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1880 West Oak Parkway
Building 100, Suite 106
Marietta, Georgia 30062

P: 770-973-2100
F: 770-973-7395
www.earthcon.com

July 26, 2019

Ms. Kimberly Kuhn
South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management
2600 Bull Street
Columbia, South Carolina 29201

RECEIVED
JUL 26 2019
SITE ASSESSMENT, REMEDIATION & REVITALIZATION

Subject: **Updated Assessment Report**
Former Ducane Company Site
Blackville, Barnwell County, South Carolina
BLWM File # 401356
EarthCon Project No. 02.20160378.00

Dear Ms. Kuhn:

On behalf of our client Lennox International Inc. (Lennox), EarthCon Consultants, Inc. (EarthCon) is submitting the enclosed Updated Assessment Report for the former Ducane Company Site located in Blackville, Barnwell County, South Carolina (BLWM File # 401356). This report is being submitted in accordance with the requirements of Voluntary Cleanup Contract 16-5848-RP executed on November 17, 2016. Due to the visual nature of Plume Analytics®, we would like to arrange a meeting with you to present the results of the Plume Analytics® study prior to your final review of the enclosed report.

Please free to call us at (770) 973-2100 if you have any questions or if we can provide any additional information.

Respectfully submitted,
EARTHCON CONSULTANTS, INC.

Carol D. Northern
Project Manager

David Richardson, P.G. (SC#2084)
Principal Geologist

Timothy O. Goist, P.G. (SC#1121)
Client Manager

Cc: Mr. Mark Yohman, Director of Environmental Affairs, Lennox International, Inc.

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UPDATED ASSESSMENT REPORT

FORMER DUCANE COMPANY SITE
118 WEST MAIN STREET
BLACKVILLE, BARNWELL COUNTY, SOUTH CAROLINA
BLWM FILE #401356

PREPARED FOR:

LENNOX INTERNATIONAL, INC.
2140 Lake Park Boulevard
Richardson, Texas 75080

RECEIVED
JUL 26 2019
SITE ASSESSMENT,
REMEDIATION &
REVITALIZATION

PREPARED BY:

EARTHCON CONSULTANTS, INC.
1880 West Oak Parkway
Building 100, Suite 106
Marietta, Georgia 30062
770-973-2100

EarthCon Project No. 02.20160378.00

July 2019

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TABLES

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1.0 INTRODUCTION

The former Ducane Company Site (the Site) is located at 118 West Main Street in Blackville, South Carolina (Figure 1). The Site consists of approximately 105 acres with about 19 acres developed with a production building and a research and development building. The Site is identified by Barnwell County as consisting of three parcels. One parcel is owned by the Barnwell County Economic Development Corporation. The other two parcels, which include the Site buildings, are owned by NK Newlook, Inc. and were formerly used for production of wooden commercial display cabinets. The Site is currently vacant.

Assessment and remediation activities have been ongoing at the Site since 1999. Constituents detected in Site soils and groundwater included chlorinated volatile organic compounds (CVOCs) and petroleum hydrocarbons. Approximately nine in-situ chemical oxidation/bio-remediation injection events were performed at the Site from July 2003 to April 2008.

On November 17, 2016, Lennox International (Lennox) entered into Voluntary Cleanup Contract 16-5848-RP (the Contract) with the South Carolina Department of Health and Environmental Control (SCDHEC). In accordance with the Contract requirements, comprehensive groundwater sampling of Site wells was conducted from January 30 to February 2, 2017. The groundwater samples were analyzed for volatile organic compounds (VOCs) to update the status of the known plume. Groundwater samples collected from monitoring wells MW-1, MW-3 and background well MW-6R were also analyzed for Target Analyte List (TAL) metals. The results of the comprehensive groundwater sampling event were presented in an Assessment Report dated March 24, 2017. Based on the sampling event results and the subsequent Plume Analytics® study, the Assessment Report proposed conducting semi-annual groundwater sampling for a period of two years (four total sampling events). The Assessment Report also recommended minor repairs to monitoring wells and the installation of one additional monitoring well (MW-16) north of MW-3 to address a data gap identified during the Plume Analytics® study. SCDHEC approved the Assessment report in letters dated May 8 and June 1, 2017.

The four semi-annual groundwater sampling events were conducted at the Site in October 2017, March 2018, October 2018 and March 2019. Groundwater sampling was conducted as described in the March 2017 Assessment Report and the Work Plan for Monitoring Well Installation dated June 29, 2017 and approved by SCDHEC on July 17, 2017. The results for the first three semi-

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annual groundwater sampling events were provided to SCDHEC in Semi-Annual Monitoring Reports dated January 30, 2018, July 23, 2018 and January 24, 2019.

This Updated Assessment Report for the Former Ducane Company Site (BLWM File #401356) is being submitted to satisfy the requirements of Voluntary Cleanup Contract 16-5848-RP executed on November 17, 2016. This report presents the results of the fourth semi-annual groundwater sampling event conducted in March 2019 along with the updated Plume Analytics® study.

2.0 GROUNDWATER SAMPLING

2.1 Field Activities

The fourth semi-annual groundwater sampling event was conducted at the Site from March 25 to March 28, 2019. There are 20 groundwater monitoring wells located at the Site. Prior to sampling, depth to groundwater measurements were collected at all accessible wells. The locations of the monitoring wells are shown on Figure 2.

Static water levels were measured on March 25, 2019 from 17 Site groundwater monitoring wells. Permission to access well MW-9, which is located on the adjacent private property, was not granted. Monitoring wells MW-12 and MW-13 could not be located. The monitoring well construction details are presented in Table 1 and the water level measurements are presented in Table 2.

Groundwater samples were collected from 17 of the 20 wells using low flow purge and sampling techniques. Wells MW-9, MW-12 and MW-13 could not be sampled for the reasons stated above. Prior to sampling, each well was purged, and the following field parameters were measured: temperature, specific conductance, dissolved oxygen (DO), oxidation reduction potential (ORP), ferrous iron and turbidity. A description of the field procedures is provided in Appendix A. Field parameters measured during the sampling event are summarized in Table 3 and the field sampling forms are provided in Appendix B.

2.2 Groundwater Flow and Site Lithology

The water level measurements collected on March 25, 2019 (Table 2) were used to develop a potentiometric surface map for the Site, which is included as Figure 3. As shown on Figure 3, groundwater elevation data indicate groundwater flow is to the northwest which is consistent with

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groundwater flow measured in previous sampling events. A summary of historical groundwater elevations is provided in Appendix C.

As requested by SCDHEC, lithologic information collected during the previous assessment activities (as shown on well boring logs) was used to develop two cross sections to illustrate the subsurface soils beneath the Site. Figure 4 shows the orientation of the cross sections and Figures 5 and 6 present cross sections A-A' and B-B', respectively. As shown on the cross sections, the Site is underlain by interbedded clayey sand, silty sand, silt, sand, and thin clay layers. The lithology appears to become more sandy with depth.

2.3 Groundwater Analytical Results

Groundwater samples were analyzed for VOCs using EPA Method 8260B and 1,4-dioxane using EPA Method 8260B SIM. The groundwater samples were also analyzed for the monitored natural attenuation (MNA) parameters nitrate, sulfate, sulfide, chloride, alkalinity, total organic carbon (TOC) and dissolved gases (ethane, ethene, methane and propane).

A summary of the VOC analyses is provided in Table 4 and the MNA parameter results are summarized in Table 5. The laboratory analytical reports from Shealy Environmental Services, Inc. (DHEC Certification No. 32010) are provided in Appendix D.

The laboratory data was validated in accordance with the *Contract Laboratory Program National Function Guidelines for Inorganic Data Review* (USEPA, 2008) and *Contract Laboratory Program National Function Guidelines for Inorganic Data Review* (USEPA, 2010). A copy of the validation summary is provided in Appendix D. A summary of historical groundwater analytical results is provided in Appendix E. The March 2019 data is substantially consistent with historical data.

2.4 IDW Management

Investigation derived waste (IDW) in the form of purge water was generated during groundwater sampling activities. IDW was containerized in 55-gallon drums, properly labeled, and properly disposed offsite.

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3.0 GROUNDWATER PLUME ANALYTICS® METHODOLOGY

A Groundwater Plume Analytics® evaluation, including a Ricker Method® Plume Stability Analysis, was conducted for the upper shallow aquifer at the Site using groundwater analytical data provided by Environmental Resources Management (ERM) through 2014 and analytical data collected by EarthCon through March 2019. The Groundwater Plume Analytics® evaluation was conducted for the following constituents of concern (COC):

Chloroethenes

- Tetrachloroethene (PCE);
- Trichloroethene (TCE);
- cis-1,2-Dichloroethene (cis-1,2-DCE);
- trans-1,2-Dichloroethene (trans-1,2-DCE);
- 1,1-Dichloroethene (1,1-DCE);
- Vinyl chloride; and
- Total chloroethenes (molar)

Chloroethanes

- 1,1,2-trichloroethane (1,1,2-TCA)
- 1,1,1-trichloroethane (1,1,1-TCA);
- 1,2-dichloroethane (1,2-DCA);
- 1,1-dichloroethane (1,1-DCA); and
- Total chloroethanes (molar)

Aromatic Hydrocarbons

- Toluene
- Ethylbenzene
- Xylenes

This Groundwater Plume Analytics® evaluation included the following elements:

- Ricker Method® Plume Stability Analysis;
- Total molar trend and molar ratio analysis for chloroethenes and chloroethanes;
- Ricker Method® Spatial Change Indicator™;
- Geochemical MNA isopleths; and
- Groundwater elevation to total chloroethenes correlation evaluation.

The following subsections present the methodologies of the aforementioned elements of the Groundwater Plume Analytics® services. Results of the Groundwater Plume Analytics® evaluation are presented in Section 4.0.

3.1 Ricker Method® Plume Stability Analysis

The Ricker Method® Plume Stability analysis was conducted using procedures described in *A Practical Method to Evaluate Ground Water Contaminant Plume Stability* (Ricker, 2008). The Ricker Method® plume stability analysis compares relative changes in contaminant plume characteristics over time, including area, average concentration, and mass indicator. Note that the term “mass indicator” does not necessarily represent the entire mass in the subsurface but

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rather an expression of it based on a fixed assumption of aquifer thickness and porosity to serve as a way of combining plume area and average concentration into one meaningful metric. Calculation of the actual constituent subsurface mass is often a very complicated exercise, and usually more data/inputs are needed than are available from typical delineation and/or remediation well information. Because the plume mass value is not necessarily an measure of actual contaminant mass, the term "mass indicator" is used to describe this plume characteristic. Since the main purpose of the plume stability analysis is to observe relative changes in plume characteristics between sampling events, applying constants (i.e., porosity and aquifer thickness) to the mass calculation has no bearing on the usefulness of the output of the analysis (i.e., relative rate of change in plume mass).

To demonstrate that a plume is decreasing or stable, temporal changes in these calculated values should result in an overall decreasing or stable trend. An increasing trend in any of these values may indicate that the plume is not stable and/or is possibly expanding. Further details concerning trend analysis and determination of a trend conclusion are provided in Section 3.1.3.

3.1.1 Data Assessment and Input File Development

Data used in the Ricker Method® plume stability analysis for the constituents listed above for the Upper Shallow aquifer at the Site are included in Appendix F. Groundwater analytical data showed that the monitoring well network and the monitoring frequency at the Site varied over a period from approximately 1999 through March 2019. Sampling events occurred at varying frequencies with annual monitoring in 1999 and 2000, semi-annual monitoring from 2001 through 2010, singular events conducted in 2012 and 2014, and five semi-annual events from February 2017 through March 2019.

Not all wells were sampled during each sampling event, and gaps were filled by either interpolating between those events with available data or by extrapolating values using available data from previous or subsequent events. Other scientific and/or statistical assumptions and adjustments to the data, consistent with the Ricker Method®, were necessary to complete the analysis. These adjustments are identified in the Ricker Method® input data set summarized in Appendix F. The assumptions and adjustments used in the analysis include the following:

- Groundwater monitoring wells, in which 100 percent of the data collected were non-detect for a particular constituent, were assumed always to be non-detect for that constituent for

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sampling events where no analytical data were reported. Instances where these values are assigned are indicated by purple shading in Appendix F.

- In most cases non-detect concentrations were evaluated with an assigned concentration value of the stated detection limit. Also, in cases where non-detect results with elevated detection limits were encountered, professional judgment was used to assign a concentration value. For instances in this case with detectable results or non-detect results with a lower detection limit before and after, a value was assigned by interpolation, using the events before and after. For instances with no detectable result or non-detect result with a lower detection limit following the event in question, the last known detectable result was used. In every case the assigned value was based on actual results (detectable value or non-detect at a lower detection limit). Assigned values for non-detect concentrations are noted in Appendix F.

- For sampling events where a particular monitoring well was not sampled, but analytical data prior to and subsequent to are available, the events were assigned values by linearly interpolating between the closest prior and subsequent sampling event. Instances where these values are assigned are indicated by orange shading in Appendix F.

3.1.2 Groundwater Plume Map Development

As part of the Ricker Method® plume stability analysis, constituent concentration isopleth maps, or plume maps, were developed for the groundwater monitoring events that occurred September 1999 through March 2019 for the aforementioned constituents in the upper shallow aquifer. The lower or deep aquifer (as designated by the "D" wells) was evaluated on a well by well basis due to the limited number of wells in this aquifer zone. Plume maps for each compound were delineated to the base contour values listed below.

Constituent	Base Contour (µg/L)
PCE	5
TCE	5
1,1-DCE	7
cis-1,2-DCE	5
Trans-1,2-DCE	5
VC	2

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1,1,2-TCA	5
1,1,1-TCA	5
1,2-DCA	5
1,1-DCA	5
Ethylbenzene	5
Toluene	5
Xylenes	5

Total chloroethene plume maps were developed by converting the individual contours of PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, 1,1-DCE and vinyl chloride to a molar concentration basis, at or above their respective base contours, and summing them to determine a total molar plume for each event. Total chloroethane plume maps were developed in the same manner using the base contours for 1,1,2-TCA, 1,1,1-TCA, 1,2-DCA and 1,1-DCA.

The area of the constituent-specific plume for each sampling event was calculated using the mathematical features of the contouring software to develop the isopleth maps (i.e., Surfer® 16.3.408, by Golden Software, Inc.) The *kriging* gridding method was used with the default linear variogram to develop the isopleth maps. Surfer® was also used for the computation of the average concentration of each plume as described in Ricker (2008). The plume area and average concentrations were then used to calculate the plume mass indicator for each event. To calculate the plume mass indicator, a porosity of 30% and an aquifer thickness of 10 feet were used based on most well screen lengths installed in the shallow aquifer.

Concentration isopleth maps for each constituent are included in Appendix G. As discussed above, plume stability characteristics were calculated for each of the sampling events included in the analysis. The plume stability characteristics of area, average concentration, and mass indicator, as well as the location of the center of mass, are also provided on each isopleth map.

3.1.3 Statistical Methodology

To evaluate the stability of each constituent plume, temporal trends of the characteristics for each plume were evaluated statistically. The area, average concentration, and mass indicator for each event were plotted to observe changes in each parameter from event to event. The results of the plume stability analyses for each constituent are discussed in Section 4.0.

The temporal trends in the plume characteristic values were statistically evaluated using both linear regression techniques and the Mann-Kendall Test. Linear regression analyses were

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conducted using the regression analysis utility in Microsoft Excel, version 1808 (Office 365). The Mann-Kendall Tests were also conducted using procedures described in Gilbert (1987). Linear regression is a parametric statistical procedure that is typically used for analyzing trends in data over time. The Mann-Kendall Test is a non-parametric statistical test; therefore, it is not dependent upon the magnitude of the data, assumptions of distribution, or regularly spaced sampling events.

The Mann-Kendall Test is used to assess whether a data set exhibits an increasing or decreasing trend at a predetermined level of significance (α). The test requires the calculation of a statistic "S" which is the difference between the number of paired differences that are positive, minus the number that are negative. If S is a large positive value, then there is evidence of an increasing trend in the data. If S is a large negative value, then there is evidence of a decreasing trend in the data. The null hypothesis, H_0, for the Mann-Kendall Test is that there is no temporal trend in the data. The alternative hypothesis, H_A, is that of either an upward trend or a downward trend.

If the null hypothesis is not rejected (i.e., no trend could be established statistically), it is expected that the plume is stable. However, a stable plume may not in fact be evident because the statistical test does not consider magnitude or variation in the data. For example, a data set can exhibit a large amount of scatter, yet the test could conclude that the plume is stable. A methodology to counter the problem of scatter in the data involves comparing the calculated S statistic, a calculated confidence factor (1-α), and the coefficient of variation for the data set. The S statistic indicates the direction of the trend, the confidence factor shows how strong the trend is, and the coefficient of variation indicates the degree of scatter in the data.

When evaluating trends using linear regression, trends may be obscured by scatter in the data. This condition is typically indicated by a low coefficient of determination (R^2) value. Even with low R^2 values (i.e., high degree of scatter) a confidence interval can still be constructed on the slope of the regression line. As described in AFCEE (2006), assuming the sign (i.e., positive or negative) of the estimated log-slope is correct, a level of confidence that the slope is not zero can be easily determined. The overall trend in the data may thus still be determined, where low levels of confidence correspond to stable or indeterminate trends and higher levels of confidence (e.g., > 90%) indicate the stronger likelihood of a trend.

For the plume stability analysis, significant trends are concluded when the calculated confidence factor is greater than 90%. If the confidence factor is less than 90%, the plume is considered stable or indeterminate (i.e. "no trend").

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In many cases the statistical results for both linear regression and the Mann-Kendall Test agree with each other. In the case where two different results are obtained (e.g., one stable trend and one decreasing trend), visual analysis and professional judgment are used to determine the overall trend result.

Trend analysis results for the respective constituent plume area, average concentration, and mass indicator are discussed for each constituent in Section 4.0.

3.1.4 Plume Center of Mass Evaluation

In addition to temporal trend analyses of plume characteristics, the center of plume mass (COM) was calculated. Evaluation of COM movement should be considered in conjunction with the other plume characteristics to assess the overall stability of a plume. For example, a stable or decreasing plume may actually show migration of COM in the downgradient direction in instances when focused remediation occurred in a source area of a site. In this case, this downgradient shift is due to the rapid loss of mass in the upgradient portion of the plume, as opposed to a gradual migration resulting from advective transport.

The plume COM is depicted on each constituent plume map included in Appendix G. For total chloroethenes and total chloroethanes, the COM data is plotted on a site map, with each COM location (representing a discrete sampling event) color coded according to event date, to visually assess spatial changes in COM location through time. Additionally, each COM location is represented by a vector that indicates the direction and distance of each COM movement from one sampling event to the next. The COM vectors are then plotted together with each vector tail anchored at a common point to show variability in COM movement (similar to a wind rose diagram).

3.2 Total Molar Plume Trend and Ratio Analysis

In addition to the metrics described above, the CVOC groundwater data was also evaluated on a molar basis for both total chloroethenes and total chloroethanes. To evaluate the CVOC plumes on a molar basis, the total moles of the plume as well as the molar ratio of each constituent to the total were calculated.

It is known that during reductive dechlorination, a parent compound loses a chlorine atom and converts to a daughter compound (e.g. TCE to DCE). Because of the extra chlorine atom, the

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parent compound on a weight basis weighs more than the daughter compound. However, in this conversion from parent to daughter example, one molecule of TCE produces one molecule of DCE and are therefore equal on a molar basis. In our analysis, the total moles only decrease once the parent-daughter compounds have been converted to ethene in the case of chloroethenes and ethane in the case of chloroethanes, and/or have been mineralized to benign end products (i.e., carbon dioxide, water, and chloride ions). Therefore, a decreasing total moles trend provides evidence of complete mineralization of CVOC compounds. Conversely, an increasing total moles trend might indicate potential new or episodic releases within a plume.

Using a molar-based approach, we can also evaluate the molar ratios of individual parent-daughter compounds. As parent compounds degrade to daughter compounds, the molar ratio of the parent compounds decrease while the ratio of daughter compounds increase. Therefore, observing the molar ratios of the individual constituents along with the trend in total moles can provide further insight into various attenuation processes that may be occurring on the Site. For example, a decreasing trend in total moles with an increasing ratio of daughter (i.e. cis-1,2-DCE) to parent (i.e. TCE) constituents may indicate evidence of biological reductive dechlorination. Whereas a decreasing trend in total moles with individual constituent ratios that remain relatively constant may indicate the occurrence of non-selective destructive processes such as abiotic chemical reduction, anthropogenic recovery, or other non-biological processes.

3.3 Ricker Method® Spatial Change Indicator™ Methodology

The Ricker Method® Spatial Change Indicator™ evaluation (patent pending) shows relative changes in the plume over time. For this analysis, each plume map in a particular series is compared to the first plume map in the series by subtracting from the original plume to create a new isopleth map that shows areas of the plume that decreased in concentration (indicated by blue shading), increased in concentration (indicated by red shading), or did not change (indicated by clear or no shading). The visual aspect of this analysis allows the viewer to observe patterns of plume behavior over time.

This analysis also has a quantitative component. Each Ricker Method® Spatial Change Indicator™ map also includes the percent change (increase or decrease) of the plume between each event and the baseline event in terms of area, average concentration, and mass indicator as calculated using Ricker Method® procedures. Additionally, for areas that increased or decreased in concentration, representative magnitudes of mass increase (red shaded areas) and

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mass decrease (blue shaded areas) are included on each map. A Spatial Change Indicator™ analysis for total chloroethenes and total chloroethanes is included in Appendix G.

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4.0 GROUNDWATER PLUME ANALYTICS® RESULTS

One of the primary benefits of the Groundwater Plume Analytics™ process is the conversion of data into graphical and video outputs that make data more understandable. As such, we highly recommend that a meeting be convened with SCDHEC that will allow for the presentation of the graphical and visual animations of the data which will provide better context for the information reported herein.

The following is provided as a textual summary of the visual outputs. The full graphical displays and analyses, including plume map videos, COM evaluation maps, molar-trend and molar ratio evaluations, and the Spatial Change Indicator™ results are included in Appendix G.

A Ricker Method® Plume Stability Analysis was conducted for the Site using groundwater data for each of the constituents from 1999 to 2019. Throughout Site history, numerous remedial efforts and groundwater monitoring well installations were performed. April 2008 is significant because it marks the end of all remedial activity for the Site. Due to the various remedial efforts and monitoring well network expansions prior to April 2008, statistical trends were performed on the data from September 2008 through March 2019. This date range was chosen to provide insight into any lasting effects of previous remedial activities. Statistical trends were also performed on the data from February 2017 through March 2019. This date range was selected to provide insight into more recent plume behavior. Note that trends are not provided for 1,2-DCA for the above-mentioned timeframes and 1,1,2-TCA, and 1,1,1-TCA for the February 2017 through March 2019 timeframe due to the limited number of detected results. Due to limitations in the early well network (i.e. few wells), the analysis was conducted inside a prescribed “window” of the plume in order to have a consistent view of plume behavior over time. This plume window is defined by the lateral extents of the monitoring well network and therefore the plume contours were truncated at the boundary of the window. As mentioned above, the full graphical displays including plume maps, plume-stability-metric charts with trends, Spatial Change Indicators™ and COM figures are available in Appendix G. The results are summarized in the following sections.

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The following table summarizes the plume stability trends for area, average concentration and mass indicator from September 2008 through March 2019.

Ricker Method® Plume Stability Results (September 2008 – March 2019)

Constituent	Area	Average Concentration	Mass Indicator
PCE	No Trend	Decreasing	Decreasing
TCE	Increasing	Decreasing	Decreasing
Cis-1,2-DCE	Decreasing	Decreasing	Decreasing
Trans-1,2-DCE	Decreasing	Decreasing	Decreasing
1,1-DCE	Decreasing	Decreasing	Decreasing
Vinyl Chloride	Decreasing	Decreasing	Decreasing
Total Chloroethenes	Decreasing	Decreasing	Decreasing
1,1,2-TCA	Decreasing	Decreasing	Decreasing
1,1,1-TCA	Decreasing	Decreasing	Decreasing
1,2-DCA	NA	NA	NA
1,1-DCA	No Trend/Decreasing*	Decreasing	Decreasing
Total Chloroethanes	No Trend	Decreasing	Decreasing
Toluene	Decreasing	Decreasing	Decreasing
Ethylbenzene	Decreasing	Decreasing	Decreasing
Xylenes	Decreasing	Decreasing	Decreasing

*Regression confidence factor less than 90%

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The following table summarizes the plume stability trends for area, average concentration and mass indicator from February 2017 through March 2019

Ricker Method® Plume Stability Results (February 2017 – March 2019)

Constituent	Area	Average Concentration	Mass Indicator
PCE	No Trend	No Trend	No Trend
TCE	Increasing	Increasing	Increasing
Cis-1,2-DCE	No Trend	No Trend	No Trend
Trans-1,2-DCE	No Trend	No Trend	No Trend
1,1-DCE	No Trend	No Trend	No Trend
Vinyl Chloride	No Trend	No Trend	No Trend
Total Chloroethenes	No Trend	No Trend	No Trend
1,1,2-TCA	NA	NA	NA
1,1,1-TCA	NA	NA	NA
1,2-DCA	NA	NA	NA
1,1-DCA	No Trend	No Trend	No Trend
Total Chloroethanes	No Trend	No Trend	No Trend
Toluene	No Trend	No Trend	No Trend
Ethylbenzene	No Trend	No Trend	No Trend
Xylenes	No Trend	No Trend	No Trend

The results summarized above indicate that the chloroethene, chloroethane, and aromatic hydrocarbon (toluene, ethylbenzene, and xylenes) plumes are all decreasing since September 2008 and are stable (i.e. no trend) since February 2017. Additional characteristics of each of these plumes are discussed further below.

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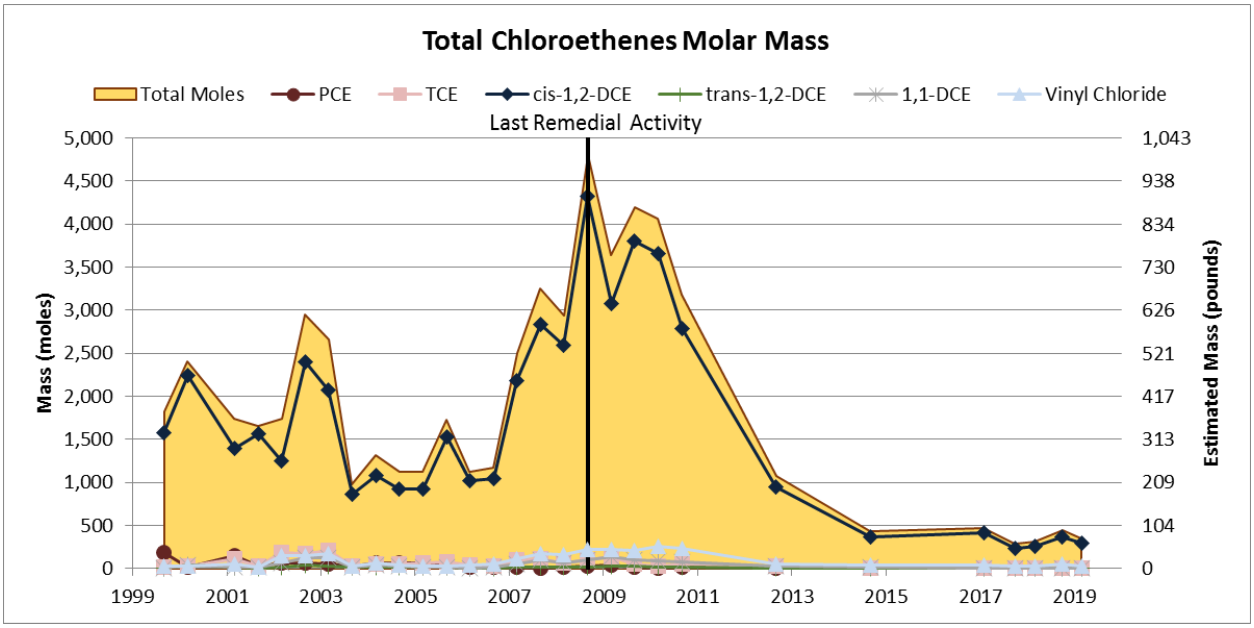
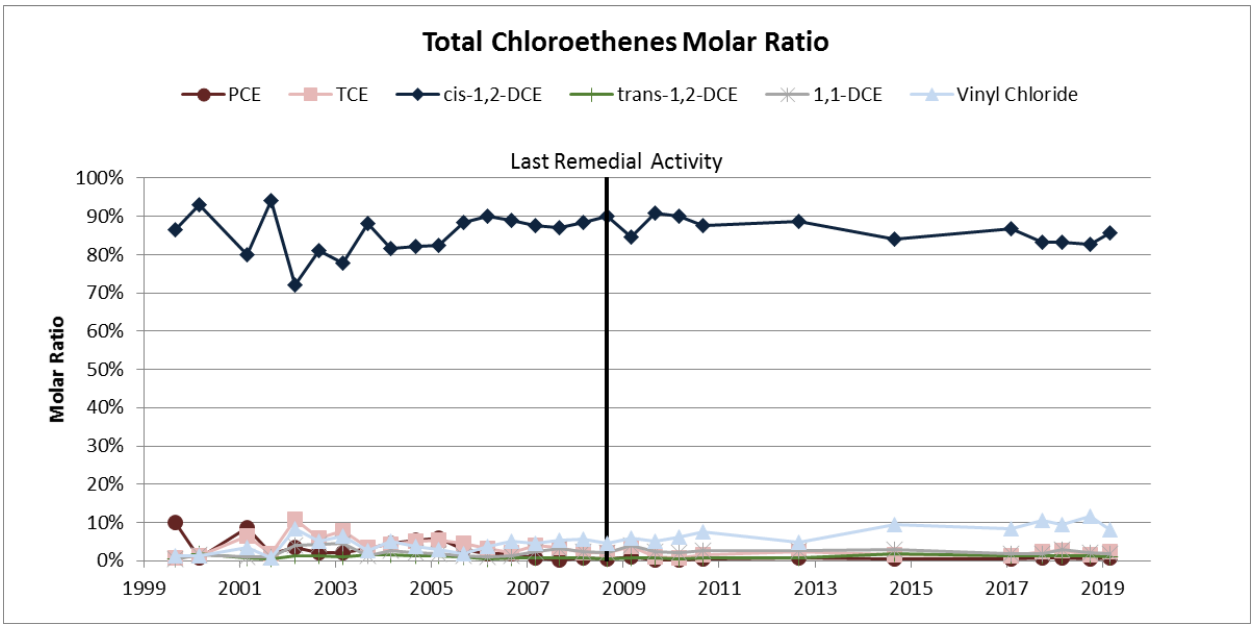
4.1 Chloroethenes

The results of this analysis indicate that the total chloroethene plume, on a molar basis, has been decreasing since September 2008 as observed in the figure below. It is noted that the total chloroethene plume (indicated by the solid yellow plot on the graph below) is in units of moles on the primary y axis. Additionally, the individual constituent molar ratios are shown in the second graph below.





