TETRA TECH, INC.

October 16, 2013

Mr. Dustin Johnson
The City of Bozeman
P.O. Box 1230
Bozeman, Montana 59771-1230

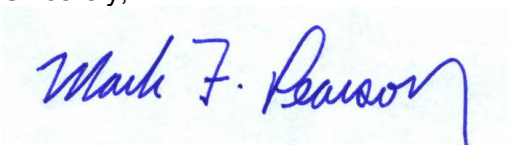
RE: Report of Groundwater Monitoring Activities – June 2013
Bozeman Landfill
Bozeman, Montana

Dear Dustin:

Please find the attached report of Groundwater Monitoring Activities for June 2013. Please contact me with any questions or comments to this report or project. Copies have been forwarded to the parties listed below.

We appreciate the opportunity to work with the City of Bozeman on this project.

Sincerely,



Mark F. Pearson
Project Manager/Hydrogeologist

mfp

Enclosure: Report of Groundwater Monitoring Activities – June 2013

Copies of this report sent to:
1) Mr. John Collins, Montana DEQ – hard copy and pdf on CD
2) Mr. and Mrs. Gianforte –pdf via email

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REPORT OF GROUNDWATER MONITORING ACTIVITIES
JUNE 2013

BOZEMAN LANDFILL
BOZEMAN, MONTANA

REPORT OF GROUNDWATER MONITORING ACTIVITIES
JUNE 2013

BOZEMAN LANDFILL
BOZEMAN, MONTANA

Submitted to:

Mr. Dustin Johnson, P.E.
City of Bozeman
P.O. Box 1230
Bozeman, Montana 59771-1230

Submitted by:

Tetra Tech, Inc.
851 Bridger Drive, Ste 6
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October 16, 2013

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1.0 INTRODUCTION

This report presents the results of groundwater monitoring activities conducted during June 2013 at the Bozeman Landfill (**Figure 1**, **Appendix A**). Tetra Tech personnel conducted the monitoring in accordance with a Task Order dated November 9, 2012 and the *Groundwater Sampling and Analysis Plan* dated October 28, 2010. The task order was approved by the City of Bozeman on December 3, 2012.

Monitoring activities included the measurement of water levels and field parameters, purging and sampling of wells and a surface water spring (McIlhattan Seep), and submitting the samples for laboratory analysis. Monitoring sites are shown in **Figure 2** (**Appendix A**).

1.1 METHODS

This section describes methods used to monitor groundwater at the Bozeman Landfill. Results of the monitoring activities are presented in Section 2.0. Figures presenting the site location, monitoring sites, and other site aspects are contained in **Appendix A**. Data tables are contained in **Appendix B**. A schedule of laboratory analysis conducted during the June 2013 monitoring event is presented in **Table 1**.

1.1.1 Water Level and Field Parameter Measurements

Depth to groundwater was measured in monitoring wells during the June monitoring event. Water levels were measured from a designated measuring point on the north quadrant of the polyvinyl chloride (PVC) collar of each well. An electric well probe was used for water level measurements and routinely decontaminated before use at each well. Other field parameter measurements, including temperature, pH, specific conductivity, dissolved oxygen (DO, measured in milligrams per liter), and oxidation reduction potential (ORP, measured in millivolts) were measured with a YSI®-556 multimeter in samples collected from the monitoring wells during purging; in purge water during pumping of wells; or downhole, in most of the wells following purging with a bailer. In the case of McIlhattan Spring, the multiprobe was completely submersed in the spring flow at the sampling location. The measurements were recorded on groundwater sampling logs included in **Appendix C**.

1.1.2 Groundwater Monitoring

The June 2013 monitoring event was an assessment groundwater monitoring event. This consisted of groundwater samples being collected from 16 monitoring wells (LF-2, LF-3, MW-4, MW-5, MW-6, MW-6B, MW-7A, MW-8A, MW-8C, MW-9A, MW-10, MW-11, MW-12, MW-13, MW-15, and MW-16). Samples were also collected from the Landfill Shop Well (shop well), McIlhattan Seep, and Valley View (formerly McIlhattan) Veterinary Clinic (Vet) well. Well and other sampling locations are shown in **Figure 2**.

The required constituents to be analyzed are listed in Appendix I to 40 CFR Part 258 contained in ARM 17.50.1306(7). The water samples collected were analyzed for volatile organic compounds (VOCs) in accordance with method 8260B MSV Low Level and inorganic constituents in accordance with method 6020 MET ICPMS (metals), method 300.0 IC (anions), and method 353.2 (nitrate+nitrite as N). Analytical methods are included with the laboratory analytical report in **Appendix D**.

DEQ had previously approved omissions and additions of constituents to the Appendix I list. These include the omission of antimony, beryllium, and mercury and the addition of iron, manganese, and dichlorodifluoromethane. Therefore, all of the wells and sample sites were analyzed for VOCs, iron and manganese, and inorganic constituents with exception to wells LF-2 (VOCs and nitrate+nitrite as N), MW-16 (VOCs), and the shop well (VOCs).

Pace Analytical Services, Inc. (Pace), in Billings, Montana was contracted to furnish the sample containers, a trip blank, and conduct the analysis. The trip blank was prepared in Pace's Billings laboratory and consisted of de-ionized water. Upon Pace's receipt of the samples, the trip blank was analyzed for VOCs (8260 method) listed in Appendix I to 40 CFR Part 258 contained in ARM 17.50.1306(7) plus dichlorodifluoromethane. A duplicate sample was also collected at well MW-8A and submitted for analysis of VOCs, iron and manganese, and inorganic constituents.

Water samples were collected from each monitoring well in accordance with the *Groundwater Monitoring Sampling and Analysis Plan* for the site (Tetra Tech 2010). In general, the following sampling procedures were used:

- Monitoring wells were purged using either dedicated submersible pump(s), decontaminated submersible pumps with disposable tubing, or dedicated and/or disposable polyethylene bailers.

- A minimum of three well casing volumes were removed in wells that had suitable recovery, with the objective of sampling "formation" water. In wells with poor recovery, an effort was made to purge to a casing water column that was less than the length of a bailer and then allow the well to recover for sampling and subsequent monitoring (if DO and ORP was being measured downhole).

- Each sample obtained for dissolved metals analysis was filtered in the field through a disposable 0.45-micron filter. The samples were filtered directly from the dedicated (or disposable) bailer or pump discharge hose into appropriate labeled containers and preserved with nitric acid.

- All other samples 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. These forms are included in **Appendix C**.

- Samples were packed in ice-filled coolers and shipped with chain-of-custody forms to Pace Analytical Services, Inc., in Billings, Montana. Chain-of-custody forms for the sampling events are included with the laboratory reports in **Appendix D**.

- Monitoring activities at the McIlhattan Seep (**Figure 2**) consisted of directly filling the sample bottles where the seep emanates at ground surface. Consistent with previous monitoring events, dissolved metals analysis had been selected at this location to provide for direct comparison with other monitoring locations' dissolved metals analysis. The sample for dissolved metals analysis was collected in a disposable bailer, filtered, and preserved with nitric acid. All other samples were collected in appropriate labeled containers and preserved, as necessary.

- Monitoring activities at the water supply well located at Valley View Veterinary Hospital on 2717 McIlhattan Road (formerly McIlhattan Veterinary Clinic) consisted of purging the well through a faucet in the kennel adjacent to the office. Approximately 130 gallons were purged prior to collecting a sample. The purging method and volume purged was consistent with previous monitoring events. As in previous monitoring events, the sample for metals was not filtered for reporting as total recoverable metals concentrations. All other samples were collected in appropriate labeled containers and preserved, as necessary.

The June 2013 monitoring event field parameter measurements and laboratory analytical results were entered into Tetra Tech's database management system. Data entries were then checked by Tetra Tech personnel to ensure correct data entry.

2.0 DATA PRESENTATION AND ANALYSIS

Data collected at the Bozeman Landfill during the June 2013 monitoring event are summarized in this section. Figures and tables cited in the report are contained in **Appendix A** and **B**, respectively**.** Groundwater sampling logs, chain-of-custody documents, and laboratory analytical reports for the monitoring events are contained in **Appendices C** and **D**, respectively.

2.1 GROUNDWATER OCCURRENCE AND MOVEMENT

Groundwater occurrence, movement, hydraulic gradient, and other groundwater aspects are discussed. A groundwater flow and gradient map representing the June 2013 groundwater elevations is presented in **Figure 3**.

Site Depth to Groundwater and Seasonal Variation

Depth to first interception of groundwater ranges between approximately one foot below ground surface (bgs) in well MW-10 near the western margin of the site, 14 feet bgs in wells LF-2 and LF-3, 52 feet bgs in wells MW-11 and MW-12, and 110 feet bgs in well MW-5 at the eastern margin of the site. Seasonal variation of groundwater elevations, since the year 2000, has been an average of 0.9 foot in well MW-10; 0.7 and 0.4 foot in wells LF-2 and LF-3, respectively; 0.3 foot in wells MW-11 and MW-12; and 0.9 foot in well MW-5. **Chart 1 (Appendix B)** presents the change in groundwater levels through time in three monitoring wells across the site.

Site Groundwater Flow Direction and Hydraulic Gradient

The June 2013 water levels 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* shifting to a west-southwest flow between the *Lined Closed Cell* and well MW-10, at the western margin of the site. The groundwater gradient beneath the *Unlined Closed Cell* is a consistent 5.4% between wells MW-15 and MW-12. The groundwater gradient decreases between wells MW-12 and MW-4 to approximately 2.3% and then steepens again to approximately 4.2% between wells MW-4 and MW-10. In the vicinity of well MW-10, the groundwater gradient is inferred to significantly decrease as indicated by topography in the vicinity of this well, near-surface groundwater level at this location, and being within the alluvial valley of the East Gallatin River (**Figure 3**).

In addition to map hydraulic gradients described above, the measurement of groundwater elevations in monitoring wells determined the following vertical groundwater gradients at the site:

MW-6 and 6B The groundwater elevation in well MW-6B is 12 feet higher than in well MW-6 indicating a distinct upward hydraulic gradient between groundwater at screened depths (below ground surface) of approximately 41 to 56 feet (MW-6) and 90 to 100 feet (MW-6B).

MW-7A and 7B Consistent with previous monitoring events, groundwater elevations are the same in both wells indicating no upward or downward gradients in groundwater to approximately 74 feet depth (below ground surface).

MW-8A, 8B, and 8C The groundwater elevation in well MW-8C is approximately 4 feet higher than in well MW-8A indicating an upward hydraulic gradient groundwater at depths of approximately 41 to 70 feet (MW-8A and 8B) and 93 to 103 feet (MW-8C). As observed in previous monitoring events, groundwater elevations in wells MW-8A and 8B are the same indicating no upward or downward gradients in groundwater to approximately 70 feet depth.

MW-9A and 9B Consistent with previous monitoring events, groundwater elevations are the same in both wells indicating no upward or downward gradients in groundwater to approximately 57 feet depth.

Hydraulic Conductivity and Groundwater Movement

Hydraulic conductivities of the alluvial fan deposits underlying the site had been evaluated in 1994 using a short-term aquifer test and laboratory hydraulic conductivity tests (Huntingdon, 1994). Results are reiterated in this section and indicate hydraulic conductivity ranging between 97 centimeters per second (cm/sec) and 5.2×10^{-6} cm/sec. The relatively wide range of hydraulic conductivity values is indicative of a heterogeneous nature of the alluvial fan deposits. The average calculated hydraulic conductivity of the alluvial fan sediments is approximately 2.0×10^{-2} cm/sec (56.7 feet per day). This is a typical hydraulic conductivity value for clean sand (Freeze and Cherry, 1979). Assuming an effective porosity of 0.35 (typical values for sand and gravel range from 0.28 to 0.39; Todd, 1980) and June 2013 hydraulic gradients ranging from 2.3% to 5.4%, the approximate rate of groundwater movement beneath the Bozeman Landfill ranges between 4.5 and 9.1 feet per day.

2.2 GROUNDWATER QUALITY

A discussion of the June 2013 results for analyses of inorganic constituents and volatile organic compounds is presented in the following sections. The Groundwater Protection Standard (GPS) is the concentration of constituents in site upgradient wells MW-5 and MW-15 and/or equal to the United States Environmental Protection Agency (U.S. EPA) Maximum Contaminant Level (MCL). The Montana Human Health Standard (HHS) cited in Circular DEQ-7 Montana Numeric Water Quality Standards (DEQ 2012) can also be representative of the GPS, as in the case of vinyl chloride.

2.2.1 Inorganic Groundwater Quality

Montana landfill inorganic constituents include chloride, sulfate, electrical conductivity, pH, nitrate+nitrite, and up to 15 metals. Metal concentrations in samples collected from monitoring wells during the June 2013 were generally near or below the analytical practical quantitation limit (PQL) and this is consistent with previous monitoring events. With exception to nitrate+nitrite as N, inorganic constituent concentrations in wells did not meet or exceed the regulatory standards.

Sites where metal concentrations were higher than the analytical reporting limit (RL) or of note are listed below:

- The nitrate+nitrite as N concentrations ranged between non-detection in well MW-13 to 14.5 milligrams per liter (mg/L) in well MW-8A. The nitrate+nitrite as N concentration in well MW-8A exceeded the GPS or MCL for nitrate+nitrite as N of 10 mg/L (DEQ 2012). Well MW-8C had a nitrate+nitrite as N concentration of 6 mg/L. Well LF-2, downgradient of well MW-8A, had a nitrate+nitrite as N concentration of 2.4 mg/L.

- Iron concentrations ranged between non-detection to 3.5 mg/L. Iron concentrations in wells MW-10 and MW-12 were the highest (3.3 and 3.5 mg/L, respectively).

- Manganese concentrations ranged between non-detection to 5.1 mg/L. Manganese concentrations in wells MW-10, MW-12, and MW-13 were the highest (0.11 to 5.1 mg/L).

- Chloride concentrations ranged between 1.7 and 74.2 mg/L. Wells MW-8A, MW-9A, and MW-10 and McIlhattan Seep had chloride concentrations over 50 mg/L.

- Sulfate concentrations ranged between 4.5 and 84.5 mg/L. Wells MW-8A and MW-10 and McIlhattan Seep had sulfate concentrations over 50 mg/L.

2.2.2 Organic Groundwater Quality

The VOC analysis (8260B MSV Low Level method) includes the analysis of 48 constituents (**Appendix D**). Detections of VOCs by selected locations are the following:

Wells MW-5 and MW-15
No VOCs detected

Wells MW-11 and MW-12
Tetrachloroethene, Trichloroethene, Vinyl Chloride, Benzene, Dichlorodifluoromethane, 1,1 Dichloroethane, cis-1,2 Dichloroethene, 1,2 Dichloropropane, Trichlorofluoromethane

Well MW-6
Tetrachloroethene, Trichloroethene, Vinyl Chloride, Chloroethane, 1,1 Dichloroethane, cis-1,2 Dichloroethene

Well MW-8A
Tetrachloroethene, Trichloroethene, cis-1,2 Dichloroethene

Wells LF-2 and LF-3
Tetrachloroethene, Trichloroethene, Dichlorodifluoromethane, cis-1,2 Dichloroethene

Well MW-10 and the McIlhattan Seep
Tetrachloroethene, Trichloroethene, cis-1,2 Dichloroethene

Table 2 summarizes concentrations of selected VOCs in monitoring events including June 2013.

Wells or sites with concentrations of tetrachloroethene and/or trichloroethene included wells LF-2, LF-3, MW-4, MW-6, MW-7A, MW-8A, MW-9A, MW-11, MW-12, MW-13, MW-16, shop well, and the McIlhattan Seep. Tetrachloroethene concentrations ranged between non-detection and 5

micrograms per liter (µg/L, 5 µg/L in well MW-7A). Trichloroethene concentrations ranged between non-detection and 2.1 µg/L (2.1 µg/L in well MW-16). Wells or sites with concentrations of vinyl chloride included wells MW-6, MW-7A, MW-12, and MW-13 where concentrations ranged between 0.25 (estimated) and 21.1 µg/L (21.1 µg/L in well MW-13). .

Tetrachloroethene (in well MW-7A) and vinyl chloride (in wells MW-6, MW-7A MW-12, and MW-13) were the only VOCs detected above the GPS during the June 2013 monitoring event. The GPS for tetrachloroethene is 5 µg/L. The U.S. EPA GPS for vinyl chloride is 2 µg/L. However, Montana has a lower GPS (also known as the Human Health Standard) for vinyl chloride of 0.2 µg/L (DEQ 2012).

3.0 DATA VALIDATION

This section describes the data validation process used to determine the adequacy and quality of June 2013 laboratory analytical data at the Bozeman Landfill. The objective of data validation is to identify any unreliable or invalid laboratory measurements and qualify that data for interpretive use. These validations are performed according to guidelines prepared by the U.S. EPA (1994a and 1994b).

3.1 FIELD QA/QC

A duplicate sample was collected from well MW-8A during the June 2013 monitoring event. The sample was labeled "Dup" and shipped with the other natural samples to Pace Analytical Services, Inc., in Billings, Montana for analysis of VOCs and inorganic constituents listed in ARM 17.50.1306 (plus dichlorodifluoromethane). A trip blank also accompanied the groundwater samples collected in June 2013. The trip blank was labeled "Trip Blank", and consisted of deionized water containerized by the laboratory, shipped to Tetra Tech's Bozeman, Montana office with the sample containers, and shipped back to the laboratory with the samples upon conclusion of the field activities. The trip blank was analyzed for VOCs listed in ARM 17.50.1306 (plus dichlorodifluoromethane).

Field duplicate results aid in the assessment of sampling and analytical precision. Analytical results for the natural and duplicate samples collected from well MW-8A 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 Minimum Detection Limit (MDL) 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 MDL.

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. Analytical results between the natural and duplicate samples collected from well MW-8A had no RPDs greater than 20 percent.

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

Analytical results between the natural and duplicate samples collected from well MW-8A had no AVDs greater than the MDL.

All trip blank results were evaluated using the following criteria:

- Analytical results of the trip blank sample were reviewed to determine if any constituent was measured in the sample at detectable concentrations. No VOCs were detected in the June 2013 trip blank.

- For detected constituents, all results greater than the MDL but less than five times the concentration of the detected constituent are considered estimated and are likely biased towards the high end.

- The following constituents are common laboratory contaminants and are considered estimated when results are greater than the MDL but less than 10 times the concentration in the contaminated blank:

    - Methylene chloride
    - Acetone
    - 2-butanone

3.2 LABORATORY QA/QC

Pace Analytical received groundwater samples collected from the City of Bozeman Sanitary Landfill on June 14, 2013. Chain-of-custody documents accompanied the samples from collection to receipt at the laboratory. The pH was measured in all bottles upon receipt or before analysis to assure proper field preservation techniques were used. All samples were properly preserved and all samples were analyzed within the respective holding time for each analyte (unless otherwise noted on the report via a qualifier). The lab personnel at Pace Analytical reviewed calibration standards, calibration verification, laboratory controls, laboratory duplicates, and laboratory spikes on a daily basis.

Review of all other laboratory quality assurance indicators showed all inorganic and organic analyses were in compliance with published QA/QC criteria and within the laboratory precision and accuracy guidelines with the exception of pH method SM 4500-H+B, where analysis was initiated more than 15 minutes after sample collection. System performance checks were also performed to evaluate proper system performance and calibration for VOC and semi-volatile analyses. All data indicate the GC/MS system was performing properly.

4.0 STATISTICAL ANALYSIS OF WATER QUALITY DATA

The City of Bozeman completed a corrective measures assessment for the Bozeman Landfill in August 1995. A landfill gas extraction system was installed as a result, and has been operated at the site since December 1997 (Maxim, 2000). According to ARM 17.50.1310(5)(b), remedies selected as a result of the corrective measures assessment are considered complete when concentrations of all constituents listed in ARM 17.50.1307 have not exceeded the GPS for a period of three consecutive years based on statistical analysis of the data.

Of those constituents listed in ARM 17.50.1307, the following constituents have equaled or exceeded the GPS at the Bozeman Landfill on at least a single occasion since 2005:

- Nitrate+Nitrite as N

- Tetrachloroethene
- Trichloroethene
- Vinyl Chloride

These constituents were statistically evaluated to determine which are present at statistically significant concentrations above enforcement standards. Selection and description of the statistical tests employed are described below, as are the results.

Results from two point-of-compliance (POC) wells downgradient of the *Unlined Closed Cell* were evaluated. These are wells MW-6 and MW-8A (**Figure 2**). The upgradient wells are MW-5 and MW-15.

In consideration of vinyl chloride concentrations in wells MW-6 and MW-7A, statistics was conducted using the U.S. EPA MCL of 2 µg/L as the GPS instead of the Montana HHS of 0.2 µg/L. The reasons for this are as follows:

- A data set of 15 to 20 data points can be used when the GPS is set to 2 µg/L.
- The MW-6 and MW-7A data sets incorporating a PQL or MDL of 0.2 µg/L are, at present, too small to conduct meaningful statistical calculations (see **Table 3**).
- Statistical calculations can continue to be performed for vinyl chloride in wells MW-6 and MW-7A while the collection of additional data points at a lower detection limit is ongoing. A GPS of 0.2 µg/L can be used when these data sets are of adequate size for meaningful statistical calculations.

In accordance with ARM 17.50.1307, the statistical analysis was conducted in three steps:

Step 1 - Comparison of constituents in samples collected from the background wells (MW-5 and MW-15) and the POC wells (MW-6 and MW-8A) since June 2010.

Step 2 - Statistical analysis of constituents in samples collected from the POC wells that have a higher concentration than samples collected from the background wells. In addition, the statistical analysis was conducted on constituents that have exceeded the GPS in the last seven years (June 2006 to present) to determine if there is a statistically significant increase over background values.

Step 3 - statistical examination of trends of those constituents that have exceeded the GPS in the last seven years (June 2006 to present) and if they are significantly greater than the GPS.

Selection and description of the statistical tests employed are described below, as are the results.

4.1 STATISTICAL TEST SELECTION

Most data in this statistical analysis exhibit non-normal distributions for which non-parametric techniques are appropriate (U.S. EPA, 1992). The demonstration of normality is a three-step process:

- Selection of all data sets with 20 or more data points;
- From the above selection, select those data sets with less than 10 percent non-detected data points; and
- Comparison of the appropriate statistic to a table of critical values at the 95 percent confidence level for all qualified data sets.

In the third step of this process, any result that is between the practical quantitation limit (PQL) or RL and the minimum detection limit (MDL) is flagged with a "J" in **Table 3** and that value is used in the analysis. Any value below the MDL is marked with a "U" in **Table 3**. In the June 2013 data, results lower than the PQL were used and included results between the PQL and MDL. Results less than the MDL are considered to be equal to half the MDL. This is in accordance with U.S. EPA guidelines (U.S. EPA 1992). Only those data sets which meet all three of the above criteria are considered normally distributed in this analysis.

Of the constituents in the June 2013 monitoring that had sufficient sample sizes to test for normality, none exhibited a normal distribution. Hence, where the proportion of non-detects allow, non-parametric techniques were employed. The 1-sample Wilcoxon test is used as the non-parametric equivalent to a parametric confidence interval test (Helsel and Hirsch, 1992).

4.2 STATISTICAL METHODS

A confidence interval approach is used to compare constituent concentrations in downgradient wells to the GPS. This approach is recommended by U.S. EPA (1989 and 1992) and endorsed by Gibbons, the author of *Statistical Methods for Groundwater Monitoring* (1994). Historical data for the constituents that have equaled or exceeded their GPS on at least a single occasion since 2005 were tested for statistical significance with respect to the GPS using two methods:

- Non-parametric 1-sample Wilcoxon test.
- Parametric 1-sample t-test.

Hypothesis tests, interpretation of results, and data requirements for each of the statistical methods used are discussed below.

4.2.1 Non-Parametric 1-Sample Wilcoxon Test

This test is a special case of the signed-rank test used to compare the median difference between paired observations. In this case, the paired observations are constituent concentrations in the POC wells versus the GPS. The null hypothesis is that there is no difference. The alternative hypothesis is that the median of the comparison well is greater than the GPS. A resulting p-value is used to test the significance of the test. The large sample approximation to the test was utilized for sample sets of more than 15 data points. The exact test was used for data sets of seven to 15 observations when the large sample approximation resulted in a p-value less than 0.15. In these instances, p-values were determined from tabulated quantiles for the reported Wilcoxon statistic and sample size. A p-value less than or equal to 0.01 indicates that a significant difference exists at the 99 percent confidence level (Helsel and Hirsch, 1992).

A minimum of seven data points are required to employ this non-parametric test at a 99 percent confidence level (U.S. EPA, 1989). In addition, 2 µg/L was considered the GPS for vinyl chloride in the June 2013 monitoring. Non-detect data with a reported PQL above the GPS are discarded in order to avoid misleading results. For non-detect data equal to the GPS, concentration levels are reduced to just below the standard in order to maintain relative ranking among data.

Well MW-6 had exhibited vinyl chloride concentrations above the U.S. EPA GPS (2 µg/L) in monitoring events conducted from December 2009 to June 2011 (four events). Vinyl chloride concentrations have been below the U.S. EPA GPS in the four sample data sets after June 2011 (December 2011 to June 2013). There are eight valid sample data monitor values with no flag since December 2009. Evaluation of the eight sample data sets from December 2009 to June 2013 indicated, with a p-value of 0.89, no difference between the GPS and the eight valid sample data values for well MW-6. Further, a more conservative evaluation using the flagged and un-flagged sample data values form June 2005 to June 2013 (14 values) also indicated, with a p-value of 0.062, no significant difference between the GPS and the 14 sample data values.

4.2.2 Parametric 1-Sample t-Test

This test is used to compare the mean difference between paired observations when normality can be demonstrated in the data set. As with the non-parametric case, the paired observations are constituent concentrations in the POC wells versus the GPS. The null hypothesis is that there is no difference. The alternative hypothesis is that the mean of the comparison well is greater than the GPS. A resulting p-value is used to evaluate the significance of the test. A p-value less than or equal to 0.01 indicates a significant difference exists at the 99 percent confidence level (Helsel and Hirsch, 1992).

Often, water quality data are not normally distributed without mathematical transformation. For those data sets which do not demonstrate normality, a log transformation often applies adequately to water quality data (Helsel and Hirsch 1992) and is also applied to the data sets in this analysis. The test for normality is then performed on the log transformed data. In sample sets containing non-detect data, values one-half the reported MDL (in un-transformed units) are used to replace non-detect data.

4.3 RESULTS AND DISCUSSION

The progression of the statistics calculations were described as Steps 1 through 3 in the beginning of Section 4.0. Results of statistical analyses are summarized in **Tables 4** and **5**. The output from statistical analysis including descriptive statistics, data plots, and test results are contained in **Appendix E**.

Step 1
A comparison of medians between the upgradient and POC wells was conducted for the last three years of data. Results of this comparison indicated that the following constituents were above background concentrations in one or both of the POC wells:

1,1 dichloroethane
cis 1,2 dichloroethene
Tetrachloroethene
Trichloroethene
Vinyl Chloride
N as NO_2+NO_3
Chloride
Sulfate

Step 2

A comparison of medians between the upgradient and POC wells was conducted for the last seven years of data (approximately 15 data points, although up to 20 data points could be used) and results of the Mann-Whitney U test are presented in **Table 4**. Plots and calculations supporting **Table 4** are contained in **Appendix E**. These results indicated that the following constituents were above background concentrations in one or both of the POC wells:

1,1 dichloroethane
cis 1,2 dichloroethene
Tetrachloroethene
Trichloroethene
Vinyl Chloride
Chloride
Sulfate

Step 3
Seven statistical tests were performed using the 1-sample Wilcoxon method at the 99 percent confidence level. Results are presented in **Table 5**.

Using the U.S. EPA GPS of 2 µg/L for vinyl chloride, concentrations of vinyl chloride in wells MW-12 and MW-13 were statistically different from the GPS at the 99 percent confidence level. As observed from the statistics and charts for wells MW-12 and MW-13, vinyl chloride concentrations are greater than the U.S.EPA GPS value of 2 ug/L. Analysis of vinyl chloride samples in well MW-7A indicate that concentrations are statistically different from the U.S. EPA GPS of 2 ug/L. Although there is a statistical difference, the analysis of the MW 7A results show that the difference is due to the fact that there is a statistically lower value of vinyl chloride in the sample concentrations. Vinyl chloride has been detected in wells MW-7A, MW-12, and MW-13 since the 1990's.

Although concentrations have increased since 2009, tetrachloroethene in well MW-7A does not exhibit concentrations statistically different from the GPS at the 99 percent confidence level. Due to the consideration of sampling results only for the last seven years, trichloroethene in well MW-12 does not exhibit concentrations that are statistically different from the GPS at the 99 percent confidence level. In addition, trichloroethene in well MW-12 exhibits a negative trend over time indicating a decrease in trichloroethene concentrations in this well. The null hypothesis, that there was no significant difference, was accepted for all other constituents at the 99 percent confidence level.

5.0 SUMMARY

The following summarizes data, calculations, and interpretations resulting from the June 2013 groundwater monitoring event at the Bozeman Landfill:

- June 2013 groundwater levels were generally consistent with previous monitoring events and indicate a southwest groundwater flow beneath the *Unlined Closed Cell* shifting to a west-southwest flow between the *Lined Closed Cell* and well MW-10 (**Figure 3**).

- Consistent with the results of the December 2012 monitoring event, upward groundwater gradients were measured at MW-6 and MW-8A well locations. Also, consistent with results of previous monitoring events, MW-7 and MW-9 well locations have no upward or downward groundwater gradients down to 74 and 57 feet depths, respectively.

- Tetrachloroethene concentrations ranged between 0.26 (estimated) and 5.0 µg/L in wells LF-2, LF-3, MW-4, MW-6, MW-7A, MW-8A, MW-9A, MW-11, MW-13, MW-16, Landfill Shop Well, and the McIlhattan Seep. Concentrations of vinyl chloride ranged between 0.25 (estimated) and 21.1 µg/L in wells MW-6, MW-7A, MW-12, and MW-13.

- Tetrachloroethene (in well MW-7A) and vinyl chloride (in wells MW-6, MW-7A, MW-12, and MW-13) exceeded the Montana Human Health Standard and/or GPS during the June 2013 monitoring event. The concentration of vinyl chloride in well MW-6 has exceeded the Montana Human Health Standard of 0.2 µg/L since December 2009.

- Due to higher analytical reporting limits for vinyl chloride in monitoring results before 2009, the U.S. EPA GPS of 2 µg/L was used in the statistics calculations. Therefore, as of June 2013, the concentration of vinyl chloride in wells MW-12 and MW-13 is statistically different from the U.S. EPA GPS of 2 µg/L. In addition, the statistical difference is noted as the result of the sample concentrations being greater than the U.S. EPA GPS. As of June 2013, vinyl chloride in well MW-6 does not meet statistics criteria to be significantly different from the U.S. EPA GPS.

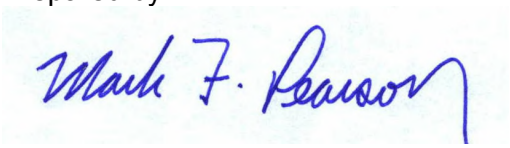
- Trichloroethene concentrations (in the June 2013 samples) ranged between 0.12 (estimated) and 2.1 µg/L in wells LF-2, LF-3, MW-4, MW-6, MW-7A, MW-8A, MW-9A, MW-10, MW-11, MW-13, MW-16, the Landfill Shop Well, and the McIlhattan Seep.

- As of June 2013, the concentration of tetrachloroethene and trichloroethene in POC wells did not meet statistics criteria to be significantly different from the GPS.

- Although statistics calculations indicated that nitrate+nitrite as N in well MW-8A was not statistically different from the background concentrations or greater than the GPS, nitrate+nitrite as N in well MW-8A has exceeded the GPS for the fifth consecutive monitoring event (since December 2010). The concentration of nitrate+nitrite as N was 14.5 mg/L in well MW-8A and 2.4 mg/L in well LF-2 (downgradient of well MW-8A).

According to ARM 17.50.1310(5)(b), the City of Bozeman is required to continue corrective actions at the Bozeman Landfill and associated groundwater monitoring until all of the approved constituents in Appendix I to 40 CFR Part 258 contained in ARM 17.50.1306 have not exceeded the GPS for a period of three consecutive years based on statistical analysis of the data. The next corrective measures assessment groundwater monitoring event is scheduled for December 2013.

Prepared by:



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Project Engineer

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ONLINE REFERENCES

U.S. EPA Groundwater Protection Standard for Vinyl Chloride:
http://water.epa.gov/drink/contaminants/index.cfm#List

Montana DEQ Solid Waste Program Laws and Rules:
http://www.deq.mt.gov/SolidWaste/LawsRules.mcpx

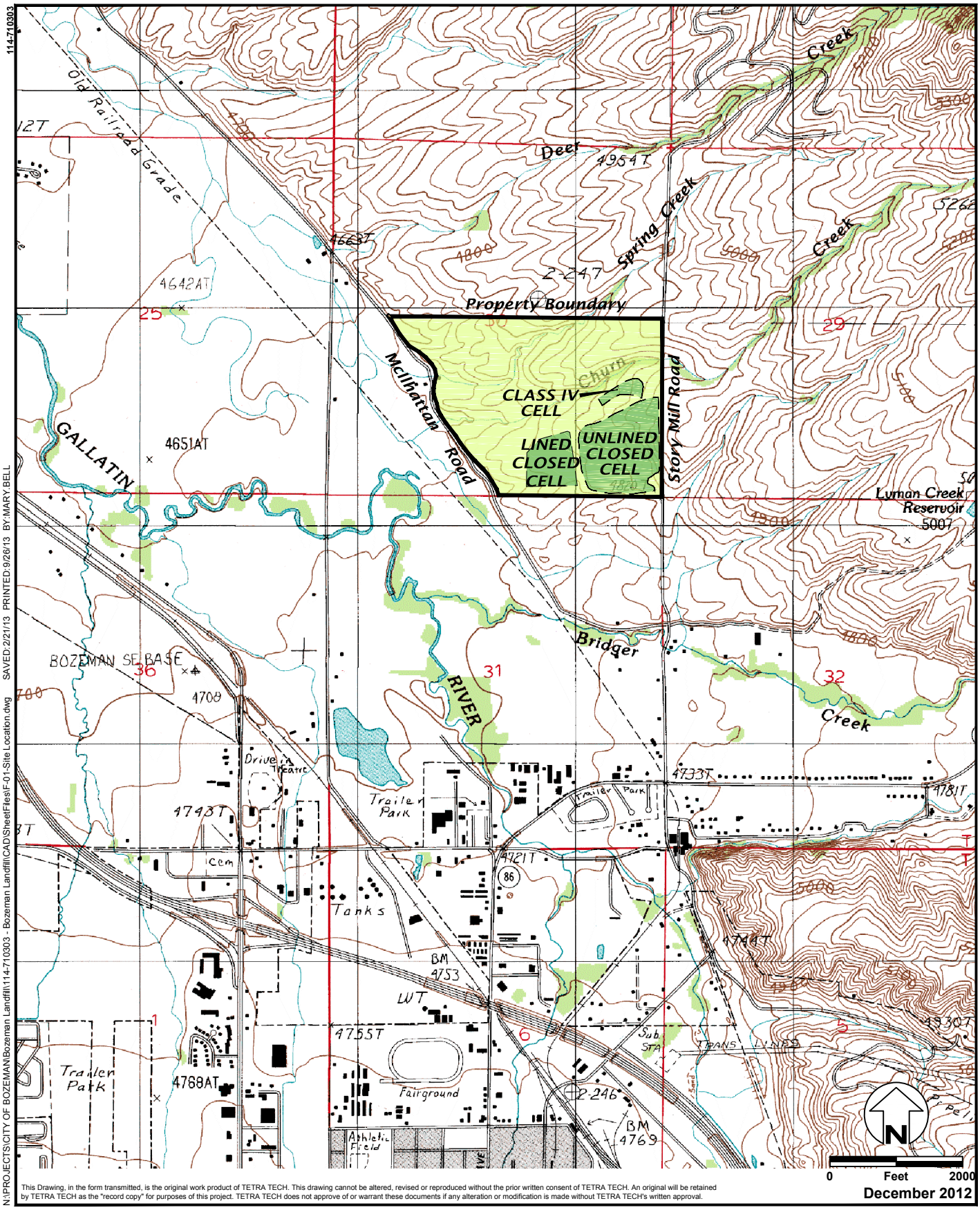
APPENDIX A

FIGURES

FIGURE 1 Site Location Map

FIGURE 2 Site Map

FIGURE 3 June 2013 – Water Table Map



114-710303
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From USGS 7.5' Bozeman Quad (1987)

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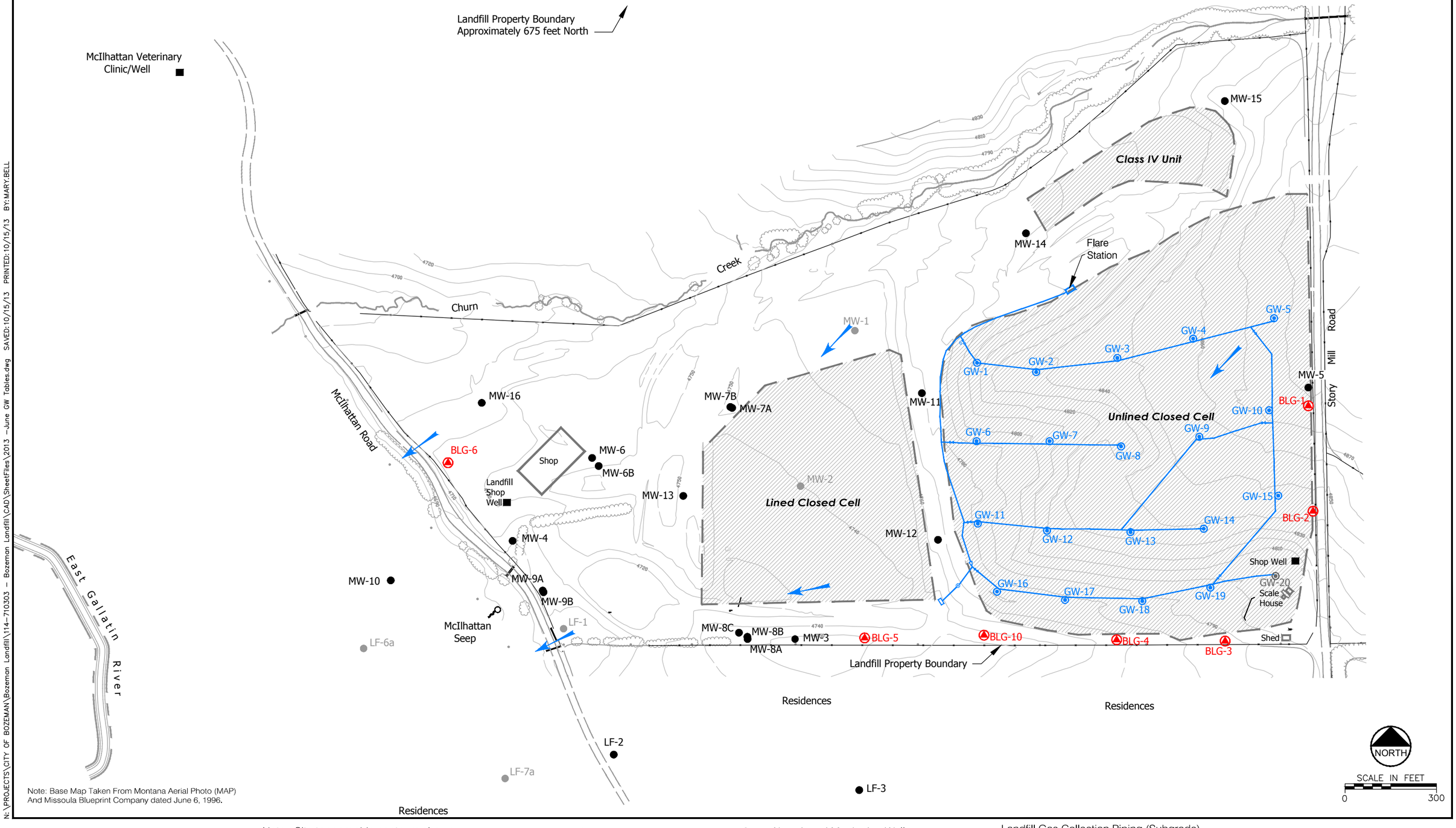
Site Location Map
Bozeman Sanitary Landfill
Bozeman, Montana
FIGURE 1



Note: Base Map Taken From Montana Aerial Photo (MAP) And Missoula Blueprint Company dated June 6, 1996.

Note: Site topographic contours shown are not indicative of current site topography.

BSV - Soil Gas Probes are not shown.

- Landfill Gas Extraction Well
- Abandoned Landfill Gas Extraction Well
- Surface Water Station
- Monitoring Well
- Supply Well
- Abandoned Monitoring Well
- Gas Monitoring Probe
- Landfill Gas Collection Piping (Subgrade)
- Typical Groundwater Flow Direction (Based on Historic Water Table Contours)

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Site Map
Bozeman Sanitary Landfill
Bozeman, Montana
FIGURE 2

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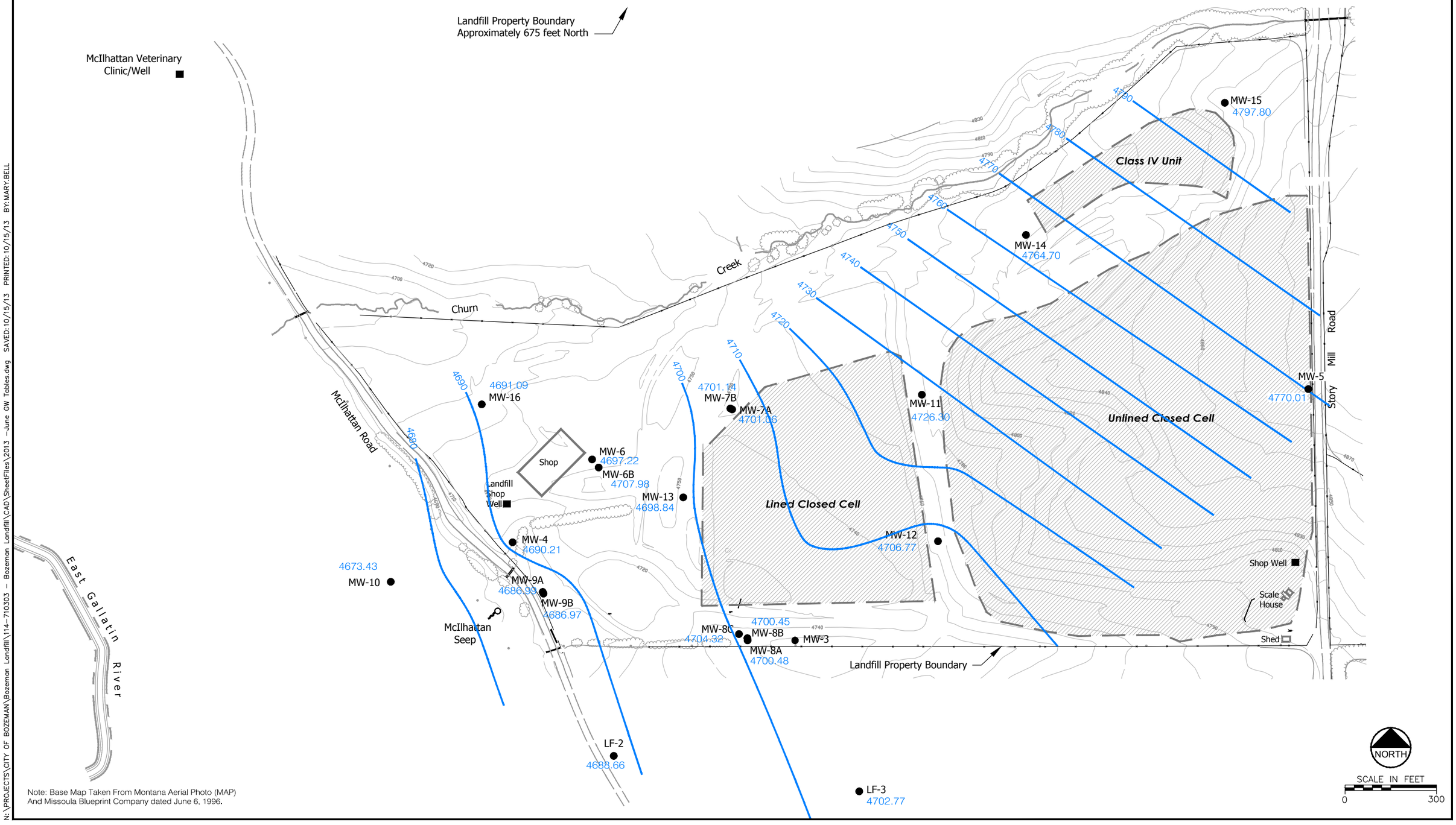

Note: Base Map Taken From Montana Aerial Photo (MAP) And Missoula Blueprint Company dated June 6, 1996.

Note: Site topographic contours shown are not indicative of current site topography.

● Monitoring Well
■ Supply Well

4702.77 Groundwater Elevation (feet AMSL)

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June 2013 - Water Table Map
Bozeman Sanitary Landfill
Bozeman, Montana
FIGURE 3

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APPENDIX B

TABLES

TABLE 1

Schedule of Field Measurements and Laboratory Analysis – June 2013

Bozeman Landfill, Bozeman Montana

Well or Sampling Site	June 2013							
	Field pH, SC, DO & ORP	Laboratory pH & SC	VOCs	Inorganics				
				Fe, Mg (dissolved)	'Full List' Metals (dissolved)	Chloride	Sulfate	N as NO2+NO3
LF-2	x		x					x
LF-3	x		x	x		x	x	x
MW-4	x		x	x		x	x	x
MW-5	x	x	x	x		x	x	x
MW-6	x	x	x	x		x	x	x
MW-6B	x		x	x	x	x	x	x
MW-7A	x		x	x		x	x	x
MW-7B								
MW-8A	x	x	x	x		x	x	x
MW-8B								
MW-8C	x		x	x	x	x	x	x
MW-9A	x		x	x		x	x	x
MW-9B								
MW-10	x		x	x	x	x	x	x
MW-11	x		x	x	x	x	x	x
MW-12	x		x	x	x	x	x	x
MW-13	x		x	x	x	x	x	x
MW-14								
MW-15	x	x	x	x	x	x	x	x
MW-16	x		x					
Shop/Office Well	x		x					
McIlhatten Seep	x		x	x	x	x	x	x
Valley View Vet Well	x		x		x (1)	x	x	x

Notes :

VOCs : Volatile organic compounds

Fe, Mg : Iron, manganese

'Full List' : Analysis of 15 metals including iron and manganese

(1) : Total recoverable analysis of metals

TABLE 2
Groundwater Levels
Bozeman Landfill, Bozeman Montana

	MEASURING POINT ELEVATION (in feet above mean sea level)													
	4702.71		4717.10		4,751.89		4,710.90		4,882.37		4738.68		4,727.23	
MP elev change											6/30/1998	4728.69		
Well No.	LF-2		LF-3		MW-3		MW-4		MW-5		MW-6[1]		MW-6B	
DATE	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV
05/86	14.20	4688.51	15.50	4701.60	48.76	4703.13	20.60	4690.30	N.M.	-----	N.M.	-----		
10/22/1986	14.53	4688.18	15.20	4701.90	48.87	4703.02	20.64	4690.26	N.M.	-----	N.M.	-----		
08/92	N.M.	-----	N.M.	-----	N.M.	-----	N.M.	-----	N.M.	-----	45.40	4693.28		
2/24/1993	N.M.	-----	16.39	4700.71	N.M.	-----	22.35	4688.55	112.66	4769.71	43.57	4695.11		
7/27/1993	14.52	4688.19	15.10	4702.00	49.91	4701.98	21.73	4689.17	111.60	4770.77	43.35	4695.33		
1/17/1994	14.72	4687.99	14.85	4702.25	49.50	4702.39	20.70	4690.20	110.76	4771.61	43.02	4695.66		
6/27/1994	15.42	4687.29	15.45	4701.65	50.34	4701.55	20.97	4689.93	110.26	4772.11	42.91	4695.77		
2/1/1995	14.43	4688.28	14.72	4702.38	50.41	4701.48	20.67	4690.23	110.71	4771.66	42.88	4695.80		
6/28/1995	14.7	4688.01	14.88	4702.22	50.27	4701.62	20.08	4690.82	110.06	4772.31	42.71	4695.97		
11/28/1995	14.39	4688.32	15.33	4701.77	49.87	4702.02	20.51	4690.39	109.70	4772.67	42.80	4695.88		
6/25/1996	13.68	4689.03	13.92	4703.18	49.30	4702.59	20.78	4690.12	109.50	4772.87	42.55	4696.13		
12/11/1996	14.29	4688.42	14.34	4702.76	48.82	4703.07	20.3	4690.60	110.10	4772.27	44.77	4693.91		
6/19/1997	12.31	4690.40	12.40	4704.70	47.07	4704.82	13.39	4697.51	108.64	4773.73	39.85	4698.83		
12/15/1997	14.16	4688.55	14.00	4703.10	48.02	4703.87	20.37	4690.53	106.71	4775.66	42.73	4695.95		
6/30/1998	13.21	4689.50	12.98	4704.12	N.M.	-----	19.27	4691.63	106.10	4776.27	30.95	4697.74		
12/14/1998	14.32	4688.39	13.82	4703.28	47.97	4703.92	20.37	4690.53	105.75	4776.62	31.24	4697.45		
6/22/1999	14.07	4688.64	13.53	4703.57	47.74	4704.15	20.25	4690.65	106.01	4776.36	31.13	4697.56		
12/14/1999	14.42	4688.29	14.31	4702.79	48.22	4703.67	20.54	4690.36	106.86	4775.51	31.33	4697.36		
6/8/2000	N.M.	-----	13.98	4703.12	48.28	4703.61	20.47	4690.43	108.22	4774.15	31.33	4697.36		
11/28/2000	14.53	4688.18	14.23	4702.87	48.77	4703.12	20.69	4690.21	109.69	4772.68	31.53	4697.16		
6/11/2001	14.27	4688.44	13.97	4703.13	48.91	4702.98	20.60	4690.30	110.61	4771.76	31.66	4697.03		
12/17/2001	14.63	4688.08	14.01	4703.09	49.40	4702.49	20.83	4690.07	111.77	4770.60	31.79	4696.90		
6/13/2002	13.31	4689.40	13.66	4703.44	48.59	4703.30	19.72	4691.18	112.47	4769.90	31.59	4697.10		
12/12/2002	14.78	4687.93	14.22	4702.88	49.85	4702.04	20.92	4689.98	113.26	4769.11	31.87	4696.82		
6/10/2003	14.20	4688.51	14.02	4703.08	49.35	4702.54	20.41	4690.49	113.52	4768.85	31.79	4696.90		
12/3/2003	14.92	4687.79	14.35	4702.75	50.32	4701.57	21.02	4689.88	114.30	4768.07	31.96	4696.73		
6/8/2004	14.36	4688.35	14.23	4702.87	50.13	4701.76	20.72	4690.18	114.94	4767.43	31.95	4696.74		
12/6/2004	14.71	4688.00	14.71	4702.39	50.53	4701.36	20.99	4689.91	115.68	4766.69	32.43	4696.26		
6/16/2005	14.13	4688.58	14.13	4702.97	50.05	4701.84	20.57	4690.33	116.01	4766.36	31.92	4696.77		
12/14/2005	14.86	4687.85	14.29	4702.81	50.72	4701.17	20.98	4689.92	116.85	4765.52	32.07	4696.62		
3/16/2006	N.M.	-----	14.02	4703.08	N.M.	-----	N.M.	-----	N.M.	-----	31.94	4696.75		
6/12/2006	13.95	4688.76	14.85	4702.25	N.M.	-----	21.80	4689.10	114.39	4767.98	31.90	4696.79		
12/2006 to 6/2010	No entry of DTW data													
12/1/2010	14.32	4688.39	13.81	4703.29	N.M.	-----	20.69	4690.21	111.97	4770.40	31.52	4697.17		
6/13/2011	12.73	4689.98	12.66	4704.44	N.M.	-----	19.29	4691.61	110.63	4771.74	30.99	4697.70		
12/5/2011	14.29	4688.42	13.71	4703.39	N.M.	-----	20.48	4690.42	110.05	4772.32	31.40	4697.29		
6/5/2012	14.12	4688.59	13.52	4703.58	N.M.	-----	20.39	4690.51	110.12	4772.25	31.29	4697.40	18.69	4708.54
12/4/2012	14.26	4688.45	13.93	4703.17	49.24	4702.65	20.73	4690.17	111.31	4771.06	31.44	4697.25	19.40	4707.83
6/12/2013	14.05	4688.66	14.33	4702.77	N.M.	-----	20.69	4690.21	112.36	4770.01	31.47	4697.22	19.25	4707.98

MP elev change : Measuring point elevation change

DTW : Depth to water below measuring point (feet)

ELEV : Groundwater elevation above mean sea level (feet). Well locations shown on Figure 2.

1 : 9.99 feet of PVC was removed on 06/30/1998.

