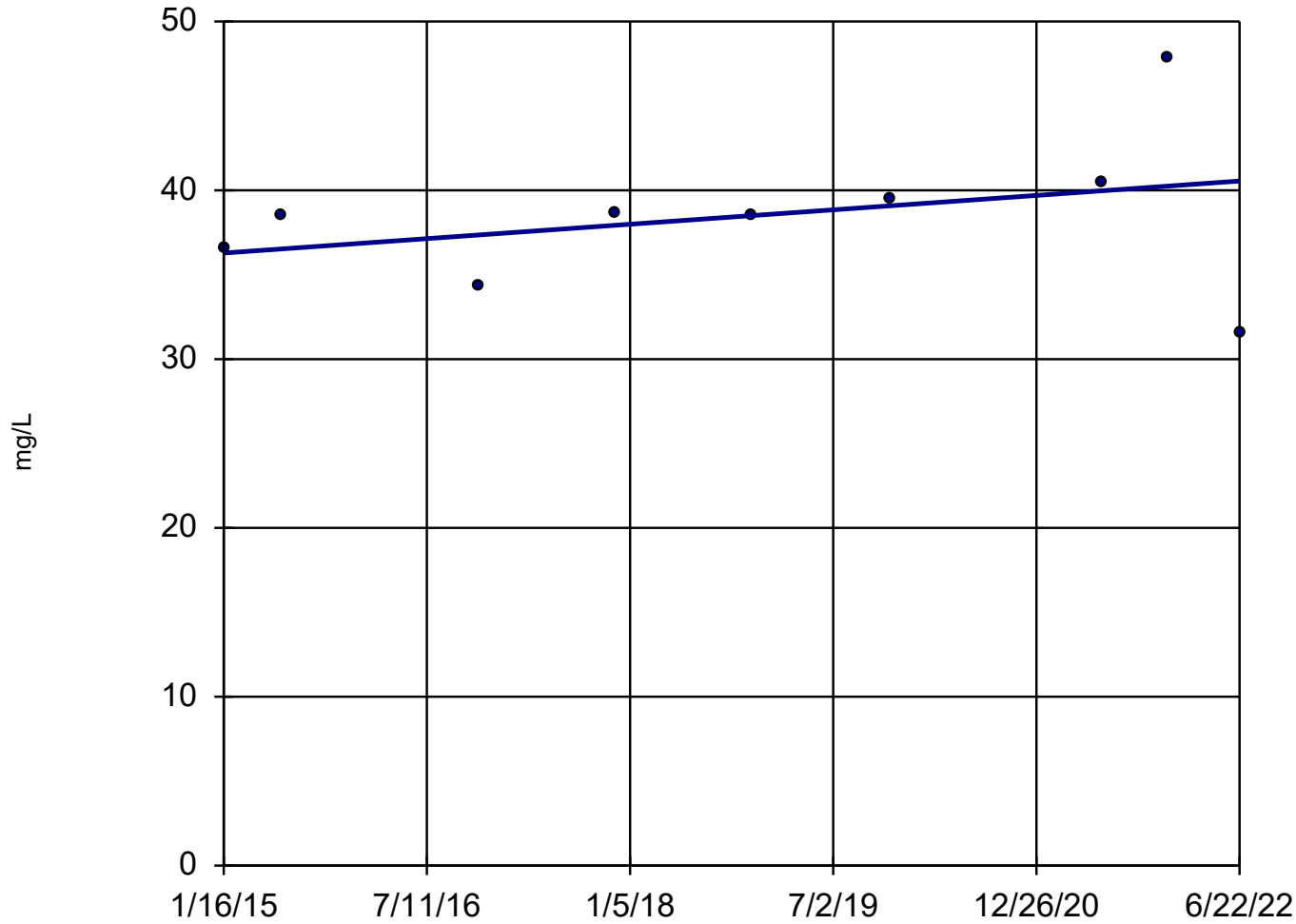
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Chloride Analysis Run 11/22/2022 1:35 PM

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-27

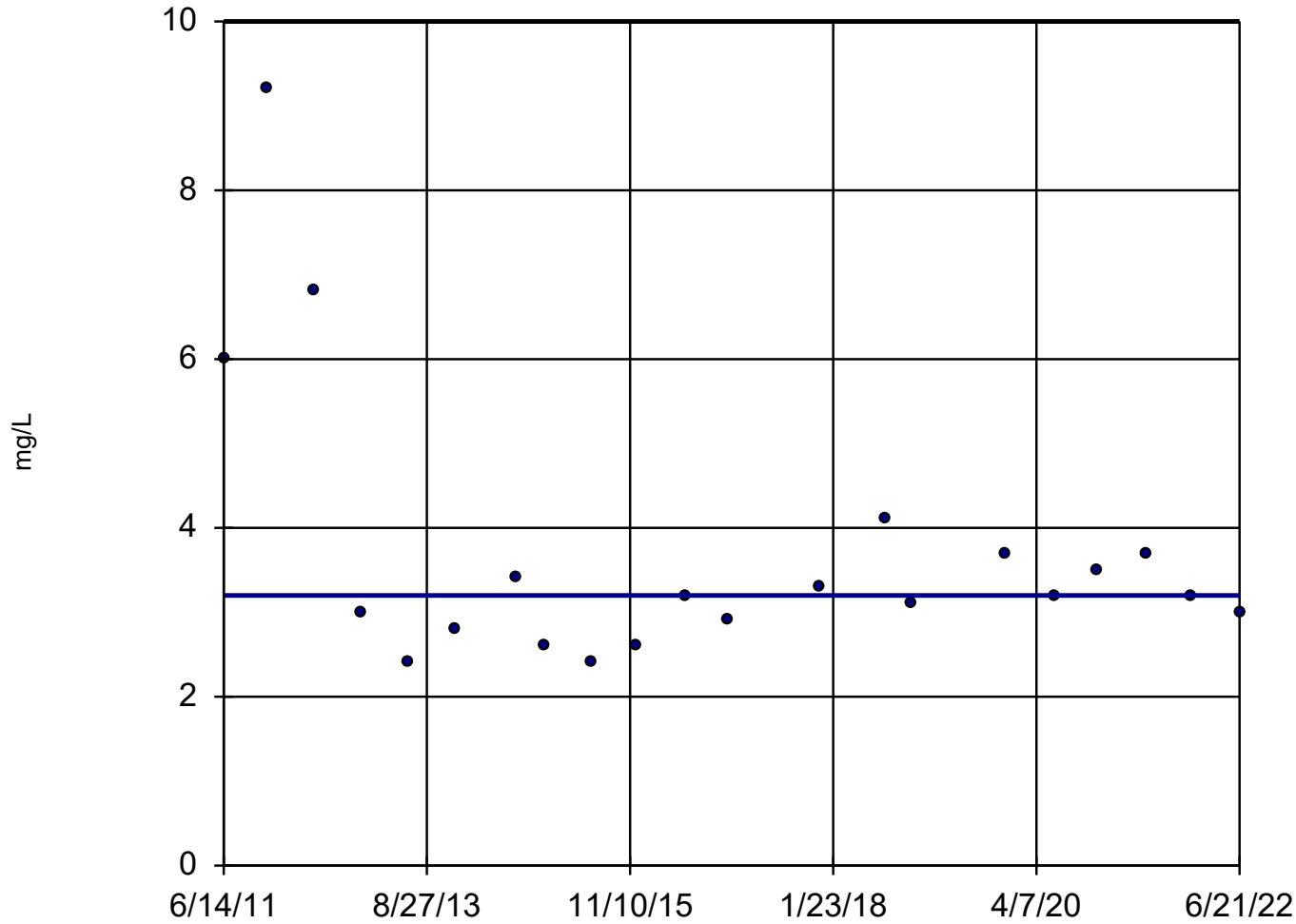


n = 9
Slope = 0.5736
units per year.
Mann-Kendall
statistic = 13
critical = 23
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Chloride Analysis Run 11/22/2022 1:35 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

LF-2



n = 21

Slope = 0
units per year.

Mann-Kendall
statistic = 3
critical = 78

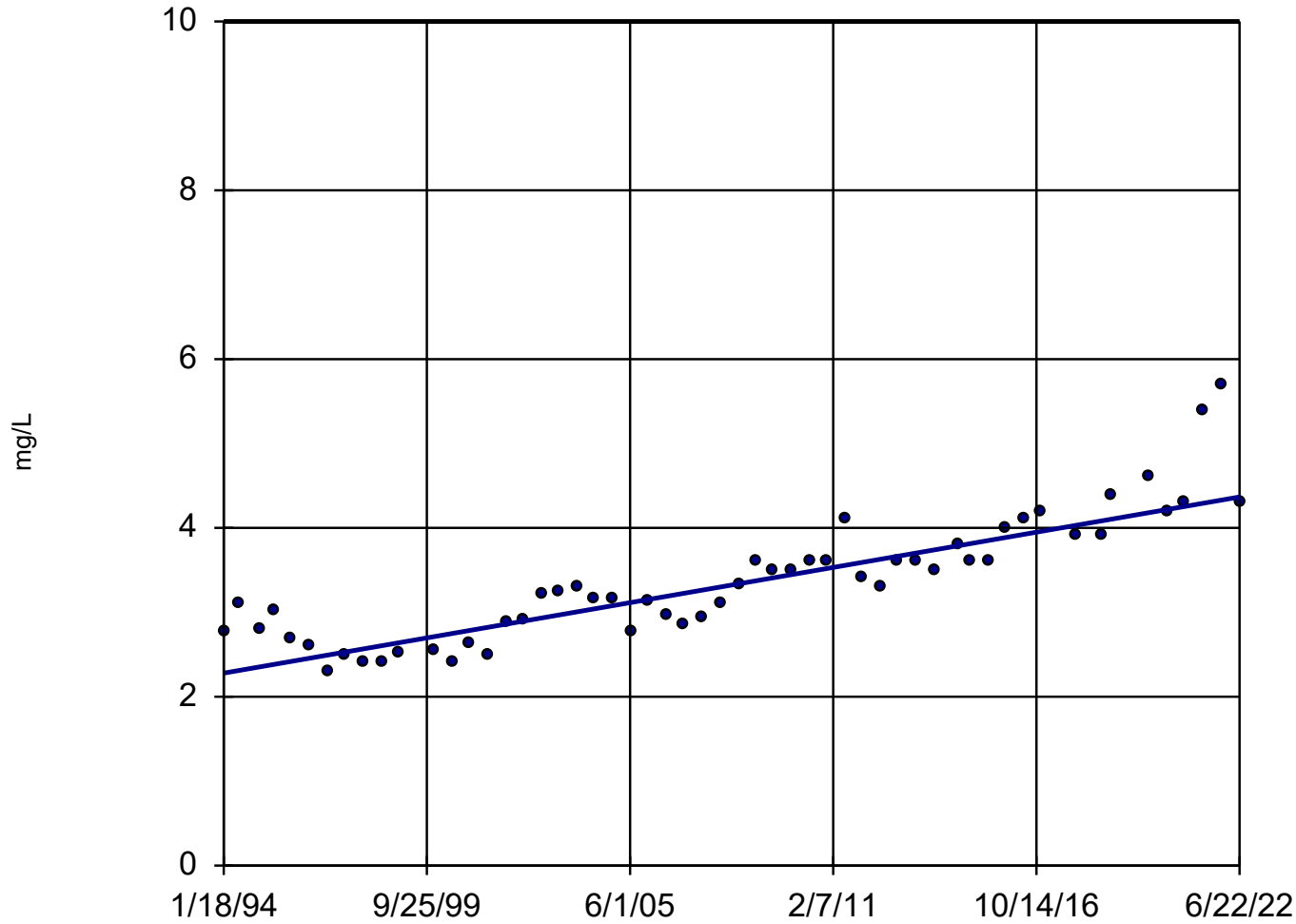
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

MCL = 10.

Constituent: Nitrogen, NO2 plus NO3 Analysis Run 11/22/2022 1:35 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

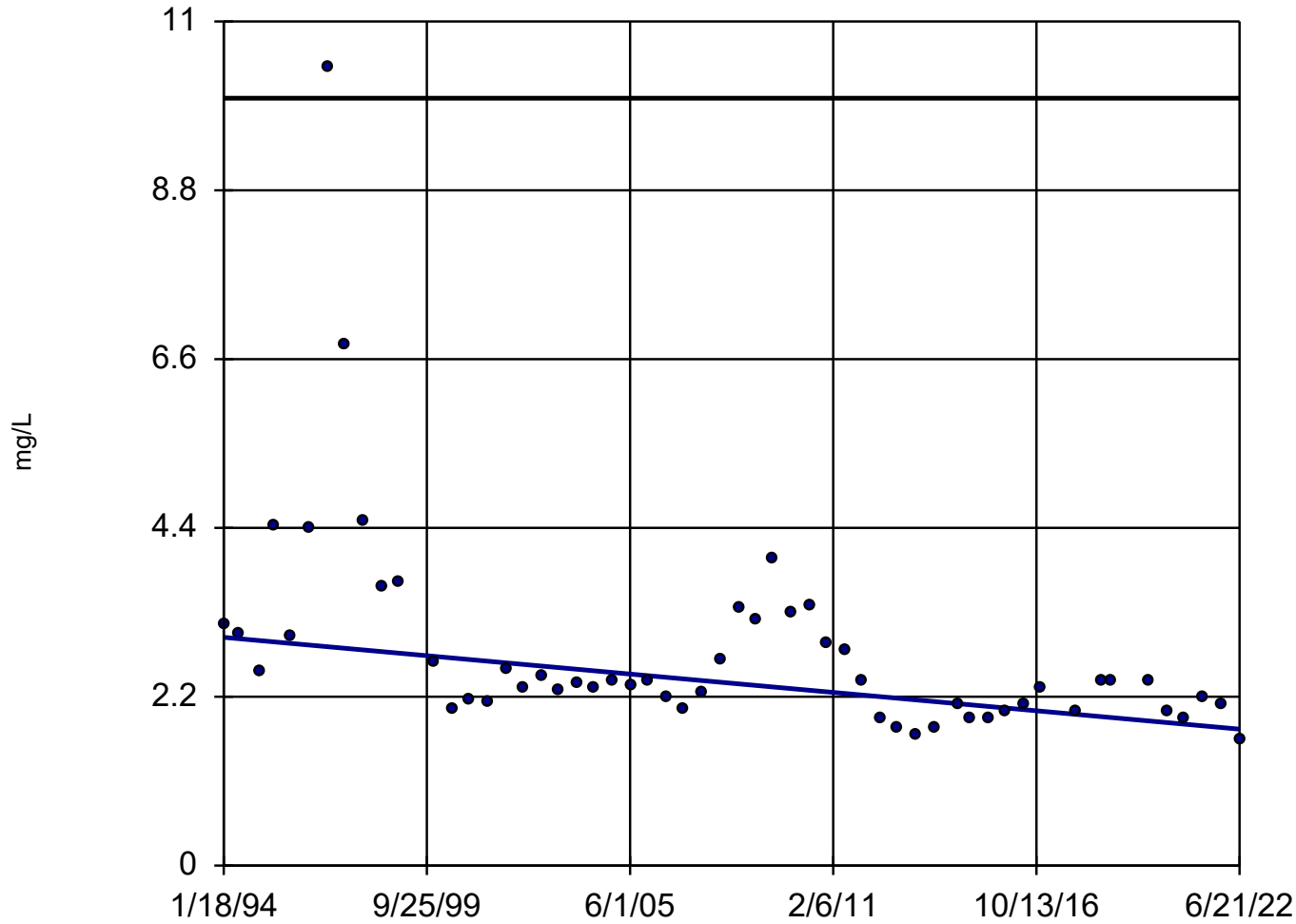
LF-3



Constituent: Nitrogen, NO2 plus NO3 Analysis Run 11/22/2022 1:35 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-4



n = 55

Slope = -0.04207
units per year.

Mann-Kendall
normal approx. =
-4.468
critical = -2.33

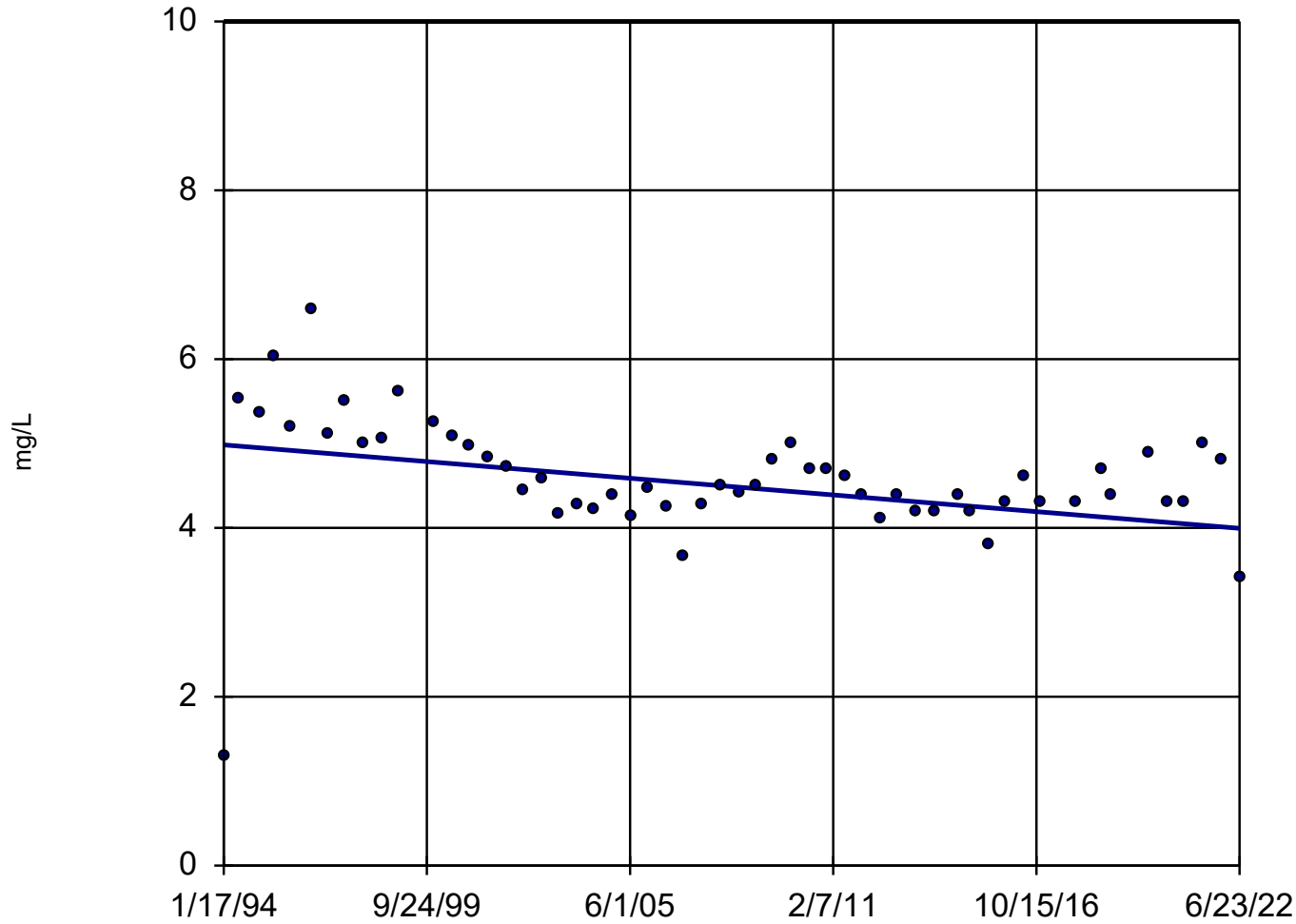
Decreasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

MCL = 10.

Constituent: Nitrogen, NO2 plus NO3 Analysis Run 11/22/2022 1:35 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-5 (bg)



n = 55

Slope = -0.03475
units per year.

Mann-Kendall
normal approx. =
-3.707
critical = -2.33

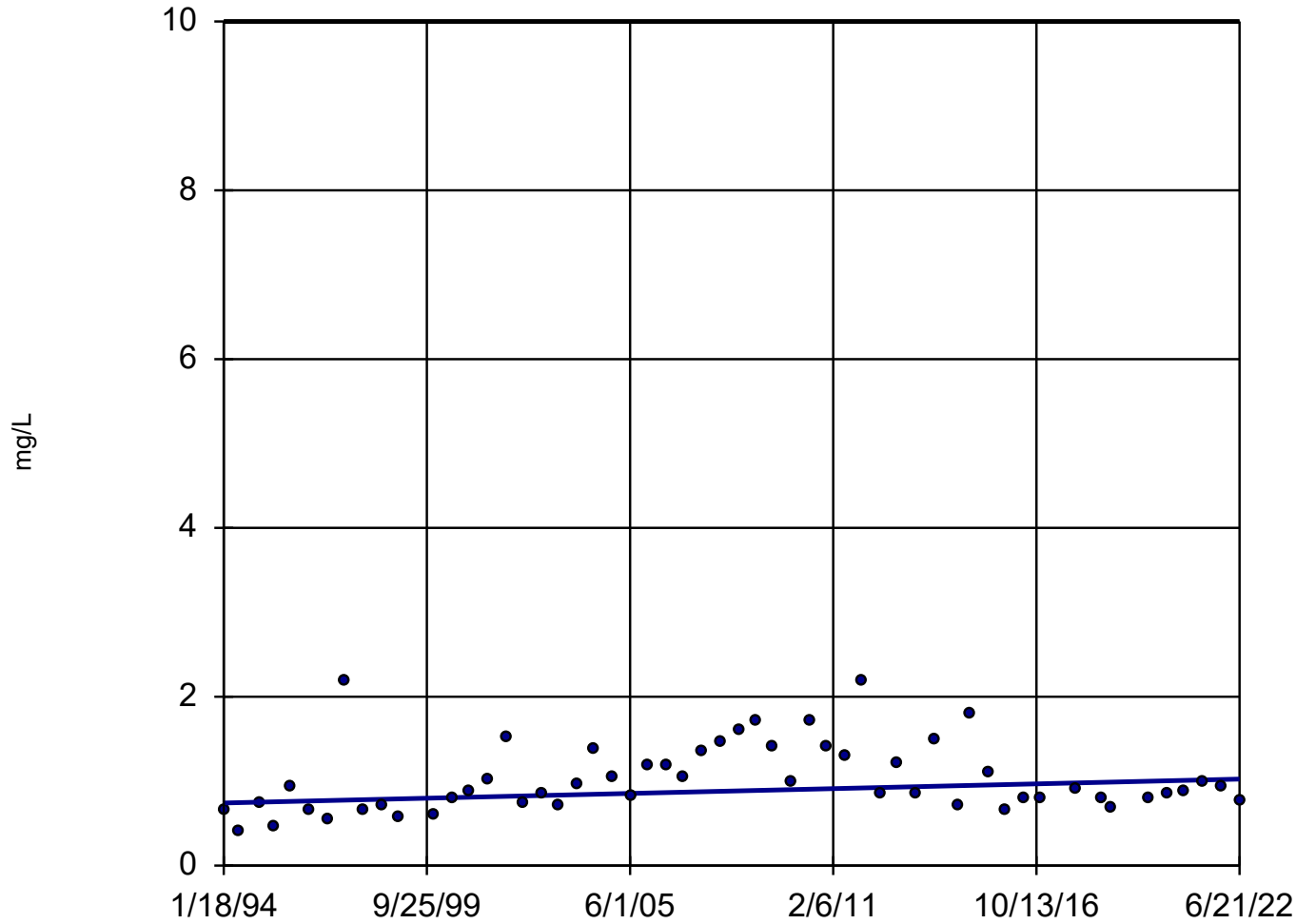
Decreasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

MCL = 10.