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The above figure demonstrates that in addition to the strong decreasing trend since September 2008, the predominate constituent of the chloroethene plume is cis-1,2-DCE. As observed, cis-1,2-DCE represents roughly 80% to 90% of the total chloroethene plume on a molar basis. It is known that during biological reductive dechlorination, the vast majority of dichloroethene (DCE) produced by the breakdown of PCE to TCE and eventually to DCE will occur as cis-1,2-DCE. Therefore, the presence of a high percentage of cis-1,2-DCE is a strong indicator that reductive dechlorination has occurred at the Site. The rapid reduction of total moles from 2008 to 2015 is likely the result of various in-situ remediation events that occurred at the Site. Additionally, an apparent increasing trend in the ratio of vinyl chloride and decreasing trend ratio of cis-1,2-DCE is observed since 2008, most notably since 2017. The apparent decrease in ratio of cis-1,2-DCE to vinyl chloride, in the most recent data, may indicate that reductive dichlorination is still occurring at the Site.

The Ricker Method® Spatial Change Indicator™ analysis shows that there is no apparent sourcing of chloroethenes occurring in the monitored area since September 2008, with decreases in area, average concentration and mass indicator of 6%, 92%, and 93%, respectively. Additionally, the chloroethene plume is delineated with analytical results below US Environmental Protection Agency (US EPA) maximum concentration level (MCLs) at MW-2, MW-4, MW-6R, MW-8, MW-11, MW-15, and MW-16. The Ricker Method® Spatial Change Indicator™ conducted on the data set from February 2017 to March 2019 does not have enough data to establish clear patterns as of yet. However, the analysis shows that during this timeframe the area, average concentration, and mass indicator decreased by 2%, 25%, and 26%, respectively.

4.2 Chloroethanes

The results of this analysis indicate that the total chloroethane plume, on a molar basis, is also decreasing since September 2008, as observed by the decreasing trend in total moles in the figure below.

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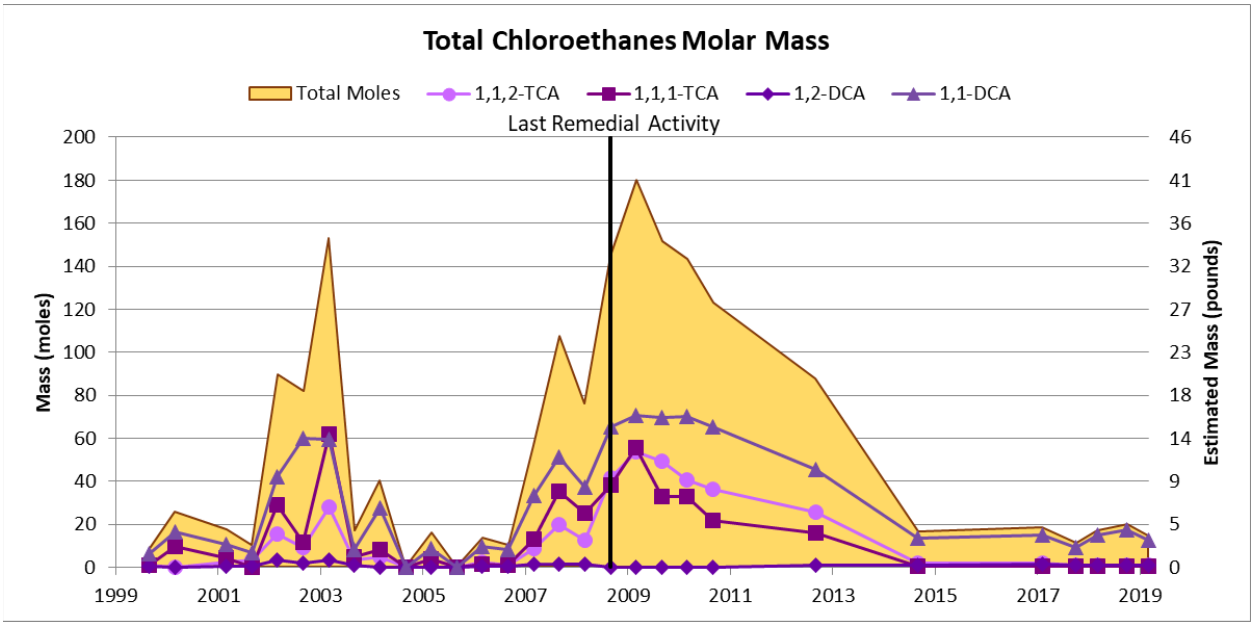

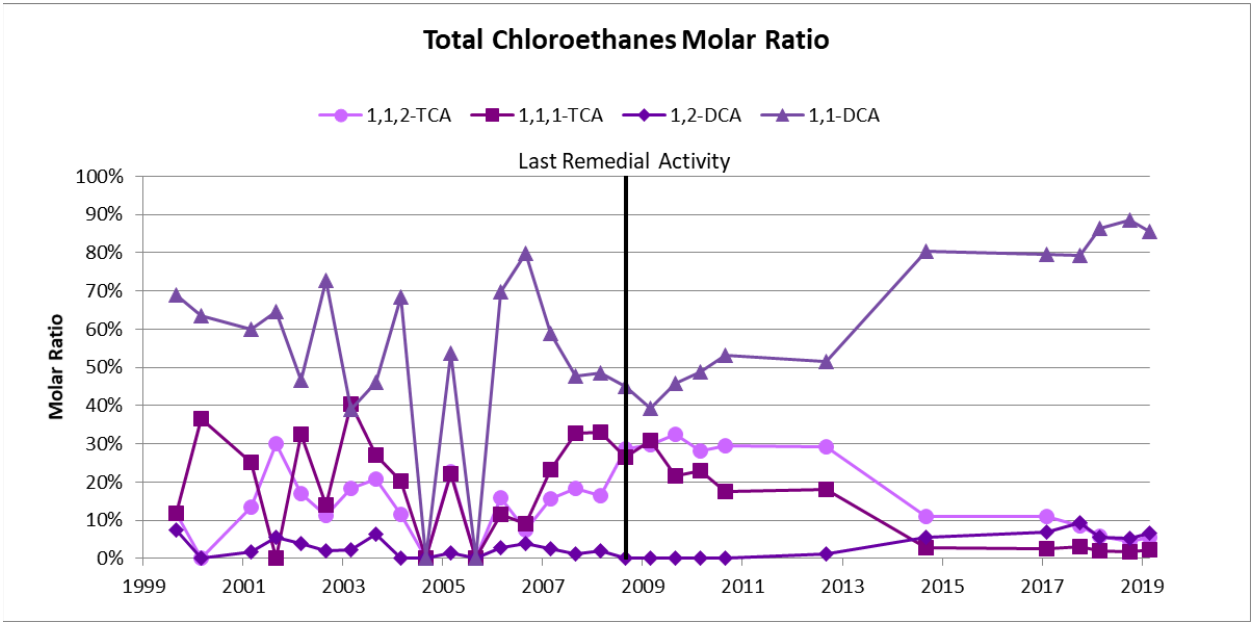

Similar to the chloroethenes, the chloroethanes exhibit patterns consistent with a plume undergoing reductive dechlorination. Since the cessation of remedial activities, the ratios of 1,1,2-TCA and 1,1,1-TCA (parents) are showing a decreasing trend while the daughter products 1,2-DCA and 1,1-DCA are increasing in molar ratio. The combination of decreasing total moles with decreasing parent ratios and increasing daughter ratios is a good indication of biological reductive dechlorination.

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The Ricker Method® Spatial Change Indicator™ analysis shows that there is no apparent sourcing of chloroethanes occurring in the monitored area since September 2008. It is noted that the small area of increase depicted around MW-5, in the September 2008 to March 2019 comparison map, is due to an increase of 1,1-DCA in MW-5 from non-detect in September 2008 to 4.6 μg/L in March 2019. Since September 2008, the 1,1-DCA concentration in MW-5 has not exceeded 6.6 μg/L. Overall, the chloroethane plume has decreased in area, average concentration and mass indicator by 8%, 89% and 90% respectively from September 2008 to March 2019. The Ricker Method® Spatial Change Indicator™ conducted on the data set from February 2017 to March 2019 does not have enough data to establish clear patterns as of yet. However, the analysis shows that during this timeframe the area, average concentration, and mass indicator decreased by 6%, 17%, and 23%, respectively.

4.3 Aromatic Hydrocarbons

Toluene, ethylbenzene and xylenes exhibit decreasing trends from September 2008 to March 2019. Additionally, no wells exceeded US EPA MCLs for toluene, ethylbenzene or xylenes during the March 2019 event.

4.4 MNA Parameters

Isopleth maps were produced for each of the MNA parameters analyzed. The MNA isopleths show strong correlation and the patterns provide evidence that biological degradation is likely occurring. For example, there is evidence of biodegradation through the observation of accumulation of metabolic byproducts such as methane, ethane, and ethene, and reducing conditions as evidenced by negative oxidation-reduction potential and low dissolved oxygen. The location of the metabolic byproducts and reducing conditions correspond to the highest concentration portion of the CVOC plumes, indicating that an MNA solution for the plumes could be a viable approach. Additionally, the co-location of the aromatic hydrocarbon plumes with the CVOC plumes may prove beneficial from the standpoint that the aromatic hydrocarbons are providing a carbon-source for the anaerobic degradation of the CVOCs, which the evidence supports is occurring. MNA isopleths are included in Appendix G.

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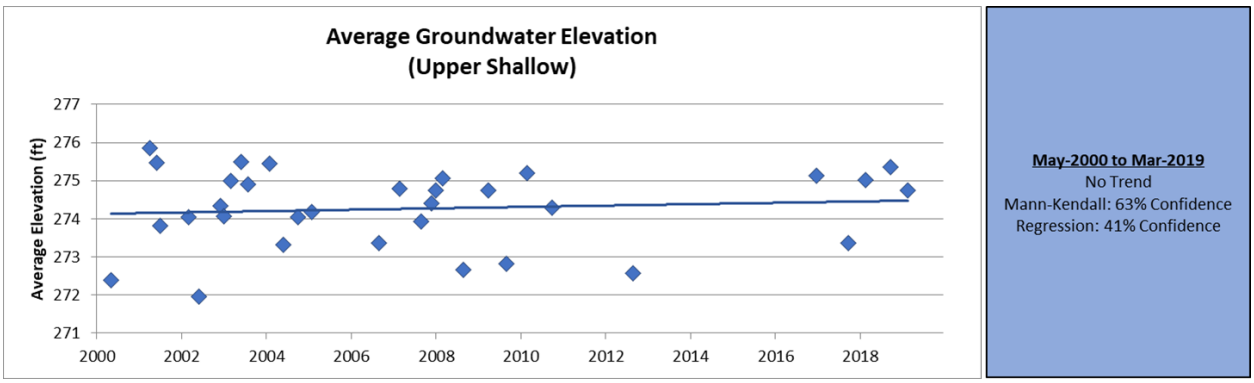
4.5 Groundwater Elevation Correlation

Groundwater elevations were also evaluated to assess a potential relationship between groundwater elevations and variability observed in concentration data. Groundwater data from May 2000 through March 2019 were contoured using kriging, and the average groundwater elevation was determined for each event using Ricker Method® techniques. These data were plotted to assess temporal trends in average groundwater elevation for the Site. As shown below, no trend in groundwater elevation from May 2010 to March 2019 is apparent for the Site. It is noted that there is approximately four feet of variability in the average groundwater elevation over the time period analyzed.



To assess a possible relationship between groundwater elevation and plume concentrations, a Pearson correlation coefficient was calculated, using the utility in Microsoft Excel, between the Site average groundwater elevation and the total chloroethene plume and the total chloroethane plume average concentration from January 2017 through March 2019. This date range was selected as it encompasses the data collected and verified by EarthCon. As shown below, the correlation coefficient between average Site groundwater elevation and total chloroethene plume average concentration is 0.73. The correlation coefficient between the average Site groundwater elevation and the total chloroethane plume average concentration is 0.87. Correlation values of 0.73 and 0.87 are strong positive correlations indicating that variability observed in constituent concentrations may be a result of changes in groundwater elevation.

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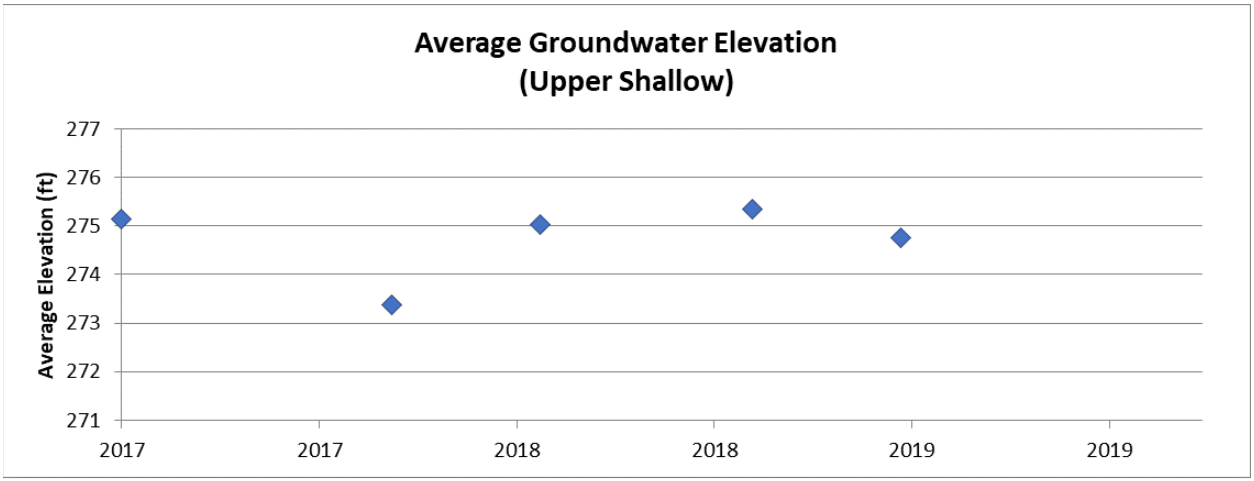

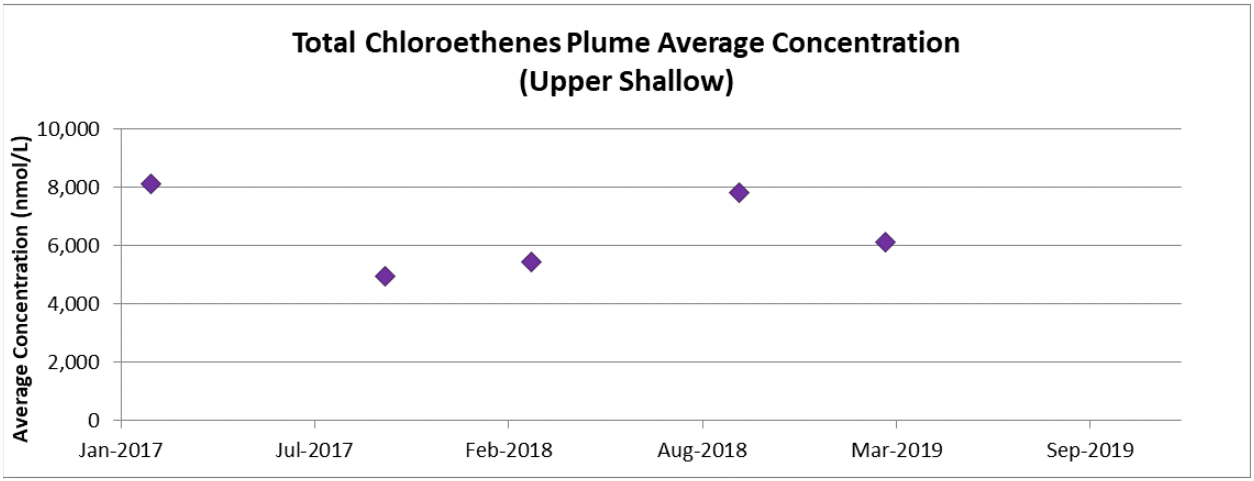

Quarter	Average Groundwater Elevation (ft)	Average Chloroethene Concentration (nmol/L)
Q1-2017	275.13	8,125
Q4-2017	273.37	4,923
Q1-2018	275.02	5,414
Q4-2018	275.35	7,804
Q1-2019	274.75	6,114
Correlation Coefficient:		0.73

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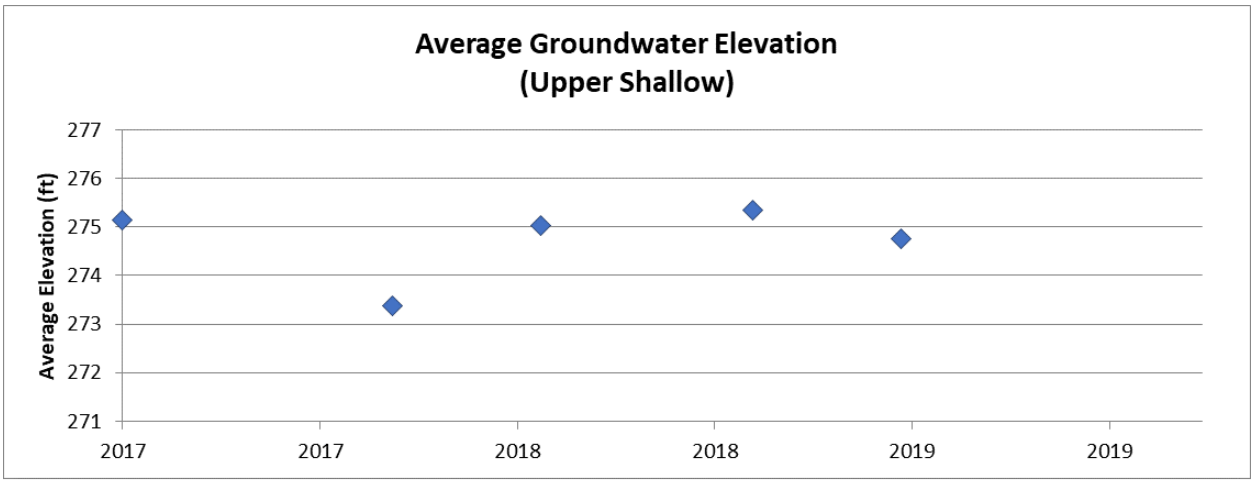

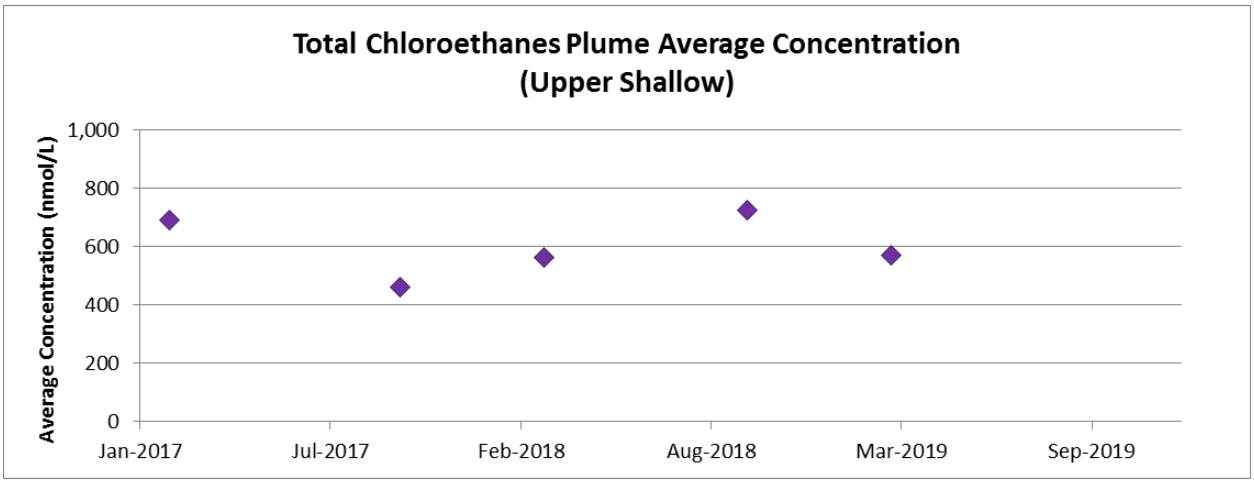

Quarter	Average Groundwater Elevation (ft)	Average Chloroethane Concentration (nmol/L)
Q1-2017	275.13	692
Q4-2017	273.37	462
Q1-2018	275.02	564
Q4-2018	275.35	727
Q1-2019	274.75	571
Correlation Coefficient:		0.87

4.6 Lower Shallow Aquifer Wells (i.e. "D" wells)

As mentioned previously, a Groundwater Plume Analytics® plume analysis could not be conducted for the four deeper wells. In instances where this occurs due to lack of a "plume" over the well

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network, a well-by-well depiction of data can be presented. Appendix G presents a well-by-well display of the four lower shallow aquifer wells (MW-1D, MW-2D, MW-3D, and MW-4D).

The data show that wells MW-2D and MW-3D did not have detectable concentrations of CVOCs in the most recent sampling event other than an estimated value of 0.46 μg/L of chloroform in MW-3D. MW-1D had detectable concentrations of PCE (above the MCL) and TCE (below the MCL). MW-4D had a detectable level of PCE above the MCL and an estimated value for TCE below the MCL. CVOC concentrations in both wells have oscillated over time. Further evaluation of CVOCs for both MW-1D and MW-4D are warranted to observe whether more pronounced trends can be established for these two wells.

4.7 Summary

Based on the Groundwater Plume Analytics® analysis conducted on the upper shallow aquifer wells as described herein, it appears that both the chloroethene and chloroethane plumes are continuing to attenuate at the Site. The analysis supports that the more recent attenuation is likely the result of biological reductive dechlorination and probably other more secondary non-biological processes such as dispersion, dilution, volatilization, hydrolysis, etc. Additionally, the analysis indicates that there are no apparent areas of CVOC sourcing. The upper shallow aquifer plume is also well-delineated by the boundary wells surrounding the plume. Additionally, the aromatic hydrocarbon plumes also appear to be attenuating and are probably serving as a carbon source for reducing bacteria. Lastly, there does appear to be a recent strong correlation between CVOC concentrations and groundwater levels at the site. Therefore, fluctuations or variability in the CVOC data may be influenced by groundwater levels. This correlation can be evaluated further with future temporal data.

Only two of the deeper wells have CVOC detections and therefore a plume analysis could not be conducted for these two wells.

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5.0 RECOMMENDATIONS

Based on the decreasing trends of total chloroethenes, total chloroethanes, and aromatic hydrocarbons observed in the upper shallow aquifer at the site; the lack of apparent sourcing; and the delineation of the plume by perimeter groundwater monitoring wells in the upper shallow aquifer, the current data strongly support that a monitored natural attenuation remedy would be appropriate and worth pursuing as the site remedy for the upper shallow aquifer. Additionally, we do not believe the data suggests that any further investigation within the upper shallow aquifer plume boundaries is warranted. As shown in the Groundwater Plume Analytics® presentation, it is our opinion that the current monitoring well network in the upper shallow aquifer is sufficient to evaluate plume behavior. Therefore, we recommend one additional year of semi-annual groundwater sampling with updates to the Groundwater Plume Analytics® to evaluate the current behavior of the plume and the feasibility of monitored natural attenuation to serve as an adequate remedy going forward. We also recommend an additional year of semi-annual monitoring to better evaluate the concentration trends of the wells in the lower shallow aquifer. After the second semi-annual sampling event, a report will be prepared and submitted to SCDHEC to provide the results of the sampling and the Groundwater Plume Analytics®, and to present recommendations for future activities.

Lastly, due to the visual nature of Plume Analytics™, Lennox strongly recommends that a meeting be held to present the results of the Groundwater Plume Analytics® services to SCDHEC. This meeting should be held as soon as practical but prior to final SCDHEC review of this document.

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TABLES

TABLE 1. GROUNDWATER MONITORING WELL CONSTRUCTION DETAILS

Former Ducane Company Site

Blackville, Barnwell County, South Carolina

BLWM File # 401356

Monitoring Well	Installation Date	Well Completion	Ground Surface Elevation feet, NAVD	Top of Casing (TOC) Elevation feet, NAVD	Screened Interval feet, bgs		Screen Length feet	Well Depth feet, bgs	Total Boring Depth feet, bgs
					Top	Bottom			
MW-1	09/01/99	Stick-up	279.09	282.05	5	20	15	20	30
MW-1D	09/01/99	Stick-up	279.08	282.08	48	53	5	53	53
MW-2	09/01/99	Stick-up	274.76	277.71	5	15	10	15	20
MW-2D	09/02/99	Stick-up	274.72	277.61	39	44	5	44	44
MW-3	09/01/99	Stick-up	277.09	279.68	5	15	10	15	15
MW-3D	09/02/99	Stick-up	277.11	279.94	20	25	5	25	25
MW-4	09/01/99	Stick-up	276.89	279.74	8	18	10	18	20
MW-4D	06/25/01	Stick-up	277.05	279.91	72	82	10	82	96
MW-5	05/12/00	Flush	280.23	279.85	15	20	5	20	20
MW-6R	09/24/12	Flush	277.24	277.73	5	15	10	15	15
MW-7	03/26/01	Stick-up	277.65	280.76	2	12	10	12	12
MW-8	03/27/01	Flush	277.11	276.83	2	12	10	12	12
MW-9	03/28/01	Stick-up	278.76	279.66	2	12	10	12	12
MW-10	03/28/01	Stick-up	276.70	278.12	2	12	10	12	12
MW-11	03/28/01	Stick-up	279.56	280.64	2	12	10	12	12
MW-12	03/28/01	Stick-up	NA	NA	2	12	10	12	12
MW-13	10/14/02	Stick-up	NA	NA	3	10	7	10	10
MW-14	10/14/02	Stick-up	278.98	280.81	2	12	10	12	12
MW-15	09/24/12	Stick-up	280.68	282.82	9	19	10	19	20
MW-16	10/18/17	Stick-up	275.31	278.48	9.93	19.57	9.64	20.00	20.07

Notes

Prepared by: TJM 5/31/19

Checked by: CDN 6/14/19

bgs - below ground surface

NAVD - North American Vertical Datum of 1988

Well construction information obtained from boring logs or the Groundwater and Soil Assessment Report, dated January 2013.