N.M. Not measured

----- Not calculated

TABLE 2 (Continued)
Groundwater Levels
Bozeman Landfill, Bozeman Montana

	MEASURING POINT ELEVATION (in feet above mean sea level)													
	4755.51		4755.52		4748.22		4747.98		4747.63		4715.27		4715.50	
MP elev change	7/6/2011	4757.87	7/6/2011	4757.95			7/3/2012	4748.47						
Well No.	MW-7A[2]		MW-7B[2]		MW-8A		MW-8B		MW-8C		MW-9A		MW-9B	
DATE	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV
08/92	55.50	4700.01	N.M.	-----	46.90	4701.32	48.50	4699.48			27.75	4687.52	N.M.	-----
2/24/1993	55.11	4700.40	55.25	4700.27	48.81	4699.41	48.96	4699.02			29.66	4685.61	29.97	4685.53
7/27/1993	54.35	4701.16	54.55	4700.97	47.69	4700.53	47.90	4700.08			28.59	4686.68	28.84	4686.66
1/17/1994	49.50	4706.01	49.48	4706.04	47.69	4700.53	47.99	4699.99			28.96	4686.31	29.31	4686.19
6/27/1994	54.43	4701.08	54.42	4701.10	47.51	4700.71	47.81	4700.17			28.77	4686.50	29.05	4686.45
2/1/1995	54.43	4701.08	54.45	4701.07	47.82	4700.40	47.53	4700.45			28.71	4686.56	28.99	4686.51
6/28/1995	53.98	4701.53	53.93	4701.59	46.54	4701.68	46.84	4701.14			28.17	4687.10	28.42	4687.08
11/28/1995	54.10	4701.41	N.M.	-----	47.07	4701.15	47.37	4700.61			28.52	4686.75	28.75	4686.75
6/25/1996	53.91	4701.60	53.93	4701.59	46.44	4701.78	46.72	4701.26			27.76	4687.51	27.92	4687.58
12/11/1996	54.78	4700.73	54.21	4701.31	46.97	4701.25	47.25	4700.73			28.08	4687.19	28.23	4687.27
6/19/1997	53.03	4702.48	53.05	4702.47	45.09	4703.13	45.41	4702.57			25.45	4689.82	25.33	4690.17
12/15/1997	53.79	4701.72	53.80	4701.72	46.38	4701.84	46.69	4701.29			28.39	4686.88	28.61	4686.89
6/30/1998	53.49	4702.02	53.50	4702.02	45.65	4702.57	45.94	4702.04			26.91	4688.36	26.96	4688.54
12/14/1998	53.73	4701.78	53.74	4701.78	46.32	4701.90	46.60	4701.38			28.40	4686.87	28.61	4686.89
6/22/1999	53.64	4701.87	53.66	4701.86	46.06	4702.16	46.36	4701.62			28.23	4687.04	28.43	4687.07
12/14/1999	53.87	4701.64	53.91	4701.61	46.59	4701.63	46.87	4701.11			28.56	4686.71	28.79	4686.71
6/8/2000	53.95	4701.56	53.96	4701.56	46.68	4701.54	46.96	4701.02			28.33	4686.94	28.54	4686.96
11/28/2000	54.23	4701.28	54.26	4701.26	47.09	4701.13	47.40	4700.58			28.65	4686.62	28.91	4686.59
6/12/2001	54.30	4701.21	54.37	4701.15	47.20	4701.02	47.51	4700.47			28.51	4686.76	28.71	4686.79
12/18/2001	54.78	4700.73	54.69	4700.83	47.66	4700.56	47.96	4700.02			28.82	4686.45	28.82	4686.68
6/13/2002	54.21	4701.30	54.25	4701.27	46.87	4701.35	47.13	4700.85			26.93	4688.34	26.98	4688.52
12/12/2002	54.81	4700.70	54.91	4700.61	48.08	4700.14	48.34	4699.64			29.03	4686.24	29.24	4686.26
6/10/2003	54.56	4700.95	N.M.	-----	47.63	4700.59	47.92	4700.06			28.50	4686.77	28.70	4686.80
12/3/2003	55.03	4700.48	55.06	4700.46	48.49	4699.73	48.73	4699.25			29.04	4686.23	29.27	4686.23
6/8/2004	55.01	4700.50	55.03	4700.49	48.34	4699.88	48.59	4699.39			28.59	4686.68	28.78	4686.72
12/6/2004	55.22	4700.29	55.23	4700.29	48.67	4699.55	48.89	4699.09			28.86	4686.41	29.11	4686.39
6/16/2005	54.92	4700.59	54.95	4700.57	48.34	4699.88	48.55	4699.43			28.19	4687.08	28.37	4687.13
12/14/2005	55.35	4700.16	55.39	4700.13	48.91	4699.31	49.13	4698.85			28.94	4686.33	29.20	4686.30
3/16/2006	55.14	4700.37	N.M.	-----	N.M.	-----	N.M.	-----			N.M.	-----	N.M.	-----
6/12/2006	55.00	4700.51	55.00	4700.52	48.28	4699.94	48.49	4699.49			28.10	4687.17	28.31	4687.19
12/2006 to 6/2010	No entry of DTW data													
12/1/2010	54.24	4701.27	54.31	4701.21	47.44	4700.78	47.72	4700.75			28.36	4686.91	28.58	4686.92
6/13/2011	53.15	4702.36	53.25	4702.27	45.51	4702.71	45.80	4702.67			26.83	4688.44	26.89	4688.61
12/5/2011	56.41	4701.46	56.49	4701.46	47.02	4701.20	47.31	4701.16			28.32	4686.95	28.56	4686.94
6/5/2012	56.36	4701.51	56.45	4701.50	46.95	4701.27	47.28	4701.19	42.62	4705.01	28.18	4687.09	28.38	4687.12
12/4/2012	56.69	4701.18	56.80	4701.15	47.50	4700.72	47.77	4700.70	43.09	4704.54	28.39	4686.88	28.62	4686.88
6/12/2013	56.81	4701.06	56.81	4701.14	47.74	4700.48	48.02	4700.45	43.31	4704.32	28.28	4686.99	28.53	4686.97

MP elev change : Measuring point elevation change

DTW : Depth to water below measuring point (feet)

ELEV : Groundwater elevation above mean sea level (feet). Well locations shown on Figure 2.

2 : Approximately 2.4 feet of PVC was added on 7/6/2011

N.M. Not measured

----- Not calculated

TABLE 2 (Continued)
Groundwater Levels
Bozeman Landfill, Bozeman Montana

	MEASURING POINT ELEVATION (in feet above mean sea level)													
	4675.01		4778.15		4763.02		4748.73		4797.94		4845.00		4717.33	
MP elev change							6/30/1998	4742.54						
Well No.	MW-10		MW-11		MW-12		MW-13[3]		MW-14		MW-15		MW-16	
DATE	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV
6/28/1995	6.58	4668.43	N.M.	-----	N.M.	-----	N.M.	-----						
9/12/1995	N.M.	-----	51.40	4726.75	55.03	4707.99	49.45	4699.28						
11/28/1995	2.07	4672.94	51.55	4726.60	55.09	4707.93	49.56	4699.17						
6/25/1996	1.63	4673.38	51.72	4726.43	54.77	4708.25	49.16	4699.57						
12/11/1996	1.85	4673.16	51.83	4726.32	55.13	4707.89	49.53	4699.20						
6/19/1997	0.90	4674.11	51.35	4726.80	53.82	4709.20	47.27	4701.46						
12/15/1997	1.78	4673.23	51.42	4726.73	54.26	4708.76	59.16	4689.57						
6/30/1998	1.38	4673.63	51.44	4726.71	53.83	4709.19	48.72	4700.01						
12/14/1998	2.20	4672.81	51.52	4726.63	54.17	4708.85	49.14	4699.59						
6/22/1999	1.61	4673.40	51.51	4726.64	54.64	4708.38	49.01	4699.72						
12/14/1999	2.32	4672.69	51.69	4726.46	54.96	4708.06	43.13	4699.41						
6/8/2000	1.95	4673.06	51.76	4726.39	55.11	4707.91	43.21	4699.33						
11/28/2000	2.44	4672.57	51.99	4726.16	55.44	4707.58	43.49	4699.05						
6/12/2001	1.38	4673.63	52.03	4726.12	55.75	4707.27	43.60	4698.94	32.96	4764.98				
12/19/2001	2.55	4672.46	52.27	4725.88	56.06	4706.96	43.87	4698.67	33.71	4764.23	47.77	-----		
6/13/2002	1.25	4673.76	52.12	4726.03	55.90	4707.12	43.45	4699.09	-----	-----	-----	-----		
12/12/2002	2.70	4672.31	52.39	4725.76	56.49	4706.53	44.10	4698.44	34.28	4763.66	48.63	-----		
6/10/2003	1.18	4673.83	52.22	4725.93	56.39	4706.63	43.87	4698.67	33.53	4764.41	48.10	-----		
12/3/2003	2.59	4672.42	52.47	4725.68	56.91	4706.11	44.31	4698.23	34.65	4763.29	49.44	-----		
6/8/2004	1.81	4673.20	52.44	4725.71	57.04	4705.98	44.26	4698.28	34.46	4763.48	49.89	-----		
12/6/2004	2.45	4672.56	53.01	4725.14	57.17	4705.85	44.44	4698.10	35.34	4762.60	50.76	-----		
6/16/2005	1.45	4673.56	52.47	4725.68	57.15	4705.87	44.26	4698.28	34.66	4763.28	50.35	-----		
12/14/2005	2.57	4672.44	52.77	4725.38	57.39	4705.63	44.60	4697.94	35.82	4762.12	51.74	-----		
3/16/2006	N.M.	-----	N.M.	-----	57.25	4705.77	44.32	4698.22	N.M.	-----	N.M.	-----		
6/12/2006	1.90	4673.11	53.9	4724.25	57.20	4705.82	44.20	4698.34	34.41	4763.53	50.30	-----		
12/2006 to 6/2010	No entry of DTW data													
12/1/2010	1.78	4673.23	51.79	4726.36	55.95	4707.07	43.54	4699.00	31.84	4766.10	44.35	4800.65		
6/13/2011	0.80	4674.21	51.18	4726.97	54.59	4708.43	42.40	4700.14	29.01	4768.93	41.52	4803.48		
12/5/2011	2.09	4672.92	51.57	4726.58	55.40	4707.62	43.28	4699.26	31.10	4766.84	42.60	4802.40		
6/5/2012	1.66	4673.35	51.54	4726.61	55.46	4707.56	43.26	4699.28	31.46	4766.48	43.95	4801.05	26.02	4691.31
12/5/2012	2.03	4672.98	51.84	4726.31	55.85	4707.17	43.59	4698.95	32.83	4765.11	45.98	4799.02	26.24	4691.09
6/12/2013	1.58	4673.43	51.85	4726.30	56.25	4706.77	43.70	4698.84	33.24	4764.70	47.20	4797.80	26.24	4691.09

MP elev change : Measuring point elevation change

DTW : Depth to water below measuring point (feet)

ELEV : Groundwater elevation above mean sea level (feet). Well locations shown on Figure 2.

3 : 6.19 feet of PVC was removed on 06/30/1998.

N.M. Not measured

----- Not calculated

TABLE 3
Summary of Selected Volatile Organic Compounds at Sampling Locations
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**	(1)	**30**	**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 0.04	U 0.08	U 2	U 0.072	U 0.021	1.1	U 0.05	U 0.049
	12/5/2011	U 0.05	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 0.05	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
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
	9/29/1998	U 1	1	11	U 1	U 1	7	3	U 1
	12/14/1998	U 1	1	U(1)B 5	U 1	(1) U 1	6	6	U 1
	3/15/1999	U 1	(1) U 1	(1) U 5	U 1		6	2	U 1
	6/22/1999	U 1	U 1	(1) U 5	U 1	U 1	4	1	U 1
	9/13/1999	U 1	(1) U 1	(1) U 5	U 1	U 1	4	1	U 1
	12/13/1999	U 1	(1) U 1	(1) U 5	U 1	U 1	5	2	U 1
	3/22/2000	U 1	(1) U 1	U 5	U 1	U 1	5	2	U 1
	6/7/2000	U 1	(1) U 1	(1) U 5	U 1	U 1	4	1	U 1
	9/22/2000	U 1	U 1	(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	(1) U 5	(1) 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	(1) U 5	(1) 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	(1) U 5	U 1	U 1	6	1	U 1
	3/24/2003	U 1	1	(1) U 5	(1) U 1	(1) U 1	5	1	U 1
	6/9/2003	U 1	1	(1) U 5	U 1	(1) U 1	5	1	U 1
	9/25/2003	U 1	1	(1) U 5	(1) U 1	U 1	5	1	U 1
	12/4/2003	U 1	(1) U 1	(1) U 5	U 1	U 1	4	1	JJF% 1
	3/25/2004	U 1	1	U 5	U 1	U 1	4	(1) U 1	U 1

Notes:
µg/L - micrograms per liter
HHS - Human Health Standard (EPA Maximum Contaminant Level or HHS in Montana Circular DEQ-7, October 2012
NA - Not Applicable
J - Estimated Concentration
(1) - No HHS established
-- - Not collected/analyzed
U - Below Method Detection Limit
* (1) X F% - Additional QA/QC notes

- Value greater than or equal to the HHS

Vinyl Chloride concentration highlighted only if equal to or greater than 2 micrograms per liter (EPA Maximum Contaminant Level). Montana HHS is 0.2 micrograms per liter.

TABLE 3
Summary of Selected Volatile Organic Compounds at Sampling Locations
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**	(1)	**30**	**5**	**5**	**2**
LF-3	6/9/2004	U 1	1	(1) U 5	U 1	U 1	4	(1) U 1	U 1
	9/9/2004	U 1	(1) U 1	(1) U 5	U 1	U 1	4	(1) U 1	U 1
	12/6/2004	U 1	(1) U 1	(1) U 5	U 1	U 1	4	(1) U 1	U 1
	3/29/2005	U 1	(1) U 1	(1) U 5	U 1	U 1	3	(1) U 1	U 1
	6/16/2005	U 1	(1) U 1	U 5	U 1	U 1	3	(1) U 1	U 1
	9/20/2005	U 1	(1) U 1	(1) BU 5	U 1	U 1	3	U 1	U 1
	12/13/2005	U 1	(1) U 1	(1) U 5	U 1	U 1	3	(1) U 1	U 1
	3/16/2006	U 1	(1) U 1	U 5	U 1	U 1	3	(1) U 1	U 1
	6/12/2006	U 0.5	0.8	(1) U 5	(1) U 1	U 1	2.7	0.5	U 0.5
	9/20/2006	U 0.5	0.6	U(1) 5	U(1) 1	U 1	2.3	U(1) 0.5	U 0.5
	12/5/2006	U 0.5	0.7	U 5	U 1	U 1	2.7	U(1) 0.5	U 0.5
	3/13/2007	U 0.5	0.8	U 5	U(1) 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	JJF% 0.5
	12/11/2007	U 0.5	0.8	U 5	U 1	U(1) 1	2.5	0.6	U 0.5
	6/25/2008	U 0.5	1	U(1) 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 0.04	1.9	U 2	J 0.11	J 0.11	3.9	0.96	U 0.049
	12/6/2011	U 0.05	1.8	U 5	U 0.072	U 0.13	3.8	0.9	U 0.16
	6/4/2012	J 0.05	1.9	U 2	J 0.086	U 0.13	4.1	0.94	U 0.16
	12/6/2012	U 0.05	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
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	(1) U 1	< (2) 1	2	1	U 1
	12/14/1998	U 1	(1) U 1	U(1)B 5	(1) U 1	(1) U 1	2	2	U 1
	6/22/1999	U 1	U 1	(1) U 5	U 1	U 1	U 1	1	U 1
	12/13/1999	U 1	U 1	(1) U 5	(1) 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

Notes:
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- Value greater than or equal to the HHS

Vinyl Chloride concentration highlighted only if equal to or greater than 2 micrograms per liter (EPA Maximum Contaminant Level). Montana HHS is 0.2 micrograms per liter.

TABLE 3
Summary of Selected Volatile Organic Compounds at Sampling Locations
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**	(1)	**30**	**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	(1) U 5	(1) U 1	U 1	1	1	U 1
	6/13/2002	U 1	(1) U 1	(1) U 5	(1) U 1	U 1	1	1	U 1
	12/11/2002	U 1	(1) U 1	(1) U 5	(1) U 1	U 1	1	(1) U 1	U 1
	6/9/2003	U 1	(1) U 1	(1) U 5	(1) U 1	U 1	1	(1) U 1	U 1
	12/4/2003	U 1	(1) U 1	(1) U 5	(1) U 1	U 1	(1) U 1	(1) U 1	JJF% 1
	6/9/2004	U 1	(1) U 1	(1) U 5	U 1	U 1	(1) U 1	(1) U 1	U 1
	12/6/2004	U 1	(1) U 1	(1) U 5	(1) U 1	U 1	(1) U 1	(1) U 1	U 1
	6/16/2005	U 1	(1) U 1	(1) U 5	U 1	U 1	(1) U 1	(1) U 1	U 1
	12/14/2005	U 1	(1) U 1	(1) U 5	(1) U 1	U 1	(1) U 1	(1) U 1	U 1
	6/12/2006	U 0.5	(1) U 0.5	(1) U 5	(1) U 1	U 1	0.5	(1) U 0.5	U 0.5
	12/5/2006	U 0.5	U(1) 0.5	U 5	U 1	U 1	U(1) 0.5	U(1) 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	JJF% 0.5
	12/11/2007	U 0.5	U(1) 0.5	U 5	U 1	U 1	0.5	U(1) 0.5	U 0.5
	6/23/2008	U 0.5	U 0.5	U(1) 5	U 1	U 1	0.5	U(1) 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 0.04	J 0.49	U 2	J 0.24	J 0.097	0.78	0.66	U 0.049
	12/7/2011	U 0.05	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
	12/4/2012	U 0.05	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
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
	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	U(1)B 5	U 1	(1) U 1	U 1	U 1	U 1
	6/22/1999	U 1	U 1	(1) U 5	U 1	U 1	U 1	U 1	U 1
	12/13/1999	U 1	U 1	(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

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

Vinyl Chloride concentration highlighted only if equal to or greater than 2 micrograms per liter (EPA Maximum Contaminant Level). Montana HHS is 0.2 micrograms per liter.

TABLE 3
Summary of Selected Volatile Organic Compounds at Sampling Locations
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**	(1)	**30**	**5**	**5**	**2**
MW-5	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	(1) U 5	U 1	U 1	U 1	(1) U 1	U 1
	6/13/2002	U 1	U 1	(1) U 5	U 1	U 1	U 1	(1) U 1	U 1
	12/11/2002	U 1	U 1	(1) U 5	U 1	U 1	U 1	U 1	U 1
	6/9/2003	U 1	U 1	(1) U 5	U 1	U 1	U 1	U 1	U 1
	12/3/2003	(1) U 1	U 1	(1) U 5	U 1	U 1	U 1	U 1	JJF% 1
	6/9/2004	U 1	U 1	(1) U 5	U 1	U 1	U 1	U 1	U 1
	12/6/2004	U 1	U 1	(1) U 5	U 1	U 1	U 1	U 1	U 1
	6/16/2005	U 1	U 1	(1) U 5	U 1	U 1	U 1	U 1	U 1
	12/14/2005	(1) U 1	U 1	(1) U 5	U 1	U 1	U 1	U 1	U 1
	6/12/2006	U 0.5	U 0.5	(1) 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	JJF% 0.5
	12/11/2007	U 0.5	U 0.5	U 5	U 1	U(1) 1	U 0.5	U 0.5	U 0.5
	6/23/2008	U 0.5	U 0.5	U(1) 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 0.05	U 0.08	U 5	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
	6/4/2012	J 0.07	U 0.08	U 2	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
	12/4/2012	U 0.05	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
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
	3/15/1999	U 1	U 1	(1) U 5	(1) U 1		(1) U 1	1	9
	6/22/1999	U 1	U 1	(1) U 5	U 1	U 1	U 1	(1) U 1	9

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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**	(1)	**30**	**5**	**5**	**2**
MW-6	9/13/1999	U 1	U 1	(1) U 5	(1) U 1	U 1	U 1	U 1	9
	12/13/1999	U 1	U 1	(1) U 5	U 1	U 1	U 1	(1) U 1	10
	3/22/2000	U 1	U 1	U 5	(1) U 1	U 1	U 1	(1) U 1	4
	6/7/2000	U 1	U 1	(1) U 5	(1) U 1	U 1	U 1	U 1	3
	9/22/2000	U 1	U 1	(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	(1) U 1	U(1,3) 5	U 1	U 1	(1) U 1	(1) U 1	U 1
	12/18/2001	U 1	(1) U 1	(1) U 5	1	U 1	(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	(1) U 1	(1) U 5	(1) U 1	U 1	(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	(1) U 5	1	U 1	(1) U 1	2	(1) U 1
	3/24/2003	U 1	(1) U 1	(1) U 5	(1) U 1	(1) U 1	(1) U 1	1	U 1
	6/9/2003	U 1	1	(1) U 5	(1) U 1	U 1	(1) U 1	2	U 1
	9/25/2003	U 1	2	(1) U 5	(1) U 1	U 1	(1) U 1	2	U 1
	12/4/2003	U 1	1	(1) U 5	(1) U 1	U 1	(1) U 1	2	JJF% 1
	3/24/2004	U 1	2	U 5	1	U 1	(1) U 1	2	U 1
	6/8/2004	U 1	2	(1) U 5	(1) U 1	U 1	(1) U 1	2	U 1
	9/9/2004	U 1	1	(1) U 5	(1) U 1	U 1	(1) U 1	2	U 1
	12/7/2004	U 1	2	(1) U 5	(1) U 1	U 1	(1) U 1	2	U 1
	3/29/2005	U 1	2	(1) U 5	1	U 1	(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	(1) BU 5	(1) U 1	U 1	(1) U 1	3	U 1
	12/14/2005	U 1	1	(1) U 5	1	U 1	2	2	U 1
	3/16/2006	U 1	(1) U 1	U 5	(1) U 1	U 1	2	1	U 1
	6/13/2006	U 0.5	0.8	(1) U 5	1.1	U 1	2.5	1.1	U 0.5
	9/21/2006	U 0.5	1.8	U(1) 5	U(1) 1	U 1	0.9	2.2	U(1) 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	JJF% 0.5
	12/10/2007	U 0.5	1.8	U 5	1.1	U(1) 1	1.3	1.9	U 0.5
	6/24/2008	U 0.5	0.8	U(1) 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

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HHS		**5**	**70**	**5**	(1)	**30**	**5**	**5**	**2**
MW-6	12/5/2011	U 0.05	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
MW-6B	6/5/2012	U 0.05	U 0.08	U 2	U 0.5	U 0.13	U 0.16	U 0.11	U 0.16
	12/4/2012	U 0.05	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
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	(1) U 1	14	4		10	3	3
	6/22/1999	2	U 1	(1) U 5	4	U (1) 5	6	3	4
	9/13/1999	2	(1) U 1	(1) U 5	3	U 1	8	3	3
	12/14/1999	1	U 1	(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	(1) U 1	(1) U 1	(1) U 5	3	U 1	7	U 1	3
	9/22/2000	(1) U 1	U 1	(1) U 5	3	U 1	7	2	3
	11/28/2000	U 1	U 1	U 5	3	U 1	7	2	3
	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	(1) U 1	U 1	U(1,3) 5	3	U 1	8	2	(1) U 1
	12/17/2001	(1) U 1	(1) U 1	(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	(1) U 1	(1) U 1	(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	(1) U 1	(1) U 1	(1) U 5	5	U 1	12	3	1
	3/24/2003	(1) U 1	(1) U 1	(1) U 5	3	(1) U 1	9	2	(1) U 1
	6/10/2003	(1) U 1	(1) U 1	(1) U 5	3	U 1	9	2	(1) U 1
	9/25/2003	(1) U 1	(1) U 1	(1) U 5	3	U 1	8	2	(1) U 1
	12/4/2003	(1) U 1	(1) U 1	(1) U 5	4	U 1	7	2	)JF% 1

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HHS		**5**	**70**	**5**	(1)	**30**	**5**	**5**	**2**
MW-7A	3/24/2004	U 1	U 1	(1) U 5	2	U 1	4	(1) U 1	(1) U 1
	6/8/2004	U 1	U 1	(1) U 5	2	U 1	6	1	(1) U 1
	9/9/2004	(1) U 1	U 1	(1) U 5	1	U 1	5	(1) U 1	(1) U 1
	12/7/2004	U 1	U 1	(1) U 5	2	U 1	6	1	(1) U 1
	3/29/2005	U 1	U 1	(1) U 5	1	U 1	3	(1) U 1	(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	(1) BU 5	1	U 1	3	(1) U 1	U 1
	12/14/2005	U 1	U 1	(1) U 5	1	U 1	4	(1) U 1	(1) U 1
	3/16/2006	U 1	U 1	U 5	(1) U 1	U 1	2	(1) U 1	(1) U 1
	6/13/2006	(1) U 0.5	U 0.5	(1) U 5	1.6	U 1	4.2	0.7	(1) U 0.5
	9/21/2006	U(1) 0.5	U 0.5	U(1) 5	U(1) 1	U 1	2.7	U(1) 0.5	U(1) 0.5
	12/7/2006	U 0.5	U 0.5	U 5	U(1) 1	U 1	1.7	U(1) 0.5	U 0.5
	3/15/2007	U 0.5	U 0.5	U 5	1	U 1	2.2	U(1) 0.5	U 0.5
	6/20/2007	0.5	U 0.5	U 5	U 1	U 1	2.3	0.6	JJF% 0.5
	12/10/2007	U 0.5	U 0.5	U 5	1.3	U(1) 1	2.4	0.5	U 0.5
	6/24/2008	U 0.5	U 0.5	U(1) 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
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 0.05	U 0.08	U 5	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
	6/5/2012	U 0.05	U 0.08	U 2	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
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
	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

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HHS		**5**	**70**	**5**	(1)	**30**	**5**	**5**	**2**
MW-8A	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	U(1)B 5	1	(1) U 1	4	4	U 1
	6/22/1999	U 1	3	(1) U 5	U 1	U 1	2	3	U 1
	12/14/1999	U 1	3	(1) U 5	(1) U 1	U 1	2	3	U 1
	6/8/2000	U 1	2	(1) U 5	(1) 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	(1) U 1	(1) U 5	(1) U 1	U 1	1	1	U 1
	6/14/2002	U 1	(1) U 1	(1) U 5	(1) U 1	U 1	1	1	U 1
	12/13/2002	U 1	(1) U 1	(1) U 5	(1) U 1	U 1	1	(1) U 1	U 1
	6/10/2003	U 1	(1) U 1	(1) U 5	(1) U 1	U 1	1	(1) U 1	U 1
	12/3/2003	U 1	(1) U 1	(1) U 5	(1) U 1	U 1	(1) U 1	(1) U 1	JJF% 1
	6/8/2004	U 1	(1) U 1	(1) U 5	(1) U 1	U 1	(1) U 1	(1) U 1	U 1
	12/7/2004	U 1	(1) U 1	(1) U 5	(1) U 1	U 1	(1) U 1	(1) U 1	U 1
	6/16/2005	U 1	U 1	(1) U 5	U 1	U 1	(1) U 1	(1) U 1	U 1
	12/14/2005	U 1	(1) U 1	(1) U 5	(1) U 1	U 1	(1) U 1	(1) U 1	U 1
	6/13/2006	U 0.5	(1) U 0.5	(1) U 5	(1) U 1	U 1	0.7	(1) U 0.5	U 0.5
	12/6/2006	U 0.5	U 0.5	U 5	U(1) 1	U(1) 1	0.7	U(1) 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	JJF% 0.5
	12/10/2007	U 0.5	U 0.5	U 5	U 1	U(1) 1	0.6	U 0.5	U 0.5
	6/24/2008	U 0.5	U 0.5	U(1) 5	U 1	U 1	0.6	U(1) 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 0.04	U 0.08	U 2	U 0.072	U 0.021	0.64	J 0.28	U 0.049
	12/5/2011	U 0.05	J 0.42	U 5	U 0.072	U 0.13	0.6	J 0.3	U 0.16
	6/5/2012	U 0.05	J 0.46	U 2	U 0.072	U 0.13	0.8	J 0.35	U 0.16
	12/4/2012	U 0.05	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
MW-8B	2/1/1995	U 1	2	U 5	1	U 1	4	3	U 1
	12/5/2011	U 0.05	J 0.29	U 5	U 0.072	U 0.13	0.81	J 0.43	U 0.16
	6/5/2012	J 0.06	J 0.23	U 2	U 0.072	U 0.13	0.83	J 0.38	U 0.16
MW-8C	6/5/2012	J 0.06	U 0.08	U 2	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
	12/4/2012	U 0.05	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
MW-9A	1/18/1994	U 2	U 1	U 5	2	U 1	4	2	U 1

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* (1) X F% - Additional QA/QC notes

- Value greater than or equal to the HHS

Vinyl Chloride concentration highlighted only if equal to or greater than 2 micrograms per liter (EPA Maximum Contaminant Level). Montana HHS is 0.2 micrograms per liter.

TABLE 3
Summary of Selected Volatile Organic Compounds at Sampling Locations
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**	(1)	**30**	**5**	**5**	**2**
MW-9A	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	U(1)B 5	(1) U 1	(1) U 1	1	1	U 1
	6/22/1999	U 1	U 1	(1) U 5	U 1	U 1	U 1	U 1	U 1
	12/13/1999	U 1	U 1	(1) U 5	(1) U 1	U 1	1	(1) U 1	U 1
	6/7/2000	U 1	U 1	(1) U 5	(1) U 1	U 1	U 1	(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	(1) U 1	(1) U 5	(1) U 1	U 1	2	1	U 1
	6/13/2002	U 1	1	(1) U 5	(1) U 1	U 1	2	1	U 1
	12/12/2002	U 1	1	(1) U 5	(1) U 1	U 1	2	1	U 1
	6/9/2003	U 1	(1) U 1	(1) U 5	(1) U 1	(1) U 1	1	(1) U 1	U 1
	12/4/2003	U 1	(1) U 1	(1) U 5	(1) U 1	U 1	1	(1) U 1	JJF% 1
	6/8/2004	U 1	(1) U 1	(1) U 5	(1) U 1	U 1	1	(1) U 1	U 1
	12/7/2004	U 1	(1) U 1	(1) U 5	(1) U 1	U 1	1	(1) U 1	U 1
	6/16/2005	U 1	(1) U 1	(1) U 5	U 1	U 1	1	(1) U 1	U 1
	12/14/2005	U 1	(1) U 1	(1) U 5	(1) U 1	U 1	1	(1) U 1	U 1
	6/13/2006	U 0.5	0.5	(1) U 5	(1) U 1	U 1	1	0.5	U 0.5
	12/6/2006	U 0.5	U(1) 0.5	U 5	U(1) 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	JJF% 0.5
	12/10/2007	U 0.5	U 0.5	U 5	U 1	U(1) 1	0.6	U(1) 0.5	U 0.5
	6/24/2008	U 0.5	U 0.5	U(1) 5	U 1	U 1	0.7	U(1) 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 0.04	J 0.44	U 2	J 0.18	U 0.021	0.95	0.64	U 0.049
	12/5/2011	U 0.05	J 0.48	U 5	J 0.28	U 0.13	0.95	0.75	U 0.16
	6/4/2012	J 0.07	J 0.47	U 2	J 0.27	U 0.13	1.4	0.95	U 0.16
	12/4/2012	U 0.05	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
MW-9B	1/31/1995	U 1	U* 1	U 5	U* 1	U 1	4	2	U 1

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TABLE 3
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Bozeman Landfill
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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**	(1)	**30**	**5**	**5**	**2**
MW-9B	12/5/2011	U 0.05	0.67	U 5	J 0.28	U 0.13	1.2	1.1	U 0.16
	6/4/2012	J 0.05	0.53	U 2	J 0.19	U 0.13	1.4	1	U 0.16
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
	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	U(1)B 5	U 1	(1) U 1	(1) U 1	(1) U 1	U 1
	6/23/1999	U 1	U 1	(1) U 5	U 1	U 1	U 1	(1) U 1	U 1
	12/13/1999	U 1	U 1	(1) U 5	U 1	U 1	U 1	(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	(1) U 1	(1) U 5	(1) U 1	U 1	(1) U 1	1	U 1
	6/14/2002	U 1	(1) U 1	(1) U 5	(1) U 1	U 1	(1) U 1	(1) U 1	U 1
	12/12/2002	U 1	(1) U 1	(1) U 5	(1) U 1	U 1	(1) U 1	1	U 1
	6/10/2003	U 1	(1) U 1	(1) U 5	(1) U 1	U 1	(1) U 1	(1) U 1	U 1
	12/3/2003	U 1	(1) U 1	(1) U 5	U 1	U 1	(1) U 1	1	JJF% 1
	6/8/2004	U 1	(1) U 1	(1) U 5	U 1	U 1	U 1	(1) U 1	U 1
	12/6/2004	U 1	U 1	(1) U 5	U 1	U 1	U 1	(1) U 1	U 1
	6/17/2005	U 1	(1) U 1	B U 5	U 1	U 1	U 1	(1) U 1	U 1
	12/13/2005	U 1	(1) U 1	(1) U 5	U 1	U 1	U 1	U 1	U 1
	6/13/2006	U 0.5	(1) U 0.5	(1) U 5	(1) U 1	U 1	U 0.5	0.6	U 0.5
	12/6/2006	U 0.5	U 0.5	U(1) 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	JJF% 0.5
	12/10/2007	U 0.5	U 0.5	U 5	U 1	U(1) 1	U 0.5	0.6	U 0.5
	6/26/2008	U 0.5	U 0.5	U(1) 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 0.04	U 0.08	U 2	U 0.072	U 0.021	U 0.041	0.7	U 0.049
	12/6/2011	U 0.05	J 0.26	U 5	U 0.072	U 0.13	U 0.16	0.57	U 0.16
	6/4/2012	J 0.09	J 0.2	U 2	U 0.072	U 0.13	U 0.16	0.58	U 0.16
	12/5/2012	U 0.05	J 0.17	U 2	U 0.072	U 0.13	U 0.16	J 0.5	U 0.16

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HHS		**5**	**70**	**5**	(1)	**30**	**5**	**5**	**2**
MW-10	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
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	U(1)B 5	U 1	(1) U 1	U 1	U 1	U 1
	6/22/1999	U 1	U 1	(1) U 5	U 1	1	U 1	U 1	U 1
	12/14/1999	U 1	U 1	(1) U 5	U 1	U 1	U 1	U 1	U 1
	6/8/2000	U 1	U 1	(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	(1) U 5	(1) U 1	U 1	(1) U 1	(1) U 1	U 1
	6/14/2002	U 1	U 1	(1) U 5	(1) U 1	U 1	(1) U 1	U 1	U 1
	12/13/2002	U 1	U 1	(1) U 5	(1) U 1	U 1	(1) U 1	(1) U 1	U 1
	6/10/2003	U 1	U 1	(1) U 5	(1) U 1	U 1	(1) U 1	(1) U 1	U 1
	12/3/2003	U 1	U 1	(1) U 5	(1) U 1	U 1	(1) U 1	U 1	JJF% 1
	6/8/2004	U 1	U 1	(1) U 5	(1) U 1	U 1	(1) U 1	U 1	U 1
	12/6/2004	U 1	U 1	(1) U 5	(1) U 1	U 1	(1) U 1	(1) U 1	U 1
	6/16/2005	U 1	U 1	(1) U 5	U 1	U 1	(1) U 1	U 1	U 1
	12/13/2005	U 1	U 1	(1) U 5	U 1	U 1	(1) U 1	(1) U 1	U 1
	6/13/2006	U 0.5	U 0.5	(1) U 5	(1) U 1	U 1	0.6	(1) U 0.5	U 0.5
	12/6/2006	U 0.5	U 0.5	U(1) 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	JJF% 0.5
	12/10/2007	U 0.5	U 0.5	U 2	U 1	U(1) 1	U 0.5	U 0.5	U 0.5
	6/24/2008	U 0.5	U 0.5	U(1) 5	U 1	U 1	U(1) 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 0.04	U 0.08	U 2	U 0.072	U 0.021	U 0.041	U 0.05	U 0.049
	12/5/2011	U 0.05	U 0.08	U 5	U 0.072	U 0.13	J 0.25	U 0.11	U 0.16
	6/4/2012	U 0.05	U 0.08	U 2	U 0.072	U 0.13	J 0.32	U 0.11	U 0.16
	12/5/2012	U 0.05	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
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

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HHS		**5**	**70**	**5**	(1)	**30**	**5**	**5**	**2**
MW-12	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
	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	(1) U 1	U 1	U 1	22
	3/17/1999	2	(1) U 1	(1) U 5	1	U 1	U 1	U 1	22
	6/23/1999	2	U 1	(1) U 5	U 1	U 1	U 1	U 1	23
	9/13/1999	2	U 1	(1) U 5	U 1	U 1	U 1	(1) U 1	25
	12/14/1999	2	(1) U 1	(1) U 5	U 1	U 1	U 1	U 1	25
	3/22/2000	1	(1) U 1	U 5	(1) U 1	U 1	U 1	U 1	16
	6/8/2000	1	U 1	(1) U 5	U 1	U 1	U 1	(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	(1) U 1	U 1	U 1	1	16
	12/18/2001	2	2	(1) U 5	1	U 1	(1) U 1	2	20
	3/25/2002	1	2	U 5	1	U 1	U 1	3	21
	6/14/2002	1	2	(1) U 5	(1) 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	(1) U 1	U 1	(1) U 1	4	22
	3/24/2003	1	4	(1) U 5	(1) U 1	(1) U 1	U 1	5	16
	6/10/2003	1	5	(1) U 5	(1) U 1	U 1	(1) U 1	6	14
	9/25/2003	1	6	(1) U 5	1	U 1	(1) U 1	8	19
	12/4/2003	2	6	(1) U 5	1	U 1	(1) U 1	8	JF% 27
	3/24/2004	2	7	U 5	1	U 1	(1) U 1	8	24
	6/8/2004	1	7	(1) U 5	1	U 1	(1) U 1	7	15
	9/9/2004	1	7	(1) U 5	1	U 1	(1) U 1	9	17
	12/7/2004	1	7	(1) U 5	1	U 1	(1) U 1	8	16
	3/29/2005	1	7	(1) U 5	1	U 1	(1) U 1	7	19
	6/17/2005	(1) U 1	7	B U 5	1	U 1	1	8	16
	9/20/2005	1	7	(1) BU 5	1	U 1	1	7	12
	12/14/2005	(1) U 1	6	(1) U 5	1	U 1	1	6	15
	3/16/2006	(1) U 1	6	U 5	(1) U 1	U 1	1	6	19
	6/13/2006	1.2	8.3	(1) U 5	1	U 1	1.2	6.8	13
	9/21/2006	0.8	5.9	U(1) 5	U(1) 1	U 1	1.5	6.3	12.5
	12/7/2006	0.5	3.6	U 5	U(1) 1	U 1	U(1) 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

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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**	(1)	**30**	**5**	**5**	**2**
MW-12	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(1) 5	U(1) 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
	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
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	(1) U 1	U(1)B 5	1	(1) U 1	(1) U 1	(1) U 1	24
	3/15/1999	(1) U 1	U 1	6	(1) U 1	U 1	U 1	(1) U 1	19
	6/23/1999	(1) U 1	U 1	(1) U 5	U 1	U 1	U 1	(1) U 1	23
	9/13/1999	(1) U 1	U 1	U 5	U 1	U 1	U 1	(1) U 1	26
	12/14/1999	(1) U 1	U 1	(1) U 5	(1) U 1	U 1	U 1	(1) U 1	27
	3/22/2000	(1) U 1	U 1	U 5	(1) U 1	U 1	U 1	(1) U 1	18
	6/8/2000	(1) U 1	U 1	(1) U 5	U 1	U 1	U 1	U 1	23
	9/22/2000	(1) U 1	U 1	(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	(1) U 1	(1) U 1	U(1,3) 5	(1) U 1	U 1	(1) U 1	(1) U 1	12
	12/18/2001	(1) U 1	(1) U 1	(1) U 5	1	U 1	(1) U 1	(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	(1) U 1	(1) U 1	(1) U 5	1	U 1	(1) U 1	(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	(1) U 1	(1) U 1	(1) U 5	1	U 1	(1) U 1	(1) U 1	12
	3/24/2003	(1) U 1	(1) U 1	(1) U 5	(1) U 1	(1) U 1	(1) U 1	(1) U 1	8
	6/10/2003	(1) U 1	(1) U 1	(1) U 5	(1) U 1	U 1	(1) U 1	(1) U 1	7
	9/25/2003	(1) U 1	(1) U 1	(1) U 5	(1) U 1	U 1	(1) U 1	(1) U 1	13

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TABLE 3
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Bozeman Landfill
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Sampling Location	Sampling Date	LABORATORY PARAMETERS							
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HHS		**5**	**70**	**5**	(1)	**30**	**5**	**5**	**2**
MW-13	12/4/2003	(1) U 1	(1) U 1	(1) U 5	1	U 1	(1) U 1	(1) U 1	JF% 15
	3/24/2004	(1) U 1	U 1	U 5	1	U 1	(1) U 1	(1) U 1	13
	6/8/2004	(1) U 1	(1) U 1	(1) U 5	(1) U 1	U 1	(1) U 1	(1) U 1	8
	9/9/2004	(1) U 1	(1) U 1	(1) U 5	1	U 1	(1) U 1	(1) U 1	11
	12/7/2004	(1) U 1	(1) U 1	(1) U 5	1	U 1	U 1	(1) U 1	9
	3/29/2005	(1) U 1	(1) U 1	(1) U 5	1	U 1	(1) U 1	(1) U 1	11
	6/17/2005	(1) U 1	U 1	U 5	1	U 1	U 1	(1) U 1	9
	9/20/2005	(1) U 1	(1) U 1	(1) BU 5	1	U 1	(1) U 1	(1) U 1	8
	12/14/2005	(1) U 1	(1) U 1	(1) U 5	1	U 1	(1) U 1	(1) U 1	9
	3/16/2006	U 1	(1) U 1	U 5	(1) U 1	U 1	(1) U 1	(1) U 1	11
	6/13/2006	0.6	0.7	(1) U 5	(1) U 1	U 1	(1) U 0.5	(1) U 0.5	7.1
	9/21/2006	0.6	U(1) 0.5	U(1) 5	U(1) 1	U 1	U(1) 0.5	U(1) 0.5	7.6
	12/7/2006	0.5	0.7	U 5	U(1) 1	U 1	U 0.5	U(1) 0.5	9.7
	3/15/2007	U(1) 0.5	0.8	U 5	1	U 1	U(1) 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(1) 0.5	18
	6/24/2008	U(1) 0.5	0.8	U(1) 5	U 1	U 1	U(1) 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
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	(1) U 5	U 1	U 1	U 1	U 1	U 1
	6/9/2003	U 1	U 1	(1) U 5	U 1	U 1	U 1	U 1	U 1
	12/3/2003	U 1	U 1	(1) U 5	U 1	U 1	U 1	U 1	JJF% 1
	6/8/2004	U 1	U 1	(1) U 5	U 1	U 1	U 1	U 1	U 1
	12/6/2004	U 1	U 1	(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	(1) U 5	U 1	U 1	U 1	(1) U 1	U 1
	6/13/2006	U 0.5	U 0.5	(1) 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) 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	JJF% 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

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HHS		**5**	**70**	**5**	(1)	**30**	**5**	**5**	**2**
MW-14	6/25/2008	U 0.5	U 0.5	U(1) 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 0.04	U 0.08	U 2	U 0.072	U 0.021	U 0.041	U 0.05	U 0.049
	12/5/2011	U 0.05	U 0.08	U 5	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
	6/4/2012	U 0.05	U 0.08	U 2	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
MW-15	10/8/2001	U 1	U 1	(1) U 5	U 1	U 1	U 1	U 1	U 1
	12/11/2002	U 1	U 1	(1) U 5	U 1	U 1	U 1	U 1	U 1
	6/10/2003	U 1	U 1	(1) U 5	U 1	U 1	U 1	U 1	U 1
	12/3/2003	U 1	U 1	(1) U 5	U 1	U 1	U 1	U 1	JJF% 1
	6/8/2004	U 1	U 1	(1) U 5	U 1	U 1	U 1	U 1	U 1
	12/6/2004	U 1	U 1	(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	(1) U 5	U 1	U 1	U 1	U 1	U 1
	6/12/2006	U 0.5	U 0.5	(1) U 5	U 1	U 1	(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	JJF% 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(1) 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 0.04	U 0.08	U 2	U 0.072	U 0.021	U 0.041	U 0.05	U 0.049
	12/6/2011	U 0.05	U 0.08	U 5	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
	6/4/2012	U 0.05	U 0.08	U 2	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
	12/5/2012	U 0.05	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
MW-16	6/4/2012	U 0.05	3.4	U 2	1.4	U 0.13	2.2	2.9	U 0.16
	12/4/2012	U 0.05	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
McIlhattan Seep	1/19/1994	U 2	U 1	U 5	U 1	U 1	U 1	U 1	U 1
	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	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

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HHS		**5**	**70**	**5**	(1)	**30**	**5**	**5**	**2**
McIlhattan Seep	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	(1) U 1	U(1)B 5	(1) U 1	(1) U 1	4	4	U 1
	6/23/1999	U 1	U 1	(1) U 5	U 1	U 1	2	1	U 1
	12/14/1999	U 1	U 1	(1) U 5	U 1	U 1	3	2	U 1
	6/7/2000	U 1	U 1	(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	(1) U 1	(1) U 5	(1) U 1	U 1	3	1	U 1
	6/14/2002	U 1	(1) U 1	(1) U 5	(1) U 1	U 1	2	(1) U 1	U 1
	12/12/2002	U 1	(1) U 1	(1) U 5	(1) U 1	U 1	4	1	(1) U 1
	6/10/2003	U 1	(1) U 1	(1) U 5	(1) U 1	U 1	3	(1) U 1	U 1
	12/3/2003	U 1	(1) U 1	(1) U 5	(1) U 1	U 1	2	(1) U 1	JJF% 1
	6/8/2004	U 1	(1) U 1	(1) U 5	(1) U 1	U 1	2	(1) U 1	U 1
	12/6/2004	U 1	(1) U 1	(1) U 5	(1) U 1	U 1	3	(1) U 1	U 1
	6/17/2005	U 1	(1) U 1	U 5	(1) U 1	U 1	2	(1) U 1	U 1
	12/14/2005	(1) U 1	(1) U 1	(1) U 5	(1) U 1	U 1	2	(1) U 1	U 1
	6/12/2006	U 0.5	(1) U 0.5	(1) U 5	(1) U 1	U 1	1.4	(1) U 0.5	U 0.5
	12/7/2006	U 0.5	U(1) 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	JJF% 0.5
	12/10/2007	U 0.5	U 0.5	U 5	U 1	U(1) 1	1.3	U 0.5	U 0.5
	6/26/2008	U 0.5	U 0.5	U(1) 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 0.04	U 0.08	U 2	U 0.072	J 0.061	0.73	J 0.26	U 0.049
	12/6/2011	U 0.05	J 0.13	U 5	U 0.072	U 0.13	1.1	J 0.3	U 0.16
	6/5/2012	U 0.05	J 0.19	U 2	U 0.072	U 0.13	1.1	J 0.32	U 0.16
	12/5/2012	U 0.05	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
Shop Well	6/13/2011	U 0.04	1	U 2	1.6	U 0.021	3.8	2.3	J 0.13
	12/7/2011	U 0.05	0.95	U 5	1.7	U 0.13	3.9	2.2	U 0.16
	6/4/2012	U 0.05	0.64	U 2	1.2	U 0.13	3.7	1.7	U 0.16
	12/4/2012	U 0.05	0.86	U 2	1.7	J 0.21	4.5	2.1	U 0.16

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HHS		**5**	**70**	**5**	(1)	**30**	**5**	**5**	**2**
Shop Well	6/10/2013	U 0.24	0.65	U 2	1.9	U 0.5	4.4	1.7	U 0.2
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	U(1)B 5	U 1	(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	(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	(1) U 5	U 1	U 1	U 1	U 1	U 1
	6/10/2003	U 1	U 1	(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	JJF% 1
	6/8/2004	U 1	U 1	(1) U 5	U 1	U 1	U 1	U 1	U 1
	12/6/2004	U 1	U 1	(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	(1) U 5	U 1	U 1	U 1	U 1	U 1
	6/12/2006	U 0.5	U 0.5	(1) 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	JJF% 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(1) 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 0.04	U 0.08	U 2	U 0.072	U 0.021	U 0.041	U 0.05	U 0.049
	12/7/2011	U 0.05	U 0.08	U 5	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
	6/5/2012	U 0.05	U 0.08	U 2	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16
	12/6/2012	U 0.05	U 0.08	U 2	U 0.072	U 0.13	U 0.16	U 0.11	U 0.16

Notes:
µg/L - micrograms per liter
HHS - Human Health Standard (EPA Maximum Contaminant Level or HHS in Montana Circular DEQ-7, October 2012
NA - Not Applicable
J - Estimated Concentration
(1) - No HHS established
-- - Not collected/analyzed
U - Below Method Detection Limit
* (1) X F% - Additional QA/QC notes

- Value greater than or equal to the HHS

Vinyl Chloride concentration highlighted only if equal to or greater than 2 micrograms per liter (EPA Maximum Contaminant Level). Montana HHS is 0.2 micrograms per liter.

TABLE 3
Summary of Selected Volatile Organic Compounds at Sampling Locations
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**	(1)	**30**	**5**	**5**	**2**
VET WELL	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

Notes:
µg/L - micrograms per liter
HHS - Human Health Standard (EPA Maximum Contaminant Level or HHS in Montana Circular DEQ-7, October 2012
NA - Not Applicable

J - Estimated Concentration
(1) - No HHS established
-- - Not collected/analyzed
U - Below Method Detection Limit
* (1) X F% - Additional QA/QC notes

- Value greater than or equal to the HHS

Vinyl Chloride concentration highlighted only if equal to or greater than 2 micrograms per liter (EPA Maximum Contaminant Level). Montana HHS is 0.2 micrograms per liter.

TABLE 4
Comparison of Medians of Selected Groundwater Quality Data
Bozeman Landfill, Bozeman, Montana
June 2013 Monitoring Event

Parameter	Units	Compliance Well MW-6 Median	Compliance Well MW-8A Median	Background Well MW-5 Median	Background Well MW-15 Median	N (1)	P-value(2) MW- 5 / MW-15	Statistically Above Background(3)
1,1, Dichloroethane	ug/L	1	-	0.375	0.375	19/16	.000/.000	YES
cis1,2, Dichlorothene	ug/L	1.5	-	0.25	0.25	19/16	.000/.000	YES
Tetrachlorethene (PCE)	ug/L	1.3	-	0.25	0.25	19/16	.000/.000	YES
Tetrachlorethene (PCE)	ug/L	-	0.69	0.25	0.25	19/16	.000/.000	YES
Trichloroethene (TCE)	ug/L	1.1	-	0.25	0.25	19/165	.000/.000	YES
Trichloroethene (TCE)	ug/L	-	0.62	0.25	0.25	17/16	.000/.000	YES
Vinyl Chloride	ug/L	0.5	-	0.15	0.15	19/14	.000/.000	YES(4)
Vinyl Chloride	ug/L	-	0.225	0.225	0.225	16	.955/.955	NO
Chloride	mg/L	19.35	-	5.05	4.95	16/16	.000/.000	YES
Chloride	mg/L	-	43.3	5.05	5	16	.000/.000	YES
Nitrate+Nitrite as N	mg/L	-	7.8	4.45	5.4	16	.043/.254	NO
Sulfate	mg/L	14	-	9.05		16	.000	YES
Sulfate	mg/L	14			14.1	16	.539	NO
Sulfate	mg/L	-	37	9.05	14.1	16	.000/.000	YES

Notes:

(1) Sample Size

(2) Mann-Whitney U test at the 99 percent confidence level.

(3) Results are significant if the p-value is less than or equal to 0.01 (and Z value is positive in worksheets)

(4) Groundwater protection standards (GPS) for vinyl chloride is considered to be 2 ug/L as established the by the US EPA and the highest value in the MW-6 data set for vinyl chloride is less that the GPS.