Constituent: Nitrogen, NO2 plus NO3 Analysis Run 11/22/2022 1:35 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

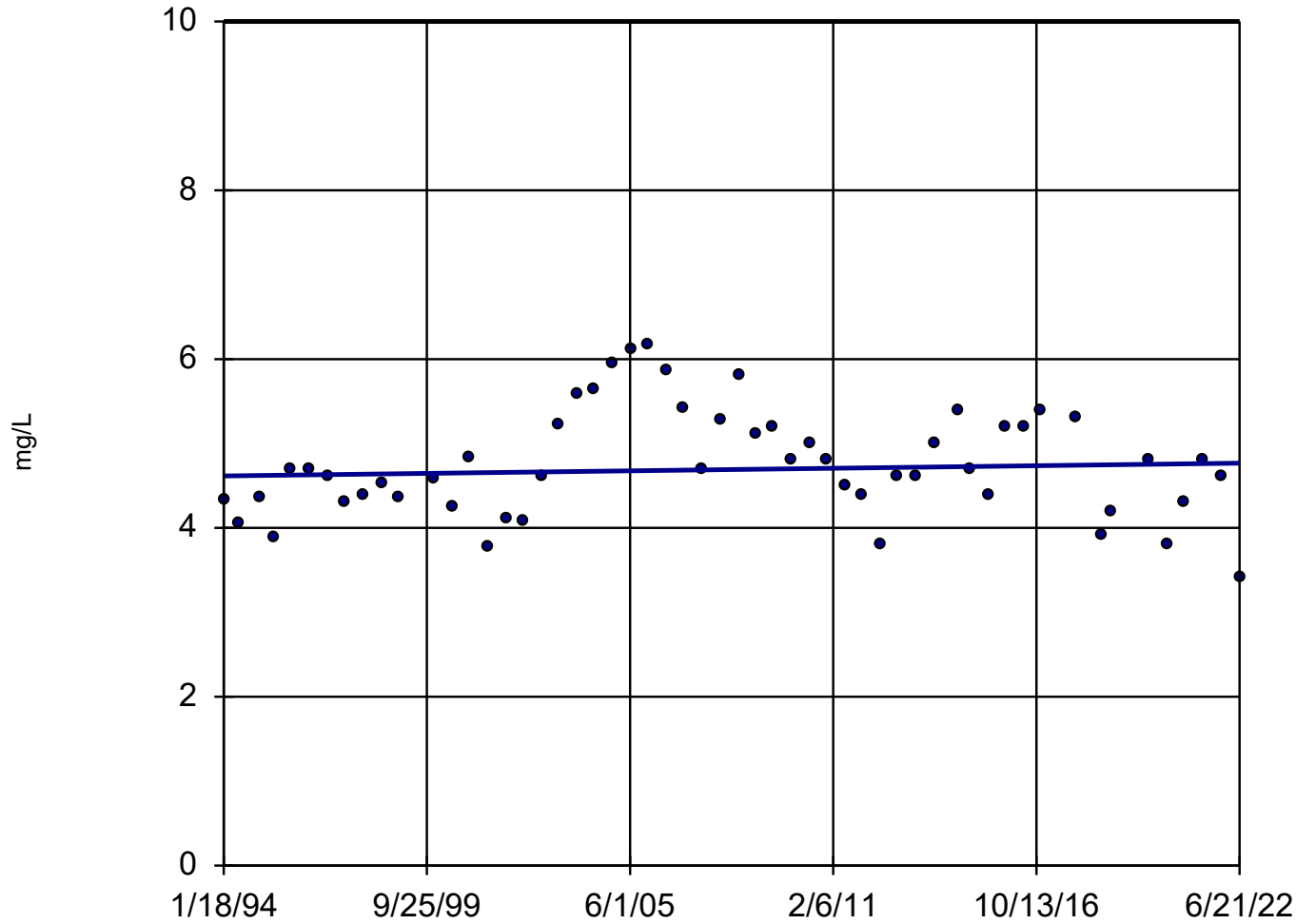
MW-6



Constituent: Nitrogen, NO2 plus NO3 Analysis Run 11/22/2022 1:35 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-7A



n = 55

Slope = 0.005347
units per year.

Mann-Kendall
normal approx. =
0.5304
critical = 2.33

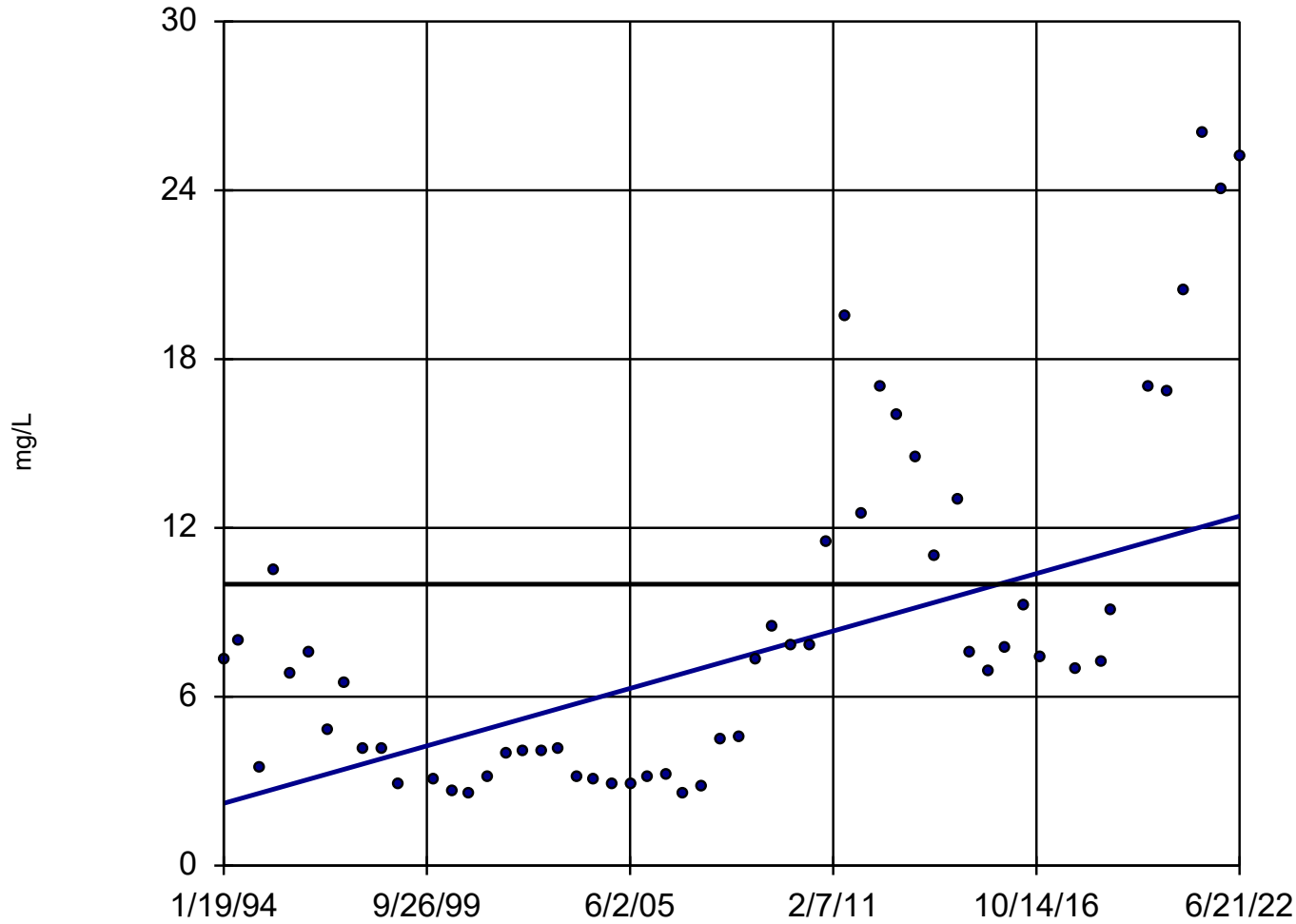
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

MCL = 10.

Constituent: Nitrogen, NO2 plus NO3 Analysis Run 11/22/2022 1:35 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-8A



n = 55

Slope = 0.3589
units per year.

Mann-Kendall
normal approx. =
4.443
critical = 2.33

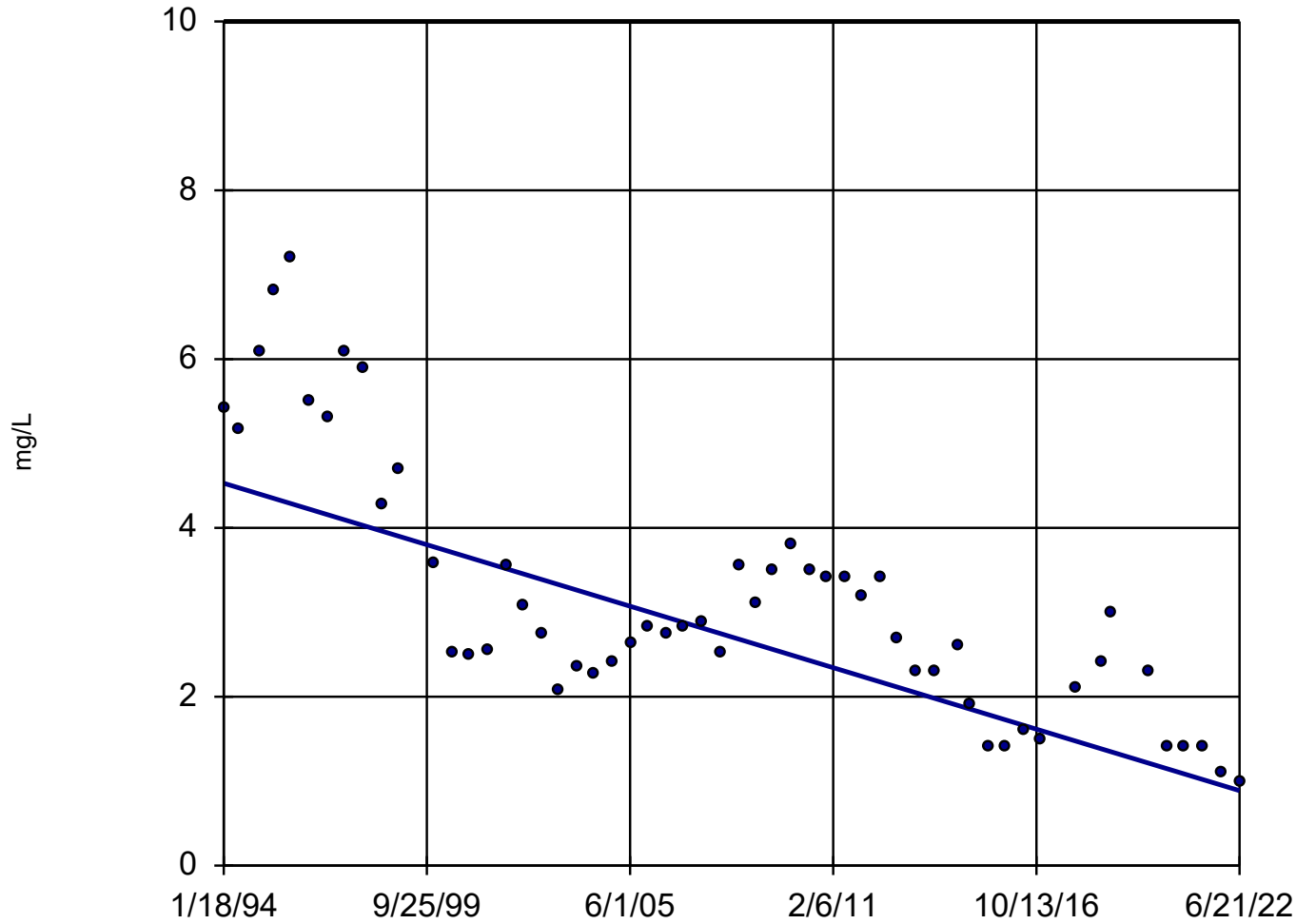
Increasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

MCL = 10.

Constituent: Nitrogen, NO2 plus NO3 Analysis Run 11/22/2022 1:35 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

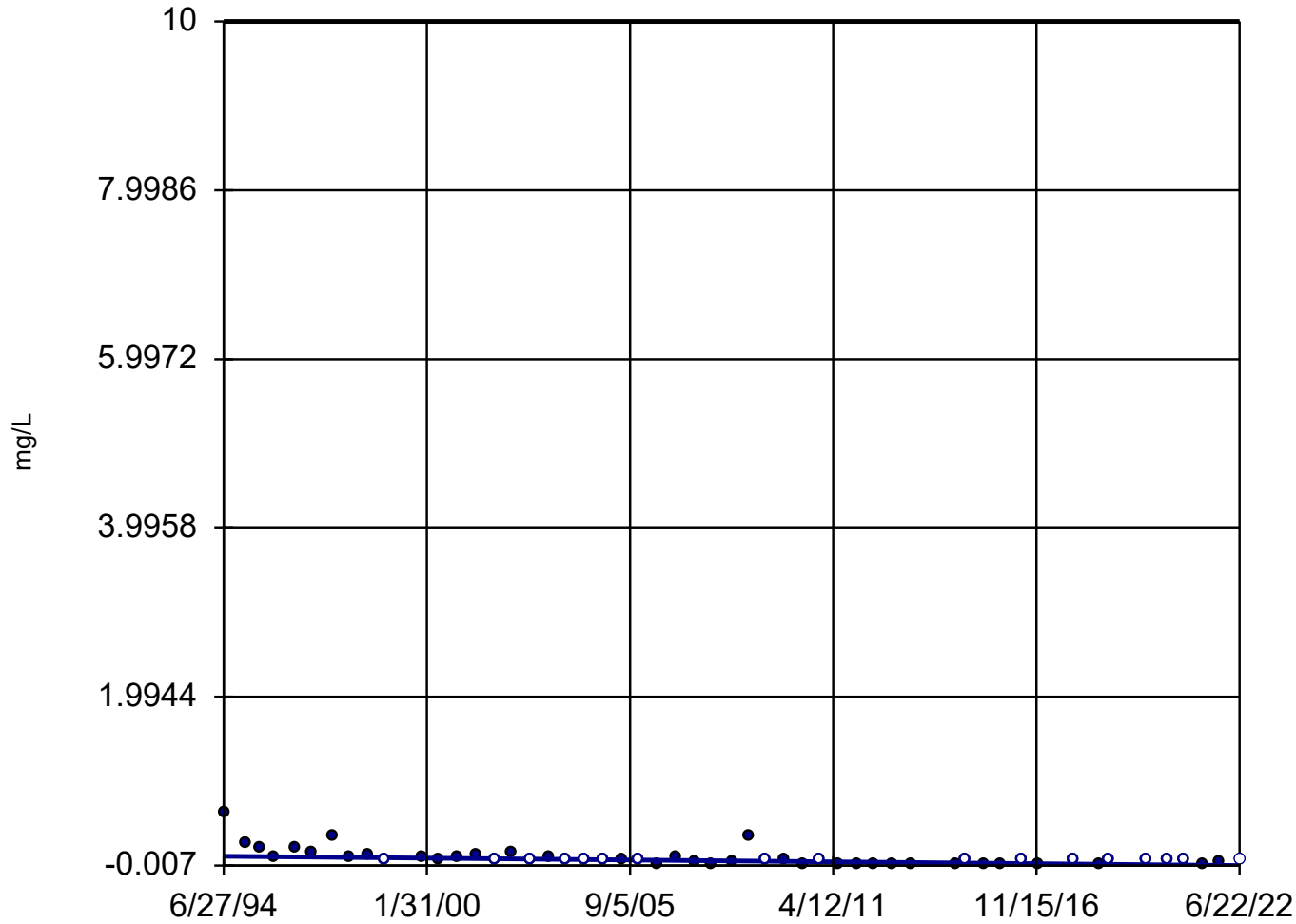
MW-9A



Constituent: Nitrogen, NO2 plus NO3 Analysis Run 11/22/2022 1:35 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-10



n = 53

Slope = -0.003915
units per year.

Mann-Kendall
normal approx. =
-5.387
critical = -2.33

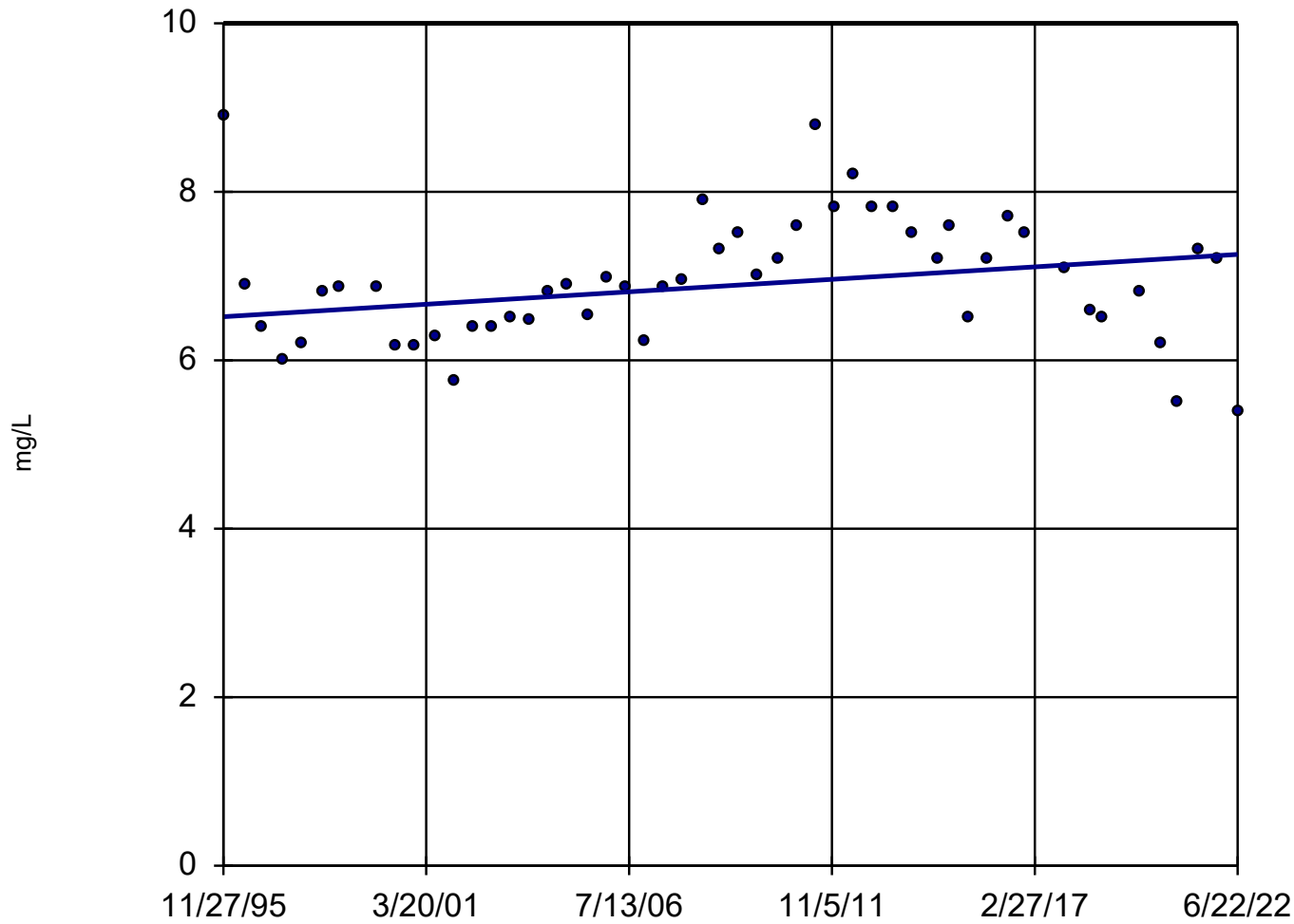
Decreasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

MCL = 10.

Constituent: Nitrogen, NO2 plus NO3 Analysis Run 11/22/2022 1:35 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-11



n = 51

Slope = 0.0278
units per year.

Mann-Kendall
normal approx. =
2.162
critical = 2.33

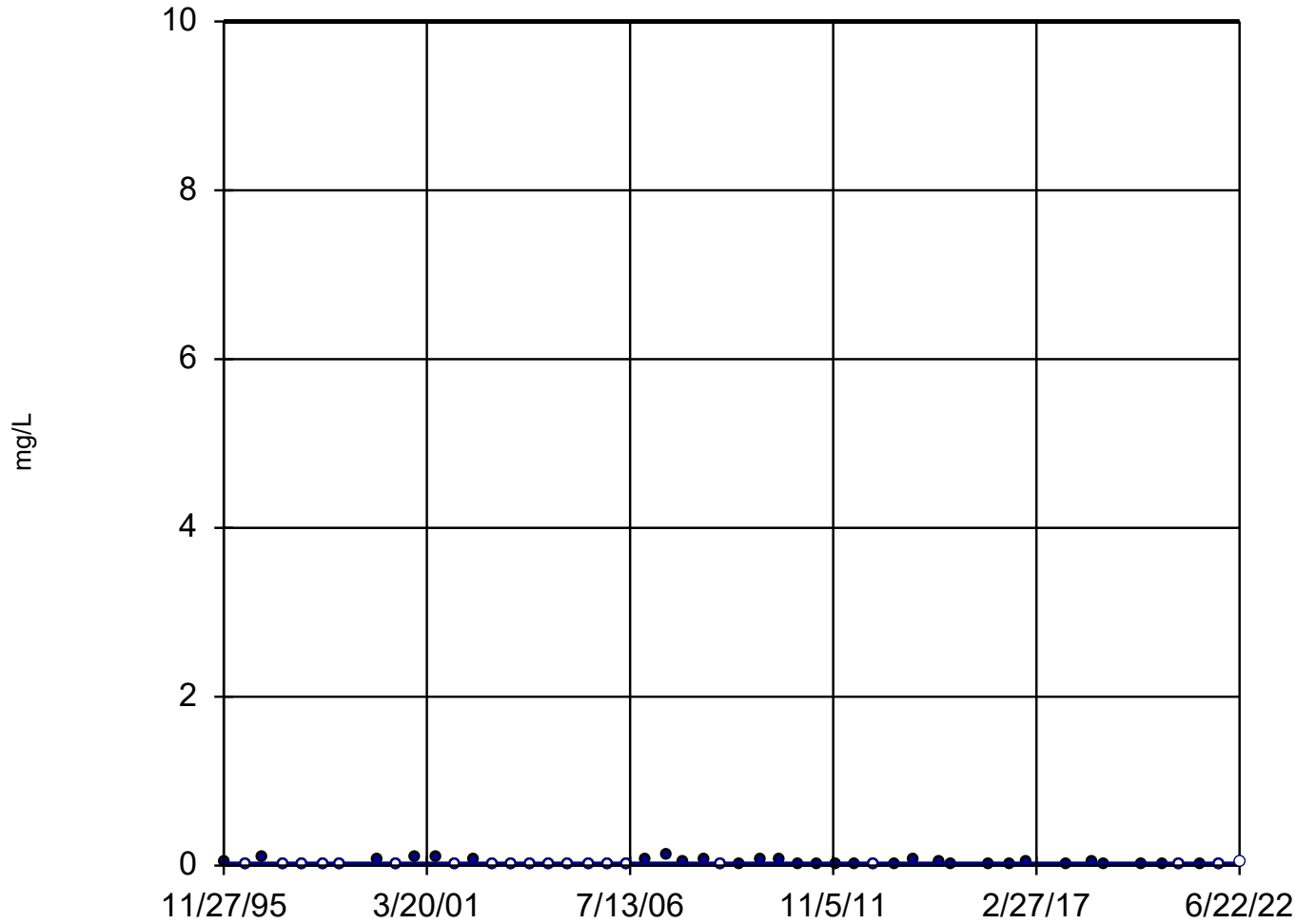
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

MCL = 10.