Elevations based on survey by American Engineering Consultants, Inc. dated November 12, 2017

NA - not available; wells MW-12 and MW-13 could not be located

TABLE 2. GROUNDWATER LEVEL MEASUREMENTS

Former Ducane Company Site

Blackville, Barnwell County, South Carolina

BLWM File # 401356

Monitoring Well	Top of Casing (TOC) Elevation feet, NAVD	March 25, 2019	
		Depth to Water feet below TOC	Groundwater Elevation feet
MW-1	282.05	6.16	275.89
MW-1D	282.08	8.45	273.63
MW-2	277.71	3.12	274.59
MW-2D	277.61	4.41	273.20
MW-3	279.68	4.12	275.56
MW-3D	279.94	4.67	275.27
MW-4	279.74	6.63	273.11
MW-4D	279.91	9.39	270.52
MW-5	279.85	6.61	273.24
MW-6R	277.73	1.37	276.36
MW-7	280.76	5.02	275.74
MW-8	276.83	0.38	276.45
MW-9	279.66	no access	NC
MW-10	278.12	3.99	274.13
MW-11	280.64	6.65	273.99
MW-14	280.81	6.59	274.22
MW-15	282.82	6.12	276.70
MW-16	278.48	4.01	274.47

Notes

NAVD - North American Vertical Datum of 1988

NC - elevation not calculated

Prepared by: JLF 04/12/19

Checked by: CDN 4/15/19

TABLE 3. FIELD PARAMETERS
Former Ducane Company Site
Blackville, Barnwell County, South Carolina
BLWM File # 401356

Monitoring Well	**Sample Date**	**Purge Volume** Gallons	**Temperature** °C	**pH** Standard Units	**Dissolved Oxygen** mg/L	**ORP** mV	**Conductivity** µs/cm	**Turbidity** NTU	**Ferrous Iron** mg/L
MW-1	3/26/19	1.50	17.49	3.69	0.15	124.7	82	0.22	0.04
MW-1D	3/26/19	1.15	19.73	4.59	6.36	179.6	14	0.00	0.01
MW-2	3/26/19	1.35	17.66	3.11	1.04	365.2	46	0.00	0.00
MW-2D	3/26/19	1.45	18.52	3.77	5.87	254.1	22	0.00	0.00
MW-3	3/27/19	0.65	15.93	4.29	0.07	-86.1	137	0.00	0.00
MW-3D	3/27/19	1.00	16.82	3.89	4.28	244.0	81	0.00	0.96
MW-4	3/27/19	0.85	16.57	3.62	1.58	295.9	39	9.88	0.00
MW-4D	3/27/19	0.65	17.83	4.20	1.54	311.0	17	0.00	0.00
MW-5	3/27/19	1.70	17.95	3.83	0.76	276.9	70	5.92	0.00
MW-6R	3/26/19	1.40	15.73	4.66	1.39	116.2	75	4.04	0.00
MW-7	3/26/19	0.80	15.70	5.07	1.28	-70.0	101	2.06	0.01
MW-8	3/26/19	1.45	17.52	4.60	8.74	70.5	104	2.66	2.96
MW-10	3/27/19	1.30	16.19	4.03	0.60	152.2	38	4.93	0.00
MW-11	3/27/19	0.35	18.76	4.92	5.32	73.7	117	7.65	0.00
MW-14	3/27/19	0.90	15.02	3.81	0.49	98.6	48	1.02	0.17
MW-15	3/26/19	1.40	17.99	4.96	0.25	135.6	92	0.99	0.00
MW-16	3/26/19	1.65	17.03	3.35	3.82	394.3	102	9.78	0.00

Notes

mg/L - milligrams per liter
mV - millivolts
µs/cm - microsiemens per centimeter
NTU - nephelometric turbidity units
NM- not measured

Prepared by: JLF 04/12/19
Checked by: CDN 4/15/19

TABLE 4. SUMMARY OF GROUNDWATER ANALYTICAL RESULTS - ORGANICS

Former Ducane Company Site

Blackville, Barnwell County, South Carolina

BLWM File # 401356

Constituent (ug/L)		Acetone	Chloroform	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethylbenzene	Toluene	Tetrachloroethene	1,1,2-Trichloroethane	Trichloroethene	Vinyl Chloride	Xylenes (total)	1,4-Dioxane*
MCL (ug/L)		NA	80**	NA	7	70	100	700	1000	5	5	5	2	10000	NA
RSL (ug/L)		1400	0.22	2.8	--	--	--	--	--	--	--	--	--	--	0.46
Well	**Date Sampled**														
MW-1	3/26/19	<200	<10	<10	<10	**1,400 J**	**4.8 J**	**32 J**	<10	**4.9 J**	<10	**6.3 J**	**33 J**	**200 J**	<1.0
MW-1D	3/26/19	<20	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	<1.0	**13**	<1.0	**2.7**	<1.0	<1.0	<1.0
MW-2	3/26/19	<20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-2D	3/26/19	<20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-3	3/27/19	<4,000	<200	**1,100**	**540**	**15,000**	**120 J**	**310**	**97 J**	<200	<200	<200	**900**	**1,200**	**310**
MW-3D	3/27/19	<20	**0.46 J**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-4	3/27/19	<20	<1.0	<1.0	<1.0	**4.1**	<1.0	<1.0	<1.0	**2.4**	**0.67 J**	**4.6**	<1.0	<1.0	<1.0
MW-4D	3/27/19	<20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**19**	<1.0	**0.53 J**	<1.0	<1.0	<1.0
MW-5	3/27/19	<100	<5.0	**4.6 J**	<5.0	**320**	**2.9 J**	<5.0	<5.0	**130**	<5.0	**250**	**3.5 J**	<5.0	**9.7**
MW-6R	3/26/19	**7.7 J**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-7	3/26/19	<100	<5.0	<5.0	<5.0	**440**	<5.0	**79**	<5.0	<5.0	<5.0	<5.0	**200**	**210**	<1.0
MW-8	3/26/19	**11 J**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**3.2**
MW-10	3/27/19	<20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-11	3/27/19	<20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-14	3/27/19	<20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-15	3/26/19	**2.7 J**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-16	3/26/19	<20	**1.6**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

Notes

ug/L - micrograms per liter

< less than the noted limit of quantitation (LOQ)

J - estimated concentration

* - 1,4-dioxane reported to the detection limit (DL)

** - MCL for total Trihalomethanes

MCL - US EPA Maximum Contaminant Level

RSL - US EPA Regional Screening Level for Tap Water

NA - not available

Bold - Constituent detected above LOQ or DL

Bold and Shaded - Constituent detected above the RSL and/or MCL

Prepared by: JLF 04/12/19

Checked by: CDN 4/15/19

TABLE 5. GROUNDWATER MNA RESULTS

Former Ducane Company Site

Blackville, Barnwell County, South Carolina

BLWM File # 401356

Monitoring Well	Sample Date	Alkalinity mg/L	Chloride mg/L	Nitrate-N mg/L	Sulfate mg/L	Sulfide mg/L	TOC mg/L	Ethane ug/L	Ethene ug/L	Methane ug/L	Propane ug/L
MW-1	3/26/19	<20	**17**	<0.020	**19.0**	<1.0	**1.2**	<10	**10**	**350**	<15
MW-1D	3/26/19	<20	**2.1**	**0.091**	**0.76 J**	<1.0	<1.0	<10	<10	<10	<15
MW-2	3/26/19	<20	**8.0**	**1.4**	**1.5**	<1.0	<1.0	<10	<10	<10	<15
MW-2D	3/26/19	<20	**2.6**	**0.19**	**1.2**	<1.0	<1.0	<10	<10	<10	<15
MW-3	3/27/19	<20	**33**	<0.020	**0.92 J**	**3.5**	**11**	**18 J**	**76**	**11,000**	<75
MW-3D	3/27/19	<20	**17**	**4.9**	**2.8**	<1.0	<1.0	<10	<10	**2.9 J**	<15
MW-4	3/27/19	<20	**8.3**	<0.020	**12.0**	<1.0	**0.71 J**	<10	<10	**3.3 J**	<15
MW-4D	3/27/19	<20	**1.8**	**0.065**	**2.9**	<1.0	<1.0	<10	<10	<10	<15
MW-5	3/27/19	<20	**17**	**0.61**	**3.3**	<1.0	**0.52 J**	<10	<10	**2,200**	<15
MW-6R	3/26/19	<20	**8.0**	**1.9**	**3.6**	<1.0	**18**	<10	<10	<10	<15
MW-7	3/26/19	**46**	**5.3**	**0.056**	**1.3**	<1.0	**4.5**	**4.7 J**	**17**	**120**	<15
MW-8	3/26/19	<20	**3.4**	<0.020	**97**	**1.1**	**12**	<10	<10	**100**	<15
MW-10	3/27/19	<20	**6.7**	<0.020	**19**	<1.0	**2.0**	<10	<10	**65**	<15
MW-11	3/27/19	**59**	**2.8**	<0.020	**6.9**	<1.0	**3.8**	<10	<10	**14**	<15
MW-14	3/27/19	<20	**2.0**	<0.020	**16**	<1.0	**0.81 J**	<10	<10	**100**	<15
MW-15	3/26/19	**27**	**4.5**	**0.13**	**13**	<1.0	**0.52 J**	<10	<10	<10	<15
MW-16	3/26/19	<20	**16**	**6.6**	**1.3**	<1.0	<1.0	<10	<10	<10	<15

Notes

mg/L - milligrams per liter

ug/L - micrograms per liter

TOC - total organic carbon

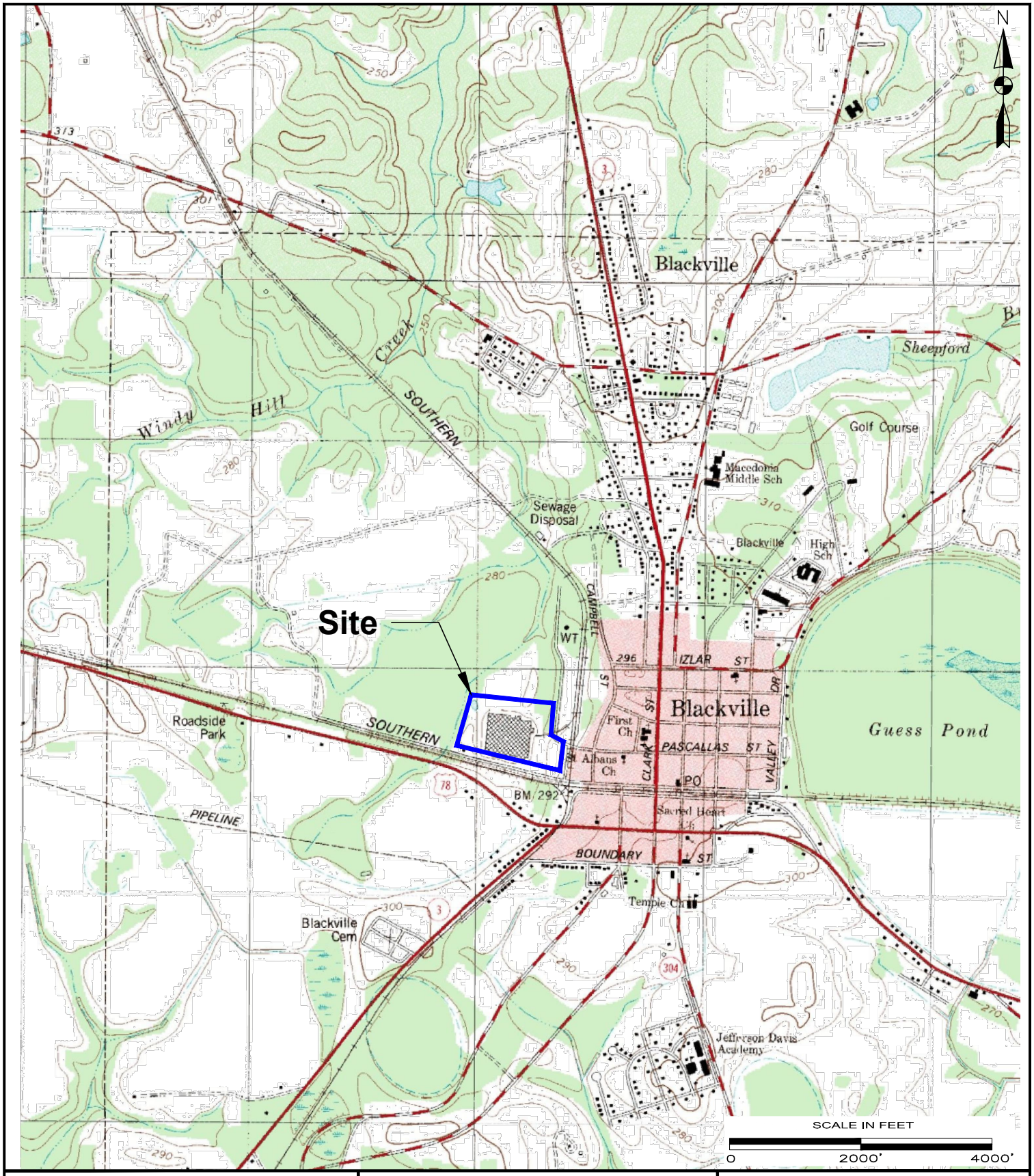
J - estimated concentration above the detection limit (DL)

Bold - Constituent detected above limit of quantitation (LOQ) or DL

Prepared by: JLF 04/12/19

Checked by: CDN 4/15/19

FIGURES



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FORMER DUNCANE COMPANY SITE
BLACKVILLE, BARNWELL COUNTY, SOUTH CAROLINA
BLWM FILE # 401356

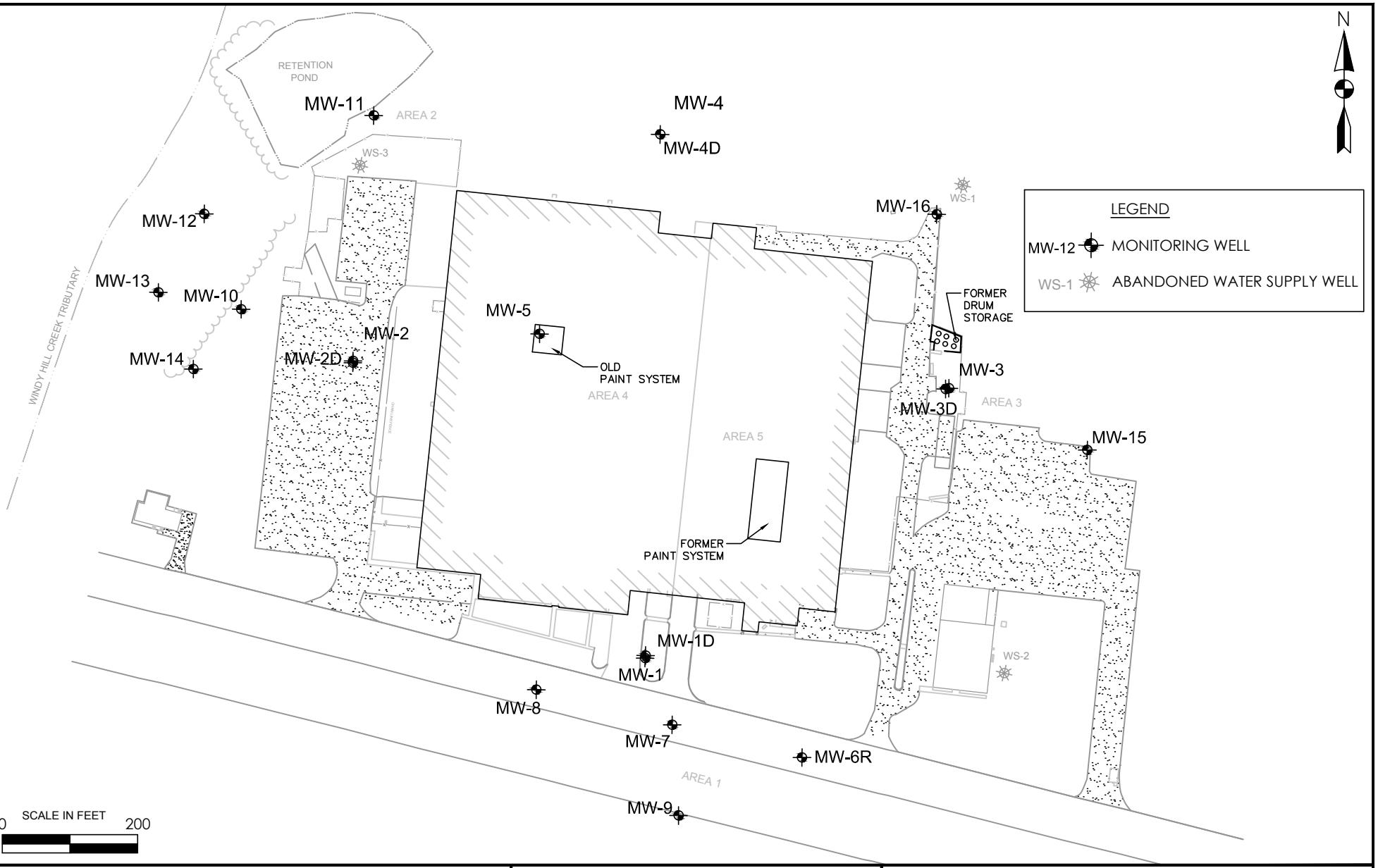
PROJECT NO. 02.20160378.00

EARTHCON®

EarthCon Consultants, Inc.
1880 WEST OAK PKWY, BLDG 100, STE 106, MARIETTA, GA, 30062

SITE LOCATION MAP

DRAWN:	CHECKED:	DATE:	FIGURE:
HVP	RLA	06/22/2018	1



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FORMER DUNCANE COMPANY SITE

BLACKVILLE, BARNWELL COUNTY, SOUTH CAROLINA
BLWM FILE # 401356

PROJECT NO. 02.20160378.00

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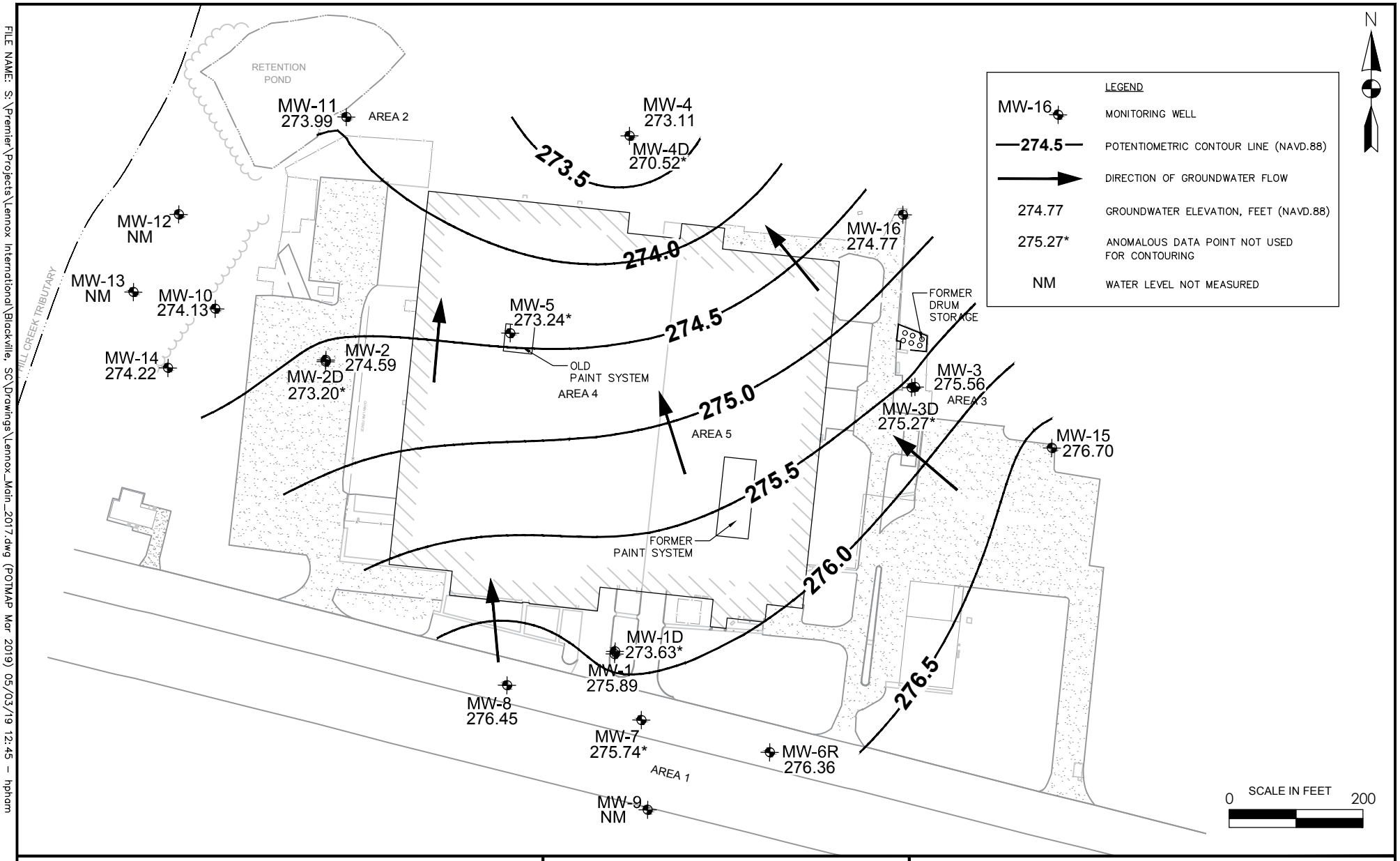
SITE LAYOUT

DRAWN:	CHECKED:	DATE:	FIGURE:
HVP	RLA	06/22/2018	2



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BLWM FILE # 401356

PROJECT NO. 02.20160378.00

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POTENTIOMETRIC SURFACE MAP
MARCH 25, 2019

DRAWN:	CHECKED:	DATE:	FIGURE:
HVP	CDN	MAY 02, 2018	3

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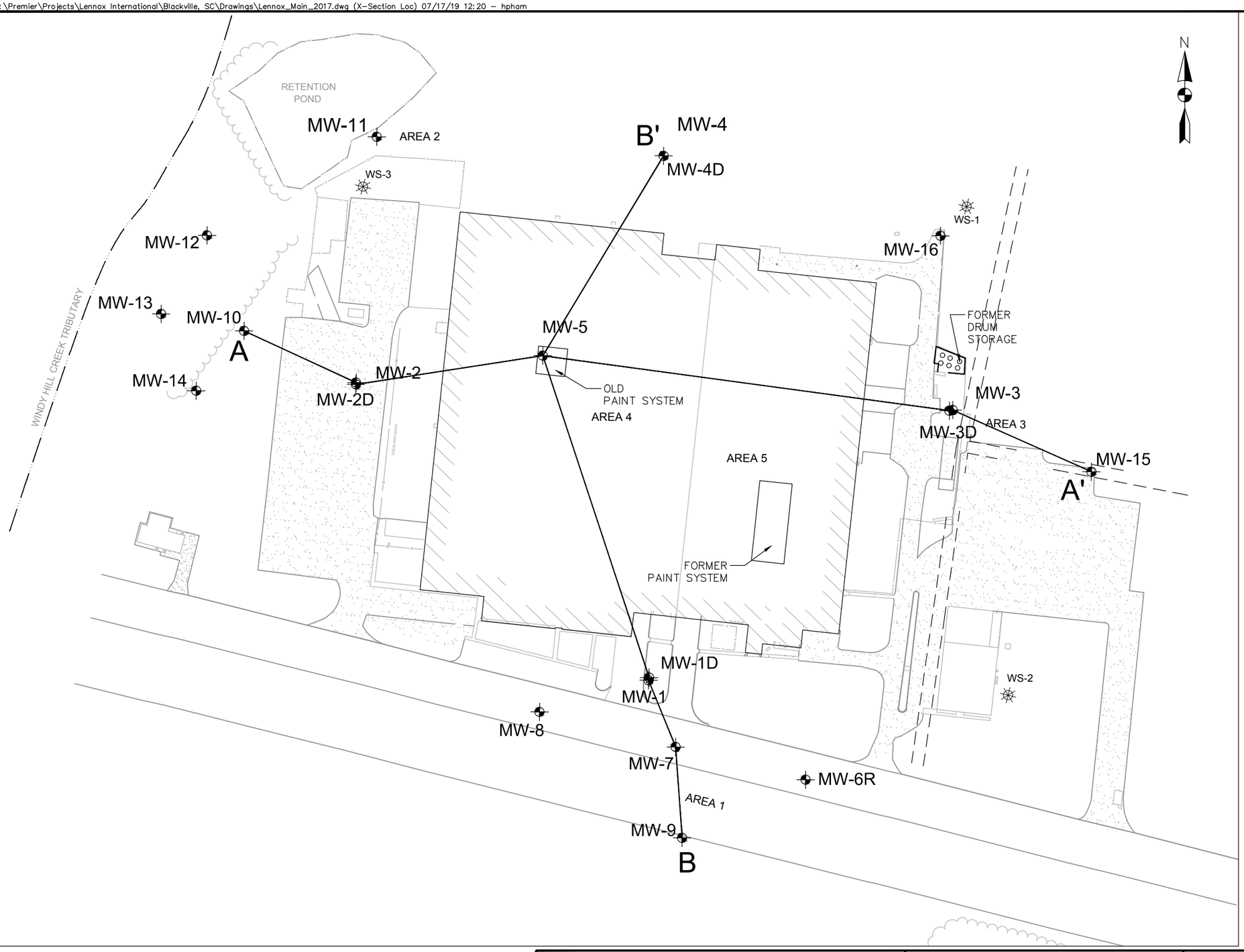

LEGEND

MW-12 ⊕ MONITORING WELL

WS-1 ✳ ABANDONED WATER SUPPLY WELL

0 75 150 300

SCALE: 1"= 150 '

FORMER DUNCANE COMPANY SITE

BLACKVILLE, BARNWELL COUNTY, SOUTH CAROLINA

BLWM FILE # 401356

PROJECT NO. 02.20160378.00

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CROSS SECTION LOCATION MAP

DRAWN:	CHECKED:	DATE:	FIGURE:
HVP	AGL	7/16/2019	4

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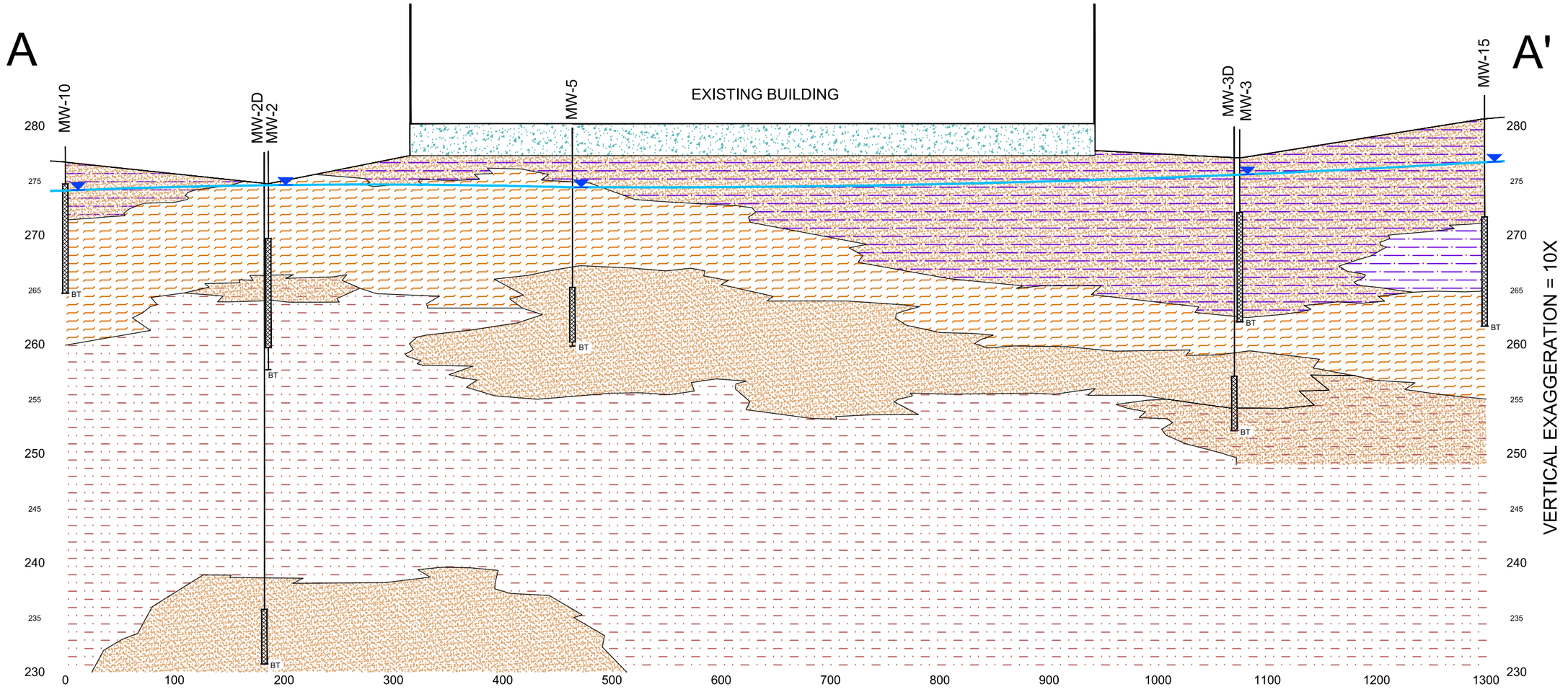

LEGEND

- EXISTING BUILDING
- CLAYEY SAND
- SILT / CLAYEY SILT
- SAND
- SANDY CLAY
- SANDY SILT
- CLAY
- SILTY SAND
- GROUNDWATER ELEVATION (FEET, NAVD.88) MARCH 25, 2019
- WELL SCREEN INTERVAL
- BT — BORING TERMINATED

0 25 50 100 200

HORIZONTAL SCALE: 1"=100'

10'

0 100'

FORMER DUNCANE COMPANY SITE

BLACKVILLE, BARNWELL COUNTY, SOUTH CAROLINA

BLWM FILE # 401356

PROJECT NO. 02.20160378.00

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CROSS SECTION A-A'

DRAWN:	CHECKED:	DATE:	FIGURE:
HVP	AGL	7/16/2019	5

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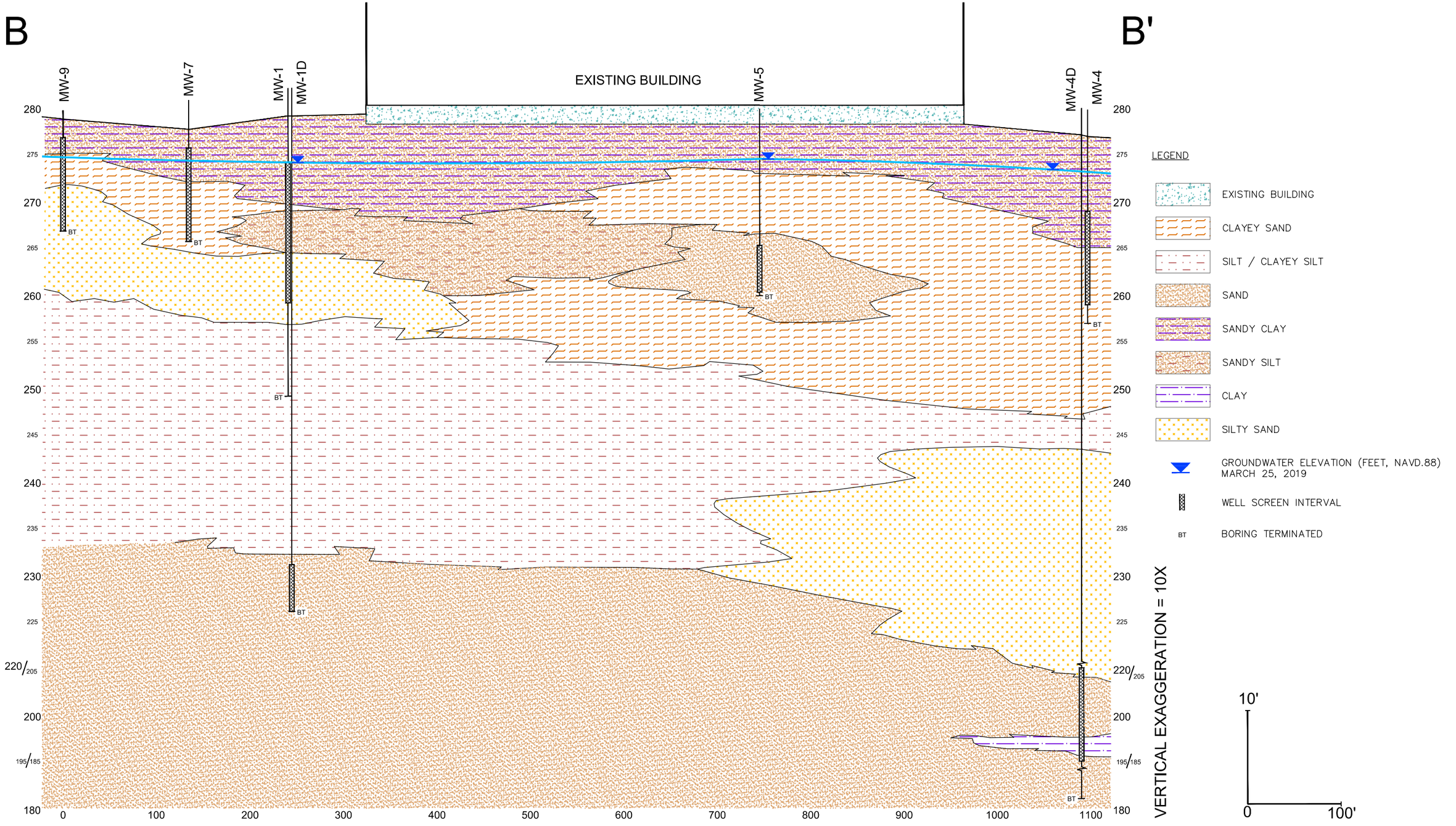

0 25 50 100 200

HORIZONTAL SCALE: 1"=100'

FORMER DUNCANE COMPANY SITE

BLACKVILLE, BARNWELL COUNTY, SOUTH CAROLINA

BLWM FILE # 401356

PROJECT NO. 02.20160378.00

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1880 WEST OAK PKWY, BLDG 100, STE 106, MARIETTA, GA, 30062

CROSS SECTION B-B'

DRAWN:	CHECKED:	DATE:	FIGURE:
HVP	AGL	7/16/2019	6

APPENDICES

Appendix A

Summary of Field Procedures – March 2019

APPENDIX A: SUMMARY OF FIELD PROCEDURES – MARCH 2019

A groundwater sampling event was conducted in March 2019 at the Former Ducane Company Site. The field activities are described in the following sections. Field sampling forms are provided in Appendix B. Laboratory analytical reports are provided in Appendix D.