TABLE 5
Summary of Statistical Analysis of Selected Groundwater Quality Data
Bozeman Landfill, Bozeman, Montana
June 2013 Monitoring Event

Parameter	Well	GPS (1)	Test[2]	n(3)	Test Result (P-value)	Statistically Greater than GPS(4)
Nitrate+Nitrite as N	MW-8A	10	1SW	15	0.589	No
Trichloroethene (TCE)	MW-12	5	1SW	18	0.686	No
Tetrachlorethene (PCE)	MW-7A	5	1SW	18	0.938	No
Vinyl Chloride	MW-6	2	1SW	18	0.062	No
	MW-7A	2	1SW	18	0.000	No (5)
	MW-12	2	1SW	18	0.000	Yes
	MW-13	2	1SW	18	0.000	Yes

Notes:

(1) Groundwater protection standards (GPS) are stated in micrograms per liter except Nitrate+Nitrite which is in milligrams per liter. The GPS for vinyl chloride is considered to be 2 ug/L as established by the U.S. EPA

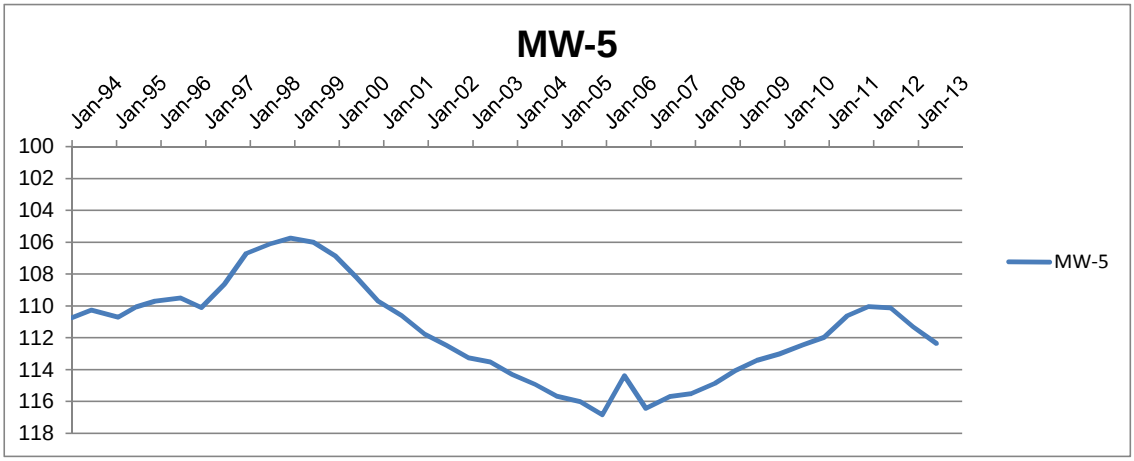
(2) 1SW indicates a 1-Sample Wilcoxon Test at the 99 percent confidence level; 1ST indicates a 1- Sample t-Test at the 99 percent confidence level

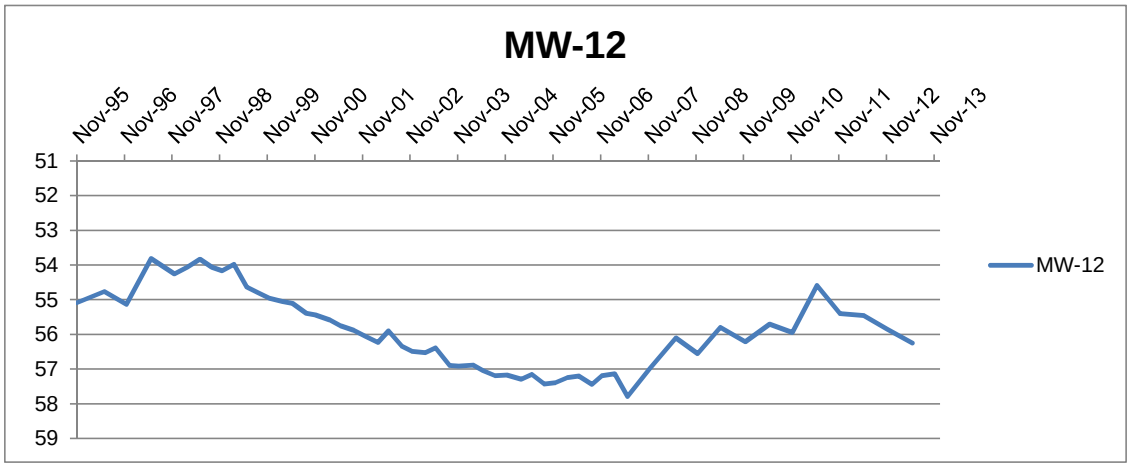
(3) Sample size after data censoring (further reduction due to the values may occur in 1-Sample Wilcoxon test)

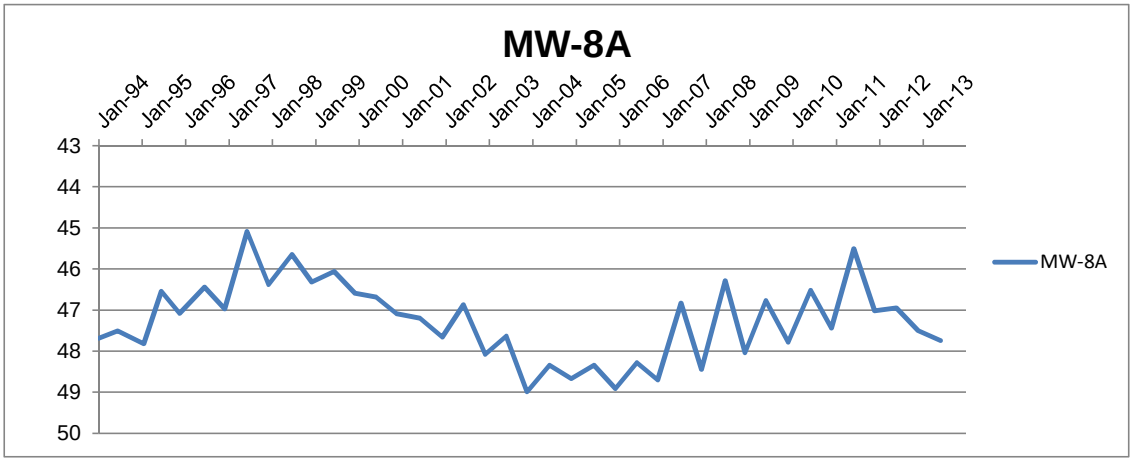
(4) Results are significant if the p-value is less than or equal to 0.01

(5) The Wilcoxon test indicated that there is a significant difference between well MW-7A vinyl chloride values and the GPS for vinyl chloride. The difference is due to the fact that well MW-7A vinyl chloride values are lower than the vinyl chloride GPS of 2 ug/L

CHART 1
Changes in Groundwater Levels Through Time
Bozeman Landfill, Bozeman, Montana







Note : Y axis: Depth to Groundwater in feet below Top of Casing

APPENDIX C

GROUNDWATER SAMPLING LOGS

GROUNDWATER SAMPLING LOG

Project: Bozeman Landfill Date: 6/12/13 @ 2000 Station No. LF-2

Personnel: MFP Weather: warm, dry

Well Locked? Yes [✓] No [ ] Note Any Problems With Condition of Well: ✓

Casing Dia. & Type: 2-inch PVC [ ] 4-inch PVC [✓] Other ____ Measuring Point: Top of PVC, north side [✓] Other ____

Aquifer: Tertiary sediments (sand, gravel, and clayey silt)

Well Depth (ft. below measuring point): 19.60 - Depth to Water 14.05 = 5.55 ft. water in well

WELL EVACUATION

Evacuation Method: Submersible Pump [ ] Disposable bailer [✓] Spigot [ ] Other ____

5.55 ft. water in well x ____ gal./ft * = one casing volume 3.6 gals. x 3 = purge volume 10.9 gals.

* 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C^2

Pumping rate (gpm): ____

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	ORP mV	DO mg/L
	3.6	9.78	7.45	502	1.6	—
	7.2	9.60	7.45	499	10.7	—
	10.8	9.41	7.45	500	17.4	—
Sampled	11.5	9.15	7.44	500	35.4	8.72 Downhole

DO measured: In-well [ ] In water bailed [ ] In water pumped [ ] Other Downhole

WELL SAMPLING

Sampling Method: Submersible Pump [ ] Disposable Polyethylene Bailer [✓] Spigot [ ] Grab [ ] Other: ____

Sample Type: Natural [✓] Duplicate [ ] Other: ____

Sample Collected	Parameters	Sample Container	Preservative
Yes [✓] No [ ]	VOCs	3 – 40 ml vials	HCl
Yes [ ] No [✓]	Metals: dissolved [ ] or total [ ] full list [ ] or reduced list [ ]	500 ml poly	HNO_3
Yes [✓] No [ ]	COD, Nitrate as N	250 ml poly	H_2SO_4
Yes [ ] No [✓]	pH, SC, sulfate, chloride	250 ml poly	
Yes [ ] No [✓]	Cyanide	500 ml poly	NaOH
Yes [ ] No [ ]			

Laboratory: Pace Analytical Services, Inc., Billings, Montana Chain-of-Custody: Yes [x] No [ ]

Meter	Model No.	Calibration Date
Water level	Water Line	
pH	YSI-556	6/12/13
SC	↓	↓
ORP		
DO		

Decontamination

Liquinox: Yes [✓] No [ ] Scrub: Yes [✓] No [ ]

Potable H_2O: Yes [ ] No [ ] Steam: Yes [ ] No [ ]

DI water: Yes [✓] No [ ] Nitric Acid: Yes [ ] No [ ]

Comments: ____

GROUNDWATER SAMPLING LOG

Project: Bozeman Landfill Date: 6/12/13 @ 1930 Station No. LF-3

Personnel: MF Pearson Weather: Warm, dry

Well Locked? Yes [✓] No [ ] Note Any Problems With Condition of Well: _____

Casing Dia. & Type: 2-inch PVC [ ] 4-inch PVC [✓] Other _____ Measuring Point: Top of PVC, north side [✓] Other _____

Aquifer: Tertiary sediments (sand, gravel, and clayey silt)

Well Depth (ft. below measuring point): 37.50 - Depth to Water 14.33 = 23.17 ft. water in well

WELL EVACUATION

Evacuation Method: Dedicated Submersible Pump [✓] Disposable bailer [ ] Spigot [ ] Other _____

23.17 ft. water in well x _____ gal./ft * = one casing volume 15.1 gals. x 3 = purge volume 45.4 gals.

* 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C^2

Pumping rate (gpm): Flow = 1 gpm

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	ORP	DO	
1850	Start						
1905	15	10.09	7.32	707	9.1	7.05	Flowthru
1920	30	10.10	7.34	706	38.1	6.93	
1935	45.3	10.08	7.37	705	50.4	6.76	
	Sampled						

DO measured: In-well [ ] In water bailed [ ] In water pumped [✓] Other _____

WELL SAMPLING

Sampling Method: Submersible Pump [✓] Disposable Polyethylene Bailer [ ] Spigot [ ] Grab [ ] Other: _____

Sample Type: Natural [✓] Duplicate [ ] Other: _____

Sample Collected	Parameters	Sample Container	Preservative
Yes [✓] No [ ]	VOCs	3 – 40 ml vials	HCl
Yes [✓] No [✓]	Metals: dissolved [✓] or total [ ] full list [ ] or reduced list [ ]	500 ml poly	HNO_3
Yes [ ] No [✓]	COD, Nitrate as N	250 ml poly	H_2SO_4
Yes [ ] No [✓]	pH, SC, sulfate, chloride	250 ml poly	
Yes [ ] No [✓]	Cyanide	500 ml poly	NaOH
Yes [ ] No [ ]			

Laboratory: Pace Analytical Services, Inc., Billings, Montana Chain-of-Custody: Yes [x] No [ ]

Meter	Model No.	Calibration Date
Water level	Water Line	
pH	YSI-556	6/12/13
SC		
ORP		
DO		

Decontamination

Liquinox:	Yes [✓] No [ ]	Scrub:	Yes [✓] No [ ]
Potable H_2O:	Yes [ ] No [ ]	Steam:	Yes [ ] No [ ]
DI water:	Yes [✓] No [ ]	Nitric Acid:	Yes [ ] No [ ]

Comments: _____

GROUNDWATER SAMPLING LOG

Project: Bozeman Landfill Date: 6/10/13 @1340 Station No. MW-4

Personnel: MF Pearson Weather: Warm, Dry

Well Locked? Yes [✓] No [ ] Note Any Problems With Condition of Well: _____

Casing Dia. & Type: 2-inch PVC [ ] 4-inch PVC [✓] Other _____ Measuring Point: Top of PVC, north side [✓] Other _____

Aquifer: Tertiary sediments (sand, gravel, and clayey silt)

Well Depth (ft. below measuring point): 38.0 - Depth to Water 20.69 = 17.31 ft. water in well

WELL EVACUATION

Evacuation Method: Dedicated ✓ Submersible Pump [✓] Disposable bailer [ ] Spigot [ ] Other _____

17.31 ft. water in well x _____ gal./ft * = one casing volume 11.3 gals. x 3 = purge volume 34.0 gals.

* 2" well = 0.163 gal./ft. 4" well = (0.653 gal./ft.) 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C^2

Pumping rate (gpm): 1gpm flow

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	ORP	pH	DO mg/L
1300	Start						
1312	12	9.34	7.28	1026	163.8	-22.2	2.10
1324	24	9.25	7.25	1040	140.8		2.06
1336	36	9.28	7.18	1047	127.4		2.25

DO measured: In-well [ ] In water bailed [ ] In water pumped [✓] Other _____

WELL SAMPLING

Sampling Method: Submersible Pump [✓] Disposable Polyethylene Bailer [ ] Spigot [ ] Grab [ ] Other: _____

Sample Type: Natural [✓] Duplicate [ ] Other: _____

Sample Collected	Parameters	Sample Container	Preservative
Yes [✓] No [ ]	VOCs	3 – 40 ml vials	HCl
Yes [✓] No [ ]	Metals: dissolved [✓] or total [ ] full list [ ] or reduced list [ ]	500 ml poly	HNO_3
Yes [✓] No [ ]	COD, Nitrate as N	250 ml poly	H_2SO_4
Yes [✓] No [ ]	pH, SC, sulfate, chloride	250 ml poly	
Yes [ ] No [✓]	Cyanide	500 ml poly	NaOH
Yes [ ] No [ ]			

Laboratory: Pace Analytical Services, Inc., Billings, Montana Chain-of-Custody: Yes [x] No [ ]

Meter	Model No.	Calibration Date
Water level	WaterLine	
pH	K1-556	6/10/13
SC		
ORP		
DO		

Decontamination

Liquinox:	Yes [✓] No [ ]	Scrub:	Yes [✓] No [ ]
Potable H_2O:	Yes [ ] No [✓]	Steam:	Yes [ ] No [ ]
DI water:	Yes [✓] No [ ]	Nitric Acid:	Yes [ ] No [ ]

Comments: _____

GROUNDWATER SAMPLING LOG

Project: Bozeman Landfill Date: 6/10/13 @ 1130 Station No. MW-5

Personnel: MF Pearson Weather: warm, dry

Well Locked? Yes [✓] No [ ] Note Any Problems With Condition of Well: None

Casing Dia. & Type: 2-inch PVC [✓] 4-inch PVC [ ] Other ____ Measuring Point: Top of PVC, north side [✓] Other ____

Aquifer: Tertiary sediments (sand, gravel, and clayey silt)

Well Depth (ft. below measuring point): 160.0 - Depth to Water 112.36 = 47.64 ft. water in well

WELL EVACUATION

Evacuation Method: Dedicated / Submersible Pump [✓] Disposable bailer [ ] Spigot [ ] Other ____

____ ft. water in well x ____ gal./ft * = one casing volume 7.8 gals. x 3 = purge volume 24.0 gals.

* 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C^2

Pumping rate (gpm): Flow 1 gal / 54.2 sec = 1.1 gpm

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	ORP mV	DO pH mV	DO mg/L
1100	Start						
1109	10	10.36	5.79	471	363.0	11.27	DO
1117	18.7	10.66	6.64	490	315.	12.5	8.74
1125	27.5	11.00	7.05	462	291.	-11.6	8.55
1130	33	11.10	7.10	460	270.0	-31.0	8.40
→ Sampled							

DO measured: In-well [ ] In water bailed [ ] In water pumped [✓] Other ____

Use this for FP measurement

WELL SAMPLING

Sampling Method: Submersible Pump [✓] Disposable Polyethylene Bailer [ ] Spigot [ ] Grab [ ] Other: ____

Sample Type: Natural [✓] Duplicate [ ] Other: ____

Sample Collected	Parameters	Sample Container	Preservative
Yes [✓] No [ ]	VOCs	3 – 40 ml vials	HCl
Yes [✓] No [ ]	Metals: dissolved [✓] or total [ ] full list [ ] or reduced list [ ]	500 ml poly	HNO_3
Yes [✓] No [ ]	COD, Nitrate as N	250 ml poly	H_2SO_4
Yes [✓] No [ ]	pH, SC, sulfate, chloride	250 ml poly	
Yes [ ] No [✓]	Cyanide	500 ml poly	NaOH
Yes [ ] No [ ]			

Laboratory: Pace Analytical Services, Inc., Billings, Montana Chain-of-Custody: Yes [x] No [ ]

Meter	Model No.	Calibration Date
Water level	Water Line	
pH	YSI-556	6/10/13
SC		
ORP		
DO		

Decontamination

Liquinox:	Yes [✓] No [ ]	Scrub:	Yes [✓] No [ ]
Potable H_2O:	Yes [ ] No [ ]	Steam:	Yes [ ] No [ ]
DI water:	Yes [✓] No [ ]	Nitric Acid:	Yes [ ] No [ ]

Comments: ____

GROUNDWATER SAMPLING LOG

Project: Bozeman Landfill Date: 6/10/13@1600 Station No. MW-6

Personnel: MF Pearson Weather: Warm, Dry

Well Locked? Yes [✓] No [ ] Note Any Problems With Condition of Well: None

Casing Dia. & Type: 2-inch PVC [✓] 4-inch PVC [ ] Other_____ Measuring Point: Top of PVC, north side [✓] Other_____

Aquifer: Tertiary sediments (sand, gravel, and clayey silt)

Well Depth (ft. below measuring point): 66.0 - Depth to Water 31.47 = ~~45.5~~ 34.5' ft. water in well

WELL EVACUATION

Evacuation Method: Submersible Pump [ ] Disposable bailer [✓] Spigot [ ] Other_____

~~34.5' 45~~ ft. water in well x _____ gal./ft * = one casing volume 5.6 gals. x 3 = purge volume 16.9 gals.

* 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C^2

Pumping rate (gpm): _____

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	ORP	DO
	5.6	11.91	6.66	906	131.4	-
	11.2	11.19	6.66	896	135.6	-
	16.9	11.01	6.67	862	139.5	-
	17.6	11.74	6.68	864	152.8	3.56

Downhole

DO measured: In-well [✓] In water bailed [ ] In water pumped [ ] Other_____

WELL SAMPLING

Sampling Method: Submersible Pump [ ] Disposable Polyethylene Bailer [✓] Spigot [ ] Grab [ ] Other:_____

Sample Type: Natural [✓] Duplicate [ ] Other: _____

Sample Collected	Parameters	Sample Container	Preservative
Yes [✓] No [ ]	VOCs	3 – 40 ml vials	HCl
Yes [✓] No [ ]	Metals: dissolved [ ] or total [ ] full list [ ] or reduced list [ ]	500 ml poly	HNO_3
Yes [✓] No [ ]	COD, Nitrate as N	250 ml poly	H_2SO_4
Yes [✓] No [ ]	pH, SC, sulfate, chloride	250 ml poly	
Yes [ ] No [✓]	Cyanide	500 ml poly	NaOH
Yes [ ] No [ ]			

Laboratory: Pace Analytical Services, Inc., Billings, Montana Chain-of-Custody: Yes [x] No [ ]

Meter	Model No.	Calibration Date
Water level	WaterLine	
pH	YSI-556	6/10/13
SC		
ORP		
DO		

Decontamination

Liquinox:	Yes [✓] No [ ]	Scrub:	Yes [✓] No [ ]
Potable H_2O:	Yes [ ] No [✓]	Steam:	Yes [ ] No [ ]
DI water:	Yes [✓] No [ ]	Nitric Acid:	Yes [ ] No [ ]

Comments: _____

GROUNDWATER SAMPLING LOG

Project: Bozeman Landfill Date: 6/10/13 @ 1520 Station No. MW-6B

Personnel: MF Pearson Weather: Warm dry

Well Locked? Yes [✓] No [ ] Note Any Problems With Condition of Well: None

Casing Dia. & Type: 2-inch PVC [✓] 4-inch PVC [ ] Other____ Measuring Point: Top of PVC, north side [✓] Other____

Aquifer: Tertiary sediments (sand, gravel, and clayey silt)

Well Depth (ft. below measuring point): 100.0 - Depth to Water 19.25 = 80.75 ft. water in well

WELL EVACUATION

Evacuation Method: dedicated Submersible Pump [✓] Disposable bailer [ ] Spigot [ ] Other____

80.75 ft. water in well x ____ gal./ft.* = one casing volume 13.2 gals. x 3 = purge volume 39.5 gals.

* 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C^2

Pumping rate (gpm): Flow = 1 gal / 23 sec = 2.6

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	ORP	DO
1457	Start					
1503		10.32	7.51	338	53.4	7.72
1508		10.29	7.48	339	64.3	9.49
1513		10.24	7.48	339	77.6	9.24

Flow thru

DO measured: In-well [ ] In water bailed [ ] In water pumped [✓] Other____

WELL SAMPLING

Sampling Method: Submersible Pump [✓] Disposable Polyethylene Bailer [ ] Spigot [ ] Grab [ ] Other:____

Sample Type: Natural [✓] Duplicate [ ] Other: ____

Sample Collected	Parameters	Sample Container	Preservative
Yes [✓] No [ ]	VOCs	3 – 40 ml vials	HCl
Yes [✓] No [ ]	Metals: dissolved [✓] or total [ ] full list [✓] or reduced list [ ]	500 ml poly	HNO_3
Yes [✓] No [ ]	COD, Nitrate as N	250 ml poly	H_2SO_4
Yes [✓] No [ ]	pH, SC, sulfate, chloride	250 ml poly	
Yes [ ] No [✓]	Cyanide	500 ml poly	NaOH
Yes [ ] No [ ]			

Laboratory: Pace Analytical Services, Inc., Billings, Montana Chain-of-Custody: Yes [x] No [ ]

Meter	Model No.	Calibration Date
Water level	Waterline	
pH	451-556	6/10/13
SC		
ORP		
DO		

Decontamination

Liquinox:	Yes [✓] No [ ]	Scrub:	Yes [✓] No [ ]
Potable H_2O:	Yes [ ] No [ ]	Steam:	Yes [ ] No [ ]
DI water:	Yes [✓] No [ ]	Nitric Acid:	Yes [ ] No [ ]

Comments: ____

MW-6 31.47

GROUNDWATER SAMPLING LOG

Project: Bozeman Landfill Date: 6/12/13 @ 1230 Station No. MW-7A

Personnel: ME Pearson Weather: Warm, Dry

Well Locked? Yes [ ] No [ ] Note Any Problems With Condition of Well: _____

Casing Dia. & Type: 2-inch PVC [✓] 4-inch PVC [ ] Other _____ Measuring Point: Top of PVC, north side [✓] Other _____

Aquifer: Tertiary sediments (sand, gravel, and clayey silt)

Well Depth (ft. below measuring point): 65.90 - Depth to Water 56.81 = 9.09 ft. water in well

WELL EVACUATION

Evacuation Method: Submersible Pump [ ] Disposable bailer [✓] Spigot [ ] Other _____

9.09 ft. water in well x _____ gal./ft * = one casing volume 1.63 gals. x 3 = purge volume 4.8 gals.

* 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C^2

Pumping rate (gpm): _____

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	ORP	DO
	1.6	11.23	6.95	440	119.6	—
	3.2	10.83	6.89	451	127.2	—
	4.9	10.84	6.76	505	132.5	—
	6.5	10.92	6.67	584	142.5	—
	7.0	11.48	6.61	584	153.1	4.44

DO measured: In-well [ ] In water bailed [ ] In water pumped [ ] Other _____ Downhole

WELL SAMPLING

Sampling Method: Submersible Pump [✓] Disposable Polyethylene Bailer [ ] Spigot [ ] Grab [ ] Other: _____

Sample Type: Natural [✓] Duplicate [ ] Other: _____

Sample Collected	Parameters	Sample Container	Preservative
Yes [✓] No [ ]	VOCs	3 – 40 ml vials	HCl
Yes [✓] No [ ]	Metals: dissolved [✓] or total [ ] full list [ ] or reduced list [✓]	500 ml poly	HNO_3
Yes [✓] No [ ]	COD, Nitrate as N	250 ml poly	H_2SO_4
Yes [✓] No [ ]	pH, SC, sulfate, chloride	250 ml poly	
Yes [ ] No [✓]	Cyanide	500 ml poly	NaOH
Yes [ ] No [ ]			

Laboratory: Pace Analytical Services, Inc., Billings, Montana Chain-of-Custody: Yes [x] No [ ]

Meter	Model No.	Calibration Date
Water level	Water Line	
pH	451-356	6/12/13
SC		
ORP		
DO		

Decontamination

Liquinox: Yes [✓] No [ ] Scrub: Yes [✓] No [ ]

Potable H_2O: Yes [ ] No [ ] Steam: Yes [ ] No [ ]

DI water: Yes [✓] No [ ] Nitric Acid: Yes [ ] No [ ]

Comments: MW-7B DTGW = 56.91'

GROUNDWATER SAMPLING LOG

Project: Bozeman Landfill Date: 6/12/13 @ 1030 Station No. MW-8A

Personnel: M F Pearson Weather: Warm, Dry

Well Locked? Yes [✓] No [ ] Note Any Problems With Condition of Well: None

Casing Dia. & Type: 2-inch PVC [✓] 4-inch PVC [ ] Other _____ Measuring Point: Top of PVC, north side [✓] Other _____

Aquifer: Tertiary sediments (sand, gravel, and clayey silt)

Well Depth (ft. below measuring point): 59.50 - Depth to Water 47.74' = 11.76' ft. water in well

WELL EVACUATION

Evacuation Method: Submersible Pump [ ] Disposable bailer [✓] Spigot [ ] Other _____

11.76 ft. water in well x _____ gal./ft * = one casing volume 1.92 gals. x 3 = purge volume 5.75 gals.

* 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C^2

Pumping rate (gpm): _____

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	ORP	DO
	1.92	9.56	7.10	1103	210.2	—
	3.8	9.27	7.05	1136	212.5	—
	5.8	9.25	7.05	1139	213.5	—
	6.5	9.59	7.04	1138	222.1	7.91 Downhole

DO measured: In-well [✓] In water bailed [ ] In water pumped [ ] Other _____

WELL SAMPLING

Sampling Method: Submersible Pump [ ] Disposable Polyethylene Bailer [✓] Spigot [ ] Grab [ ] Other: _____

Sample Type: Natural [✓] Duplicate [ ] Other: _____

Sample Collected	Parameters	Sample Container	Preservative
Yes [✓] No [ ]	VOCs	3 – 40 ml vials	HCl
Yes [✓] No [ ]	Metals: dissolved [ ] or total [✓] full list [ ] or reduced list [✓]	500 ml poly	HNO_3
Yes [✓] No [ ]	COD, Nitrate as N	250 ml poly	H_2SO_4
Yes [✓] No [ ]	pH, SC, sulfate, chloride	250 ml poly	
Yes [ ] No [✓]	Cyanide	500 ml poly	NaOH
Yes [ ] No [ ]			

Laboratory: Pace Analytical Services, Inc., Billings, Montana Chain-of-Custody: Yes [x] No [ ]

Meter	Model No.	Calibration Date
Water level	Water CliP	6/12/13
pH	YSI-556	6/12/13
SC		
ORP		
DO		

Decontamination

Liquinox:	Yes [✓] No [ ]	Scrub:	Yes [✓] No [ ]
Potable H_2O:	Yes [ ] No [ ]	Steam:	Yes [ ] No [ ]
DI water:	Yes [✓] No [ ]	Nitric Acid:	Yes [ ] No [ ]

Comments: MW-8B DTGW = 48.02' MW-8A "DUP" Collected at 1050

GROUNDWATER SAMPLING LOG

Project: Bozeman Landfill Date: 6/12/13@930 Station No. MW-8C

Personnel: MF Pearson Weather: Warm, Dry

Well Locked? Yes [✓] No [ ] Note Any Problems With Condition of Well: _____

Casing Dia. & Type: 2-inch PVC [✓] 4-inch PVC [ ] Other _____ Measuring Point: Top of PVC, north side [✓] Other _____

Aquifer: Tertiary sediments (sand, gravel, and clayey silt)

Well Depth (ft. below measuring point): 103.0 - Depth to Water 43.31 = 59.69 ft. water in well

WELL EVACUATION

Evacuation Method: Dedicated Submersible Pump [✓] Disposable bailer [ ] Spigot [ ] Other _____

59.7 ft. water in well x _____ gal./ft * = one casing volume 9.7 gals. x 3 = purge volume 29.2 gals.

* 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C^2

Pumping rate (gpm): Flow = 1 gal/24.18 sec = 2.5 gpm

EVACUATION DATA

Meter re-cal necessary

Time	Cumulative Gallons	Temp	pH	SC	ORP	DO
915	Start					
919	10	9.82	~~4.59~~	366	334.3	10.25
923	20	9.82	~~4.66~~	366	331.0	9.99
927	30	9.86	7.45	368	184.3	9.12
930	Sampled					

Flow thru ↓

DO measured: In-well [ ] In water bailed [ ] In water pumped [✓] Other _____

WELL SAMPLING

Sampling Method: Submersible Pump [✓] Disposable Polyethylene Bailer [ ] Spigot [ ] Grab [ ] Other: _____

Sample Type: Natural [✓] Duplicate [ ] Other: _____

Sample Collected	Parameters	Sample Container	Preservative
Yes [✓] No [ ]	VOCs	3 – 40 ml vials	HCl
Yes [✓] No [ ]	Metals: dissolved [✓] or total [ ] full list [✓] or reduced list [ ]	500 ml poly	HNO_3
Yes [✓] No [ ]	COD, Nitrate as N	250 ml poly	H_2SO_4
Yes [✓] No [ ]	pH, SC, sulfate, chloride	250 ml poly	
Yes [ ] No [✓]	Cyanide	500 ml poly	NaOH
Yes [ ] No [ ]			

Laboratory: Pace Analytical Services, Inc., Billings, Montana Chain-of-Custody: Yes [x] No [ ]

Meter	Model No.	Calibration Date
Water level	Water Line	
pH	YSI-556	6/12/13
SC		
ORP		
DO		

Decontamination

Liquinox:	Yes [✓] No [ ]	Scrub:	Yes [✓] No [ ]
Potable H_2O:	Yes [ ] No [ ]	Steam:	Yes [ ] No [ ]
DI water:	Yes [✓] No [ ]	Nitric Acid:	Yes [ ] No [ ]

Comments: _____

GROUNDWATER SAMPLING LOG

Project: Bozeman Landfill Date: 6/10/13 @ 1400 Station No. MW-9A

Personnel: MF Pearson Weather: Warm, dry

Well Locked? Yes [✓] No [ ] Note Any Problems With Condition of Well: None

Casing Dia. & Type: 2-inch PVC [✓] 4-inch PVC [ ] Other _____ Measuring Point: Top of PVC, north side [✓] Other _____

Aquifer: Tertiary sediments (sand, gravel, and clayey silt)

Well Depth (ft. below measuring point): 39.0 - Depth to Water 28.28 = 10.72 ft. water in well

WELL EVACUATION

Evacuation Method: Submersible Pump [ ] Disposable bailer [✓] Spigot [ ] Other _____

10.7 ft. water in well x _____ gal./ft * = one casing volume 1.75 gals. x 3 = purge volume 5.25 gals.

* 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C^2

Pumping rate (gpm): _____

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	ORP	DO	
	1.75	10.05	7.01	1117	-	-	
	3.50	9.52	6.95	1123	-	-	
	5.25	9.61	6.99	1105	170.5	4.92	
	5.5	9.55	6.85	1129	170.2	2.07	Downhole

DO measured: In-well [ ] In water bailed [✓] In water pumped [ ] Other _____

WELL SAMPLING

Sampling Method: Submersible Pump [ ] Disposable Polyethylene Bailer [✓] Spigot [ ] Grab [ ] Other: _____

Sample Type: Natural [✓] Duplicate [ ] Other: _____

Sample Collected	Parameters	Sample Container	Preservative
Yes [✓] No [ ]	VOCs	3 – 40 ml vials	HCl
Yes [✓] No [ ]	Metals: dissolved [✓] or total [✓] full list [ ] or reduced list [✓]	500 ml poly	HNO_3
Yes [✓] No [ ]	COD, Nitrate as N	250 ml poly	H_2SO_4
Yes [✓] No [ ]	pH, SC, sulfate, chloride	250 ml poly	
Yes [ ] No [✓]	Cyanide	500 ml poly	NaOH
Yes [ ] No [ ]			

Laboratory: Pace Analytical Services, Inc., Billings, Montana Chain-of-Custody: Yes [x] No [ ]

Meter	Model No.	Calibration Date
Water level	Water Line	
pH	YSI-556	6/10/13
SC		
ORP		
DO		

Decontamination

Liquinox: Yes [✓] No [ ] Scrub: Yes [✓] No [ ]

Potable H_2O: Yes [ ] No [ ] Steam: Yes [ ] No [ ]

DI water: Yes [✓] No [ ] Nitric Acid: Yes [ ] No [ ]

Comments: MW-9B DTGW = 28.53'

GROUNDWATER SAMPLING LOG

Project: Bozeman Landfill Date: 6/12/13 @ 1430 Station No. MW-10

Personnel: MF Pearson Weather: Warm, Dry

Well Locked? Yes [✓] No [ ] Note Any Problems With Condition of Well: _____

Casing Dia. & Type: 2-inch PVC [✓] 4-inch PVC [ ] Other_____ Measuring Point: Top of PVC, north side [✓] Other_____

Aquifer: Tertiary sediments (sand, gravel, and clayey silt)

Well Depth (ft. below measuring point): 14.50 - Depth to Water 1.58' = 12.92 ft. water in well

WELL EVACUATION

Evacuation Method: Submersible Pump [ ] Disposable bailer [✓] Spigot [ ] Other_____

12.92 ft. water in well x _____ gal./ft * = one casing volume 2.1 gals. x 3 = purge volume 6.3 gals.

* 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C^2

Pumping rate (gpm): _____

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	ORP	DO
				1046		–
	2.1	8.11	6.93	↓	14.4	–
	4.2	7.39	6.93	1046	5.4	–
	6.3	7.12	6.90	1048	1.5	–
Sampled	6.8	6.31	6.99	1051	-13.5	0.34 Downhole

DO measured: In-well [✓] In water bailed [ ] In water pumped [ ] Other_____

WELL SAMPLING

Sampling Method: Submersible Pump [ ] Disposable Polyethylene Bailer [✓] Spigot [ ] Grab [ ] Other:_____

Sample Type: Natural [✓] Duplicate [ ] Other: _____

Sample Collected	Parameters	Sample Container	Preservative
Yes [✓] No [ ]	VOCs	3 – 40 ml vials	HCl
Yes [✓] No [ ]	Metals: dissolved [✓] or total [ ] full list [✓] or reduced list [ ]	500 ml poly	HNO_3
Yes [✓] No [ ]	COD, Nitrate as N	250 ml poly	H_2SO_4
Yes [✓] No [ ]	pH, SC, sulfate, chloride	250 ml poly	
Yes [ ] No [✓]	Cyanide	500 ml poly	NaOH
Yes [ ] No [ ]			

Laboratory: Pace Analytical Services, Inc., Billings, Montana Chain-of-Custody: Yes [x] No [ ]

Meter	Model No.	Calibration Date
Water level	Water Line	
pH	YSI-556	6/12/13
SC		
ORP		
DO		

Decontamination

Liquinox:	Yes [✓] No [ ]	Scrub:	Yes [✓] No [ ]
Potable H_20:	Yes [ ] No [ ]	Steam:	Yes [ ] No [ ]
DI water:	Yes [✓] No [ ]	Nitric Acid:	Yes [ ] No [ ]

Comments: _____

GROUNDWATER SAMPLING LOG

Project: Bozeman Landfill Date: 6/12/13 @ 1730 Station No. MW-11

Personnel: MFPearson Weather: Warm Dry

Well Locked? Yes [✓] No [ ] Note Any Problems With Condition of Well: None

Casing Dia. & Type: 2-inch PVC [✓] 4-inch PVC [ ] Other _____ Measuring Point: Top of PVC, north side [✓] Other _____

Aquifer: Tertiary sediments (sand, gravel, and clayey silt)

Well Depth (ft. below measuring point): 70.0 - Depth to Water 51.85 = 18.2 ft. water in well

WELL EVACUATION

Evacuation Method: Submersible Pump [ ] Disposable bailer [✓] Spigot [ ] Other _____

18.2 ft. water in well x _____ gal./ft * = one casing volume 3 gals. x 3 = purge volume 9 gals.

* 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C^2

Pumping rate (gpm): _____

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	ORP	DO
	3	10.2	7.29	699	178.0	—
	6	10.0	7.32	696	167.0	—
	9	9.94	7.37	688	162.0	—
Sampled	9.5	9.75	7.41	684	143.0	4.80 downhole

DO measured: In-well [✓] In water bailed [~~✓~~] In water pumped [ ] Other _____

WELL SAMPLING

Sampling Method: Submersible Pump [ ] Disposable Polyethylene Bailer [✓] Spigot [ ] Grab [ ] Other: _____

Sample Type: Natural [✓] Duplicate [ ] Other: _____

Sample Collected	Parameters	Sample Container	Preservative
Yes [✓] No [ ]	VOCs	3 – 40 ml vials	HCl
Yes [✓] No [ ]	Metals: dissolved [✓] or total [ ] full list [✓] or reduced list [ ]	500 ml poly	HNO_3
Yes [✓] No [ ]	COD, Nitrate as N	250 ml poly	H_2SO_4
Yes [✓] No [ ]	pH, SC, sulfate, chloride	250 ml poly	
Yes [ ] No [✓]	Cyanide	500 ml poly	NaOH
Yes [ ] No [ ]			

Laboratory: Pace Analytical Services, Inc., Billings, Montana Chain-of-Custody: Yes [x] No [ ]

Meter	Model No.	Calibration Date
Water level	Water Line	
pH	YSI-556	6/12/13
SC		
ORP		
DO		

Decontamination

Liquinox:	Yes [✓] No [ ]	Scrub:	Yes [✓] No [ ]
Potable H_2O:	Yes [ ] No [ ]	Steam:	Yes [ ] No [ ]
DI water:	Yes [✓] No [ ]	Nitric Acid:	Yes [ ] No [ ]

Comments: _____

GROUNDWATER SAMPLING LOG

Project: Bozeman Landfill Date: 6/12/13 @1830 Station No. MW-12

Personnel: MF Pearson Weather: Calm, Dry

Well Locked? Yes [✓] No [ ] Note Any Problems With Condition of Well: None

Casing Dia. & Type: 2-inch PVC [✓] 4-inch PVC [ ] Other____ Measuring Point: Top of PVC, north side [✓] Other____

Aquifer: Tertiary sediments (sand, gravel, and clayey silt)

Well Depth (ft. below measuring point): 65.80 - Depth to Water 56.25 = 9.55 ft. water in well

WELL EVACUATION

Evacuation Method: Submersible Pump [ ] Disposable bailer [✓] Spigot [ ] Other____

9.55 ft. water in well x ____ gal./ft * = one casing volume 1.6 gals. x 3 = purge volume 4.8 gals.

* 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C^2

Pumping rate (gpm): ____

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	ORP	DO
	1.6	12.35	6.64	880	-14.2	—
	3.2	12.45	6.65	882	-13.7	—
	4.8	12.24	6.63	881	-8.4	—
Sampled	5.5	12.13	6.63	882	-1.2	0.33 downhole

DO measured: In-well [✓] In water bailed [ ] In water pumped [ ] Other____

WELL SAMPLING

Sampling Method: Submersible Pump [ ] Disposable Polyethylene Bailer [✓] Spigot [ ] Grab [ ] Other:____

Sample Type: Natural [✓] Duplicate [ ] Other: ____

Sample Collected	Parameters	Sample Container	Preservative
Yes [✓] No [ ]	VOCs	3 – 40 ml vials	HCl
Yes [✓] No [ ]	Metals: dissolved [✓] or total [ ] full list [✓] or reduced list [ ]	500 ml poly	HNO_3
Yes [✓] No [ ]	COD, Nitrate as N	250 ml poly	H_2SO_4
Yes [✓] No [ ]	pH, SC, sulfate, chloride	250 ml poly	
Yes [ ] No [✓]	Cyanide	500 ml poly	NaOH
Yes [ ] No [ ]			

Laboratory: Pace Analytical Services, Inc., Billings, Montana Chain-of-Custody: Yes [x] No [ ]

Meter	Model No.	Calibration Date
Water level	Water Line	
pH	YSI-556	6/12/13
SC		
ORP		
DO		

Decontamination

Liquinox:	Yes [✓] No [ ]	Scrub:	Yes [✓] No [ ]
Potable H_2O:	Yes [ ] No [ ]	Steam:	Yes [ ] No [ ]
DI water:	Yes [✓] No [ ]	Nitric Acid:	Yes [ ] No [ ]

Comments:

	T	pH	SC	ORP	DO
MW-14 DTGW = 33.24	10.43	7.30	843	-2.9	0.53
(Not Sampled)	Downhole after 2 gal bailed				

GROUNDWATER SAMPLING LOG

Project: Bozeman Landfill Date: 6/12/13@1130 Station No. MW-13

Personnel: MFPearson Weather: Calm, Dry

Well Locked? Yes [✓] No [ ] Note Any Problems With Condition of Well: _____

Casing Dia. & Type: 2-inch PVC [✓] 4-inch PVC [ ] Other_____ Measuring Point: Top of PVC, north side [✓] Other_____

Aquifer: Tertiary sediments (sand, gravel, and clayey silt)

Well Depth (ft. below measuring point): 61.3 - Depth to Water 43.70 = 17.6 ft. water in well

WELL EVACUATION

Evacuation Method: Submersible Pump [ ] Disposable bailer [✓] Spigot [ ] Other_____

17.6 ft. water in well x _____ gal./ft * = one casing volume 2.9 gals. x 3 = purge volume 8.6 gals.

* 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C^2

Pumping rate (gpm): _____

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	ORP	DO
	2.9	11.80	6.86	952	167.3	—
	5.8	11.76	6.66	953	172.0	—
	8.6	11.74	6.66	955	167.9	—
1130	9.1	12.22	6.61	954	136.9	1.22 Downhole

DO measured: In-well [✓] In water bailed [ ] In water pumped [ ] Other_____

WELL SAMPLING

Sampling Method: Submersible Pump [ ] Disposable Polyethylene Bailer [✓] Spigot [ ] Grab [ ] Other:_____

Sample Type: Natural [✓] Duplicate [ ] Other: _____

Sample Collected	Parameters	Sample Container	Preservative
Yes [✓] No [ ]	VOCs	3 – 40 ml vials	HCl
Yes [✓] No [ ]	Metals: dissolved [✓] or total [ ] full list [✓] or reduced list [ ]	500 ml poly	HNO_3
Yes [✓] No [ ]	COD, Nitrate as N	250 ml poly	H_2SO_4
Yes [✓] No [ ]	pH, SC, sulfate, chloride	250 ml poly	
Yes [ ] No [✓]	Cyanide	500 ml poly	NaOH
Yes [ ] No [ ]			

Laboratory: Pace Analytical Services, Inc., Billings, Montana Chain-of-Custody: Yes [x] No [ ]

Meter	Model No.	Calibration Date
Water level	Water Line	
pH	451-556	6/12/13
SC		
ORP		
DO		

Decontamination

Liquinox:	Yes [✓] No [ ]	Scrub:	Yes [✓] No [ ]
Potable H_2O:	Yes [ ] No [ ]	Steam:	Yes [ ] No [ ]
DI water:	Yes [✓] No [ ]	Nitric Acid:	Yes [ ] No [ ]

Comments: _____

GROUNDWATER SAMPLING LOG

Project: Bozeman Landfill Date: 6/10/13 @ 1230 Station No. MW-15

Personnel: MF Pearson Weather: Calm, dry

Well Locked? Yes [✓] No [ ] Note Any Problems With Condition of Well: None

Casing Dia. & Type: 2-inch PVC [✓] 4-inch PVC [ ] Other Measuring Point: Top of PVC, north side [✓] Other

Aquifer: Tertiary sediments (sand, gravel, and clayey silt)

Well Depth (ft. below measuring point): 72.5 - Depth to Water 47.20 = 25.3 ft. water in well

WELL EVACUATION

Evacuation Method: Submersible Pump [ ] Disposable bailer [✓] Spigot [ ] Other

25.3 ft. water in well x _____ gal./ft * = one casing volume 4.1 gals. x 3 = purge volume 12.5 gals.

* 2" well = ~~0.163 gal./ft.~~ 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C^2

Pumping rate (gpm): _____

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	ORP	DO mg/L
	4.1	8.43	7.05	438	220	–
	8.2	8.23	6.40	437	284	- 10.09
	12.5	8.19	6.49	433	258	10.20

pH min -14.1

DO measured: In-well [ ] In water bailed [✓] (* Did not have 20m cable yet) In water pumped [ ] Other

WELL SAMPLING

Sampling Method: Submersible Pump [ ] Disposable Polyethylene Bailer [✓] Spigot [ ] Grab [ ] Other:

Sample Type: Natural [✓] Duplicate [ ] Other:

Sample Collected	Parameters	Sample Container	Preservative
Yes [✓] No [ ]	VOCs	3 – 40 ml vials	HCl
Yes [✓] No [ ]	Metals: dissolved [✓] or total [ ] full list [✓] or reduced list [ ]	500 ml poly	HNO_3
Yes [✓] No [ ]	COD, Nitrate as N	250 ml poly	H_2SO_4
Yes [✓] No [ ]	pH, SC, sulfate, chloride	250 ml poly	
Yes [ ] No [✓]	Cyanide	500 ml poly	NaOH
Yes [ ] No [ ]			

Laboratory: Pace Analytical Services, Inc., Billings, Montana Chain-of-Custody: Yes [x] No [ ]

Meter	Model No.	Calibration Date
Water level	Water Line	
pH	YSI-556	6/10/13
SC		
ORP		
DO		

Decontamination

Liquinox:	Yes [✓] No [ ]	Scrub:	Yes [✓] No [ ]
Potable H_2O:	Yes [ ] No [ ]	Steam:	Yes [ ] No [ ]
DI water:	Yes [✓] No [ ]	Nitric Acid:	Yes [ ] No [ ]

Comments:

GROUNDWATER SAMPLING LOG

Project: Bozeman Landfill Date: 6/10/13@1700 Station No. MW-16

Personnel: MFPearson Weather: Warm, Dry

Well Locked? Yes [✓] No [ ] Note Any Problems With Condition of Well: _____

Casing Dia. & Type: 2-inch PVC [✓] 4-inch PVC [ ] Other_____ Measuring Point: Top of PVC, north side [✓] Other_____

Aquifer: Tertiary sediments (sand, gravel, and clayey silt)

Well Depth (ft. below measuring point): 40.0 - Depth to Water 25.96 = 14.04 ft. water in well

WELL EVACUATION

Evacuation Method: Submersible Pump [ ] Disposable bailer [✓] Spigot [ ] Other_____

14.04 ft. water in well x _____ gal./ft * = one casing volume 2.3 gals. x 3 = purge volume 6.9 gals.

* 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C^2

Pumping rate (gpm): _____

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	ORP	DO
	2.3	11.56	6.78	884	167.6	—
	4.6	11.13	6.82	890	173.0	—
	6.9	10.83	6.78	888	175.8	—
	7.2	11.2	6.79	887	198.8	7.55 downhole

DO measured: In-well [✓] In water bailed [ ] In water pumped [ ] Other_____

WELL SAMPLING

Sampling Method: Submersible Pump [ ] Disposable Polyethylene Bailer [✓] Spigot [ ] Grab [ ] Other:_____

Sample Type: Natural [✓] Duplicate [ ] Other: _____

Sample Collected	Parameters	Sample Container	Preservative
Yes [✓] No [ ]	VOCs	3 – 40 ml vials	HCl
Yes [ ] No [✓]	Metals: dissolved [ ] or total [ ] full list [ ] or reduced list [ ]	500 ml poly	HNO_3
Yes [ ] No [✓]	COD, Nitrate as N	250 ml poly	H_2SO_4
Yes [ ] No [✓]	pH, SC, sulfate, chloride	250 ml poly	
Yes [ ] No [✓]	Cyanide	500 ml poly	NaOH
Yes [ ] No [ ]			

Laboratory: Pace Analytical Services, Inc., Billings, Montana Chain-of-Custody: Yes [x] No [ ]

Meter	Model No.	Calibration Date
Water level	Waterline	
pH	YSI-556	6/10/13
SC		
ORP		
DO		

Decontamination

Liquinox:	Yes [✓] No [ ]	Scrub:	Yes [✓] No [ ]
Potable H_2O:	Yes [ ] No [✓]	Steam:	Yes [ ] No [ ]
DI water:	Yes [✓] No [ ]	Nitric Acid:	Yes [ ] No [ ]

Comments: _____

GROUNDWATER SAMPLING LOG

Project: Bozeman Landfill Date: 6/10/13 @ 1720 Station No. Shop Well

Personnel: MF Pearson Weather: Warm, Dry

Well Locked? Yes [ ] No [✓] Note Any Problems With Condition of Well: Water supply well

Casing Dia. & Type: 2-inch PVC [ ] 4-inch PVC [✓] Other_____ Measuring Point: Top of PVC, north side [ ] Other_____

Aquifer: Tertiary sediments (sand, gravel, and clayey silt)

Well Depth (ft. below measuring point): _____ - Depth to Water NM = _____ ft. water in well

WELL EVACUATION

Evacuation Method: Submersible Pump [✓] Disposable bailer [ ] Spigot [ ] Other_____

_____ ft. water in well x _____ gal./ft * = one casing volume _____ gals. x 3 = purge volume _____ gals.

* 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C^2

Pumping rate (gpm): Flow = 1 gal/8 sec = 7.5 gpm

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	ORP	DO	
1625	Start	45 min purge					
1710	Stop						
At End of Purge	338	10.24	7.35	583	206.4	4.54	Flow-thru

DO measured: In-well [ ] In water bailed [ ] In water pumped [ ] Other_____

WELL SAMPLING

Sampling Method: Submersible Pump [✓] Disposable Polyethylene Bailer [ ] Spigot [ ] Grab [ ] Other:_____

Sample Type: Natural [✓] Duplicate [ ] Other: _____

Sample Collected	Parameters	Sample Container	Preservative
Yes [✓] No [ ]	VOCs	3 – 40 ml vials	HCl
Yes [ ] No [✓]	Metals: dissolved [ ] or total [ ] full list [ ] or reduced list [ ]	500 ml poly	HNO_3
Yes [ ] No [✓]	COD, Nitrate as N	250 ml poly	H_2SO_4
Yes [ ] No [✓]	pH, SC, sulfate, chloride	250 ml poly	
Yes [ ] No [✓]	Cyanide	500 ml poly	NaOH
Yes [ ] No [ ]			

Laboratory: Pace Analytical Services, Inc., Billings, Montana Chain-of-Custody: Yes [x] No [ ]

Meter	Model No.	Calibration Date
Water level	--	
pH	YSI-556	6/10/13
SC		
ORP		
DO		

Decontamination

Liquinox:	Yes [✓] No [ ]	Scrub:	Yes [✓] No [ ]
Potable H_2O:	Yes [ ] No [ ]	Steam:	Yes [ ] No [ ]
DI water:	Yes [✓] No [ ]	Nitric Acid:	Yes [ ] No [ ]

Comments: _____

GROUNDWATER SAMPLING LOG

McIlhattan

Project: Bozeman Landfill Date: 6/12/13 @ 1450 Station No. Seep

Personnel: MFPearson Weather: Warm, Dry

Well Locked? Yes [ ] No [ ] Note Any Problems With Condition of Well: Flowing Spring

Casing Dia. & Type: 2-inch PVC [ ] 4-inch PVC [ ] Other_____ Measuring Point: Top of PVC, north side [ ] Other_____

Aquifer: Tertiary sediments (sand, gravel, and clayey silt)

Well Depth (ft. below measuring point): — - Depth to Water — = — ft. water in well

WELL EVACUATION

Evacuation Method: Submersible Pump [ ] Used New Disposable bailer [✓] Spigot [ ] Other_____

_____ ft. water in well x _____ gal./ft * = one casing volume _____ gals. x 3 = purge volume _____ gals.

* 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C^2

Pumping rate (gpm): Flowing

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	ORP	DO
	Flowing	8.95	7.08	934	-8.0	7.81 Probe submerged in flow

DO measured: In-well [ ] In water bailed [ ] In water pumped [ ] Other_____

WELL SAMPLING

Sampling Method: Submersible Pump [ ] Disposable Polyethylene Bailer [ ] Spigot [ ] Grab [ ] Other:_____

Sample Type: Natural [✓] Duplicate [ ] Other: _____

Sample Collected	Parameters	Sample Container	Preservative
Yes [✓] No [ ]	VOCs	3 – 40 ml vials	HCl
Yes [✓] No [ ]	Metals: dissolved [ ] or total [ ] full list [✓] or reduced list [ ]	500 ml poly	HNO_3
Yes [✓] No [ ]	COD, Nitrate as N	250 ml poly	H_2SO_4
Yes [✓] No [ ]	pH, SC, sulfate, chloride	250 ml poly	
Yes [ ] No [✓]	Cyanide	500 ml poly	NaOH
Yes [ ] No [ ]			

Laboratory: Pace Analytical Services, Inc., Billings, Montana Chain-of-Custody: Yes [x] No [ ]

Meter	Model No.	Calibration Date
Water level	— —	
pH	YSI-556	6/12/13
SC		
ORP		
DO		

Decontamination

Liquinox:	Yes [✓] No [ ]	Scrub:	Yes [✓] No [ ]
Potable H_2O:	Yes [ ] No [ ]	Steam:	Yes [ ] No [ ]
DI water:	Yes [✓] No [ ]	Nitric Acid:	Yes [ ] No [ ]

Comments: _____

GROUNDWATER SAMPLING LOG

Project: Bozeman Landfill Date: 6/12/13 @ 1540 Station No. Vet Well

Personnel: MFPearson Weather: Warm, Dry

Well Locked? Yes [ ] No [✓] Note Any Problems With Condition of Well: Water supply well

Casing Dia. & Type: 2-inch PVC [ ] 4-inch PVC [ ] Other_____ Measuring Point: Top of PVC, north side [ ] Other_____

Aquifer: Tertiary sediments (sand, gravel, and clayey silt)

Well Depth (ft. below measuring point): — - Depth to Water — = — ft. water in well

WELL EVACUATION

Evacuation Method: Submersible Pump [✓] Disposable bailer [ ] Spigot [ ] Other_____

_____ ft. water in well x _____ gal./ft * = one casing volume _____ gals. x 3 = purge volume _____ gals.

* 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C^2

Pumping rate (gpm): Flow = 1 gal / 16.25 sec = 3.7 gpm

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	ORP	DO	
1505	Start						
1540	End	9.89	7.32	451	109.6	8.63	flow thru
	129.5 gal	purged					

DO measured: In-well [ ] In water bailed [ ] In water pumped [ ] Other_____

WELL SAMPLING

Sampling Method: Submersible Pump [✓] Disposable Polyethylene Bailer [ ] Spigot [ ] Grab [ ] Other:_____

Sample Type: Natural [✓] Duplicate [ ] Other: _____

Sample Collected	Parameters	Sample Container	Preservative
Yes [✓] No [ ]	VOCs	3 – 40 ml vials	HCl
Yes [✓] No [ ]	Metals: dissolved [✓] or total [✓] full list [✓] or reduced list [ ]	500 ml poly	HNO_3
Yes [✓] No [ ]	COD, Nitrate as N	250 ml poly	H_2SO_4
Yes [✓] No [ ]	pH, SC, sulfate, chloride	250 ml poly	
Yes [ ] No [✓]	Cyanide	500 ml poly	NaOH
Yes [ ] No [ ]			

Laboratory: Pace Analytical Services, Inc., Billings, Montana Chain-of-Custody: Yes [x] No [ ]

Meter	Model No.	Calibration Date
Water level	—	
pH	YSI-556	6/12/13
SC	/	/
ORP	/	/
DO	/	/

Decontamination

Liquinox:	Yes [✓] No [ ]	Scrub:	Yes [✓] No [ ]
Potable H_2O:	Yes [ ] No [ ]	Steam:	Yes [ ] No [ ]
DI water:	Yes [✓] No [ ]	Nitric Acid:	Yes [ ] No [ ]