Constituent: Nitrogen, NO2 plus NO3 Analysis Run 11/22/2022 1:35 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-12



n = 50

Slope = 0
units per year.

Mann-Kendall
normal approx. =
-0.9783
critical = -2.33

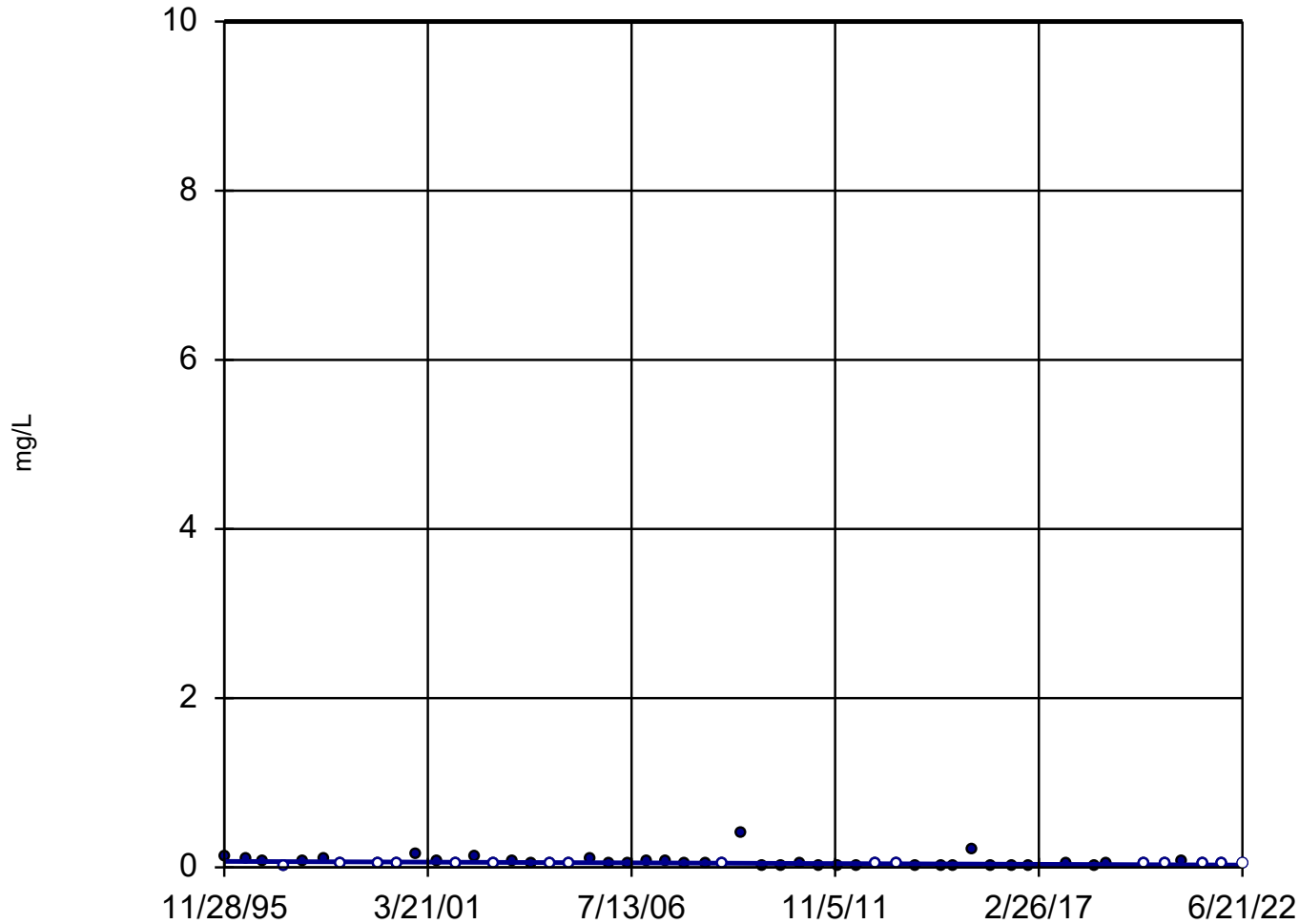
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

MCL = 10.

Constituent: Nitrogen, NO₂ plus NO₃ Analysis Run 11/22/2022 1:35 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-13



n = 51

Slope = -0.001612
units per year.

Mann-Kendall
normal approx. =
-3.043
critical = -2.33

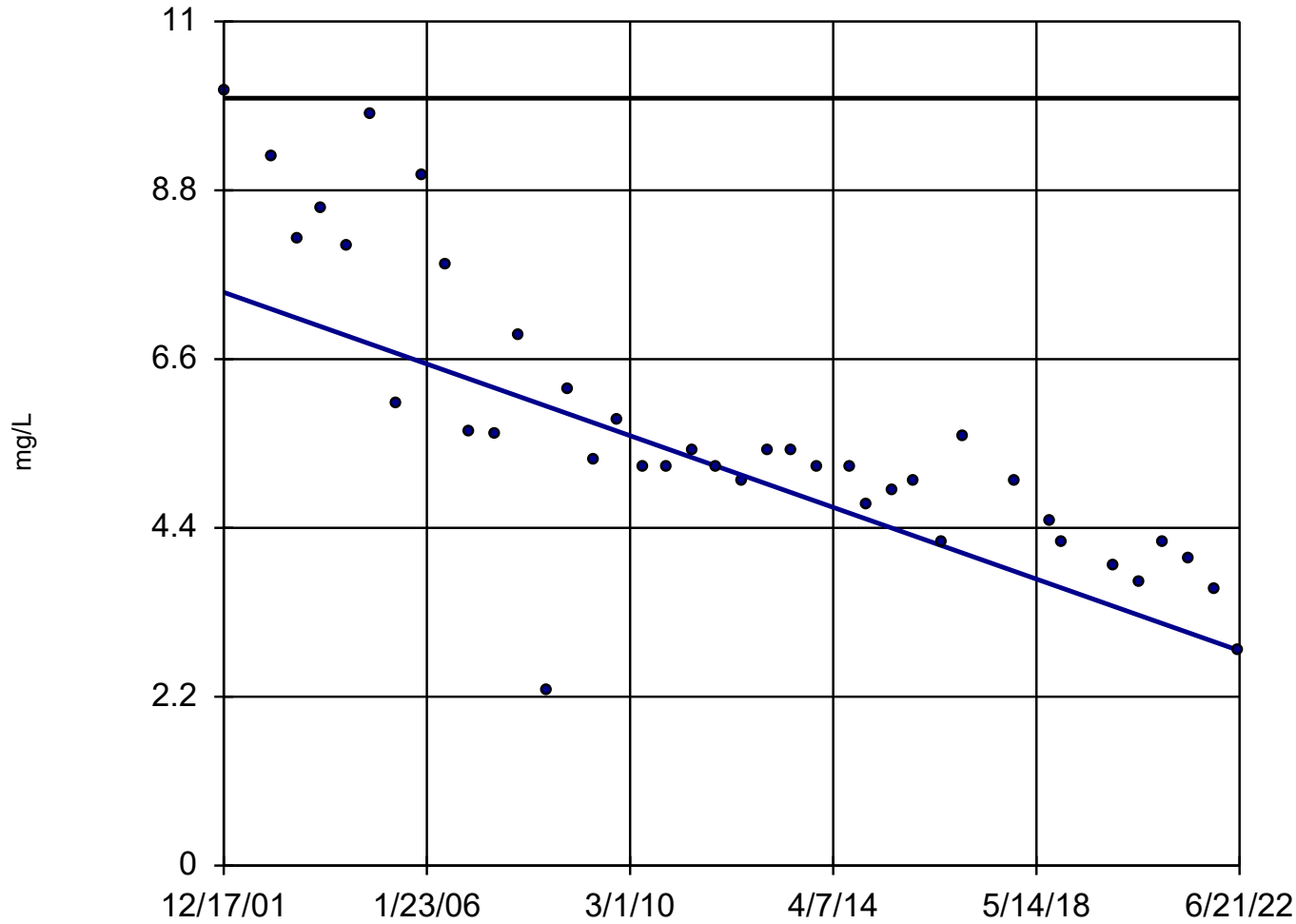
Decreasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

MCL = 10.

Constituent: Nitrogen, NO2 plus NO3 Analysis Run 11/22/2022 1:35 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-15 (bg)



n = 39

Slope = -0.2275
units per year.

Mann-Kendall
statistic = -552
critical = -194

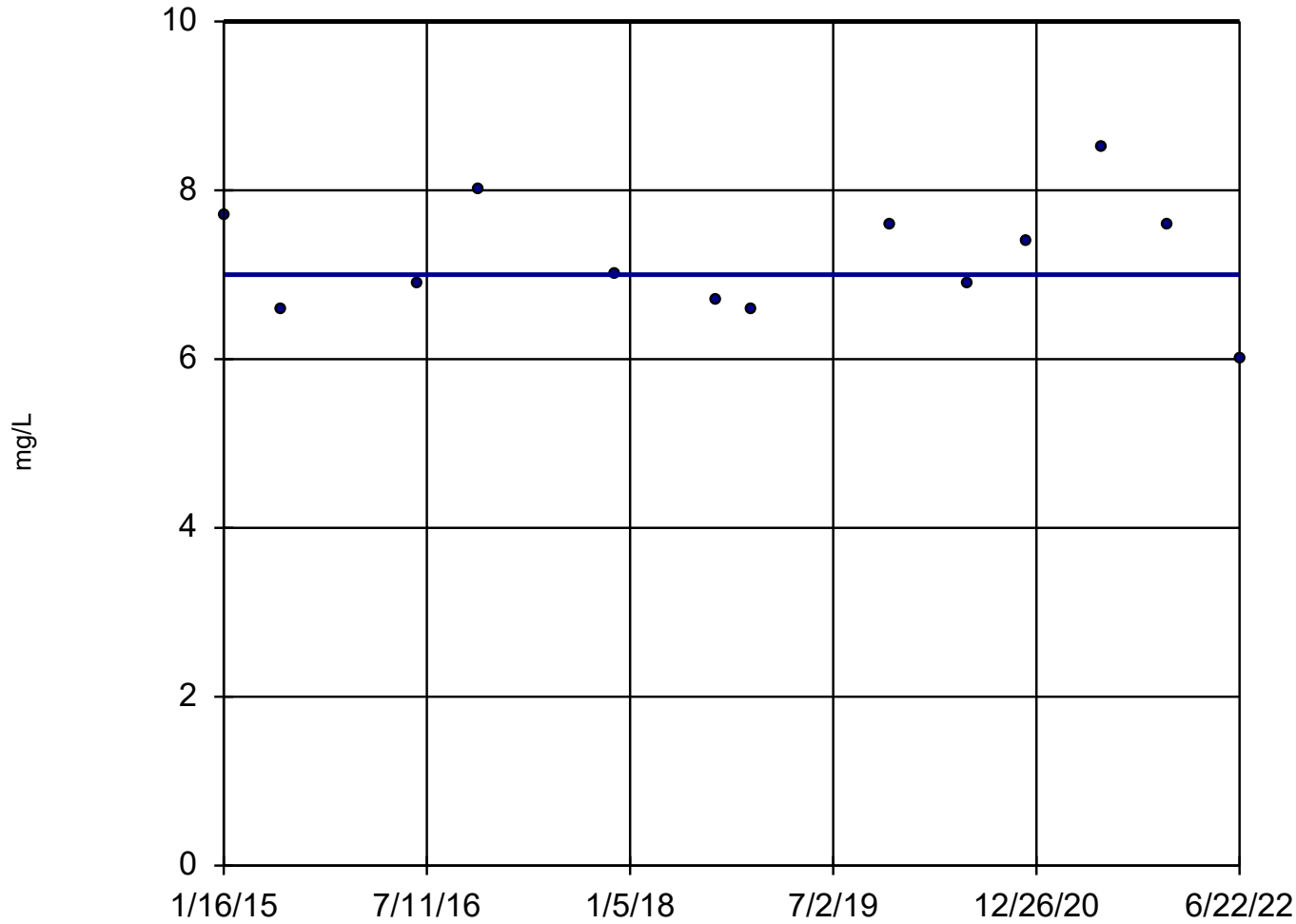
Decreasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

MCL = 10.

Constituent: Nitrogen, NO2 plus NO3 Analysis Run 11/22/2022 1:35 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-27



n = 13

Slope = 0
units per year.

Mann-Kendall
statistic = 1
critical = 39

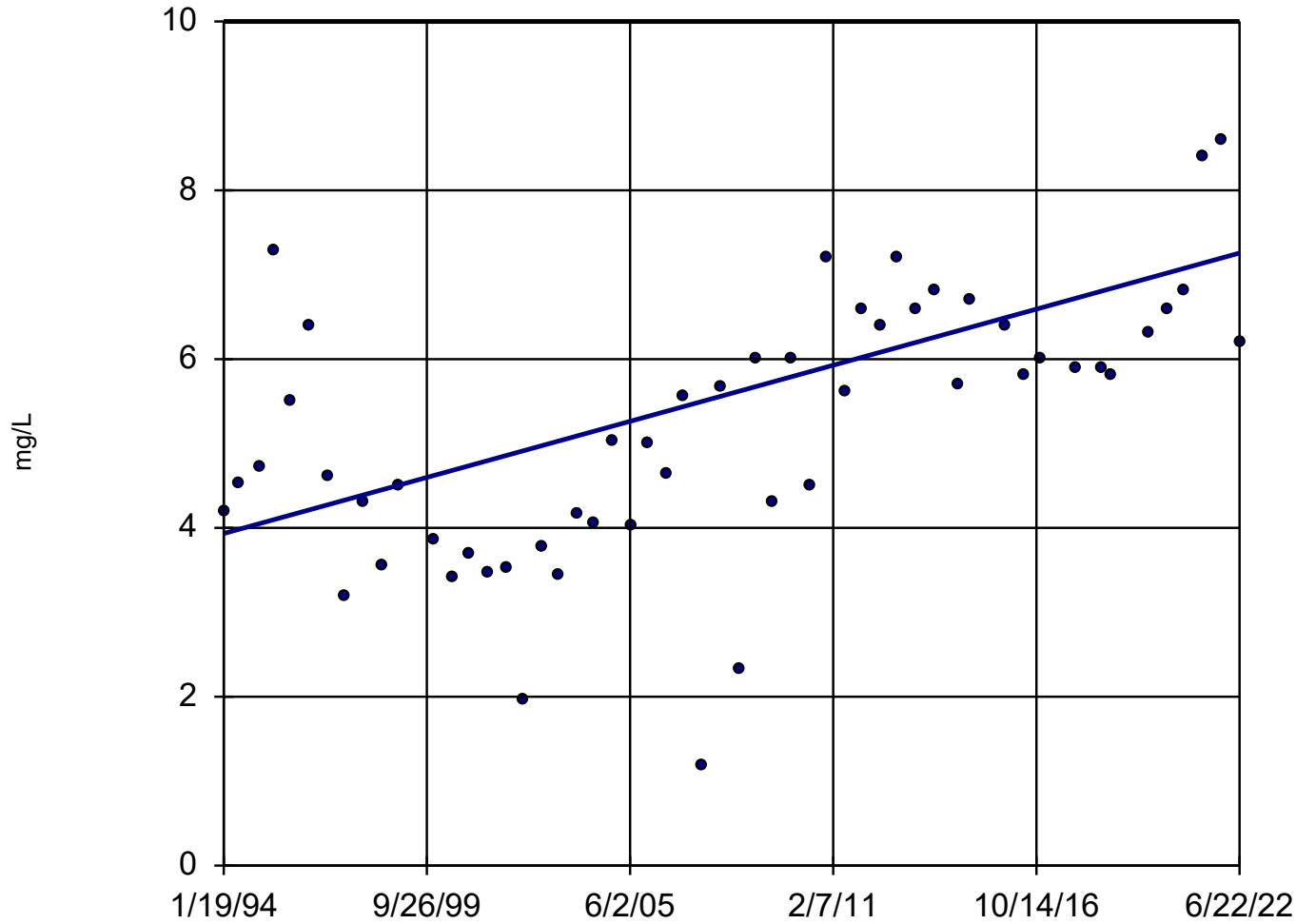
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

MCL = 10.

Constituent: Nitrogen, NO2 plus NO3 Analysis Run 11/22/2022 1:35 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

McILHATTAN_SEEP



n = 54

Slope = 0.1168
units per year.

Mann-Kendall
normal approx. =
4.672
critical = 2.33

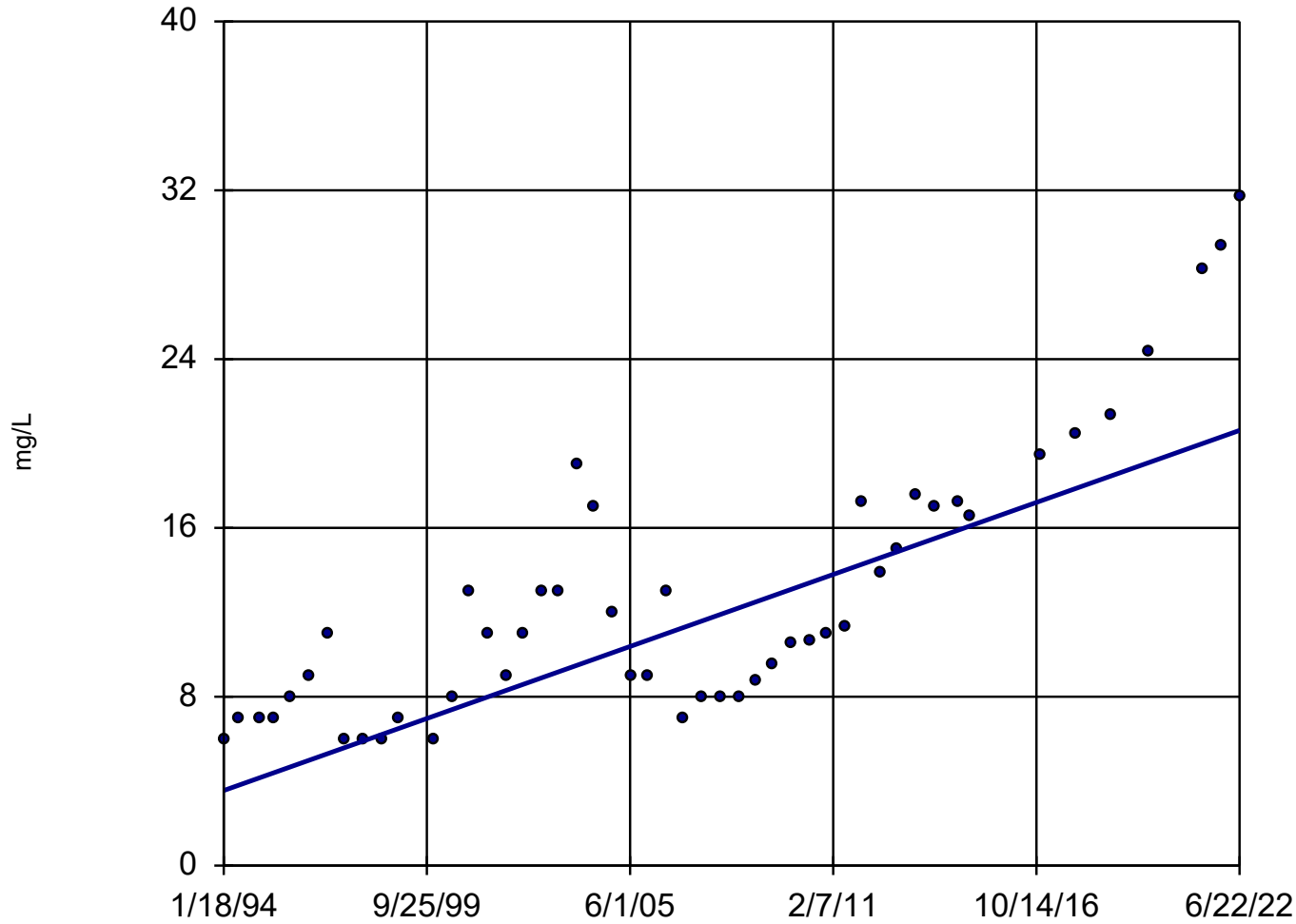
Increasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

MCL = 10.