GROUNDWATER SAMPLING

A groundwater sampling event was conducted from March 25 to 28, 2019 and 17 of the 20 Site monitoring wells were sampled. Monitoring wells MW-12 and MW-13 could not be located while monitoring well MW-9 is located on private property and access could not be obtained. Well construction details are provided in Table 1.

Groundwater sampling was conducted in general accordance with the United States Environmental Protection Agency (USEPA) Region 4 Science and Ecosystem Support Division (SESD) Operating Procedure (OP) for *Groundwater Sampling* (as updated) using low-flow techniques. Prior to sampling, water level measurements were collected from each well and water quality parameters were measured. Water level measurements are presented in Table 2. The field parameters measured at the time of groundwater sampling are provided on the field forms in Appendix B and presented in Table 3.

Sample Containers

The laboratory provided sample containers that met the sampling requirements of the study. The laboratory verified the cleanliness of each batch of containers prior to use. The laboratory supplied the necessary preservation solutions and shipped these with the sample containers.

The field samplers took responsibility for properly identifying the location of each sample taken and for recording the sample date, the type of sample, the preservative used, and the applicable project number. This information was documented in the field book/field form. This same information was then placed on the sample identification label and the chain-of-custody record. Sample labels were filled out with indelible ink. If the field sampler determined that additional information was pertinent to a sample being taken, such data was recorded in the field book or on the field form.

Groundwater Level Measurement

Prior to well sampling, depth to groundwater and total well depth were measured using an electronic tape or water level indicator. A fixed point was marked with an indelible marker on each well to serve as a reference point for measurement. Depths were measured to the nearest 0.01 foot and recorded on the field sheet. The tape was cleaned with phosphate-free laboratory detergent and water and rinsed with distilled water prior to each use.

Well Purging

The monitoring wells were purged using a low flow/low volume method with a peristaltic pump and dedicated, disposable, polyethylene tubing. The groundwater parameters of temperature, pH, specific conductivity, dissolved oxygen (DO), oxidation-reduction potential (ORP), and turbidity were measured during purging.

Purging continued until a minimum of three consecutive stable readings were measured with five to fifteen-minute intervals between readings. Pumping rates were reduced as much as possible to reduce the amount of drawdown in the wells.

Purging was considered complete after the depth to water and water quality parameters stabilized. Purge water from the wells was temporarily placed in five-gallon buckets and emptied into a 55-gallon steel drum. Additional information regarding the purging and sampling activities including the volume of water in each well, purge rate, and depth to water during the purge process are provided in the field sampling forms in Appendix B.

Groundwater Sampling and Analysis

Groundwater samples were collected after the water level in the well stabilized and after the pH and specific conductance measurements stabilized. A peristaltic pump and polyethylene tubing were used to collect the groundwater samples. The groundwater samples were collected from the intake end of the dedicated polyethylene discharge tubing after the peristaltic pump was stopped and the tubing was removed from the well. The groundwater samples were placed into laboratory supplied pre-preserved containers, labeled, and recorded on a Chain-of-Custody form. The containers were then placed in a cooler on ice, and transported to Shealy Environmental Services, Inc. (DHEC Certification No. 32010) in Columbia, SC.

The groundwater samples were analyzed for volatile organic compounds (VOCs) by EPA Method 8260B and 1,4-dioxane using EPA Method 8260B SIM. Groundwater samples were also analyzed for the monitored natural attenuation (MNA) parameters nitrate, sulfate, sulfide, chloride, alkalinity, total organic carbon (TOC) and dissolved gasses (ethane, ethene, methane and propane). Field measurements of ferrous iron were also collected. A summary of the organic analytical results is provided in Table 4 while the MNA results are provided in Table 5. The laboratory analytical reports are provided in Appendix D.

Decontamination Procedures

Decontamination procedures consisted of the use of dedicated, disposable tubing at each sampling location. Equipment such as the water level indicator and field measurement instrumentation were cleaned with phosphate-free laboratory detergent and rinsed with distilled water in general accordance with the EPA SESD OP for *Field Equipment Cleaning and Decontamination* (as updated). The equipment was allowed to air dry. Nitrile gloves were also worn and changed between each sampling location.

Equipment Calibration

Equipment used to perform field testing on groundwater samples included a HF Scientific Micro TPW 20000 turbidity meter and a Hanna HI 98194 with flow thru cell meter to measure pH, specific conductivity, temperature, dissolved oxygen, ORP, and turbidity. Equipment calibration was verified daily.

Field Sampling Forms

Field personnel maintained a permanently bound, water resistant field notebook. Field activities were recorded with indelible ink. Additionally, sampling field forms were completed for each sample. The notebook, sampling forms, and chain-of-custody records contain sufficient information to allow reconstruction of the sample collection and handling procedures at a later time.

Chain-of-Custody

Sample custody was documented from the time of sample collection when the labeled sample was placed into an iced cooler in the possession of the sampling technician. A corresponding line item on the chain-of-custody record was filled out and initialed by the sampling technicians. The chain-of-custody record is used to track custody of samples during transport and shipping. Upon completion of appropriate line items, or upon sample pick-up, the field representative signed, dated, listed the time, and confirmed the completeness of descriptive information contained on the form. The chain-of-custody form accompanied the samples and terminated upon laboratory receipt of samples. All entries were recorded in ink. Each sample had a corresponding entry on a chain-of-custody record.

Analytical Procedures and QA/QC

Groundwater samples were transported to Shealy Environmental Services, Inc. under chain-of-custody protocols. The samples were analyzed for VOCs by EPA Method 8260B and 1,4-dioxane by EPA Method 8260B SIM. Quality control samples, consisting of blind duplicates, trip blanks, and laboratory method blanks were also collected and analyzed for these parameters. The data validation summary and laboratory analytical reports are provided in Appendix D.

Appendix B

Field Sampling Forms – March 2019

EARTHCON®

Groundwater Sampling Record

WELL No. MW-1	PROJECT # 02.20160378.00	LOCATION: Blackville, SC	DATE 03/26/19
SAMPLE No. MW-1	PROJECT NAME: Lennox, Blackville, SC	FIELD PERSONNEL/COMPANY: T. Messier, E. Cook	/EarthCon
SAMPLE TIME: 0920	SITE :	FIELD CONDITIONS/WEATHER cloudy, overcast ~55°F	

Well Condition Inspection (circle one)

cover: locked / not locked
number: legible / not legible
outer casing: good / fair / poor
inner casing: good / fair / poor
well photographed: yes / no

Equipment Cleaning Procedures

- potable water and phosphate-free soap
- potable water rinse
- water rinse: distilled / deionized
- solvent rinse: acetone / hexane
- air dry

Casing Diameter: (circle one) 2" / 4" / 6" / Other:____

Casing Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$
Casing Volume (gallons/ft) for: 2" = 0.163; 4" = 0.653; 6" = 1.47
Casing Volume (liters/ft) for: 2" = 0.618; 4" = 2.47; 6" = 5.56

Depth to Water (feet):	6.00	Measuring Point Elevation (feet):	
Depth of Well (feet):	21.9	Groundwater Surface Elevation:	
Water Column (feet):	15.9	LNAPL present: —	thickness:
Casing Volume (gallons/liters):	2.59	DNAPL present: —	thickness:
Calculated Purge Volume (gallons/liters):	7.78	Remarks:	
Actual Purge Volume (gallons/liters):	1.50		
Pump Intake Depth (feet):	~15	Ferrous Iron (mg/L):	0.04

Well Evacuation
Water level recovery is: very slow / slow / moderate / fast
Bailed dry: yes / no

TIME 2400 hrs	CUMULATIVE VOLUME (gal)	TEMPERATURE (°C)	pH	DISSOLVED OXYGEN (mg/L)	ORP (mV)	CONDUCTIVITY (µs/cm)	TURBIDITY (NTU)	Depth to Water (Feet)	ODOR/COLOR/ REMARKS
0840	0								PURGE START
0845	0.10	16.05	4.27	1.78	186.1	80	1.82	6.15	clear
0850	0.25	16.40	3.98	0.59	216.0	79	1.80	6.19	"
0855	0.50	16.92	3.76	0.34	237.5	79	2.12	6.20	"
0901	0.75	16.99	3.74	0.35	230.3	79	0.49	6.20	"
0905	1.00	17.34	3.70	0.22	143.0	80	0.80	6.20	"
0909	1.20	17.48	3.69	0.17	136.2	81	0.47	6.20	"
0913	1.35	17.49	3.69	0.15	124.7	82	0.22	6.20	"
0920	S	AMPLE							

Measurement and Sampling Equipment

Type	Manufacturer	Model #	Calibration Date
Water Quality	YSI — Hanna	556 HI98194	3/26/19
Turbidity	HF Scientific	Micro TPW 20000	"
Peristaltic Pump	Geotech	Geopump	NA

SAMPLE NUMBER	ANALYTICAL METHOD	BOTTLE TYPE/ PRESERVATIVES	QA REMARKS
3	VOCs	40 ml glass / HCL	
3	1,4 - Dioxane	40 ml glass / HCL	
2	Diss. Gasses	40 ml glass / HCL	
1	TOC	250 ml HDPE / H2SO4	
1	NO3/SO4/Cl/Alk	500 ml HDPE / none	
3	Sulfide	250 ml HDPE / ZnAcetate + NaOH	
			DUP-1 collected 0930

EARTHCON®

Groundwater Sampling Record

WELL No. MW-1D	PROJECT # 02.20160378.00	LOCATION: Blackville, SC	DATE 03/26/19
SAMPLE No. MW-10	PROJECT NAME: Lennox, Blackville, SC	FIELD PERSONNEL/COMPANY: T. Messier, E. Cook	/EarthCon
SAMPLE TIME: 1025	SITE :	FIELD CONDITIONS/WEATHER overcast / sunny, ~60°F	

Well Condition Inspection (circle one)

cover:	(locked)	not locked	
number:	(legible)	not legible	
outer casing:	good	(fair)	poor
inner casing:	(good)	fair	poor
well photographed:	yes	(no)	

Equipment Cleaning Procedures

- potable water and phosphate-free soap
- potable water rinse
- water rinse: distilled deionized
- solvent rinse: acetone hexane
- air dry

Casing Diameter: (circle one) (2") 4" 6" Other:____

Casing Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$
Casing Volume (gallons/ft) for: 2" = 0.163; 4" = 0.653; 6" = 1.47
Casing Volume (liters/ft) for: 2" = 0.618; 4" = 2.47; 6" = 5.56

Depth to Water (feet):	8.74	Measuring Point Elevation (feet):	
Depth of Well (feet):	49.95	Groundwater Surface Elevation:	
Water Column (feet):	41.21	LNAPL present: ____	thickness:
Casing Volume (gallons/liters):	6.72	DNAPL present: ____	thickness:
Calculated Purge Volume (gallons/liters):	20.15	Remarks:	
Actual Purge Volume (gallons/liters):	1.15		
Pump Intake Depth (feet):	~45	Ferrous Iron (mg/L):	0.01

Well Evacuation
Water level recovery is: (very slow) slow moderate fast Bailed dry: yes (no)

TIME 2400 hrs	CUMULATIVE VOLUME (gal)	TEMPERATURE (°C)	pH	DISSOLVED OXYGEN (mg/L)	ORP (mV)	CONDUCTIVITY (µs/cm)	TURBIDITY (NTU)	Depth to Water (Feet)	ODOR/COLOR/ REMARKS
0950	0								PURGE START
0954	0.25	19.40	4.11	6.34	197.6	25	0.04	9.29	clear
0958	0.50	19.53	4.41	6.34	181.6	17	0.03	9.41	"
1002	0.65	19.64	4.48	6.30	177.1	15	0.31	9.42	"
1007	0.75	19.61	4.53	6.24	171.7	15	0.00	9.45	"
1011	0.85	19.64	4.58	6.36	174.4	15	1.00	9.50	"
1015	0.95	19.72	4.59	6.26	177.2	14	0.28	9.53	"
1019	1.05	19.73	4.59	6.36	~~179.6~~ 179.6	14	0.00	9.53	"
1025	1.15	SAMP	LE		ESC				"

Measurement and Sampling Equipment

Type	Manufacturer	Model #	Calibration Date
Water Quality	~~YSI~~ Hanna	~~556~~ HI 98194	03/26/19
Turbidity	HF Scientific	Micro TPW 20000	"
Peristaltic Pump	Geotech	Geopump	NA

SAMPLE NUMBER	ANALYTICAL METHOD	BOTTLE TYPE/ PRESERVATIVES	QA REMARKS
3	VOCs	40 ml glass / HCL	
3	1,4 - Dioxane	40 ml glass / HCL	
2	Diss. Gasses	40 ml glass / HCL	
1	TOC	250 ml HDPE / H2SO4	
1	NO3/SO4/Cl/Alk	500 ml HDPE / none	
3	Sulfide	250 ml HDPE / ZnAcetate + NaOH	

EARTHCON®

Groundwater Sampling Record

WELL No. MW-2	PROJECT # 02.20160378.00	LOCATION: Blackville, SC	DATE: 3/26/19
SAMPLE No.	PROJECT NAME: Lennox, Blackville, SC	FIELD PERSONNEL/COMPANY: T. Messier, E. Cook	/EarthCon
SAMPLE TIME: 09:20	SITE :	FIELD CONDITIONS/WEATHER M/cloudy 56°	

Well Condition Inspection (circle one)

cover: (locked) not locked
number: (legible) not legible
outer casing: (good) fair poor
inner casing: (good) fair poor
well photographed: yes (no)

Equipment Cleaning Procedures

- potable water and phosphate-free soap: X
- potable water rinse
- water rinse: distilled deionized
- solvent rinse: acetone hexane
- air dry: X

Casing Diameter: (circle one) (2") 4" 6" Other:____

Casing Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$
Casing Volume (gallons/ft) for: 2" = 0.163; 4" = 0.653; 6" = 1.47
Casing Volume (liters/ft) for: 2" = 0.618; 4" = 2.47; 6" = 5.56

Depth to Water (feet):	2.97	Measuring Point Elevation (feet):	
Depth of Well (feet):	14.11	Groundwater Surface Elevation:	
Water Column (feet):	11.14	LNAPL present: N/A	thickness: —
Casing Volume (gallons/liters):	1.81	DNAPL present: N/A	thickness: —
Calculated Purge Volume (gallons/liters):	5.44	Remarks:	
Actual Purge Volume (gallons/liters):	1.35		
Pump Intake Depth (feet):	11	Ferrous Iron (mg/L):	0.00 mg/L

Well Evacuation
Water level recovery is: very slow slow moderate (fast) Bailed dry: yes (no)

TIME 2400 hrs	CUMULATIVE VOLUME (gal)	TEMPERATURE (°C)	pH .	DISSOLVED OXYGEN (mg/L)	ORP (mV)	CONDUCTIVITY (µs/cm)	TURBIDITY (NTU)	Depth to Water (Feet)	ODOR/COLOR/ REMARKS
08:40	0								PURGE START
08:45	0.25	17.28	4.75	5.57	312.7	4	0.41	3.19	—
08:50	0.45	17.57	3.44	2.15	344.7	45	0	3.19	CLEAR
08:55	0.65	17.64	3.30	1.63	352.1	45	0	3.19	CLEAR
09:00	0.85	17.68	3.16	1.24	360.5	45	0	3.19	CLEAR
09:05	1.00	17.69	3.10	1.14	364.1	46	0	3.19	CLEAR
09:10	1.35	17.66	3.11	1.04	365.2	46	0	3.19	CLEAR

Measurement and Sampling Equipment

Type	Manufacturer	Model #	Calibration Date
Water Quality	~~YSI~~ HANNA	~~556~~ H.I 98,194	3/26/19
Turbidity	HF Scientific	Micro TPW 20000	3/26/19
Peristaltic Pump	Geotech	Geopump	N/A

SAMPLE NUMBER	ANALYTICAL METHOD	BOTTLE TYPE/ PRESERVATIVES	QA REMARKS
3 ✓	VOCs	40 ml glass / HCL	
3 ✓	1,4 - Dioxane	40 ml glass / HCL	
2 ✓	Diss. Gasses	40 ml glass / HCL	
1 ✓	TOC	250 ml HDPE / H2SO4	
1 ✓	NO3/SO4/Cl/Alk	500 ml HDPE / none	
3 ✓	Sulfide	250 ml HDPE / ZnAcetate + NaOH	

EARTHCON®

Groundwater Sampling Record

WELL No. MW-2D	PROJECT # 02.20160378.00	LOCATION: Blackville, SC	DATE 3/26/19
SAMPLE No.	PROJECT NAME: Lennox, Blackville, SC	FIELD PERSONNEL/COMPANY: T. Messier, E. Cook	/EarthCon
SAMPLE TIME: 10:20	SITE :	FIELD CONDITIONS/WEATHER Mostly Cloudy 57°	

Well Condition Inspection (circle one)

cover: (locked) ~~not locked~~
number: ~~legible~~ not legible
outer casing: (good) fair poor
inner casing: (good) fair poor
well photographed: yes (no)

Equipment Cleaning Procedures

- potable water and phosphate-free soap: X
- potable water rinse
- water rinse: ~~distilled~~ deionized
- solvent rinse: acetone hexane
- air dry: X

Casing Diameter: (circle one) (2") 4" 6" Other:___

Casing Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$
Casing Volume (gallons/ft) for (2") = 0.163; 4" = 0.653; 6" = 1.47
Casing Volume (liters/ft) for: 2" = 0.618; 4" = 2.47; 6" = 5.56

Depth to Water (feet):	4.33	Measuring Point Elevation (feet):	
Depth of Well (feet):	40.97	Groundwater Surface Elevation:	
Water Column (feet):	36.65	LNAPL present: N/A	thickness: —
Casing Volume (gallons/liters):	5.97	DNAPL present: N/A	thickness: —
Calculated Purge Volume (gallons/liters):	17.97	Remarks:	
Actual Purge Volume (gallons/liters):	1.45		
Pump Intake Depth (feet):	38	Ferrous Iron (mg/L):	0.00 mg/L

Well Evacuation
Water level recovery is: very slow (slow moderate) fast Bailed dry: yes (no)

TIME 2400 hrs	CUMULATIVE VOLUME (gal)	TEMPERATURE (°C)	pH	DISSOLVED OXYGEN (mg/L)	ORP (mV)	CONDUCTIVITY (µs/cm)	TURBIDITY (NTU)	Depth to Water (Feet)	ODOR/COLOR/ REMARKS
09:35	0								PURGE START
09:40	0.35	18.06	3.79	5.98	258.3	22	0.22	7.04	CLEAR
09:45	0.45	18.35	3.81	5.82	263.6	22	0.15	7.40	CLEAR
09:50	0.65	18.35	3.81	5.85	264.6	22	0.11	7.61	CLEAR
09:55	0.85	18.43	3.80	5.93	265.8	22	0.09	7.85	CLEAR
10:00	1.00	18.45	3.78	5.77	262.3	22	0.04	8.06	CLEAR
10:05	1.25	18.50	3.78	5.85	256.2	22	0	8.19	CLEAR
10:10	1.45	18.52	3.77	5.87	254.1	22	0	8.25	

Measurement and Sampling Equipment

Type	Manufacturer	Model #	Calibration Date
Water Quality	~~YSI~~ HANNA (TM)	~~556~~ HI 98194 (TM)	3/26/19
Turbidity	HF Scientific	Micro TPW 20000	3/26/19
Peristaltic Pump	Geotech	Geopump	N/A

SAMPLE NUMBER	ANALYTICAL METHOD	BOTTLE TYPE/ PRESERVATIVES	QA REMARKS
3	VOCs	40 ml glass / HCL	
3	1,4 - Dioxane	40 ml glass / HCL	
2	Diss. Gasses	40 ml glass / HCL	
1	TOC	250 ml HDPE / H2SO4	
1	NO3/SO4/Cl/Alk	500 ml HDPE / none	
3	Sulfide	250 ml HDPE / ZnAcetate + NaOH	

MW-3

EARTHCON®

Groundwater Sampling Record

WELL No. MW-3D	PROJECT # 02.20160378.00	LOCATION: Blackville, SC	Date: 3/27/19
SAMPLE No.	PROJECT NAME: Lennox, Blackville, SC	FIELD PERSONNEL/COMPANY: T. Messier, E. Cook	/EarthCon
SAMPLE TIME: 10:40	SITE :	FIELD CONDITIONS/WEATHER Sunny 41°	

Well Condition Inspection (circle one)

cover:	locked	not locked
number:	legible	not legible
outer casing:	good	fair poor
inner casing:	good	fair poor
well photographed:	yes	no

Equipment Cleaning Procedures

- potable water and ~~phosphate~~-free soap
- potable water rinse
- water rinse: ~~distilled~~ deionized
- solvent rinse: acetone hexane
- ~~air dry~~

Casing Diameter: (circle one) 2" 4" 6" Other:____

Casing Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$
Casing Volume (gallons/ft) for: 2" = 0.163; 4" = 0.653; 6" = 1.47
Casing Volume (liters/ft) for: 2" = 0.616; 4" = 2.47; 6" = 5.56

Depth to Water (feet):	4.20	Measuring Point Elevation (feet):	
Depth of Well (feet):	28.12 17.96	Groundwater Surface Elevation:	
Water Column (feet):	13.76	LNAPL present: N/A	thickness: —
Casing Volume (gallons/liters):	2.24	DNAPL present: N/A	thickness: —
Calculated Purge Volume (gallons/liters):	6.72	Remarks: Sulfur Odor very strong	
Actual Purge Volume (gallons/liters):	0.65		
Pump Intake Depth (feet):	~14	Ferrous Iron (mg/L):	0.00 mg/L

Well Evacuation

Water level recovery is: very slow slow ~~moderate~~ fast Bailed dry: yes no

TIME 2400 hrs	CUMULATIVE VOLUME (gal)	TEMPERATURE (°C)	pH	DISSOLVED OXYGEN (mg/L)	ORP (mV)	CONDUCTIVITY (µs/cm)	TURBIDITY (NTU)	Depth to Water (Feet)	ODOR/COLOR/ REMARKS
~~10:05~~	0								PURGE START
10:10	0.15	15.90	4.28	0.11	-50.5	134	1.81	6.85	CLEAR
10:15	0.25	15.05	4.29	0.01	-56.5	130	4.50	6.23	CLEAR
10:20	0.45	15.96	4.29	0.07	-67.9	137	1.59	6.65	CLEAR
10:25	0.55	15.83	4.29	0.08	-81.1	137	0	7.19	CLEAR
10:30	0.65	15.93	4.29	0.07	-86.1	137	0	7.55	CLEAR

Measurement and Sampling Equipment

Type	Manufacturer	Model #	Calibration Date
Water Quality	~~YSI~~ HANNA	~~556~~ HI9828/94	3/27/19
Turbidity-	HF Scientific	Micro TPW 20000	3/27/19
Peristaltic Pump	Geotech	Geopump	N/A

SAMPLE NUMBER	ANALYTICAL METHOD	BOTTLE TYPE/ PRESERVATIVES	QA REMARKS
3	VOCs	40 ml glass / HCL	
~~3~~ 2	1,4 - Dioxane	40 ml glass / HCL	
2	Diss. Gasses	40 ml glass / HCL	
1	TOC	250 ml HDPE / H2SO4	
1	NO3/SO4/Cl/Alk	500 ml HDPE / none	
~~3~~ 1	Sulfide	250 ml HDPE / ZnAcetate + NaOH	

EARTHCON®

MW-3D

Groundwater Sampling Record

WELL No. ~~MW-3D~~	PROJECT # 02.20160378.00	LOCATION: Blackville, SC	DATE 3/27/19
SAMPLE No.	PROJECT NAME: Lennox, Blackville, SC	FIELD PERSONNEL/COMPANY: T. Messier, E. Cook	/EarthCon
SAMPLE TIME: 10:00	SITE :	FIELD CONDITIONS/WEATHER Sunny 45°	

Well Condition Inspection (circle one)

cover:	(locked)	not locked
number:	(legible)	not legible
outer casing:	(good)	fair poor
inner casing:	(good)	fair poor
well photographed:	yes	no

Equipment Cleaning Procedures

- potable water and ~~phosphate~~-free soap
- potable water rinse
- water rinse: (distilled) deionized
- solvent rinse: acetone hexane
- air dry

Casing Diameter: (circle one) (2") 4" 6" Other:____

Casing Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$
Casing Volume (gallons/ft) for: 2" = 0.163; 4" = 0.653; 6" = 1.47
Casing Volume (liters/ft) for: 2" = 0.618; 4" = 2.47; 6" = 5.56

Depth to Water (feet):	4.167	Measuring Point Elevation (feet):	
Depth of Well (feet):	~~28.12~~ 28.12	Groundwater Surface Elevation:	
Water Column (feet):	23.43	LNAPL present: N/A	thickness: —
Casing Volume (gallons/liters):	3.8	DNAPL present: N/A	thickness: —
Calculated Purge Volume (gallons/liters):	11.46	Remarks:	
Actual Purge Volume (gallons/liters):	1.00		
Pump Intake Depth (feet):	25'	Ferrous Iron (mg/L):	0.96 mg/L