Comments: _____

APPENDIX D

LABORATORY ANALYTICAL REPORT

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

July 09, 2013

Mark Pearson
Tetra Tech, Inc. - MT
851 Bridger Dr. Suite 6
Bozeman, MT 59715

RE: Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Dear Mark Pearson:
Enclosed are the analytical results for sample(s) received by the laboratory on June 14, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Samantha Rupe

samantha.rupe@pacelabs.com
Project Manager

Enclosures

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

CERTIFICATIONS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Minnesota Certification IDs
1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: Pace
Florida/NELAP Certification #: E87605
Georgia Certification #: 959
Hawaii Certification #Pace
Idaho Certification #: MN00064
Illinois Certification #: 200011
Kansas Certification #: E-10167
Louisiana Certification #: 03086
Louisiana Certification #: LA080009
Maine Certification #: 2007029
Maryland Certification #: 322
Michigan DEQ Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT CERT0092
Nebraska Certification #: Pace
Nevada Certification #: MN_00064
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Dakota Certification #: R-036
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Tennessee Certification #: 02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Virginia/DCLS Certification #: 002521
Virginia/VELAP Certification #: 460163
Washington Certification #: C754
West Virginia Certification #: 382
Wisconsin Certification #: 999407970

Montana Certification IDs
602 South 25th Street, Billings, MT 59101
EPA Region 8 Certification #: 8TMS-Q
Idaho Certification #: MT00012
Montana Certification #: MT CERT0040
NVLAP Certification #: 101292-0
Minnesota Dept of Health Certification #: 030-999-442
Washington Department of Ecology #: C993

Green Bay Certification IDs
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 11888
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

SAMPLE SUMMARY

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10232279001	**LF-2**	Water	06/12/13 20:00	06/14/13 10:15
10232279002	**LF-3**	Water	06/12/13 19:30	06/14/13 10:15
10232279003	**MW-4**	Water	06/10/13 13:40	06/14/13 10:15
10232279004	**MW-5**	Water	06/10/13 11:30	06/14/13 10:15
10232279005	**MW-6**	Water	06/10/13 16:00	06/14/13 10:15
10232279006	**MW-6B**	Water	06/10/13 15:20	06/14/13 10:15
10232279007	**MW-7A**	Water	06/12/13 12:30	06/14/13 10:15
10232279008	**MW-8A**	Water	06/12/13 10:30	06/14/13 10:15
10232279009	**MW-8C**	Water	06/12/13 09:30	06/14/13 10:15
10232279010	**MW-9A**	Water	06/10/13 14:00	06/14/13 10:15
10232279011	**MW-10**	Water	06/12/13 14:30	06/14/13 10:15
10232279012	**MW-11**	Water	06/12/13 17:30	06/14/13 10:15
10232279013	**MW-12**	Water	06/12/13 18:30	06/14/13 10:15
10232279014	**MW-13**	Water	06/12/13 11:30	06/14/13 10:15
10232279015	**MW-15**	Water	06/10/13 12:30	06/14/13 10:15
10232279016	**MW-16**	Water	06/10/13 17:00	06/14/13 10:15
10232279017	**SEEP**	Water	06/12/13 14:50	06/14/13 10:15
10232279018	**SHOP WELL**	Water	06/10/13 17:20	06/14/13 10:15
10232279019	**DUP**	Water	06/12/13 10:50	06/14/13 10:15
10232279020	**VET WELL**	Water	06/12/13 15:40	06/14/13 10:15
10232279021	**TRIP BLANK**	Water		06/14/13 10:15

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

SAMPLE ANALYTE COUNT

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10232279001	**LF-2**	EPA 8260B	KT1	51	PASI-M
		EPA 353.2	CAC	1	PASI-MT
10232279002	**LF-3**	EPA 6020	MMZ	2	PASI-G
		EPA 8260B	KT1	51	PASI-M
		EPA 300.0	AH1	2	PASI-MT
		EPA 353.2	CAC	1	PASI-MT
10232279003	**MW-4**	EPA 6020	MMZ	2	PASI-G
		EPA 8260B	KT1	51	PASI-M
		EPA 300.0	AH1	2	PASI-MT
		EPA 353.2	CAC	1	PASI-MT
10232279004	**MW-5**	EPA 6020	MMZ	2	PASI-G
		EPA 8260B	KT1	51	PASI-M
		SM 2510B	CS1	1	PASI-MT
		EPA 300.0	AH1	2	PASI-MT
		EPA 353.2	CAC	1	PASI-MT
		SM 4500-H+B	SC1	1	PASI-MT
10232279005	**MW-6**	EPA 6020	MMZ	2	PASI-G
		EPA 8260B	KT1	51	PASI-M
		SM 2510B	CS1	1	PASI-MT
		EPA 300.0	AH1	2	PASI-MT
		EPA 353.2	CAC	1	PASI-MT
		SM 4500-H+B	SC1	1	PASI-MT
10232279006	**MW-6B**	EPA 6020	MMZ	15	PASI-G
		EPA 8260B	KT1	51	PASI-M
		EPA 300.0	AH1	2	PASI-MT
		EPA 353.2	CAC	1	PASI-MT
10232279007	**MW-7A**	EPA 6020	MMZ	2	PASI-G
		EPA 8260B	KT1	51	PASI-M
		EPA 300.0	AH1	2	PASI-MT
		EPA 353.2	CAC	1	PASI-MT
10232279008	**MW-8A**	EPA 6020	MMZ	2	PASI-G
		EPA 8260B	KT1	51	PASI-M
		SM 2510B	CS1	1	PASI-MT
		EPA 300.0	AH1	2	PASI-MT
		EPA 353.2	CAC	1	PASI-MT
		SM 4500-H+B	SC1	1	PASI-MT
10232279009	**MW-8C**	EPA 6020	MMZ	15	PASI-G

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

SAMPLE ANALYTE COUNT

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8260B	KT1	51	PASI-M
		EPA 300.0	AH1	2	PASI-MT
		EPA 353.2	CAC	1	PASI-MT
10232279010	**MW-9A**	EPA 6020	MMZ	2	PASI-G
		EPA 8260B	KT1	51	PASI-M
		EPA 300.0	AH1	2	PASI-MT
		EPA 353.2	CAC	1	PASI-MT
10232279011	**MW-10**	EPA 6020	MMZ	15	PASI-G
		EPA 8260B	KT1	51	PASI-M
		EPA 300.0	AH1	2	PASI-MT
		EPA 353.2	CAC	1	PASI-MT
10232279012	**MW-11**	EPA 6020	MMZ	15	PASI-G
		EPA 8260B	KT1	51	PASI-M
		EPA 300.0	AH1	2	PASI-MT
		EPA 353.2	CAC	1	PASI-MT
10232279013	**MW-12**	EPA 6020	MMZ	15	PASI-G
		EPA 8260B	KT1	51	PASI-M
		EPA 300.0	AH1	2	PASI-MT
		EPA 353.2	CAC	1	PASI-MT
10232279014	**MW-13**	EPA 6020	MMZ	15	PASI-G
		EPA 8260B	KT1	51	PASI-M
		EPA 300.0	AH1	2	PASI-MT
		EPA 353.2	CAC	1	PASI-MT
10232279015	**MW-15**	EPA 6020	DS1	15	PASI-G
		EPA 8260B	KT1	51	PASI-M
		SM 2510B	CS1	1	PASI-MT
		EPA 300.0	AH1	2	PASI-MT
		EPA 353.2	CAC	1	PASI-MT
		SM 4500-H+B	SC1	1	PASI-MT
10232279016	**MW-16**	EPA 8260B	KT1	51	PASI-M
10232279017	**SEEP**	EPA 6020	MMZ	15	PASI-G
		EPA 8260B	CNC	51	PASI-M
		EPA 300.0	AH1	2	PASI-MT
		EPA 353.2	CAC	1	PASI-MT
10232279018	**SHOP WELL**	EPA 8260B	KT1	51	PASI-M
10232279019	**DUP**	EPA 6020	MMZ	2	PASI-G
		EPA 8260B	CNC	51	PASI-M

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

SAMPLE ANALYTE COUNT

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 300.0	AH1	2	PASI-MT
		EPA 353.2	CAC	1	PASI-MT
10232279020	**VET WELL**	EPA 6020	DS1	15	PASI-G
		EPA 8260B	CNC	51	PASI-M
		EPA 300.0	AH1	2	PASI-MT
		EPA 353.2	CAC	1	PASI-MT
10232279021	**TRIP BLANK**	EPA 8260B	CNC	51	PASI-M

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

PROJECT NARRATIVE

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Method: **EPA 6020**
Description: 6020 MET ICPMS
Client: Tetra Tech, Inc. - MT
Date: July 09, 2013

General Information:
1 sample was analyzed for EPA 6020. All samples were received in acceptable condition with any exceptions noted below.

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

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

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.

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

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

QC Batch: MPRP/8684

B: Analyte was detected in the associated method blank.

- BLANK for HBN 132914 [MPRP/868 (Lab ID: 813458)
  - Manganese
  - Thallium
  - Zinc

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:

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

PROJECT NARRATIVE

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Method: **EPA 6020**
Description: 6020 MET ICPMS, Dissolved
Client: Tetra Tech, Inc. - MT
Date: July 09, 2013

General Information:
16 samples were analyzed for EPA 6020. All samples were received in acceptable condition with any exceptions noted below.

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

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

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.

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

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

QC Batch: MPRP/8675

B: Analyte was detected in the associated method blank.

- BLANK for HBN 132769 [MPRP/867 (Lab ID: 812965)
  - Copper, Dissolved
  - Iron, Dissolved

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:

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

PROJECT NARRATIVE

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: Tetra Tech, Inc. - MT
Date: July 09, 2013

General Information:
21 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below.

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

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.

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 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: MSV/24104

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10232554001

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

- MS (Lab ID: 1465276)
  - Dichlorodifluoromethane

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, Inc.
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PROJECT NARRATIVE

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Method: **SM 2510B**
Description: 2510B Specific Conductance
Client: Tetra Tech, Inc. - MT
Date: July 09, 2013

General Information:
4 samples were analyzed for SM 2510B. All samples were received in acceptable condition with any exceptions noted below.

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

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.

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 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.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Method: **EPA 300.0**
Description: 300.0 IC Anions
Client: Tetra Tech, Inc. - MT
Date: July 09, 2013

General Information:
17 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below.

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

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.

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 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: MT/12444

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10232279002,10232279020

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

- MS (Lab ID: 1461346)
  - Chloride

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: MT/12432

- MS (Lab ID: 1460183)
  - Sulfate

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Method: **EPA 353.2**
Description: 353.2 Nitrate + Nitrite pres.
Client: Tetra Tech, Inc. - MT
Date: July 09, 2013

General Information:
18 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below.

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

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.

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 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: MT/12516

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10232279001

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 1464673)
  - Nitrogen, NO2 plus NO3
- MSD (Lab ID: 1464674)
  - Nitrogen, NO2 plus NO3

Additional Comments:

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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PROJECT NARRATIVE

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Method: **SM 4500-H+B**
Description: 4500H+ pH, Electrometric
Client: Tetra Tech, Inc. - MT
Date: July 09, 2013

General Information:
4 samples were analyzed for SM 4500-H+B. All samples were received in acceptable condition with any exceptions noted below.

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

H6: Analysis initiated outside of the 15 minute EPA recommended holding time.
- MW-15 (Lab ID: 10232279015)
- MW-5 (Lab ID: 10232279004)
- MW-6 (Lab ID: 10232279005)
- MW-8A (Lab ID: 10232279008)

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.

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 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.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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

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ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: LF-2 **Lab ID: 10232279001** Collected: 06/12/13 20:00 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Acetone	**<10.0**	ug/L	20.0	10.0	1		06/24/13 17:33	67-64-1	
Acrylonitrile	**<5.0**	ug/L	10.0	5.0	1		06/24/13 17:33	107-13-1	
Benzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 17:33	71-43-2	
Bromochloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 17:33	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	0.50	0.18	1		06/24/13 17:33	75-27-4	
Bromoform	**<2.0**	ug/L	4.0	2.0	1		06/24/13 17:33	75-25-2	
Bromomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 17:33	74-83-9	
2-Butanone (MEK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 17:33	78-93-3	
Carbon disulfide	**<0.22**	ug/L	1.0	0.22	1		06/24/13 17:33	75-15-0	
Carbon tetrachloride	**<0.31**	ug/L	1.0	0.31	1		06/24/13 17:33	56-23-5	
Chlorobenzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 17:33	108-90-7	
Chloroethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 17:33	75-00-3	
Chloroform	**<0.50**	ug/L	0.50	0.50	1		06/24/13 17:33	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 17:33	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 17:33	96-12-8	
Dibromochloromethane	**<0.25**	ug/L	1.0	0.25	1		06/24/13 17:33	124-48-1	
1,2-Dibromoethane (EDB)	**<0.13**	ug/L	0.50	0.13	1		06/24/13 17:33	106-93-4	
Dibromomethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 17:33	74-95-3	
1,2-Dichlorobenzene	**<0.092**	ug/L	0.50	0.092	1		06/24/13 17:33	95-50-1	
1,4-Dichlorobenzene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 17:33	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	10.0	5.0	1		06/24/13 17:33	110-57-6	
Dichlorodifluoromethane	**<0.40**	ug/L	1.0	0.40	1		06/24/13 17:33	75-71-8	
1,1-Dichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 17:33	75-34-3	
1,2-Dichloroethane	**<0.21**	ug/L	0.50	0.21	1		06/24/13 17:33	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 17:33	75-35-4	
cis-1,2-Dichloroethene	**<0.23**	ug/L	0.50	0.23	1		06/24/13 17:33	156-59-2	
trans-1,2-Dichloroethene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 17:33	156-60-5	
1,2-Dichloropropane	**<0.20**	ug/L	4.0	0.20	1		06/24/13 17:33	78-87-5	
cis-1,3-Dichloropropene	**<0.42**	ug/L	0.50	0.42	1		06/24/13 17:33	10061-01-5	
trans-1,3-Dichloropropene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 17:33	10061-02-6	
Ethylbenzene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 17:33	100-41-4	
2-Hexanone	**<2.5**	ug/L	5.0	2.5	1		06/24/13 17:33	591-78-6	
Iodomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 17:33	74-88-4	
Methylene Chloride	**<2.0**	ug/L	4.0	2.0	1		06/24/13 17:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 17:33	108-10-1	
Styrene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 17:33	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 17:33	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.13**	ug/L	0.50	0.13	1		06/24/13 17:33	79-34-5	
Tetrachloroethene	**0.86**	ug/L	0.50	0.25	1		06/24/13 17:33	127-18-4	
Toluene	**<0.22**	ug/L	0.50	0.22	1		06/24/13 17:33	108-88-3	
1,1,1-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 17:33	71-55-6	
1,1,2-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 17:33	79-00-5	
Trichloroethene	**0.12J**	ug/L	0.40	0.12	1		06/24/13 17:33	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	0.50	0.12	1		06/24/13 17:33	75-69-4	
1,2,3-Trichloropropane	**<0.54**	ug/L	4.0	0.54	1		06/24/13 17:33	96-18-4	
Vinyl acetate	**<5.0**	ug/L	10.0	5.0	1		06/24/13 17:33	108-05-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: LF-2 **Lab ID: 10232279001** Collected: 06/12/13 20:00 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Vinyl chloride	**<0.20**	ug/L	0.40	0.20	1		06/24/13 17:33	75-01-4	
Xylene (Total)	**<0.75**	ug/L	1.5	0.75	1		06/24/13 17:33	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	109	%	75-125		1		06/24/13 17:33	17060-07-0	
Toluene-d8 (S)	97	%	75-125		1		06/24/13 17:33	2037-26-5	
4-Bromofluorobenzene (S)	104	%	75-125		1		06/24/13 17:33	460-00-4	
353.2 Nitrate + Nitrite pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**2.4**	mg/L	2.0	0.17	20		06/25/13 16:42		M6

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
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ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: LF-3 **Lab ID: 10232279002** Collected: 06/12/13 19:30 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Iron, Dissolved	**<0.036**	mg/L	0.25	0.036	1	06/24/13 09:10	06/29/13 00:15	7439-89-6	
Manganese, Dissolved	**<0.00032**	mg/L	0.0010	0.00032	1	07/02/13 09:45	07/03/13 23:22	7439-96-5	
8260B MSV Low Level	Analytical Method: EPA 8260B								
Acetone	**<10.0**	ug/L	20.0	10.0	1		06/24/13 17:58	67-64-1	
Acrylonitrile	**<5.0**	ug/L	10.0	5.0	1		06/24/13 17:58	107-13-1	
Benzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 17:58	71-43-2	
Bromochloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 17:58	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	0.50	0.18	1		06/24/13 17:58	75-27-4	
Bromoform	**<2.0**	ug/L	4.0	2.0	1		06/24/13 17:58	75-25-2	
Bromomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 17:58	74-83-9	
2-Butanone (MEK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 17:58	78-93-3	
Carbon disulfide	**<0.22**	ug/L	1.0	0.22	1		06/24/13 17:58	75-15-0	
Carbon tetrachloride	**<0.31**	ug/L	1.0	0.31	1		06/24/13 17:58	56-23-5	
Chlorobenzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 17:58	108-90-7	
Chloroethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 17:58	75-00-3	
Chloroform	**<0.50**	ug/L	0.50	0.50	1		06/24/13 17:58	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 17:58	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 17:58	96-12-8	
Dibromochloromethane	**<0.25**	ug/L	1.0	0.25	1		06/24/13 17:58	124-48-1	
1,2-Dibromoethane (EDB)	**<0.13**	ug/L	0.50	0.13	1		06/24/13 17:58	106-93-4	
Dibromomethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 17:58	74-95-3	
1,2-Dichlorobenzene	**<0.092**	ug/L	0.50	0.092	1		06/24/13 17:58	95-50-1	
1,4-Dichlorobenzene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 17:58	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	10.0	5.0	1		06/24/13 17:58	110-57-6	
Dichlorodifluoromethane	**0.77J**	ug/L	1.0	0.40	1		06/24/13 17:58	75-71-8	
1,1-Dichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 17:58	75-34-3	
1,2-Dichloroethane	**<0.21**	ug/L	0.50	0.21	1		06/24/13 17:58	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 17:58	75-35-4	
cis-1,2-Dichloroethene	**2.3**	ug/L	0.50	0.23	1		06/24/13 17:58	156-59-2	
trans-1,2-Dichloroethene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 17:58	156-60-5	
1,2-Dichloropropane	**<0.20**	ug/L	4.0	0.20	1		06/24/13 17:58	78-87-5	
cis-1,3-Dichloropropene	**<0.42**	ug/L	0.50	0.42	1		06/24/13 17:58	10061-01-5	
trans-1,3-Dichloropropene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 17:58	10061-02-6	
Ethylbenzene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 17:58	100-41-4	
2-Hexanone	**<2.5**	ug/L	5.0	2.5	1		06/24/13 17:58	591-78-6	
Iodomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 17:58	74-88-4	
Methylene Chloride	**<2.0**	ug/L	4.0	2.0	1		06/24/13 17:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 17:58	108-10-1	
Styrene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 17:58	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 17:58	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.13**	ug/L	0.50	0.13	1		06/24/13 17:58	79-34-5	
Tetrachloroethene	**4.2**	ug/L	0.50	0.25	1		06/24/13 17:58	127-18-4	
Toluene	**<0.22**	ug/L	0.50	0.22	1		06/24/13 17:58	108-88-3	
1,1,1-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 17:58	71-55-6	
1,1,2-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 17:58	79-00-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: LF-3 **Lab ID: 10232279002** Collected: 06/12/13 19:30 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Trichloroethene	**1.0**	ug/L	0.40	0.12	1		06/24/13 17:58	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	0.50	0.12	1		06/24/13 17:58	75-69-4	
1,2,3-Trichloropropane	**<0.54**	ug/L	4.0	0.54	1		06/24/13 17:58	96-18-4	
Vinyl acetate	**<5.0**	ug/L	10.0	5.0	1		06/24/13 17:58	108-05-4	
Vinyl chloride	**<0.20**	ug/L	0.40	0.20	1		06/24/13 17:58	75-01-4	
Xylene (Total)	**<0.75**	ug/L	1.5	0.75	1		06/24/13 17:58	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	107	%	75-125		1		06/24/13 17:58	17060-07-0	
Toluene-d8 (S)	96	%	75-125		1		06/24/13 17:58	2037-26-5	
4-Bromofluorobenzene (S)	103	%	75-125		1		06/24/13 17:58	460-00-4	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**27.2**	mg/L	2.0	1.0	2		06/21/13 06:06	16887-00-6	M1
Sulfate	**17.5**	mg/L	2.0	1.0	2		06/21/13 06:06	14808-79-8	
353.2 Nitrate + Nitrite pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**3.6**	mg/L	1.0	0.087	10		06/25/13 16:52		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
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ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-4 **Lab ID: 10232279003** Collected: 06/10/13 13:40 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Iron, Dissolved	**<0.036**	mg/L	0.25	0.036	1	06/24/13 09:10	06/29/13 00:28	7439-89-6	
Manganese, Dissolved	**<0.00032**	mg/L	0.0010	0.00032	1	07/02/13 09:45	07/03/13 23:47	7439-96-5	
8260B MSV Low Level	Analytical Method: EPA 8260B								
Acetone	**<10.0**	ug/L	20.0	10.0	1		06/24/13 13:52	67-64-1	
Acrylonitrile	**<5.0**	ug/L	10.0	5.0	1		06/24/13 13:52	107-13-1	
Benzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 13:52	71-43-2	
Bromochloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 13:52	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	0.50	0.18	1		06/24/13 13:52	75-27-4	
Bromoform	**<2.0**	ug/L	4.0	2.0	1		06/24/13 13:52	75-25-2	
Bromomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 13:52	74-83-9	
2-Butanone (MEK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 13:52	78-93-3	
Carbon disulfide	**<0.22**	ug/L	1.0	0.22	1		06/24/13 13:52	75-15-0	
Carbon tetrachloride	**<0.31**	ug/L	1.0	0.31	1		06/24/13 13:52	56-23-5	
Chlorobenzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 13:52	108-90-7	
Chloroethane	**1.6**	ug/L	1.0	0.50	1		06/24/13 13:52	75-00-3	
Chloroform	**<0.50**	ug/L	0.50	0.50	1		06/24/13 13:52	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 13:52	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 13:52	96-12-8	
Dibromochloromethane	**<0.25**	ug/L	1.0	0.25	1		06/24/13 13:52	124-48-1	
1,2-Dibromoethane (EDB)	**<0.13**	ug/L	0.50	0.13	1		06/24/13 13:52	106-93-4	
Dibromomethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 13:52	74-95-3	
1,2-Dichlorobenzene	**<0.092**	ug/L	0.50	0.092	1		06/24/13 13:52	95-50-1	
1,4-Dichlorobenzene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 13:52	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	10.0	5.0	1		06/24/13 13:52	110-57-6	
Dichlorodifluoromethane	**0.72J**	ug/L	1.0	0.40	1		06/24/13 13:52	75-71-8	
1,1-Dichloroethane	**0.42J**	ug/L	0.50	0.25	1		06/24/13 13:52	75-34-3	
1,2-Dichloroethane	**<0.21**	ug/L	0.50	0.21	1		06/24/13 13:52	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 13:52	75-35-4	
cis-1,2-Dichloroethene	**0.50J**	ug/L	0.50	0.23	1		06/24/13 13:52	156-59-2	
trans-1,2-Dichloroethene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 13:52	156-60-5	
1,2-Dichloropropane	**<0.20**	ug/L	4.0	0.20	1		06/24/13 13:52	78-87-5	
cis-1,3-Dichloropropene	**<0.42**	ug/L	0.50	0.42	1		06/24/13 13:52	10061-01-5	
trans-1,3-Dichloropropene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 13:52	10061-02-6	
Ethylbenzene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 13:52	100-41-4	
2-Hexanone	**<2.5**	ug/L	5.0	2.5	1		06/24/13 13:52	591-78-6	
Iodomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 13:52	74-88-4	
Methylene Chloride	**<2.0**	ug/L	4.0	2.0	1		06/24/13 13:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 13:52	108-10-1	
Styrene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 13:52	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 13:52	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.13**	ug/L	0.50	0.13	1		06/24/13 13:52	79-34-5	
Tetrachloroethene	**1.1**	ug/L	0.50	0.25	1		06/24/13 13:52	127-18-4	
Toluene	**<0.22**	ug/L	0.50	0.22	1		06/24/13 13:52	108-88-3	
1,1,1-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 13:52	71-55-6	
1,1,2-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 13:52	79-00-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-4 **Lab ID: 10232279003** Collected: 06/10/13 13:40 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Trichloroethene	**0.97**	ug/L	0.40	0.12	1		06/24/13 13:52	79-01-6	
Trichlorofluoromethane	**0.12J**	ug/L	0.50	0.12	1		06/24/13 13:52	75-69-4	
1,2,3-Trichloropropane	**<0.54**	ug/L	4.0	0.54	1		06/24/13 13:52	96-18-4	
Vinyl acetate	**<5.0**	ug/L	10.0	5.0	1		06/24/13 13:52	108-05-4	
Vinyl chloride	**<0.20**	ug/L	0.40	0.20	1		06/24/13 13:52	75-01-4	
Xylene (Total)	**<0.75**	ug/L	1.5	0.75	1		06/24/13 13:52	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%	75-125		1		06/24/13 13:52	17060-07-0	
Toluene-d8 (S)	97	%	75-125		1		06/24/13 13:52	2037-26-5	
4-Bromofluorobenzene (S)	104	%	75-125		1		06/24/13 13:52	460-00-4	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**35.4**	mg/L	3.0	1.5	3		06/21/13 07:09	16887-00-6	
Sulfate	**16.7**	mg/L	3.0	1.5	3		06/21/13 07:09	14808-79-8	
353.2 Nitrate + Nitrite pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**1.7**	mg/L	1.0	0.087	10		06/25/13 16:53		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-5 **Lab ID: 10232279004** Collected: 06/10/13 11:30 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Iron, Dissolved	**<0.036**	mg/L	0.25	0.036	1	06/24/13 09:10	06/29/13 00:34	7439-89-6	
Manganese, Dissolved	**<0.00032**	mg/L	0.0010	0.00032	1	07/02/13 09:45	07/03/13 23:59	7439-96-5	
8260B MSV Low Level	Analytical Method: EPA 8260B								
Acetone	**<10.0**	ug/L	20.0	10.0	1		06/24/13 14:16	67-64-1	
Acrylonitrile	**<5.0**	ug/L	10.0	5.0	1		06/24/13 14:16	107-13-1	
Benzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 14:16	71-43-2	
Bromochloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 14:16	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	0.50	0.18	1		06/24/13 14:16	75-27-4	
Bromoform	**<2.0**	ug/L	4.0	2.0	1		06/24/13 14:16	75-25-2	
Bromomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 14:16	74-83-9	
2-Butanone (MEK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 14:16	78-93-3	
Carbon disulfide	**<0.22**	ug/L	1.0	0.22	1		06/24/13 14:16	75-15-0	
Carbon tetrachloride	**<0.31**	ug/L	1.0	0.31	1		06/24/13 14:16	56-23-5	
Chlorobenzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 14:16	108-90-7	
Chloroethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 14:16	75-00-3	
Chloroform	**<0.50**	ug/L	0.50	0.50	1		06/24/13 14:16	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 14:16	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 14:16	96-12-8	
Dibromochloromethane	**<0.25**	ug/L	1.0	0.25	1		06/24/13 14:16	124-48-1	
1,2-Dibromoethane (EDB)	**<0.13**	ug/L	0.50	0.13	1		06/24/13 14:16	106-93-4	
Dibromomethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 14:16	74-95-3	
1,2-Dichlorobenzene	**<0.092**	ug/L	0.50	0.092	1		06/24/13 14:16	95-50-1	
1,4-Dichlorobenzene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 14:16	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	10.0	5.0	1		06/24/13 14:16	110-57-6	
Dichlorodifluoromethane	**<0.40**	ug/L	1.0	0.40	1		06/24/13 14:16	75-71-8	
1,1-Dichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 14:16	75-34-3	
1,2-Dichloroethane	**<0.21**	ug/L	0.50	0.21	1		06/24/13 14:16	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 14:16	75-35-4	
cis-1,2-Dichloroethene	**<0.23**	ug/L	0.50	0.23	1		06/24/13 14:16	156-59-2	
trans-1,2-Dichloroethene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 14:16	156-60-5	
1,2-Dichloropropane	**<0.20**	ug/L	4.0	0.20	1		06/24/13 14:16	78-87-5	
cis-1,3-Dichloropropene	**<0.42**	ug/L	0.50	0.42	1		06/24/13 14:16	10061-01-5	
trans-1,3-Dichloropropene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 14:16	10061-02-6	
Ethylbenzene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 14:16	100-41-4	
2-Hexanone	**<2.5**	ug/L	5.0	2.5	1		06/24/13 14:16	591-78-6	
Iodomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 14:16	74-88-4	
Methylene Chloride	**<2.0**	ug/L	4.0	2.0	1		06/24/13 14:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 14:16	108-10-1	
Styrene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 14:16	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 14:16	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.13**	ug/L	0.50	0.13	1		06/24/13 14:16	79-34-5	
Tetrachloroethene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 14:16	127-18-4	
Toluene	**<0.22**	ug/L	0.50	0.22	1		06/24/13 14:16	108-88-3	
1,1,1-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 14:16	71-55-6	
1,1,2-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 14:16	79-00-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
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ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-5 **Lab ID: 10232279004** Collected: 06/10/13 11:30 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Trichloroethene	**<0.12**	ug/L	0.40	0.12	1		06/24/13 14:16	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	0.50	0.12	1		06/24/13 14:16	75-69-4	
1,2,3-Trichloropropane	**<0.54**	ug/L	4.0	0.54	1		06/24/13 14:16	96-18-4	
Vinyl acetate	**<5.0**	ug/L	10.0	5.0	1		06/24/13 14:16	108-05-4	
Vinyl chloride	**<0.20**	ug/L	0.40	0.20	1		06/24/13 14:16	75-01-4	
Xylene (Total)	**<0.75**	ug/L	1.5	0.75	1		06/24/13 14:16	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%	75-125		1		06/24/13 14:16	17060-07-0	
Toluene-d8 (S)	95	%	75-125		1		06/24/13 14:16	2037-26-5	
4-Bromofluorobenzene (S)	104	%	75-125		1		06/24/13 14:16	460-00-4	
2510B Specific Conductance	Analytical Method: SM 2510B								
Specific Conductance	**368**	umhos/cm	10.0	5.0	1		06/21/13 09:49		
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**4.8**	mg/L	1.0	0.50	1		06/21/13 00:19	16887-00-6	
Sulfate	**9.1**	mg/L	1.0	0.50	1		06/21/13 00:19	14808-79-8	
353.2 Nitrate + Nitrite pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**4.2**	mg/L	1.0	0.087	10		06/25/13 16:55		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**7.4**	Std. Units	0.10	0.050	1		06/14/13 14:57		H6

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-6 **Lab ID: 10232279005** Collected: 06/10/13 16:00 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Iron, Dissolved	**<0.036**	mg/L	0.25	0.036	1	06/24/13 09:10	06/29/13 00:40	7439-89-6	
Manganese, Dissolved	**0.0043**	mg/L	0.0010	0.00032	1	07/02/13 09:45	07/04/13 00:05	7439-96-5	
8260B MSV Low Level	Analytical Method: EPA 8260B								
Acetone	**<10.0**	ug/L	20.0	10.0	1		06/24/13 15:05	67-64-1	
Acrylonitrile	**<5.0**	ug/L	10.0	5.0	1		06/24/13 15:05	107-13-1	
Benzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 15:05	71-43-2	
Bromochloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 15:05	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	0.50	0.18	1		06/24/13 15:05	75-27-4	
Bromoform	**<2.0**	ug/L	4.0	2.0	1		06/24/13 15:05	75-25-2	
Bromomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 15:05	74-83-9	
2-Butanone (MEK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 15:05	78-93-3	
Carbon disulfide	**<0.22**	ug/L	1.0	0.22	1		06/24/13 15:05	75-15-0	
Carbon tetrachloride	**<0.31**	ug/L	1.0	0.31	1		06/24/13 15:05	56-23-5	
Chlorobenzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 15:05	108-90-7	
Chloroethane	**1.6**	ug/L	1.0	0.50	1		06/24/13 15:05	75-00-3	
Chloroform	**<0.50**	ug/L	0.50	0.50	1		06/24/13 15:05	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 15:05	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 15:05	96-12-8	
Dibromochloromethane	**<0.25**	ug/L	1.0	0.25	1		06/24/13 15:05	124-48-1	
1,2-Dibromoethane (EDB)	**<0.13**	ug/L	0.50	0.13	1		06/24/13 15:05	106-93-4	
Dibromomethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 15:05	74-95-3	
1,2-Dichlorobenzene	**<0.092**	ug/L	0.50	0.092	1		06/24/13 15:05	95-50-1	
1,4-Dichlorobenzene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 15:05	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	10.0	5.0	1		06/24/13 15:05	110-57-6	
Dichlorodifluoromethane	**<0.40**	ug/L	1.0	0.40	1		06/24/13 15:05	75-71-8	
1,1-Dichloroethane	**1.2**	ug/L	0.50	0.25	1		06/24/13 15:05	75-34-3	
1,2-Dichloroethane	**<0.21**	ug/L	0.50	0.21	1		06/24/13 15:05	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 15:05	75-35-4	
cis-1,2-Dichloroethene	**2.3**	ug/L	0.50	0.23	1		06/24/13 15:05	156-59-2	
trans-1,2-Dichloroethene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 15:05	156-60-5	
1,2-Dichloropropane	**0.26J**	ug/L	4.0	0.20	1		06/24/13 15:05	78-87-5	
cis-1,3-Dichloropropene	**<0.42**	ug/L	0.50	0.42	1		06/24/13 15:05	10061-01-5	
trans-1,3-Dichloropropene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 15:05	10061-02-6	
Ethylbenzene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 15:05	100-41-4	
2-Hexanone	**<2.5**	ug/L	5.0	2.5	1		06/24/13 15:05	591-78-6	
Iodomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 15:05	74-88-4	
Methylene Chloride	**<2.0**	ug/L	4.0	2.0	1		06/24/13 15:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 15:05	108-10-1	
Styrene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 15:05	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 15:05	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.13**	ug/L	0.50	0.13	1		06/24/13 15:05	79-34-5	
Tetrachloroethene	**0.80**	ug/L	0.50	0.25	1		06/24/13 15:05	127-18-4	
Toluene	**<0.22**	ug/L	0.50	0.22	1		06/24/13 15:05	108-88-3	
1,1,1-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 15:05	71-55-6	
1,1,2-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 15:05	79-00-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-6 **Lab ID: 10232279005** Collected: 06/10/13 16:00 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Trichloroethene	**0.82**	ug/L	0.40	0.12	1		06/24/13 15:05	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	0.50	0.12	1		06/24/13 15:05	75-69-4	
1,2,3-Trichloropropane	**<0.54**	ug/L	4.0	0.54	1		06/24/13 15:05	96-18-4	
Vinyl acetate	**<5.0**	ug/L	10.0	5.0	1		06/24/13 15:05	108-05-4	
Vinyl chloride	**0.65**	ug/L	0.40	0.20	1		06/24/13 15:05	75-01-4	
Xylene (Total)	**<0.75**	ug/L	1.5	0.75	1		06/24/13 15:05	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%	75-125		1		06/24/13 15:05	17060-07-0	
Toluene-d8 (S)	97	%	75-125		1		06/24/13 15:05	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-125		1		06/24/13 15:05	460-00-4	
2510B Specific Conductance	Analytical Method: SM 2510B								
Specific Conductance	**719**	umhos/cm	10.0	5.0	1		06/21/13 09:50		
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**16.1**	mg/L	1.0	0.50	1		06/21/13 01:22	16887-00-6	
Sulfate	**12.8**	mg/L	1.0	0.50	1		06/21/13 01:22	14808-79-8	
353.2 Nitrate + Nitrite pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.85**	mg/L	0.50	0.044	5		06/25/13 16:56		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**6.7**	Std. Units	0.10	0.050	1		06/14/13 14:57		H6

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-6B **Lab ID: 10232279006** Collected: 06/10/13 15:20 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Vanadium, Dissolved	**0.0048**	mg/L	0.0010	0.00037	1	06/24/13 09:10	06/28/13 23:12	7440-62-2	
Chromium, Dissolved	**0.0068**	mg/L	0.0010	0.00024	1	06/24/13 09:10	06/28/13 23:12	7440-47-3	
Manganese, Dissolved	**0.0011**	mg/L	0.0010	0.00032	1	07/02/13 09:45	07/04/13 00:23	7439-96-5	
Cobalt, Dissolved	**0.00020J**	mg/L	0.0010	0.000033	1	06/24/13 09:10	06/28/13 23:12	7440-48-4	
Nickel, Dissolved	**0.00025J**	mg/L	0.0010	0.00013	1	06/24/13 09:10	06/28/13 23:12	7440-02-0	
Copper, Dissolved	**0.00048J**	mg/L	0.0010	0.00021	1	06/24/13 09:10	07/02/13 17:43	7440-50-8	B
Zinc, Dissolved	**<0.0024**	mg/L	0.010	0.0024	1	06/24/13 09:10	07/02/13 17:43	7440-66-6	
Arsenic, Dissolved	**0.0013**	mg/L	0.0010	0.00012	1	06/24/13 09:10	06/28/13 23:12	7440-38-2	
Selenium, Dissolved	**0.00056J**	mg/L	0.0010	0.00026	1	06/24/13 09:10	06/28/13 23:12	7782-49-2	
Silver, Dissolved	**0.00013J**	mg/L	0.00050	0.000025	1	06/24/13 09:10	06/28/13 23:12	7440-22-4	
Cadmium, Dissolved	**0.00023J**	mg/L	0.0010	0.000057	1	06/24/13 09:10	06/28/13 23:12	7440-43-9	
Barium, Dissolved	**0.015**	mg/L	0.0010	0.000062	1	06/24/13 09:10	06/28/13 23:12	7440-39-3	
Thallium, Dissolved	**0.00069J**	mg/L	0.0010	0.000052	1	06/24/13 09:10	06/28/13 23:12	7440-28-0	
Lead, Dissolved	**0.00024J**	mg/L	0.0010	0.000064	1	06/24/13 09:10	06/28/13 23:12	7439-92-1	
Iron, Dissolved	**<0.036**	mg/L	0.25	0.036	1	06/24/13 09:10	06/28/13 23:12	7439-89-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
Acetone	**<10.0**	ug/L	20.0	10.0	1		06/24/13 15:29	67-64-1	
Acrylonitrile	**<5.0**	ug/L	10.0	5.0	1		06/24/13 15:29	107-13-1	
Benzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 15:29	71-43-2	
Bromochloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 15:29	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	0.50	0.18	1		06/24/13 15:29	75-27-4	
Bromoform	**<2.0**	ug/L	4.0	2.0	1		06/24/13 15:29	75-25-2	
Bromomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 15:29	74-83-9	
2-Butanone (MEK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 15:29	78-93-3	
Carbon disulfide	**<0.22**	ug/L	1.0	0.22	1		06/24/13 15:29	75-15-0	
Carbon tetrachloride	**<0.31**	ug/L	1.0	0.31	1		06/24/13 15:29	56-23-5	
Chlorobenzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 15:29	108-90-7	
Chloroethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 15:29	75-00-3	
Chloroform	**<0.50**	ug/L	0.50	0.50	1		06/24/13 15:29	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 15:29	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 15:29	96-12-8	
Dibromochloromethane	**<0.25**	ug/L	1.0	0.25	1		06/24/13 15:29	124-48-1	
1,2-Dibromoethane (EDB)	**<0.13**	ug/L	0.50	0.13	1		06/24/13 15:29	106-93-4	
Dibromomethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 15:29	74-95-3	
1,2-Dichlorobenzene	**<0.092**	ug/L	0.50	0.092	1		06/24/13 15:29	95-50-1	
1,4-Dichlorobenzene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 15:29	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	10.0	5.0	1		06/24/13 15:29	110-57-6	
Dichlorodifluoromethane	**<0.40**	ug/L	1.0	0.40	1		06/24/13 15:29	75-71-8	
1,1-Dichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 15:29	75-34-3	
1,2-Dichloroethane	**<0.21**	ug/L	0.50	0.21	1		06/24/13 15:29	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 15:29	75-35-4	
cis-1,2-Dichloroethene	**<0.23**	ug/L	0.50	0.23	1		06/24/13 15:29	156-59-2	
trans-1,2-Dichloroethene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 15:29	156-60-5	
1,2-Dichloropropane	**<0.20**	ug/L	4.0	0.20	1		06/24/13 15:29	78-87-5	
cis-1,3-Dichloropropene	**<0.42**	ug/L	0.50	0.42	1		06/24/13 15:29	10061-01-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
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ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-6B **Lab ID: 10232279006** Collected: 06/10/13 15:20 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
trans-1,3-Dichloropropene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 15:29	10061-02-6	
Ethylbenzene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 15:29	100-41-4	
2-Hexanone	**<2.5**	ug/L	5.0	2.5	1		06/24/13 15:29	591-78-6	
Iodomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 15:29	74-88-4	
Methylene Chloride	**<2.0**	ug/L	4.0	2.0	1		06/24/13 15:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 15:29	108-10-1	
Styrene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 15:29	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 15:29	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.13**	ug/L	0.50	0.13	1		06/24/13 15:29	79-34-5	
Tetrachloroethene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 15:29	127-18-4	
Toluene	**<0.22**	ug/L	0.50	0.22	1		06/24/13 15:29	108-88-3	
1,1,1-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 15:29	71-55-6	
1,1,2-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 15:29	79-00-5	
Trichloroethene	**<0.12**	ug/L	0.40	0.12	1		06/24/13 15:29	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	0.50	0.12	1		06/24/13 15:29	75-69-4	
1,2,3-Trichloropropane	**<0.54**	ug/L	4.0	0.54	1		06/24/13 15:29	96-18-4	
Vinyl acetate	**<5.0**	ug/L	10.0	5.0	1		06/24/13 15:29	108-05-4	
Vinyl chloride	**<0.20**	ug/L	0.40	0.20	1		06/24/13 15:29	75-01-4	
Xylene (Total)	**<0.75**	ug/L	1.5	0.75	1		06/24/13 15:29	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%	75-125		1		06/24/13 15:29	17060-07-0	
Toluene-d8 (S)	97	%	75-125		1		06/24/13 15:29	2037-26-5	
4-Bromofluorobenzene (S)	103	%	75-125		1		06/24/13 15:29	460-00-4	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**1.7**	mg/L	1.0	0.50	1		06/21/13 08:12	16887-00-6	
Sulfate	**4.5**	mg/L	1.0	0.50	1		06/21/13 08:12	14808-79-8	
353.2 Nitrate + Nitrite pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.90**	mg/L	0.20	0.017	2		06/25/13 16:58		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
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ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-7A **Lab ID: 10232279007** Collected: 06/12/13 12:30 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Iron, Dissolved	**<0.036**	mg/L	0.25	0.036	1	06/24/13 09:10	06/29/13 00:47	7439-89-6	
Manganese, Dissolved	**0.0082**	mg/L	0.0010	0.00032	1	07/02/13 09:45	07/04/13 00:29	7439-96-5	
8260B MSV Low Level	Analytical Method: EPA 8260B								
Acetone	**<10.0**	ug/L	20.0	10.0	1		06/24/13 18:22	67-64-1	
Acrylonitrile	**<5.0**	ug/L	10.0	5.0	1		06/24/13 18:22	107-13-1	
Benzene	**0.28J**	ug/L	0.50	0.24	1		06/24/13 18:22	71-43-2	
Bromochloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 18:22	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	0.50	0.18	1		06/24/13 18:22	75-27-4	
Bromoform	**<2.0**	ug/L	4.0	2.0	1		06/24/13 18:22	75-25-2	
Bromomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 18:22	74-83-9	
2-Butanone (MEK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 18:22	78-93-3	
Carbon disulfide	**<0.22**	ug/L	1.0	0.22	1		06/24/13 18:22	75-15-0	
Carbon tetrachloride	**<0.31**	ug/L	1.0	0.31	1		06/24/13 18:22	56-23-5	
Chlorobenzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 18:22	108-90-7	
Chloroethane	**1.3**	ug/L	1.0	0.50	1		06/24/13 18:22	75-00-3	
Chloroform	**<0.50**	ug/L	0.50	0.50	1		06/24/13 18:22	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 18:22	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 18:22	96-12-8	
Dibromochloromethane	**<0.25**	ug/L	1.0	0.25	1		06/24/13 18:22	124-48-1	
1,2-Dibromoethane (EDB)	**<0.13**	ug/L	0.50	0.13	1		06/24/13 18:22	106-93-4	
Dibromomethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 18:22	74-95-3	
1,2-Dichlorobenzene	**<0.092**	ug/L	0.50	0.092	1		06/24/13 18:22	95-50-1	
1,4-Dichlorobenzene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 18:22	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	10.0	5.0	1		06/24/13 18:22	110-57-6	
Dichlorodifluoromethane	**1.9**	ug/L	1.0	0.40	1		06/24/13 18:22	75-71-8	
1,1-Dichloroethane	**3.6**	ug/L	0.50	0.25	1		06/24/13 18:22	75-34-3	
1,2-Dichloroethane	**<0.21**	ug/L	0.50	0.21	1		06/24/13 18:22	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 18:22	75-35-4	
cis-1,2-Dichloroethene	**0.54**	ug/L	0.50	0.23	1		06/24/13 18:22	156-59-2	
trans-1,2-Dichloroethene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 18:22	156-60-5	
1,2-Dichloropropane	**<0.20**	ug/L	4.0	0.20	1		06/24/13 18:22	78-87-5	
cis-1,3-Dichloropropene	**<0.42**	ug/L	0.50	0.42	1		06/24/13 18:22	10061-01-5	
trans-1,3-Dichloropropene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 18:22	10061-02-6	
Ethylbenzene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 18:22	100-41-4	
2-Hexanone	**<2.5**	ug/L	5.0	2.5	1		06/24/13 18:22	591-78-6	
Iodomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 18:22	74-88-4	
Methylene Chloride	**<2.0**	ug/L	4.0	2.0	1		06/24/13 18:22	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 18:22	108-10-1	
Styrene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 18:22	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 18:22	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.13**	ug/L	0.50	0.13	1		06/24/13 18:22	79-34-5	
Tetrachloroethene	**5.0**	ug/L	0.50	0.25	1		06/24/13 18:22	127-18-4	
Toluene	**<0.22**	ug/L	0.50	0.22	1		06/24/13 18:22	108-88-3	
1,1,1-Trichloroethane	**0.58**	ug/L	0.50	0.25	1		06/24/13 18:22	71-55-6	
1,1,2-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 18:22	79-00-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
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ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-7A **Lab ID: 10232279007** Collected: 06/12/13 12:30 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Trichloroethene	**1.4**	ug/L	0.40	0.12	1		06/24/13 18:22	79-01-6	
Trichlorofluoromethane	**0.77**	ug/L	0.50	0.12	1		06/24/13 18:22	75-69-4	
1,2,3-Trichloropropane	**<0.54**	ug/L	4.0	0.54	1		06/24/13 18:22	96-18-4	
Vinyl acetate	**<5.0**	ug/L	10.0	5.0	1		06/24/13 18:22	108-05-4	
Vinyl chloride	**0.25J**	ug/L	0.40	0.20	1		06/24/13 18:22	75-01-4	
Xylene (Total)	**<0.75**	ug/L	1.5	0.75	1		06/24/13 18:22	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%	75-125		1		06/24/13 18:22	17060-07-0	
Toluene-d8 (S)	97	%	75-125		1		06/24/13 18:22	2037-26-5	
4-Bromofluorobenzene (S)	102	%	75-125		1		06/24/13 18:22	460-00-4	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**17.4**	mg/L	2.0	1.0	2		06/21/13 08:43	16887-00-6	
Sulfate	**23.1**	mg/L	2.0	1.0	2		06/21/13 08:43	14808-79-8	
353.2 Nitrate + Nitrite pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**4.6**	mg/L	1.0	0.087	10		06/25/13 16:59		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
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ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-8A **Lab ID: 10232279008** Collected: 06/12/13 10:30 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Iron, Dissolved	**0.052J**	mg/L	0.25	0.036	1	06/24/13 09:10	06/29/13 00:53	7439-89-6	B
Manganese, Dissolved	**0.00092J**	mg/L	0.0010	0.00032	1	07/02/13 09:45	07/04/13 00:35	7439-96-5	
8260B MSV Low Level	Analytical Method: EPA 8260B								
Acetone	**<10.0**	ug/L	20.0	10.0	1		06/24/13 18:46	67-64-1	
Acrylonitrile	**<5.0**	ug/L	10.0	5.0	1		06/24/13 18:46	107-13-1	
Benzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 18:46	71-43-2	
Bromochloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 18:46	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	0.50	0.18	1		06/24/13 18:46	75-27-4	
Bromoform	**<2.0**	ug/L	4.0	2.0	1		06/24/13 18:46	75-25-2	
Bromomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 18:46	74-83-9	
2-Butanone (MEK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 18:46	78-93-3	
Carbon disulfide	**<0.22**	ug/L	1.0	0.22	1		06/24/13 18:46	75-15-0	
Carbon tetrachloride	**<0.31**	ug/L	1.0	0.31	1		06/24/13 18:46	56-23-5	
Chlorobenzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 18:46	108-90-7	
Chloroethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 18:46	75-00-3	
Chloroform	**<0.50**	ug/L	0.50	0.50	1		06/24/13 18:46	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 18:46	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 18:46	96-12-8	
Dibromochloromethane	**<0.25**	ug/L	1.0	0.25	1		06/24/13 18:46	124-48-1	
1,2-Dibromoethane (EDB)	**<0.13**	ug/L	0.50	0.13	1		06/24/13 18:46	106-93-4	
Dibromomethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 18:46	74-95-3	
1,2-Dichlorobenzene	**<0.092**	ug/L	0.50	0.092	1		06/24/13 18:46	95-50-1	
1,4-Dichlorobenzene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 18:46	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	10.0	5.0	1		06/24/13 18:46	110-57-6	
Dichlorodifluoromethane	**<0.40**	ug/L	1.0	0.40	1		06/24/13 18:46	75-71-8	
1,1-Dichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 18:46	75-34-3	
1,2-Dichloroethane	**<0.21**	ug/L	0.50	0.21	1		06/24/13 18:46	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 18:46	75-35-4	
cis-1,2-Dichloroethene	**0.77**	ug/L	0.50	0.23	1		06/24/13 18:46	156-59-2	
trans-1,2-Dichloroethene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 18:46	156-60-5	
1,2-Dichloropropane	**<0.20**	ug/L	4.0	0.20	1		06/24/13 18:46	78-87-5	
cis-1,3-Dichloropropene	**<0.42**	ug/L	0.50	0.42	1		06/24/13 18:46	10061-01-5	
trans-1,3-Dichloropropene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 18:46	10061-02-6	
Ethylbenzene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 18:46	100-41-4	
2-Hexanone	**<2.5**	ug/L	5.0	2.5	1		06/24/13 18:46	591-78-6	
Iodomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 18:46	74-88-4	
Methylene Chloride	**<2.0**	ug/L	4.0	2.0	1		06/24/13 18:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 18:46	108-10-1	
Styrene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 18:46	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 18:46	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.13**	ug/L	0.50	0.13	1		06/24/13 18:46	79-34-5	
Tetrachloroethene	**0.68**	ug/L	0.50	0.25	1		06/24/13 18:46	127-18-4	
Toluene	**<0.22**	ug/L	0.50	0.22	1		06/24/13 18:46	108-88-3	
1,1,1-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 18:46	71-55-6	
1,1,2-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 18:46	79-00-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-8A **Lab ID: 10232279008** Collected: 06/12/13 10:30 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Trichloroethene	**0.33J**	ug/L	0.40	0.12	1		06/24/13 18:46	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	0.50	0.12	1		06/24/13 18:46	75-69-4	
1,2,3-Trichloropropane	**<0.54**	ug/L	4.0	0.54	1		06/24/13 18:46	96-18-4	
Vinyl acetate	**<5.0**	ug/L	10.0	5.0	1		06/24/13 18:46	108-05-4	
Vinyl chloride	**<0.20**	ug/L	0.40	0.20	1		06/24/13 18:46	75-01-4	
Xylene (Total)	**<0.75**	ug/L	1.5	0.75	1		06/24/13 18:46	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	110	%	75-125		1		06/24/13 18:46	17060-07-0	
Toluene-d8 (S)	96	%	75-125		1		06/24/13 18:46	2037-26-5	
4-Bromofluorobenzene (S)	103	%	75-125		1		06/24/13 18:46	460-00-4	
2510B Specific Conductance	Analytical Method: SM 2510B								
Specific Conductance	**1100**	umhos/cm	10.0	5.0	1		06/21/13 09:51		
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**71.6**	mg/L	5.0	2.5	5		06/21/13 02:25	16887-00-6	
Sulfate	**67.8**	mg/L	5.0	2.5	5		06/21/13 02:25	14808-79-8	
353.2 Nitrate + Nitrite pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**14.5**	mg/L	5.0	0.44	50		06/25/13 17:30		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**7.0**	Std. Units	0.10	0.050	1		06/14/13 14:58		H6