Constituent: Nitrogen, NO2 plus NO3 Analysis Run 11/22/2022 1:35 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

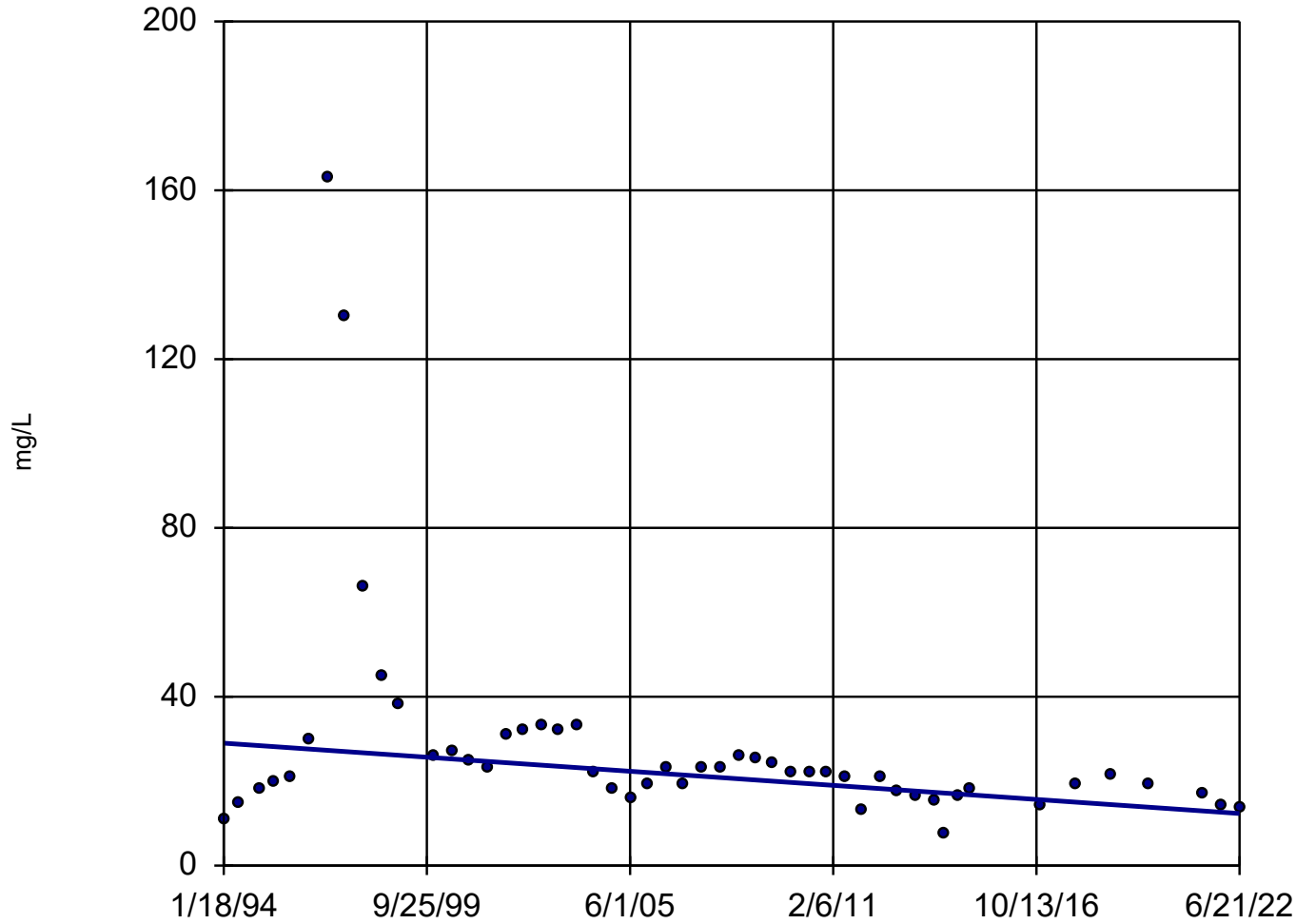
LF-3



Constituent: Sulfate Analysis Run 11/22/2022 1:35 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-4

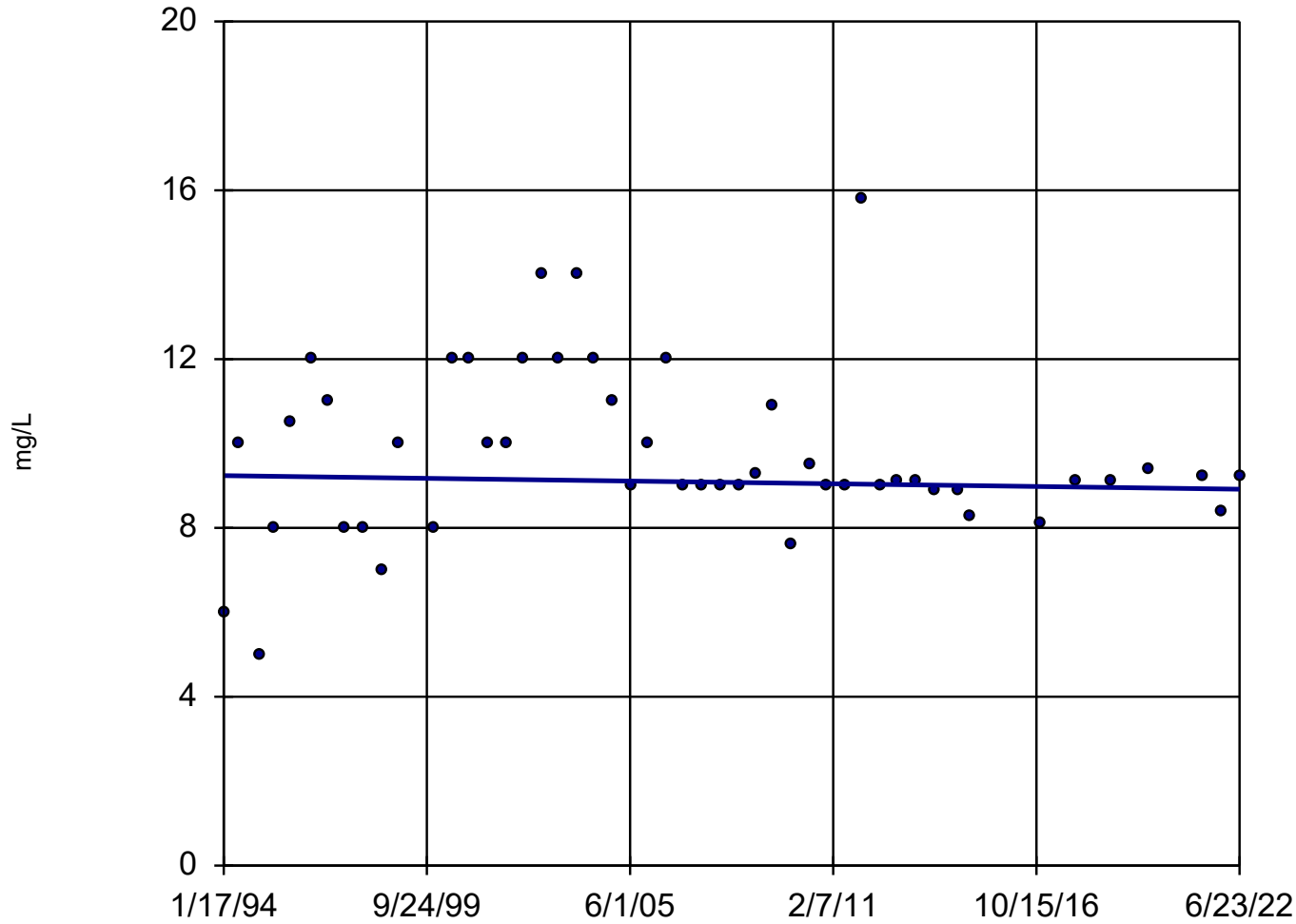


Constituent: Sulfate Analysis Run 11/22/2022 1:35 PM

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-5 (bg)



n = 49

Slope = -0.01132
units per year.

Mann-Kendall
normal approx. =
-0.7281
critical = -2.33

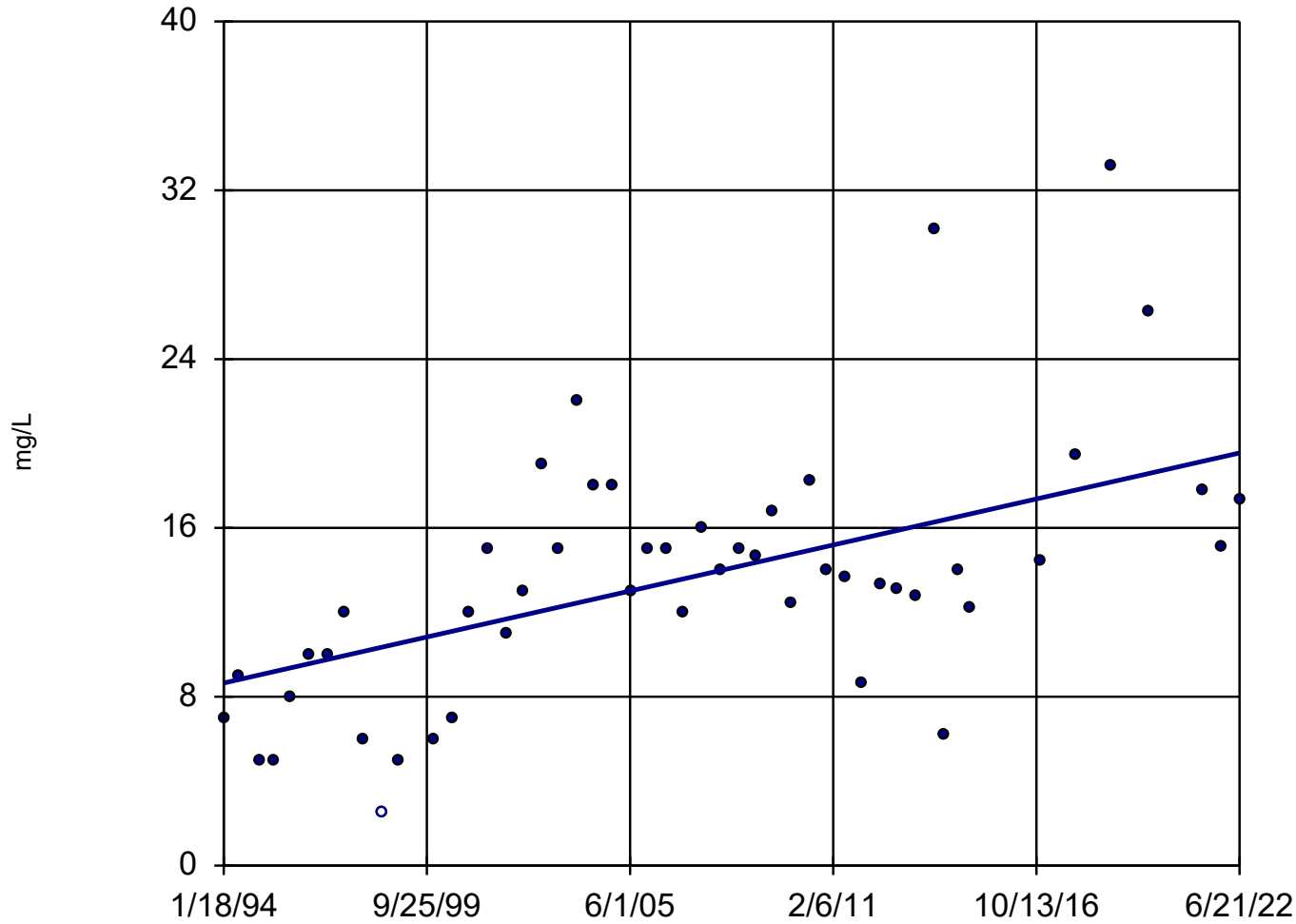
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Sulfate Analysis Run 11/22/2022 1:35 PM

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-6



n = 50

Slope = 0.3831
units per year.

Mann-Kendall
normal approx. =
4.221
critical = 2.33

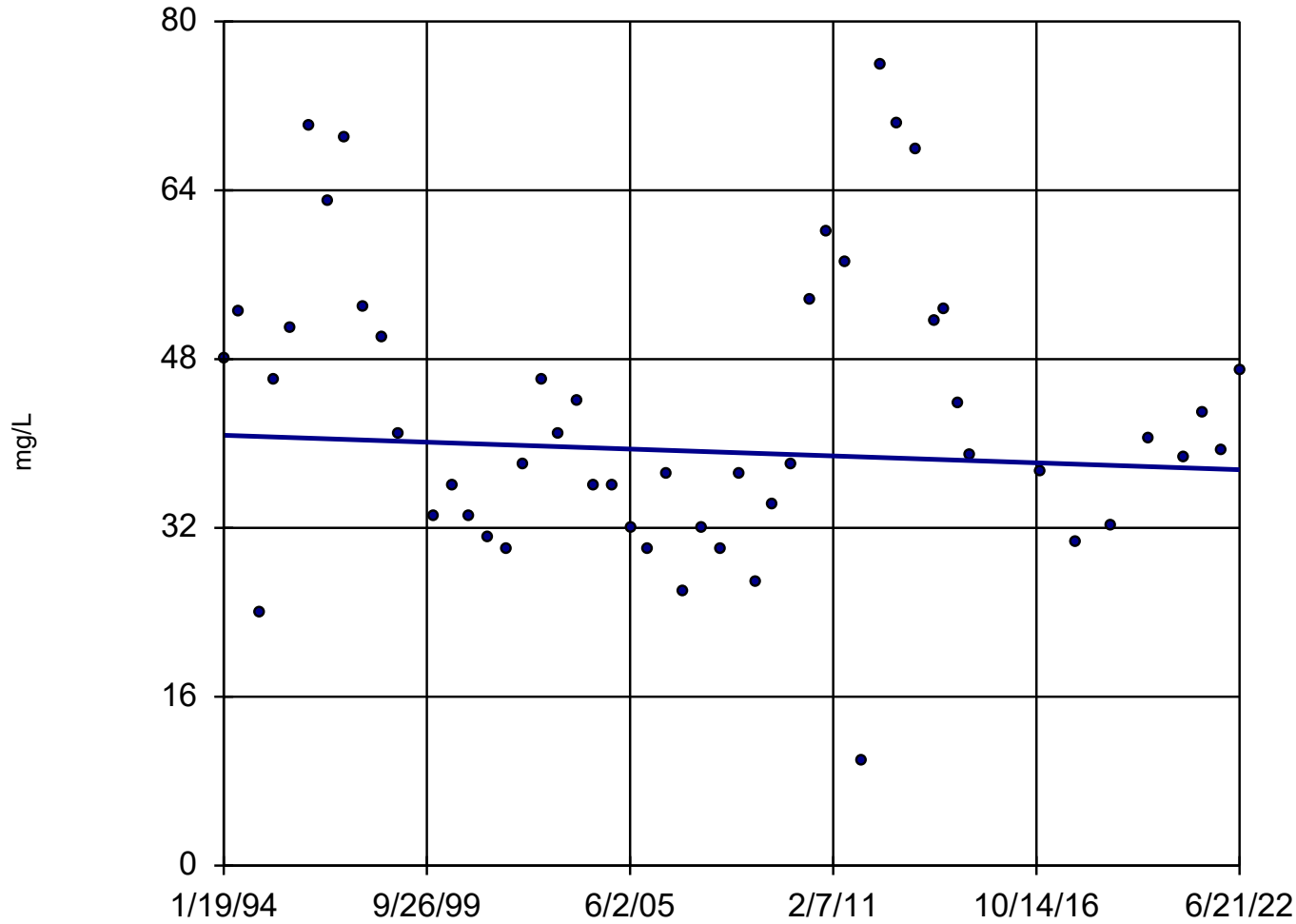
Increasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Sulfate Analysis Run 11/22/2022 1:35 PM

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-8A

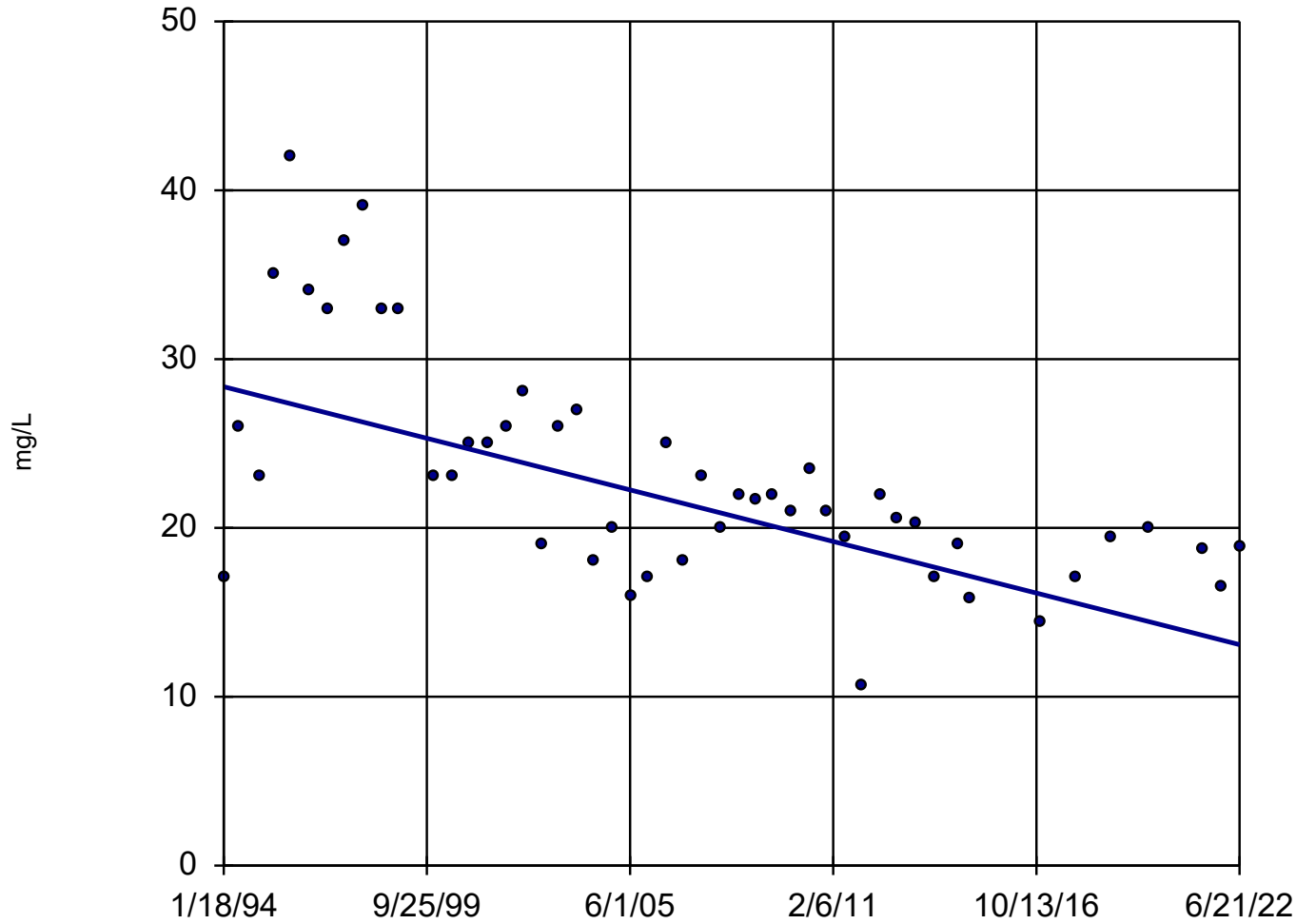


Constituent: Sulfate Analysis Run 11/22/2022 1:35 PM

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-9A

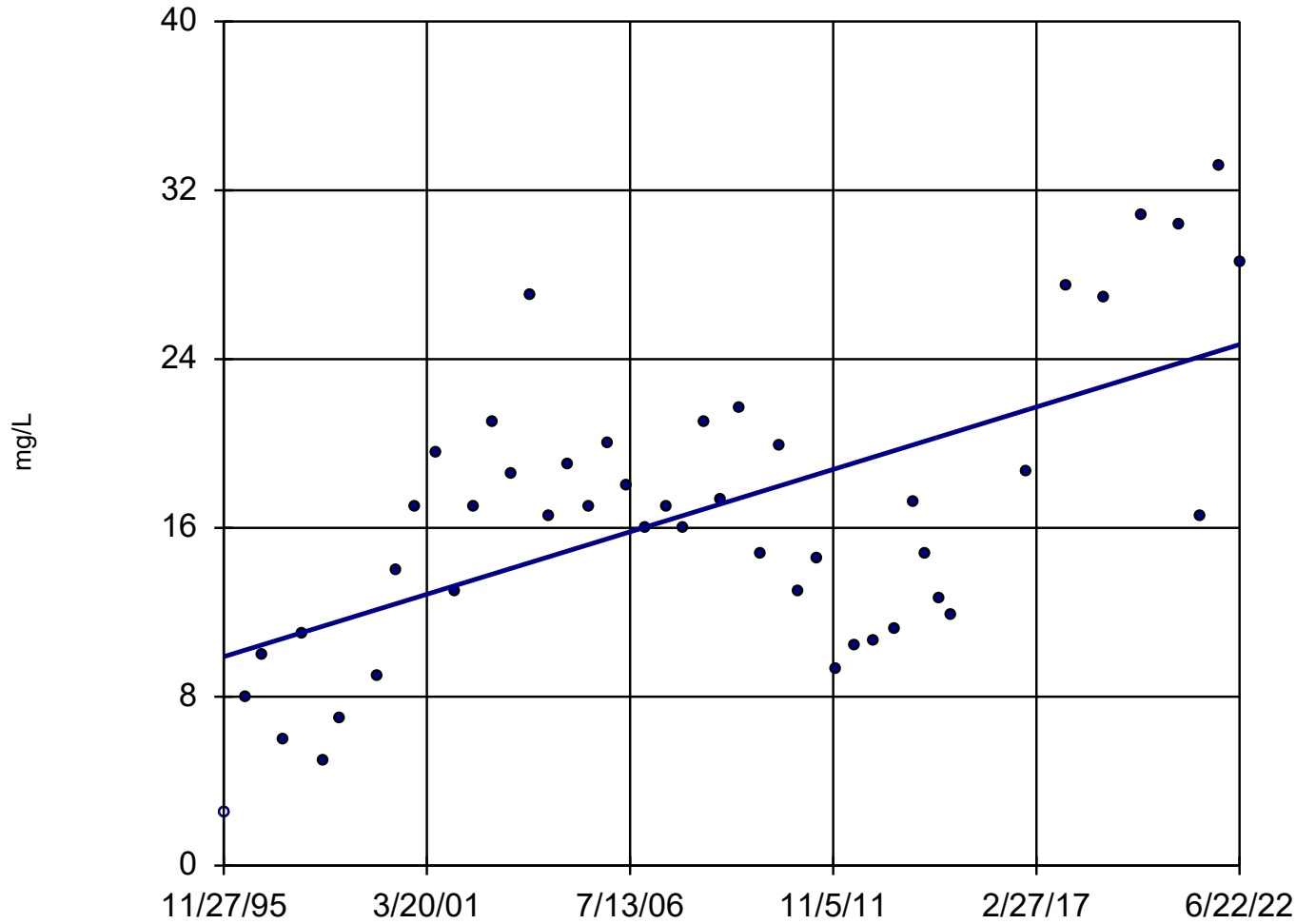


Constituent: Sulfate Analysis Run 11/22/2022 1:35 PM

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-12



n = 47

Slope = 0.5563
units per year.