Well Evacuation
Water level recovery is: very slow slow moderate (fast) Bailed dry: yes (no)

TIME 2400 hrs	CUMULATIVE VOLUME (gal)	TEMPERATURE (°C)	pH	DISSOLVED OXYGEN (mg/L)	ORP (mV)	CONDUCTIVITY (µs/cm)	TURBIDITY (NTU)	Depth to Water (Feet)	ODOR/COLOR/ REMARKS
09:20	0								PURGE START
09:25	0.15	16.39	4.44	5.47	183.7	82	0	4.96	CLEAR
09:30	0.25	16.50	4.10	4.78	214.7	81	0	4.96	CLEAR
09:35	0.45	16.51	4.00	4.53	226.3	82	0	4.96	CLEAR
09:40	0.55	16.60	3.99	4.39	232.6	82	0	4.96	CLEAR
09:45	0.65	16.83	3.91	4.32	238.9	82	0	4.96	clear
09:50	0.85	16.81	3.90	4.29	242.3	81	0	4.96	clear
09:55	1.00	16.82	3.89	4.28	244.0	81	0	4.96	CLEAR

Measurement and Sampling Equipment

Type	Manufacturer	Model #	Calibration Date
Water Quality	~~YSI~~ HANNA	~~556~~ HI98194	3/27/19
Turbidity	HF Scientific	Micro TPW 20000	3/27/19
Peristaltic Pump	Geotech	Geopump	10/A

SAMPLE NUMBER	ANALYTICAL METHOD	BOTTLE TYPE/ PRESERVATIVES	QA REMARKS
3	VOCs	40 ml glass / HCL	
3	1,4 - Dioxane	40 ml glass / HCL	
2	Diss. Gasses	40 ml glass / HCL	
1	TOC	250 ml HDPE / H2SO4	
1	NO3/SO4/Cl/Alk	500 ml HDPE / none	
3	Sulfide	250 ml HDPE / ZnAcetate + NaOH	

EARTHCON®

Groundwater Sampling Record

WELL No. MW-4	PROJECT # 02.20160378.00	LOCATION: Blackville, SC	DATE 03/27/19
SAMPLE No. MW-4	PROJECT NAME: Lennox, Blackville, SC	FIELD PERSONNEL/COMPANY: T. Messier, E. Cook	/EarthCon
SAMPLE TIME: 14:40	SITE :	FIELD CONDITIONS/WEATHER Sunny + windy, ~ 55°F	

Well Condition Inspection (circle one)

cover: (locked) not locked
number: (legible) not legible
outer casing: good (fair) poor
inner casing: (good) fair poor
well photographed: yes (no)

Equipment Cleaning Procedures

- potable water ~~and~~ phosphate-free soap
- potable water rinse
- water rinse: ~~distilled~~ deionized
- solvent rinse: acetone hexane
- ~~air dry~~

Casing Diameter: (circle one) (2") 4" 6" Other:____

Casing Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$
Casing Volume (gallons/ft) for: 2" = 0.163; 4" = 0.653; 6" = 1.47
Casing Volume (liters/ft) for: 2" = ~~0.618~~; 4" = 2.47; 6" = 5.56

Depth to Water (feet):	6.61	Measuring Point Elevation (feet):	
Depth of Well (feet):	20.78	Groundwater Surface Elevation:	
Water Column (feet):	14.17	LNAPL present:	thickness:
Casing Volume (gallons/liters):	2.31	DNAPL present:	thickness:
Calculated Purge Volume (gallons/liters):	6.93	Remarks:	
Actual Purge Volume (gallons/liters):	0.85		
Pump Intake Depth (feet):	~15	Ferrous Iron (mg/L):	0.00 mg/L

Well Evacuation
Water level recovery is: very slow slow moderate (fast) Bailed dry: yes (no)

TIME 2400 hrs	CUMULATIVE VOLUME (gal)	TEMPERATURE (°C)	pH	DISSOLVED OXYGEN (mg/L)	ORP (mV)	CONDUCTIVITY (µs/cm)	TURBIDITY (NTU)	Depth to Water (Feet)	ODOR/COLOR/ REMARKS
1320	0								PURGE START
13:25	0.15	16.95	4.62	2.02	197.3	35	32.84	7.25	clear
13:30	0.35	16.64	4.14	1.72	242.2	35	18.15	7.40	clear
13:35	0.45	16.52	3.97	1.65	265.5	35	19.27	7.44	clear
13:40	0.55	16.59	3.65	1.61	281.3	39	15.17	7.45	clear
13:45	0.65	16.57	3.63	1.54	287.3	39	14.16	7.45	clear
13:50	0.75	16.58	3.62	1.59	292.1	39	10.09	7.45	clear
14:00	0.85	16.57	3.62	1.58	295.9	39	9.88	7.45	clear

Measurement and Sampling Equipment

Type	Manufacturer	Model #	Calibration Date
Water Quality	~~YSI~~ HANNA	~~556~~ HI98194	03/27/19
Turbidity	HF Scientific	Micro TPW 20000	
Peristaltic Pump	Geotech	Geopump	NA

SAMPLE NUMBER	ANALYTICAL METHOD	BOTTLE TYPE/ PRESERVATIVES	QA REMARKS
3	VOCs	40 ml glass / HCL	
3	1,4 - Dioxane	40 ml glass / HCL	
2	Diss. Gasses	40 ml glass / HCL	
1	TOC	250 ml HDPE / H2SO4	
1	NO3/SO4/Cl/Alk	500 ml HDPE / none	
3	Sulfide	250 ml HDPE / ZnAcetate + NaOH	

EARTHCON®

Groundwater Sampling Record

WELL No. MW-4D	PROJECT # 02.20160378.00	LOCATION: Blackville, SC	DATE 3/29/19
SAMPLE No. 14	PROJECT NAME: Lennox, Blackville, SC	FIELD PERSONNEL/COMPANY: T. Messier, E. Cook	/EarthCon
SAMPLE TIME: ~~13:50~~	SITE :	FIELD CONDITIONS/WEATHER: Sunny / Windy 55°	

Well Condition Inspection (circle one)

cover: (locked) not locked
number: (legible) not legible
outer casing: ~~good~~ fair poor
inner casing: ~~good~~ fair poor
well photographed: yes (no)

Equipment Cleaning Procedures

- potable water and ~~phosphate-free~~ soap
- potable water rinse
- water rinse: ~~distilled~~ deionized
- solvent rinse: acetone hexane
- ~~air dry~~

Casing Diameter: (circle one) (2") 4" 6" Other:____

Casing Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$
Casing Volume (gallons/ft) ~~for:~~ 2" = 0.163; 4" = 0.653; 6" = 1.47
Casing Volume (liters/ft) for: 2" = 0.618; 4" = 2.47; 6" = 5.56

Depth to Water (feet):	9.30	Measuring Point Elevation (feet):	
Depth of Well (feet):	78.75	Groundwater Surface Elevation:	
Water Column (feet):	69.45	LNAPL present: N/A	thickness: —
Casing Volume (gallons/liters):	11.32	DNAPL present: N/A	thickness: —
Calculated Purge Volume (gallons/liters):	34	Remarks:	
Actual Purge Volume (gallons/liters):	0.65		
Pump Intake Depth (feet):	~35	Ferrous Iron (mg/L):	0.00

Well Evacuation
Water level recovery is: very slow slow moderate fast
Bailed dry: yes (no)

	TIME 2400 hrs	CUMULATIVE VOLUME (gal)	TEMPERATURE (°C)	pH	DISSOLVED OXYGEN (mg/L)	ORP (mV)	CONDUCTIVITY (µs/cm)	TURBIDITY (NTU)	Depth to Water (Feet)	ODOR/COLOR/ REMARKS
kl	~~13:20~~	0								PURGE START
14	~~13:25~~	0.15	17.69	4.09	2.39	291.4	17	0.60	10.61	clear
14	~~13:30~~	0.25	17.74	4.16	1.87	297.0	18	0.10	11.09	clear
14	~~13:35~~	0.45	17.81	4.21	1.72	298.2	17	0	11.32	clear
14	~~13:40~~	0.55	17.84	4.28	1.62	299.4	18	0	11.75	clear
14	~~13:45~~	0.65	17.83	4.20	1.54	311.0	17	0	11.98	clear

Measurement and Sampling Equipment

Type	Manufacturer	Model #	Calibration Date
Water Quality	~~YSI~~ HANNA	~~556~~ HI98194	3/29/19
Turbidity	HF Scientific	Micro TPW 20000	3/27/19
Bladder Pump	QED	Well Wizard Micro Purge	N/A

SAMPLE NUMBER	ANALYTICAL METHOD	BOTTLE TYPE/ PRESERVATIVES	QA REMARKS
3	VOCs	40 ml glass / HCL	
~~3~~ 2	1,4 - Dioxane	40 ml glass / HCL	
2	Diss. Gasses	40 ml glass / HCL	
1	TOC	250 ml HDPE / H2SO4	
1	NO3/SO4/Cl/Alk	500 ml HDPE / none	
~~2~~ 1	Sulfide	250 ml HDPE / ZnAcetate + NaOH	

EARTHCON®

Groundwater Sampling Record

WELL No. MW-5	PROJECT # 02.20160378.00	LOCATION: Blackville, SC	DATE 3/27/19
SAMPLE No. MW-5	PROJECT NAME: Lennox, Blackville, SC	FIELD PERSONNEL/COMPANY: T. Messier, E. Cook	/EarthCon
SAMPLE TIME: 1600	SITE :	FIELD CONDITIONS/WEATHER inside building	

Well Condition Inspection (circle one)

cover: locked / not locked
number: legible / not legible
outer casing: good / fair / poor
inner casing: good / fair / poor
well photographed: yes / no

Equipment Cleaning Procedures

- potable water and phosphate-free soap
- potable water rinse
- water rinse: distilled / deionized
- solvent rinse: acetone / hexane
- air dry

Casing Diameter: (circle one) 2" 4" 6" Other: 1"

Casing Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$
Casing Volume (gallons/ft) for: 2" = 0.163; 4" = 0.653; 6" = 1.47
Casing Volume (liters/ft) for: 2" = 0.618; 4" = 2.47; 6" = 5.56

1" = 0.045

Depth to Water (feet):	5.61	Measuring Point Elevation (feet):	
Depth of Well (feet):	19.7	Groundwater Surface Elevation:	
Water Column (feet):	14.09	LNAPL present:	thickness:
Casing Volume (gallons/liters):	.634	DNAPL present:	thickness:
Calculated Purge Volume (gallons/liters):	1.9	Remarks:	
Actual Purge Volume (gallons/liters):	1.70		
Pump Intake Depth (feet):	~15	Ferrous Iron (mg/L):	0.00

Well Evacuation
Water level recovery is: very slow / slow / moderate / fast
Bailed dry: yes / no

TIME 2400 hrs	CUMULATIVE VOLUME (gal)	TEMPERATURE (°C)	pH	DISSOLVED OXYGEN (mg/L)	ORP (mV)	CONDUCTIVITY (µs/cm)	TURBIDITY (NTU)	Depth to Water (Feet)	ODOR/COLOR/ REMARKS
1525	0								PURGE START
1528	0.25	17.98	4.09	1.04	257.8	72	110.88	5.62	clear/slow
1532	0.50	18.07	4.06	0.73	233.5	70	221.17	5.62	cloudy
1537	0.70	17.96	3.98	0.70	251.3	71	65.59	5.62	cloudy
1541	0.90	17.95	3.91	0.72	262.8	70	16.51	5.62	"
1545	1.10	17.95	3.84	0.76	274.0	70	8.78	5.62	clear
1550	1.30	17.96	3.86	0.76	276.7	70	6.12	5.62	"
1555	1.50	17.95	3.83	0.76	276.9	70	5.92	5.62	"
1600	SAMPLE								

Measurement and Sampling Equipment

Type	Manufacturer	Model #	Calibration Date
Water Quality	~~YSI~~ Hanna	~~556~~ HI 98194	03/27/19
Turbidity	HF Scientific	Micro TPW 20000	"
Bladder Pump	QED	Well Wizard Micro Purge	NA

SAMPLE NUMBER	ANALYTICAL METHOD	BOTTLE TYPE/ PRESERVATIVES	QA REMARKS
3	VOCs	40 ml glass / HCL	
3	1,4 - Dioxane	40 ml glass / HCL	
2	Diss. Gasses	40 ml glass / HCL	
1	TOC	250 ml HDPE / H2SO4	
1	NO3/SO4/Cl/Alk	500 ml HDPE / none	
3	Sulfide	250 ml HDPE / ZnAcetate + NaOH	
			DUP-2 collected

EARTHCON®

Groundwater Sampling Record

WELL No. MW-6R	PROJECT # 02.20160378.00	LOCATION: Blackville, SC	DATE 03/26/19
SAMPLE No. MW-6R	PROJECT NAME: Lennox, Blackville, SC	FIELD PERSONNEL/COMPANY: T. Messier, E. Cook	/EarthCon
SAMPLE TIME: 1315	SITE :	FIELD CONDITIONS/WEATHER	overcast, ~55 °F

Well Condition Inspection (circle one)

cover: (locked) not locked
number: (legible) not legible
outer casing: (good) fair poor
inner casing: (good) fair poor
well photographed: yes (no)

Equipment Cleaning Procedures

- potable water and phosphate-free soap
- potable water rinse
- water rinse: distilled deionized
- solvent rinse: acetone hexane
- air dry

Casing Diameter: (circle one) (2") 4" 6" Other:____

Casing Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$
Casing Volume (gallons/ft) for: 2" = 0.168; 4" = 0.653; 6" = 1.47
Casing Volume (liters/ft) for: 2" = 0.618; 4" = 2.47; 6" = 5.56

Depth to Water (feet):	1.19	Measuring Point Elevation (feet):	
Depth of Well (feet):	14.3	Groundwater Surface Elevation:	
Water Column (feet):	13.11	LNAPL present: —	thickness:
Casing Volume (gallons/liters):	2.14	DNAPL present: —	thickness:
Calculated Purge Volume (gallons/liters):	6.41	Remarks:	
Actual Purge Volume (gallons/liters):	1.40		
Pump Intake Depth (feet):	~9	Ferrous Iron (mg/L):	0.00

Well Evacuation
Water level recovery is: very slow (slow) moderate fast Bailed dry: yes (no)

TIME 2400 hrs	CUMULATIVE VOLUME (gal)	TEMPERATURE (°C)	pH	DISSOLVED OXYGEN (mg/L)	ORP (mV)	CONDUCTIVITY (µs/cm)	TURBIDITY (NTU)	Depth to Water (Feet)	ODOR/COLOR/ REMARKS
1240	0								PURGE START
1244	0.05	15.39	5.10	2.48	55.8	78	12.95	1.25	clear
1248	0.15	15.41	5.00	2.04	67.9	77	8.14	1.28	"
1252	0.50	15.59	4.85	1.74	87.3	76	5.86	1.30	"
1256	0.65	15.67	4.80	1.63	98.2	76	5.80	1.25	"
1300	0.85	15.70	4.72	1.48	108.5	75	5.33	1.25	"
1304	1.05	15.75	4.68	1.42	114.4	75	4.44	1.25	"
1310	1.20	15.73	4.66	1.39	116.2	75	4.04	1.25	"
1315	SAMPLE								

Measurement and Sampling Equipment

Type	Manufacturer	Model #	Calibration Date
Water Quality	~~YSI~~ Hanna	~~556~~ HI 98194	03/26/19
Turbidity	HF Scientific	Micro TPW 20000	"
Peristaltic Pump	Geotech	Geopump	NA

SAMPLE NUMBER	ANALYTICAL METHOD	BOTTLE TYPE/ PRESERVATIVES	QA REMARKS
3	VOCs	40 ml glass / HCL	
3	1,4 - Dioxane	40 ml glass / HCL	
2	Diss. Gasses	40 ml glass / HCL	
1	TOC	250 ml HDPE / H2SO4	
1	NO3/SO4/Cl/Alk	500 ml HDPE / none	
3	Sulfide	250 ml HDPE / ZnAcetate + NaOH	

EARTHCON®

Groundwater Sampling Record

WELL No. MW-7	PROJECT # 02.20160378.00	LOCATION: Blackville, SC	DATE 03/26/19
SAMPLE No. MW-7	PROJECT NAME: Lennox, Blackville, SC	FIELD PERSONNEL/COMPANY: T. Messier, E. Cook	/EarthCon.
SAMPLE TIME: 1135	SITE :	FIELD CONDITIONS/WEATHER overcast, ~55°F	

Well Condition Inspection (circle one)

cover: (locked) not locked
number: (legible) not legible
outer casing: (good) fair poor
inner casing: (good) fair poor
well photographed: yes (no)

Equipment Cleaning Procedures

- potable water and phosphate-free soap
- potable water rinse
- water rinse: distilled deionized
- solvent rinse: acetone hexane
- air dry

Casing Diameter: (circle one) (2") 4" 6" Other:____

Casing Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$
Casing Volume (gallons/ft) for: (2" = 0.163) 4" = 0.653; 6" = 1.47
Casing Volume (liters/ft) for: 2" = 0.618; 4" = 2.47; 6" = 5.56

Depth to Water (feet):	~~5~~ 8.75 EJC	Measuring Point Elevation (feet):	
Depth of Well (feet):	11.98	Groundwater Surface Elevation:	
Water Column (feet):	6.23	LNAPL present: —	thickness:
Casing Volume (gallons/liters):	1.02	DNAPL present: —	thickness:
Calculated Purge Volume (gallons/liters):	3.05	Remarks:	
Actual Purge Volume (gallons/liters):	0.80		
Pump Intake Depth (feet):	~6	Ferrous Iron (mg/L):	0.01

Well Evacuation
Water level recovery is: (very slow) slow moderate fast Bailed dry: yes (no)

TIME 2400 hrs	CUMULATIVE VOLUME (gal)	TEMPERATURE (°C)	pH	DISSOLVED OXYGEN (mg/L)	ORP (mV)	CONDUCTIVITY (µs/cm)	TURBIDITY (NTU)	Depth to Water (Feet)	ODOR/COLOR/ REMARKS
1100	0								PURGE START
1105	0.10	15.10	5.01	0.68	-43.5	100	6.34	6.30	clear sm
1109	0.20	14.98	5.01	0.32	-47.8	100	4.74	6.55	"
1114	0.30	15.25	4.99	0.13	-58.6	102	2.95	6.85	"
1118	0.40	15.43	4.99	0.12	-62.5	103	2.29	6.87	"
1122	0.50	15.76	5.01	0.06	-68.8	102	2.07	6.87	"
1126	0.60	15.72	5.07	0.33	-67.7	101	2.00	6.89	"
1130	0.70	15.70	5.07	1.28	-70.0	101	2.06	6.89	"
1135	SAMPLE								

Measurement and Sampling Equipment

Type	Manufacturer	Model #	Calibration Date
Water Quality	~~YSI~~ Hanna	~~556~~ HI 98194	03/26/19
Turbidity	HF Scientific	Micro TPW 20000	"
Peristaltic Pump	Geotech	Geopump	NA

SAMPLE NUMBER	ANALYTICAL METHOD	BOTTLE TYPE/ PRESERVATIVES	QA REMARKS
3	VOCs	40 ml glass / HCL	
3	1,4 - Dioxane	40 ml glass / HCL	
2	Diss. Gasses	40 ml glass / HCL	
1	TOC	250 ml HDPE / H2SO4	
1	NO3/SO4/Cl/Alk	500 ml HDPE / none	
3	Sulfide	250 ml HDPE / ZnAcetate + NaOH	

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Groundwater Sampling Record

WELL No. MW-8	PROJECT # 02.20160378.00	LOCATION: Blackville, SC	DATE 3/26/19
SAMPLE No. 14:40	PROJECT NAME: Lennox, Blackville, SC	FIELD PERSONNEL/COMPANY: T. Messier, E. Cook	/EarthCon
SAMPLE TIME: ~~14:40~~	SITE :	FIELD CONDITIONS/WEATHER P/CLOUDY 52°	

Well Condition Inspection (circle one)

cover: (locked) not locked
number: (legible) not legible
outer casing: (good) fair poor
inner casing: (good) fair poor
well photographed: yes (no)

Equipment Cleaning Procedures

- potable water and phosphate-free soap
- potable water rinse
- water rinse: distilled deionized
- solvent rinse: acetone hexane
- air dry

Casing Diameter: (circle one) (2") 4" 6" Other: 1"

Casing Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$ 0.065
Casing Volume (gallons/ft) for: 2" = 0.163; 4" = 0.653; 6" = 1.47
Casing Volume (liters/ft) for: 2" = 0.618; 4" = 2.47; 6" = 5.56

Depth to Water (feet): 0.38
Depth of Well (feet): 12
Water Column (feet): ~~11.62~~ ~~11.93~~ 11.72
Casing Volume (gallons/liters): ~~1.89~~ 0.76
Calculated Purge Volume (gallons/liters): ~~5.6~~ 2.25
Actual Purge Volume (gallons/liters): 1.45
Pump Intake Depth (feet): 9

Measuring Point Elevation (feet):
Groundwater Surface Elevation:
LNAPL present: N/A thickness: —
DNAPL present: N/A thickness: —
Remarks:
Ferrous Iron (mg/L): 2.96 mg/L

Well Evacuation
Water level recovery is: (very slow) slow moderate fast
Bailed dry: (yes) no

TIME 2400 hrs	CUMULATIVE VOLUME (gal)	TEMPERATURE (°C)	pH	DISSOLVED OXYGEN (mg/L)	ORP (mV)	CONDUCTIVITY (µs/cm)	TURBIDITY (NTU)	Depth to Water (Feet)	ODOR/COLOR/ REMARKS
11:00	0								PURGE START
11:05	0.25	15.81	3.99	1.57	113.5	122	27.12	5.10	P/CLOUDY
11:10	0.45	15.95	4.00	0.90	108.5	121	13.76	9.40	P/CLOUDY
11:15	0.65	16.52	3.96	1.57	96.7	107	4.00	10.61	CLEAR
11:20	0.85	16.68	4.14	3.09	83.8	110	3.00	10.60	CLEAR
11:25	1.00	16.80	4.36	7.69	75.9	118	2.98	10.61	CLEAR
11:30	1.25	17.49	4.52	8.54	72.5	106	3.82	10.61	CLEAR
11:35	1.45	17.52	4.60	8.74	70.5	104	2.66	11.59	CLOUDY

Measurement and Sampling Equipment

Type	Manufacturer	Model #	Calibration Date
Water Quality	~~YSI~~ HANNA	~~556~~ H198194	3/26/19
Turbidity	HF Scientific	Micro TPW 20000	3/26/19
Peristaltic Pump	Geotech	Geopump	N/A

SAMPLE NUMBER	ANALYTICAL METHOD	BOTTLE TYPE/ PRESERVATIVES	QA REMARKS
3	VOCs	40 ml glass / HCL	
3	1,4 - Dioxane	40 ml glass / HCL	
2	Diss. Gasses	40 ml glass / HCL	
1	TOC	250 ml HDPE / H2SO4	
1	NO3/SO4/Cl/Alk	500 ml HDPE / none	
3	Sulfide	250 ml HDPE / ZnAcetate + NaOH	

EARTHCON®

Groundwater Sampling Record

WELL No. MW-10	PROJECT # 02.20160378.00	LOCATION: Blackville, SC	DATE 03/27/19
SAMPLE No. MW-10	PROJECT NAME: Lennox, Blackville, SC	FIELD PERSONNEL/COMPANY: T. Messier, E. Cook	/EarthCon
SAMPLE TIME: 1025	SITE :	FIELD CONDITIONS/WEATHER Sunny + windy, ~50°F	

Well Condition Inspection (circle one)

cover: (locked) not locked
number: (legible) not legible
outer casing: (good) (fair) poor
inner casing: (good) fair poor
well photographed: yes (no)

Equipment Cleaning Procedures

- potable water and phosphate-free soap
- potable water rinse
- water rinse: distilled deionized
- solvent rinse: acetone hexane
- air dry

Casing Diameter:

(circle one)
2" 4"
6" (Other: 1")

Casing Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$
Casing Volume (gallons/ft) for: 2" = 0.163; 4" = 0.653; 6" = 1.47
Casing Volume (liters/ft) for: 2" = 0.618; 4" = 2.47; 6" = 5.56

1" = 0.045

Depth to Water (feet):	3.91	Measuring Point Elevation (feet):	
Depth of Well (feet):	12.33	Groundwater Surface Elevation:	
Water Column (feet):	8.42	LNAPL present: —	thickness:
Casing Volume (gallons/liters):	.379	DNAPL present: —	thickness:
Calculated Purge Volume (gallons/liters):	1.137	Remarks:	
Actual Purge Volume (gallons/liters):	1.30		
Pump Intake Depth (feet):	~8	Ferrous Iron (mg/L):	0.00

Well Evacuation
Water level recovery is: very slow (slow) moderate fast Bailed dry: yes no

TIME 2400 hrs	CUMULATIVE VOLUME (gal)	TEMPERATURE (°C)	pH	DISSOLVED OXYGEN (mg/L)	ORP (mV)	CONDUCTIVITY (µs/cm)	TURBIDITY (NTU)	Depth to Water (Feet)	ODOR/COLOR/ REMARKS
0950	0								PURGE START
0955	0.20	16.17	4.60	1.17	130.9	36	23.13	4.05	clear
1000	0.40	16.07	4.41	0.67	138.4	37	10.97	4.05	"
1005	0.60	16.10	4.32	0.59	136.0	37	8.01	4.06	"
1009	0.75	16.01	4.24	0.56	139.9	38	6.27	4.06	"
1014	0.90	16.09	4.11	0.57	146.9	38	5.09	4.06	"
1020	1.10	16.19	4.03	0.60	152.2	38	4.93	4.06	"
1025	SAMPLE								

Measurement and Sampling Equipment

Type	Manufacturer	Model #	Calibration Date
Water Quality	~~YSI~~ Hanna	~~556~~ HI98194	03/27/19
Turbidity	HF Scientific	Micro TPW 20000	"
Peristaltic Pump	Geotech	Geopump	NA

SAMPLE NUMBER	ANALYTICAL METHOD	BOTTLE TYPE/ PRESERVATIVES	QA REMARKS
3	VOCs	40 ml glass / HCL	
3	1,4 - Dioxane	40 ml glass / HCL	
2	Diss. Gasses	40 ml glass / HCL	
1	TOC	250 ml HDPE / H2SO4	
1	NO3/SO4/Cl/Alk	500 ml HDPE / none	
3	Sulfide	250 ml HDPE / ZnAcetate + NaOH	

EARTHCON®

Groundwater Sampling Record

WELL No. MW-11	PROJECT # 02.20160378.00	LOCATION: Blackville, SC	DATE 03/27/19
SAMPLE No. MW-11	PROJECT NAME: Lennox, Blackville, SC	FIELD PERSONNEL/COMPANY: T. Messier, E. Cook	/EarthCon
SAMPLE TIME: 1220	SITE :	FIELD CONDITIONS/WEATHER	

Well Condition Inspection (circle one)

cover: locked / not locked
number: legible / not legible
outer casing: good / fair / poor
inner casing: good / fair / poor
well photographed: yes / no

Equipment Cleaning Procedures

- potable water and phosphate-free soap
- potable water rinse
- water rinse: distilled / deionized
- solvent rinse: acetone / hexane
- air dry

Casing Diameter: (circle one) 2" 4" 6" Other: 1"

Casing Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$
Casing Volume (gallons/ft) for: 2" = 0.163; 4" = 0.653; 6" = 1.47
Casing Volume (liters/ft) for: 2" = 0.618; 4" = 2.47; 6" = 5.56

1" = 0.045

Depth to Water (feet):	6.55	Measuring Point Elevation (feet):	
Depth of Well (feet):	9.59	Groundwater Surface Elevation:	
Water Column (feet):	3.04	LNAPL present: —	thickness:
Casing Volume (gallons/liters):	.137	DNAPL present: —	thickness:
Calculated Purge Volume (gallons/liters):	.411	Remarks:	
Actual Purge Volume (gallons/liters):	0.35		
Pump Intake Depth (feet):	~5	Ferrous Iron (mg/L):	0.00

Well Evacuation
Water level recovery is: very slow / slow / moderate / fast
Bailed dry: yes / no

TIME 2400 hrs	CUMULATIVE VOLUME (gal)	TEMPERATURE (°C)	pH	DISSOLVED OXYGEN (mg/L)	ORP (mV)	CONDUCTIVITY (µs/cm)	TURBIDITY (NTU)	Depth to Water (Feet)	ODOR/COLOR/ REMARKS
1140	0								PURGE START
1145	0.05	17.97	4.58	5.01	110.0	101	36.46	6.70	clear
1150	0.10	18.08	4.64	5.38	103.0	103	31.50	6.64	"
1155	0.15	18.42	4.76	5.55	87.9	108	20.51	6.65	"
1200	0.20	18.55	4.84	5.18	78.8	112	15.66	6.65	"
1205	0.25	18.69	4.86	5.32	76.5	115	10.23	6.65	"
1210	0.28	18.70	4.90	5.32	74.3	117	9.88	6.65	"
1215	0.32	18.76	4.92	5.32	73.7	117	7.65	6.65	"
1220	SAMPLE								