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
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ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-8C **Lab ID: 10232279009** Collected: 06/12/13 09:30 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Arsenic, Dissolved	**0.00074J**	mg/L	0.0010	0.00012	1	06/24/13 09:10	06/29/13 00:59	7440-38-2	
Barium, Dissolved	**0.018**	mg/L	0.0010	0.000062	1	06/24/13 09:10	06/29/13 00:59	7440-39-3	
Cadmium, Dissolved	**<0.000057**	mg/L	0.0010	0.000057	1	06/24/13 09:10	06/29/13 00:59	7440-43-9	
Chromium, Dissolved	**0.0032**	mg/L	0.0010	0.00024	1	06/24/13 09:10	06/29/13 00:59	7440-47-3	
Cobalt, Dissolved	**<0.000033**	mg/L	0.0010	0.000033	1	06/24/13 09:10	06/29/13 00:59	7440-48-4	
Copper, Dissolved	**0.00033J**	mg/L	0.0010	0.00021	1	06/24/13 09:10	07/02/13 18:19	7440-50-8	B
Iron, Dissolved	**<0.036**	mg/L	0.25	0.036	1	06/24/13 09:10	06/29/13 00:59	7439-89-6	
Lead, Dissolved	**<0.000064**	mg/L	0.0010	0.000064	1	06/24/13 09:10	06/29/13 00:59	7439-92-1	
Manganese, Dissolved	**<0.00032**	mg/L	0.0010	0.00032	1	07/02/13 09:45	07/04/13 00:41	7439-96-5	
Nickel, Dissolved	**<0.00013**	mg/L	0.0010	0.00013	1	06/24/13 09:10	06/29/13 00:59	7440-02-0	
Selenium, Dissolved	**0.00039J**	mg/L	0.0010	0.00026	1	06/24/13 09:10	06/29/13 00:59	7782-49-2	
Silver, Dissolved	**<0.000025**	mg/L	0.00050	0.000025	1	06/24/13 09:10	06/29/13 00:59	7440-22-4	
Thallium, Dissolved	**<0.000052**	mg/L	0.0010	0.000052	1	06/24/13 09:10	06/29/13 00:59	7440-28-0	
Vanadium, Dissolved	**0.0032**	mg/L	0.0010	0.00037	1	06/24/13 09:10	06/29/13 00:59	7440-62-2	
Zinc, Dissolved	**<0.0024**	mg/L	0.010	0.0024	1	06/24/13 09:10	07/02/13 18:19	7440-66-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
Acetone	**<10.0**	ug/L	20.0	10.0	1		06/24/13 19:11	67-64-1	
Acrylonitrile	**<5.0**	ug/L	10.0	5.0	1		06/24/13 19:11	107-13-1	
Benzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 19:11	71-43-2	
Bromochloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 19:11	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	0.50	0.18	1		06/24/13 19:11	75-27-4	
Bromoform	**<2.0**	ug/L	4.0	2.0	1		06/24/13 19:11	75-25-2	
Bromomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 19:11	74-83-9	
2-Butanone (MEK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 19:11	78-93-3	
Carbon disulfide	**<0.22**	ug/L	1.0	0.22	1		06/24/13 19:11	75-15-0	
Carbon tetrachloride	**<0.31**	ug/L	1.0	0.31	1		06/24/13 19:11	56-23-5	
Chlorobenzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 19:11	108-90-7	
Chloroethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 19:11	75-00-3	
Chloroform	**<0.50**	ug/L	0.50	0.50	1		06/24/13 19:11	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 19:11	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 19:11	96-12-8	
Dibromochloromethane	**<0.25**	ug/L	1.0	0.25	1		06/24/13 19:11	124-48-1	
1,2-Dibromoethane (EDB)	**<0.13**	ug/L	0.50	0.13	1		06/24/13 19:11	106-93-4	
Dibromomethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 19:11	74-95-3	
1,2-Dichlorobenzene	**<0.092**	ug/L	0.50	0.092	1		06/24/13 19:11	95-50-1	
1,4-Dichlorobenzene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 19:11	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	10.0	5.0	1		06/24/13 19:11	110-57-6	
Dichlorodifluoromethane	**<0.40**	ug/L	1.0	0.40	1		06/24/13 19:11	75-71-8	
1,1-Dichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 19:11	75-34-3	
1,2-Dichloroethane	**<0.21**	ug/L	0.50	0.21	1		06/24/13 19:11	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 19:11	75-35-4	
cis-1,2-Dichloroethene	**<0.23**	ug/L	0.50	0.23	1		06/24/13 19:11	156-59-2	
trans-1,2-Dichloroethene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 19:11	156-60-5	
1,2-Dichloropropane	**<0.20**	ug/L	4.0	0.20	1		06/24/13 19:11	78-87-5	
cis-1,3-Dichloropropene	**<0.42**	ug/L	0.50	0.42	1		06/24/13 19:11	10061-01-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
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ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-8C **Lab ID: 10232279009** Collected: 06/12/13 09:30 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
trans-1,3-Dichloropropene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 19:11	10061-02-6	
Ethylbenzene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 19:11	100-41-4	
2-Hexanone	**<2.5**	ug/L	5.0	2.5	1		06/24/13 19:11	591-78-6	
Iodomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 19:11	74-88-4	
Methylene Chloride	**<2.0**	ug/L	4.0	2.0	1		06/24/13 19:11	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 19:11	108-10-1	
Styrene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 19:11	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 19:11	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.13**	ug/L	0.50	0.13	1		06/24/13 19:11	79-34-5	
Tetrachloroethene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 19:11	127-18-4	
Toluene	**<0.22**	ug/L	0.50	0.22	1		06/24/13 19:11	108-88-3	
1,1,1-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 19:11	71-55-6	
1,1,2-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 19:11	79-00-5	
Trichloroethene	**<0.12**	ug/L	0.40	0.12	1		06/24/13 19:11	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	0.50	0.12	1		06/24/13 19:11	75-69-4	
1,2,3-Trichloropropane	**<0.54**	ug/L	4.0	0.54	1		06/24/13 19:11	96-18-4	
Vinyl acetate	**<5.0**	ug/L	10.0	5.0	1		06/24/13 19:11	108-05-4	
Vinyl chloride	**<0.20**	ug/L	0.40	0.20	1		06/24/13 19:11	75-01-4	
Xylene (Total)	**<0.75**	ug/L	1.5	0.75	1		06/24/13 19:11	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	108	%	75-125		1		06/24/13 19:11	17060-07-0	
Toluene-d8 (S)	96	%	75-125		1		06/24/13 19:11	2037-26-5	
4-Bromofluorobenzene (S)	102	%	75-125		1		06/24/13 19:11	460-00-4	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**6.4**	mg/L	1.0	0.50	1		06/21/13 09:15	16887-00-6	
Sulfate	**7.8**	mg/L	1.0	0.50	1		06/21/13 09:15	14808-79-8	
353.2 Nitrate + Nitrite pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**6.0**	mg/L	2.0	0.17	20		06/25/13 17:02		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-9A **Lab ID: 10232279010** Collected: 06/10/13 14:00 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Iron, Dissolved	**<0.036**	mg/L	0.25	0.036	1	06/24/13 09:10	06/29/13 01:06	7439-89-6	
Manganese, Dissolved	**<0.00032**	mg/L	0.0010	0.00032	1	07/02/13 09:45	07/04/13 00:47	7439-96-5	
8260B MSV Low Level	Analytical Method: EPA 8260B								
Acetone	**<10.0**	ug/L	20.0	10.0	1		06/24/13 15:56	67-64-1	
Acrylonitrile	**<5.0**	ug/L	10.0	5.0	1		06/24/13 15:56	107-13-1	
Benzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 15:56	71-43-2	
Bromochloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 15:56	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	0.50	0.18	1		06/24/13 15:56	75-27-4	
Bromoform	**<2.0**	ug/L	4.0	2.0	1		06/24/13 15:56	75-25-2	
Bromomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 15:56	74-83-9	
2-Butanone (MEK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 15:56	78-93-3	
Carbon disulfide	**<0.22**	ug/L	1.0	0.22	1		06/24/13 15:56	75-15-0	
Carbon tetrachloride	**<0.31**	ug/L	1.0	0.31	1		06/24/13 15:56	56-23-5	
Chlorobenzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 15:56	108-90-7	
Chloroethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 15:56	75-00-3	
Chloroform	**<0.50**	ug/L	0.50	0.50	1		06/24/13 15:56	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 15:56	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 15:56	96-12-8	
Dibromochloromethane	**<0.25**	ug/L	1.0	0.25	1		06/24/13 15:56	124-48-1	
1,2-Dibromoethane (EDB)	**<0.13**	ug/L	0.50	0.13	1		06/24/13 15:56	106-93-4	
Dibromomethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 15:56	74-95-3	
1,2-Dichlorobenzene	**<0.092**	ug/L	0.50	0.092	1		06/24/13 15:56	95-50-1	
1,4-Dichlorobenzene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 15:56	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	10.0	5.0	1		06/24/13 15:56	110-57-6	
Dichlorodifluoromethane	**0.67J**	ug/L	1.0	0.40	1		06/24/13 15:56	75-71-8	
1,1-Dichloroethane	**0.40J**	ug/L	0.50	0.25	1		06/24/13 15:56	75-34-3	
1,2-Dichloroethane	**<0.21**	ug/L	0.50	0.21	1		06/24/13 15:56	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 15:56	75-35-4	
cis-1,2-Dichloroethene	**0.54**	ug/L	0.50	0.23	1		06/24/13 15:56	156-59-2	
trans-1,2-Dichloroethene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 15:56	156-60-5	
1,2-Dichloropropane	**0.21J**	ug/L	4.0	0.20	1		06/24/13 15:56	78-87-5	
cis-1,3-Dichloropropene	**<0.42**	ug/L	0.50	0.42	1		06/24/13 15:56	10061-01-5	
trans-1,3-Dichloropropene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 15:56	10061-02-6	
Ethylbenzene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 15:56	100-41-4	
2-Hexanone	**<2.5**	ug/L	5.0	2.5	1		06/24/13 15:56	591-78-6	
Iodomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 15:56	74-88-4	
Methylene Chloride	**<2.0**	ug/L	4.0	2.0	1		06/24/13 15:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 15:56	108-10-1	
Styrene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 15:56	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 15:56	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.13**	ug/L	0.50	0.13	1		06/24/13 15:56	79-34-5	
Tetrachloroethene	**1.4**	ug/L	0.50	0.25	1		06/24/13 15:56	127-18-4	
Toluene	**<0.22**	ug/L	0.50	0.22	1		06/24/13 15:56	108-88-3	
1,1,1-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 15:56	71-55-6	
1,1,2-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 15:56	79-00-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-9A **Lab ID: 10232279010** Collected: 06/10/13 14:00 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Trichloroethene	**0.95**	ug/L	0.40	0.12	1		06/24/13 15:56	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	0.50	0.12	1		06/24/13 15:56	75-69-4	
1,2,3-Trichloropropane	**<0.54**	ug/L	4.0	0.54	1		06/24/13 15:56	96-18-4	
Vinyl acetate	**<5.0**	ug/L	10.0	5.0	1		06/24/13 15:56	108-05-4	
Vinyl chloride	**<0.20**	ug/L	0.40	0.20	1		06/24/13 15:56	75-01-4	
Xylene (Total)	**<0.75**	ug/L	1.5	0.75	1		06/24/13 15:56	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%	75-125		1		06/24/13 15:56	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1		06/24/13 15:56	2037-26-5	
4-Bromofluorobenzene (S)	103	%	75-125		1		06/24/13 15:56	460-00-4	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**50.8**	mg/L	3.0	1.5	3		06/21/13 09:46	16887-00-6	
Sulfate	**20.3**	mg/L	3.0	1.5	3		06/21/13 09:46	14808-79-8	
353.2 Nitrate + Nitrite pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**2.3**	mg/L	1.0	0.087	10		06/25/13 17:03		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-10 **Lab ID: 10232279011** Collected: 06/12/13 14:30 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Arsenic, Dissolved	**0.0034**	mg/L	0.0010	0.00012	1	06/24/13 09:10	06/29/13 01:12	7440-38-2	
Barium, Dissolved	**0.12**	mg/L	0.0010	0.000062	1	06/24/13 09:10	06/29/13 01:12	7440-39-3	
Cadmium, Dissolved	**<0.000057**	mg/L	0.0010	0.000057	1	06/24/13 09:10	06/29/13 01:12	7440-43-9	
Chromium, Dissolved	**<0.00024**	mg/L	0.0010	0.00024	1	06/24/13 09:10	06/29/13 01:12	7440-47-3	
Cobalt, Dissolved	**0.000081J**	mg/L	0.0010	0.000033	1	06/24/13 09:10	06/29/13 01:12	7440-48-4	
Copper, Dissolved	**0.00048J**	mg/L	0.0010	0.00021	1	06/24/13 09:10	07/02/13 18:25	7440-50-8	B
Iron, Dissolved	**3.3**	mg/L	0.25	0.036	1	06/24/13 09:10	06/29/13 01:12	7439-89-6	
Lead, Dissolved	**<0.000064**	mg/L	0.0010	0.000064	1	06/24/13 09:10	06/29/13 01:12	7439-92-1	
Manganese, Dissolved	**0.11**	mg/L	0.0010	0.00032	1	06/24/13 09:10	06/29/13 01:12	7439-96-5	
Nickel, Dissolved	**0.0010**	mg/L	0.0010	0.00013	1	06/24/13 09:10	06/29/13 01:12	7440-02-0	
Selenium, Dissolved	**<0.00026**	mg/L	0.0010	0.00026	1	06/24/13 09:10	06/29/13 01:12	7782-49-2	
Silver, Dissolved	**<0.000025**	mg/L	0.00050	0.000025	1	06/24/13 09:10	06/29/13 01:12	7440-22-4	
Thallium, Dissolved	**<0.000052**	mg/L	0.0010	0.000052	1	06/24/13 09:10	06/29/13 01:12	7440-28-0	
Vanadium, Dissolved	**0.00057J**	mg/L	0.0010	0.00037	1	06/24/13 09:10	06/29/13 01:12	7440-62-2	
Zinc, Dissolved	**<0.0024**	mg/L	0.010	0.0024	1	06/24/13 09:10	07/02/13 18:25	7440-66-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
Acetone	**<10.0**	ug/L	20.0	10.0	1		06/24/13 19:37	67-64-1	
Acrylonitrile	**<5.0**	ug/L	10.0	5.0	1		06/24/13 19:37	107-13-1	
Benzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 19:37	71-43-2	
Bromochloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 19:37	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	0.50	0.18	1		06/24/13 19:37	75-27-4	
Bromoform	**<2.0**	ug/L	4.0	2.0	1		06/24/13 19:37	75-25-2	
Bromomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 19:37	74-83-9	
2-Butanone (MEK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 19:37	78-93-3	
Carbon disulfide	**<0.22**	ug/L	1.0	0.22	1		06/24/13 19:37	75-15-0	
Carbon tetrachloride	**<0.31**	ug/L	1.0	0.31	1		06/24/13 19:37	56-23-5	
Chlorobenzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 19:37	108-90-7	
Chloroethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 19:37	75-00-3	
Chloroform	**<0.50**	ug/L	0.50	0.50	1		06/24/13 19:37	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 19:37	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 19:37	96-12-8	
Dibromochloromethane	**<0.25**	ug/L	1.0	0.25	1		06/24/13 19:37	124-48-1	
1,2-Dibromoethane (EDB)	**<0.13**	ug/L	0.50	0.13	1		06/24/13 19:37	106-93-4	
Dibromomethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 19:37	74-95-3	
1,2-Dichlorobenzene	**<0.092**	ug/L	0.50	0.092	1		06/24/13 19:37	95-50-1	
1,4-Dichlorobenzene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 19:37	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	10.0	5.0	1		06/24/13 19:37	110-57-6	
Dichlorodifluoromethane	**<0.40**	ug/L	1.0	0.40	1		06/24/13 19:37	75-71-8	
1,1-Dichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 19:37	75-34-3	
1,2-Dichloroethane	**<0.21**	ug/L	0.50	0.21	1		06/24/13 19:37	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 19:37	75-35-4	
cis-1,2-Dichloroethene	**<0.23**	ug/L	0.50	0.23	1		06/24/13 19:37	156-59-2	
trans-1,2-Dichloroethene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 19:37	156-60-5	
1,2-Dichloropropane	**<0.20**	ug/L	4.0	0.20	1		06/24/13 19:37	78-87-5	
cis-1,3-Dichloropropene	**<0.42**	ug/L	0.50	0.42	1		06/24/13 19:37	10061-01-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-10 **Lab ID: 10232279011** Collected: 06/12/13 14:30 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
trans-1,3-Dichloropropene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 19:37	10061-02-6	
Ethylbenzene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 19:37	100-41-4	
2-Hexanone	**<2.5**	ug/L	5.0	2.5	1		06/24/13 19:37	591-78-6	
Iodomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 19:37	74-88-4	
Methylene Chloride	**<2.0**	ug/L	4.0	2.0	1		06/24/13 19:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 19:37	108-10-1	
Styrene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 19:37	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 19:37	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.13**	ug/L	0.50	0.13	1		06/24/13 19:37	79-34-5	
Tetrachloroethene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 19:37	127-18-4	
Toluene	**<0.22**	ug/L	0.50	0.22	1		06/24/13 19:37	108-88-3	
1,1,1-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 19:37	71-55-6	
1,1,2-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 19:37	79-00-5	
Trichloroethene	**0.39J**	ug/L	0.40	0.12	1		06/24/13 19:37	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	0.50	0.12	1		06/24/13 19:37	75-69-4	
1,2,3-Trichloropropane	**<0.54**	ug/L	4.0	0.54	1		06/24/13 19:37	96-18-4	
Vinyl acetate	**<5.0**	ug/L	10.0	5.0	1		06/24/13 19:37	108-05-4	
Vinyl chloride	**<0.20**	ug/L	0.40	0.20	1		06/24/13 19:37	75-01-4	
Xylene (Total)	**<0.75**	ug/L	1.5	0.75	1		06/24/13 19:37	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	107	%	75-125		1		06/24/13 19:37	17060-07-0	
Toluene-d8 (S)	96	%	75-125		1		06/24/13 19:37	2037-26-5	
4-Bromofluorobenzene (S)	105	%	75-125		1		06/24/13 19:37	460-00-4	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**61.3**	mg/L	5.0	2.5	5		06/21/13 16:04	16887-00-6	
Sulfate	**84.5**	mg/L	5.0	2.5	5		06/21/13 16:04	14808-79-8	
353.2 Nitrate + Nitrite pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.020J**	mg/L	0.10	0.0087	1		06/25/13 17:10		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-11 **Lab ID: 10232279012** Collected: 06/12/13 17:30 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Arsenic, Dissolved	**0.00056J**	mg/L	0.0010	0.00012	1	06/24/13 09:10	06/29/13 01:31	7440-38-2	
Barium, Dissolved	**0.060**	mg/L	0.0010	0.000062	1	06/24/13 09:10	06/29/13 01:31	7440-39-3	
Cadmium, Dissolved	**<0.000057**	mg/L	0.0010	0.000057	1	06/24/13 09:10	06/29/13 01:31	7440-43-9	
Chromium, Dissolved	**0.00086J**	mg/L	0.0010	0.00024	1	06/24/13 09:10	06/29/13 01:31	7440-47-3	
Cobalt, Dissolved	**<0.000033**	mg/L	0.0010	0.000033	1	06/24/13 09:10	06/29/13 01:31	7440-48-4	
Copper, Dissolved	**0.00059J**	mg/L	0.0010	0.00021	1	06/24/13 09:10	07/02/13 18:43	7440-50-8	B
Iron, Dissolved	**<0.036**	mg/L	0.25	0.036	1	06/24/13 09:10	06/29/13 01:31	7439-89-6	
Lead, Dissolved	**0.00012J**	mg/L	0.0010	0.000064	1	06/24/13 09:10	06/29/13 01:31	7439-92-1	
Manganese, Dissolved	**<0.00032**	mg/L	0.0010	0.00032	1	07/02/13 09:45	07/04/13 00:53	7439-96-5	
Nickel, Dissolved	**<0.00013**	mg/L	0.0010	0.00013	1	06/24/13 09:10	06/29/13 01:31	7440-02-0	
Selenium, Dissolved	**0.0032**	mg/L	0.0010	0.00026	1	06/24/13 09:10	06/29/13 01:31	7782-49-2	
Silver, Dissolved	**<0.000025**	mg/L	0.00050	0.000025	1	06/24/13 09:10	06/29/13 01:31	7440-22-4	
Thallium, Dissolved	**<0.000052**	mg/L	0.0010	0.000052	1	06/24/13 09:10	06/29/13 01:31	7440-28-0	
Vanadium, Dissolved	**0.0026**	mg/L	0.0010	0.00037	1	06/24/13 09:10	06/29/13 01:31	7440-62-2	
Zinc, Dissolved	**<0.0024**	mg/L	0.010	0.0024	1	06/24/13 09:10	07/02/13 18:43	7440-66-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
Acetone	**<10.0**	ug/L	20.0	10.0	1		06/24/13 20:02	67-64-1	
Acrylonitrile	**<5.0**	ug/L	10.0	5.0	1		06/24/13 20:02	107-13-1	
Benzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 20:02	71-43-2	
Bromochloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 20:02	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	0.50	0.18	1		06/24/13 20:02	75-27-4	
Bromoform	**<2.0**	ug/L	4.0	2.0	1		06/24/13 20:02	75-25-2	
Bromomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 20:02	74-83-9	
2-Butanone (MEK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 20:02	78-93-3	
Carbon disulfide	**<0.22**	ug/L	1.0	0.22	1		06/24/13 20:02	75-15-0	
Carbon tetrachloride	**<0.31**	ug/L	1.0	0.31	1		06/24/13 20:02	56-23-5	
Chlorobenzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 20:02	108-90-7	
Chloroethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 20:02	75-00-3	
Chloroform	**<0.50**	ug/L	0.50	0.50	1		06/24/13 20:02	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 20:02	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 20:02	96-12-8	
Dibromochloromethane	**<0.25**	ug/L	1.0	0.25	1		06/24/13 20:02	124-48-1	
1,2-Dibromoethane (EDB)	**<0.13**	ug/L	0.50	0.13	1		06/24/13 20:02	106-93-4	
Dibromomethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 20:02	74-95-3	
1,2-Dichlorobenzene	**<0.092**	ug/L	0.50	0.092	1		06/24/13 20:02	95-50-1	
1,4-Dichlorobenzene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 20:02	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	10.0	5.0	1		06/24/13 20:02	110-57-6	
Dichlorodifluoromethane	**6.2**	ug/L	1.0	0.40	1		06/24/13 20:02	75-71-8	
1,1-Dichloroethane	**0.28J**	ug/L	0.50	0.25	1		06/24/13 20:02	75-34-3	
1,2-Dichloroethane	**<0.21**	ug/L	0.50	0.21	1		06/24/13 20:02	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 20:02	75-35-4	
cis-1,2-Dichloroethene	**<0.23**	ug/L	0.50	0.23	1		06/24/13 20:02	156-59-2	
trans-1,2-Dichloroethene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 20:02	156-60-5	
1,2-Dichloropropane	**<0.20**	ug/L	4.0	0.20	1		06/24/13 20:02	78-87-5	
cis-1,3-Dichloropropene	**<0.42**	ug/L	0.50	0.42	1		06/24/13 20:02	10061-01-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
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ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-11 **Lab ID: 10232279012** Collected: 06/12/13 17:30 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
trans-1,3-Dichloropropene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 20:02	10061-02-6	
Ethylbenzene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 20:02	100-41-4	
2-Hexanone	**<2.5**	ug/L	5.0	2.5	1		06/24/13 20:02	591-78-6	
Iodomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 20:02	74-88-4	
Methylene Chloride	**<2.0**	ug/L	4.0	2.0	1		06/24/13 20:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 20:02	108-10-1	
Styrene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 20:02	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 20:02	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.13**	ug/L	0.50	0.13	1		06/24/13 20:02	79-34-5	
Tetrachloroethene	**0.38J**	ug/L	0.50	0.25	1		06/24/13 20:02	127-18-4	
Toluene	**<0.22**	ug/L	0.50	0.22	1		06/24/13 20:02	108-88-3	
1,1,1-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 20:02	71-55-6	
1,1,2-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 20:02	79-00-5	
Trichloroethene	**<0.12**	ug/L	0.40	0.12	1		06/24/13 20:02	79-01-6	
Trichlorofluoromethane	**5.2**	ug/L	0.50	0.12	1		06/24/13 20:02	75-69-4	
1,2,3-Trichloropropane	**<0.54**	ug/L	4.0	0.54	1		06/24/13 20:02	96-18-4	
Vinyl acetate	**<5.0**	ug/L	10.0	5.0	1		06/24/13 20:02	108-05-4	
Vinyl chloride	**<0.20**	ug/L	0.40	0.20	1		06/24/13 20:02	75-01-4	
Xylene (Total)	**<0.75**	ug/L	1.5	0.75	1		06/24/13 20:02	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%	75-125		1		06/24/13 20:02	17060-07-0	
Toluene-d8 (S)	96	%	75-125		1		06/24/13 20:02	2037-26-5	
4-Bromofluorobenzene (S)	102	%	75-125		1		06/24/13 20:02	460-00-4	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**31.1**	mg/L	3.0	1.5	3		06/21/13 16:36	16887-00-6	
Sulfate	**37.6**	mg/L	3.0	1.5	3		06/21/13 16:36	14808-79-8	
353.2 Nitrate + Nitrite pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**7.8**	mg/L	2.0	0.17	20		06/25/13 17:12		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-12 **Lab ID: 10232279013** Collected: 06/12/13 18:30 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Arsenic, Dissolved	**0.0045**	mg/L	0.0010	0.00012	1	06/24/13 09:10	06/29/13 01:37	7440-38-2	
Barium, Dissolved	**0.13**	mg/L	0.0010	0.000062	1	06/24/13 09:10	06/29/13 01:37	7440-39-3	
Cadmium, Dissolved	**<0.000057**	mg/L	0.0010	0.000057	1	06/24/13 09:10	06/29/13 01:37	7440-43-9	
Chromium, Dissolved	**<0.00024**	mg/L	0.0010	0.00024	1	06/24/13 09:10	06/29/13 01:37	7440-47-3	
Cobalt, Dissolved	**0.0038**	mg/L	0.0010	0.000033	1	06/24/13 09:10	06/29/13 01:37	7440-48-4	
Copper, Dissolved	**0.00029J**	mg/L	0.0010	0.00021	1	06/24/13 09:10	07/02/13 18:49	7440-50-8	B
Iron, Dissolved	**3.5**	mg/L	0.25	0.036	1	06/24/13 09:10	06/29/13 01:37	7439-89-6	
Lead, Dissolved	**<0.000064**	mg/L	0.0010	0.000064	1	06/24/13 09:10	06/29/13 01:37	7439-92-1	
Manganese, Dissolved	**5.1**	mg/L	0.0010	0.00032	1	06/24/13 09:10	06/29/13 01:37	7439-96-5	
Nickel, Dissolved	**0.0048**	mg/L	0.0010	0.00013	1	06/24/13 09:10	06/29/13 01:37	7440-02-0	
Selenium, Dissolved	**<0.00026**	mg/L	0.0010	0.00026	1	06/24/13 09:10	06/29/13 01:37	7782-49-2	
Silver, Dissolved	**<0.000025**	mg/L	0.00050	0.000025	1	06/24/13 09:10	06/29/13 01:37	7440-22-4	
Thallium, Dissolved	**<0.000052**	mg/L	0.0010	0.000052	1	06/24/13 09:10	06/29/13 01:37	7440-28-0	
Vanadium, Dissolved	**<0.00037**	mg/L	0.0010	0.00037	1	06/24/13 09:10	06/29/13 01:37	7440-62-2	
Zinc, Dissolved	**<0.0024**	mg/L	0.010	0.0024	1	06/24/13 09:10	07/02/13 18:49	7440-66-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
Acetone	**<10.0**	ug/L	20.0	10.0	1		06/24/13 20:26	67-64-1	
Acrylonitrile	**<5.0**	ug/L	10.0	5.0	1		06/24/13 20:26	107-13-1	
Benzene	**1.4**	ug/L	0.50	0.24	1		06/24/13 20:26	71-43-2	
Bromochloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 20:26	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	0.50	0.18	1		06/24/13 20:26	75-27-4	
Bromoform	**<2.0**	ug/L	4.0	2.0	1		06/24/13 20:26	75-25-2	
Bromomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 20:26	74-83-9	
2-Butanone (MEK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 20:26	78-93-3	
Carbon disulfide	**<0.22**	ug/L	1.0	0.22	1		06/24/13 20:26	75-15-0	
Carbon tetrachloride	**<0.31**	ug/L	1.0	0.31	1		06/24/13 20:26	56-23-5	
Chlorobenzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 20:26	108-90-7	
Chloroethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 20:26	75-00-3	
Chloroform	**<0.50**	ug/L	0.50	0.50	1		06/24/13 20:26	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 20:26	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 20:26	96-12-8	
Dibromochloromethane	**<0.25**	ug/L	1.0	0.25	1		06/24/13 20:26	124-48-1	
1,2-Dibromoethane (EDB)	**<0.13**	ug/L	0.50	0.13	1		06/24/13 20:26	106-93-4	
Dibromomethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 20:26	74-95-3	
1,2-Dichlorobenzene	**<0.092**	ug/L	0.50	0.092	1		06/24/13 20:26	95-50-1	
1,4-Dichlorobenzene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 20:26	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	10.0	5.0	1		06/24/13 20:26	110-57-6	
Dichlorodifluoromethane	**<0.40**	ug/L	1.0	0.40	1		06/24/13 20:26	75-71-8	
1,1-Dichloroethane	**1.9**	ug/L	0.50	0.25	1		06/24/13 20:26	75-34-3	
1,2-Dichloroethane	**<0.21**	ug/L	0.50	0.21	1		06/24/13 20:26	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 20:26	75-35-4	
cis-1,2-Dichloroethene	**11.1**	ug/L	0.50	0.23	1		06/24/13 20:26	156-59-2	
trans-1,2-Dichloroethene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 20:26	156-60-5	
1,2-Dichloropropane	**0.37J**	ug/L	4.0	0.20	1		06/24/13 20:26	78-87-5	
cis-1,3-Dichloropropene	**<0.42**	ug/L	0.50	0.42	1		06/24/13 20:26	10061-01-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
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ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-12 **Lab ID: 10232279013** Collected: 06/12/13 18:30 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
trans-1,3-Dichloropropene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 20:26	10061-02-6	
Ethylbenzene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 20:26	100-41-4	
2-Hexanone	**<2.5**	ug/L	5.0	2.5	1		06/24/13 20:26	591-78-6	
Iodomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 20:26	74-88-4	
Methylene Chloride	**<2.0**	ug/L	4.0	2.0	1		06/24/13 20:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 20:26	108-10-1	
Styrene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 20:26	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 20:26	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.13**	ug/L	0.50	0.13	1		06/24/13 20:26	79-34-5	
Tetrachloroethene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 20:26	127-18-4	
Toluene	**<0.22**	ug/L	0.50	0.22	1		06/24/13 20:26	108-88-3	
1,1,1-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 20:26	71-55-6	
1,1,2-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 20:26	79-00-5	
Trichloroethene	**1.0**	ug/L	0.40	0.12	1		06/24/13 20:26	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	0.50	0.12	1		06/24/13 20:26	75-69-4	
1,2,3-Trichloropropane	**<0.54**	ug/L	4.0	0.54	1		06/24/13 20:26	96-18-4	
Vinyl acetate	**<5.0**	ug/L	10.0	5.0	1		06/24/13 20:26	108-05-4	
Vinyl chloride	**17.7**	ug/L	0.40	0.20	1		06/24/13 20:26	75-01-4	
Xylene (Total)	**<0.75**	ug/L	1.5	0.75	1		06/24/13 20:26	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	109	%	75-125		1		06/24/13 20:26	17060-07-0	
Toluene-d8 (S)	97	%	75-125		1		06/24/13 20:26	2037-26-5	
4-Bromofluorobenzene (S)	105	%	75-125		1		06/24/13 20:26	460-00-4	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**15.9**	mg/L	2.0	1.0	2		06/21/13 17:07	16887-00-6	
Sulfate	**11.2**	mg/L	2.0	1.0	2		06/21/13 17:07	14808-79-8	
353.2 Nitrate + Nitrite pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.020J**	mg/L	0.10	0.0087	1		06/25/13 17:13		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
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ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-13 **Lab ID: 10232279014** Collected: 06/12/13 11:30 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Arsenic, Dissolved	**0.00045J**	mg/L	0.0010	0.00012	1	06/24/13 09:10	06/29/13 01:44	7440-38-2	
Barium, Dissolved	**0.096**	mg/L	0.0010	0.000062	1	06/24/13 09:10	06/29/13 01:44	7440-39-3	
Cadmium, Dissolved	**<0.000057**	mg/L	0.0010	0.000057	1	06/24/13 09:10	06/29/13 01:44	7440-43-9	
Chromium, Dissolved	**<0.00024**	mg/L	0.0010	0.00024	1	06/24/13 09:10	06/29/13 01:44	7440-47-3	
Cobalt, Dissolved	**0.00033J**	mg/L	0.0010	0.000033	1	06/24/13 09:10	06/29/13 01:44	7440-48-4	
Copper, Dissolved	**0.00038J**	mg/L	0.0010	0.00021	1	06/24/13 09:10	07/02/13 18:55	7440-50-8	B
Iron, Dissolved	**0.061J**	mg/L	0.25	0.036	1	06/24/13 09:10	06/29/13 01:44	7439-89-6	B
Lead, Dissolved	**<0.000064**	mg/L	0.0010	0.000064	1	06/24/13 09:10	06/29/13 01:44	7439-92-1	
Manganese, Dissolved	**1.2**	mg/L	0.0010	0.00032	1	06/24/13 09:10	06/29/13 01:44	7439-96-5	
Nickel, Dissolved	**0.0036**	mg/L	0.0010	0.00013	1	06/24/13 09:10	06/29/13 01:44	7440-02-0	
Selenium, Dissolved	**<0.00026**	mg/L	0.0010	0.00026	1	06/24/13 09:10	06/29/13 01:44	7782-49-2	
Silver, Dissolved	**<0.000025**	mg/L	0.00050	0.000025	1	06/24/13 09:10	06/29/13 01:44	7440-22-4	
Thallium, Dissolved	**<0.000052**	mg/L	0.0010	0.000052	1	06/24/13 09:10	06/29/13 01:44	7440-28-0	
Vanadium, Dissolved	**0.0024**	mg/L	0.0010	0.00037	1	06/24/13 09:10	06/29/13 01:44	7440-62-2	
Zinc, Dissolved	**<0.0024**	mg/L	0.010	0.0024	1	06/24/13 09:10	07/02/13 18:55	7440-66-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
Acetone	**<10.0**	ug/L	20.0	10.0	1		06/24/13 20:50	67-64-1	
Acrylonitrile	**<5.0**	ug/L	10.0	5.0	1		06/24/13 20:50	107-13-1	
Benzene	**0.72**	ug/L	0.50	0.24	1		06/24/13 20:50	71-43-2	
Bromochloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 20:50	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	0.50	0.18	1		06/24/13 20:50	75-27-4	
Bromoform	**<2.0**	ug/L	4.0	2.0	1		06/24/13 20:50	75-25-2	
Bromomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 20:50	74-83-9	
2-Butanone (MEK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 20:50	78-93-3	
Carbon disulfide	**<0.22**	ug/L	1.0	0.22	1		06/24/13 20:50	75-15-0	
Carbon tetrachloride	**<0.31**	ug/L	1.0	0.31	1		06/24/13 20:50	56-23-5	
Chlorobenzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 20:50	108-90-7	
Chloroethane	**2.4**	ug/L	1.0	0.50	1		06/24/13 20:50	75-00-3	
Chloroform	**<0.50**	ug/L	0.50	0.50	1		06/24/13 20:50	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 20:50	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 20:50	96-12-8	
Dibromochloromethane	**<0.25**	ug/L	1.0	0.25	1		06/24/13 20:50	124-48-1	
1,2-Dibromoethane (EDB)	**<0.13**	ug/L	0.50	0.13	1		06/24/13 20:50	106-93-4	
Dibromomethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 20:50	74-95-3	
1,2-Dichlorobenzene	**<0.092**	ug/L	0.50	0.092	1		06/24/13 20:50	95-50-1	
1,4-Dichlorobenzene	**0.61**	ug/L	0.50	0.25	1		06/24/13 20:50	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	10.0	5.0	1		06/24/13 20:50	110-57-6	
Dichlorodifluoromethane	**<0.40**	ug/L	1.0	0.40	1		06/24/13 20:50	75-71-8	
1,1-Dichloroethane	**1.5**	ug/L	0.50	0.25	1		06/24/13 20:50	75-34-3	
1,2-Dichloroethane	**<0.21**	ug/L	0.50	0.21	1		06/24/13 20:50	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 20:50	75-35-4	
cis-1,2-Dichloroethene	**1.2**	ug/L	0.50	0.23	1		06/24/13 20:50	156-59-2	
trans-1,2-Dichloroethene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 20:50	156-60-5	
1,2-Dichloropropane	**0.41J**	ug/L	4.0	0.20	1		06/24/13 20:50	78-87-5	
cis-1,3-Dichloropropene	**<0.42**	ug/L	0.50	0.42	1		06/24/13 20:50	10061-01-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-13 **Lab ID: 10232279014** Collected: 06/12/13 11:30 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
trans-1,3-Dichloropropene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 20:50	10061-02-6	
Ethylbenzene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 20:50	100-41-4	
2-Hexanone	**<2.5**	ug/L	5.0	2.5	1		06/24/13 20:50	591-78-6	
Iodomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 20:50	74-88-4	
Methylene Chloride	**<2.0**	ug/L	4.0	2.0	1		06/24/13 20:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 20:50	108-10-1	
Styrene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 20:50	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 20:50	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.13**	ug/L	0.50	0.13	1		06/24/13 20:50	79-34-5	
Tetrachloroethene	**0.26J**	ug/L	0.50	0.25	1		06/24/13 20:50	127-18-4	
Toluene	**<0.22**	ug/L	0.50	0.22	1		06/24/13 20:50	108-88-3	
1,1,1-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 20:50	71-55-6	
1,1,2-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 20:50	79-00-5	
Trichloroethene	**0.36J**	ug/L	0.40	0.12	1		06/24/13 20:50	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	0.50	0.12	1		06/24/13 20:50	75-69-4	
1,2,3-Trichloropropane	**<0.54**	ug/L	4.0	0.54	1		06/24/13 20:50	96-18-4	
Vinyl acetate	**<5.0**	ug/L	10.0	5.0	1		06/24/13 20:50	108-05-4	
Vinyl chloride	**21.1**	ug/L	0.40	0.20	1		06/24/13 20:50	75-01-4	
Xylene (Total)	**<0.75**	ug/L	1.5	0.75	1		06/24/13 20:50	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	111	%	75-125		1		06/24/13 20:50	17060-07-0	
Toluene-d8 (S)	96	%	75-125		1		06/24/13 20:50	2037-26-5	
4-Bromofluorobenzene (S)	103	%	75-125		1		06/24/13 20:50	460-00-4	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**21.6**	mg/L	3.0	1.5	3		06/21/13 17:39	16887-00-6	
Sulfate	**11.8**	mg/L	3.0	1.5	3		06/21/13 17:39	14808-79-8	
353.2 Nitrate + Nitrite pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**<0.0087**	mg/L	0.10	0.0087	1		06/25/13 17:15		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-15 **Lab ID: 10232279015** Collected: 06/10/13 12:30 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Arsenic, Dissolved	ND	mg/L	0.0010	0.00012	1	06/26/13 08:45	06/29/13 07:13	7440-38-2	
Barium, Dissolved	**0.040**	mg/L	0.0010	0.000062	1	06/26/13 08:45	06/29/13 07:13	7440-39-3	
Cadmium, Dissolved	ND	mg/L	0.0010	0.000057	1	06/26/13 08:45	06/29/13 07:13	7440-43-9	
Chromium, Dissolved	**0.0022**	mg/L	0.0010	0.00024	1	06/26/13 08:45	06/29/13 07:13	7440-47-3	
Cobalt, Dissolved	ND	mg/L	0.0010	0.000033	1	06/26/13 08:45	06/29/13 07:13	7440-48-4	
Copper, Dissolved	ND	mg/L	0.0010	0.00021	1	06/26/13 08:45	06/29/13 07:13	7440-50-8	
Iron, Dissolved	ND	mg/L	0.25	0.036	1	06/26/13 08:45	06/29/13 07:13	7439-89-6	
Lead, Dissolved	ND	mg/L	0.0010	0.000064	1	06/26/13 08:45	06/29/13 07:13	7439-92-1	
Manganese, Dissolved	ND	mg/L	0.0010	0.00032	1	06/26/13 08:45	06/29/13 07:13	7439-96-5	
Nickel, Dissolved	ND	mg/L	0.0010	0.00013	1	06/26/13 08:45	06/29/13 07:13	7440-02-0	
Selenium, Dissolved	ND	mg/L	0.0010	0.00026	1	06/26/13 08:45	06/29/13 07:13	7782-49-2	
Silver, Dissolved	ND	mg/L	0.00050	0.000025	1	06/26/13 08:45	06/29/13 07:13	7440-22-4	
Thallium, Dissolved	ND	mg/L	0.0010	0.000052	1	06/26/13 08:45	06/29/13 07:13	7440-28-0	
Vanadium, Dissolved	**0.0015**	mg/L	0.0010	0.00037	1	06/26/13 08:45	06/29/13 07:13	7440-62-2	
Zinc, Dissolved	ND	mg/L	0.010	0.0024	1	06/26/13 08:45	06/29/13 07:13	7440-66-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
Acetone	**<10.0**	ug/L	20.0	10.0	1		06/24/13 16:21	67-64-1	
Acrylonitrile	**<5.0**	ug/L	10.0	5.0	1		06/24/13 16:21	107-13-1	
Benzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 16:21	71-43-2	
Bromochloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 16:21	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	0.50	0.18	1		06/24/13 16:21	75-27-4	
Bromoform	**<2.0**	ug/L	4.0	2.0	1		06/24/13 16:21	75-25-2	
Bromomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 16:21	74-83-9	
2-Butanone (MEK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 16:21	78-93-3	
Carbon disulfide	**<0.22**	ug/L	1.0	0.22	1		06/24/13 16:21	75-15-0	
Carbon tetrachloride	**<0.31**	ug/L	1.0	0.31	1		06/24/13 16:21	56-23-5	
Chlorobenzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 16:21	108-90-7	
Chloroethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 16:21	75-00-3	
Chloroform	**<0.50**	ug/L	0.50	0.50	1		06/24/13 16:21	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 16:21	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 16:21	96-12-8	
Dibromochloromethane	**<0.25**	ug/L	1.0	0.25	1		06/24/13 16:21	124-48-1	
1,2-Dibromoethane (EDB)	**<0.13**	ug/L	0.50	0.13	1		06/24/13 16:21	106-93-4	
Dibromomethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 16:21	74-95-3	
1,2-Dichlorobenzene	**<0.092**	ug/L	0.50	0.092	1		06/24/13 16:21	95-50-1	
1,4-Dichlorobenzene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 16:21	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	10.0	5.0	1		06/24/13 16:21	110-57-6	
Dichlorodifluoromethane	**<0.40**	ug/L	1.0	0.40	1		06/24/13 16:21	75-71-8	
1,1-Dichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 16:21	75-34-3	
1,2-Dichloroethane	**<0.21**	ug/L	0.50	0.21	1		06/24/13 16:21	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 16:21	75-35-4	
cis-1,2-Dichloroethene	**<0.23**	ug/L	0.50	0.23	1		06/24/13 16:21	156-59-2	
trans-1,2-Dichloroethene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 16:21	156-60-5	
1,2-Dichloropropane	**<0.20**	ug/L	4.0	0.20	1		06/24/13 16:21	78-87-5	
cis-1,3-Dichloropropene	**<0.42**	ug/L	0.50	0.42	1		06/24/13 16:21	10061-01-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-15 **Lab ID: 10232279015** Collected: 06/10/13 12:30 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
trans-1,3-Dichloropropene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 16:21	10061-02-6	
Ethylbenzene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 16:21	100-41-4	
2-Hexanone	**<2.5**	ug/L	5.0	2.5	1		06/24/13 16:21	591-78-6	
Iodomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 16:21	74-88-4	
Methylene Chloride	**<2.0**	ug/L	4.0	2.0	1		06/24/13 16:21	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 16:21	108-10-1	
Styrene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 16:21	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 16:21	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.13**	ug/L	0.50	0.13	1		06/24/13 16:21	79-34-5	
Tetrachloroethene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 16:21	127-18-4	
Toluene	**<0.22**	ug/L	0.50	0.22	1		06/24/13 16:21	108-88-3	
1,1,1-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 16:21	71-55-6	
1,1,2-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 16:21	79-00-5	
Trichloroethene	**<0.12**	ug/L	0.40	0.12	1		06/24/13 16:21	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	0.50	0.12	1		06/24/13 16:21	75-69-4	
1,2,3-Trichloropropane	**<0.54**	ug/L	4.0	0.54	1		06/24/13 16:21	96-18-4	
Vinyl acetate	**<5.0**	ug/L	10.0	5.0	1		06/24/13 16:21	108-05-4	
Vinyl chloride	**<0.20**	ug/L	0.40	0.20	1		06/24/13 16:21	75-01-4	
Xylene (Total)	**<0.75**	ug/L	1.5	0.75	1		06/24/13 16:21	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	108	%	75-125		1		06/24/13 16:21	17060-07-0	
Toluene-d8 (S)	96	%	75-125		1		06/24/13 16:21	2037-26-5	
4-Bromofluorobenzene (S)	104	%	75-125		1		06/24/13 16:21	460-00-4	
2510B Specific Conductance	Analytical Method: SM 2510B								
Specific Conductance	**380**	umhos/cm	10.0	5.0	1		06/21/13 09:55		
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**4.8**	mg/L	1.0	0.50	1		06/21/13 02:57	16887-00-6	
Sulfate	**14.2**	mg/L	1.0	0.50	1		06/21/13 02:57	14808-79-8	
353.2 Nitrate + Nitrite pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**5.4**	mg/L	2.0	0.17	20		06/25/13 17:16		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**7.1**	Std. Units	0.10	0.050	1		06/14/13 14:56		H6