Mann-Kendall
normal approx. =
3.367
critical = 2.33

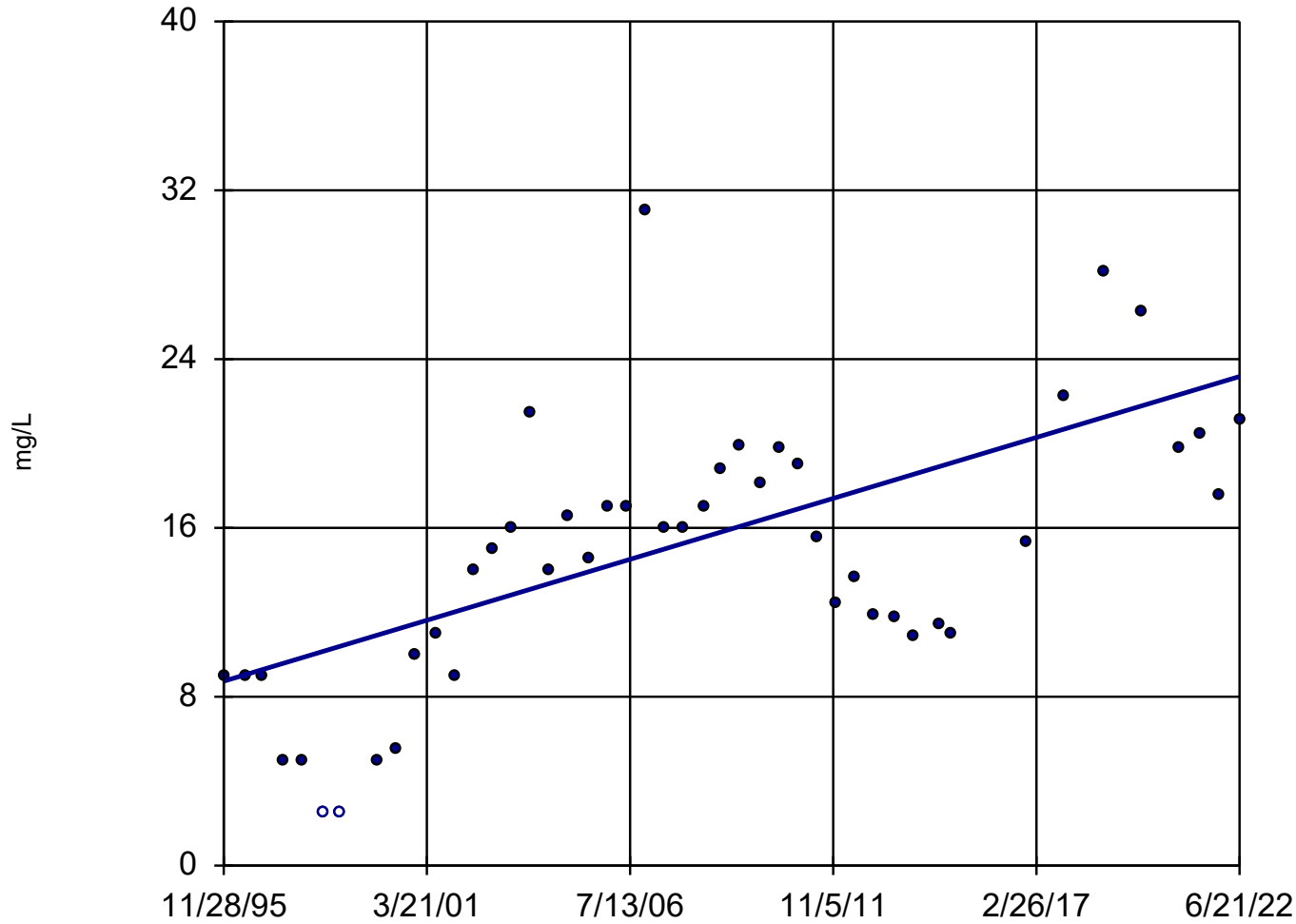
Increasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Sulfate Analysis Run 11/22/2022 1:35 PM

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

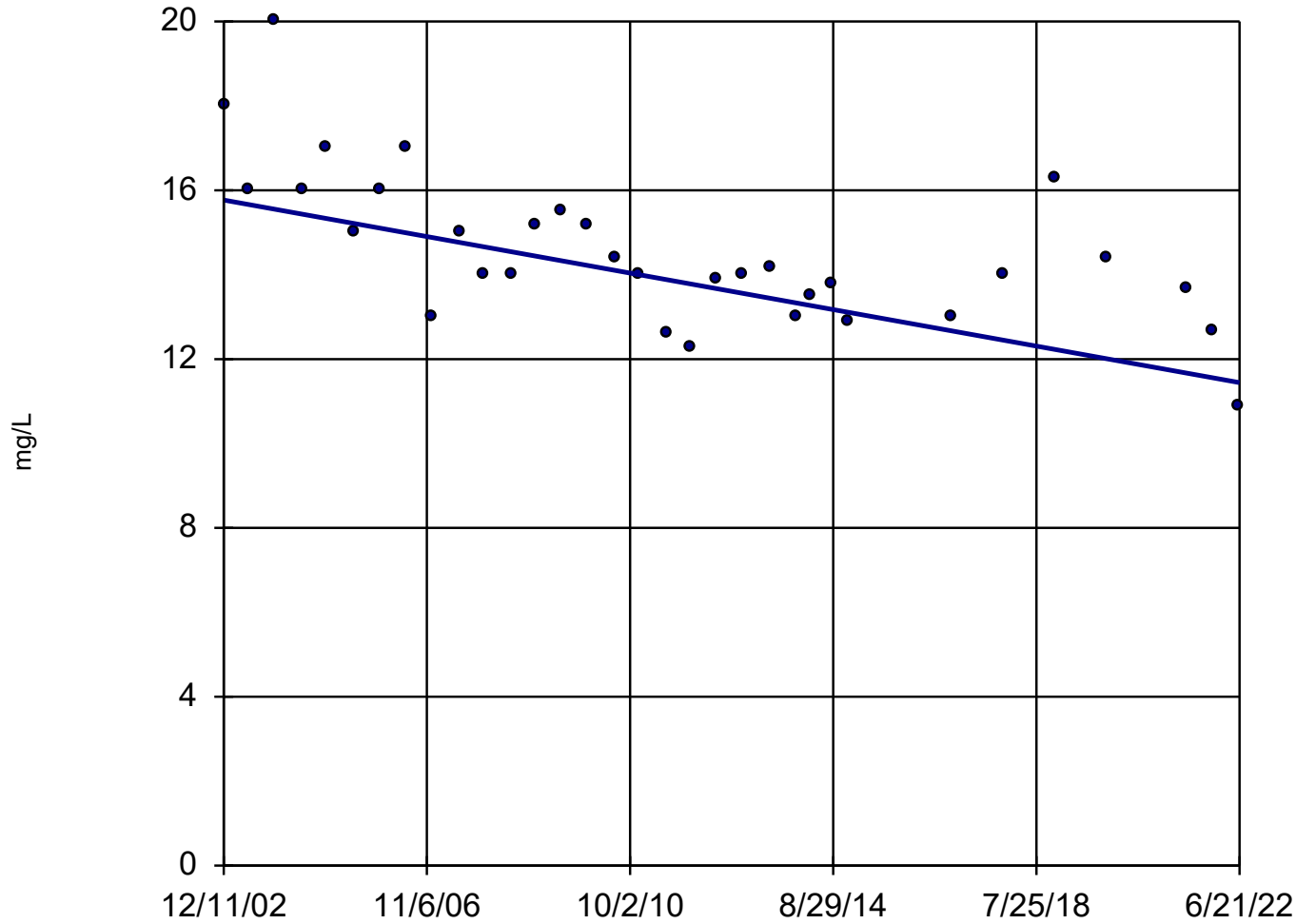
Sen's Slope Estimator

MW-13



Sen's Slope Estimator

MW-15 (bg)

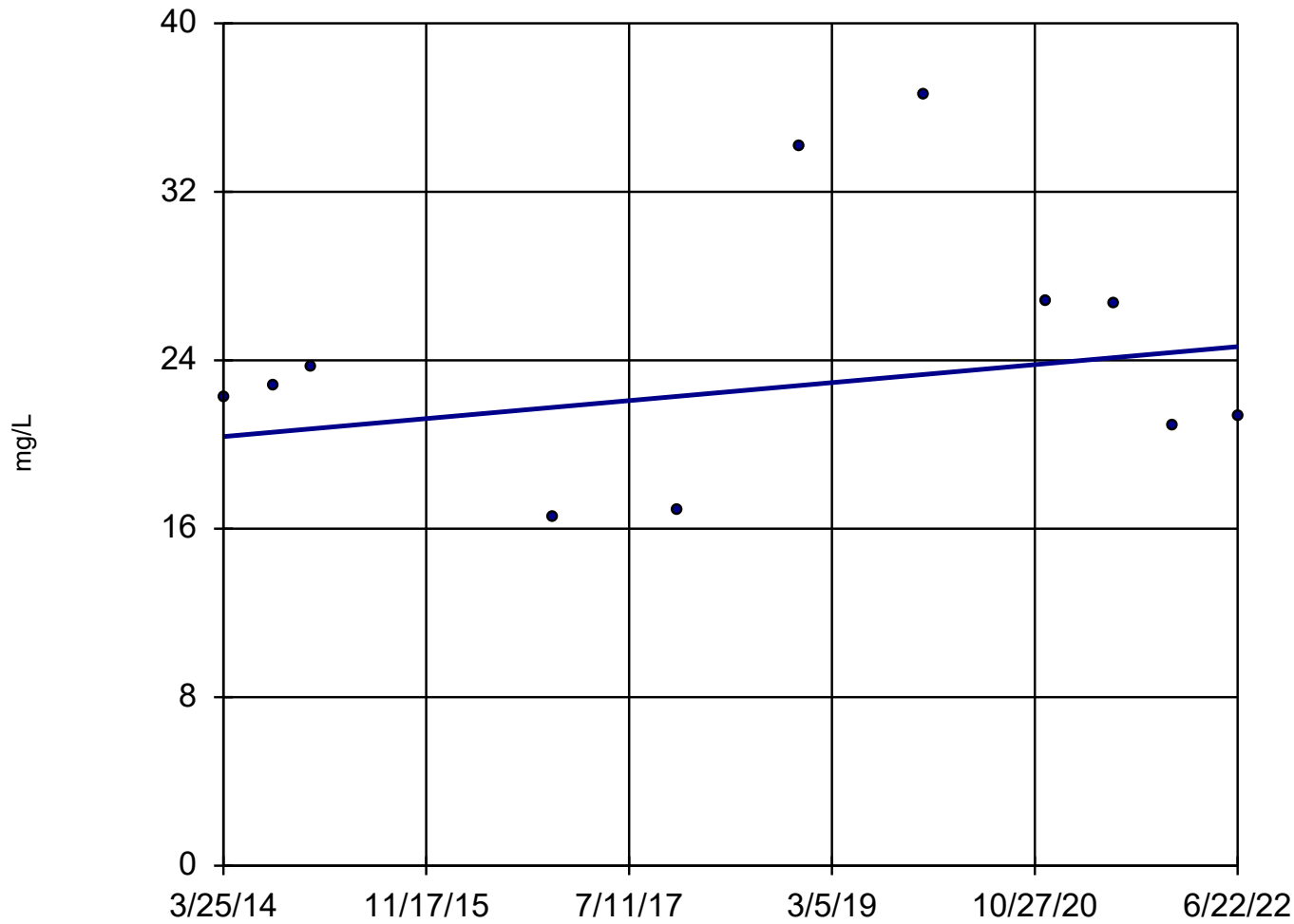


Constituent: Sulfate Analysis Run 11/22/2022 1:35 PM

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-17



n = 11

Slope = 0.5181
units per year.

Mann-Kendall
statistic = 5
critical = 31

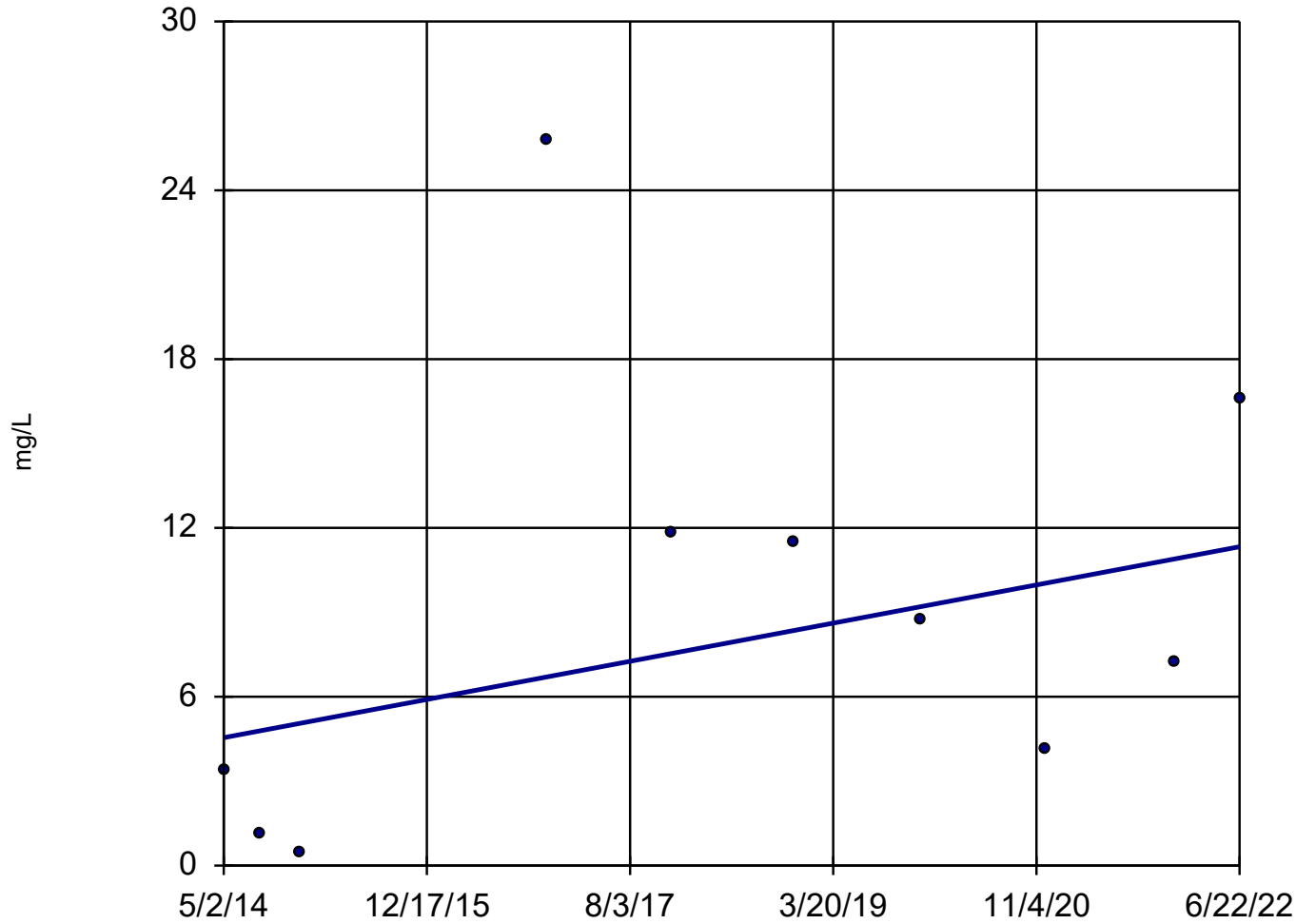
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Sulfate Analysis Run 11/22/2022 1:35 PM

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-18



n = 10

Slope = 0.833
units per year.

Mann-Kendall
statistic = 9
critical = 27

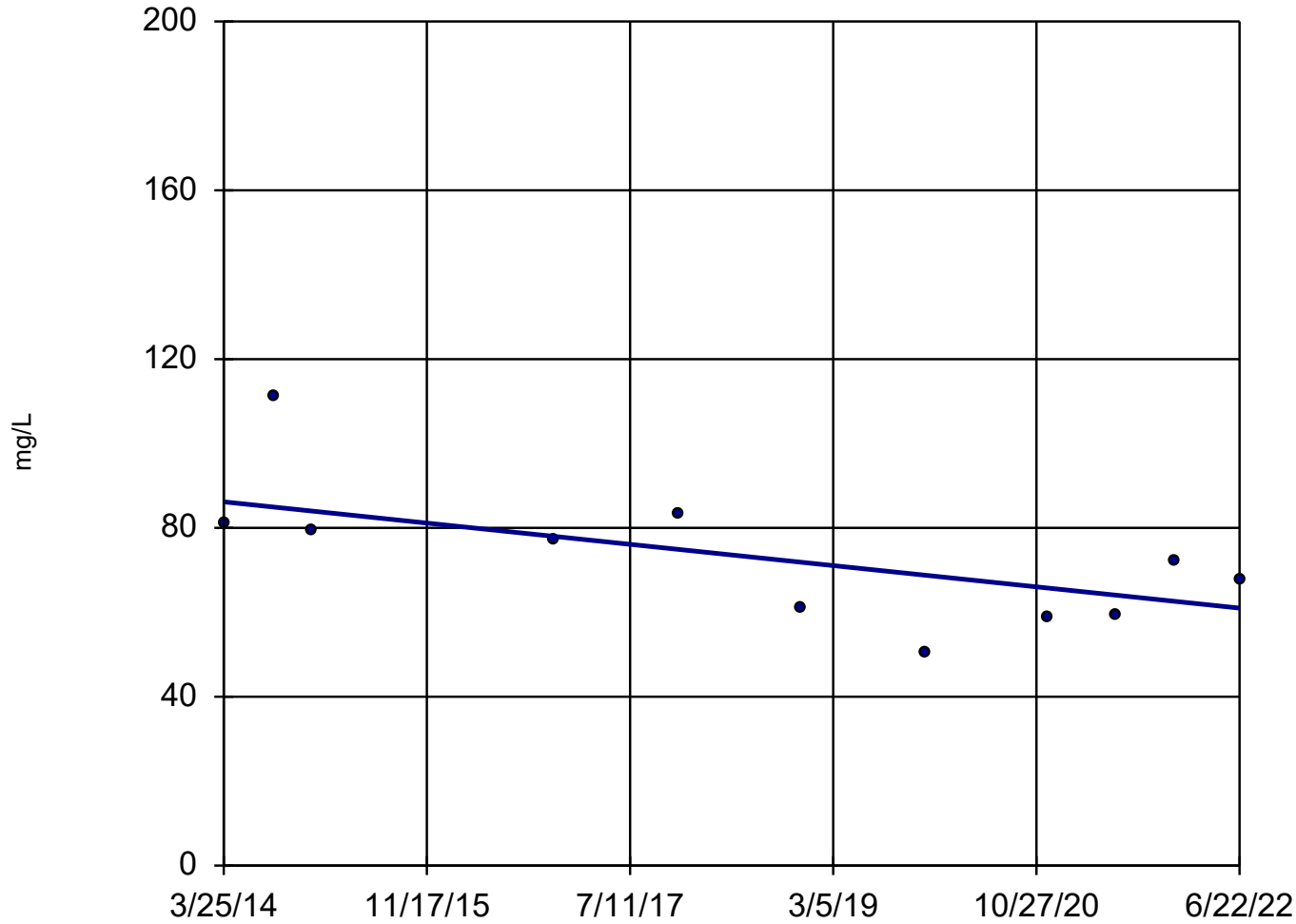
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Sulfate Analysis Run 11/22/2022 1:35 PM

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-20



n = 11

Slope = -3.049
units per year.

Mann-Kendall
statistic = -25
critical = -31

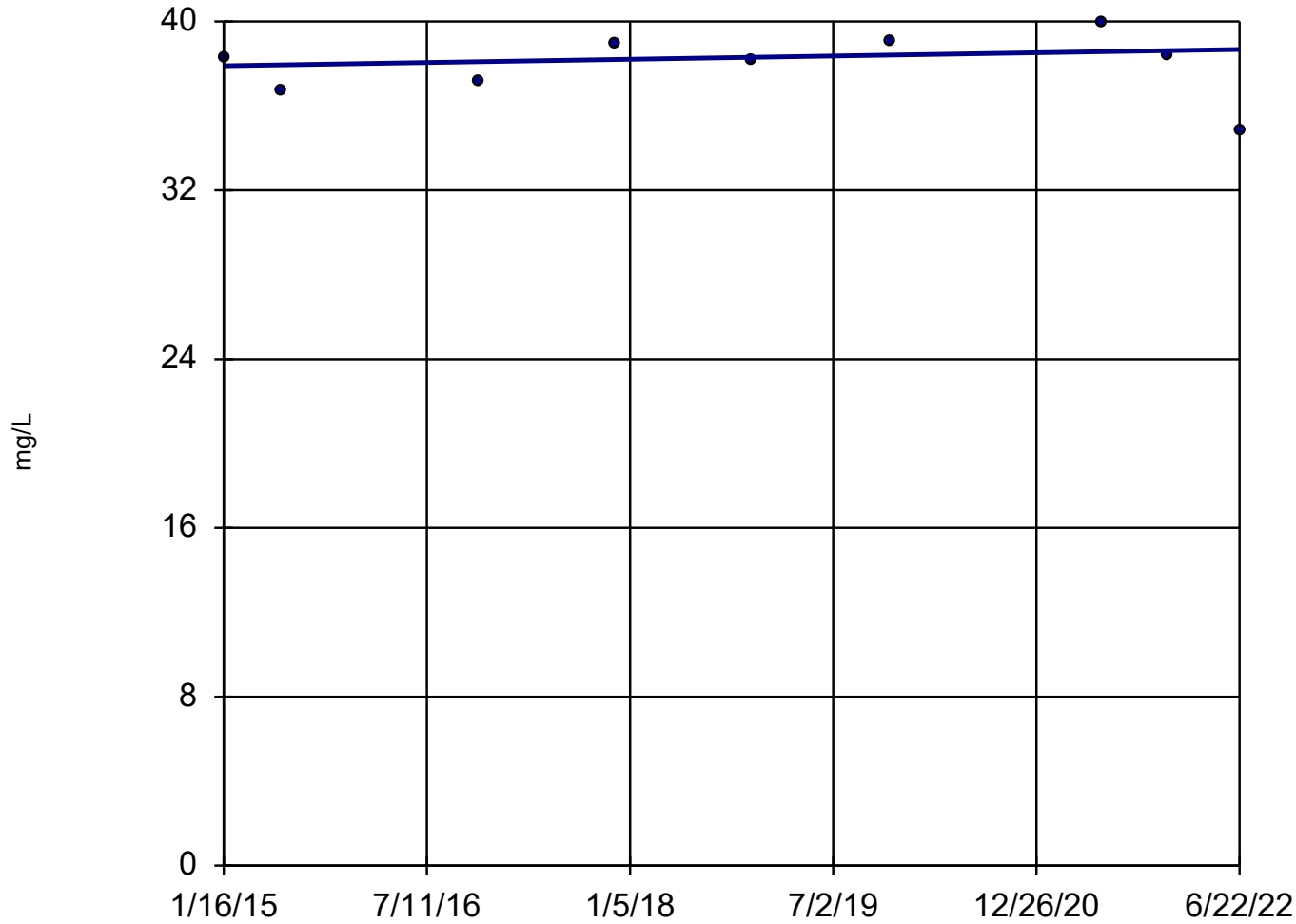
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Sulfate Analysis Run 11/22/2022 1:35 PM

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

MW-27

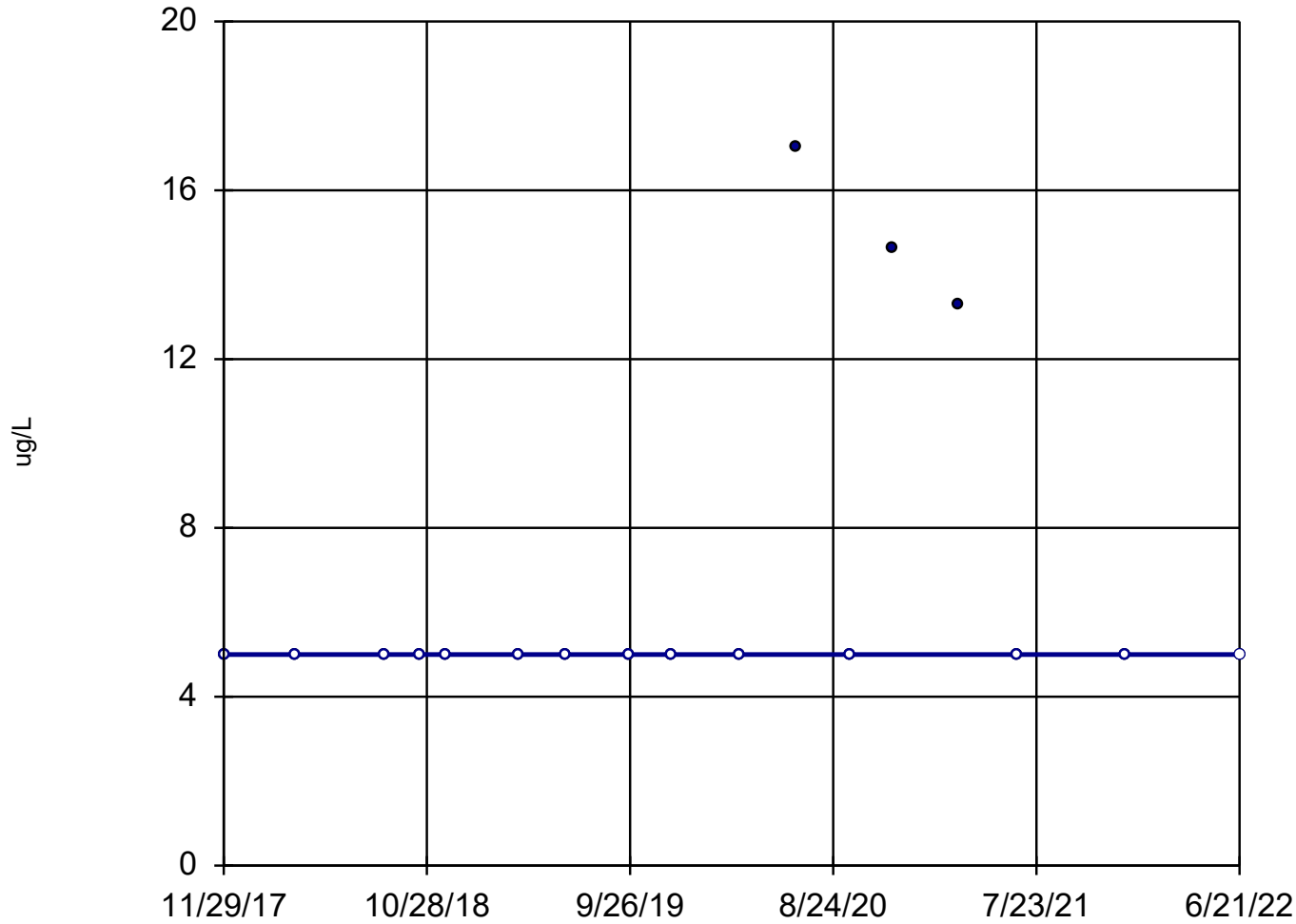


n = 9
Slope = 0.1044
units per year.
Mann-Kendall
statistic = 6
critical = 23
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Sulfate Analysis Run 11/22/2022 1:36 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Inorganics

Sen's Slope Estimator

LF-2



n = 17

Slope = 0
units per year.