Measurement and Sampling Equipment

Type	Manufacturer	Model #	Calibration Date
Water Quality	~~YSI~~ Hanna	~~550~~ HI 98194	03/27/19
Turbidity	HF Scientific	Micro TPW 20000	"
Peristaltic Pump	Geotech	Geopump	NA

SAMPLE NUMBER	ANALYTICAL METHOD	BOTTLE TYPE/ PRESERVATIVES	QA REMARKS
3	VOCs	40 ml glass / HCL	
3	1,4 - Dioxane	40 ml glass / HCL	
2	Diss. Gasses	40 ml glass / HCL	
1	TOC	250 ml HDPE / H2SO4	
1	NO3/SO4/Cl/Alk	500 ml HDPE / none	
3	Sulfide	250 ml HDPE / ZnAcetate + NaOH	

EARTHCON®

Groundwater Sampling Record

WELL No. MW-14	PROJECT # 02.20160378.00	LOCATION: Blackville, SC	DATE 3/27/19
SAMPLE No.	PROJECT NAME: Lennox, Blackville, SC	FIELD PERSONNEL/COMPANY: T. Messier, E. Cook	/EarthCon
SAMPLE TIME: 0910	SITE :	FIELD CONDITIONS/WEATHER	

Well Condition Inspection (circle one)

cover: (locked) not locked
number: (legible) not legible
outer casing: (good) fair poor
inner casing: (good) fair poor
well photographed: yes (no)

Equipment Cleaning Procedures

- potable water and phosphate-free soap
- potable water rinse
- water rinse: distilled deionized
- solvent rinse: acetone hexane
- air dry

Casing Diameter:

(circle one)
2" 4"
6" Other: 1"

Casing Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$
Casing Volume (gallons/ft) for: 2" = 0.163; 4" = 0.653; 6" = 1.47
Casing Volume (liters/ft) for: 2" = 0.618; 4" = 2.47; 6" = 5.56

1" = 0.045

Depth to Water (feet):	6.68 58 EJC	Measuring Point Elevation (feet):	
Depth of Well (feet):	13.41	Groundwater Surface Elevation:	
Water Column (feet):	6.83	LNAPL present: —	thickness:
Casing Volume (gallons/liters):	.307	DNAPL present: —	thickness:
Calculated Purge Volume (gallons/liters):	.922	Remarks:	
Actual Purge Volume (gallons/liters):	0.90		
Pump Intake Depth (feet):	~8	Ferrous Iron (mg/L):	0.17

Well Evacuation
Water level recovery is: very slow slow (moderate) fast Bailed dry: yes (no)

TIME 2400 hrs	CUMULATIVE VOLUME (gal)	TEMPERATURE (°C)	pH	DISSOLVED OXYGEN (mg/L)	ORP (mV)	CONDUCTIVITY (µs/cm)	TURBIDITY (NTU)	Depth to Water (Feet)	ODOR/COLOR/ REMARKS
0840	0								PURGE START
0843	0.05	14.46	4.40	1.91	129.8	59	6.56	6.60	clear
0847	0.20	14.61	3.88	0.71	114.6	52	5.25	6.60	"
0851	0.40	14.62	3.87	0.63	104.1	52	3.53	6.60	"
0856	0.55	14.61	3.88	0.55	96.9	49	3.19	6.60	"
0900	0.65	14.86	3.84	0.50	97.4	48	1.02	6.60	"
0905	0.85	15.02	3.81	0.49	98.6	48		6.60	"
0910	SAMPLE								

Measurement and Sampling Equipment

Type	Manufacturer	Model #	Calibration Date
Water Quality	~~YSI~~ Hanna	~~556~~ HI98194	3/27/19
Turbidity	HF Scientific	Micro TPW 20000	"
Peristaltic Pump	Geotech	Geopump	NA

SAMPLE NUMBER	ANALYTICAL METHOD	BOTTLE TYPE/ PRESERVATIVES	QA REMARKS
3	VOCs	40 ml glass / HCL	
3	1,4 - Dioxane	40 ml glass / HCL	
2	Diss. Gasses	40 ml glass / HCL	
1	TOC	250 ml HDPE / H2SO4	
1	NO3/SO4/Cl/Alk	500 ml HDPE / none	
3	Sulfide	250 ml HDPE / ZnAcetate + NaOH	

EARTHCON®

Groundwater Sampling Record

WELL No. MW-15	PROJECT # 02.20160378.00	LOCATION: Blackville, SC	DATE 03/26/19
SAMPLE No. MW-15	PROJECT NAME: Lennox, Blackville, SC	FIELD PERSONNEL/COMPANY: T. Messier, E. Cook	/EarthCon
SAMPLE TIME: 1420	SITE :	FIELD CONDITIONS/WEATHER	

Well Condition Inspection (circle one)

cover: (locked) not locked
number: (legible) not legible
outer casing: (good) fair poor
inner casing: (good) fair poor
well photographed: yes (no)

Equipment Cleaning Procedures

- potable water and phosphate-free soap
- potable water rinse
- water rinse: distilled deionized
- solvent rinse: acetone hexane
- air dry

Casing Diameter: (circle one) (2") 4" 6" Other:____

Casing Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$
Casing Volume (gallons/ft) for: 2" = 0.163; 4" = 0.653; 6" = 1.47
Casing Volume (liters/ft) for: 2" = 0.618; 4" = 2.47; 6" = 5.56

Depth to Water (feet):	6.09	Measuring Point Elevation (feet):	
Depth of Well (feet):	21.81	Groundwater Surface Elevation:	
Water Column (feet):	15.72	LNAPL present: —	thickness:
Casing Volume (gallons/liters):	2.56	DNAPL present: —	thickness:
Calculated Purge Volume (gallons/liters):	7.69	Remarks:	
Actual Purge Volume (gallons/liters):	1.40		
Pump Intake Depth (feet):	~15	Ferrous Iron (mg/L):	0.00

Well Evacuation
Water level recovery is: very slow (slow) moderate fast Bailed dry: yes (no)

TIME 2400 hrs	CUMULATIVE VOLUME (gal)	TEMPERATURE (°C)	pH	DISSOLVED OXYGEN (mg/L)	ORP (mV)	CONDUCTIVITY (µs/cm)	TURBIDITY (NTU)	Depth to Water (Feet)	ODOR/COLOR/ REMARKS
1340	0								PURGE START
1345	0.10	17.29	4.99	1.29	130.5	95	24.85	6.26	clear
1349	0.20	17.50	4.98	0.46	129.5	94	11.51	6.25	w/ orange
1353	0.30	17.77	4.97	0.35	130.5	94	5.26	6.25	flakes
1358	0.50	18.03	4.96	0.32	132.9	94	3.10	6.26	"
1403	0.70	17.99	4.96	0.28	133.9	93	3.17	6.26	"
1407	0.90	17.99	4.96	0.27	134.7	93	1.12	6.26	"
1412	1.15	17.99	4.96	0.25	135.6	92	0.99	6.26	"
1420	SAMPLE								

Measurement and Sampling Equipment

Type	Manufacturer	Model #	Calibration Date
Water Quality	~~YSI~~ Hanna	~~556~~ HI 98194	03/26/19
Turbidity	HF Scientific	Micro TPW 20000	"
Peristaltic Pump	Geotech	Geopump	NA

SAMPLE NUMBER	ANALYTICAL METHOD	BOTTLE TYPE/ PRESERVATIVES	QA REMARKS
3	VOCs	40 ml glass / HCL	
3	1,4 - Dioxane	40 ml glass / HCL	
2	Diss. Gasses	40 ml glass / HCL	
1	TOC	250 ml HDPE / H2SO4	
1	NO3/SO4/Cl/Alk	500 ml HDPE / none	
3	Sulfide	250 ml HDPE / ZnAcetate + NaOH	

EARTHCON®

Groundwater Sampling Record

WELL No. ~~MW-8~~ 16	PROJECT # 02.20160378.00	LOCATION: Blackville, SC	DATE 3/26/19
SAMPLE No.	PROJECT NAME: Lennox, Blackville, SC	FIELD PERSONNEL/COMPANY: T. Messier, E. Cook	/EarthCon
SAMPLE TIME: 14:40	SITE :	FIELD CONDITIONS/WEATHER M/CLOUDY 59°	

Well Condition Inspection (circle one)

cover: (locked) not locked
number: (legible) not legible
outer casing: (good) fair poor
inner casing: (good) fair poor
well photographed: yes (no)

Equipment Cleaning Procedures

- potable water and ~~phosphate~~-free soap ✓
- potable water rinse
- water rinse: ~~distilled~~ ✓ deionized
- solvent rinse: acetone hexane
- ~~air dry~~ ✓

Casing Diameter: (circle one) (2") 4" 6" Other:____

Casing Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$
Casing Volume (gallons/ft) for: ~~2" = 0.163~~; 4" = 0.653; 6" = 1.47
Casing Volume (liters/ft) for: 2" = 0.618; 4" = 2.47; 6" = 5.56

Depth to Water (feet):	3.91	Measuring Point Elevation (feet):	
Depth of Well (feet):	~~17.96~~ 22.42	Groundwater Surface Elevation:	
Water Column (feet):	18.51	LNAPL present: N/A	thickness: —
Casing Volume (gallons/liters):	3.01	DNAPL present: N/A	thickness: —
Calculated Purge Volume (gallons/liters):	15.0	Remarks:	
Actual Purge Volume (gallons/liters):	1.65		
Pump Intake Depth (feet):	19	Ferrous Iron (mg/L):	0.00 mg/L

Well Evacuation
Water level recovery is: very slow slow moderate (fast) Bailed dry: yes (no)

TIME 2400 hrs	CUMULATIVE VOLUME (gal)	TEMPERATURE (°C)	pH	DISSOLVED OXYGEN (mg/L)	ORP (mV)	CONDUCTIVITY (µs/cm)	TURBIDITY (NTU)	Depth to Water (Feet)	ODOR/COLOR/ REMARKS
13:45	0								PURGE START
13:50	0.25	16.61	3.43	4.19	324.9	104	43.33	4.12	CLEAR
13:55	0.45	16.78	3.34	4.02	358.8	103	58.33	4.12	P/CLOUDY
14:00	0.65	16.84	3.33	3.99	365.9	102	87.78	4.12	P/CLOUDY
14:05	0.85	16.88	3.34	3.97	379.4	102	77.16	4.12	P/CLOUDY
14:10	1.00	16.92	3.34	3.89	386.0	102	62.56	4.12	P/CLOUDY
14:15	1.10	16.93	3.34	3.88	389.1	102	37.82	4.12	CLOUDY
14:20	1.20	16.94	3.34	3.85	390.7	102	22.43	4.12	CLOUDY
14:25	1.45	16.91	3.35	3.83	392.8	102	16.24	4.12	CLEAR
14:30	1.65	17.03	3.35	3.82	344.3	102	9.78	4.12	CLEAR

Measurement and Sampling Equipment

Type	Manufacturer	Model #	Calibration Date
Water Quality	~~YSI~~ HANNA	~~556~~ HI 98194	3/26/19
Turbidity	HF Scientific	Micro TPW 20000	3/26/19
Peristaltic Pump	Geotech	Geopump	N/A

SAMPLE NUMBER	ANALYTICAL METHOD	BOTTLE TYPE/ PRESERVATIVES	QA REMARKS
3	VOCs	40 ml glass / HCL	
3	1,4 - Dioxane	40 ml glass / HCL	
2	Diss. Gasses	40 ml glass / HCL	
1	TOC	250 ml HDPE / H2SO4	
1	NO3/SO4/Cl/Alk	500 ml HDPE / none	
3	Sulfide	250 ml HDPE / ZnAcetate + NaOH	

Appendix C

Groundwater Elevations Summary

APPENDIX C: GROUNDWATER ELEVATIONS SUMMARY

Well Location	May-00	Apr-01	Jun-01	Jul-01	Mar-02	Jun-02	Dec-02	Jan-03	Mar-03	Jun-03	Aug-03
MW-1	273.81	275.70	na	na	274.80	273.04	274.85	274.97	276.00	276.34	275.87
MW-2	272.05	na	na	273.05	273.43	270.68	273.56	273.24	274.02	274.02	274.03
MW-3	273.66	na	na	274.27	273.85	272.30	273.86	273.98	274.96	275.87	275.45
MW-4	269.20	na	na	272.81	273.32	269.13	273.71	273.40	274.68	275.59	273.69
MW-5	na	na	na	na	na	na	na	na	na	na	na
MW-6/MW-6R	na	275.80	na	275.33	274.69	273.38	277.03	na	na	na	na
MW-7	na	275.98	275.03	na	275.05	273.09	274.77	275.25	276.02	276.43	276.07
MW-8	na	276.20	275.78	na	274.64	273.17	275.27	275.64	276.18	276.53	276.03
MW-9	na	na	273.95	na	273.72	271.64	274.56	273.98	275.08	275.25	274.78
MW-10	na	na	na	272.06	272.54	272.03	272.66	272.58	272.89	273.17	272.93
MW-11	na	na	na	274.41	275.86	275.66	275.84	275.12	276.03	276.09	275.87
MW-12	na	na	na	267.80	269.87	269.89	269.98	269.93	270.03	270.29	270.37
MW-13	na	na	na	na	na	na	272.50	272.47	272.59	272.80	272.83
MW-14	na	na	na	na	na	na	272.68	272.61	272.97	273.32	272.97
MW-15	na	na	na	na	na	na	na	na	na	na	na
MW-16	na	na	na	na	na	na	na	na	na	na	na

Notes:
na - not available
nm - not measured

APPENDIX C: GROUNDWATER ELEVATIONS SUMMARY

Well Location	Feb-04	Jun-04	Oct-04	Feb-05	Sep-06	Mar-07	Sep-07	Dec-07	Jan-08	Mar-08
MW-1	276.20	274.13	273.84	275.59	274.28	275.22	274.27	275.24	275.65	275.98
MW-2	274.03	273.11	273.86	274.03	271.64	na	na	274.12	274.38	na
MW-3	275.47	274.04	274.55	274.58	274.10	274.66	273.89	273.94	274.46	275.05
MW-4	275.96	270.31	272.75	270.90	271.97	274.72	272.62	274.22	274.35	274.70
MW-5	na	na	na	na	na	na	na	na	na	na
MW-6/MW-6R	na	na	na	na	na	na	na	na	na	na
MW-7	276.33	274.55	274.98	274.91	274.28	274.13	275.67	na	na	276.26
MW-8	276.78	274.51	275.33	276.46	274.48	276.05	274.82	na	na	276.40
MW-9	275.22	272.86	273.77	274.64	272.96	274.18	272.87	na	na	275.08
MW-10	273.25	272.40	272.95	273.20	272.98	273.53	273.50	na	na	273.70
MW-11	276.18	275.87	275.83	275.97	275.48	275.83	275.38	na	na	274.32
MW-12	270.43	270.17	270.42	270.61	270.67	na	na	na	na	na
MW-13	272.92	272.68	272.98	273.08	na	na	na	na	na	na
MW-14	273.50	272.46	273.02	273.33	272.97	273.57	272.99	na	na	273.86
MW-15	na	na	na	na	na	na	na	na	na	na
MW-16	na	na	na	na	na	na	na	na	na	na

Notes:
na - not available
nm - not measured

APPENDIX C: GROUNDWATER ELEVATIONS SUMMARY

Well Location	Sep-08	Apr-09	Sep-09	Mar-10	Oct-10	Sep-12	Jan-17	Oct-17	Mar-18	Oct-18	Mar-19
MW-1	273.55	273.68	272.76	276.00	274.94	273.29	276.29	274.60	276.12	276.38	275.89
MW-2	273.27	274.49	273.63	274.63	274.02	272.85	nm	272.98	274.90	274.89	274.59
MW-3	272.05	275.32	273.27	275.44	274.34	272.95	275.76	274.00	275.23	275.53	275.56
MW-4	271.14	274.27	270.64	274.30	273.19	270.80	274.83	270.51	273.56	275.24	273.11
MW-5	na	na	na	na	na	na	nm	272.81	274.46	274.53	273.24
MW-6/MW-6R	na	na	na	na	na	273.52	276.37	274.95	276.30	276.89	276.36
MW-7	274.70	276.14	272.72	275.60	275.06	272.63	276.71	274.92	276.14	276.57	275.74
MW-8	273.79	276.70	272.68	277.02	275.44	273.75	nm	274.58	276.51	276.37	276.45
MW-9	272.06	274.81	271.74	274.97	273.62	na	nm	nm	nm	nm	nm
MW-10	272.69	273.59	273.38	273.59	273.45	271.50	273.06	271.88	274.24	274.29	274.13
MW-11	na	275.44	274.75	275.30	275.14	271.54	273.40	272.30	274.14	274.15	273.99
MW-12	na	na	na	na	na	na	nm	nm	nm	nm	nm
MW-13	na	na	na	na	na	na	nm	nm	nm	nm	nm
MW-14	272.83	273.64	272.31	273.68	273.43	271.62	273.57	272.27	274.29	274.35	274.22
MW-15	na	na	na	na	na	na	276.41	275.49	275.82	276.73	276.70
MW-16	na	na	na	na	na	na	nm	273.67	274.08	274.55	274.47

Notes:
na - not available
nm - not measured

Prepared By: JLF 4/12/19
Checked By: CDN 4/15/19

Appendix D

Data Validation Summary and Laboratory Analytical Reports – March 2019

Data Validation Summary

EarthCon Consultants, Inc.
1880 West Oak Parkway
Building 100, Suite 106
Marietta, Georgia, 30062

P: 770-973-2100
F: 770-973-7395
www.earthcon.com

MEMORANDUM

DATE:	April 29, 2019
TO:	Carol Northern
FROM:	Mary Ann Brookshire and Jordan French
SUBJECT:	Quality Assurance Review
PROJECT:	Lennox International
SAMPLING DATES:	March 26 and 27, 2019
PROJECT NUMBER:	02.20160378.00

1.0 Introduction

This quality assurance review presents the cursory validation of the sample analyses listed in Table 1. The analyses were performed by Shealy Environmental Services, Inc. located in Columbia, South Carolina.

The criteria used to qualify data are from the *Contract Laboratory Program National Functional Guidelines for Inorganic and Organic Data Review* (USEPA 2010 and 2008), the analytical methods, or the professional judgment of the validation chemist. The following laboratory deliverables were reviewed during the validation process:

- Chain-of-custody (COC) documentation to assess holding times and verify report completeness
- Laboratory quality control (QC) sample results, including method blanks, surrogate spikes, laboratory control samples (LCS), matrix spike/matrix spike duplicates (MS/MSD), and laboratory duplicates
- Analytical results to verify reporting limits
- Field QC samples to assess field blank contamination and field duplicate precision

Field duplicate precision is presented in Table 2 and the qualified data are summarized in Section 5 of this memorandum. Data qualifier flags have been added to the attached sample results and database files.

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Table 1—Sample Data Reviewed

Sample ID	Laboratory ID	VOA[a]
MW-6R	UC26059-001	X
MW-8	UC26059-002	X
MW-15	UC26059-003	X
MW-16	UC26059-004	X
TB-02	UC26059-005	X
MW-1	UC26062-001	X
MW-1D	UC26062-002	X
MW-2	UC26062-003	X
MW-2D	UC26062-004	X
DUP-01	UC26062-005	X
MW-7	UC26062-006	X
TB-01	UC26062-007	X
MW-10	UC27069-001	X
MW-14	UC27069-002	X
MW-3	UC27069-003	X
MW-3D	UC27069-004	X
TB-01	UC27069-005	X
MW-4	UC27071-001	X
MW-4D	UC27071-002	X
MW-5	UC27071-003	X
DUP-02	UC27071-004	X
TB-02	UC27071-005	X
MW-11	UC27071-006	X

[a] Volatile Organic Compounds by Method 8260B and 8260B SIM (USEPA 1996)

2.0 Data Validation Findings

2.1 Custody, Preservation, and Completeness

Sample custody was maintained as required from sample collection to receipt at the laboratory. The samples were received intact and were properly preserved. The reports are complete and contain results for the samples and tests requested on the COC forms.

2.2 Volatile Organic Analyses by Methods 8260B and 8260B SIM

2.2.1 Holding Times

The samples were analyzed within the required holding time of 14 days from collection.

2.2.2 Blank Analyses

2.2.2.1 Method Blanks

Method blanks were analyzed at the required frequency. Target analytes were not detected above the method detection limits (MDLs) in the method blank samples.

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2.2.2.2 Field Blanks

Four trip blanks are associated with the samples. Target analytes were not detected above the MDL in the blank samples with the following exceptions.

- Acetone was detected at concentrations of 3.4 µg/L, 2.8 µg/L, and 5.9 µg/L in three of the four trip blanks shipped with samples on March 26 and 27, 2019.

Functional Guidelines prescribes three qualification schemes for blank contamination; (1) associated sample concentrations greater than the action level (five times the blank concentration) are not qualified, (2) associated sample concentrations less than the action level and greater than the reporting limit are qualified as undetected (U) at the reported value, and (3) associated sample concentrations less than the action level and less than the reporting limit are qualified as undetected (U) at the reporting limit. Data are qualified as outlined in Section 5.

2.2.3 Surrogate Analyses

Surrogate compounds were added to samples, blanks, and QC samples as required. The recovery values are within the laboratory QC limits.

2.2.4 Matrix Spike/Matrix Spike Duplicate Analyses

MS/MSD analyses were reported as required with the following exception. The recovery and relative percent difference (RPD) values are within the laboratory QC limits for the reported MS/MSD analyses.

- Samples in batch UQ11807 were not analyzed with a MS/MSD due to an instrument error. The LCS criteria were met and the LCS data were reported. Data qualification was not required as MS/MSD data were obtained from other batches reviewed.

2.2.5 Laboratory Control Sample Analyses

Laboratory control samples were analyzed as required. The recovery values of target analytes in the LCS are within the laboratory QC limits with the following exceptions.

- The recovery value for dichlorodifluoromethane in the LCS sample associated with analytical batch 11807 is 153 percent, which exceeds the laboratory QC limits of 60 to 140 percent. Data qualification is not required as the bias is high and the associated sample results are non-detect.

- The recovery value for acetone in the LCS sample associated with analytical batch 12007 is 192 percent, which exceeds the laboratory QC limits of 60 to 140 percent. The associated detected results are qualified as estimated (J) and may be biased high. The associated non-detect sample results are not qualified. Data are qualified as outlined in Section 5.

2.2.6 Laboratory Reporting Limits

The laboratory practical quantitation limits (PQL) are consistent with method reporting limits.

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2.2.7 Field Duplicates

Two field duplicate pairs (MW-1/DUP-01 and MW-5/DUP-02) were collected. Each of the RPD values for the MW-5/DUP-02 pair is within the QC guideline of 30 for groundwater samples as shown in the table below. The RPD results for ethylbenzene, vinyl chloride, and total xylenes between samples MW-1 and DUP-01 exceed the QC guideline resulting in qualification of these results for samples MW-1 and DUP-01 as estimated (J).

Sample ID	Duplicate ID	Analyte	Units	Sample Value	Duplicate Value	RPD
MW-1	DUP-01	cis-1,2-Dichloroethene	µg/L	1400	1900	30
		trans-1,2-Dichloroethene		4.8 J	6.4 J	NC
		Ethylbenzene		32	79	85
		Tetrachloroethene		4.9 J	4.3 J	NC
		Trichloroethene		6.3 J	5.6 J	NC
		Vinyl Chloride		33	57	53
		Total Xylenes		200	470	81
MW-5	DUP-02	1,1-Dichloroethane	µg/L	4.6 J	5.2	NC
		cis-1,2-Dichloroethene		320	310	3.2
		trans-1,2-Dichloroethene		2.9 J	2.8 J	NC
		Tetrachloroethene		130	120	8.0
		Trichloroethene		250	240	4.1
		Vinyl Chloride		3.5 J	3.3 J	NC
		1,4-Dioxane		9.7	11	12

NC – not calculable. One or both results are below the limit of quantitation

2.2.8 Overall Assessment of Data Usability

The usability of the data is based on the EPA guidance documents noted previously. Upon consideration of the information presented here; the data are acceptable with qualification.

3.0 Data Qualifier Definitions

3.1 Inorganic Data Qualifiers

The following data validation qualifiers were used in the review of this data set. These qualifiers are from the *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*.

U The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

J The associated value is an estimated quantity.

UJ The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

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R The data are unusable. (Note: Analyte may or may not be present)

3.2 Organic Data Qualifiers

The following data validation qualifiers were used in the review of this data set. These qualifiers are from the *Contract Laboratory Program National Functional Guidelines for Organic Data Review*.

U The analyte was analyzed for but not detected above the reported sample quantitation limit.

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".

NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

R The sample results are rejected due to serious deficiencies in the ability to analyze the samples and meet quality control criteria. The presence or absence of the analyte cannot be verified.

4.0 References

USEPA. 1996. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846) Third Edition, Updates I, II, IIA, IIB, and III. United States Environmental Protection Agency. Office of Solid Waste. December 1996.

USEPA. 1999a. Methods and Guidance for Analysis of Water, Version 2.0. United States Environmental Protection Agency Office of Science and Technology. EPA 821-C-99-004. CD ROM. June 1999.

USEPA. 2008. Contract Laboratory Program National Functional Guidelines for Organic Data Review. U.S. Environmental Protection Agency Office of Emergency and Remedial Response. EPA540/R-99/008. June 2008.

USEPA. 2010. Contract Laboratory Program National Functional Guidelines for Inorganic Data Review. United States Environmental Protection Agency. Office of Solid Waste and Emergency Response. January 2010.

5.0 Summary of Data Qualification

The following data qualifier flags were applied to the sample results.