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
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ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-16 **Lab ID: 10232279016** Collected: 06/10/13 17:00 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Acetone	**<10.0**	ug/L	20.0	10.0	1		06/24/13 16:45	67-64-1	
Acrylonitrile	**<5.0**	ug/L	10.0	5.0	1		06/24/13 16:45	107-13-1	
Benzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 16:45	71-43-2	
Bromochloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 16:45	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	0.50	0.18	1		06/24/13 16:45	75-27-4	
Bromoform	**<2.0**	ug/L	4.0	2.0	1		06/24/13 16:45	75-25-2	
Bromomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 16:45	74-83-9	
2-Butanone (MEK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 16:45	78-93-3	
Carbon disulfide	**<0.22**	ug/L	1.0	0.22	1		06/24/13 16:45	75-15-0	
Carbon tetrachloride	**<0.31**	ug/L	1.0	0.31	1		06/24/13 16:45	56-23-5	
Chlorobenzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 16:45	108-90-7	
Chloroethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 16:45	75-00-3	
Chloroform	**<0.50**	ug/L	0.50	0.50	1		06/24/13 16:45	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 16:45	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 16:45	96-12-8	
Dibromochloromethane	**<0.25**	ug/L	1.0	0.25	1		06/24/13 16:45	124-48-1	
1,2-Dibromoethane (EDB)	**<0.13**	ug/L	0.50	0.13	1		06/24/13 16:45	106-93-4	
Dibromomethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 16:45	74-95-3	
1,2-Dichlorobenzene	**<0.092**	ug/L	0.50	0.092	1		06/24/13 16:45	95-50-1	
1,4-Dichlorobenzene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 16:45	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	10.0	5.0	1		06/24/13 16:45	110-57-6	
Dichlorodifluoromethane	**<0.40**	ug/L	1.0	0.40	1		06/24/13 16:45	75-71-8	
1,1-Dichloroethane	**1.5**	ug/L	0.50	0.25	1		06/24/13 16:45	75-34-3	
1,2-Dichloroethane	**<0.21**	ug/L	0.50	0.21	1		06/24/13 16:45	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 16:45	75-35-4	
cis-1,2-Dichloroethene	**4.3**	ug/L	0.50	0.23	1		06/24/13 16:45	156-59-2	
trans-1,2-Dichloroethene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 16:45	156-60-5	
1,2-Dichloropropane	**0.31J**	ug/L	4.0	0.20	1		06/24/13 16:45	78-87-5	
cis-1,3-Dichloropropene	**<0.42**	ug/L	0.50	0.42	1		06/24/13 16:45	10061-01-5	
trans-1,3-Dichloropropene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 16:45	10061-02-6	
Ethylbenzene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 16:45	100-41-4	
2-Hexanone	**<2.5**	ug/L	5.0	2.5	1		06/24/13 16:45	591-78-6	
Iodomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 16:45	74-88-4	
Methylene Chloride	**<2.0**	ug/L	4.0	2.0	1		06/24/13 16:45	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 16:45	108-10-1	
Styrene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 16:45	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 16:45	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.13**	ug/L	0.50	0.13	1		06/24/13 16:45	79-34-5	
Tetrachloroethene	**1.4**	ug/L	0.50	0.25	1		06/24/13 16:45	127-18-4	
Toluene	**<0.22**	ug/L	0.50	0.22	1		06/24/13 16:45	108-88-3	
1,1,1-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 16:45	71-55-6	
1,1,2-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 16:45	79-00-5	
Trichloroethene	**2.1**	ug/L	0.40	0.12	1		06/24/13 16:45	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	0.50	0.12	1		06/24/13 16:45	75-69-4	
1,2,3-Trichloropropane	**<0.54**	ug/L	4.0	0.54	1		06/24/13 16:45	96-18-4	
Vinyl acetate	**<5.0**	ug/L	10.0	5.0	1		06/24/13 16:45	108-05-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: MW-16 **Lab ID: 10232279016** Collected: 06/10/13 17:00 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Vinyl chloride	**<0.20**	ug/L	0.40	0.20	1		06/24/13 16:45	75-01-4	
Xylene (Total)	**<0.75**	ug/L	1.5	0.75	1		06/24/13 16:45	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%	75-125		1		06/24/13 16:45	17060-07-0	
Toluene-d8 (S)	97	%	75-125		1		06/24/13 16:45	2037-26-5	
4-Bromofluorobenzene (S)	104	%	75-125		1		06/24/13 16:45	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: SEEP **Lab ID: 10232279017** Collected: 06/12/13 14:50 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Arsenic, Dissolved	**0.00081J**	mg/L	0.0010	0.00012	1	06/24/13 09:10	06/29/13 01:50	7440-38-2	
Barium, Dissolved	**0.057**	mg/L	0.0010	0.000062	1	06/24/13 09:10	06/29/13 01:50	7440-39-3	
Cadmium, Dissolved	**<0.000057**	mg/L	0.0010	0.000057	1	06/24/13 09:10	06/29/13 01:50	7440-43-9	
Chromium, Dissolved	**0.0029**	mg/L	0.0010	0.00024	1	06/24/13 09:10	06/29/13 01:50	7440-47-3	
Cobalt, Dissolved	**0.000038J**	mg/L	0.0010	0.000033	1	06/24/13 09:10	06/29/13 01:50	7440-48-4	
Copper, Dissolved	**0.00085J**	mg/L	0.0010	0.00021	1	06/24/13 09:10	07/02/13 19:01	7440-50-8	B
Iron, Dissolved	**<0.036**	mg/L	0.25	0.036	1	06/24/13 09:10	06/29/13 01:50	7439-89-6	
Lead, Dissolved	**<0.000064**	mg/L	0.0010	0.000064	1	06/24/13 09:10	06/29/13 01:50	7439-92-1	
Manganese, Dissolved	**0.00068J**	mg/L	0.0010	0.00032	1	07/02/13 09:45	07/04/13 00:59	7439-96-5	
Nickel, Dissolved	**0.00068J**	mg/L	0.0010	0.00013	1	06/24/13 09:10	06/29/13 01:50	7440-02-0	
Selenium, Dissolved	**0.0025**	mg/L	0.0010	0.00026	1	06/24/13 09:10	06/29/13 01:50	7782-49-2	
Silver, Dissolved	**<0.000025**	mg/L	0.00050	0.000025	1	06/24/13 09:10	06/29/13 01:50	7440-22-4	
Thallium, Dissolved	**<0.000052**	mg/L	0.0010	0.000052	1	06/24/13 09:10	06/29/13 01:50	7440-28-0	
Vanadium, Dissolved	**0.0034**	mg/L	0.0010	0.00037	1	06/24/13 09:10	06/29/13 01:50	7440-62-2	
Zinc, Dissolved	**<0.0024**	mg/L	0.010	0.0024	1	06/24/13 09:10	07/02/13 19:01	7440-66-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
Acetone	**<10.0**	ug/L	20.0	10.0	1		06/26/13 16:57	67-64-1	
Acrylonitrile	**<5.0**	ug/L	10.0	5.0	1		06/26/13 16:57	107-13-1	
Benzene	**<0.24**	ug/L	0.50	0.24	1		06/26/13 16:57	71-43-2	
Bromochloromethane	**<0.50**	ug/L	1.0	0.50	1		06/26/13 16:57	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	0.50	0.18	1		06/26/13 16:57	75-27-4	
Bromoform	**<2.0**	ug/L	4.0	2.0	1		06/26/13 16:57	75-25-2	
Bromomethane	**<2.0**	ug/L	4.0	2.0	1		06/26/13 16:57	74-83-9	
2-Butanone (MEK)	**<2.5**	ug/L	5.0	2.5	1		06/26/13 16:57	78-93-3	
Carbon disulfide	**<0.22**	ug/L	1.0	0.22	1		06/26/13 16:57	75-15-0	
Carbon tetrachloride	**<0.31**	ug/L	1.0	0.31	1		06/26/13 16:57	56-23-5	
Chlorobenzene	**<0.24**	ug/L	0.50	0.24	1		06/26/13 16:57	108-90-7	
Chloroethane	**<0.50**	ug/L	1.0	0.50	1		06/26/13 16:57	75-00-3	
Chloroform	**<0.50**	ug/L	0.50	0.50	1		06/26/13 16:57	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		06/26/13 16:57	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	4.0	2.0	1		06/26/13 16:57	96-12-8	
Dibromochloromethane	**<0.25**	ug/L	1.0	0.25	1		06/26/13 16:57	124-48-1	
1,2-Dibromoethane (EDB)	**<0.13**	ug/L	0.50	0.13	1		06/26/13 16:57	106-93-4	
Dibromomethane	**<0.25**	ug/L	0.50	0.25	1		06/26/13 16:57	74-95-3	
1,2-Dichlorobenzene	**<0.092**	ug/L	0.50	0.092	1		06/26/13 16:57	95-50-1	
1,4-Dichlorobenzene	**<0.25**	ug/L	0.50	0.25	1		06/26/13 16:57	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	10.0	5.0	1		06/26/13 16:57	110-57-6	
Dichlorodifluoromethane	**<0.40**	ug/L	1.0	0.40	1		06/26/13 16:57	75-71-8	
1,1-Dichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/26/13 16:57	75-34-3	
1,2-Dichloroethane	**<0.21**	ug/L	0.50	0.21	1		06/26/13 16:57	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	0.50	0.24	1		06/26/13 16:57	75-35-4	
cis-1,2-Dichloroethene	**0.30J**	ug/L	0.50	0.23	1		06/26/13 16:57	156-59-2	
trans-1,2-Dichloroethene	**<0.21**	ug/L	0.50	0.21	1		06/26/13 16:57	156-60-5	
1,2-Dichloropropane	**<0.20**	ug/L	4.0	0.20	1		06/26/13 16:57	78-87-5	
cis-1,3-Dichloropropene	**<0.42**	ug/L	0.50	0.42	1		06/26/13 16:57	10061-01-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: SEEP **Lab ID: 10232279017** Collected: 06/12/13 14:50 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
trans-1,3-Dichloropropene	**<0.25**	ug/L	0.50	0.25	1		06/26/13 16:57	10061-02-6	
Ethylbenzene	**<0.21**	ug/L	0.50	0.21	1		06/26/13 16:57	100-41-4	
2-Hexanone	**<2.5**	ug/L	5.0	2.5	1		06/26/13 16:57	591-78-6	
Iodomethane	**<2.0**	ug/L	4.0	2.0	1		06/26/13 16:57	74-88-4	
Methylene Chloride	**<2.0**	ug/L	4.0	2.0	1		06/26/13 16:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<2.5**	ug/L	5.0	2.5	1		06/26/13 16:57	108-10-1	
Styrene	**<0.24**	ug/L	0.50	0.24	1		06/26/13 16:57	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.25**	ug/L	0.50	0.25	1		06/26/13 16:57	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.13**	ug/L	0.50	0.13	1		06/26/13 16:57	79-34-5	
Tetrachloroethene	**1.3**	ug/L	0.50	0.25	1		06/26/13 16:57	127-18-4	
Toluene	**<0.22**	ug/L	0.50	0.22	1		06/26/13 16:57	108-88-3	
1,1,1-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/26/13 16:57	71-55-6	
1,1,2-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/26/13 16:57	79-00-5	
Trichloroethene	**0.41**	ug/L	0.40	0.12	1		06/26/13 16:57	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	0.50	0.12	1		06/26/13 16:57	75-69-4	
1,2,3-Trichloropropane	**<0.54**	ug/L	4.0	0.54	1		06/26/13 16:57	96-18-4	
Vinyl acetate	**<5.0**	ug/L	10.0	5.0	1		06/26/13 16:57	108-05-4	
Vinyl chloride	**<0.20**	ug/L	0.40	0.20	1		06/26/13 16:57	75-01-4	
Xylene (Total)	**<0.75**	ug/L	1.5	0.75	1		06/26/13 16:57	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%	75-125		1		06/26/13 16:57	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1		06/26/13 16:57	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-125		1		06/26/13 16:57	460-00-4	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**56.9**	mg/L	3.0	1.5	3		06/21/13 18:10	16887-00-6	
Sulfate	**57.1**	mg/L	3.0	1.5	3		06/21/13 18:10	14808-79-8	
353.2 Nitrate + Nitrite pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**6.6**	mg/L	2.0	0.17	20		06/25/13 17:17		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: SHOP WELL **Lab ID: 10232279018** Collected: 06/10/13 17:20 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Acetone	**<10.0**	ug/L	20.0	10.0	1		06/24/13 17:09	67-64-1	
Acrylonitrile	**<5.0**	ug/L	10.0	5.0	1		06/24/13 17:09	107-13-1	
Benzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 17:09	71-43-2	
Bromochloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 17:09	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	0.50	0.18	1		06/24/13 17:09	75-27-4	
Bromoform	**<2.0**	ug/L	4.0	2.0	1		06/24/13 17:09	75-25-2	
Bromomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 17:09	74-83-9	
2-Butanone (MEK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 17:09	78-93-3	
Carbon disulfide	**<0.22**	ug/L	1.0	0.22	1		06/24/13 17:09	75-15-0	
Carbon tetrachloride	**<0.31**	ug/L	1.0	0.31	1		06/24/13 17:09	56-23-5	
Chlorobenzene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 17:09	108-90-7	
Chloroethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 17:09	75-00-3	
Chloroform	**<0.50**	ug/L	0.50	0.50	1		06/24/13 17:09	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		06/24/13 17:09	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 17:09	96-12-8	
Dibromochloromethane	**<0.25**	ug/L	1.0	0.25	1		06/24/13 17:09	124-48-1	
1,2-Dibromoethane (EDB)	**<0.13**	ug/L	0.50	0.13	1		06/24/13 17:09	106-93-4	
Dibromomethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 17:09	74-95-3	
1,2-Dichlorobenzene	**<0.092**	ug/L	0.50	0.092	1		06/24/13 17:09	95-50-1	
1,4-Dichlorobenzene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 17:09	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	10.0	5.0	1		06/24/13 17:09	110-57-6	
Dichlorodifluoromethane	**4.7**	ug/L	1.0	0.40	1		06/24/13 17:09	75-71-8	
1,1-Dichloroethane	**1.9**	ug/L	0.50	0.25	1		06/24/13 17:09	75-34-3	
1,2-Dichloroethane	**<0.21**	ug/L	0.50	0.21	1		06/24/13 17:09	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 17:09	75-35-4	
cis-1,2-Dichloroethene	**0.65**	ug/L	0.50	0.23	1		06/24/13 17:09	156-59-2	
trans-1,2-Dichloroethene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 17:09	156-60-5	
1,2-Dichloropropane	**<0.20**	ug/L	4.0	0.20	1		06/24/13 17:09	78-87-5	
cis-1,3-Dichloropropene	**<0.42**	ug/L	0.50	0.42	1		06/24/13 17:09	10061-01-5	
trans-1,3-Dichloropropene	**<0.25**	ug/L	0.50	0.25	1		06/24/13 17:09	10061-02-6	
Ethylbenzene	**<0.21**	ug/L	0.50	0.21	1		06/24/13 17:09	100-41-4	
2-Hexanone	**<2.5**	ug/L	5.0	2.5	1		06/24/13 17:09	591-78-6	
Iodomethane	**<2.0**	ug/L	4.0	2.0	1		06/24/13 17:09	74-88-4	
Methylene Chloride	**<2.0**	ug/L	4.0	2.0	1		06/24/13 17:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<2.5**	ug/L	5.0	2.5	1		06/24/13 17:09	108-10-1	
Styrene	**<0.24**	ug/L	0.50	0.24	1		06/24/13 17:09	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 17:09	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.13**	ug/L	0.50	0.13	1		06/24/13 17:09	79-34-5	
Tetrachloroethene	**4.4**	ug/L	0.50	0.25	1		06/24/13 17:09	127-18-4	
Toluene	**<0.22**	ug/L	0.50	0.22	1		06/24/13 17:09	108-88-3	
1,1,1-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 17:09	71-55-6	
1,1,2-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/24/13 17:09	79-00-5	
Trichloroethene	**1.7**	ug/L	0.40	0.12	1		06/24/13 17:09	79-01-6	
Trichlorofluoromethane	**0.74**	ug/L	0.50	0.12	1		06/24/13 17:09	75-69-4	
1,2,3-Trichloropropane	**<0.54**	ug/L	4.0	0.54	1		06/24/13 17:09	96-18-4	
Vinyl acetate	**<5.0**	ug/L	10.0	5.0	1		06/24/13 17:09	108-05-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: SHOP WELL **Lab ID: 10232279018** Collected: 06/10/13 17:20 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Vinyl chloride	**<0.20**	ug/L	0.40	0.20	1		06/24/13 17:09	75-01-4	
Xylene (Total)	**<0.75**	ug/L	1.5	0.75	1		06/24/13 17:09	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	109	%	75-125		1		06/24/13 17:09	17060-07-0	
Toluene-d8 (S)	97	%	75-125		1		06/24/13 17:09	2037-26-5	
4-Bromofluorobenzene (S)	102	%	75-125		1		06/24/13 17:09	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: DUP **Lab ID: 10232279019** Collected: 06/12/13 10:50 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Iron, Dissolved	**<0.036**	mg/L	0.25	0.036	1	06/24/13 09:10	06/29/13 01:57	7439-89-6	
Manganese, Dissolved	**0.0011**	mg/L	0.0010	0.00032	1	07/02/13 09:45	07/04/13 01:05	7439-96-5	
8260B MSV Low Level	Analytical Method: EPA 8260B								
Acetone	**<10.0**	ug/L	20.0	10.0	1		06/26/13 17:22	67-64-1	
Acrylonitrile	**<5.0**	ug/L	10.0	5.0	1		06/26/13 17:22	107-13-1	
Benzene	**<0.24**	ug/L	0.50	0.24	1		06/26/13 17:22	71-43-2	
Bromochloromethane	**<0.50**	ug/L	1.0	0.50	1		06/26/13 17:22	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	0.50	0.18	1		06/26/13 17:22	75-27-4	
Bromoform	**<2.0**	ug/L	4.0	2.0	1		06/26/13 17:22	75-25-2	
Bromomethane	**<2.0**	ug/L	4.0	2.0	1		06/26/13 17:22	74-83-9	
2-Butanone (MEK)	**<2.5**	ug/L	5.0	2.5	1		06/26/13 17:22	78-93-3	
Carbon disulfide	**<0.22**	ug/L	1.0	0.22	1		06/26/13 17:22	75-15-0	
Carbon tetrachloride	**<0.31**	ug/L	1.0	0.31	1		06/26/13 17:22	56-23-5	
Chlorobenzene	**<0.24**	ug/L	0.50	0.24	1		06/26/13 17:22	108-90-7	
Chloroethane	**<0.50**	ug/L	1.0	0.50	1		06/26/13 17:22	75-00-3	
Chloroform	**<0.50**	ug/L	0.50	0.50	1		06/26/13 17:22	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		06/26/13 17:22	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	4.0	2.0	1		06/26/13 17:22	96-12-8	
Dibromochloromethane	**<0.25**	ug/L	1.0	0.25	1		06/26/13 17:22	124-48-1	
1,2-Dibromoethane (EDB)	**<0.13**	ug/L	0.50	0.13	1		06/26/13 17:22	106-93-4	
Dibromomethane	**<0.25**	ug/L	0.50	0.25	1		06/26/13 17:22	74-95-3	
1,2-Dichlorobenzene	**<0.092**	ug/L	0.50	0.092	1		06/26/13 17:22	95-50-1	
1,4-Dichlorobenzene	**<0.25**	ug/L	0.50	0.25	1		06/26/13 17:22	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	10.0	5.0	1		06/26/13 17:22	110-57-6	
Dichlorodifluoromethane	**<0.40**	ug/L	1.0	0.40	1		06/26/13 17:22	75-71-8	
1,1-Dichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/26/13 17:22	75-34-3	
1,2-Dichloroethane	**<0.21**	ug/L	0.50	0.21	1		06/26/13 17:22	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	0.50	0.24	1		06/26/13 17:22	75-35-4	
cis-1,2-Dichloroethene	**0.79**	ug/L	0.50	0.23	1		06/26/13 17:22	156-59-2	
trans-1,2-Dichloroethene	**<0.21**	ug/L	0.50	0.21	1		06/26/13 17:22	156-60-5	
1,2-Dichloropropane	**<0.20**	ug/L	4.0	0.20	1		06/26/13 17:22	78-87-5	
cis-1,3-Dichloropropene	**<0.42**	ug/L	0.50	0.42	1		06/26/13 17:22	10061-01-5	
trans-1,3-Dichloropropene	**<0.25**	ug/L	0.50	0.25	1		06/26/13 17:22	10061-02-6	
Ethylbenzene	**<0.21**	ug/L	0.50	0.21	1		06/26/13 17:22	100-41-4	
2-Hexanone	**<2.5**	ug/L	5.0	2.5	1		06/26/13 17:22	591-78-6	
Iodomethane	**<2.0**	ug/L	4.0	2.0	1		06/26/13 17:22	74-88-4	
Methylene Chloride	**<2.0**	ug/L	4.0	2.0	1		06/26/13 17:22	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<2.5**	ug/L	5.0	2.5	1		06/26/13 17:22	108-10-1	
Styrene	**<0.24**	ug/L	0.50	0.24	1		06/26/13 17:22	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.25**	ug/L	0.50	0.25	1		06/26/13 17:22	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.13**	ug/L	0.50	0.13	1		06/26/13 17:22	79-34-5	
Tetrachloroethene	**0.66**	ug/L	0.50	0.25	1		06/26/13 17:22	127-18-4	
Toluene	**<0.22**	ug/L	0.50	0.22	1		06/26/13 17:22	108-88-3	
1,1,1-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/26/13 17:22	71-55-6	
1,1,2-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/26/13 17:22	79-00-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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(406)254-7226

ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: DUP **Lab ID: 10232279019** Collected: 06/12/13 10:50 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Trichloroethene	**0.27J**	ug/L	0.40	0.12	1		06/26/13 17:22	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	0.50	0.12	1		06/26/13 17:22	75-69-4	
1,2,3-Trichloropropane	**<0.54**	ug/L	4.0	0.54	1		06/26/13 17:22	96-18-4	
Vinyl acetate	**<5.0**	ug/L	10.0	5.0	1		06/26/13 17:22	108-05-4	
Vinyl chloride	**<0.20**	ug/L	0.40	0.20	1		06/26/13 17:22	75-01-4	
Xylene (Total)	**<0.75**	ug/L	1.5	0.75	1		06/26/13 17:22	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	110	%	75-125		1		06/26/13 17:22	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1		06/26/13 17:22	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-125		1		06/26/13 17:22	460-00-4	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**74.2**	mg/L	3.0	1.5	3		06/21/13 18:42	16887-00-6	
Sulfate	**68.4**	mg/L	3.0	1.5	3		06/21/13 18:42	14808-79-8	
353.2 Nitrate + Nitrite pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**14.0**	mg/L	5.0	0.44	50		06/25/13 17:31		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: VET WELL **Lab ID: 10232279020** Collected: 06/12/13 15:40 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Vanadium	**0.0043**	mg/L	0.0010	0.00037	1	06/25/13 09:35	06/27/13 20:14	7440-62-2	
Chromium	**0.0010**	mg/L	0.0010	0.00024	1	06/25/13 09:35	06/27/13 20:14	7440-47-3	
Iron	**<0.036**	mg/L	0.25	0.036	1	06/25/13 09:35	06/27/13 20:14	7439-89-6	
Manganese	**0.00033J**	mg/L	0.0010	0.00032	1	06/25/13 09:35	06/27/13 20:14	7439-96-5	B
Cobalt	**0.000052J**	mg/L	0.0010	0.000033	1	06/25/13 09:35	06/27/13 20:14	7440-48-4	
Nickel	**<0.00013**	mg/L	0.0010	0.00013	1	06/25/13 09:35	06/27/13 20:14	7440-02-0	
Copper	**0.027**	mg/L	0.0010	0.00021	1	06/25/13 09:35	06/27/13 20:14	7440-50-8	
Zinc	**0.0036J**	mg/L	0.010	0.0024	1	06/25/13 09:35	06/27/13 20:14	7440-66-6	B
Arsenic	**0.00093J**	mg/L	0.0010	0.00012	1	06/25/13 09:35	06/27/13 20:14	7440-38-2	
Selenium	**0.00093J**	mg/L	0.0010	0.00026	1	06/25/13 09:35	06/27/13 20:14	7782-49-2	
Silver	**<0.000025**	mg/L	0.00050	0.000025	1	06/25/13 09:35	06/27/13 20:14	7440-22-4	
Cadmium	**<0.000057**	mg/L	0.0010	0.000057	1	06/25/13 09:35	06/27/13 20:14	7440-43-9	
Barium	**0.011**	mg/L	0.0010	0.000062	1	06/25/13 09:35	06/27/13 20:14	7440-39-3	
Thallium	**0.00065J**	mg/L	0.0010	0.000052	1	06/25/13 09:35	06/28/13 20:30	7440-28-0	B
Lead	**0.00020J**	mg/L	0.0010	0.000064	1	06/25/13 09:35	06/27/13 20:14	7439-92-1	
8260B MSV Low Level	Analytical Method: EPA 8260B								
Acetone	**<10.0**	ug/L	20.0	10.0	1		06/26/13 17:46	67-64-1	
Acrylonitrile	**<5.0**	ug/L	10.0	5.0	1		06/26/13 17:46	107-13-1	
Benzene	**<0.24**	ug/L	0.50	0.24	1		06/26/13 17:46	71-43-2	
Bromochloromethane	**<0.50**	ug/L	1.0	0.50	1		06/26/13 17:46	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	0.50	0.18	1		06/26/13 17:46	75-27-4	
Bromoform	**<2.0**	ug/L	4.0	2.0	1		06/26/13 17:46	75-25-2	
Bromomethane	**<2.0**	ug/L	4.0	2.0	1		06/26/13 17:46	74-83-9	
2-Butanone (MEK)	**<2.5**	ug/L	5.0	2.5	1		06/26/13 17:46	78-93-3	
Carbon disulfide	**<0.22**	ug/L	1.0	0.22	1		06/26/13 17:46	75-15-0	
Carbon tetrachloride	**<0.31**	ug/L	1.0	0.31	1		06/26/13 17:46	56-23-5	
Chlorobenzene	**<0.24**	ug/L	0.50	0.24	1		06/26/13 17:46	108-90-7	
Chloroethane	**<0.50**	ug/L	1.0	0.50	1		06/26/13 17:46	75-00-3	
Chloroform	**<0.50**	ug/L	0.50	0.50	1		06/26/13 17:46	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		06/26/13 17:46	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	4.0	2.0	1		06/26/13 17:46	96-12-8	
Dibromochloromethane	**<0.25**	ug/L	1.0	0.25	1		06/26/13 17:46	124-48-1	
1,2-Dibromoethane (EDB)	**<0.13**	ug/L	0.50	0.13	1		06/26/13 17:46	106-93-4	
Dibromomethane	**<0.25**	ug/L	0.50	0.25	1		06/26/13 17:46	74-95-3	
1,2-Dichlorobenzene	**<0.092**	ug/L	0.50	0.092	1		06/26/13 17:46	95-50-1	
1,4-Dichlorobenzene	**<0.25**	ug/L	0.50	0.25	1		06/26/13 17:46	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	10.0	5.0	1		06/26/13 17:46	110-57-6	
Dichlorodifluoromethane	**<0.40**	ug/L	1.0	0.40	1		06/26/13 17:46	75-71-8	
1,1-Dichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/26/13 17:46	75-34-3	
1,2-Dichloroethane	**<0.21**	ug/L	0.50	0.21	1		06/26/13 17:46	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	0.50	0.24	1		06/26/13 17:46	75-35-4	
cis-1,2-Dichloroethene	**<0.23**	ug/L	0.50	0.23	1		06/26/13 17:46	156-59-2	
trans-1,2-Dichloroethene	**<0.21**	ug/L	0.50	0.21	1		06/26/13 17:46	156-60-5	
1,2-Dichloropropane	**<0.20**	ug/L	4.0	0.20	1		06/26/13 17:46	78-87-5	
cis-1,3-Dichloropropene	**<0.42**	ug/L	0.50	0.42	1		06/26/13 17:46	10061-01-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
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ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: VET WELL **Lab ID: 10232279020** Collected: 06/12/13 15:40 Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
trans-1,3-Dichloropropene	**<0.25**	ug/L	0.50	0.25	1		06/26/13 17:46	10061-02-6	
Ethylbenzene	**<0.21**	ug/L	0.50	0.21	1		06/26/13 17:46	100-41-4	
2-Hexanone	**<2.5**	ug/L	5.0	2.5	1		06/26/13 17:46	591-78-6	
Iodomethane	**<2.0**	ug/L	4.0	2.0	1		06/26/13 17:46	74-88-4	
Methylene Chloride	**<2.0**	ug/L	4.0	2.0	1		06/26/13 17:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<2.5**	ug/L	5.0	2.5	1		06/26/13 17:46	108-10-1	
Styrene	**<0.24**	ug/L	0.50	0.24	1		06/26/13 17:46	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.25**	ug/L	0.50	0.25	1		06/26/13 17:46	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.13**	ug/L	0.50	0.13	1		06/26/13 17:46	79-34-5	
Tetrachloroethene	**<0.25**	ug/L	0.50	0.25	1		06/26/13 17:46	127-18-4	
Toluene	**<0.22**	ug/L	0.50	0.22	1		06/26/13 17:46	108-88-3	
1,1,1-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/26/13 17:46	71-55-6	
1,1,2-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/26/13 17:46	79-00-5	
Trichloroethene	**<0.12**	ug/L	0.40	0.12	1		06/26/13 17:46	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	0.50	0.12	1		06/26/13 17:46	75-69-4	
1,2,3-Trichloropropane	**<0.54**	ug/L	4.0	0.54	1		06/26/13 17:46	96-18-4	
Vinyl acetate	**<5.0**	ug/L	10.0	5.0	1		06/26/13 17:46	108-05-4	
Vinyl chloride	**<0.20**	ug/L	0.40	0.20	1		06/26/13 17:46	75-01-4	
Xylene (Total)	**<0.75**	ug/L	1.5	0.75	1		06/26/13 17:46	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	111	%	75-125		1		06/26/13 17:46	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1		06/26/13 17:46	2037-26-5	
4-Bromofluorobenzene (S)	103	%	75-125		1		06/26/13 17:46	460-00-4	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**11.5**	mg/L	2.0	1.0	2		06/21/13 19:45	16887-00-6	
Sulfate	**17.9**	mg/L	2.0	1.0	2		06/21/13 19:45	14808-79-8	
353.2 Nitrate + Nitrite pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**4.2**	mg/L	2.0	0.17	20		06/25/13 17:33		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: TRIP BLANK **Lab ID: 10232279021** Collected: Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Acetone	**<10.0**	ug/L	20.0	10.0	1		06/26/13 14:30	67-64-1	
Acrylonitrile	**<5.0**	ug/L	10.0	5.0	1		06/26/13 14:30	107-13-1	
Benzene	**<0.24**	ug/L	0.50	0.24	1		06/26/13 14:30	71-43-2	
Bromochloromethane	**<0.50**	ug/L	1.0	0.50	1		06/26/13 14:30	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	0.50	0.18	1		06/26/13 14:30	75-27-4	
Bromoform	**<2.0**	ug/L	4.0	2.0	1		06/26/13 14:30	75-25-2	
Bromomethane	**<2.0**	ug/L	4.0	2.0	1		06/26/13 14:30	74-83-9	
2-Butanone (MEK)	**<2.5**	ug/L	5.0	2.5	1		06/26/13 14:30	78-93-3	
Carbon disulfide	**<0.22**	ug/L	1.0	0.22	1		06/26/13 14:30	75-15-0	
Carbon tetrachloride	**<0.31**	ug/L	1.0	0.31	1		06/26/13 14:30	56-23-5	
Chlorobenzene	**<0.24**	ug/L	0.50	0.24	1		06/26/13 14:30	108-90-7	
Chloroethane	**<0.50**	ug/L	1.0	0.50	1		06/26/13 14:30	75-00-3	
Chloroform	**<0.50**	ug/L	0.50	0.50	1		06/26/13 14:30	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		06/26/13 14:30	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	4.0	2.0	1		06/26/13 14:30	96-12-8	
Dibromochloromethane	**<0.25**	ug/L	1.0	0.25	1		06/26/13 14:30	124-48-1	
1,2-Dibromoethane (EDB)	**<0.13**	ug/L	0.50	0.13	1		06/26/13 14:30	106-93-4	
Dibromomethane	**<0.25**	ug/L	0.50	0.25	1		06/26/13 14:30	74-95-3	
1,2-Dichlorobenzene	**<0.092**	ug/L	0.50	0.092	1		06/26/13 14:30	95-50-1	
1,4-Dichlorobenzene	**<0.25**	ug/L	0.50	0.25	1		06/26/13 14:30	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	10.0	5.0	1		06/26/13 14:30	110-57-6	
Dichlorodifluoromethane	**<0.40**	ug/L	1.0	0.40	1		06/26/13 14:30	75-71-8	
1,1-Dichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/26/13 14:30	75-34-3	
1,2-Dichloroethane	**<0.21**	ug/L	0.50	0.21	1		06/26/13 14:30	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	0.50	0.24	1		06/26/13 14:30	75-35-4	
cis-1,2-Dichloroethene	**<0.23**	ug/L	0.50	0.23	1		06/26/13 14:30	156-59-2	
trans-1,2-Dichloroethene	**<0.21**	ug/L	0.50	0.21	1		06/26/13 14:30	156-60-5	
1,2-Dichloropropane	**<0.20**	ug/L	4.0	0.20	1		06/26/13 14:30	78-87-5	
cis-1,3-Dichloropropene	**<0.42**	ug/L	0.50	0.42	1		06/26/13 14:30	10061-01-5	
trans-1,3-Dichloropropene	**<0.25**	ug/L	0.50	0.25	1		06/26/13 14:30	10061-02-6	
Ethylbenzene	**<0.21**	ug/L	0.50	0.21	1		06/26/13 14:30	100-41-4	
2-Hexanone	**<2.5**	ug/L	5.0	2.5	1		06/26/13 14:30	591-78-6	
Iodomethane	**<2.0**	ug/L	4.0	2.0	1		06/26/13 14:30	74-88-4	
Methylene Chloride	**<2.0**	ug/L	4.0	2.0	1		06/26/13 14:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<2.5**	ug/L	5.0	2.5	1		06/26/13 14:30	108-10-1	
Styrene	**<0.24**	ug/L	0.50	0.24	1		06/26/13 14:30	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.25**	ug/L	0.50	0.25	1		06/26/13 14:30	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.13**	ug/L	0.50	0.13	1		06/26/13 14:30	79-34-5	
Tetrachloroethene	**<0.25**	ug/L	0.50	0.25	1		06/26/13 14:30	127-18-4	
Toluene	**<0.22**	ug/L	0.50	0.22	1		06/26/13 14:30	108-88-3	
1,1,1-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/26/13 14:30	71-55-6	
1,1,2-Trichloroethane	**<0.25**	ug/L	0.50	0.25	1		06/26/13 14:30	79-00-5	
Trichloroethene	**<0.12**	ug/L	0.40	0.12	1		06/26/13 14:30	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	0.50	0.12	1		06/26/13 14:30	75-69-4	
1,2,3-Trichloropropane	**<0.54**	ug/L	4.0	0.54	1		06/26/13 14:30	96-18-4	
Vinyl acetate	**<5.0**	ug/L	10.0	5.0	1		06/26/13 14:30	108-05-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

ANALYTICAL RESULTS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Sample: TRIP BLANK **Lab ID: 10232279021** Collected: Received: 06/14/13 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Vinyl chloride	**<0.20**	ug/L	0.40	0.20	1		06/26/13 14:30	75-01-4	
Xylene (Total)	**<0.75**	ug/L	1.5	0.75	1		06/26/13 14:30	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%	75-125		1		06/26/13 14:30	17060-07-0	
Toluene-d8 (S)	95	%	75-125		1		06/26/13 14:30	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1		06/26/13 14:30	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
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QUALITY CONTROL DATA

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

QC Batch: MPRP/8684
QC Batch Method: EPA 3010
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Associated Lab Samples: 10232279020

METHOD BLANK: 813458
Matrix: Water
Associated Lab Samples: 10232279020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	<0.00012	0.0010	06/27/13 19:38	
Barium	mg/L	<0.000062	0.0010	06/27/13 19:38	
Cadmium	mg/L	<0.000057	0.0010	06/27/13 19:38	
Chromium	mg/L	<0.00024	0.0010	06/27/13 19:38	
Cobalt	mg/L	<0.000033	0.0010	06/27/13 19:38	
Copper	mg/L	0.00024J	0.0010	06/27/13 19:38	
Iron	mg/L	0.065J	0.25	06/27/13 19:38	
Lead	mg/L	<0.000064	0.0010	06/27/13 19:38	
Manganese	mg/L	0.00056J	0.0010	06/27/13 19:38	
Nickel	mg/L	<0.00013	0.0010	06/27/13 19:38	
Selenium	mg/L	<0.00026	0.0010	06/27/13 19:38	
Silver	mg/L	<0.000025	0.00050	06/27/13 19:38	
Thallium	mg/L	0.00013J	0.0010	06/28/13 20:06	
Vanadium	mg/L	<0.00037	0.0010	06/27/13 19:38	
Zinc	mg/L	0.0032J	0.010	06/27/13 19:38	

LABORATORY CONTROL SAMPLE: 813459

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	.5	0.50	101	80-120	
Barium	mg/L	.5	0.49	97	80-120	
Cadmium	mg/L	.5	0.53	105	80-120	
Chromium	mg/L	.5	0.49	98	80-120	
Cobalt	mg/L	.5	0.49	98	80-120	
Copper	mg/L	.5	0.49	98	80-120	
Iron	mg/L	5	5.1	101	80-120	
Lead	mg/L	.5	0.48	97	80-120	
Manganese	mg/L	.5	0.50	99	80-120	
Nickel	mg/L	.5	0.50	100	80-120	
Selenium	mg/L	.5	0.52	104	80-120	
Silver	mg/L	.25	0.25	99	80-120	
Thallium	mg/L	.5	0.48	97	80-120	
Vanadium	mg/L	.5	0.49	99	80-120	
Zinc	mg/L	.5	0.53	106	80-120	

REPORT OF LABORATORY ANALYSIS

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(406)254-7226

QUALITY CONTROL DATA

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 813460 813461

Parameter	Units	10232279020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	0.00093 J	.5	.5	0.50	0.50	100	100	75-125	0	20	
Barium	mg/L	0.011	.5	.5	0.49	0.49	97	97	75-125	0	20	
Cadmium	mg/L	<0.000057	.5	.5	0.51	0.51	102	102	75-125	0	20	
Chromium	mg/L	0.0010	.5	.5	0.48	0.48	96	96	75-125	1	20	
Cobalt	mg/L	0.000052J	.5	.5	0.47	0.47	94	94	75-125	0	20	
Copper	mg/L	0.027	.5	.5	0.50	0.50	94	94	75-125	0	20	
Iron	mg/L	<0.036	5	5	4.9	4.9	99	98	75-125	0	20	
Lead	mg/L	0.00020 J	.5	.5	0.48	0.47	95	95	75-125	0	20	
Manganese	mg/L	0.00033 J	.5	.5	0.48	0.48	96	97	75-125	0	20	
Nickel	mg/L	<0.00013	.5	.5	0.48	0.48	96	96	75-125	1	20	
Selenium	mg/L	0.00093 J	.5	.5	0.51	0.52	102	103	75-125	1	20	
Silver	mg/L	<0.000025	.25	.25	0.24	0.24	95	95	75-125	0	20	
Thallium	mg/L	0.00065 J	.5	.5	0.48	0.48	96	96	75-125	0	20	
Vanadium	mg/L	0.0043	.5	.5	0.49	0.49	97	97	75-125	0	20	
Zinc	mg/L	0.0036J	.5	.5	0.51	0.51	102	102	75-125	0	20	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

QUALITY CONTROL DATA

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

QC Batch: MPRP/8675 Analysis Method: EPA 6020
QC Batch Method: EPA 3010 Analysis Description: 6020 MET Dissolved
Associated Lab Samples: 10232279002, 10232279003, 10232279004, 10232279005, 10232279006, 10232279007, 10232279008, 10232279009, 10232279010, 10232279011, 10232279012, 10232279013, 10232279014, 10232279017, 10232279019

METHOD BLANK: 812965 Matrix: Water
Associated Lab Samples: 10232279002, 10232279003, 10232279004, 10232279005, 10232279006, 10232279007, 10232279008, 10232279009, 10232279010, 10232279011, 10232279012, 10232279013, 10232279014, 10232279017, 10232279019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic, Dissolved	mg/L	<0.00012	0.0010	06/28/13 22:59	
Barium, Dissolved	mg/L	<0.000062	0.0010	06/28/13 22:59	
Cadmium, Dissolved	mg/L	<0.000057	0.0010	06/28/13 22:59	
Chromium, Dissolved	mg/L	<0.00024	0.0010	06/28/13 22:59	
Cobalt, Dissolved	mg/L	<0.000033	0.0010	06/28/13 22:59	
Copper, Dissolved	mg/L	0.00068J	0.0010	07/02/13 17:30	
Iron, Dissolved	mg/L	0.16J	0.25	06/28/13 22:59	
Lead, Dissolved	mg/L	<0.000064	0.0010	06/28/13 22:59	
Manganese, Dissolved	mg/L	0.0012	0.0010	06/28/13 22:59	
Nickel, Dissolved	mg/L	<0.00013	0.0010	06/28/13 22:59	
Selenium, Dissolved	mg/L	<0.00026	0.0010	06/28/13 22:59	
Silver, Dissolved	mg/L	<0.000025	0.00050	06/28/13 22:59	
Thallium, Dissolved	mg/L	<0.000052	0.0010	06/28/13 22:59	
Vanadium, Dissolved	mg/L	<0.00037	0.0010	06/28/13 22:59	
Zinc, Dissolved	mg/L	<0.0024	0.010	07/02/13 17:30	

LABORATORY CONTROL SAMPLE: 812966

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	mg/L	.5	0.52	103	80-120	
Barium, Dissolved	mg/L	.5	0.51	101	80-120	
Cadmium, Dissolved	mg/L	.5	0.52	104	80-120	
Chromium, Dissolved	mg/L	.5	0.50	100	80-120	
Cobalt, Dissolved	mg/L	.5	0.51	102	80-120	
Copper, Dissolved	mg/L	.5	0.51	103	80-120	
Iron, Dissolved	mg/L	5	5.2	104	80-120	
Lead, Dissolved	mg/L	.5	0.48	97	80-120	
Manganese, Dissolved	mg/L	.5	0.50	100	80-120	
Nickel, Dissolved	mg/L	.5	0.52	105	80-120	
Selenium, Dissolved	mg/L	.5	0.52	105	80-120	
Silver, Dissolved	mg/L	.25	0.25	102	80-120	
Thallium, Dissolved	mg/L	.5	0.49	97	80-120	
Vanadium, Dissolved	mg/L	.5	0.50	101	80-120	
Zinc, Dissolved	mg/L	.5	0.53	105	80-120	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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(406)254-7226

QUALITY CONTROL DATA

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 812967 812968

Parameter	Units	10232279006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic, Dissolved	mg/L	0.0013	.5	.5	0.51	0.52	102	104	75-125	2	20	
Barium, Dissolved	mg/L	0.015	.5	.5	0.53	0.53	102	104	75-125	1	20	
Cadmium, Dissolved	mg/L	0.00023 J	.5	.5	0.50	0.52	101	104	75-125	3	20	
Chromium, Dissolved	mg/L	0.0068	.5	.5	0.51	0.51	101	101	75-125	0	20	
Cobalt, Dissolved	mg/L	0.00020 J	.5	.5	0.50	0.50	99	100	75-125	1	20	
Copper, Dissolved	mg/L	0.00048 J	.5	.5	0.50	0.50	99	100	75-125	1	20	
Iron, Dissolved	mg/L	<0.036	5	5	5.1	5.2	101	104	75-125	3	20	
Lead, Dissolved	mg/L	0.00024 J	.5	.5	0.49	0.49	98	98	75-125	1	20	
Manganese, Dissolved	mg/L	0.0011	.5	.5	0.50	0.50	100	100	75-125	0	20	
Nickel, Dissolved	mg/L	0.00025 J	.5	.5	0.51	0.51	102	103	75-125	0	20	
Selenium, Dissolved	mg/L	0.00056 J	.5	.5	0.52	0.53	103	105	75-125	2	20	
Silver, Dissolved	mg/L	0.00013 J	.25	.25	0.25	0.25	100	101	75-125	1	20	
Thallium, Dissolved	mg/L	0.00069 J	.5	.5	0.50	0.50	100	100	75-125	0	20	
Vanadium, Dissolved	mg/L	0.0048	.5	.5	0.51	0.51	100	102	75-125	1	20	
Zinc, Dissolved	mg/L	<0.0024	.5	.5	0.52	0.53	105	106	75-125	1	20	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
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QUALITY CONTROL DATA

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

QC Batch: MPRP/8692
QC Batch Method: EPA 3010
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Associated Lab Samples: 10232279015

METHOD BLANK: 814127 Matrix: Water
Associated Lab Samples: 10232279015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic, Dissolved	mg/L	ND	0.0010	06/29/13 06:36	
Barium, Dissolved	mg/L	ND	0.0010	06/29/13 06:36	
Cadmium, Dissolved	mg/L	ND	0.0010	06/29/13 06:36	
Chromium, Dissolved	mg/L	ND	0.0010	06/29/13 06:36	
Cobalt, Dissolved	mg/L	ND	0.0010	06/29/13 06:36	
Copper, Dissolved	mg/L	ND	0.0010	06/29/13 06:36	
Iron, Dissolved	mg/L	ND	0.25	06/29/13 06:36	
Lead, Dissolved	mg/L	ND	0.0010	06/29/13 06:36	
Manganese, Dissolved	mg/L	ND	0.0010	06/29/13 06:36	
Nickel, Dissolved	mg/L	ND	0.0010	06/29/13 06:36	
Selenium, Dissolved	mg/L	ND	0.0010	06/29/13 06:36	
Silver, Dissolved	mg/L	ND	0.00050	06/29/13 06:36	
Thallium, Dissolved	mg/L	ND	0.0010	06/29/13 06:36	
Vanadium, Dissolved	mg/L	ND	0.0010	06/29/13 06:36	
Zinc, Dissolved	mg/L	ND	0.010	06/29/13 06:36	

LABORATORY CONTROL SAMPLE: 814128

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	mg/L	.5	0.50	101	80-120	
Barium, Dissolved	mg/L	.5	0.49	98	80-120	
Cadmium, Dissolved	mg/L	.5	0.51	103	80-120	
Chromium, Dissolved	mg/L	.5	0.49	97	80-120	
Cobalt, Dissolved	mg/L	.5	0.48	95	80-120	
Copper, Dissolved	mg/L	.5	0.49	98	80-120	
Iron, Dissolved	mg/L	5	4.9	98	80-120	
Lead, Dissolved	mg/L	.5	0.47	94	80-120	
Manganese, Dissolved	mg/L	.5	0.48	97	80-120	
Nickel, Dissolved	mg/L	.5	0.49	98	80-120	
Selenium, Dissolved	mg/L	.5	0.53	105	80-120	
Silver, Dissolved	mg/L	.25	0.25	99	80-120	
Thallium, Dissolved	mg/L	.5	0.46	92	80-120	
Vanadium, Dissolved	mg/L	.5	0.49	98	80-120	
Zinc, Dissolved	mg/L	.5	0.51	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 814129 814130

Parameter	Units	10232279015 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic, Dissolved	mg/L	ND	.5	.5	0.50	0.51	101	101	75-125	1	20	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

QUALITY CONTROL DATA

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 814129 814130

Parameter	Units	10232279015 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium, Dissolved	mg/L	0.040	.5	.5	0.53	0.53	97	97	75-125	0	20	
Cadmium, Dissolved	mg/L	ND	.5	.5	0.51	0.51	101	102	75-125	1	20	
Chromium, Dissolved	mg/L	0.0022	.5	.5	0.49	0.49	97	97	75-125	0	20	
Cobalt, Dissolved	mg/L	ND	.5	.5	0.47	0.47	94	94	75-125	0	20	
Copper, Dissolved	mg/L	ND	.5	.5	0.48	0.48	95	96	75-125	0	20	
Iron, Dissolved	mg/L	ND	5	5	4.9	4.9	98	97	75-125	0	20	
Lead, Dissolved	mg/L	ND	.5	.5	0.47	0.48	95	95	75-125	0	20	
Manganese, Dissolved	mg/L	ND	.5	.5	0.48	0.48	97	97	75-125	0	20	
Nickel, Dissolved	mg/L	ND	.5	.5	0.48	0.48	96	96	75-125	0	20	
Selenium, Dissolved	mg/L	ND	.5	.5	0.52	0.52	104	105	75-125	1	20	
Silver, Dissolved	mg/L	ND	.25	.25	0.24	0.24	95	96	75-125	1	20	
Thallium, Dissolved	mg/L	ND	.5	.5	0.46	0.47	92	93	75-125	1	20	
Vanadium, Dissolved	mg/L	0.0015	.5	.5	0.49	0.50	98	99	75-125	1	20	
Zinc, Dissolved	mg/L	ND	.5	.5	0.51	0.51	101	101	75-125	0	20	

REPORT OF LABORATORY ANALYSIS

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602 S 25th Street
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(406)254-7226

QUALITY CONTROL DATA

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

QC Batch: MPRP/8750 Analysis Method: EPA 6020
QC Batch Method: EPA 3010 Analysis Description: 6020 MET Dissolved
Associated Lab Samples: 10232279002, 10232279003, 10232279004, 10232279005, 10232279006, 10232279007, 10232279008, 10232279009, 10232279010, 10232279012, 10232279017, 10232279019

METHOD BLANK: 818054 Matrix: Water
Associated Lab Samples: 10232279002, 10232279003, 10232279004, 10232279005, 10232279006, 10232279007, 10232279008, 10232279009, 10232279010, 10232279012, 10232279017, 10232279019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Manganese, Dissolved	mg/L	<0.00032	0.0010	07/03/13 23:10	

LABORATORY CONTROL SAMPLE: 818055

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Manganese, Dissolved	mg/L	.5	0.47	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 818056 818057

Parameter	Units	10232279002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Manganese, Dissolved	mg/L	<0.00032	.5	.5	0.48	0.48	97	95	75-125	2	20	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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(406)254-7226

QUALITY CONTROL DATA

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

QC Batch: MSV/24086 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10232279001, 10232279002, 10232279003, 10232279004, 10232279005, 10232279006, 10232279007, 10232279008, 10232279009, 10232279010, 10232279011, 10232279012, 10232279013, 10232279014, 10232279015, 10232279016, 10232279018

METHOD BLANK: 1463576 Matrix: Water
Associated Lab Samples: 10232279001, 10232279002, 10232279003, 10232279004, 10232279005, 10232279006, 10232279007, 10232279008, 10232279009, 10232279010, 10232279011, 10232279012, 10232279013, 10232279014, 10232279015, 10232279016, 10232279018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.25	0.50	06/24/13 13:27	
1,1,1-Trichloroethane	ug/L	<0.25	0.50	06/24/13 13:27	
1,1,2,2-Tetrachloroethane	ug/L	<0.13	0.50	06/24/13 13:27	
1,1,2-Trichloroethane	ug/L	<0.25	0.50	06/24/13 13:27	
1,1-Dichloroethane	ug/L	<0.25	0.50	06/24/13 13:27	
1,1-Dichloroethene	ug/L	<0.24	0.50	06/24/13 13:27	
1,2,3-Trichloropropane	ug/L	<0.54	4.0	06/24/13 13:27	
1,2-Dibromo-3-chloropropane	ug/L	<2.0	4.0	06/24/13 13:27	
1,2-Dibromoethane (EDB)	ug/L	<0.13	0.50	06/24/13 13:27	
1,2-Dichlorobenzene	ug/L	<0.092	0.50	06/24/13 13:27	
1,2-Dichloroethane	ug/L	<0.21	0.50	06/24/13 13:27	
1,2-Dichloropropane	ug/L	<0.20	4.0	06/24/13 13:27	
1,4-Dichlorobenzene	ug/L	<0.25	0.50	06/24/13 13:27	
2-Butanone (MEK)	ug/L	<2.5	5.0	06/24/13 13:27	
2-Hexanone	ug/L	<2.5	5.0	06/24/13 13:27	
4-Methyl-2-pentanone (MIBK)	ug/L	<2.5	5.0	06/24/13 13:27	
Acetone	ug/L	<10.0	20.0	06/24/13 13:27	
Acrylonitrile	ug/L	<5.0	10.0	06/24/13 13:27	
Benzene	ug/L	<0.24	0.50	06/24/13 13:27	
Bromochloromethane	ug/L	<0.50	1.0	06/24/13 13:27	
Bromodichloromethane	ug/L	<0.18	0.50	06/24/13 13:27	
Bromoform	ug/L	<2.0	4.0	06/24/13 13:27	
Bromomethane	ug/L	<2.0	4.0	06/24/13 13:27	
Carbon disulfide	ug/L	<0.22	1.0	06/24/13 13:27	
Carbon tetrachloride	ug/L	<0.31	1.0	06/24/13 13:27	
Chlorobenzene	ug/L	<0.24	0.50	06/24/13 13:27	
Chloroethane	ug/L	<0.50	1.0	06/24/13 13:27	
Chloroform	ug/L	<0.50	0.50	06/24/13 13:27	
Chloromethane	ug/L	<0.50	1.0	06/24/13 13:27	
cis-1,2-Dichloroethene	ug/L	<0.23	0.50	06/24/13 13:27	
cis-1,3-Dichloropropene	ug/L	<0.42	0.50	06/24/13 13:27	
Dibromochloromethane	ug/L	<0.25	1.0	06/24/13 13:27	
Dibromomethane	ug/L	<0.25	0.50	06/24/13 13:27	
Dichlorodifluoromethane	ug/L	<0.40	1.0	06/24/13 13:27	
Ethylbenzene	ug/L	<0.21	0.50	06/24/13 13:27	
Iodomethane	ug/L	<2.0	4.0	06/24/13 13:27	
Methylene Chloride	ug/L	<2.0	4.0	06/24/13 13:27	
Styrene	ug/L	<0.24	0.50	06/24/13 13:27	
Tetrachloroethene	ug/L	<0.25	0.50	06/24/13 13:27	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

QUALITY CONTROL DATA

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

METHOD BLANK: 1463576 Matrix: Water

Associated Lab Samples: 10232279001, 10232279002, 10232279003, 10232279004, 10232279005, 10232279006, 10232279007, 10232279008, 10232279009, 10232279010, 10232279011, 10232279012, 10232279013, 10232279014, 10232279015, 10232279016, 10232279018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Toluene	ug/L	<0.22	0.50	06/24/13 13:27	
trans-1,2-Dichloroethene	ug/L	<0.21	0.50	06/24/13 13:27	
trans-1,3-Dichloropropene	ug/L	<0.25	0.50	06/24/13 13:27	
trans-1,4-Dichloro-2-butene	ug/L	<5.0	10.0	06/24/13 13:27	
Trichloroethene	ug/L	<0.12	0.40	06/24/13 13:27	
Trichlorofluoromethane	ug/L	<0.12	0.50	06/24/13 13:27	
Vinyl acetate	ug/L	<5.0	10.0	06/24/13 13:27	
Vinyl chloride	ug/L	<0.20	0.40	06/24/13 13:27	
Xylene (Total)	ug/L	<0.75	1.5	06/24/13 13:27	
1,2-Dichloroethane-d4 (S)	%	104	75-125	06/24/13 13:27	
4-Bromofluorobenzene (S)	%	103	75-125	06/24/13 13:27	
Toluene-d8 (S)	%	97	75-125	06/24/13 13:27	

LABORATORY CONTROL SAMPLE: 1463577

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	22.9	115	75-125	
1,1,1-Trichloroethane	ug/L	20	20.7	104	75-126	
1,1,2,2-Tetrachloroethane	ug/L	20	20.3	102	75-125	
1,1,2-Trichloroethane	ug/L	20	20.2	101	75-125	
1,1-Dichloroethane	ug/L	20	18.9	94	75-125	
1,1-Dichloroethene	ug/L	20	17.9	89	71-126	
1,2,3-Trichloropropane	ug/L	20	21.6	108	75-125	
1,2-Dibromo-3-chloropropane	ug/L	50	50.3	101	73-125	
1,2-Dibromoethane (EDB)	ug/L	20	21.1	105	75-125	
1,2-Dichlorobenzene	ug/L	20	18.6	93	75-125	
1,2-Dichloroethane	ug/L	20	20.7	103	74-125	
1,2-Dichloropropane	ug/L	20	18.6	93	75-125	
1,4-Dichlorobenzene	ug/L	20	19.2	96	75-125	
2-Butanone (MEK)	ug/L	100	97.2	97	68-126	
2-Hexanone	ug/L	100	109	109	70-125	
4-Methyl-2-pentanone (MIBK)	ug/L	100	103	103	72-125	
Acetone	ug/L	100	88.1	88	69-132	
Acrylonitrile	ug/L	200	194	97	72-125	
Benzene	ug/L	20	18.4	92	75-125	
Bromochloromethane	ug/L	20	19.7	99	75-125	
Bromodichloromethane	ug/L	20	20.1	101	75-125	
Bromoform	ug/L	20	20.2	101	75-126	
Bromomethane	ug/L	20	13.8	69	30-150	
Carbon disulfide	ug/L	20	18.3	92	66-126	
Carbon tetrachloride	ug/L	20	20.1	101	74-127	
Chlorobenzene	ug/L	20	20.0	100	75-125	
Chloroethane	ug/L	20	14.7	73	68-132	
Chloroform	ug/L	20	19.2	96	75-125	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
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QUALITY CONTROL DATA

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

LABORATORY CONTROL SAMPLE: 1463577

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloromethane	ug/L	20	16.6	83	61-129	
cis-1,2-Dichloroethene	ug/L	20	19.7	98	75-125	
cis-1,3-Dichloropropene	ug/L	20	21.0	105	75-125	
Dibromochloromethane	ug/L	20	21.2	106	75-125	
Dibromomethane	ug/L	20	20.3	102	75-125	
Dichlorodifluoromethane	ug/L	20	12.5	63	49-137	
Ethylbenzene	ug/L	20	17.8	89	75-125	
Iodomethane	ug/L	20	14.8	74	30-141	
Methylene Chloride	ug/L	20	17.6	88	75-125	
Styrene	ug/L	20	20.0	100	75-125	
Tetrachloroethene	ug/L	20	19.3	97	75-125	
Toluene	ug/L	20	19.1	95	75-125	
trans-1,2-Dichloroethene	ug/L	20	19.4	97	74-125	
trans-1,3-Dichloropropene	ug/L	20	23.6	118	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	47.3	95	70-127	
Trichloroethene	ug/L	20	18.4	92	75-125	
Trichlorofluoromethane	ug/L	20	17.8	89	69-129	
Vinyl acetate	ug/L	20	22.0	110	70-125	
Vinyl chloride	ug/L	20	15.5	77	70-128	
Xylene (Total)	ug/L	60	58.6	98	75-125	
1,2-Dichloroethane-d4 (S)	%			108	75-125	
4-Bromofluorobenzene (S)	%			106	75-125	
Toluene-d8 (S)	%			105	75-125	

MATRIX SPIKE SAMPLE: 1463578

Parameter	Units	10232279003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.25	20	21.9	109	75-125	
1,1,1-Trichloroethane	ug/L	<0.25	20	21.4	107	75-136	
1,1,2,2-Tetrachloroethane	ug/L	<0.13	20	18.8	94	66-131	
1,1,2-Trichloroethane	ug/L	<0.25	20	18.4	92	75-125	
1,1-Dichloroethane	ug/L	0.42J	20	18.9	92	75-131	
1,1-Dichloroethene	ug/L	<0.24	20	18.2	91	75-138	
1,2,3-Trichloropropane	ug/L	<0.54	20	19.9	99	71-126	
1,2-Dibromo-3-chloropropane	ug/L	<2.0	50	45.9	92	69-127	
1,2-Dibromoethane (EDB)	ug/L	<0.13	20	19.3	96	75-125	
1,2-Dichlorobenzene	ug/L	<0.092	20	17.3	87	75-125	
1,2-Dichloroethane	ug/L	<0.21	20	19.2	96	74-128	
1,2-Dichloropropane	ug/L	<0.20	20	18.4	91	75-125	
1,4-Dichlorobenzene	ug/L	<0.25	20	18.0	89	75-125	
2-Butanone (MEK)	ug/L	<2.5	100	87.0	87	64-125	
2-Hexanone	ug/L	<2.5	100	103	103	67-125	
4-Methyl-2-pentanone (MIBK)	ug/L	<2.5	100	95.6	96	69-125	
Acetone	ug/L	<10.0	100	87.4	87	57-135	
Acrylonitrile	ug/L	<5.0	200	177	89	69-126	
Benzene	ug/L	<0.24	20	17.0	85	70-135	
Bromochloromethane	ug/L	<0.50	20	18.3	92	75-125	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

QUALITY CONTROL DATA

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

MATRIX SPIKE SAMPLE: 1463578

Parameter	Units	10232279003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/L	<0.18	20	19.3	97	75-125	
Bromoform	ug/L	<2.0	20	18.9	95	68-133	
Bromomethane	ug/L	<2.0	20	14.3	72	56-150	
Carbon disulfide	ug/L	<0.22	20	15.9	80	66-135	
Carbon tetrachloride	ug/L	<0.31	20	21.1	106	75-137	
Chlorobenzene	ug/L	<0.24	20	19.3	97	75-125	
Chloroethane	ug/L	1.6	20	17.2	78	64-150	
Chloroform	ug/L	<0.50	20	18.9	94	75-127	
Chloromethane	ug/L	<0.50	20	18.7	93	65-140	
cis-1,2-Dichloroethene	ug/L	0.50J	20	18.8	91	75-129	
cis-1,3-Dichloropropene	ug/L	<0.42	20	19.8	99	75-125	
Dibromochloromethane	ug/L	<0.25	20	20.3	102	75-125	
Dibromomethane	ug/L	<0.25	20	18.9	94	75-125	
Dichlorodifluoromethane	ug/L	0.72J	20	23.6	114	70-150	
Ethylbenzene	ug/L	<0.21	20	17.4	87	75-125	
Iodomethane	ug/L	<2.0	20	13.6	68	49-150	
Methylene Chloride	ug/L	<2.0	20	16.2	80	73-125	
Styrene	ug/L	<0.24	20	19.3	96	52-137	
Tetrachloroethene	ug/L	1.1	20	21.0	99	75-130	
Toluene	ug/L	<0.22	20	18.7	93	75-125	
trans-1,2-Dichloroethene	ug/L	<0.21	20	18.0	90	75-135	
trans-1,3-Dichloropropene	ug/L	<0.25	20	21.1	105	75-125	
trans-1,4-Dichloro-2-butene	ug/L	<5.0	50	41.8	84	62-130	
Trichloroethene	ug/L	0.97	20	19.6	93	75-129	
Trichlorofluoromethane	ug/L	0.12J	20	24.3	121	75-150	
Vinyl acetate	ug/L	<5.0	20	20.8	104	57-139	
Vinyl chloride	ug/L	<0.20	20	18.6	93	75-147	
Xylene (Total)	ug/L	<0.75	60	57.5	96	75-125	
1,2-Dichloroethane-d4 (S)	%				109	75-125	
4-Bromofluorobenzene (S)	%				103	75-125	
Toluene-d8 (S)	%				107	75-125	