Mann-Kendall
statistic = 19
critical = 58

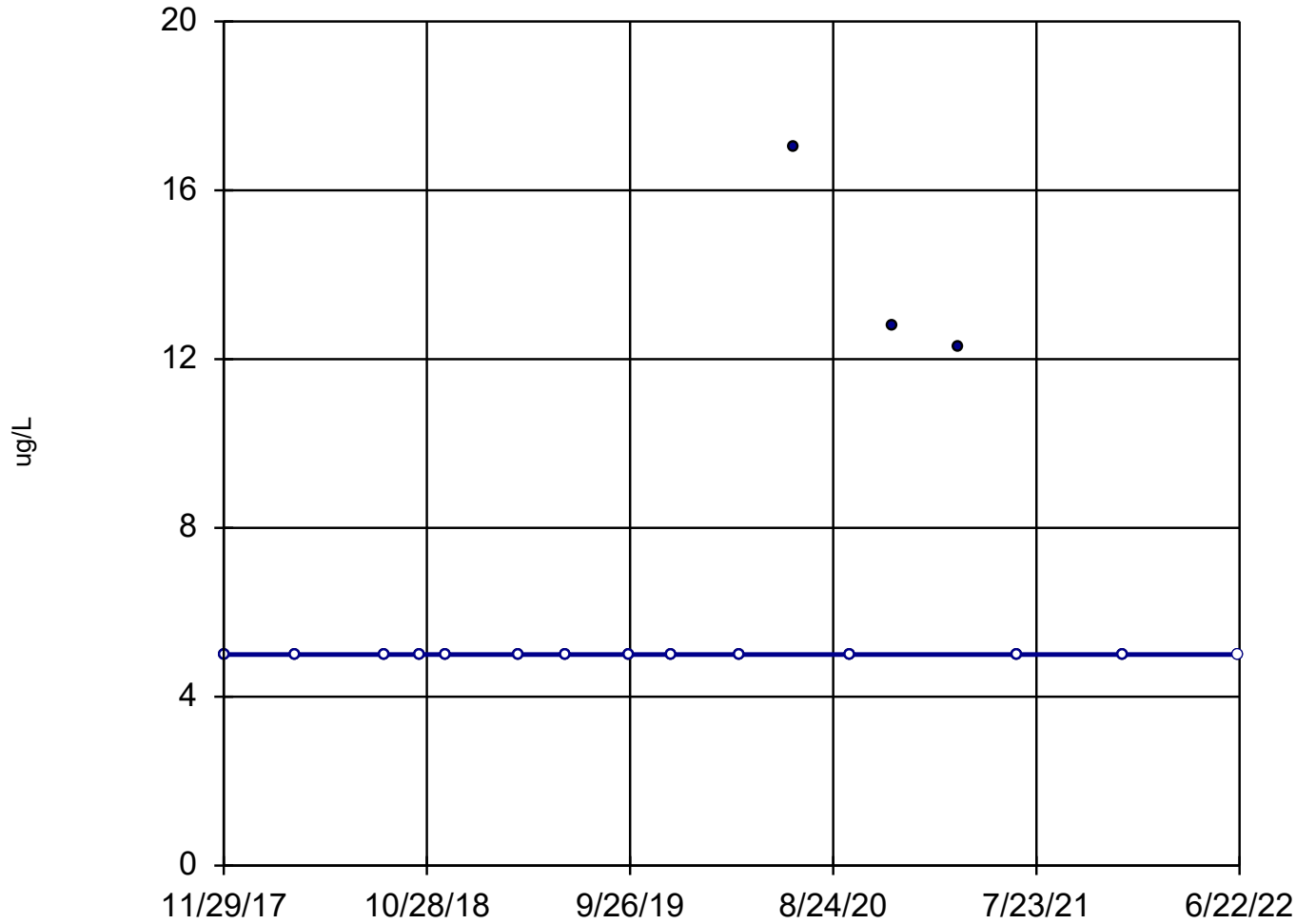
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: 2-Propanol Analysis Run 11/18/2022 2:50 PM

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Sen's Slope Estimator

LF-3



n = 17

Slope = 0
units per year.

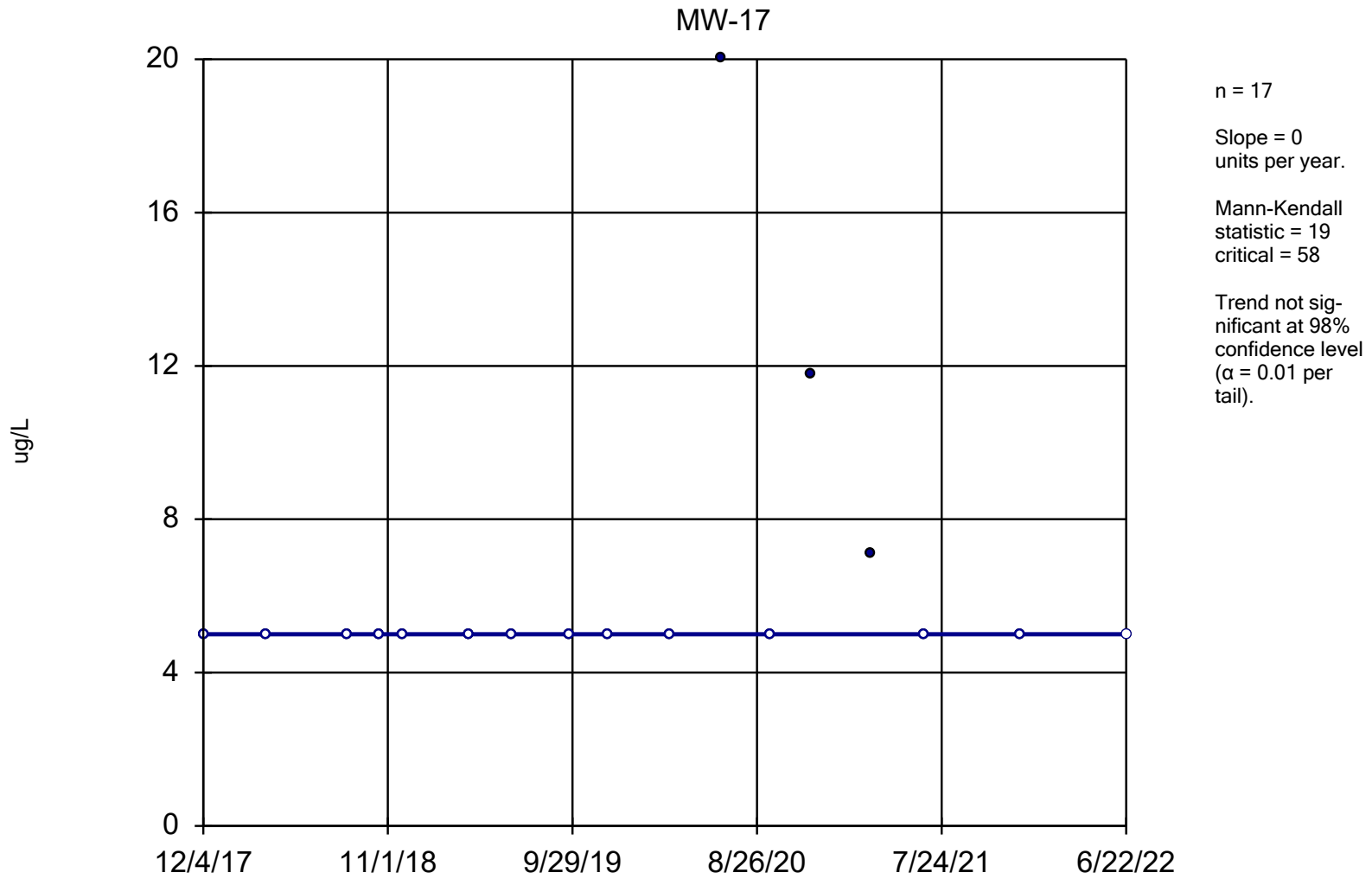
Mann-Kendall
statistic = 19
critical = 58

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

Constituent: 2-Propanol Analysis Run 11/18/2022 2:50 PM

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Sen's Slope Estimator

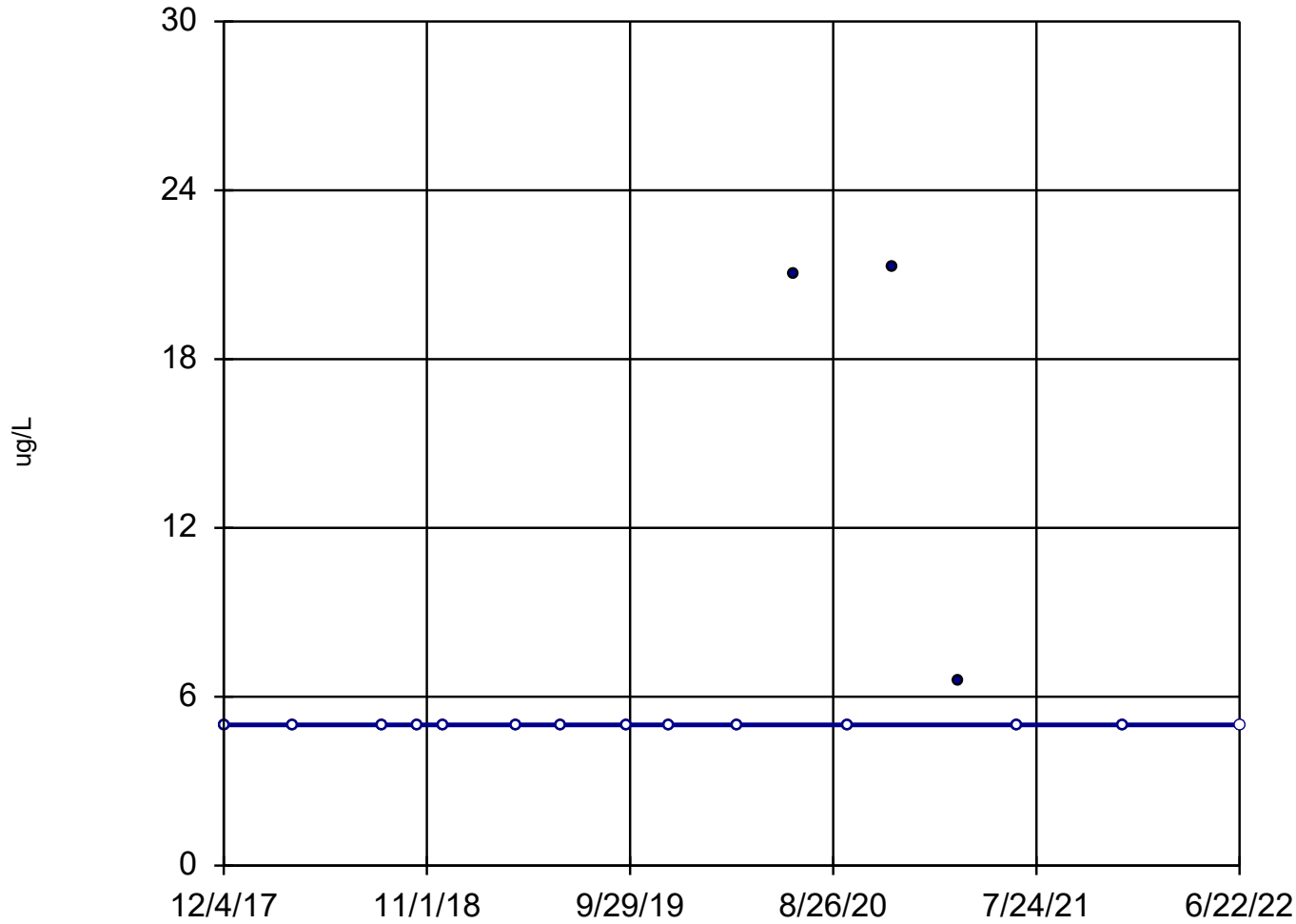


Constituent: 2-Propanol Analysis Run 11/18/2022 2:50 PM

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Sen's Slope Estimator

MW-18



n = 17

Slope = 0
units per year.

Mann-Kendall
statistic = 21
critical = 58

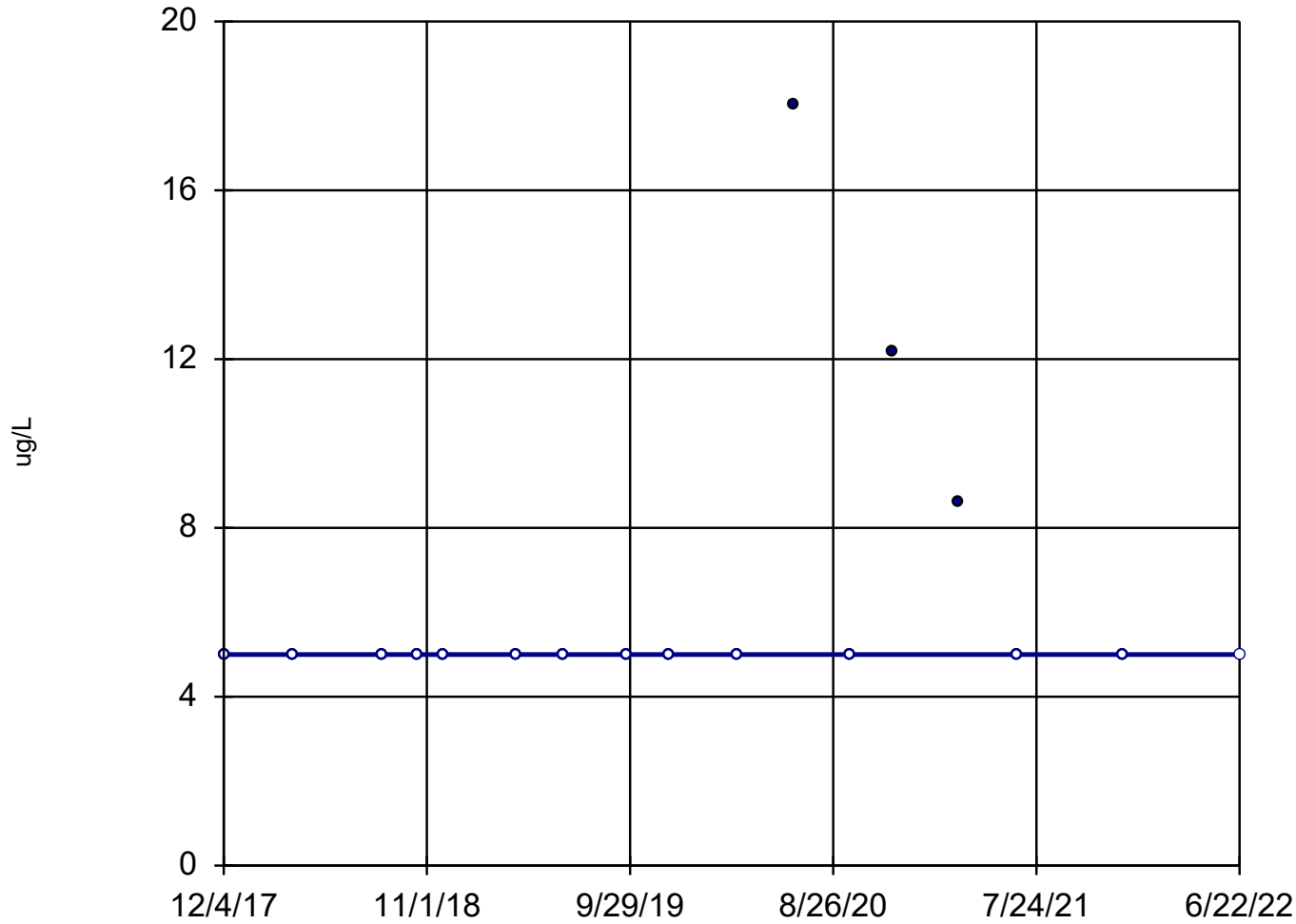
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: 2-Propanol Analysis Run 11/18/2022 2:50 PM

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Sen's Slope Estimator

MW-20



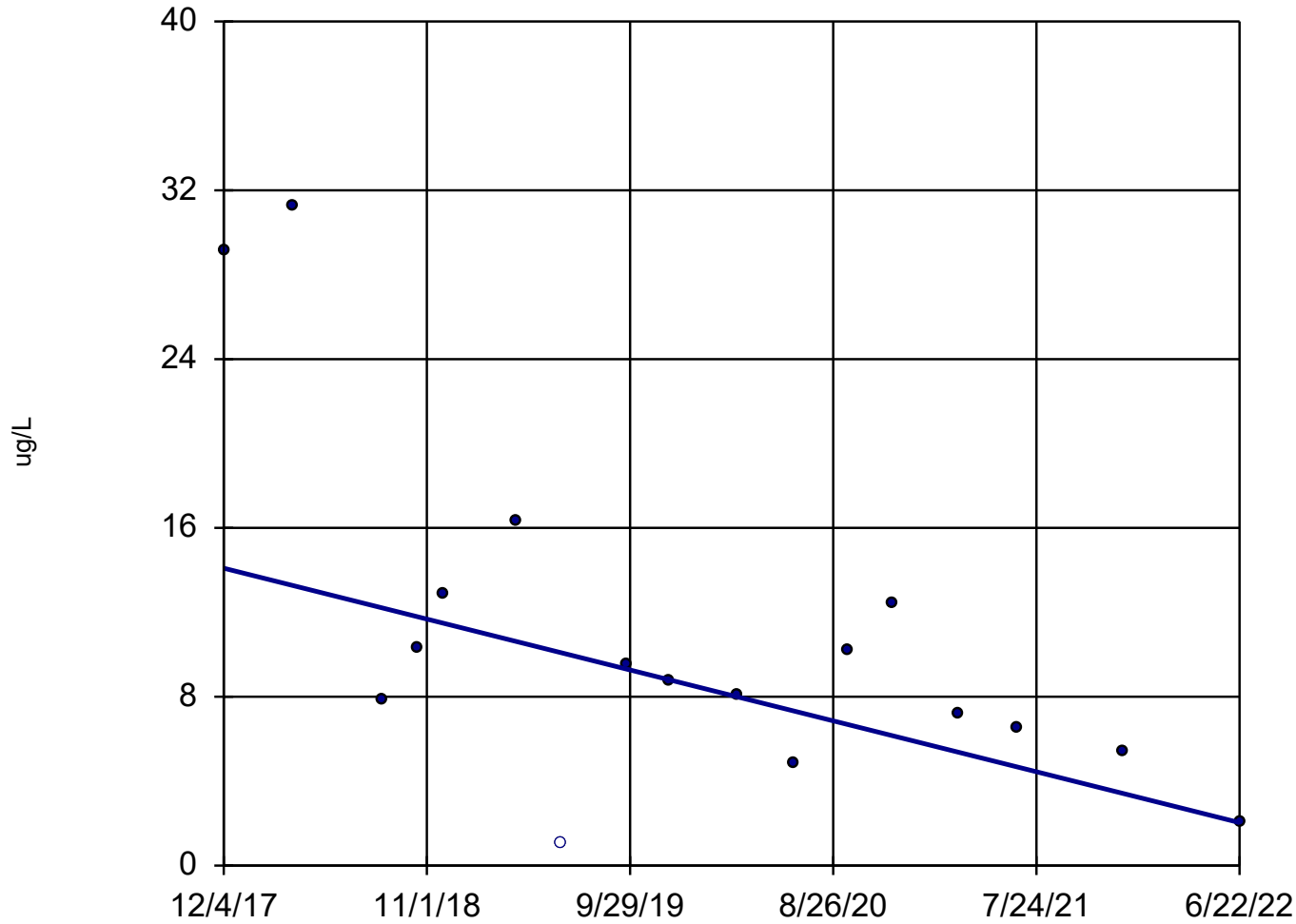
n = 17
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = 19
 critical = 58
 Trend not sig-
 nificant at 98%
 confidence level
 ($\alpha = 0.01$ per
 tail).

Constituent: 2-Propanol Analysis Run 11/18/2022 2:50 PM

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Sen's Slope Estimator

MW-18



n = 17

Slope = -2.65
units per year.