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Sample ID	Analyte	Qualifier	Reason for Qualification
MW-1D	Acetone	U at LOQ	Constituent in trip blank; result below LOQ
MW-2	Acetone	U at LOQ	Constituent in trip blank; result below LOQ
MW-2D	Acetone	U at LOQ	Constituent in trip blank; result below LOQ
MW-10	Acetone	U at LOQ	Constituent in trip blank; result below LOQ
MW-14	Acetone	U at LOQ	Constituent in trip blank; result below LOQ
MW-3D	Acetone	U at LOQ	Constituent in trip blank; result below LOQ
MW-4	Acetone	U at LOQ	Constituent in trip blank; result below LOQ
MW-4D	Acetone	U at LOQ	Constituent in trip blank; result below LOQ
MW-11	Acetone	U at LOQ	Constituent in trip blank; result below LOQ
TB-02 (UC27071-005)	Acetone	J	LCS %R > QC limit
MW-1	Ethylbenzene	J	Field duplicate RPD > QC limit
DUP-01	Ethylbenzene	J	Field duplicate RPD > QC limit
MW-1	Vinyl Chloride	J	Field duplicate RPD > QC limit
DUP-01	Vinyl Chloride	J	Field duplicate RPD > QC limit
MW-1	Total Xylenes	J	Field duplicate RPD > QC limit
DUP-01	Total Xylenes	J	Field duplicate RPD > QC limit

PQL– practical quantitation limit
MDL – method detection limit

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Client: **EarthCon Consultants, Inc.**
Description: **MW-6R**
Date Sampled: **03/26/2019 1315**
Date Received: **03/26/2019**

Laboratory ID: **UC26059-001**
Matrix: **Aqueous**

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/28/2019 0405	KFE		11603
1		(Chloride) 9056A	1	03/27/2019 1158	SLU		11460
1		(Nitrate - N) 9056A	1	03/27/2019 1158	SLU		11461
1		(Sulfate) 9056A	1	03/27/2019 1158	SLU		11463
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 0051	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		**9056A**	**8.0**		**1.0**	**0.20**	**mg/L**	**1**
Nitrate - N		**9056A**	**1.9**		**0.020**	**0.0050**	**mg/L**	**1**
Sulfate		**9056A**	**3.6**		**1.0**	**0.20**	**mg/L**	**1**
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		**9060A**	**18**		**1.0**	**0.42**	**mg/L**	**1**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	5030B	8260B	1	04/02/2019 0236	MNS		11939

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	**67-64-1**	**8260B**	**7.7**	**J**	**20**	**2.0**	**ug/L**	**2**
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	2
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	2
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	2
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	2
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	2
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	2
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	2
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	2
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	2
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	2
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	2
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	2
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	2
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	2
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	2
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	2
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	2

TOC Range: 17.967 - 18.624

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

JLF
4/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-6R**
Date Sampled: **03/26/2019 1315**
Date Received: **03/26/2019**

Laboratory ID: **UC26059-001**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	5030B	8260B	1	04/02/2019 0236	MNS		11939

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	2
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	2
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	2
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	2
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	2
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	2
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	2
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	2
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	2
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	2
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	2
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	2
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	2
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	2
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	2
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	2
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	2
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		94	70-130
Toluene-d8		103	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	03/27/2019 1450	ECB		11423

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
4/29/19

Client: EarthCon Consultants, Inc.
Description: MW-6R
Date Sampled: 03/26/2019 1315
Date Received: 03/26/2019

Laboratory ID: UC26059-001
Matrix: Aqueous

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/02/2019 1258	JJG		12018

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	74-82-8	RSK - 175	ND		10	2.5	ug/L	1
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
4/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-8**
Date Sampled: **03/26/2019 1135**
Date Received: **03/26/2019**

Laboratory ID: **UC26059-002**
Matrix: **Aqueous**

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/28/2019 0414	KFE		11603
1		(Chloride) 9056A	1	03/27/2019 1224	SLU		11460
1		(Nitrate - N) 9056A	1	03/27/2019 1224	SLU		11461
1		(Sulfate) 9056A	1	03/27/2019 1224	SLU		11463
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 0125	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		**9056A**	**3.4**		**1.0**	**0.20**	**mg/L**	**1**
Nitrate - N		9056A	ND		0.020	0.0050	mg/L	1
Sulfate		**9056A**	**97**		**1.0**	**0.20**	**mg/L**	**1**
Sulfide	**18496-25-8**	**SM 4500-S2 F-**	**1.1**		**1.0**	**1.0**	**mg/L**	**1**
TOC		**9060A**	**12**		**1.0**	**0.42**	**mg/L**	**1**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1541	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	**67-64-1**	**8260B**	**11**	**J**	**20**	**2.0**	**ug/L**	**1**
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1

TOC Range: 12.008 - 12.591

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
4/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-8**
Date Sampled: **03/26/2019 1135**
Date Received: **03/26/2019**

Laboratory ID: **UC26059-002**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1541	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		101	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	03/27/2019 1515	ECB		11423

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	**123-91-1**	**8260B (SIM is**	**3.2**		**3.0**	**1.0**	**ug/L**	**1**

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
4/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-8**
Date Sampled: **03/26/2019 1135**
Date Received: **03/26/2019**

Laboratory ID: **UC26059-002**
Matrix: **Aqueous**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		98	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/02/2019 1320	JJG		12018

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	**74-82-8**	**RSK - 175**	**100**		**10**	**2.5**	**ug/L**	**1**
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

JLF
4/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-15**
Date Sampled: **03/26/2019 1420**
Date Received: **03/26/2019**

Laboratory ID: **UC26059-003**
Matrix: **Aqueous**

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/28/2019 0420	KFE		11603
1		(Chloride) 9056A	1	03/27/2019 1342	SLU		11460
1		(Nitrate - N) 9056A	1	03/27/2019 1342	SLU		11461
1		(Sulfate) 9056A	1	03/27/2019 1342	SLU		11463
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 0159	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		**SM 2320B-**	**27**		**20**	**20**	**mg/L**	**1**
Chloride		**9056A**	**4.5**		**1.0**	**0.20**	**mg/L**	**1**
Nitrate - N		**9056A**	**0.13**		**0.020**	**0.0050**	**mg/L**	**1**
Sulfate		**9056A**	**13**		**1.0**	**0.20**	**mg/L**	**1**
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		**9060A**	**0.52**	**J**	**1.0**	**0.42**	**mg/L**	**1**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1603	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	**67-64-1**	**8260B**	**2.7**	**J**	**20**	**2.0**	**ug/L**	**1**
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1

TOC Range: 0.47 - 0.568

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
4/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-15**
Date Sampled: **03/26/2019 1420**
Date Received: **03/26/2019**

Laboratory ID: **UC26059-003**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1603	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		104	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		101	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	03/27/2019 1539	ECB		11423

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
4/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-15**
Date Sampled: **03/26/2019 1420**
Date Received: **03/26/2019**

Laboratory ID: **UC26059-003**
Matrix: **Aqueous**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/02/2019 1334	JJG		12018

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	74-82-8	RSK - 175	ND		10	2.5	ug/L	1
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Client: **EarthCon Consultants, Inc.**
Description: **MW-16**
Date Sampled: **03/26/2019 1440**
Date Received: **03/26/2019**

Laboratory ID: **UC26059-004**
Matrix: **Aqueous**

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/28/2019 0436	KFE		11603
1		(Chloride) 9056A	1	03/27/2019 1408	SLU		11460
1		(Nitrate - N) 9056A	1	03/27/2019 1408	SLU		11461
1		(Sulfate) 9056A	1	03/27/2019 1408	SLU		11463
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 0232	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		**9056A**	**16**		**1.0**	**0.20**	**mg/L**	**1**
Nitrate - N		**9056A**	**6.6**		**0.020**	**0.0050**	**mg/L**	**1**
Sulfate		**9056A**	**1.3**		**1.0**	**0.20**	**mg/L**	**1**
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		9060A	ND		1.0	0.42	mg/L	1

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1625	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	**67-66-3**	**8260B**	**1.6**		**1.0**	**0.40**	**ug/L**	**1**
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1

TOC Range: 0.088 - 0.144

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
4/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-16**
Date Sampled: **03/26/2019 1440**
Date Received: **03/26/2019**

Laboratory ID: **UC26059-004**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1625	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		91	70-130
Toluene-d8		99	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	03/27/2019 1604	ECB		11423

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
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E = Quantitation of compound exceeded the calibration range
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4/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-16**
Date Sampled: **03/26/2019 1440**
Date Received: **03/26/2019**

Laboratory ID: **UC26059-004**
Matrix: **Aqueous**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		98	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/02/2019 1438	JJG		12018

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	74-82-8	RSK - 175	ND		10	2.5	ug/L	1
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Client: **EarthCon Consultants, Inc.**
Description: **TB-02**
Date Sampled: **03/26/2019**
Date Received: **03/26/2019**

Laboratory ID: **UC26059-005**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1646	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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4/29/19

Client: **EarthCon Consultants, Inc.**
Description: **TB-02**
Date Sampled: **03/26/2019**
Date Received: **03/26/2019**

Laboratory ID: **UC26059-005**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1646	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		103	70-130

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLP
4/29/19

Client: EarthCon Consultants, Inc.
Description: MW-1
Date Sampled: 03/26/2019 0920
Date Received: 03/26/2019

Laboratory ID: UC26062-001
Matrix: Aqueous

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/28/2019 0439	KFE		11603
1		(Chloride) 9056A	1	03/27/2019 0922	SLU		11460
1		(Nitrate - N) 9056A	1	03/27/2019 0922	SLU		11461
1		(Sulfate) 9056A	1	03/27/2019 0922	SLU		11463
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 0517	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		**9056A**	**17**		**1.0**	**0.20**	**mg/L**	**1**
Nitrate - N		9056A	ND		0.020	0.0050	mg/L	1
Sulfate		**9056A**	**19**		**1.0**	**0.20**	**mg/L**	**1**
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		**9060A**	**1.2**		**1.0**	**0.42**	**mg/L**	**1**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	10	03/31/2019 1835	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		200	20	ug/L	1
Benzene	71-43-2	8260B	ND		10	4.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		10	4.0	ug/L	1
Bromoform	75-25-2	8260B	ND		10	4.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		20	4.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		100	20	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		10	4.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		10	4.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		10	4.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		20	4.0	ug/L	1
Chloroform	67-66-3	8260B	ND		10	4.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		10	5.0	ug/L	1
Cyclohexane	110-82-7	8260B	ND		10	4.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		10	4.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		10	4.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		10	4.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		10	4.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		10	4.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		10	4.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		20	6.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		10	4.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		10	4.0	ug/L	1

TOC Range: 1.117 - 1.252

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
4/29/19

Client: EarthCon Consultants, Inc.
Description: MW-1
Date Sampled: 03/26/2019 0920
Date Received: 03/26/2019

Laboratory ID: UC26062-001
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	10	03/31/2019 1835	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		10	4.0	ug/L	1
cis-1,2-Dichloroethene	**156-59-2**	**8260B**	**1400**		**10**	**4.0**	**ug/L**	**1**
trans-1,2-Dichloroethene	**156-60-5**	**8260B**	**4.8**	**J**	**10**	**4.0**	**ug/L**	**1**
1,2-Dichloropropane	78-87-5	8260B	ND		10	4.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		10	4.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		10	4.0	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**32**	**J**	**10**	**4.0**	**ug/L**	**1**
2-Hexanone	591-78-6	8260B	ND		100	20	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		10	4.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		10	4.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		10	4.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		100	20	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		50	4.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		10	4.0	ug/L	1
Styrene	100-42-5	8260B	ND		10	4.1	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		10	4.0	ug/L	1
Tetrachloroethene	**127-18-4**	**8260B**	**4.9**	**J**	**10**	**4.0**	**ug/L**	**1**
Toluene	108-88-3	8260B	ND		10	4.0	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		10	4.2	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		10	4.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		10	4.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		10	4.0	ug/L	1
Trichloroethene	**79-01-6**	**8260B**	**6.3**	**J**	**10**	**4.0**	**ug/L**	**1**
Trichlorofluoromethane	75-69-4	8260B	ND		10	4.0	ug/L	1
Vinyl chloride	**75-01-4**	**8260B**	**33**	**J**	**10**	**4.0**	**ug/L**	**1**
Xylenes (total)	**1330-20-7**	**8260B**	**200**	**J**	**10**	**4.0**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		92	70-130
Toluene-d8		100	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	03/27/2019 1628	ECB		11423

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
4/29/19

Client: EarthCon Consultants, Inc.
Description: **MW-1**
Date Sampled: **03/26/2019 0920**
Date Received: **03/26/2019**

Laboratory ID: **UC26062-001**
Matrix: **Aqueous**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		97	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/02/2019 1540	JJG		12018

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	**74-85-1**	**RSK - 175**	**10**		**10**	**2.5**	**ug/L**	**1**
Methane	**74-82-8**	**RSK - 175**	**350**		**10**	**2.5**	**ug/L**	**1**
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

JLF
4/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-1D**
Date Sampled: **03/26/2019 1025**
Date Received: **03/26/2019**

Laboratory ID: **UC26062-002**
Matrix: **Aqueous**

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/28/2019 0442	KFE		11603
1		(Chloride) 9056A	1	03/27/2019 0948	SLU		11460
1		(Nitrate - N) 9056A	1	03/27/2019 0948	SLU		11461
1		(Sulfate) 9056A	1	03/27/2019 0948	SLU		11463
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 0550	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		**9056A**	**2.1**		**1.0**	**0.20**	**mg/L**	**1**
Nitrate - N		**9056A**	**0.091**		**0.020**	**0.0050**	**mg/L**	**1**
Sulfate		**9056A**	**0.76**	**J**	**1.0**	**0.20**	**mg/L**	**1**
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		9060A	ND		1.0	0.42	mg/L	1

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1708	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	**67-64-1**	**8260B**	ND ~~3.9~~	U	**20**	~~2.0~~	**ug/L**	**1**
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1

<20

TOC Range: 0.088 - 0.147

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
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E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
4/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-1D**
Date Sampled: **03/26/2019 1025**
Date Received: **03/26/2019**

Laboratory ID: **UC26062-002**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1708	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	**127-18-4**	**8260B**	**13**		**1.0**	**0.40**	**ug/L**	**1**
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	**79-01-6**	**8260B**	**2.7**		**1.0**	**0.40**	**ug/L**	**1**
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		94	70-130
Toluene-d8		103	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	03/27/2019 1652	ECB		11423

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
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W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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4/29/19

Client: EarthCon Consultants, Inc.
Description: **MW-1D**
Date Sampled: **03/26/2019 1025**
Date Received: **03/26/2019**

Laboratory ID: **UC26062-002**
Matrix: **Aqueous**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		92	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/02/2019 1506	JJG		12018

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	74-82-8	RSK - 175	ND		10	2.5	ug/L	1
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

JLF
4/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-2**
Date Sampled: **03/26/2019 0920**
Date Received: **03/26/2019**

Laboratory ID: **UC26062-003**
Matrix: **Aqueous**

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/28/2019 0445	KFE		11603
1		(Chloride) 9056A	1	03/27/2019 1014	SLU		11460
1		(Nitrate - N) 9056A	1	03/27/2019 1014	SLU		11461
1		(Sulfate) 9056A	1	03/27/2019 1014	SLU		11463
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 0728	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		**9056A**	**8.0**		**1.0**	**0.20**	**mg/L**	**1**
Nitrate - N		**9056A**	**1.4**		**0.020**	**0.0050**	**mg/L**	**1**
Sulfate		**9056A**	**1.5**		**1.0**	**0.20**	**mg/L**	**1**
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		9060A	ND		1.0	0.42	mg/L	1

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1730	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	**67-64-1**	**8260B**	ND ~~2.5~~	U	**20**	~~2.0~~	**ug/L**	**1**
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1

<20

TOC Range: 0.155 - 0.205

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
4/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-2**
Date Sampled: **03/26/2019 0920**
Date Received: **03/26/2019**

Laboratory ID: **UC26062-003**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1730	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		101	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	03/27/2019 1716	ECB		11423

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
4/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-2**
Date Sampled: **03/26/2019 0920**
Date Received: **03/26/2019**

Laboratory ID: **UC26062-003**
Matrix: **Aqueous**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/02/2019 1516	JJG		12018

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	74-82-8	RSK - 175	ND		10	2.5	ug/L	1
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Client: **EarthCon Consultants, Inc.**
Description: **MW-2D**
Date Sampled: **03/26/2019 1020**
Date Received: **03/26/2019**

Laboratory ID: **UC26062-004**
Matrix: **Aqueous**

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/28/2019 0449	KFE		11603
1		(Chloride) 9056A	1	03/27/2019 1040	SLU		11460
1		(Nitrate - N) 9056A	1	03/27/2019 1040	SLU		11461
1		(Sulfate) 9056A	1	03/27/2019 1040	SLU		11463
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 0802	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		**9056A**	**2.6**		**1.0**	**0.20**	**mg/L**	**1**
Nitrate - N		**9056A**	**0.19**		**0.020**	**0.0050**	**mg/L**	**1**
Sulfate		**9056A**	**1.2**		**1.0**	**0.20**	**mg/L**	**1**
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		9060A	ND		1.0	0.42	mg/L	1

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1751	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	**67-64-1**	**8260B**	~~ND~~ ~~3.2~~	~~U~~	**20**	~~2.0~~	**ug/L**	**1**
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1

TOC Range: 0.143 - 0.191

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
4/29/19

Client: EarthCon Consultants, Inc.
Description: MW-2D
Date Sampled: 03/26/2019 1020
Date Received: 03/26/2019

Laboratory ID: UC26062-004
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1751	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		101	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	03/27/2019 1740	ECB		11423

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: EarthCon Consultants, Inc.
Description: **MW-2D**
Date Sampled: **03/26/2019 1020**
Date Received: **03/26/2019**

Laboratory ID: **UC26062-004**
Matrix: **Aqueous**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/02/2019 1530	JJG		12018

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	74-82-8	RSK - 175	ND		10	2.5	ug/L	1
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

JLF
04/29/19

Client: **EarthCon Consultants, Inc.**
Description: **DUP-01**
Date Sampled: **03/26/2019**
Date Received: **03/26/2019**

Laboratory ID: **UC26062-005**
Matrix: **Aqueous**

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/28/2019 0452	KFE		11603
1		(Chloride) 9056A	1	03/27/2019 1106	SLU		11460
1		(Nitrate - N) 9056A	1	03/27/2019 1106	SLU		11461
1		(Sulfate) 9056A	1	03/27/2019 1106	SLU		11463
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 0835	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		**9056A**	**19**		**1.0**	**0.20**	**mg/L**	**1**
Nitrate - N		9056A	ND		0.020	0.0050	mg/L	1
Sulfate		**9056A**	**18**		**1.0**	**0.20**	**mg/L**	**1**
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		**9060A**	**1.2**		**1.0**	**0.42**	**mg/L**	**1**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	10	03/31/2019 1857	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		200	20	ug/L	1
Benzene	71-43-2	8260B	ND		10	4.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		10	4.0	ug/L	1
Bromoform	75-25-2	8260B	ND		10	4.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		20	4.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		100	20	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		10	4.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		10	4.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		10	4.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		20	4.0	ug/L	1
Chloroform	67-66-3	8260B	ND		10	4.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		10	5.0	ug/L	1
Cyclohexane	110-82-7	8260B	ND		10	4.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		10	4.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		10	4.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		10	4.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		10	4.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		10	4.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		10	4.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		20	6.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		10	4.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		10	4.0	ug/L	1

TOC Range: 1.18 - 1.29

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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04/29/19

Client: **EarthCon Consultants, Inc.**
Description: **DUP-01**
Date Sampled: **03/26/2019**
Date Received: **03/26/2019**

Laboratory ID: **UC26062-005**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	10	03/31/2019 1857	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		10	4.0	ug/L	1
cis-1,2-Dichloroethene	**156-59-2**	**8260B**	**1900**		**10**	**4.0**	**ug/L**	**1**
trans-1,2-Dichloroethene	**156-60-5**	**8260B**	**6.4**	**J**	**10**	**4.0**	**ug/L**	**1**
1,2-Dichloropropane	78-87-5	8260B	ND		10	4.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		10	4.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		10	4.0	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**79**	**J**	**10**	**4.0**	**ug/L**	**1**
2-Hexanone	591-78-6	8260B	ND		100	20	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		10	4.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		10	4.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		10	4.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		100	20	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		50	4.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		10	4.0	ug/L	1
Styrene	100-42-5	8260B	ND		10	4.1	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		10	4.0	ug/L	1
Tetrachloroethene	**127-18-4**	**8260B**	**4.3**	**J**	**10**	**4.0**	**ug/L**	**1**
Toluene	108-88-3	8260B	ND		10	4.0	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		10	4.2	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		10	4.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		10	4.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		10	4.0	ug/L	1
Trichloroethene	**79-01-6**	**8260B**	**5.6**	**J**	**10**	**4.0**	**ug/L**	**1**
Trichlorofluoromethane	75-69-4	8260B	ND		10	4.0	ug/L	1
Vinyl chloride	**75-01-4**	**8260B**	**57**	**J**	**10**	**4.0**	**ug/L**	**1**
Xylenes (total)	**1330-20-7**	**8260B**	**470**	**J**	**10**	**4.0**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		106	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		102	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	03/27/2019 1804	ECB		11423

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: **EarthCon Consultants, Inc.**
Description: **DUP-01**
Date Sampled: **03/26/2019**
Date Received: **03/26/2019**

Laboratory ID: **UC26062-005**
Matrix: **Aqueous**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		97	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/02/2019 1449	JJG		12018

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	**74-85-1**	**RSK - 175**	**8.1**	**J**	**10**	**2.5**	**ug/L**	**1**
Methane	**74-82-8**	**RSK - 175**	**180**		**10**	**2.5**	**ug/L**	**1**
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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04/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-7**
Date Sampled: **03/26/2019 1135**
Date Received: **03/26/2019**

Laboratory ID: **UC26062-006**
Matrix: **Aqueous**

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/28/2019 0457	KFE		11603
1		(Chloride) 9056A	1	03/27/2019 1132	SLU		11460
1		(Nitrate - N) 9056A	1	03/27/2019 1132	SLU		11461
1		(Sulfate) 9056A	1	03/27/2019 1132	SLU		11463
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 0909	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		**SM 2320B-**	**46**		**20**	**20**	**mg/L**	**1**
Chloride		**9056A**	**5.3**		**1.0**	**0.20**	**mg/L**	**1**
Nitrate - N		**9056A**	**0.056**		**0.020**	**0.0050**	**mg/L**	**1**
Sulfate		**9056A**	**1.3**		**1.0**	**0.20**	**mg/L**	**1**
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		**9060A**	**4.5**		**1.0**	**0.42**	**mg/L**	**1**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	03/31/2019 1919	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		100	10	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	2.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	2.0	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	2.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		10	2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	2.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	2.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	2.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		10	2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	2.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	2.5	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	2.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	2.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	2.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	2.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	2.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		10	3.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	2.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	2.0	ug/L	1

TOC Range: 4.44 - 4.625

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-7**
Date Sampled: **03/26/2019 1135**
Date Received: **03/26/2019**

Laboratory ID: **UC26062-006**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	03/31/2019 1919	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	2.0	ug/L	1
cis-1,2-Dichloroethene	**156-59-2**	**8260B**	**440**		**5.0**	**2.0**	**ug/L**	**1**
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	2.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	2.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	2.0	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**79**		**5.0**	**2.0**	**ug/L**	**1**
2-Hexanone	591-78-6	8260B	ND		50	10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	2.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	2.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	2.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		25	2.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	2.0	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	2.1	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	2.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	2.0	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	2.0	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	2.1	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	2.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	2.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	2.0	ug/L	1
Trichloroethene	79-01-6	8260B	ND		5.0	2.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	2.0	ug/L	1
Vinyl chloride	**75-01-4**	**8260B**	**200**		**5.0**	**2.0**	**ug/L**	**1**
Xylenes (total)	**1330-20-7**	**8260B**	**210**		**5.0**	**2.0**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		100	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	03/27/2019 1828	ECB		11423

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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04/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-7**
Date Sampled: **03/26/2019 1135**
Date Received: **03/26/2019**

Laboratory ID: **UC26062-006**
Matrix: **Aqueous**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/04/2019 1831	JJG		12263

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	**74-84-0**	**RSK - 175**	**4.7**	**J**	**10**	**2.5**	**ug/L**	**1**
Ethene	**74-85-1**	**RSK - 175**	**17**		**10**	**2.5**	**ug/L**	**1**
Methane	**74-82-8**	**RSK - 175**	**120**		**10**	**2.5**	**ug/L**	**1**
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: **EarthCon Consultants, Inc.**
Description: **TRIP BLANK 01**
Date Sampled: **03/26/2019**
Date Received: **03/26/2019**

Laboratory ID: **UC26062-007**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1814	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	**67-64-1**	**8260B**	**3.4**	**J**	**20**	**2.0**	**ug/L**	**1**
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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04/29/19

Client: EarthCon Consultants, Inc.
Description: TRIP BLANK 01
Date Sampled: 03/26/2019
Date Received: 03/26/2019

Laboratory ID: UC26062-007
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1814	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		92	70-130
Toluene-d8		101	70-130

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-10**
Date Sampled: **03/27/2019 1025**
Date Received: **03/27/2019**

Laboratory ID: **UC27069-001**
Matrix: **Aqueous**

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/30/2019 1412	KFE		12031
1		(Chloride) 9056A	1	03/28/2019 0947	SLU		11591
1		(Nitrate - N) 9056A	1	03/28/2019 0947	SLU		11592
1		(Sulfate) 9056A	1	03/28/2019 0947	SLU		11593
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 0943	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		**9056A**	**6.7**		**1.0**	**0.20**	**mg/L**	**1**
Nitrate - N		9056A	ND		0.020	0.0050	mg/L	1
Sulfate		**9056A**	**19**		**1.0**	**0.20**	**mg/L**	**1**
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		**9060A**	**2.0**		**1.0**	**0.42**	**mg/L**	**1**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/01/2019 0300	KGT		11807

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	**67-64-1**	**8260B**	ND 3.5	U	**20**	2.0	**ug/L**	1 <20
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1

TOC Range: 1.975 - 2.077

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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04/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-10**
Date Sampled: **03/27/2019 1025**
Date Received: **03/27/2019**

Laboratory ID: **UC27069-001**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/01/2019 0300	KGT		11807

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		104	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		104	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	04/01/2019 1235	JJG		11870

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-10**
Date Sampled: **03/27/2019 1025**
Date Received: **03/27/2019**

Laboratory ID: **UC27069-001**
Matrix: **Aqueous**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/04/2019 1607	JJG		12263

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	**74-82-8**	**RSK - 175**	**65**		**10**	**2.5**	**ug/L**	**1**
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-14**
Date Sampled: **03/27/2019 0910**
Date Received: **03/27/2019**

Laboratory ID: **UC27069-002**
Matrix: **Aqueous**

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/30/2019 1421	KFE		12031
1		(Chloride) 9056A	1	03/28/2019 1013	SLU		11591
1		(Nitrate - N) 9056A	1	03/28/2019 1013	SLU		11592
1		(Sulfate) 9056A	1	03/28/2019 1013	SLU		11593
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 1016	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		**9056A**	**2.0**		**1.0**	**0.20**	**mg/L**	**1**
Nitrate - N		9056A	ND		0.020	0.0050	mg/L	1
Sulfate		**9056A**	**16**		**1.0**	**0.20**	**mg/L**	**1**
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		**9060A**	**0.81**	**J**	**1.0**	**0.42**	**mg/L**	**1**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/01/2019 0321	KGT		11807

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	**67-64-1**	**8260B**	~~4.7~~ ND	~~J~~ U	**20**	~~2.0~~	**ug/L**	**1**
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1

TOC Range: 0.761 - 0.873

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-14**
Date Sampled: **03/27/2019 0910**
Date Received: **03/27/2019**

Laboratory ID: **UC27069-002**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/01/2019 0321	KGT		11807

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		104	70-130
Bromofluorobenzene		94	70-130
Toluene-d8		102	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	04/01/2019 1259	JJG		11870

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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04/29/19

Client: EarthCon Consultants, Inc.
Description: **MW-14**
Date Sampled: **03/27/2019 0910**
Date Received: **03/27/2019**

Laboratory ID: **UC27069-002**
Matrix: **Aqueous**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/04/2019 1623	JJG		12263

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	**74-82-8**	**RSK - 175**	**100**		**10**	**2.5**	**ug/L**	**1**
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: EarthCon Consultants, Inc.
Description: MW-3
Date Sampled: 03/27/2019 1040
Date Received: 03/27/2019

Laboratory ID: UC27069-003
Matrix: Aqueous

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/30/2019 1424	KFE		12031
1		(Chloride) 9056A	1	03/28/2019 1039	SLU		11591
1		(Nitrate - N) 9056A	1	03/28/2019 1039	SLU		11592
1		(Sulfate) 9056A	1	03/28/2019 1039	SLU		11593
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 1154	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		**9056A**	**33**		**1.0**	**0.20**	**mg/L**	**1**
Nitrate - N		9056A	ND		0.020	0.0050	mg/L	1
Sulfate		**9056A**	**0.92**	**J**	**1.0**	**0.20**	**mg/L**	**1**
Sulfide	**18496-25-8**	**SM 4500-S2 F-**	**3.5**		**1.0**	**1.0**	**mg/L**	**1**
TOC		**9060A**	**11**		**1.0**	**0.42**	**mg/L**	**1**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	200	04/01/2019 0510	KGT		11807

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		4000	400	ug/L	1
Benzene	71-43-2	8260B	ND		200	80	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		200	80	ug/L	1
Bromoform	75-25-2	8260B	ND		200	80	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		400	80	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		2000	400	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		200	80	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		200	80	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		200	80	ug/L	1
Chloroethane	75-00-3	8260B	ND		400	80	ug/L	1
Chloroform	67-66-3	8260B	ND		200	80	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		200	100	ug/L	1
Cyclohexane	110-82-7	8260B	ND		200	80	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		200	80	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		200	80	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		200	80	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		200	80	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		200	80	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		200	80	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		400	120	ug/L	1
1,1-Dichloroethane	**75-34-3**	**8260B**	**1100**		**200**	**80**	**ug/L**	**1**
1,2-Dichloroethane	107-06-2	8260B	ND		200	80	ug/L	1

TOC Range: 11.005 - 11.627

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-3**
Date Sampled: **03/27/2019 1040**
Date Received: **03/27/2019**

Laboratory ID: **UC27069-003**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	200	04/01/2019 0510	KGT		11807

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	**75-35-4**	**8260B**	**540**		**200**	**80**	**ug/L**	**1**
cis-1,2-Dichloroethene	**156-59-2**	**8260B**	**15000**		**200**	**80**	**ug/L**	**1**
trans-1,2-Dichloroethene	**156-60-5**	**8260B**	**120**	**J**	**200**	**80**	**ug/L**	**1**
1,2-Dichloropropane	78-87-5	8260B	ND		200	80	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		200	80	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		200	80	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**310**		**200**	**80**	**ug/L**	**1**
2-Hexanone	591-78-6	8260B	ND		2000	400	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		200	80	ug/L	1
Methyl acetate	79-20-9	8260B	ND		200	80	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		200	80	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		2000	400	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		1000	80	ug/L	1
Methylene chloride	75-09-2	8260B	ND		200	80	ug/L	1
Styrene	100-42-5	8260B	ND		200	82	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		200	80	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		200	80	ug/L	1
Toluene	**108-88-3**	**8260B**	**97**	**J**	**200**	**80**	**ug/L**	**1**
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		200	84	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		200	80	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		200	80	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		200	80	ug/L	1
Trichloroethene	79-01-6	8260B	ND		200	80	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		200	80	ug/L	1
Vinyl chloride	**75-01-4**	**8260B**	**900**		**200**	**80**	**ug/L**	**1**
Xylenes (total)	**1330-20-7**	**8260B**	**1200**		**200**	**80**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		102	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	5	04/01/2019 1955	JJG		11870

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	**123-91-1**	**8260B (SIM is**	**310**		**15**	**5.0**	**ug/L**	**1**

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-3**
Date Sampled: **03/27/2019 1040**
Date Received: **03/27/2019**

Laboratory ID: **UC27069-003**
Matrix: **Aqueous**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		98	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	5	04/04/2019 1639	JJG		12263

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	**74-84-0**	**RSK - 175**	**18**	**J**	**50**	**13**	**ug/L**	**1**
Ethene	**74-85-1**	**RSK - 175**	**76**		**50**	**13**	**ug/L**	**1**
Methane	**74-82-8**	**RSK - 175**	**11000**		**50**	**13**	**ug/L**	**1**
Propane	74-98-6	RSK - 175	ND		75	25	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Client: **EarthCon Consultants, Inc.**
Description: **MW-3D**
Date Sampled: **03/27/2019 1000**
Date Received: **03/27/2019**