SAMPLE DUPLICATE: 1463579

Parameter	Units	10232279004 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.25	<0.25		30	
1,1,1-Trichloroethane	ug/L	<0.25	<0.25		30	
1,1,2,2-Tetrachloroethane	ug/L	<0.13	<0.13		30	
1,1,2-Trichloroethane	ug/L	<0.25	<0.25		30	
1,1-Dichloroethane	ug/L	<0.25	<0.25		30	
1,1-Dichloroethene	ug/L	<0.24	<0.24		30	
1,2,3-Trichloropropane	ug/L	<0.54	<0.54		30	
1,2-Dibromo-3-chloropropane	ug/L	<2.0	<2.0		30	
1,2-Dibromoethane (EDB)	ug/L	<0.13	<0.13		30	
1,2-Dichlorobenzene	ug/L	<0.092	<0.092		30	
1,2-Dichloroethane	ug/L	<0.21	<0.21		30	
1,2-Dichloropropane	ug/L	<0.20	<0.20		30	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

QUALITY CONTROL DATA

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

SAMPLE DUPLICATE: 1463579

Parameter	Units	10232279004 Result	Dup Result	RPD	Max RPD	Qualifiers
1,4-Dichlorobenzene	ug/L	<0.25	<0.25		30	
2-Butanone (MEK)	ug/L	<2.5	<2.5		30	
2-Hexanone	ug/L	<2.5	<2.5		30	
4-Methyl-2-pentanone (MIBK)	ug/L	<2.5	<2.5		30	
Acetone	ug/L	<10.0	<10.0		30	
Acrylonitrile	ug/L	<5.0	<5.0		30	
Benzene	ug/L	<0.24	<0.24		30	
Bromochloromethane	ug/L	<0.50	<0.50		30	
Bromodichloromethane	ug/L	<0.18	<0.18		30	
Bromoform	ug/L	<2.0	<2.0		30	
Bromomethane	ug/L	<2.0	<2.0		30	
Carbon disulfide	ug/L	<0.22	<0.22		30	
Carbon tetrachloride	ug/L	<0.31	<0.31		30	
Chlorobenzene	ug/L	<0.24	<0.24		30	
Chloroethane	ug/L	<0.50	<0.50		30	
Chloroform	ug/L	<0.50	<0.50		30	
Chloromethane	ug/L	<0.50	<0.50		30	
cis-1,2-Dichloroethene	ug/L	<0.23	<0.23		30	
cis-1,3-Dichloropropene	ug/L	<0.42	<0.42		30	
Dibromochloromethane	ug/L	<0.25	<0.25		30	
Dibromomethane	ug/L	<0.25	<0.25		30	
Dichlorodifluoromethane	ug/L	<0.40	<0.40		30	
Ethylbenzene	ug/L	<0.21	<0.21		30	
Iodomethane	ug/L	<2.0	<2.0		30	
Methylene Chloride	ug/L	<2.0	<2.0		30	
Styrene	ug/L	<0.24	<0.24		30	
Tetrachloroethene	ug/L	<0.25	<0.25		30	
Toluene	ug/L	<0.22	<0.22		30	
trans-1,2-Dichloroethene	ug/L	<0.21	<0.21		30	
trans-1,3-Dichloropropene	ug/L	<0.25	<0.25		30	
trans-1,4-Dichloro-2-butene	ug/L	<5.0	<5.0		30	
Trichloroethene	ug/L	<0.12	<0.12		30	
Trichlorofluoromethane	ug/L	<0.12	<0.12		30	
Vinyl acetate	ug/L	<5.0	<5.0		30	
Vinyl chloride	ug/L	<0.20	<0.20		30	
Xylene (Total)	ug/L	<0.75	<0.75		30	
1,2-Dichloroethane-d4 (S)	%	106	103	3		
4-Bromofluorobenzene (S)	%	104	103	.5		
Toluene-d8 (S)	%	95	97	2		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

QUALITY CONTROL DATA

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

QC Batch: MSV/24104 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10232279017, 10232279019, 10232279020, 10232279021

METHOD BLANK: 1465274 Matrix: Water
Associated Lab Samples: 10232279017, 10232279019, 10232279020, 10232279021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.25	0.50	06/26/13 13:41	
1,1,1-Trichloroethane	ug/L	<0.25	0.50	06/26/13 13:41	
1,1,2,2-Tetrachloroethane	ug/L	<0.13	0.50	06/26/13 13:41	
1,1,2-Trichloroethane	ug/L	<0.25	0.50	06/26/13 13:41	
1,1-Dichloroethane	ug/L	<0.25	0.50	06/26/13 13:41	
1,1-Dichloroethene	ug/L	<0.24	0.50	06/26/13 13:41	
1,2,3-Trichloropropane	ug/L	<0.54	4.0	06/26/13 13:41	
1,2-Dibromo-3-chloropropane	ug/L	<2.0	4.0	06/26/13 13:41	
1,2-Dibromoethane (EDB)	ug/L	<0.13	0.50	06/26/13 13:41	
1,2-Dichlorobenzene	ug/L	<0.092	0.50	06/26/13 13:41	
1,2-Dichloroethane	ug/L	<0.21	0.50	06/26/13 13:41	
1,2-Dichloropropane	ug/L	<0.20	4.0	06/26/13 13:41	
1,4-Dichlorobenzene	ug/L	<0.25	0.50	06/26/13 13:41	
2-Butanone (MEK)	ug/L	<2.5	5.0	06/26/13 13:41	
2-Hexanone	ug/L	<2.5	5.0	06/26/13 13:41	
4-Methyl-2-pentanone (MIBK)	ug/L	<2.5	5.0	06/26/13 13:41	
Acetone	ug/L	<10.0	20.0	06/26/13 13:41	
Acrylonitrile	ug/L	<5.0	10.0	06/26/13 13:41	
Benzene	ug/L	<0.24	0.50	06/26/13 13:41	
Bromochloromethane	ug/L	<0.50	1.0	06/26/13 13:41	
Bromodichloromethane	ug/L	<0.18	0.50	06/26/13 13:41	
Bromoform	ug/L	<2.0	4.0	06/26/13 13:41	
Bromomethane	ug/L	<2.0	4.0	06/26/13 13:41	
Carbon disulfide	ug/L	<0.22	1.0	06/26/13 13:41	
Carbon tetrachloride	ug/L	<0.31	1.0	06/26/13 13:41	
Chlorobenzene	ug/L	<0.24	0.50	06/26/13 13:41	
Chloroethane	ug/L	<0.50	1.0	06/26/13 13:41	
Chloroform	ug/L	<0.50	0.50	06/26/13 13:41	
Chloromethane	ug/L	<0.50	1.0	06/26/13 13:41	
cis-1,2-Dichloroethene	ug/L	<0.23	0.50	06/26/13 13:41	
cis-1,3-Dichloropropene	ug/L	<0.42	0.50	06/26/13 13:41	
Dibromochloromethane	ug/L	<0.25	1.0	06/26/13 13:41	
Dibromomethane	ug/L	<0.25	0.50	06/26/13 13:41	
Dichlorodifluoromethane	ug/L	<0.40	1.0	06/26/13 13:41	
Ethylbenzene	ug/L	<0.21	0.50	06/26/13 13:41	
Iodomethane	ug/L	<2.0	4.0	06/26/13 13:41	
Methylene Chloride	ug/L	<2.0	4.0	06/26/13 13:41	
Styrene	ug/L	<0.24	0.50	06/26/13 13:41	
Tetrachloroethene	ug/L	<0.25	0.50	06/26/13 13:41	
Toluene	ug/L	<0.22	0.50	06/26/13 13:41	
trans-1,2-Dichloroethene	ug/L	<0.21	0.50	06/26/13 13:41	
trans-1,3-Dichloropropene	ug/L	<0.25	0.50	06/26/13 13:41	
trans-1,4-Dichloro-2-butene	ug/L	<5.0	10.0	06/26/13 13:41	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

QUALITY CONTROL DATA

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

METHOD BLANK: 1465274 Matrix: Water

Associated Lab Samples: 10232279017, 10232279019, 10232279020, 10232279021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Trichloroethene	ug/L	<0.12	0.40	06/26/13 13:41	
Trichlorofluoromethane	ug/L	<0.12	0.50	06/26/13 13:41	
Vinyl acetate	ug/L	<5.0	10.0	06/26/13 13:41	
Vinyl chloride	ug/L	<0.20	0.40	06/26/13 13:41	
Xylene (Total)	ug/L	<0.75	1.5	06/26/13 13:41	
1,2-Dichloroethane-d4 (S)	%	104	75-125	06/26/13 13:41	
4-Bromofluorobenzene (S)	%	101	75-125	06/26/13 13:41	
Toluene-d8 (S)	%	98	75-125	06/26/13 13:41	

LABORATORY CONTROL SAMPLE: 1465275

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	21.7	108	75-125	
1,1,1-Trichloroethane	ug/L	20	19.0	95	75-126	
1,1,2,2-Tetrachloroethane	ug/L	20	18.7	94	75-125	
1,1,2-Trichloroethane	ug/L	20	19.1	96	75-125	
1,1-Dichloroethane	ug/L	20	16.5	83	75-125	
1,1-Dichloroethene	ug/L	20	15.1	76	71-126	
1,2,3-Trichloropropane	ug/L	20	20.2	101	75-125	
1,2-Dibromo-3-chloropropane	ug/L	50	45.4	91	73-125	
1,2-Dibromoethane (EDB)	ug/L	20	19.4	97	75-125	
1,2-Dichlorobenzene	ug/L	20	18.0	90	75-125	
1,2-Dichloroethane	ug/L	20	19.1	96	74-125	
1,2-Dichloropropane	ug/L	20	17.7	89	75-125	
1,4-Dichlorobenzene	ug/L	20	18.3	92	75-125	
2-Butanone (MEK)	ug/L	100	91.9	92	68-126	
2-Hexanone	ug/L	100	112	112	70-125	
4-Methyl-2-pentanone (MIBK)	ug/L	100	102	102	72-125	
Acetone	ug/L	100	87.0	87	69-132	
Acrylonitrile	ug/L	200	180	90	72-125	
Benzene	ug/L	20	16.5	82	75-125	
Bromochloromethane	ug/L	20	18.1	90	75-125	
Bromodichloromethane	ug/L	20	20.3	101	75-125	
Bromoform	ug/L	20	18.9	95	75-126	
Bromomethane	ug/L	20	16.3	82	30-150	
Carbon disulfide	ug/L	20	14.1	71	66-126	
Carbon tetrachloride	ug/L	20	17.7	89	74-127	
Chlorobenzene	ug/L	20	18.9	95	75-125	
Chloroethane	ug/L	20	15.3	77	68-132	
Chloroform	ug/L	20	17.5	87	75-125	
Chloromethane	ug/L	20	19.3	97	61-129	
cis-1,2-Dichloroethene	ug/L	20	17.4	87	75-125	
cis-1,3-Dichloropropene	ug/L	20	18.9	94	75-125	
Dibromochloromethane	ug/L	20	18.8	94	75-125	
Dibromomethane	ug/L	20	19.0	95	75-125	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

QUALITY CONTROL DATA

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

LABORATORY CONTROL SAMPLE: 1465275

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dichlorodifluoromethane	ug/L	20	18.5	92	49-137	
Ethylbenzene	ug/L	20	17.2	86	75-125	
Iodomethane	ug/L	20	14.3	72	30-141	
Methylene Chloride	ug/L	20	16.0	80	75-125	
Styrene	ug/L	20	19.3	96	75-125	
Tetrachloroethene	ug/L	20	17.7	89	75-125	
Toluene	ug/L	20	17.3	87	75-125	
trans-1,2-Dichloroethene	ug/L	20	16.6	83	74-125	
trans-1,3-Dichloropropene	ug/L	20	20.6	103	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	44.4	89	70-127	
Trichloroethene	ug/L	20	16.8	84	75-125	
Trichlorofluoromethane	ug/L	20	19.5	98	69-129	
Vinyl acetate	ug/L	20	19.4	97	70-125	
Vinyl chloride	ug/L	20	17.7	88	70-128	
Xylene (Total)	ug/L	60	56.5	94	75-125	
1,2-Dichloroethane-d4 (S)	%			104	75-125	
4-Bromofluorobenzene (S)	%			102	75-125	
Toluene-d8 (S)	%			105	75-125	

MATRIX SPIKE SAMPLE: 1465276

Parameter	Units	10232554001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	24.8	124	75-125	
1,1,1-Trichloroethane	ug/L	ND	20	24.1	121	75-136	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	21.0	105	66-131	
1,1,2-Trichloroethane	ug/L	ND	20	22.6	113	75-125	
1,1-Dichloroethane	ug/L	ND	20	20.1	101	75-131	
1,1-Dichloroethene	ug/L	ND	20	18.3	92	75-138	
1,2,3-Trichloropropane	ug/L	ND	20	23.2	116	71-126	
1,2-Dibromo-3-chloropropane	ug/L	ND	50	51.0	102	69-127	
1,2-Dibromoethane (EDB)	ug/L	ND	20	21.7	108	75-125	
1,2-Dichlorobenzene	ug/L	ND	20	20.0	100	75-125	
1,2-Dichloroethane	ug/L	ND	20	22.5	112	74-128	
1,2-Dichloropropane	ug/L	ND	20	20.4	102	75-125	
1,4-Dichlorobenzene	ug/L	ND	20	20.0	100	75-125	
2-Butanone (MEK)	ug/L	ND	100	109	109	64-125	
2-Hexanone	ug/L	ND	100	125	125	67-125	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	119	119	69-125	
Acetone	ug/L	ND	100	101	101	57-135	
Acrylonitrile	ug/L	ND	200	197	99	69-126	
Benzene	ug/L	ND	20	19.9	99	70-135	
Bromochloromethane	ug/L	ND	20	20.2	101	75-125	
Bromodichloromethane	ug/L	ND	20	24.2	121	75-125	
Bromoform	ug/L	ND	20	21.2	106	68-133	
Bromomethane	ug/L	ND	20	18.1	90	56-150	
Carbon disulfide	ug/L	ND	20	13.7	69	66-135	
Carbon tetrachloride	ug/L	ND	20	23.5	118	75-137	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

QUALITY CONTROL DATA

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

MATRIX SPIKE SAMPLE: 1465276

Parameter	Units	10232554001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chlorobenzene	ug/L	ND	20	22.2	111	75-125	
Chloroethane	ug/L	ND	20	19.1	96	64-150	
Chloroform	ug/L	ND	20	21.3	107	75-127	
Chloromethane	ug/L	ND	20	23.9	119	65-140	
cis-1,2-Dichloroethene	ug/L	ND	20	19.2	96	75-129	
cis-1,3-Dichloropropene	ug/L	ND	20	21.0	105	75-125	
Dibromochloromethane	ug/L	ND	20	22.3	111	75-125	
Dibromomethane	ug/L	ND	20	21.8	109	75-125	
Dichlorodifluoromethane	ug/L	ND	20	32.2	161	70-150	M1
Ethylbenzene	ug/L	ND	20	22.6	112	75-125	
Iodomethane	ug/L	ND	20	15.6	78	49-150	
Methylene Chloride	ug/L	ND	20	17.1	86	73-125	
Styrene	ug/L	ND	20	22.2	111	52-137	
Tetrachloroethene	ug/L	ND	20	21.1	105	75-130	
Toluene	ug/L	ND	20	21.0	104	75-125	
trans-1,2-Dichloroethene	ug/L	ND	20	18.4	92	75-135	
trans-1,3-Dichloropropene	ug/L	ND	20	23.2	116	75-125	
trans-1,4-Dichloro-2-butene	ug/L	ND	50	46.3	93	62-130	
Trichloroethene	ug/L	ND	20	20.9	104	75-129	
Trichlorofluoromethane	ug/L	ND	20	28.9	145	75-150	
Vinyl acetate	ug/L	ND	20	20.0	100	57-139	
Vinyl chloride	ug/L	ND	20	23.5	118	75-147	
Xylene (Total)	ug/L	ND	60	73.6	122	75-125	ES
1,2-Dichloroethane-d4 (S)	%				109	75-125	
4-Bromofluorobenzene (S)	%				100	75-125	
Toluene-d8 (S)	%				106	75-125	

SAMPLE DUPLICATE: 1465277

Parameter	Units	10232554002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	<0.25		30	
1,1,1-Trichloroethane	ug/L	ND	<0.25		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	<0.13		30	
1,1,2-Trichloroethane	ug/L	ND	<0.25		30	
1,1-Dichloroethane	ug/L	ND	<0.25		30	
1,1-Dichloroethene	ug/L	ND	<0.24		30	
1,2,3-Trichloropropane	ug/L	ND	<0.54		30	
1,2-Dibromo-3-chloropropane	ug/L	ND	<2.0		30	
1,2-Dibromoethane (EDB)	ug/L	ND	<0.13		30	
1,2-Dichlorobenzene	ug/L	ND	0.30J		30	
1,2-Dichloroethane	ug/L	ND	<0.21		30	
1,2-Dichloropropane	ug/L	ND	<0.20		30	
1,4-Dichlorobenzene	ug/L	ND	0.35J		30	
2-Butanone (MEK)	ug/L	ND	<2.5		30	
2-Hexanone	ug/L	ND	<2.5		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	<2.5		30	
Acetone	ug/L	ND	<10.0		30	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

SAMPLE DUPLICATE: 1465277

Parameter	Units	10232554002 Result	Dup Result	RPD	Max RPD	Qualifiers
Acrylonitrile	ug/L	ND	<5.0		30	
Benzene	ug/L	ND	<0.24		30	
Bromochloromethane	ug/L	ND	<0.50		30	
Bromodichloromethane	ug/L	ND	<0.18		30	
Bromoform	ug/L	ND	<2.0		30	
Bromomethane	ug/L	ND	<2.0		30	
Carbon disulfide	ug/L	ND	<0.22		30	
Carbon tetrachloride	ug/L	ND	<0.31		30	
Chlorobenzene	ug/L	ND	<0.24		30	
Chloroethane	ug/L	ND	<0.50		30	
Chloroform	ug/L	ND	<0.50		30	
Chloromethane	ug/L	ND	<0.50		30	
cis-1,2-Dichloroethene	ug/L	ND	<0.23		30	
cis-1,3-Dichloropropene	ug/L	ND	<0.42		30	
Dibromochloromethane	ug/L	ND	<0.25		30	
Dibromomethane	ug/L	ND	<0.25		30	
Dichlorodifluoromethane	ug/L	ND	<0.40		30	
Ethylbenzene	ug/L	ND	0.65		30	
Iodomethane	ug/L	ND	<2.0		30	
Methylene Chloride	ug/L	ND	<2.0		30	
Styrene	ug/L	ND	<0.24		30	
Tetrachloroethene	ug/L	ND	<0.25		30	
Toluene	ug/L	ND	0.26J		30	
trans-1,2-Dichloroethene	ug/L	ND	<0.21		30	
trans-1,3-Dichloropropene	ug/L	ND	<0.25		30	
trans-1,4-Dichloro-2-butene	ug/L	ND	<5.0		30	
Trichloroethene	ug/L	ND	<0.12		30	
Trichlorofluoromethane	ug/L	ND	<0.12		30	
Vinyl acetate	ug/L	ND	<5.0		30	
Vinyl chloride	ug/L	ND	<0.20		30	
Xylene (Total)	ug/L	ND	1.5		30	
1,2-Dichloroethane-d4 (S)	%	110	108	2		
4-Bromofluorobenzene (S)	%	100	101	1		
Toluene-d8 (S)	%	97	100	3		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

QC Batch: MT/12458 Analysis Method: SM 2510B
QC Batch Method: SM 2510B Analysis Description: 2510B Specific Conductance
Associated Lab Samples: 10232279004, 10232279005, 10232279008, 10232279015

METHOD BLANK: 1461819 Matrix: Water
Associated Lab Samples: 10232279004, 10232279005, 10232279008, 10232279015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Specific Conductance	umhos/cm	<5.0	10.0	06/21/13 09:09	

LABORATORY CONTROL SAMPLE: 1461820

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Specific Conductance	umhos/cm	1000	955	95	90-110	

SAMPLE DUPLICATE: 1461821

Parameter	Units	10232120010 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance	umhos/cm	844	837	.9	20	

SAMPLE DUPLICATE: 1461822

Parameter	Units	60147022004 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance	umhos/cm	666	664	.3	20	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

QC Batch: MT/12432 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 10232279004, 10232279005, 10232279008, 10232279015

METHOD BLANK: 1460181 Matrix: Water
Associated Lab Samples: 10232279004, 10232279005, 10232279008, 10232279015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.50	1.0	06/20/13 12:06	
Sulfate	mg/L	<0.50	1.0	06/20/13 12:06	

LABORATORY CONTROL SAMPLE: 1460182

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.6	96	90-110	
Sulfate	mg/L	10	10	100	90-110	

MATRIX SPIKE SAMPLE: 1460183

Parameter	Units	10232120001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	45.0	200	238	97	90-110	
Sulfate	mg/L	1020	1000	2090	108	90-110	

MATRIX SPIKE SAMPLE: 1460185

Parameter	Units	10232279004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	4.8	10	15.3	105	90-110	
Sulfate	mg/L	9.1	10	20.0	109	90-110	

SAMPLE DUPLICATE: 1460184

Parameter	Units	10232120002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	52.5	55.0	5	20	
Sulfate	mg/L	1160	1160	.3	20	

SAMPLE DUPLICATE: 1460186

Parameter	Units	10232279005 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	16.1	16.1	.08	20	
Sulfate	mg/L	12.8	12.7	.6	20	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

QC Batch: MT/12444 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 10232279002, 10232279003, 10232279006, 10232279007, 10232279009, 10232279010, 10232279011, 10232279012, 10232279013, 10232279014, 10232279017, 10232279019, 10232279020

METHOD BLANK: 1461344 Matrix: Water
Associated Lab Samples: 10232279002, 10232279003, 10232279006, 10232279007, 10232279009, 10232279010, 10232279011, 10232279012, 10232279013, 10232279014, 10232279017, 10232279019, 10232279020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.50	1.0	06/21/13 05:34	
Sulfate	mg/L	<0.50	1.0	06/21/13 05:34	

LABORATORY CONTROL SAMPLE: 1461345

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.6	96	90-110	
Sulfate	mg/L	10	10.1	101	90-110	

MATRIX SPIKE SAMPLE: 1461346

Parameter	Units	10232279002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	27.2	20	50.0	114	90-110	M1
Sulfate	mg/L	17.5	20	38.9	107	90-110	

MATRIX SPIKE SAMPLE: 1461348

Parameter	Units	10232279020 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	11.5	20	32.7	106	90-110	
Sulfate	mg/L	17.9	20	39.4	107	90-110	

SAMPLE DUPLICATE: 1461347

Parameter	Units	10232279003 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	35.4	34.5	2	20	
Sulfate	mg/L	16.7	16.4	2	20	

SAMPLE DUPLICATE: 1461349

Parameter	Units	10232279019 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	74.2	72.3	3	20	
Sulfate	mg/L	68.4	66.6	3	20	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

QC Batch: MT/12516 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10232279001, 10232279002, 10232279003, 10232279004, 10232279005, 10232279006, 10232279007, 10232279008, 10232279009, 10232279010, 10232279011, 10232279012, 10232279013, 10232279014, 10232279015, 10232279017, 10232279019, 10232279020

METHOD BLANK: 1464669 Matrix: Water
Associated Lab Samples: 10232279001, 10232279002, 10232279003, 10232279004, 10232279005, 10232279006, 10232279007, 10232279008, 10232279009, 10232279010, 10232279011, 10232279012, 10232279013, 10232279014, 10232279015, 10232279017, 10232279019, 10232279020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.0087	0.10	06/25/13 16:36	

METHOD BLANK: 1464671 Matrix: Water
Associated Lab Samples: 10232279001, 10232279002, 10232279003, 10232279004, 10232279005, 10232279006, 10232279007, 10232279008, 10232279009, 10232279010, 10232279011, 10232279012, 10232279013, 10232279014, 10232279015, 10232279017, 10232279019, 10232279020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.0087	0.10	06/25/13 16:39	

LABORATORY CONTROL SAMPLE: 1464670

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	.33	0.30	90	90-110	

LABORATORY CONTROL SAMPLE: 1464672

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	.33	0.32	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1464673 1464674

Parameter	Units	10232279001 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	2.4	.33	.33	2.4	2.6	0	60	90-110	8	20	M6

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

QC Batch: MT/12380 Analysis Method: SM 4500-H+B
QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH
Associated Lab Samples: 10232279004, 10232279005, 10232279008, 10232279015

LABORATORY CONTROL SAMPLE: 1457779

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
pH at 25 Degrees C	Std. Units	7	7.0	100	98-102	H6

SAMPLE DUPLICATE: 1457780

Parameter	Units	10232279015 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.1	7.2	.7	3	H6

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay
PASI-M	Pace Analytical Services - Minneapolis
PASI-MT	Pace Analytical Services - Montana

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
ES	The reported result is estimated because one or more of the constituent results are qualified as such.
H6	Analysis initiated outside of the 15 minute EPA recommended holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10232279020	**VET WELL**	EPA 3010	MPRP/8684	EPA 6020	ICPM/3872
10232279002	**LF-3**	EPA 3010	MPRP/8675	EPA 6020	ICPM/3866
10232279002	**LF-3**	EPA 3010	MPRP/8750	EPA 6020	ICPM/3900
10232279003	**MW-4**	EPA 3010	MPRP/8675	EPA 6020	ICPM/3866
10232279003	**MW-4**	EPA 3010	MPRP/8750	EPA 6020	ICPM/3900
10232279004	**MW-5**	EPA 3010	MPRP/8675	EPA 6020	ICPM/3866
10232279004	**MW-5**	EPA 3010	MPRP/8750	EPA 6020	ICPM/3900
10232279005	**MW-6**	EPA 3010	MPRP/8675	EPA 6020	ICPM/3866
10232279005	**MW-6**	EPA 3010	MPRP/8750	EPA 6020	ICPM/3900
10232279006	**MW-6B**	EPA 3010	MPRP/8675	EPA 6020	ICPM/3866
10232279006	**MW-6B**	EPA 3010	MPRP/8750	EPA 6020	ICPM/3900
10232279007	**MW-7A**	EPA 3010	MPRP/8675	EPA 6020	ICPM/3866
10232279007	**MW-7A**	EPA 3010	MPRP/8750	EPA 6020	ICPM/3900
10232279008	**MW-8A**	EPA 3010	MPRP/8675	EPA 6020	ICPM/3866
10232279008	**MW-8A**	EPA 3010	MPRP/8750	EPA 6020	ICPM/3900
10232279009	**MW-8C**	EPA 3010	MPRP/8675	EPA 6020	ICPM/3866
10232279009	**MW-8C**	EPA 3010	MPRP/8750	EPA 6020	ICPM/3900
10232279010	**MW-9A**	EPA 3010	MPRP/8675	EPA 6020	ICPM/3866
10232279010	**MW-9A**	EPA 3010	MPRP/8750	EPA 6020	ICPM/3900
10232279011	**MW-10**	EPA 3010	MPRP/8675	EPA 6020	ICPM/3866
10232279012	**MW-11**	EPA 3010	MPRP/8675	EPA 6020	ICPM/3866
10232279012	**MW-11**	EPA 3010	MPRP/8750	EPA 6020	ICPM/3900
10232279013	**MW-12**	EPA 3010	MPRP/8675	EPA 6020	ICPM/3866
10232279014	**MW-13**	EPA 3010	MPRP/8675	EPA 6020	ICPM/3866
10232279015	**MW-15**	EPA 3010	MPRP/8692	EPA 6020	ICPM/3878
10232279017	**SEEP**	EPA 3010	MPRP/8675	EPA 6020	ICPM/3866
10232279017	**SEEP**	EPA 3010	MPRP/8750	EPA 6020	ICPM/3900
10232279019	**DUP**	EPA 3010	MPRP/8675	EPA 6020	ICPM/3866
10232279019	**DUP**	EPA 3010	MPRP/8750	EPA 6020	ICPM/3900
10232279001	**LF-2**	EPA 8260B	MSV/24086		
10232279002	**LF-3**	EPA 8260B	MSV/24086		
10232279003	**MW-4**	EPA 8260B	MSV/24086		
10232279004	**MW-5**	EPA 8260B	MSV/24086		
10232279005	**MW-6**	EPA 8260B	MSV/24086		
10232279006	**MW-6B**	EPA 8260B	MSV/24086		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10232279007	**MW-7A**	EPA 8260B	MSV/24086		
10232279008	**MW-8A**	EPA 8260B	MSV/24086		
10232279009	**MW-8C**	EPA 8260B	MSV/24086		
10232279010	**MW-9A**	EPA 8260B	MSV/24086		
10232279011	**MW-10**	EPA 8260B	MSV/24086		
10232279012	**MW-11**	EPA 8260B	MSV/24086		
10232279013	**MW-12**	EPA 8260B	MSV/24086		
10232279014	**MW-13**	EPA 8260B	MSV/24086		
10232279015	**MW-15**	EPA 8260B	MSV/24086		
10232279016	**MW-16**	EPA 8260B	MSV/24086		
10232279017	**SEEP**	EPA 8260B	MSV/24104		
10232279018	**SHOP WELL**	EPA 8260B	MSV/24086		
10232279019	**DUP**	EPA 8260B	MSV/24104		
10232279020	**VET WELL**	EPA 8260B	MSV/24104		
10232279021	**TRIP BLANK**	EPA 8260B	MSV/24104		
10232279004	**MW-5**	SM 2510B	MT/12458		
10232279005	**MW-6**	SM 2510B	MT/12458		
10232279008	**MW-8A**	SM 2510B	MT/12458		
10232279015	**MW-15**	SM 2510B	MT/12458		
10232279002	**LF-3**	EPA 300.0	MT/12444		
10232279003	**MW-4**	EPA 300.0	MT/12444		
10232279004	**MW-5**	EPA 300.0	MT/12432		
10232279005	**MW-6**	EPA 300.0	MT/12432		
10232279006	**MW-6B**	EPA 300.0	MT/12444		
10232279007	**MW-7A**	EPA 300.0	MT/12444		
10232279008	**MW-8A**	EPA 300.0	MT/12432		
10232279009	**MW-8C**	EPA 300.0	MT/12444		
10232279010	**MW-9A**	EPA 300.0	MT/12444		
10232279011	**MW-10**	EPA 300.0	MT/12444		
10232279012	**MW-11**	EPA 300.0	MT/12444		
10232279013	**MW-12**	EPA 300.0	MT/12444		
10232279014	**MW-13**	EPA 300.0	MT/12444		
10232279015	**MW-15**	EPA 300.0	MT/12432		
10232279017	**SEEP**	EPA 300.0	MT/12444		
10232279019	**DUP**	EPA 300.0	MT/12444		
10232279020	**VET WELL**	EPA 300.0	MT/12444		
10232279001	**LF-2**	EPA 353.2	MT/12516		
10232279002	**LF-3**	EPA 353.2	MT/12516		
10232279003	**MW-4**	EPA 353.2	MT/12516		
10232279004	**MW-5**	EPA 353.2	MT/12516		
10232279005	**MW-6**	EPA 353.2	MT/12516		
10232279006	**MW-6B**	EPA 353.2	MT/12516		
10232279007	**MW-7A**	EPA 353.2	MT/12516		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
602 S 25th Street
Billings, MT 591014549
(406)254-7226

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 114-710303.302 Bozeman LF
Pace Project No.: 10232279

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10232279008	**MW-8A**	EPA 353.2	MT/12516		
10232279009	**MW-8C**	EPA 353.2	MT/12516		
10232279010	**MW-9A**	EPA 353.2	MT/12516		
10232279011	**MW-10**	EPA 353.2	MT/12516		
10232279012	**MW-11**	EPA 353.2	MT/12516		
10232279013	**MW-12**	EPA 353.2	MT/12516		
10232279014	**MW-13**	EPA 353.2	MT/12516		
10232279015	**MW-15**	EPA 353.2	MT/12516		
10232279017	**SEEP**	EPA 353.2	MT/12516		
10232279019	**DUP**	EPA 353.2	MT/12516		
10232279020	**VET WELL**	EPA 353.2	MT/12516		
10232279004	**MW-5**	SM 4500-H+B	MT/12380		
10232279005	**MW-6**	SM 4500-H+B	MT/12380		
10232279008	**MW-8A**	SM 4500-H+B	MT/12380		
10232279015	**MW-15**	SM 4500-H+B	MT/12380		

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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.

Page: 1 of 2

1629015

Section A Required Client Information:

Company: Tetra Tech
Address: 881 Bridger Dr. Ste 6
Bozeman MT 59715
Email To: mark.pearson@tetratech.com
Phone: 582-8780 Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To:
Copy To:
Purchase Order No.:
Project Name: Bozeman Landfill
Project Number: 114-710303.302

Section C Invoice Information:

Attention: Mark Pearson
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: Samantha Rupe
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: MT

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE)

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: NO_3+NO_2 as N	VOCs	Dissolved Metals Total Recoverable Metals	pH & SC	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	LF-2			6/12 (2013)	2000													X	X	X				001
2	LF-3			↓	1930													X	X	X				002
3	MW-4			6/10	1340													X	X	X				003
4	MW-5				1130													X	X	X	X			004
5	MW-6				1600													X	X	X	X			005
6	MW-6B			↓	1520													X	X	X				006
7	MW-7A			6/12	1230													X	X	X				007
8	MW-8A				1030													X	X	X	X			008
9	MW-8C			↓	930													X	X	X				009
10	MW-9A			6/10	1400													X	X	X				010
11	MW-10			6/12	1430													X	X	X				011
12	MW-11			↓	1730													X	X	X				012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
3 Coolers	Mark Pearson / Fed Ex	6/13/13	2PM	Fed Ex						
	Fed Ex			Mike Watson - Pace	6/14/13	10:15	0.0	Y	Y	Y
							0.6	Y	Y	Y
							0.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Mark Pearson

SIGNATURE of SAMPLER: Mark Pearson

DATE Signed (MM/DD/YY): 6/13/13

ORIGINAL

*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.

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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.

Page: 2 of 2

1629016

Section A Required Client Information:

Company:

Address: Same as Page 1

Email To:

Phone: Fax:

Requested Due Date/TAT:

Section B Required Project Information:

Report To:

Copy To:

Purchase Order No.:

Project Name: Bozeman Landfill

Project Number:

Section C Invoice Information:

Attention:

Company Name:

Address:

Pace Quote Reference:

Pace Project Manager:

Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER

☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: _____

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE)

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	NO_3+NO_2 as N	VOC	Dissolved Metals Tot. Recv. Metals	pH & SC	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-12			6/12/2013	1830														X	X	X			013
2	MW-13			↓	1130														X	X	X			014
3	MW-15			6/10	1230																	X		015
4	MW-16			↓	1700															X	X			016
5	Seep			6/12	1450														X	X	X			017
6	~~Monitor well~~ Shop well			6/10	1720															X	X			018
7	~~Stockpile~~ DUP			6/12	1050														X	X	X			019
8	Rat Well			↓	1540															X	X			020
9	Trip Blank			5/22	—															X	X			021
10																								
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
3 coolers	Mark Pearson / FedEx	6/13/13	1300	FedEx / Mwalter-Pace	6/14/13	1015	Y	0.0	Y	Y
							Y	0.6	Y	Y
							Y	0.6	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Mark Pearson

SIGNATURE of SAMPLER: Mark Pearson DATE Signed (MM/DD/YY): 6/13/13

ORIGINAL

*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.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 14Nov2012 Page 1 of 1
	Document No.: **F-MT-C-184-rev.02**	Issuing Authority: Pace Montana Quality Office

Sample Condition Upon Receipt

Client Name: Tetra Tech Bozeman **Project #:** WO#: 10232279

Courier: ☒Fed Ex ☐UPS ☐USPS ☐Client ☐Commercial ☐Pace ☐Other:

Tracking Number: 7999 9339 8210, 8368, 8162

Custody Seal on Cooler/Box Present? ☒Yes ☐No **Seals Intact?** ☒Yes ☐No **Optional:** Proj. Due Date: Proj. Name:

Packing Material: ☒Bubble Wrap ☒Bubble Bags ☐None ☐Other: **Temp Blank?** ☒Yes ☐No

Thermometer Used: ☒1383045 ☐135 ☐NA **Type of Ice:** ☒Wet ☐Blue ☐None ☒Samples on ice, cooling process has begun

Cooler Temp Read: 0.0, 0.6, 0.6 **Date and Initials of Person Examining Contents:** MW 6/14/13

Cooler Temp Corrected: 0.0, 0.6, 0.6 **Biological Tissue Frozen?** ☐Yes ☒No

Temp should be above freezing to 6°C

				Comments:
Chain of Custody Present?	☒Yes	☐No	☐N/A	1.
Chain of Custody Filled Out?	☒Yes	☐No	☐N/A	2.
Chain of Custody Relinquished?	☒Yes	☐No	☐N/A	3.
Sampler Name and Signature on COC?	☒Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time?	☒Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72 hr)?	☐Yes	☒No	☐N/A	6.
Rush Turn Around Time Requested?	☐Yes	☒No	☐N/A	7.
Sufficient Volume?	☒Yes	☐No	☐N/A	8.
Correct Containers Used?	☒Yes	☐No	☐N/A	9.
-Pace Containers Used?	☒Yes	☐No	☐N/A	
Containers Intact?	☒Yes	☐No	☐N/A	10.
Filtered Volume Received for Dissolved Tests?	☒Yes	☐No	☐N/A	11.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: H2O	☒Yes	☐No	☐N/A	12.
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	☒Yes	☐No	☐N/A	13. ☐HNO_3 ☐H_2SO_4 ☐NaOH ☐HCl
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH>12)	☒Yes	☐No	☐N/A	Sample #
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	☒Yes	☐No		Initial when completed: Lot # of added preservative:
Samples checked for dechlorination?	☐Yes	☐No	☒N/A	14.
Headspace in VOA Vials (>6mm)?	☐Yes	☒No	☐N/A	15.
Trip Blank Present?	☒Yes	☐No	☐N/A	16.
Trip Blank Custody Seals Present?	☒Yes	☐No	☐N/A	
Pace Trip Blank Lot # (if purchased): 051413-1				

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐Yes ☐No

Person Contacted: Date/Time:

Comments/Resolution:

Project Manager Review: **Date:** 6-17-13

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)

Pace Analytical™	Document Name: MT to MN Sample Transfer Form	Revised Date: 19Apr2013 Page: 1 of 1
	Document Number: F-MT-C-179-rev.04	Issuing Authority: Pace Minnesota Quality Office

Shipping (circle):	UPS (Fed Ex)
Tracking #:	5555 4796 7945
Client:	Tetra Tech
Due Date:	27-Jun-2013
Pace WO:	10232279
Project Manager:	Samantha Rupe

MT to MN Sample Transfer Condition Upon Receipt Form

ANALYSIS REQUESTED

Method Number & Description	Container Type	# of Bottles	Number of Samples	Preservative Yes or No	Verify Arrival Date & Initials
Tests					
8260 VOC	VG9H	57	19	Yes	KO 6-19-13
Trip Blank	VG9H	2	1	Yes	KO 6-19-13

REPORTING/MINNESOTA/ADDITIONAL COMMENTS

MINNESOTA SAMPLE RECEIPT INFORMATION

IR Gun (circle): **80512447, B88A912167504, (72337080)** Correction Factor: +.5 | Sample Matrix: WT

Cooler Temp Read (°C): 3.2	Cooler Temp Corrected (°C): 3.7	Filtred volume rec'd for dissolved tests:	Yes __ No __ NA X
Arrived on Ice:	Yes X No __	Samples pH have been checked:	Yes __ No __ NA X
Custody Seal Present:	Yes X No __	Trip Blank Present:	Yes X No __ NA __
Short Hold Time Requested < 72 Hours:	Yes __ No X	Trip Blank Custody Seals Present:	Yes X No __ NA __
Rush TAT Requested:	Yes __ No X	Pace Trip Blank Lot #:	051413-1
Sufficient Sample Volume:	Yes X No __	Sample Composites Required:	Yes __ No __ NA X
Samples Arrived within Hold Time:	Yes X No __	Report Samples:	Wet Wt. __ Dry Wt. __ NA
Containers Intact:	Yes X No __	Reporting Units:	

CUSTODY TRANSFER

Relinquished by/Affiliation	Date	Time	Accepted By Affiliation	Date	Time
McWalters - Pace	6/18/13	1600	KO / Pace	6-19-13	845

CLIENT NOTIFICATION/RESOLUTION

Person Contacted: ____________________ **Date:** ____________

Comments/Resolution: ____________________

Project Manager Review: [signature] **Date:** 6-20-13

Pace Analytical	Document Name: MT to MN Sample Transfer Form	Revised Date: 19Apr2013 Page: 1 of 1
	Document Number: F-MT-C-179-rev.04	Issuing Authority: Pace Minnesota Quality Office

Shipping (circle):	UPS (Fed Ex)
Tracking #:	5665 4796 8459
Client:	Tetra Tech
Due Date:	27-Jun-2013
Pace WO:	10232279
Project Manager:	Samantha Rupe

MT to MN Sample Transfer Condition Upon Receipt Form

Method Number & Description	Container Type	# of Bottles	Number of Samples	Preservative Yes or No	Verify Arrival Date & Initials
Tests					
8260 VOC	VG9H	3	1	Yes	CW 6.21.13

IR Gun (circle): **80512447, B88A912167504, (72337080)** Correction Factor: +.5		Sample Matrix:	WT
Cooler Temp Read (°C): 2.4	Cooler Temp Corrected (°C): 2.9	Filtred volume rec'd for dissolved tests:	Yes __ No __ NA ✓
Arrived on Ice:	Yes ✓ No __	Samples pH have been checked:	Yes __ No __ NA ✓
Custody Seal Present:	Yes ✓ No __	Trip Blank Present:	Yes __ No __ NA ✓
Short Hold Time Requested < 72 Hours:	Yes __ No ✓	Trip Blank Custody Seals Present:	Yes __ No __ NA ✓
Rush TAT Requested:	Yes __ No ✓	Pace Trip Blank Lot #:	
Sufficient Sample Volume:	Yes ✓ No __	Sample Composites Required:	Yes __ No __ NA __
Samples Arrived within Hold Time:	Yes ✓ No __	Report Samples:	Wet Wt. __ Dry Wt. __
Containers Intact:	Yes ✓ No __	Reporting Units:	

Relinquished by/Affiliation	Date	Time	Accepted By Affiliation	Date	Time
[signature] - Pace	6/20/13	1600	[signature] Pace	6.21.13	12:30

Person Contacted: ______________________ **Date:** ______________

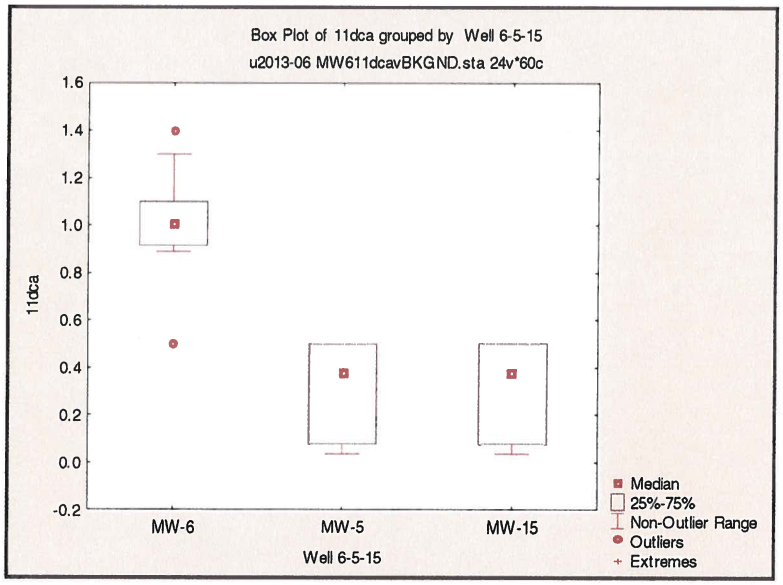
Comments/Resolution: ______________________

Project Manager Review: [signature] **Date:** 6-24-13

APPENDIX E

STATISTICAL EVALUATION DATA AND WORKSHEETS

Mann Whitney MW6 11DCA VS BKGND

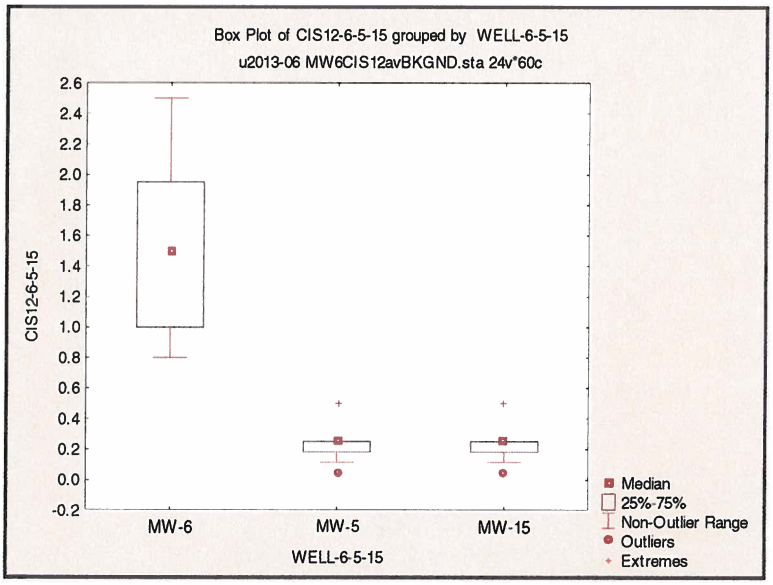


	Descriptive Statistics (u2013-06 MW611dcavBKGND.sta)					
Variable	Valid N	Mean	Median	Minimum	Maximum	Std.Dev.
11dca6	19	0.962105	1.000000	0.500000	1.400000	0.272938
11dca5	16	0.313375	0.375000	0.036000	0.500000	0.205884
11dca15	16	0.313375	0.375000	0.036000	0.500000	0.205884

	Mann-Whitney U Test (u2013-06 MW611dcavBKGND.sta) By variable Well6-5 Marked tests are significant at p <.01000									
variable	Rank Sum MW-6	Rank Sum MW-5	U	Z	p-value	Z adjusted	p-value	Valid N MW-6	Valid N MW-5	2*1sided exact p
11dca6-5	514.0000	152.0000	16.00000	4.568427	0.000005	4.671784	0.000003	20	16	0.000000

	Mann-Whitney U Test (u2013-06 MW611dcavBKGND.sta) By variable Well6-15 Marked tests are significant at p <.01000									
variable	Rank Sum MW-6	Rank Sum MW-15	U	Z	p-value	Z adjusted	p-value	Valid N MW-6	Valid N MW-15	2*1sided exact p
11dca6-15	510.0000	156.0000	20.00000	4.441084	0.000009	4.565899	0.000005	20	16	0.000001

Mann Whitney - MW6 CIS12 VS BKGND

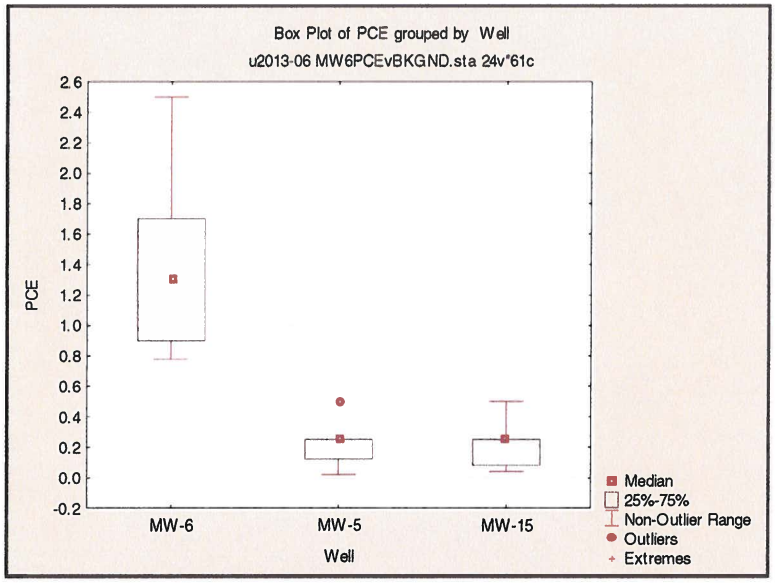


	Descriptive Statistics (u2013-06 MW6CIS12avBKGND.sta)					
Variable	Valid N	Mean	Median	Minimum	Maximum	Std.Dev.
CIS12-6	19	1.494737	1.500000	0.800000	2.500000	0.546172
CIS12-5	16	0.235938	0.250000	0.040000	0.500000	0.158947
CIS12-15	16	0.235938	0.250000	0.040000	0.500000	0.158947

	Mann-Whitney U Test (u2013-06 MW6CIS12avBKGND.sta) By variable Well6-5 Marked tests are significant at p <.01000									
variable	Rank Sum MW-6	Rank Sum MW-5	U	Z	p-value	Z adjusted	p-value	Valid N MW-6	Valid N MW-5	2*1sided exact p
CIS12-6-5	530.0000	136.0000	0.00	5.077798	0.000000	5.128880	0.000000	20	16	0.000000

	Mann-Whitney U Test (u2013-06 MW6CIS12avBKGND.sta) By variable Well6-15 Marked tests are significant at p <.01000									
variable	Rank Sum MW-6	Rank Sum MW-15	U	Z	p-value	Z adjusted	p-value	Valid N MW-6	Valid N MW-15	2*1sided exact p
CIS12-6-15	530.0000	136.0000	0.00	5.077798	0.000000	5.128880	0.000000	20	16	0.000000

Mann Whitney MW6 PCE VS BKGND

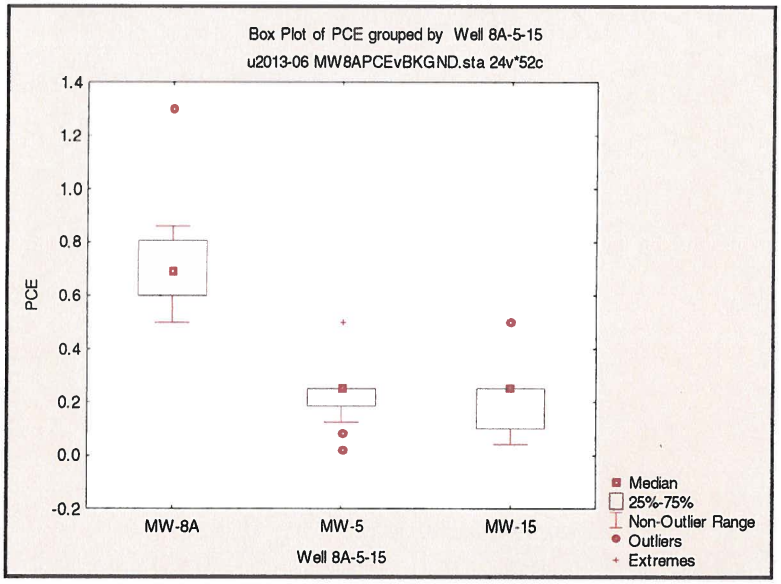


	Descriptive Statistics (u2013-06 MW6PCEvBKGND.sta)					
Variable	Valid N	Mean	Median	Minimum	Maximum	Std.Dev.
PCE6	19	1.340000	1.300000	0.780000	2.500000	0.494537
PCE5	16	0.242844	0.250000	0.020500	0.500000	0.150925
PCE15	16	0.228500	0.250000	0.041000	0.500000	0.132567

	Mann-Whitney U Test (u2013-06 MW6PCEvBKGND.sta) By variable WELL6-5 Marked tests are significant at p <.01000									
variable	Rank Sum MW-6	Rank Sum MW-5	U	Z	p-value	Z adjusted	p-value	Valid N MW-6	Valid N MW-5	2*1sided exact p
PCE6-5	494.0000	136.0000	0.00	5.016666	0.000001	5.049661	0.000000	19	16	0.000000

	Mann-Whitney U Test (u2013-06 MW6PCEvBKGND.sta) By variable WELL6-15 Marked tests are significant at p <.01000									
variable	Rank Sum MW-6	Rank Sum MW-15	U	Z	p-value	Z adjusted	p-value	Valid N MW-6	Valid N MW-15	2*1sided exact p
PCE6-15	494.0000	136.0000	0.00	5.016666	0.000001	5.062608	0.000000	19	16	0.000000