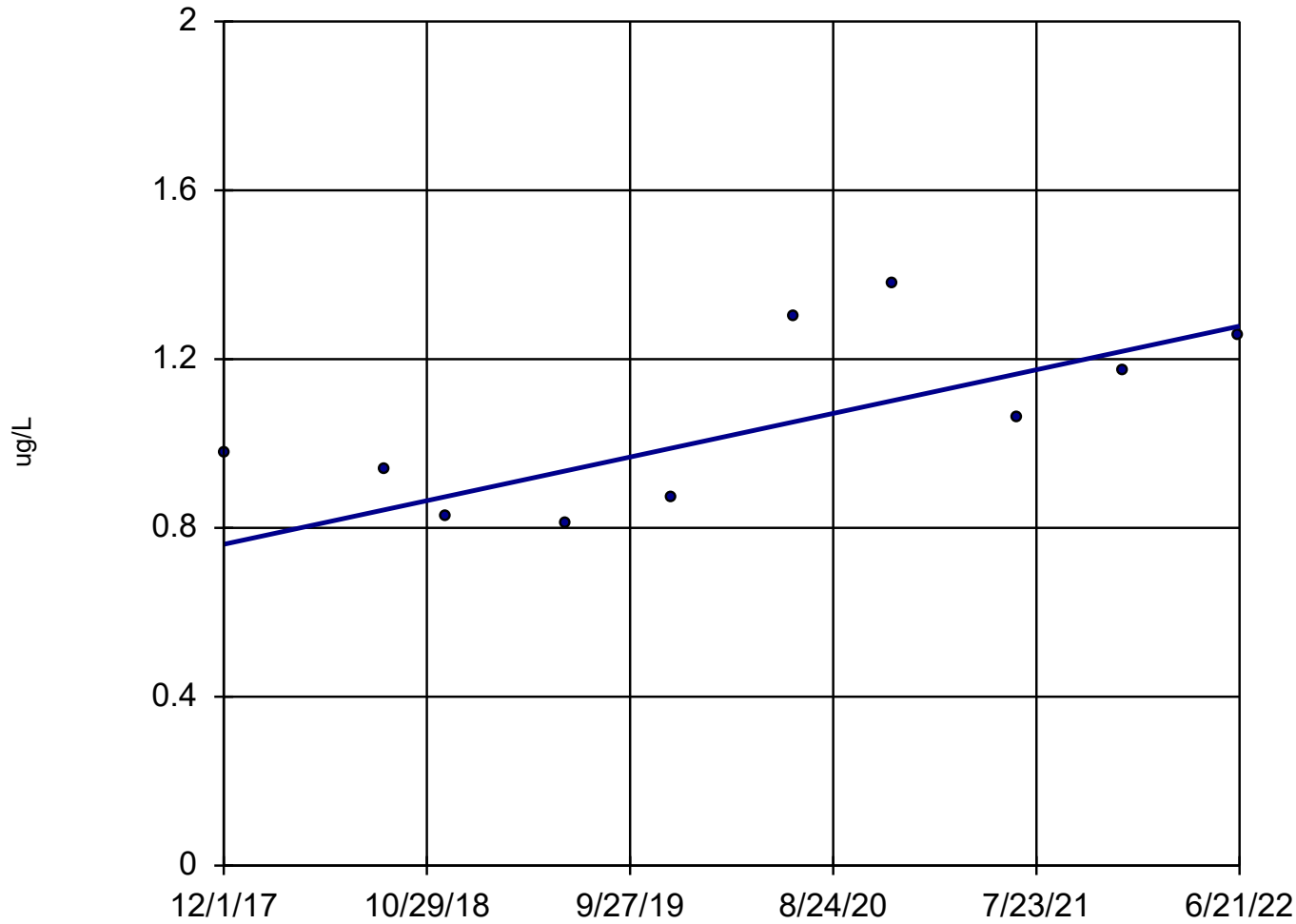
Mann-Kendall
statistic = -66
critical = -58

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

Constituent: Tetrahydrofuran Analysis Run 11/18/2022 2:50 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Sen's Slope Estimator

MW-6



n = 10

Slope = 0.1134
units per year.

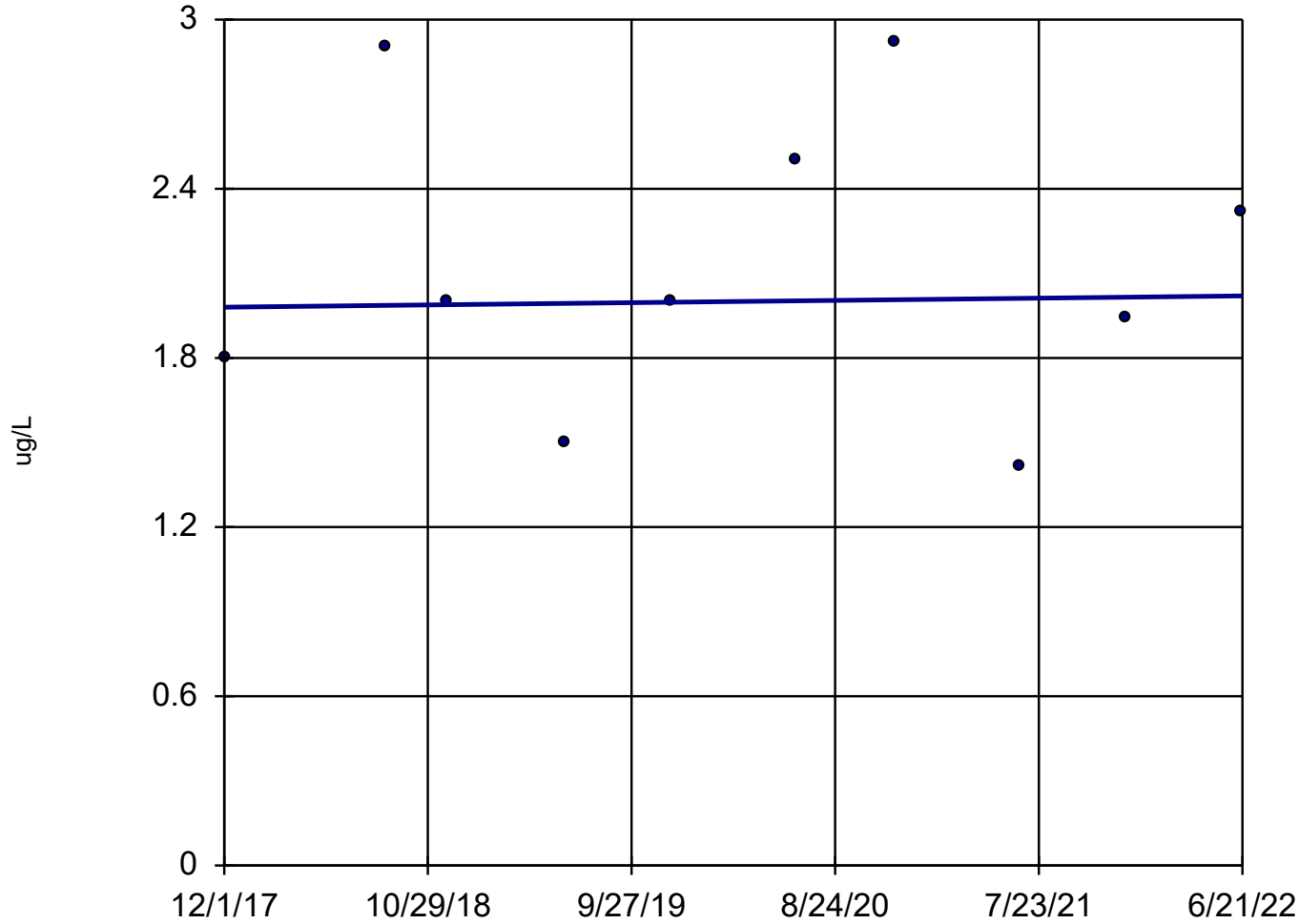
Mann-Kendall
statistic = 17
critical = 27

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

Constituent: 1,1-Dichloroethane Analysis Run 11/22/2022 1:06 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Sen's Slope Estimator

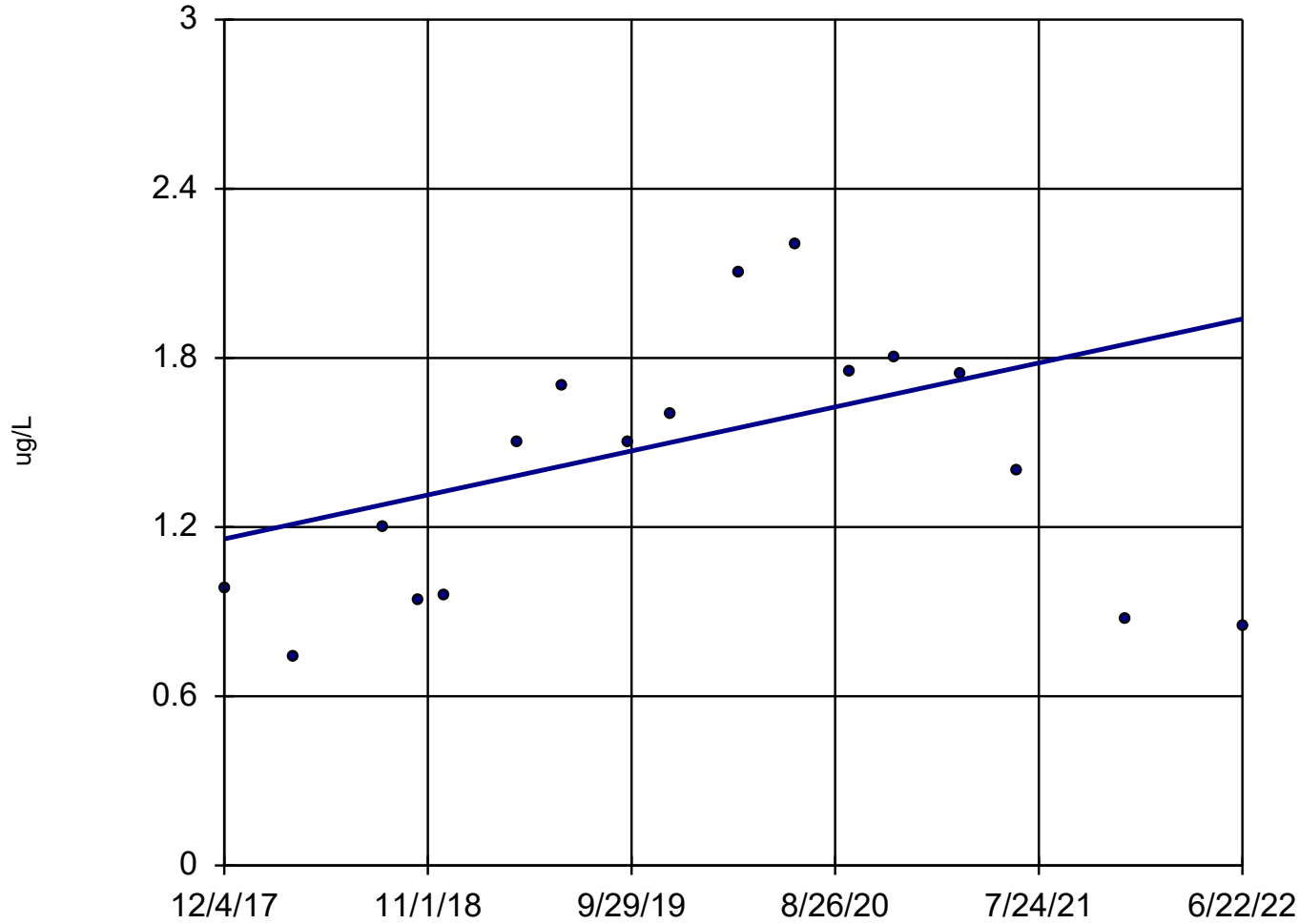
MW-7A



Constituent: 1,1-Dichloroethane Analysis Run 11/22/2022 1:06 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Sen's Slope Estimator

MW-12

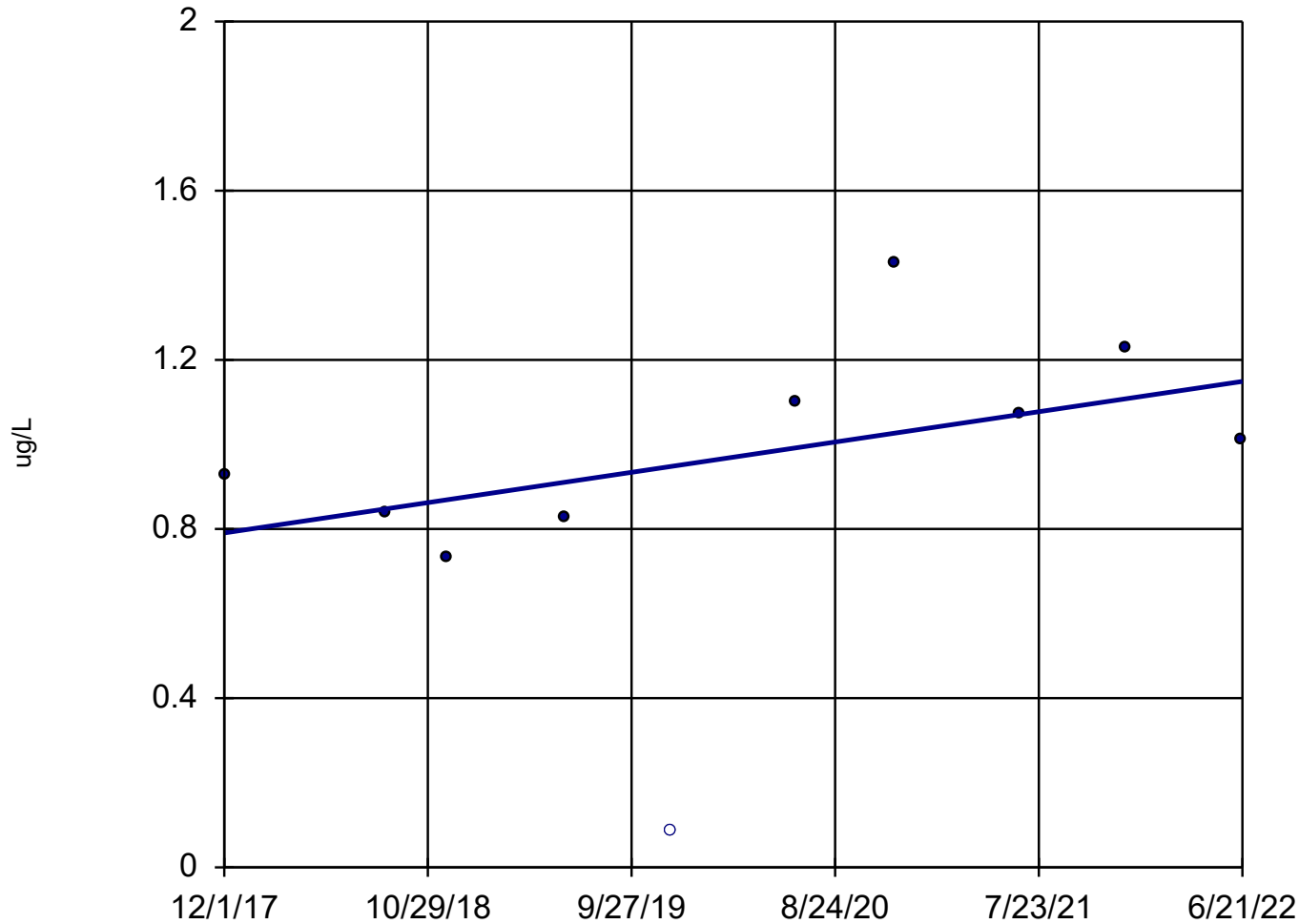


n = 17
Slope = 0.1715
units per year.
Mann-Kendall
statistic = 29
critical = 58
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: 1,1-Dichloroethane Analysis Run 11/22/2022 1:06 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Sen's Slope Estimator

MW-13



n = 10

Slope = 0.07862
units per year.

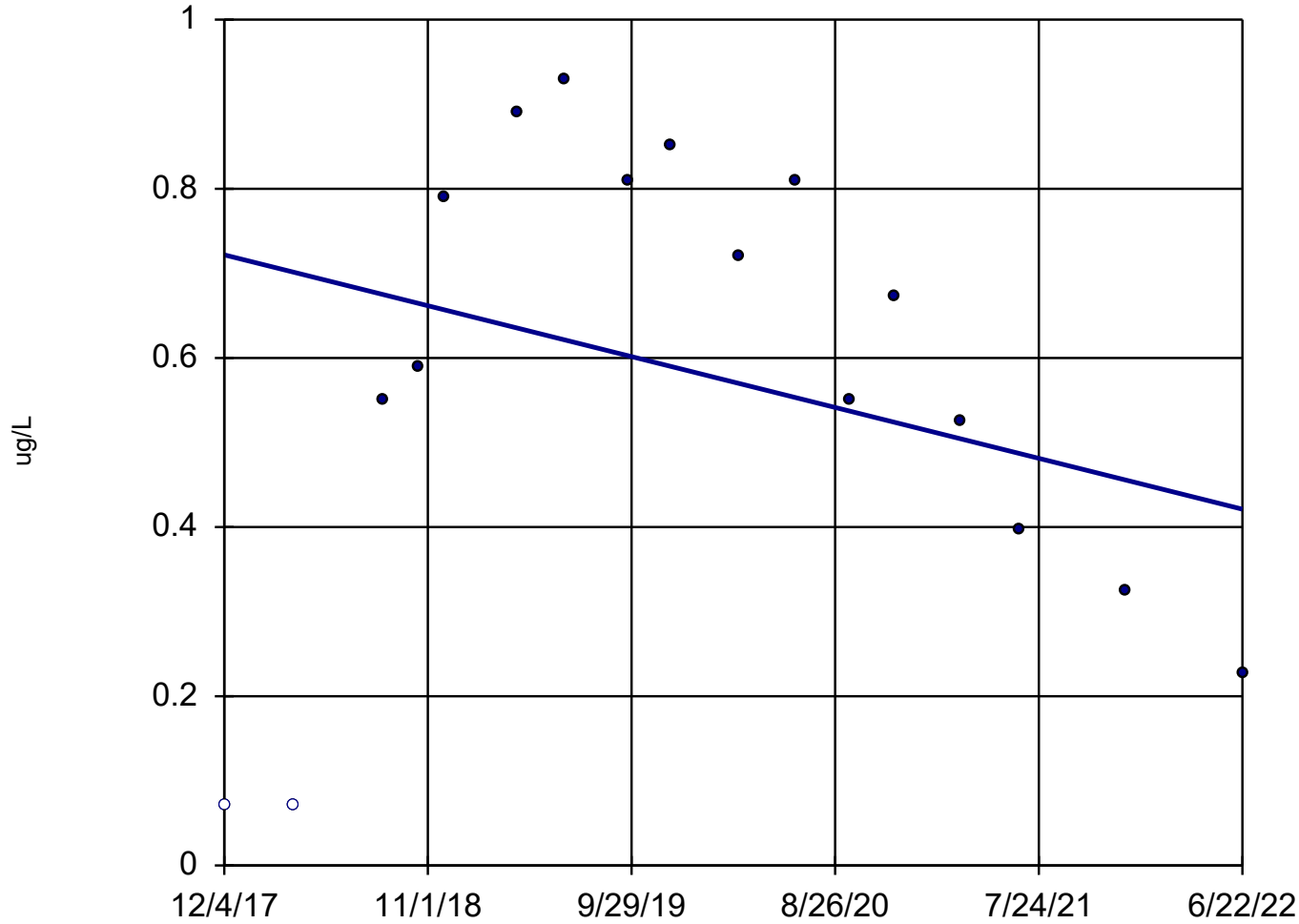
Mann-Kendall
statistic = 13
critical = 27

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

Constituent: 1,1-Dichloroethane Analysis Run 11/22/2022 1:06 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Sen's Slope Estimator

MW-17



n = 17

Slope = -0.06607
units per year.

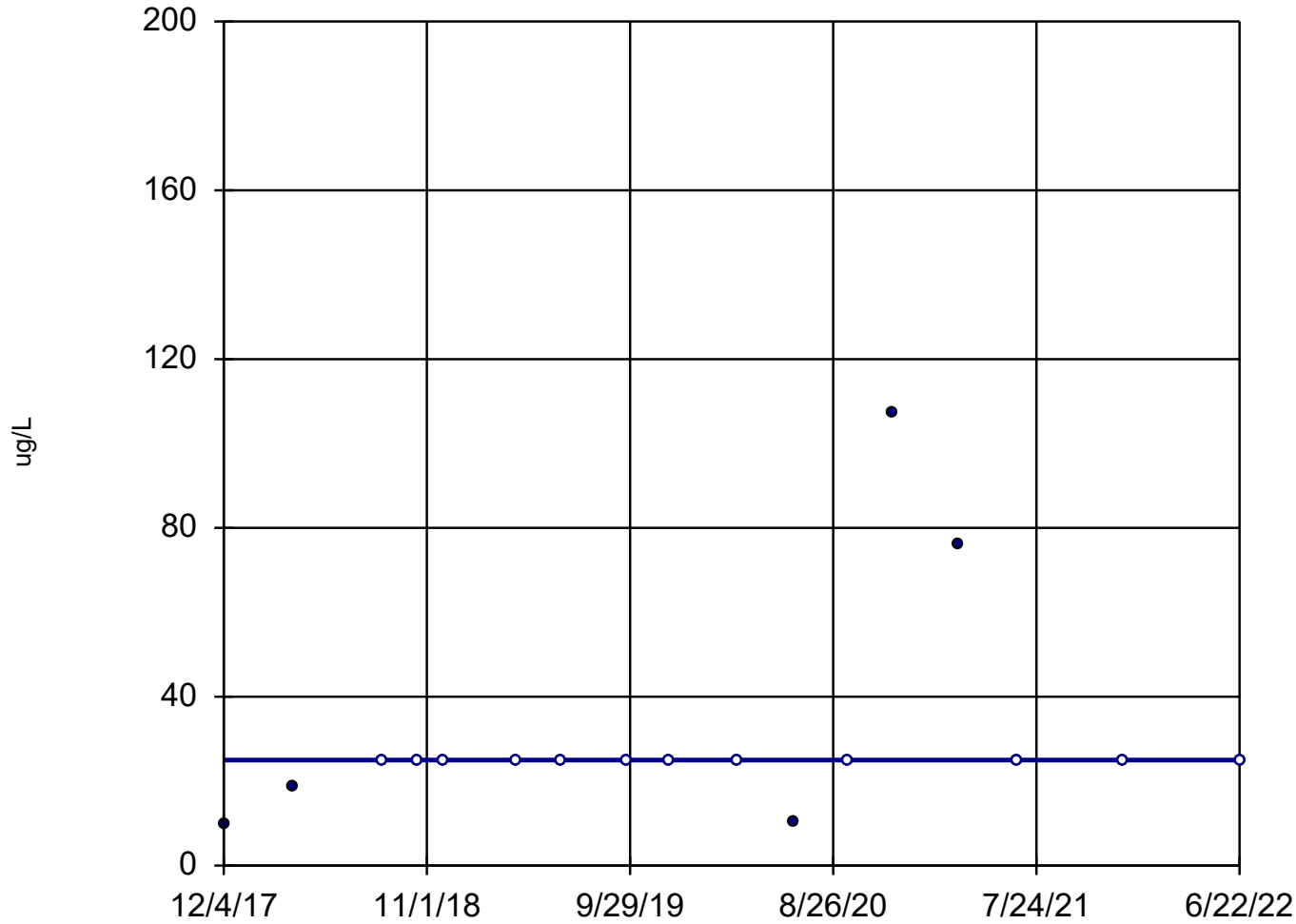
Mann-Kendall
statistic = -22
critical = -58

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

Constituent: 1,1-Dichloroethane Analysis Run 11/22/2022 1:06 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Sen's Slope Estimator

MW-18



n = 17

Slope = 0
units per year.

Mann-Kendall
statistic = 38
critical = 58

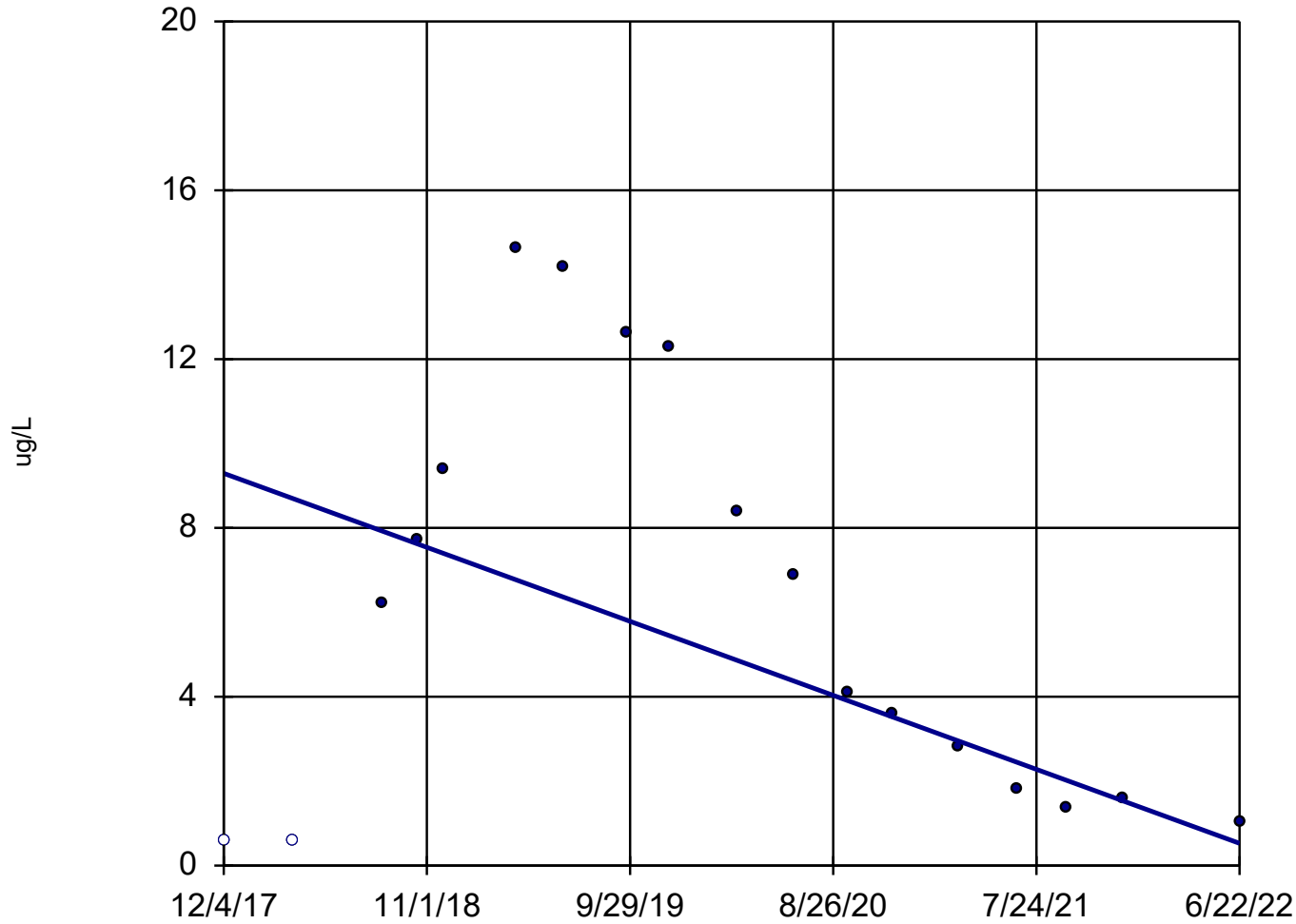
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Acetone Analysis Run 11/22/2022 1:06 PM

Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Sen's Slope Estimator

MW-17

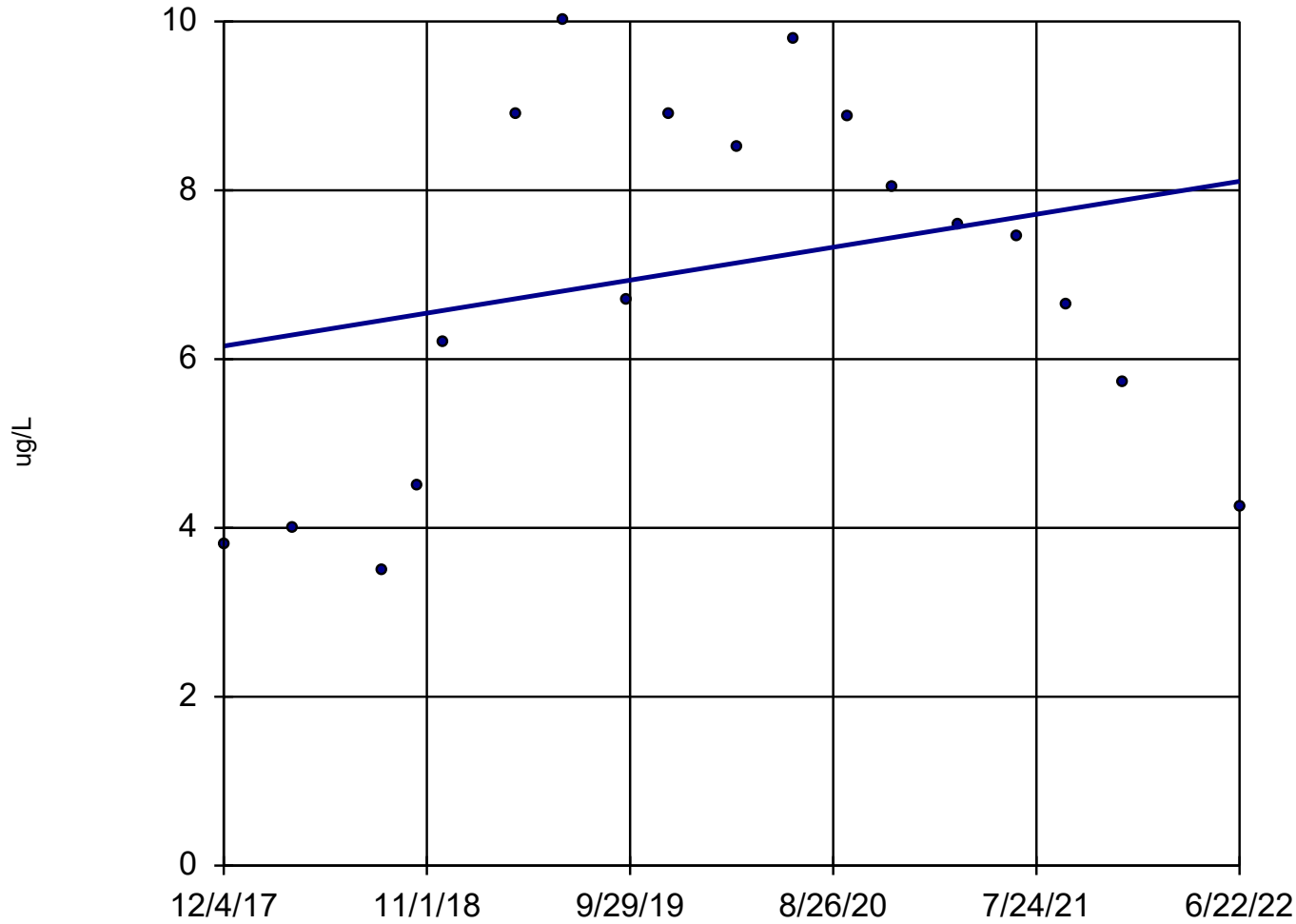


n = 18
Slope = -1.926
units per year.
Mann-Kendall
statistic = -50
critical = -63
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Methylene Chloride Analysis Run 11/22/2022 1:06 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Sen's Slope Estimator

MW-17



n = 18

Slope = 0.4291
units per year.

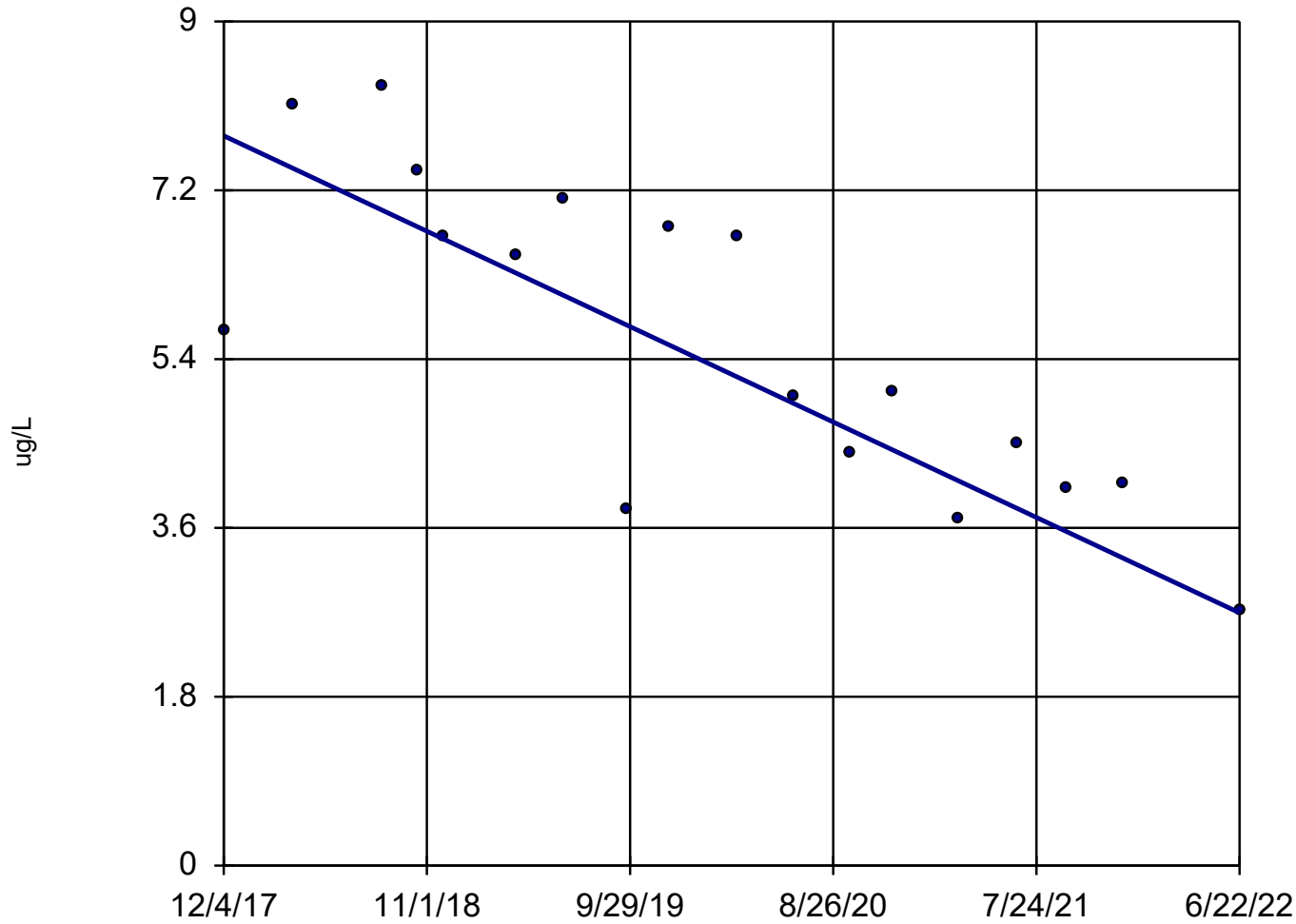
Mann-Kendall
statistic = 12
critical = 63

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

Constituent: Tetrachloroethene Analysis Run 11/22/2022 1:06 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Sen's Slope Estimator

MW-20



n = 18

Slope = -1.118
units per year.

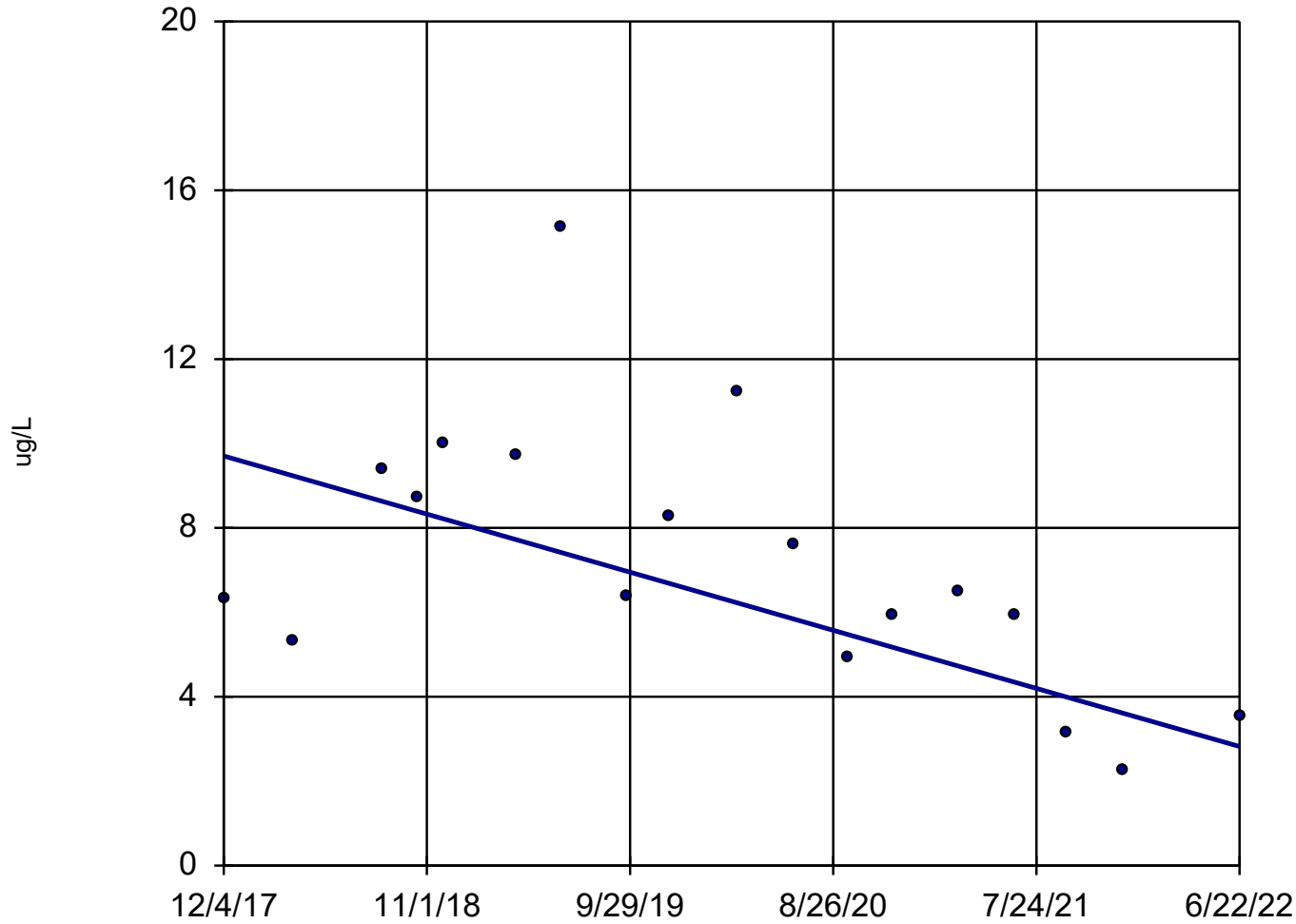
Mann-Kendall
statistic = -94
critical = -63

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

Constituent: Tetrachloroethene Analysis Run 11/22/2022 1:06 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Sen's Slope Estimator

MW-12



n = 18

Slope = -1.513
units per year.

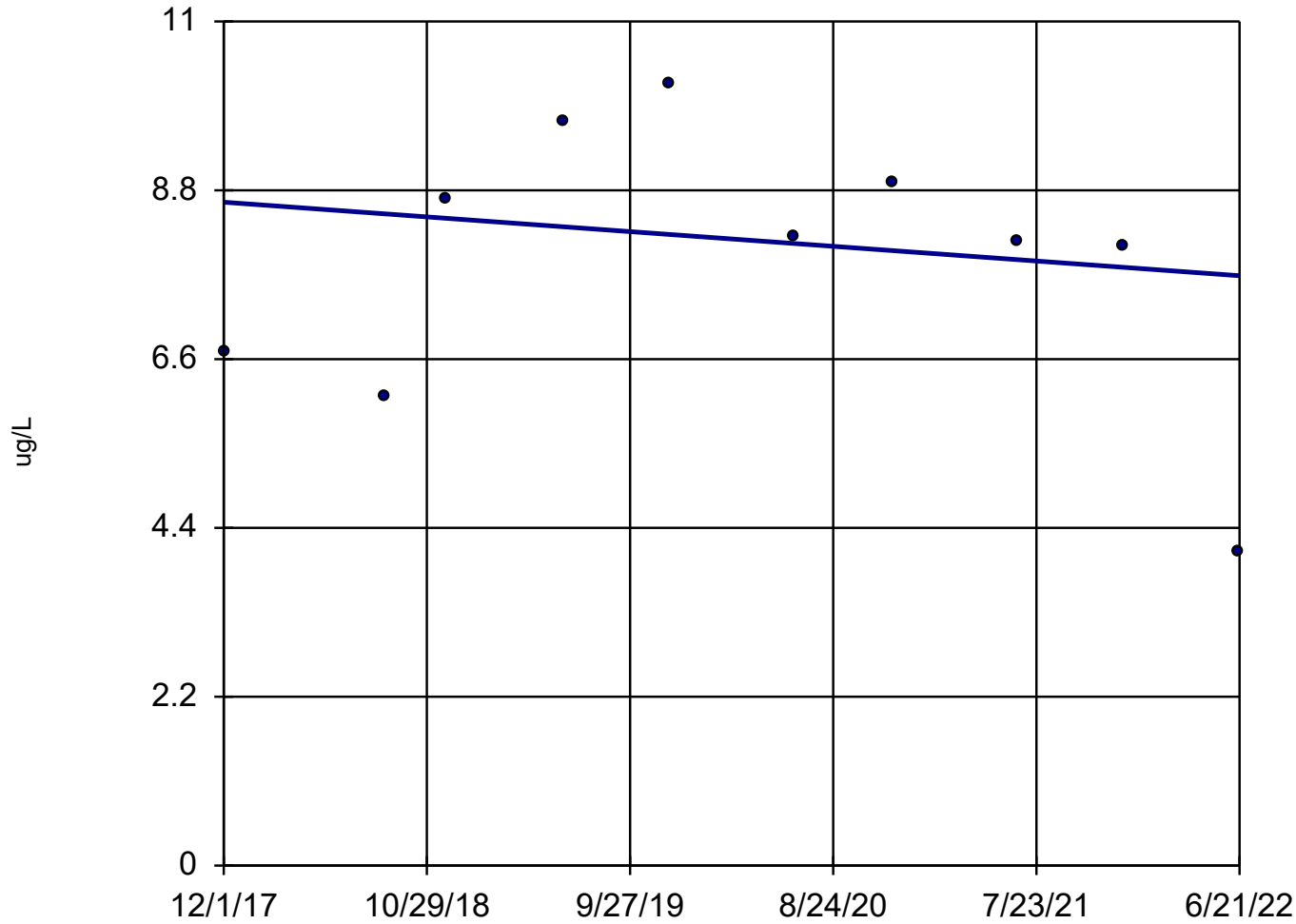
Mann-Kendall
statistic = -61
critical = -63

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

Constituent: Vinyl chloride Analysis Run 11/22/2022 1:06 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Sen's Slope Estimator

MW-13



n = 10

Slope = -0.2105
units per year.

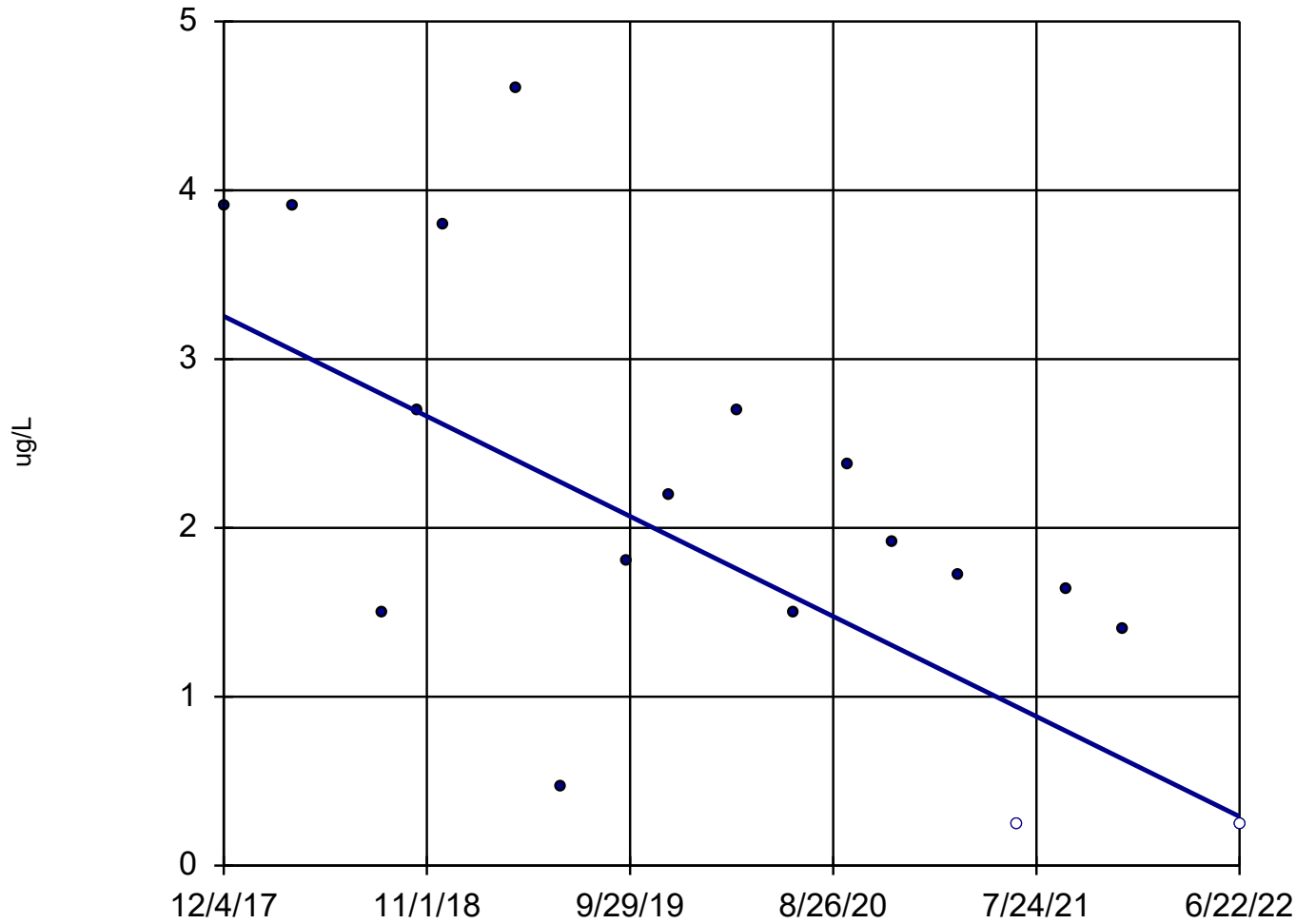
Mann-Kendall
statistic = -7
critical = -27

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

Constituent: Vinyl chloride Analysis Run 11/22/2022 1:06 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics

Sen's Slope Estimator

MW-18



n = 18

Slope = -0.6511
units per year.

Mann-Kendall
statistic = -77
critical = -63

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

Constituent: Vinyl chloride Analysis Run 11/22/2022 1:06 PM
Bozeman Landfill Client: Tetra Tech, Inc. Data: Bozeman Lf Organics