Mann Whitney MW8A PCE VS BKGND

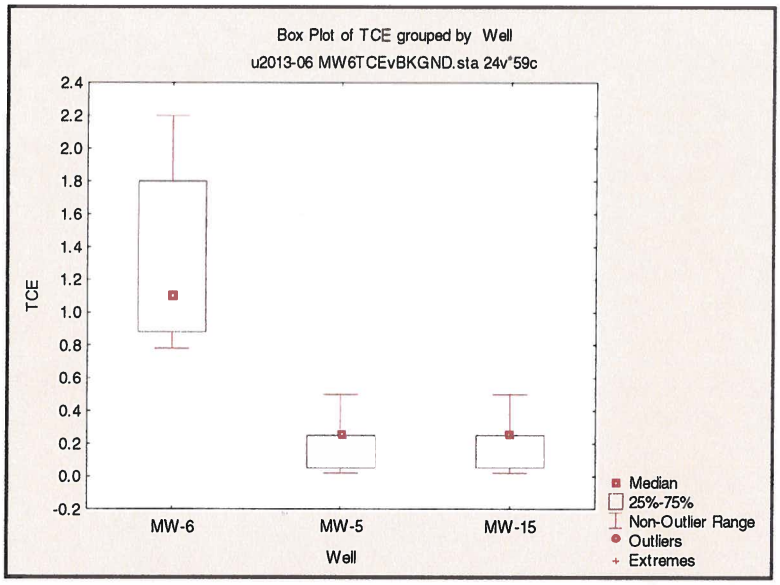


	Descriptive Statistics (u2013-06 MW8APCEvBKGND.sta)					
Variable	Valid N	Mean	Median	Minimum	Maximum	Std.Dev.
PCE8A	16	0.724375	0.690000	0.500000	1.300000	0.190996
PCE5	16	0.242844	0.250000	0.020500	0.500000	0.150925
PCE15	16	0.228500	0.250000	0.041000	0.500000	0.132567

	Mann-Whitney U Test (u2013-06 MW8APCEvBKGND.sta) By variable Well8A-5 Marked tests are significant at p <.01000									
variable	Rank Sum MW-8A	Rank Sum MW-5	U	Z	p-value	Z adjusted	p-value	Valid N MW-8A	Valid N MW-5	2*1sided exact p
PCE8A-5	389.0000	139.0000	3.000000	4.692270	0.000003	4.740742	0.000002	16	16	0.000000

	Mann-Whitney U Test (u2013-06 MW8APCEvBKGND.sta) By variable Well8A-15 Marked tests are significant at p <.01000									
variable	Rank Sum MW-8A	Rank Sum MW-15	U	Z	p-value	Z adjusted	p-value	Valid N MW-8A	Valid N MW-15	2*1sided exact p
PCE8A-15	390.0000	138.0000	2.000000	4.729959	0.000002	4.791838	0.000002	16	16	0.000000

Mann Whitney MW6 TCE VS BKGND

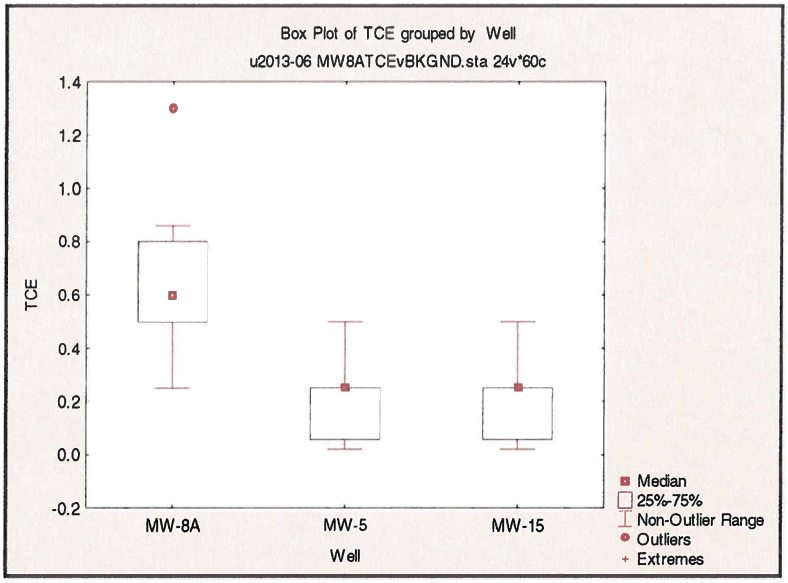


	Descriptive Statistics (u2013-06 MW6TCEvBKGND.sta)					
Variable	Valid N	Mean	Median	Minimum	Maximum	Std.Dev.
TCE6	19	1.324737	1.100000	0.780000	2.200000	0.493608
TCE5	16	0.234094	0.250000	0.020500	0.500000	0.160478
TCE15	16	0.234094	0.250000	0.020500	0.500000	0.160478

	Mann-Whitney U Test (u2013-06 MW6TCEvBKGND.sta) By variable WELL6-5 Marked tests are significant at p <.01000									
variable	Rank Sum MW-6	Rank Sum MW-5	U	Z	p-value	Z adjusted	p-value	Valid N MW-6	Valid N MW-5	2*1sided exact p
TCE6-5	513.0000	153.0000	0.00	5.101694	0.000000	5.134174	0.000000	19	17	0.000000

	Mann-Whitney U Test (u2013-06 MW6TCEvBKGND.sta) By variable WELL6-15 Marked tests are significant at p <.01000									
variable	Rank Sum MW-6	Rank Sum MW-15	U	Z	p-value	Z adjusted	p-value	Valid N MW-6	Valid N MW-15	2*1sided exact p
TCE6-15	513.0000	153.0000	0.00	5.101694	0.000000	5.134174	0.000000	19	17	0.000000

Mann Whitney MW8A TCE VS BKGND

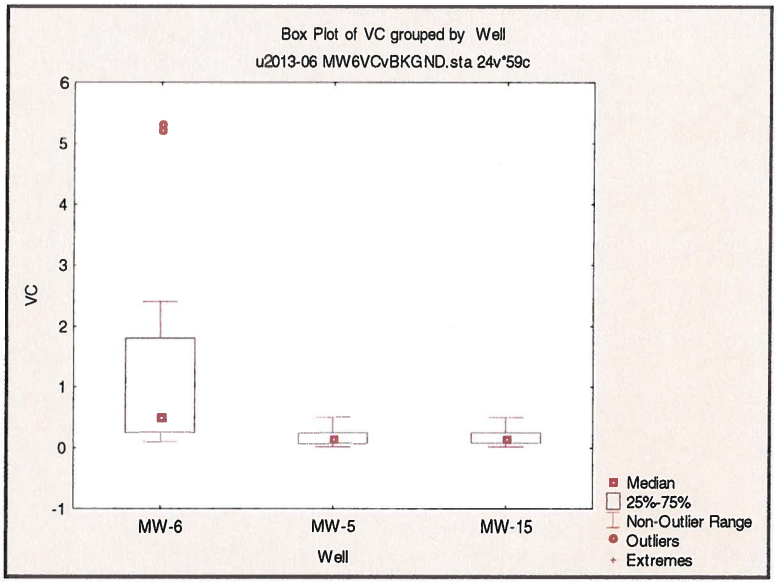


	Descriptive Statistics (u2013-06 MW8ATCEvBKGND.sta)					
Variable	Valid N	Mean	Median	Minimum	Maximum	Std.Dev.
TCE8A	17	0.618824	0.600000	0.250000	1.300000	0.266643
TCE5	16	0.234094	0.250000	0.020500	0.500000	0.160478
TCE15	16	0.234094	0.250000	0.020500	0.500000	0.160478

	Mann-Whitney U Test (u2013-06 MW8ATCEvBKGND.sta) By variable WELL8A-5 Marked tests are significant at p <.01000									
variable	Rank Sum MW-8A	Rank Sum MW-5	U	Z	p-value	Z adjusted	p-value	Valid N MW-8A	Valid N MW-5	2*1sided exact p
TCE8A-5	404.5000	156.5000	20.50000	4.142519	0.000034	4.198316	0.000027	17	16	0.000005

	Mann-Whitney U Test (u2013-06 MW8ATCEvBKGND.sta) By variable WELL8A-15 Marked tests are significant at p <.01000									
variable	Rank Sum MW-8A	Rank Sum MW-15	U	Z	p-value	Z adjusted	p-value	Valid N MW-8A	Valid N MW-15	2*1sided exact p
TCE8A-15	404.5000	156.5000	20.50000	4.142519	0.000034	4.198316	0.000027	17	16	0.000005

Mann Whitney MW6 VC VS BKGND

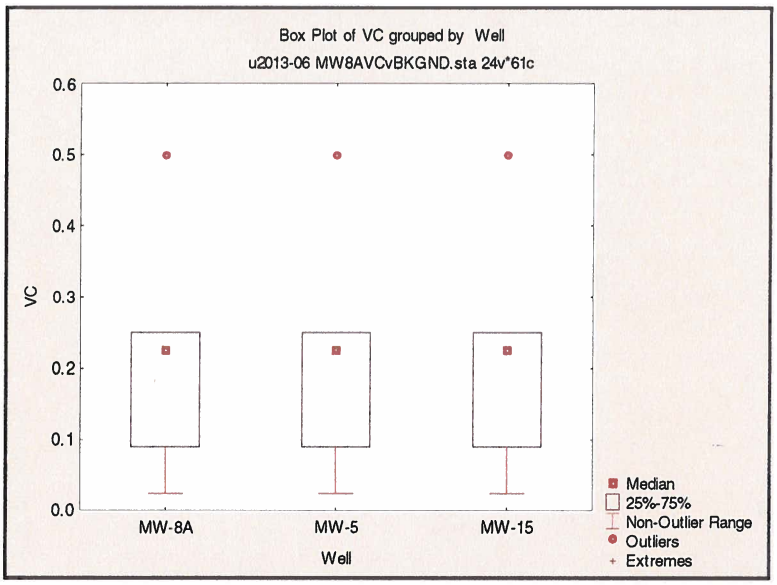


	Descriptive Statistics (u2013-06 MW6VCvBKGND.sta)					
Variable	Valid N	Mean	Median	Minimum	Maximum	Std.Dev.
VC6	19	1.221053	0.500000	0.100000	5.300000	1.586603
VC5	14	0.179607	0.150000	0.024500	0.500000	0.124245
VC15	14	0.179607	0.150000	0.024500	0.500000	0.124245

	Mann-Whitney U Test (u2013-06 MW6VCvBKGND.sta) By variable WELL6-5 Marked tests are significant at p <.01000									
variable	Rank Sum MW-6	Rank Sum MW-5	U	Z	p-value	Z adjusted	p-value	Valid N MW-6	Valid N MW-5	2*1sided exact p
VC6-5	415.5000	145.5000	40.50000	3.351183	0.000805	3.439088	0.000584	19	14	0.000400

	Mann-Whitney U Test (u2013-06 MW6VCvBKGND.sta) By variable WELL6-15 Marked tests are significant at p <.01000									
variable	Rank Sum MW-6	Rank Sum MW-15	U	Z	p-value	Z adjusted	p-value	Valid N MW-6	Valid N MW-15	2*1sided exact p
VC6-15	415.5000	145.5000	40.50000	3.351183	0.000805	3.439088	0.000584	19	14	0.000400

Mann Whitney MW8A VC VS BKGND

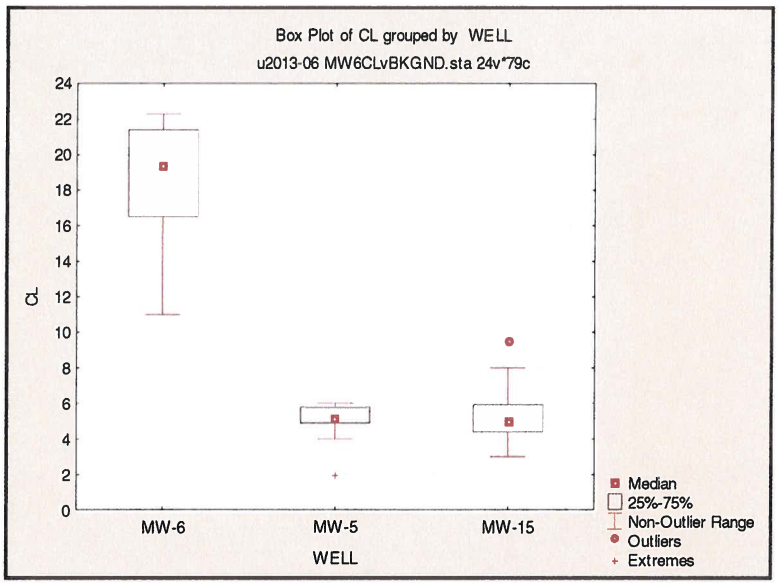


	Descriptive Statistics (u2013-06 MW8AVCvBKGND.sta)					
Variable	Valid N	Mean	Median	Minimum	Maximum	Std.Dev.
VC8A	16	0.204031	0.225000	0.024500	0.500000	0.141124
VC5	16	0.204031	0.225000	0.024500	0.500000	0.141124
VC15	16	0.204031	0.225000	0.024500	0.500000	0.141124

	Mann-Whitney U Test (u2013-06 MW8AVCvBKGND.sta) By variable WELL8A-5 Marked tests are significant at p <.01000									
variable	Rank Sum MW-8A	Rank Sum MW-5	U	Z	p-value	Z adjusted	p-value	Valid N MW-8A	Valid N MW-5	2*1sided exact p
VC8A-5	262.5000	265.5000	126.5000	-0.037689	0.969936	-0.038925	0.968950	16	16	0.955558

	Mann-Whitney U Test (u2013-06 MW8AVCvBKGND.sta) By variable WELL8A-15 Marked tests are significant at p <.01000									
variable	Rank Sum MW-8A	Rank Sum MW-15	U	Z	p-value	Z adjusted	p-value	Valid N MW-8A	Valid N MW-15	2*1sided exact p
VC8A-15	262.5000	265.5000	126.5000	-0.037689	0.969936	-0.038925	0.968950	16	16	0.955558

Mann Whitney MW6 CL VS BKGND

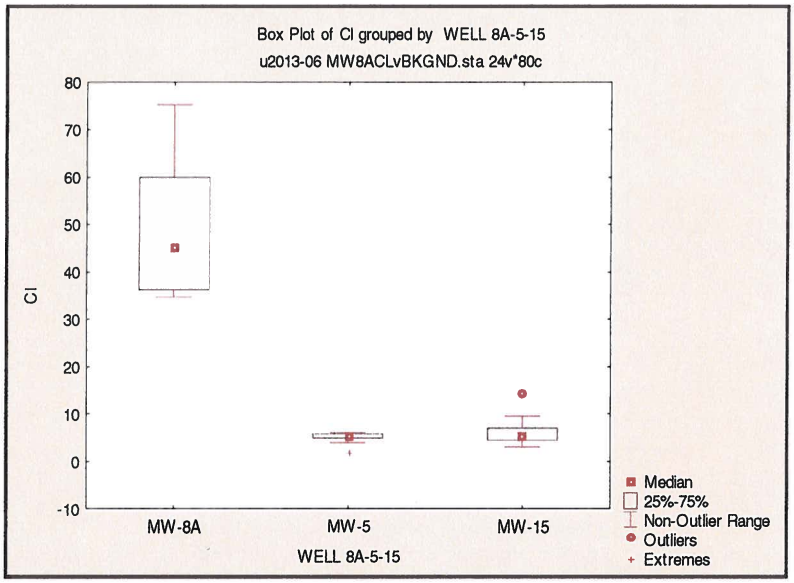


	Descriptive Statistics (u2013-06 MW6CLvBKGND.sta)					
Variable	Valid N	Mean	Median	Minimum	Maximum	Std.Dev.
Cl6	16	18.45625	19.35000	11.00000	22.30000	3.450211
Cl5	16	5.06875	5.05000	2.00000	6.00000	0.989086
Cl15	16	5.40000	4.95000	3.00000	9.50000	1.725109

	Mann-Whitney U Test (u2013-06 MW6CLvBKGND.sta) By variable WELL6-5 Marked tests are significant at p <.01000									
variable	Rank Sum MW-6	Rank Sum MW-5	U	Z	p-value	Z adjusted	p-value	Valid N MW-6	Valid N MW-5	2*1sided exact p
Cl6-5	392.0000	136.0000	0.00	4.805337	0.000002	4.812841	0.000001	16	16	0.000000

	Mann-Whitney U Test (u2013-06 MW6CLvBKGND.sta) By variable WELL6-15 Marked tests are significant at p <.01000									
variable	Rank Sum MW-6	Rank Sum MW-15	U	Z	p-value	Z adjusted	p-value	Valid N MW-6	Valid N MW-15	2*1sided exact p
Cl6-15	392.0000	136.0000	0.00	4.805337	0.000002	4.810630	0.000002	16	16	0.000000

Mann Whitney MW8A CL VS BKGND

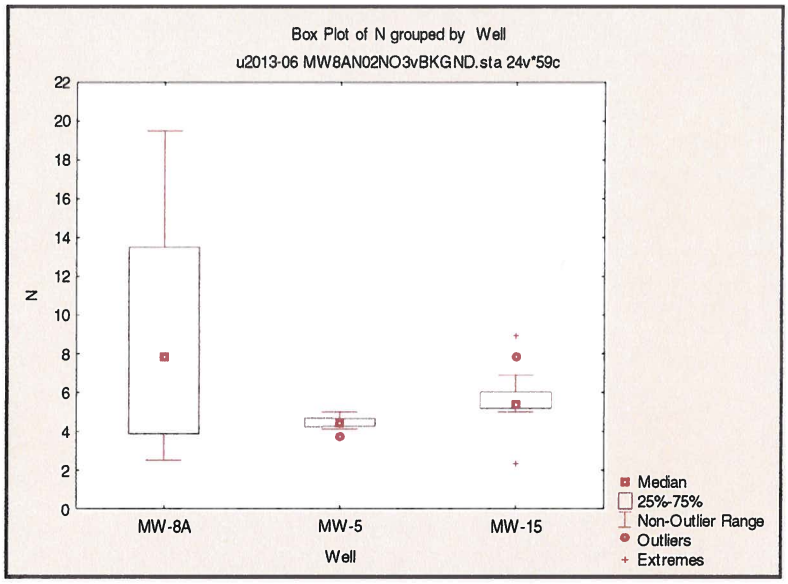


	Descriptive Statistics (u2013-06 MW8ACLvBKGND.sta)					
Variable	Valid N	Mean	Median	Minimum	Maximum	Std.Dev.
CL8A	16	48.81250	45.30000	34.70000	75.30000	14.41027
Cl5	16	5.06875	5.05000	2.00000	6.00000	0.98909
Cl15	16	5.97500	5.00000	3.00000	14.00000	2.74408

	Mann-Whitney U Test (u2013-06 MW8ACLvBKGND.sta) By variable WELL8A-5 Marked tests are significant at p <.01000									
variable	Rank Sum MW-8A	Rank Sum MW-5	U	Z	p-value	Z adjusted	p-value	Valid N MW-8A	Valid N MW-5	2*1sided exact p
Cl8A-5	392.0000	136.0000	0.00	4.805337	0.000002	4.811072	0.000002	16	16	0.000000

	Mann-Whitney U Test (u2013-06 MW8ACLvBKGND.sta) By variable WELL8A-15 Marked tests are significant at p <.01000									
variable	Rank Sum MW-8A	Rank Sum MW-15	U	Z	p-value	Z adjusted	p-value	Valid N MW-8A	Valid N MW-15	2*1sided exact p
Cl8A-15	392.0000	136.0000	0.00	4.805337	0.000002	4.808423	0.000002	16	16	0.000000

Mann Whitney MW8A NO2NO3 VS BKGND

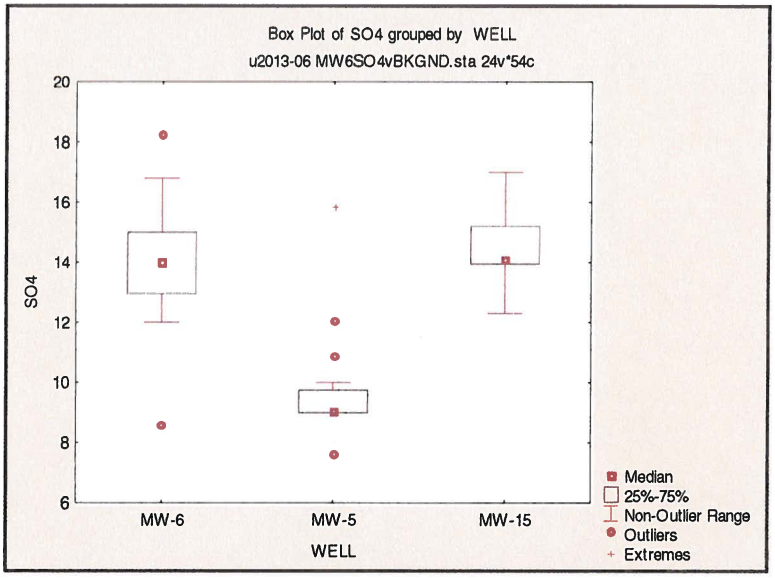


	Descriptive Statistics (u2013-06 MW8AN02NO3vBKGND.sta)					
Variable	Valid N	Mean	Median	Minimum	Maximum	Std.Dev.
N8A	16	8.943750	7.800000	2.510000	19.50000	5.576825
N5	16	4.436250	4.445000	3.660000	5.00000	0.312535
N15	16	5.711250	5.400000	2.280000	8.98000	1.424897

	Mann-Whitney U Test (u2013-06 MW8AN02NO3vBKGND.sta) By variable WELL8A-5 Marked tests are significant at p <.01000									
variable	Rank Sum MW-8A	Rank Sum MW-5	U	Z	p-value	Z adjusted	p-value	Valid N MW-8A	Valid N MW-5	2*1sided exact p
N8A-5	317.5000	210.5000	74.50000	1.997513	0.045770	1.998245	0.045691	16	16	0.042619

	Mann-Whitney U Test (u2013-06 MW8AN02NO3vBKGND.sta) By variable WELL8A-15 Marked tests are significant at p <.01000									
variable	Rank Sum MW-8A	Rank Sum MW-15	U	Z	p-value	Z adjusted	p-value	Valid N MW-8A	Valid N MW-15	2*1sided exact p
N8A-15	295.0000	233.0000	97.00000	1.149512	0.250346	1.150461	0.249955	16	16	0.254227

Mann Whitney MW6 SO4 VS BKGND

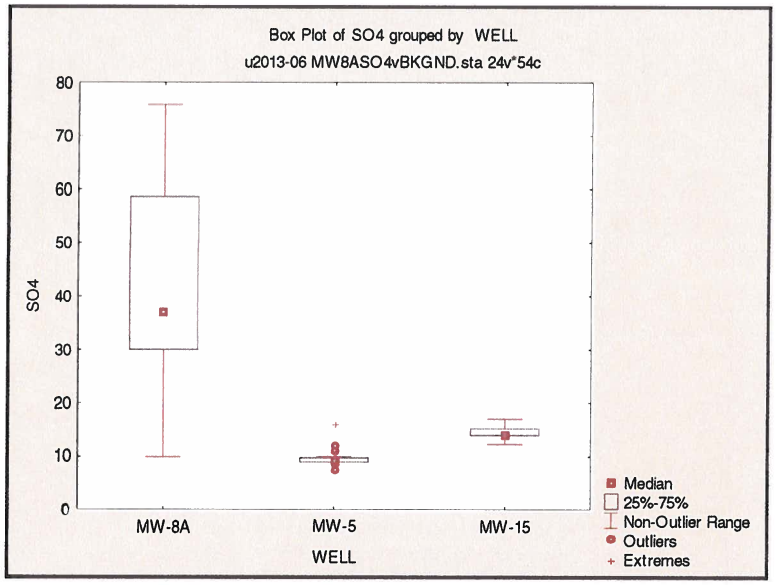


	Descriptive Statistics (u2013-06 MW6SO4vBKGND.sta)					
Variable	Valid N	Mean	Median	Minimum	Maximum	Std.Dev.
SO46	16	14.03875	14.00000	8.62000	18.20000	2.179914
SO45	16	9.76875	9.05000	7.60000	15.80000	1.874644
SO415	16	14.39375	14.10000	12.30000	17.00000	1.230430

	Mann-Whitney U Test (u2013-06 MW6SO4vBKGND.sta) By variable WELL6-5 Marked tests are significant at p <.01000									
variable	Rank Sum MW-6	Rank Sum MW-5	U	Z	p-value	Z adjusted	p-value	Valid N MW-6	Valid N MW-5	2*1sided exact p
SO46-5	364.5000	163.5000	27.50000	3.768892	0.000164	3.790842	0.000150	16	16	0.000046

	Mann-Whitney U Test (u2013-06 MW6SO4vBKGND.sta) By variable WELL6-15 Marked tests are significant at p <.01000									
variable	Rank Sum MW-6	Rank Sum MW-15	U	Z	p-value	Z adjusted	p-value	Valid N MW-6	Valid N MW-15	2*1sided exact p
SO46-15	247.0000	281.0000	111.0000	-0.621867	0.534030	-0.624563	0.532258	16	16	0.539150

Mann Whitney MW8A SO4 VS BKGND



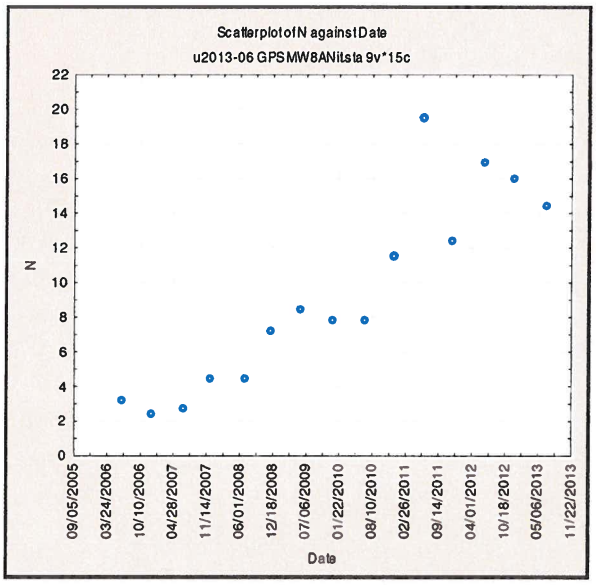
	Descriptive Statistics (u2013-06 MW8ASO4vBKGND.sta)					
Variable	Valid N	Mean	Median	Minimum	Maximum	Std.Dev.
SO48A	16	42.84063	37.00000	9.85000	75.80000	18.81814
SO4-5	16	9.76875	9.05000	7.60000	15.80000	1.87464
SO4-15	16	14.39375	14.10000	12.30000	17.00000	1.23043

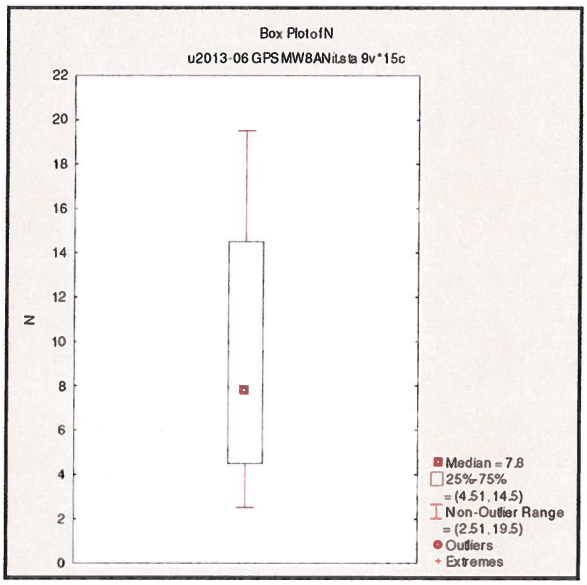
	Mann-Whitney U Test (u2013-06 MW8ASO4vBKGND.sta) By variable WELL8A-5 Marked tests are significant at p <.01000									
variable	Rank Sum MW-8A	Rank Sum MW-5	U	Z	p-value	Z adjusted	p-value	Valid N MW-8A	Valid N MW-5	2*1sided exact p
SO48A-5	388.0000	140.0000	4.000000	4.654581	0.000003	4.679954	0.000003	16	16	0.000000

	Mann-Whitney U Test (u2013-06 MW8ASO4vBKGND.sta) By variable WELL8A-15 Marked tests are significant at p <.01000									
variable	Rank Sum MW-8A	Rank Sum MW-15	U	Z	p-value	Z adjusted	p-value	Valid N MW-8A	Valid N MW-15	2*1sided exact p
SO48A-15	376.0000	152.0000	16.00000	4.202314	0.000026	4.207330	0.000026	16	16	0.000003

Nitrate + Nitrite as N MW8A VS GPS

	1 Var1	2 Date	3 N	4 N Flag	5 GPS
1	MW-8A	06/13/2006	3.250		10
2	MW-8A	12/06/2006	2.510		10
3	MW-8A	06/20/2007	2.800	JF	10
4	MW-8A	12/10/2007	4.510	JF%	10
5	MW-8A	06/24/2008	4.520		10
6	MW-8A	12/09/2008	7.300		10
7	MW-8A	06/01/2009	8.500		10
8	MW-8A	12/09/2009	7.800	JF	10
9	MW-8A	06/15/2010	7.800		10
10	MW-8A	12/07/2010	11.500	J	10
11	MW-8A	06/14/2011	19.500		10
12	MW-8A	12/05/2011	12.500		10
13	MW-8A	06/04/2012	17.000		10
14	MW-8A	12/05/2012	16.000		10
15	MW-8A	06/10/2013	14.500		10



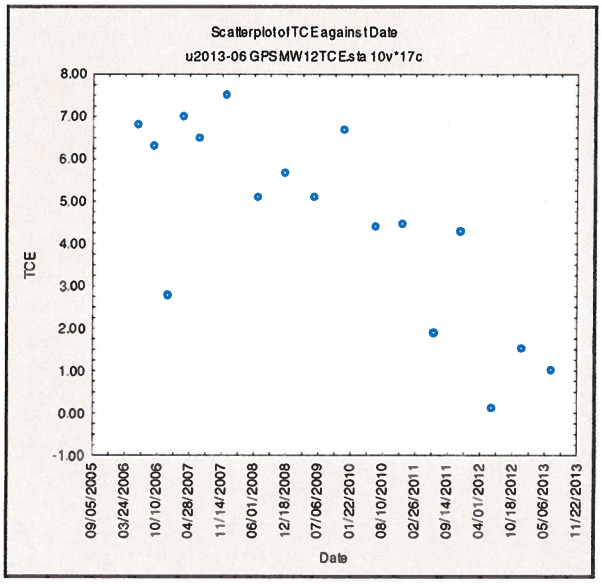


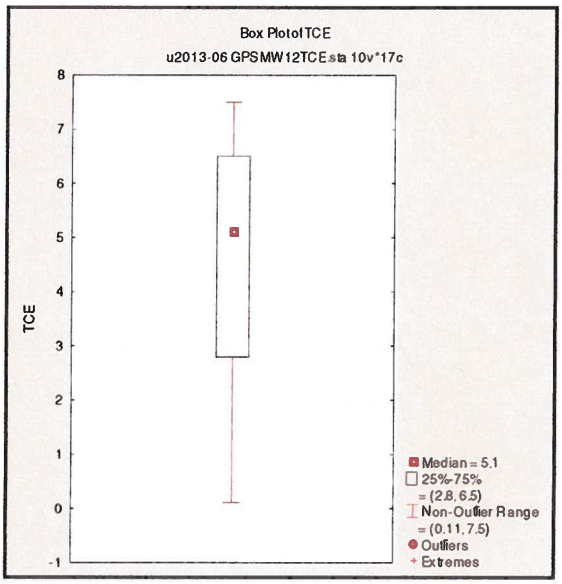
Variable	Descriptive Statistics (u2013-06 GPS MW8ANit.sta)					
	Valid N	Mean	Median	Minimum	Maximum	Std.Dev.
N	15	9.332667	7.800000	2.510000	19.50000	5.543420

Pair of Variables	Wilcoxon Matched Pairs Test (u2013-06 GPS MW8ANit.sta) Marked tests are significant at p <.01000			
	Valid N	T	Z	p-value
N & GPS	15	50.50000	0.539564	0.589498

TCE MW12 VS GPS

	1 Well	2 Date	3 TCE	4 TCEFlag	5 GPS
1	MW-12	06/13/2006	6.80		5
2	MW-12	09/21/2006	6.30		5
3	MW-12	12/07/2006	2.80		5
4	MW-12	03/15/2007	7.00		5
5	MW-12	06/21/2007	6.50		5
6	MW-12	12/11/2007	7.50		5
7	MW-12	06/25/2008	5.10		5
8	MW-12	12/10/2008	5.70		5
9	MW-12	06/02/2009	5.10		5
10	MW-12	12/09/2009	6.70		5
11	MW-12	06/15/2010	4.40		5
12	MW-12	12/07/2010	4.50		5
13	MW-12	06/14/2011	1.90		5
14	MW-12	12/06/2011	4.30		5
15	MW-12	06/05/2012	0.11	U	5
16	MW-12	12/05/2012	1.50		5
17	MW-12	06/12/2013	1.00		5



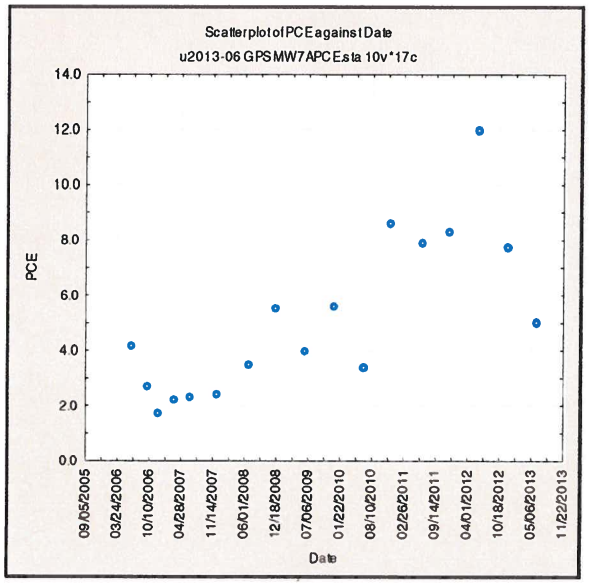


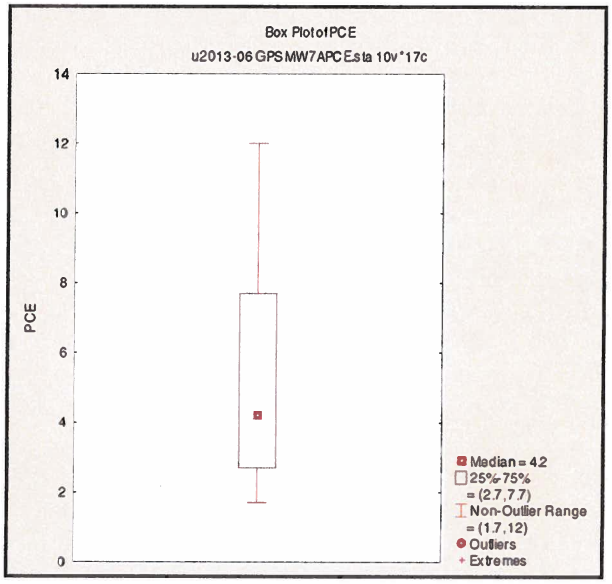
Variable	Descriptive Statistics (u2013-06 GPS MW12TCE.sta)					
	Valid N	Mean	Median	Minimum	Maximum	Std.Dev.
TCE	17	4.541765	5.100000	0.110000	7.500000	2.304513

Pair of Variables	Wilcoxon Matched Pairs Test (u2013-06 GPS MW12TCE.sta) Marked tests are significant at p <.01000			
	Valid N	T	Z	p-value
TCE & GPS	17	66.50000	0.473381	0.635942

PCE MW7A VS GPS

	1 Well	2 Date	3 PCE	4 PCEFlag	5 GPS
1	MW-7A	06/13/2006	4.2		5
2	MW-7A	09/21/2006	2.7		5
3	MW-7A	12/07/2006	1.7		5
4	MW-7A	03/15/2007	2.2		5
5	MW-7A	06/20/2007	2.3		5
6	MW-7A	12/10/2007	2.4		5
7	MW-7A	06/24/2008	3.5		5
8	MW-7A	12/10/2008	5.5		5
9	MW-7A	06/02/2009	4.0		5
10	MW-7A	12/09/2009	5.6		5
11	MW-7A	06/16/2010	3.4		5
12	MW-7A	12/07/2010	8.6		5
13	MW-7A	06/14/2011	7.9		5
14	MW-7A	12/06/2011	8.3		5
15	MW-7A	06/05/2012	12.0		5
16	MW-7A	12/04/2012	7.7		5
17	MW-7A	06/12/2013	5.0		5



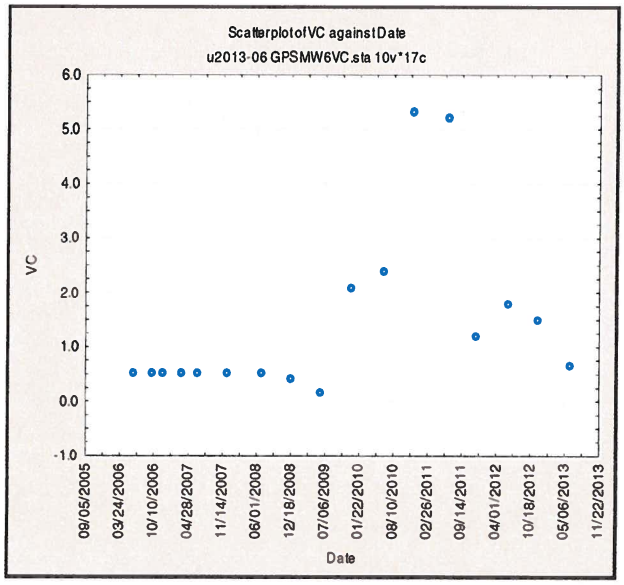


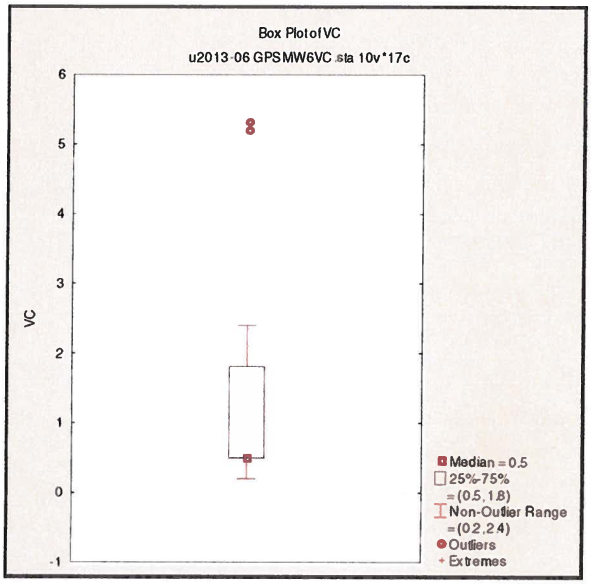
Variable	Descriptive Statistics (u2013-06 GPS MW7APCE.sta) Valid N	Mean	Median	Minimum	Maximum	Std.Dev.
PCE	17	5.117647	4.200000	1.700000	12.00000	2.887957

Pair of Variables	Wilcoxon Matched Pairs Test (u2013-06 GPS MW7APCE.sta) Marked tests are significant at p <.01000 Valid N	T	Z	p-value
PCE & GPS	16	66.50000	0.077563	0.938176

Vinyl Chloride MW6 VS GPS

	1 Well	2 Date	3 VC	4 VCFlag	5 GPS
1	MW-6	06/13/2006	0.5	U	2.0
2	MW-6	09/21/2006	0.5	U(1)	2.0
3	MW-6	12/06/2006	0.5	U	2.0
4	MW-6	03/15/2007	0.5	U	2.0
5	MW-6	06/20/2007	0.5	UJF%	2.0
6	MW-6	12/10/2007	0.5	U	2.0
7	MW-6	06/24/2008	0.5	U	2.0
8	MW-6	12/09/2008	0.4	U	2.0
9	MW-6	06/02/2009	0.2	U	2.0
10	MW-6	12/09/2009	2.1		2.0
11	MW-6	06/15/2010	2.4		2.0
12	MW-6	12/07/2010	5.3	J	2.0
13	MW-6	06/13/2011	5.2	J	2.0
14	MW-6	12/05/2011	1.2		2.0
15	MW-6	06/05/2012	1.8		2.0
16	MW-6	12/04/2012	1.5		2.0
17	MW-6	06/10/2013	0.7		2.0



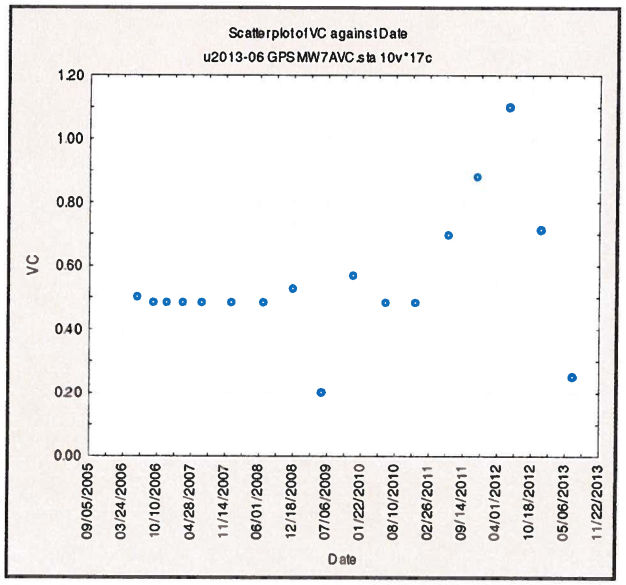


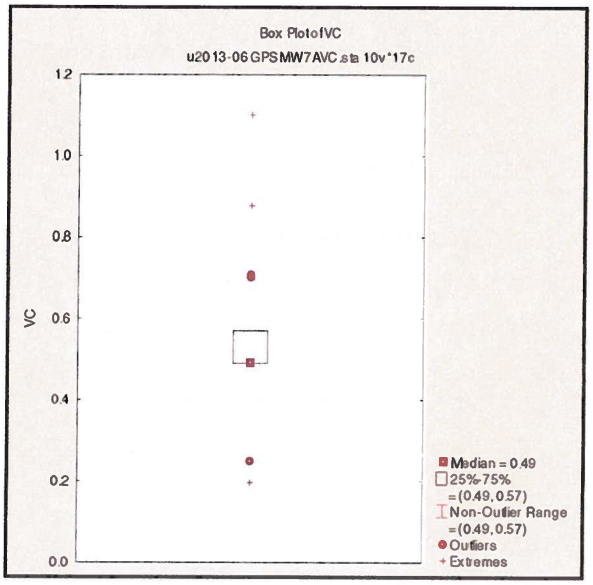
Variable	Descriptive Statistics (u2013-06 GPS MW6VC.sta) Valid N	Mean	Median	Minimum	Maximum	Std.Dev.
VC	17	1.426471	0.500000	0.200000	5.300000	1.581348

Pair of Variables	Wilcoxon Matched Pairs Test (u2013-06 GPS MW6VC.sta) Marked tests are significant at p <.01000 Valid N	T	Z	p-value
VC & GPS	17	37.00000	1.869855	0.061505

Vinyl Chloride MW7A VS GPS

	1 Well	2 Date	3 VC	4 VCFlag	5 GPS	6 VCnorm
1	MW-7A	06/13/2006	0.50		2	0.25
2	MW-7A	09/21/2006	0.49	U	2	0.25
3	MW-7A	12/07/2006	0.49	U	2	0.25
4	MW-7A	03/15/2007	0.49	U	2	0.25
5	MW-7A	06/20/2007	0.49	U	2	0.25
6	MW-7A	12/10/2007	0.49	U	2	0.25
7	MW-7A	06/24/2008	0.49	U	2	0.25
8	MW-7A	12/10/2008	0.53		2	0.53
9	MW-7A	06/02/2009	0.20	U	2	0.25
10	MW-7A	12/09/2009	0.57		2	0.57
11	MW-7A	06/16/2010	0.49	U	2	0.25
12	MW-7A	12/07/2010	0.49	U	2	0.25
13	MW-7A	06/14/2011	0.70		2	0.7
14	MW-7A	12/06/2011	0.88		2	0.88
15	MW-7A	06/05/2012	1.10		2	1.1
16	MW-7A	12/05/2012	0.71		2	1.1
17	MW-7A	06/10/2013	0.25	J	2	1.1



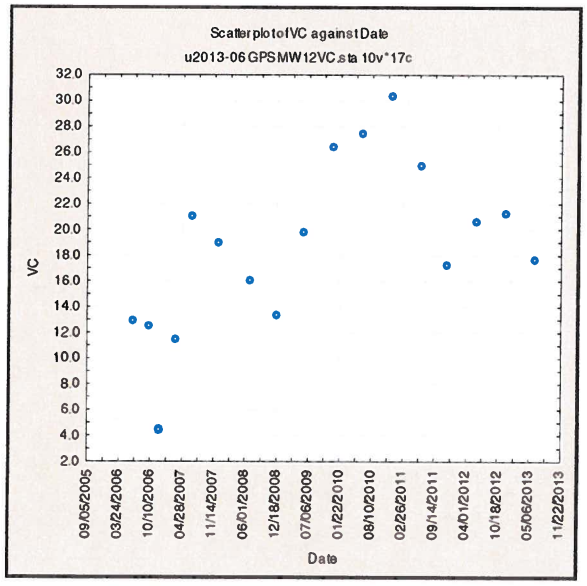


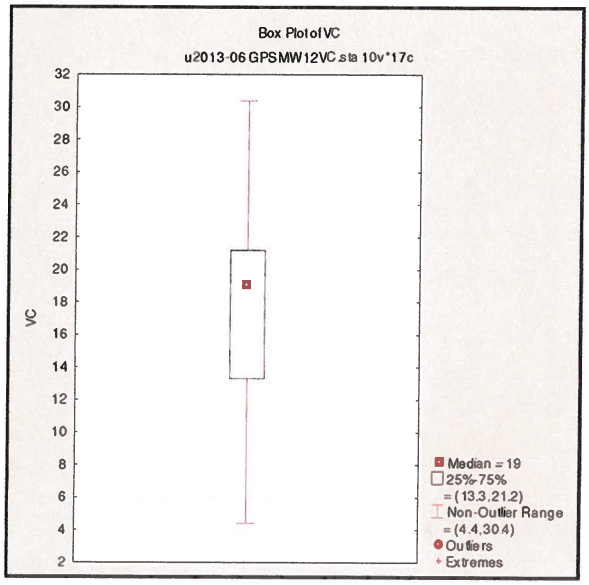
Variable	Descriptive Statistics (u2013-06 GPS MW7AVC.sta) Valid N	Mean	Median	Minimum	Maximum	Std.Dev.
VC	17	0.550588	0.490000	0.200000	1.100000	0.209776

Pair of Variables	Wilcoxon Matched Pairs Test (u2013-06 GPS MW7AVC.sta) Marked tests are significant at p <.01000 Valid N	T	Z	p-value
VC & GPS	17	0.00	3.621365	0.000293

Vinyl Chloride MW12 VS GPS

	1 Well	2 Date	3 VC	4 VCFlag	5 GPS
1	MW-12	06/13/2006	13.0		2
2	MW-12	09/21/2006	12.5		2
3	MW-12	12/07/2006	4.4		2
4	MW-12	03/15/2007	11.5		2
5	MW-12	06/21/2007	21.0	JF%	2
6	MW-12	12/11/2007	19.0		2
7	MW-12	06/25/2008	16.0		2
8	MW-12	12/10/2008	13.3		2
9	MW-12	06/02/2009	19.7		2
10	MW-12	12/09/2009	26.4		2
11	MW-12	06/15/2010	27.4		2
12	MW-12	12/07/2010	30.4	J	2
13	MW-12	06/14/2011	24.9	J	2
14	MW-12	12/06/2011	17.4		2
15	MW-12	06/05/2012	20.7		2
16	MW-12	12/05/2012	21.2		2
17	MW-12	06/10/2013	17.7		2



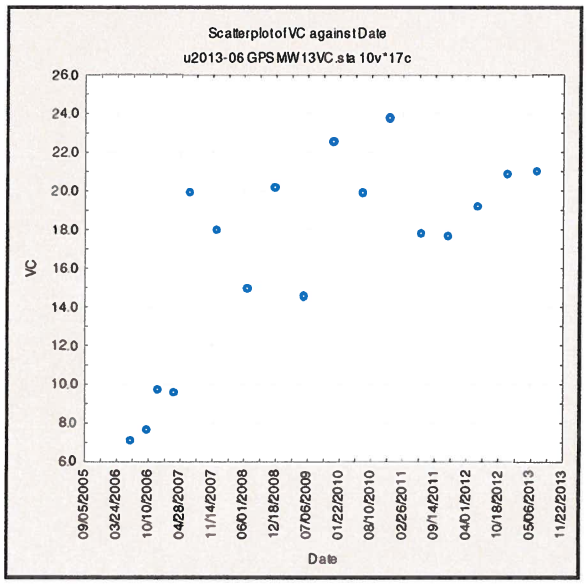


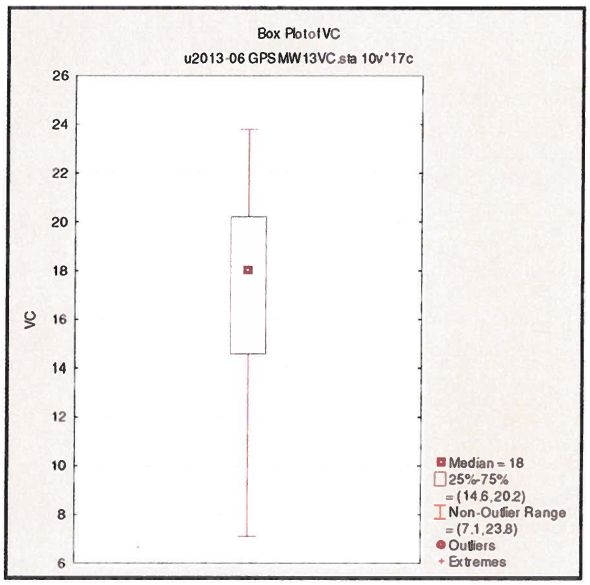
Variable	Descriptive Statistics (u2013-06 GPS MW12VC.sta)					
	Valid N	Mean	Median	Minimum	Maximum	Std.Dev.
VC	17	18.61765	19.00000	4.400000	30.40000	6.582290

Pair of Variables	Wilcoxon Matched Pairs Test (u2013-06 GPS MW12VC.sta) Marked tests are significant at p <.01000			
	Valid N	T	Z	p-value
VC & GPS	17	0.00	3.621365	0.000293

Vinyl Chloride MW13 VS GPS

	1 Well	2 Date	3 VC	4 VCFlag	5 GPS
1	MW-13	06/13/2006	7.1		2
2	MW-13	09/21/2006	7.6		2
3	MW-13	12/07/2006	9.7		2
4	MW-13	03/15/2007	9.6		2
5	MW-13	06/20/2007	20.0	JF%	2
6	MW-13	12/11/2007	18.0		2
7	MW-13	06/24/2008	15.0		2
8	MW-13	12/10/2008	20.2		2
9	MW-13	06/02/2009	14.6		2
10	MW-13	12/09/2009	22.5		2
11	MW-13	06/16/2010	19.9		2
12	MW-13	12/07/2010	23.8	J	2
13	MW-13	06/14/2011	17.9	J	2
14	MW-13	12/07/2011	17.7		2
15	MW-13	06/06/2012	19.3		2
16	MW-13	12/05/2012	20.9		2
17	MW-13	06/12/2013	21.1		2

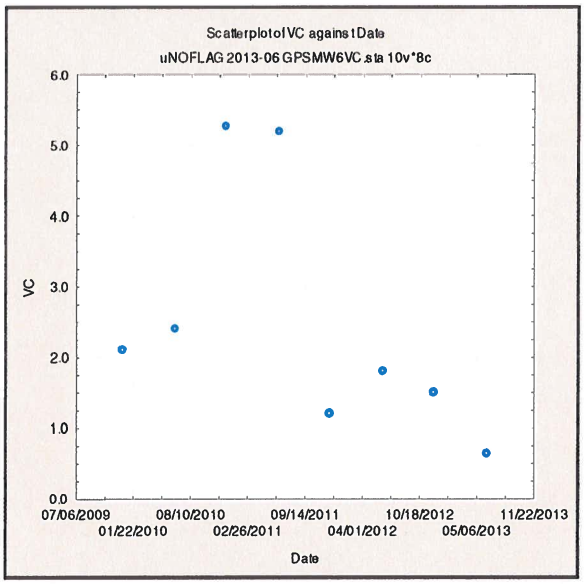


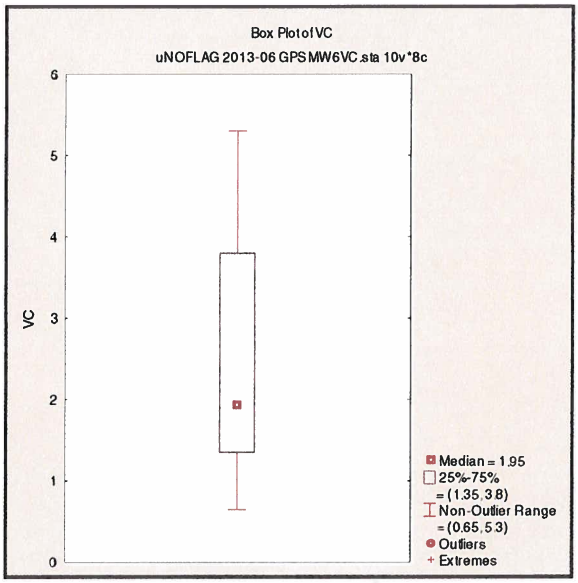


Variable	Descriptive Statistics (u2013-06 GPS MW13VC.sta) Valid N	Mean	Median	Minimum	Maximum	Std.Dev.
VC	17	16.75882	18.00000	7.100000	23.80000	5.285246

Pair of Variables	Wilcoxon Matched Pairs Test (u2013-06 GPS MW13VC.sta) Marked tests are significant at p <.01000 Valid N	T	Z	p-value
VC & GPS	17	0.00	3.621365	0.000293

UNFLAGGED MW6VC VS GPS





	Descriptive Statistics (uNOFLAG 2013-06 GPS MW6VC.sta)					
Variable	Valid N	Mean	Median	Minimum	Maximum	Std.Dev.
VC	8	2.518750	1.950000	0.650000	5.300000	1.768764

	Wilcoxon Matched Pairs Test (uNOFLAG 2013-06 GPS MW6VC.sta) Marked tests are significant at p <.01000			
Pair of Variables	Valid N	T	Z	p-value
VC & GPS	8	17.00000	0.140028	0.888638