Laboratory ID: **UC27069-004**
Matrix: **Aqueous**

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/30/2019 1427	KFE		12031
1		(Chloride) 9056A	1	03/28/2019 1105	SLU		11591
1		(Nitrate - N) 9056A	1	03/28/2019 1105	SLU		11592
1		(Sulfate) 9056A	1	03/28/2019 1105	SLU		11593
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 1228	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		**9056A**	**17**		**1.0**	**0.20**	**mg/L**	**1**
Nitrate - N		**9056A**	**4.9**		**0.020**	**0.0050**	**mg/L**	**1**
Sulfate		**9056A**	**2.8**		**1.0**	**0.20**	**mg/L**	**1**
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		9060A	ND		1.0	0.42	mg/L	1

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/01/2019 0343	KGT		11807

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	**67-64-1**	**8260B**	ND 2.8	J U	**20**	**2.0**	**ug/L**	**1**
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	**67-66-3**	**8260B**	**0.46**	**J**	**1.0**	**0.40**	**ug/L**	**1**
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1

TOC Range: 0.127 - 0.242

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: EarthCon Consultants, Inc.
Description: MW-3D
Date Sampled: 03/27/2019 1000
Date Received: 03/27/2019

Laboratory ID: UC27069-004
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/01/2019 0343	KGT		11807

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		107	70-130
Bromofluorobenzene		95	70-130
Toluene-d8		105	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	04/01/2019 1324	JJG		11870

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: EarthCon Consultants, Inc.
Description: MW-3D
Date Sampled: 03/27/2019 1000
Date Received: 03/27/2019

Laboratory ID: UC27069-004
Matrix: Aqueous

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/04/2019 1655	JJG		12263

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	**74-82-8**	**RSK - 175**	**2.9**	**J**	**10**	**2.5**	**ug/L**	**1**
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: **EarthCon Consultants, Inc.**
Description: **TB-01**
Date Sampled: **03/27/2019**
Date Received: **03/27/2019**

Laboratory ID: **UC27069-005**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 2300	KGT		11807

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	**67-64-1**	**8260B**	**2.8**	**J**	**20**	**2.0**	**ug/L**	**1**
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: **EarthCon Consultants, Inc.**
Description: **TB-01**
Date Sampled: **03/27/2019**
Date Received: **03/27/2019**

Laboratory ID: **UC27069-005**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 2300	KGT		11807

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		105	70-130
Bromofluorobenzene		95	70-130
Toluene-d8		103	70-130

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-4**
Date Sampled: **03/27/2019 1410**
Date Received: **03/27/2019**

Laboratory ID: **UC27071-001**
Matrix: **Aqueous**

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/30/2019 1430	KFE		12031
1		(Chloride) 9056A	1	03/28/2019 1131	SLU		11591
1		(Nitrate - N) 9056A	1	03/28/2019 1131	SLU		11592
1		(Sulfate) 9056A	1	03/28/2019 1131	SLU		11593
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 1302	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		**9056A**	**8.3**		**1.0**	**0.20**	**mg/L**	**1**
Nitrate - N		9056A	ND		0.020	0.0050	mg/L	1
Sulfate		**9056A**	**12**		**1.0**	**0.20**	**mg/L**	**1**
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		**9060A**	**0.71**	**J**	**1.0**	**0.42**	**mg/L**	**1**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/02/2019 1337	BWS		12007

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	**67-64-1**	**8260B**	ND 4.2	U	**20**	2.0	**ug/L**	**1**
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1

TOC Range: 0.659 - 0.751

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: EarthCon Consultants, Inc.
Description: **MW-4**
Date Sampled: **03/27/2019 1410**
Date Received: **03/27/2019**

Laboratory ID: **UC27071-001**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/02/2019 1337	BWS		12007

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	**156-59-2**	**8260B**	**4.1**		**1.0**	**0.40**	**ug/L**	**1**
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	**127-18-4**	**8260B**	**2.4**		**1.0**	**0.40**	**ug/L**	**1**
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	**79-00-5**	**8260B**	**0.67**	**J**	**1.0**	**0.40**	**ug/L**	**1**
Trichloroethene	**79-01-6**	**8260B**	**4.6**		**1.0**	**0.40**	**ug/L**	**1**
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	70-130
Bromofluorobenzene		98	70-130
Toluene-d8		94	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	04/01/2019 1348	JJG		11870

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

JLF
04/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-4**
Date Sampled: **03/27/2019 1410**
Date Received: **03/27/2019**

Laboratory ID: **UC27071-001**
Matrix: **Aqueous**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/04/2019 1711	JJG		12263

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	**74-82-8**	**RSK - 175**	**3.3**	**J**	**10**	**2.5**	**ug/L**	**1**
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-4D**
Date Sampled: **03/27/2019 1450**
Date Received: **03/27/2019**

Laboratory ID: **UC27071-002**
Matrix: **Aqueous**

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/30/2019 1445	KFE		12031
1		(Chloride) 9056A	1	03/28/2019 1157	SLU		11591
1		(Nitrate - N) 9056A	1	03/28/2019 1157	SLU		11592
1		(Sulfate) 9056A	1	03/28/2019 1157	SLU		11593
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 1336	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		**9056A**	**1.8**		**1.0**	**0.20**	**mg/L**	**1**
Nitrate - N		**9056A**	**0.065**		**0.020**	**0.0050**	**mg/L**	**1**
Sulfate		**9056A**	**2.9**		**1.0**	**0.20**	**mg/L**	**1**
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		9060A	ND		1.0	0.42	mg/L	1

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/01/2019 0405	KGT		11807

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	**67-64-1**	**8260B**	~~2.9~~ ND	~~J~~ U	**20**	~~2.0~~	**ug/L**	**1**
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1

<2

TOC Range: 0.061 - 0.1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-4D**
Date Sampled: **03/27/2019 1450**
Date Received: **03/27/2019**

Laboratory ID: **UC27071-002**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/01/2019 0405	KGT		11807

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	**127-18-4**	**8260B**	**19**		**1.0**	**0.40**	**ug/L**	**1**
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	**79-01-6**	**8260B**	**0.53**	**J**	**1.0**	**0.40**	**ug/L**	**1**
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		90	70-130
Toluene-d8		100	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	04/01/2019 1412	JJG		11870

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-4D**
Date Sampled: **03/27/2019 1450**
Date Received: **03/27/2019**

Laboratory ID: **UC27071-002**
Matrix: **Aqueous**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/04/2019 1727	JJG		12263

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	74-82-8	RSK - 175	ND		10	2.5	ug/L	1
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

JLF
04/29/19

Client: EarthCon Consultants, Inc.
Description: MW-5
Date Sampled: 03/27/2019 1600
Date Received: 03/27/2019

Laboratory ID: UC27071-003
Matrix: Aqueous

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/30/2019 1447	KFE		12031
1		(Chloride) 9056A	1	03/28/2019 1223	SLU		11591
1		(Nitrate - N) 9056A	1	03/28/2019 1223	SLU		11592
1		(Sulfate) 9056A	1	03/28/2019 1223	SLU		11593
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 1409	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		**9056A**	**17**		**1.0**	**0.20**	**mg/L**	**1**
Nitrate - N		**9056A**	**0.61**		**0.020**	**0.0050**	**mg/L**	**1**
Sulfate		**9056A**	**3.3**		**1.0**	**0.20**	**mg/L**	**1**
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		**9060A**	**0.52**	**J**	**1.0**	**0.42**	**mg/L**	**1**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	04/02/2019 1729	BWS		12007

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		100	10	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	2.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	2.0	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	2.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		10	2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	2.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	2.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	2.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		10	2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	2.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	2.5	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	2.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	2.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	2.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	2.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	2.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		10	3.0	ug/L	1
1,1-Dichloroethane	**75-34-3**	**8260B**	**4.6**	**J**	**5.0**	**2.0**	**ug/L**	**1**
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	2.0	ug/L	1

TOC Range: 0.498 - 0.536

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-5**
Date Sampled: **03/27/2019 1600**
Date Received: **03/27/2019**

Laboratory ID: **UC27071-003**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	04/02/2019 1729	BWS		12007

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	2.0	ug/L	1
cis-1,2-Dichloroethene	**156-59-2**	**8260B**	**320**		**5.0**	**2.0**	**ug/L**	**1**
trans-1,2-Dichloroethene	**156-60-5**	**8260B**	**2.9**	**J**	**5.0**	**2.0**	**ug/L**	**1**
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	2.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	2.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	2.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	2.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	2.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	2.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		25	2.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	2.0	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	2.1	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	2.0	ug/L	1
Tetrachloroethene	**127-18-4**	**8260B**	**130**		**5.0**	**2.0**	**ug/L**	**1**
Toluene	108-88-3	8260B	ND		5.0	2.0	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	2.1	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	2.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	2.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	2.0	ug/L	1
Trichloroethene	**79-01-6**	**8260B**	**250**		**5.0**	**2.0**	**ug/L**	**1**
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	2.0	ug/L	1
Vinyl chloride	**75-01-4**	**8260B**	**3.5**	**J**	**5.0**	**2.0**	**ug/L**	**1**
Xylenes (total)	1330-20-7	8260B	ND		5.0	2.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		93	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	04/01/2019 1437	JJG		11870

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	**123-91-1**	**8260B (SIM is**	**9.7**		**3.0**	**1.0**	**ug/L**	**1**

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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04/29/19

Client: **EarthCon Consultants, Inc.**
Description: **MW-5**
Date Sampled: **03/27/2019 1600**
Date Received: **03/27/2019**

Laboratory ID: **UC27071-003**
Matrix: **Aqueous**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/04/2019 1743	JJG		12263

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	**74-82-8**	**RSK - 175**	**2200**		**10**	**2.5**	**ug/L**	**1**
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: **EarthCon Consultants, Inc.**
Description: **DUP-02**
Date Sampled: **03/27/2019**
Date Received: **03/27/2019**

Laboratory ID: **UC27071-004**
Matrix: **Aqueous**

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/30/2019 1450	KFE		12031
1		(Chloride) 9056A	1	03/28/2019 1249	SLU		11591
1		(Nitrate - N) 9056A	1	03/28/2019 1249	SLU		11592
1		(Sulfate) 9056A	1	03/28/2019 1249	SLU		11593
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 1443	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		**9056A**	**17**		**1.0**	**0.20**	**mg/L**	**1**
Nitrate - N		**9056A**	**0.60**		**0.020**	**0.0050**	**mg/L**	**1**
Sulfate		**9056A**	**4.0**		**1.0**	**0.20**	**mg/L**	**1**
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		**9060A**	**0.60**	**J**	**1.0**	**0.42**	**mg/L**	**1**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	04/02/2019 1752	BWS		12007

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		100	10	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	2.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	2.0	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	2.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		10	2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	2.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	2.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	2.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		10	2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	2.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	2.5	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	2.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	2.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	2.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	2.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	2.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		10	3.0	ug/L	1
1,1-Dichloroethane	**75-34-3**	**8260B**	**5.2**		**5.0**	**2.0**	**ug/L**	**1**
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	2.0	ug/L	1

TOC Range: 0.564 - 0.624

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: EarthCon Consultants, Inc.
Description: DUP-02
Date Sampled: 03/27/2019
Date Received: 03/27/2019

Laboratory ID: UC27071-004
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	04/02/2019 1752	BWS		12007

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	2.0	ug/L	1
cis-1,2-Dichloroethene	**156-59-2**	**8260B**	**310**		**5.0**	**2.0**	**ug/L**	**1**
trans-1,2-Dichloroethene	**156-60-5**	**8260B**	**2.8**	**J**	**5.0**	**2.0**	**ug/L**	**1**
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	2.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	2.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	2.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	2.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	2.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	2.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		25	2.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	2.0	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	2.1	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	2.0	ug/L	1
Tetrachloroethene	**127-18-4**	**8260B**	**120**		**5.0**	**2.0**	**ug/L**	**1**
Toluene	108-88-3	8260B	ND		5.0	2.0	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	2.1	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	2.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	2.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	2.0	ug/L	1
Trichloroethene	**79-01-6**	**8260B**	**240**		**5.0**	**2.0**	**ug/L**	**1**
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	2.0	ug/L	1
Vinyl chloride	**75-01-4**	**8260B**	**3.3**	**J**	**5.0**	**2.0**	**ug/L**	**1**
Xylenes (total)	1330-20-7	8260B	ND		5.0	2.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130
Bromofluorobenzene		98	70-130
Toluene-d8		95	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	04/01/2019 1501	JJG		11870

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	**123-91-1**	**8260B (SIM is**	**11**		**3.0**	**1.0**	**ug/L**	**1**

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: EarthCon Consultants, Inc.
Description: DUP-02
Date Sampled: 03/27/2019
Date Received: 03/27/2019

Laboratory ID: UC27071-004
Matrix: Aqueous

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/04/2019 1759	JJG		12263

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	**74-82-8**	**RSK - 175**	**2200**		**10**	**2.5**	**ug/L**	**1**
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Client: EarthCon Consultants, Inc.
Description: TB-02
Date Sampled: 03/27/2019
Date Received: 03/27/2019

Laboratory ID: UC27071-005
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/02/2019 1205	BWS		12007

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	**67-64-1**	**8260B**	**5.9**	**J**	**20**	**2.0**	**ug/L**	**1**
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: EarthCon Consultants, Inc.
Laboratory ID: **DC27071-005**

Description: **TB-02**
Matrix: **Aqueous**

Date Sampled: **03/27/2019**

Date Received: **03/27/2019**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/02/2019 1205	BWS		12007

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		109	70-130
Bromofluorobenzene		107	70-130
Toluene-d8		105	70-130

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: EarthCon Consultants, Inc. Laboratory ID: UC27071-006

Description: **MW-11** Matrix: **Aqueous**

Date Sampled: **03/27/2019 1220**

Date Received: **03/27/2019**

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/30/2019 1456	KFE		12031
1		(Chloride) 9056A	1	03/28/2019 1407	SLU		11591
1		(Nitrate - N) 9056A	1	03/28/2019 1407	SLU		11592
1		(Sulfate) 9056A	1	03/28/2019 1407	SLU		11593
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	04/01/2019 2350	DMA		11885

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		**SM 2320B-**	**59**		**20**	**20**	**mg/L**	**1**
Chloride		**9056A**	**2.8**		**1.0**	**0.20**	**mg/L**	**1**
Nitrate - N		9056A	ND		0.020	0.0050	mg/L	1
Sulfate		**9056A**	**6.9**		**1.0**	**0.20**	**mg/L**	**1**
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		**9060A**	**3.8**		**1.0**	**0.42**	**mg/L**	**1**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/02/2019 1401	BWS		12007

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	**67-64-1**	**8260B**	ND ~~6.5~~	~~J~~ U	**20**	~~2.0~~	**ug/L**	**1** <2C
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1

TOC Range: 3.647 - 3.872

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Client: Earthcon Consultants, Inc. Laboratory ID: OC27071-006

Description: **MW-11** Matrix: **Aqueous**

Date Sampled: **03/27/2019 1220**

Date Received: **03/27/2019**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/02/2019 1401	BWS		12007

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130
Bromofluorobenzene		97	70-130
Toluene-d8		96	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	04/01/2019 1526	JJG		11870

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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JLF
04/29/19

Client: EarthCon Consultants, Inc. Laboratory ID: SC27071-006

Description: **MW-11** Matrix: **Aqueous**

Date Sampled: **03/27/2019 1220**

Date Received: **03/27/2019**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/04/2019 1815	JJG		12263

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	**74-82-8**	**RSK - 175**	**14**		**10**	**2.5**	**ug/L**	**1**
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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04/29/19

Laboratory Analytical Reports

SHEALY ENVIRONMENTAL SERVICES, INC.

Report of Analysis

EarthCon Consultants, Inc.
1880 West Oak Parkway
Building 100, Suite 106
Marietta, GA 30062
Attention: Carol Northern

Project Name: Lennox International

Project Number: 02.20160378

Lot Number:**UC26059**

Date Completed:04/04/2019

04/08/2019 1:45 PM
Approved and released by:
Lab Director - Greenville: Lucas Odom

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Case Narrative
EarthCon Consultants, Inc.
Lot Number: UC26059

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Nitrate

The matrix spike/matrix spike duplicate (MS/MSD) associated with samples -001, -002, -003, and -004 had 0% recovery for target analyte: nitrate. The remaining analytes contained in the spiking solution have 0% recovery. The poor nitrate MS/MSD recoveries are attributed to matrix interference.

VOCs by GC/MS

The continuing calibration verification (CCV) associated with samples UC26059-002, UC26059-003, UC26059-004, UC26059-005 recovered Acetone above the upper control limit. The samples associated with this CCV were non-detect for the affected analytes; therefore, the data has been reported.

The laboratory control sample (LCS) for analytical batch 11778 exceeded acceptance criteria for Chloroethane. This analyte is biased high but detected in the samples affected.

Sulfide

Insufficient sample volume was provided to perform matrix spike/matrix spike duplicate (MS/MSD) for analytical batch 12039. An LCS/LCSD was run in lieu of an MS/MSD. A sample duplicate was performed alongside the LCS/LCSD.

Sample Summary

EarthCon Consultants, Inc.

Lot Number: UC26059

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-6R	Aqueous	03/26/2019 1315	03/26/2019
002	MW-8	Aqueous	03/26/2019 1135	03/26/2019
003	MW-15	Aqueous	03/26/2019 1420	03/26/2019
004	MW-16	Aqueous	03/26/2019 1440	03/26/2019
005	TB-02	Aqueous	03/26/2019	03/26/2019

(5 samples)

Detection Summary

EarthCon Consultants, Inc.

Lot Number: UC26059

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-6R	Aqueous	Chloride	9056A	8.0		mg/L	6
001	MW-6R	Aqueous	Nitrate - N	9056A	1.9		mg/L	6
001	MW-6R	Aqueous	Sulfate	9056A	3.6		mg/L	6
001	MW-6R	Aqueous	TOC	9060A	18		mg/L	6
001	MW-6R	Aqueous	Acetone	8260B	7.7	J	ug/L	6
002	MW-8	Aqueous	Chloride	9056A	3.4		mg/L	9
002	MW-8	Aqueous	Sulfate	9056A	97		mg/L	9
002	MW-8	Aqueous	Sulfide	SM 4500-S2 F-	1.1		mg/L	9
002	MW-8	Aqueous	TOC	9060A	12		mg/L	9
002	MW-8	Aqueous	Acetone	8260B	11	J	ug/L	9
002	MW-8	Aqueous	1,4-Dioxane	8260B (SIM	3.2		ug/L	10
002	MW-8	Aqueous	Methane	RSK - 175	100		ug/L	11
003	MW-15	Aqueous	Alkalinity	SM 2320B-	27		mg/L	12
003	MW-15	Aqueous	Chloride	9056A	4.5		mg/L	12
003	MW-15	Aqueous	Nitrate - N	9056A	0.13		mg/L	12
003	MW-15	Aqueous	Sulfate	9056A	13		mg/L	12
003	MW-15	Aqueous	TOC	9060A	0.52	J	mg/L	12
003	MW-15	Aqueous	Acetone	8260B	2.7	J	ug/L	12
004	MW-16	Aqueous	Chloride	9056A	16		mg/L	15
004	MW-16	Aqueous	Nitrate - N	9056A	6.6		mg/L	15
004	MW-16	Aqueous	Sulfate	9056A	1.3		mg/L	15
004	MW-16	Aqueous	Chloroform	8260B	1.6		ug/L	15

(22 detections)

Client: EarthCon Consultants, Inc.
Description: MW-6R
Date Sampled: 03/26/2019 1315
Date Received: 03/26/2019

Laboratory ID: UC26059-001
Matrix: Aqueous

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/28/2019 0405	KFE		11603
1		(Chloride) 9056A	1	03/27/2019 1158	SLU		11460
1		(Nitrate - N) 9056A	1	03/27/2019 1158	SLU		11461
1		(Sulfate) 9056A	1	03/27/2019 1158	SLU		11463
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 0051	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		9056A	8.0		1.0	0.20	mg/L	1
Nitrate - N		9056A	1.9		0.020	0.0050	mg/L	1
Sulfate		9056A	3.6		1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		9060A	18		1.0	0.42	mg/L	1

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	5030B	8260B	1	04/02/2019 0236	MNS		11939

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	7.7	J	20	2.0	ug/L	2
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	2
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	2
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	2
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	2
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	2
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	2
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	2
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	2
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	2
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	2
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	2
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	2
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	2
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	2
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	2
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	2
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	2

TOC Range: 17.967 - 18.624

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Client: EarthCon Consultants, Inc.
Description: MW-6R
Date Sampled: 03/26/2019 1315
Date Received: 03/26/2019

Laboratory ID: UC26059-001
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	5030B	8260B	1	04/02/2019 0236	MNS		11939

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	2
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	2
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	2
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	2
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	2
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	2
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	2
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	2
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	2
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	2
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	2
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	2
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	2
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	2
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	2
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	2
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	2
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		94	70-130
Toluene-d8		103	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	03/27/2019 1450	ECB		11423

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Laboratory ID: UC26059-001
Description: MW-6R
Matrix: Aqueous
Date Sampled: 03/26/2019 1315
Date Received: 03/26/2019

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/02/2019 1258	JJG		12018

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	74-82-8	RSK - 175	ND		10	2.5	ug/L	1
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: MW-8
Date Sampled: 03/26/2019 1135
Date Received: 03/26/2019

Laboratory ID: UC26059-002
Matrix: Aqueous

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/28/2019 0414	KFE		11603
1		(Chloride) 9056A	1	03/27/2019 1224	SLU		11460
1		(Nitrate - N) 9056A	1	03/27/2019 1224	SLU		11461
1		(Sulfate) 9056A	1	03/27/2019 1224	SLU		11463
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 0125	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		9056A	3.4		1.0	0.20	mg/L	1
Nitrate - N		9056A	ND		0.020	0.0050	mg/L	1
Sulfate		9056A	97		1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2 F-	1.1		1.0	1.0	mg/L	1
TOC		9060A	12		1.0	0.42	mg/L	1

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1541	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	11	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1

TOC Range: 12.008 - 12.591

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Client: EarthCon Consultants, Inc.
Description: MW-8
Date Sampled: 03/26/2019 1135
Date Received: 03/26/2019

Laboratory ID: UC26059-002
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1541	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		101	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	03/27/2019 1515	ECB		11423

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	3.2		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
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Client: EarthCon Consultants, Inc.
Laboratory ID: UC26059-002
Description: MW-8
Matrix: Aqueous
Date Sampled: 03/26/2019 1135
Date Received: 03/26/2019

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		98	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/02/2019 1320	JJG		12018

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	74-82-8	RSK - 175	100		10	2.5	ug/L	1
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: MW-15
Date Sampled: 03/26/2019 1420
Date Received: 03/26/2019

Laboratory ID: UC26059-003
Matrix: Aqueous

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/28/2019 0420	KFE		11603
1		(Chloride) 9056A	1	03/27/2019 1342	SLU		11460
1		(Nitrate - N) 9056A	1	03/27/2019 1342	SLU		11461
1		(Sulfate) 9056A	1	03/27/2019 1342	SLU		11463
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 0159	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	27		20	20	mg/L	1
Chloride		9056A	4.5		1.0	0.20	mg/L	1
Nitrate - N		9056A	0.13		0.020	0.0050	mg/L	1
Sulfate		9056A	13		1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		9060A	0.52	J	1.0	0.42	mg/L	1

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1603	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	2.7	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1

TOC Range: 0.47 - 0.568

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: MW-15
Date Sampled: 03/26/2019 1420
Date Received: 03/26/2019

Laboratory ID: UC26059-003
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1603	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		104	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		101	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	03/27/2019 1539	ECB		11423

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Laboratory ID: UC26059-003
Description: MW-15
Matrix: Aqueous
Date Sampled: 03/26/2019 1420
Date Received: 03/26/2019

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/02/2019 1334	JJG		12018

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	74-82-8	RSK - 175	ND		10	2.5	ug/L	1
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc. | Laboratory ID: UC26059-004
Description: MW-16 | Matrix: Aqueous
Date Sampled: 03/26/2019 1440
Date Received: 03/26/2019

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/28/2019 0436	KFE		11603
1		(Chloride) 9056A	1	03/27/2019 1408	SLU		11460
1		(Nitrate - N) 9056A	1	03/27/2019 1408	SLU		11461
1		(Sulfate) 9056A	1	03/27/2019 1408	SLU		11463
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 0232	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		9056A	16		1.0	0.20	mg/L	1
Nitrate - N		9056A	6.6		0.020	0.0050	mg/L	1
Sulfate		9056A	1.3		1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		9060A	ND		1.0	0.42	mg/L	1

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1625	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	1.6		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1

TOC Range: 0.088 - 0.144

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Client: EarthCon Consultants, Inc.
Description: MW-16
Date Sampled: 03/26/2019 1440
Date Received: 03/26/2019

Laboratory ID: UC26059-004
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1625	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		91	70-130
Toluene-d8		99	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	03/27/2019 1604	ECB		11423

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: MW-16
Date Sampled: 03/26/2019 1440
Date Received: 03/26/2019

Laboratory ID: UC26059-004
Matrix: Aqueous

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		98	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/02/2019 1438	JJG		12018

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	74-82-8	RSK - 175	ND		10	2.5	ug/L	1
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Client: EarthCon Consultants, Inc.
Description: TB-02
Date Sampled: 03/26/2019
Date Received: 03/26/2019

Laboratory ID: UC26059-005
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1646	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: TB-02
Date Sampled: 03/26/2019
Date Received: 03/26/2019

Laboratory ID: UC26059-005
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1646	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		103	70-130

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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QC Summary

Inorganic non-metals - MB

Sample ID: UQ11460-001
Batch: 11460
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Chloride	ND		1	1.0	0.20	mg/L	03/27/2019 0804

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - LCS

Sample ID: UQ11460-002
Batch: 11460
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Chloride	20	20		1	102	80-120	03/27/2019 0856

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MS

Sample ID: UC26059-004MS
Batch: 11460
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Chloride	16	20	33		1	86	80-120	03/27/2019 1434

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - MSD

Sample ID: UC26059-004MD
Batch: 11460
Analytical Method: 9056A
Matrix: Aqueous

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Chloride	16	20	33		1	86	0.61	80-120	20	03/27/2019 1500

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MB

Sample ID: UQ11461-001
Batch: 11461
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Nitrate - N	ND		1	0.020	0.0050	mg/L	03/27/2019 0804

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - LCS

Sample ID: UQ11461-002
Batch: 11461
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Nitrate - N	0.80	0.79		1	99	80-120	03/27/2019 0856

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MS

Sample ID: UC26059-004MS
Batch: 11461
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Nitrate - N	6.6	0.80	6.6	N	1	0.00	80-120	03/27/2019 1434

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MSD

Sample ID: UC26059-004MD
Batch: 11461
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Nitrate - N	6.6	0.80	6.6	N	1	0.00	0.00	80-120	20	03/27/2019 1500

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MB

Sample ID: UQ11463-001
Batch: 11463
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Sulfate	ND		1	1.0	0.20	mg/L	03/27/2019 0804

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - LCS

Sample ID: UQ11463-002
Batch: 11463
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Sulfate	20	20		1	101	80-120	03/27/2019 0856

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MS

Sample ID: UC26059-004MS
Batch: 11463
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Sulfate	1.3	20	33	N	1	157	80-120	03/27/2019 1434

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - MSD

Sample ID: UC26059-004MD
Batch: 11463
Analytical Method: 9056A
Matrix: Aqueous

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Sulfate	1.3	20	35	N	1	168	6.5	80-120	20	03/27/2019 1500

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MB

Sample ID: UQ11603-001
Batch: 11603
Analytical Method: SM 2320B-2011

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Alkalinity	ND		1	20	20	mg/L	03/28/2019 0349

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - LCS

Sample ID: UQ11603-002
Batch: 11603
Analytical Method: SM 2320B-2011

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Alkalinity	100	110		1	107	90-110	03/28/2019 0355

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - Duplicate

Sample ID: UC26059-001DU
Batch: 11603
Analytical Method: SM 2320B-2011

Matrix: Aqueous

Parameter	Sample Amount (mg/L)	Result (mg/L)	Q	Dil	% RPD	% RPD Limit	Analysis Date
Alkalinity	ND	ND		1	0.00	20	03/28/2019 0411

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MB

Sample ID: UQ11671-001
Batch: 11671
Analytical Method: 9060A

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
TOC	ND		1	1.0	0.42	mg/L	03/29/2019 2240

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - LCS

Sample ID: UQ11671-002
Batch: 11671
Analytical Method: 9060A

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TOC	20	20		1	99	90-110	03/29/2019 2312

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MS

Sample ID: UC26059-004MS
Batch: 11671
Analytical Method: 9060A

Matrix: Aqueous

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TOC	ND	20	20		1	98	70-130	03/30/2019 0306

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - MSD

Sample ID: UC26059-004MD
Batch: 11671
Analytical Method: 9060A

Matrix: Aqueous

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
TOC	ND	20	20		1	100	1.9	70-130	20	03/30/2019 0339

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MB

Sample ID: UQ12039-001
Batch: 12039
Analytical Method: SM 4500-S2 F-2011

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Sulfide	ND		1	1.0	1.0	mg/L	04/02/2019 1446

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - LCS

Sample ID: UQ12039-002
Batch: 12039
Analytical Method: SM 4500-S2 F-2011

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Sulfide	10	9.3		1	93	80-120	04/02/2019 1446

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - LCSD

Sample ID: UQ12039-003
Batch: 12039
Analytical Method: SM 4500-S2 F-2011

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Sulfide	10	9.8		1	98	5.2	80-120	20	04/02/2019 1446

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS (SIM with isotope dilution) - MB

Sample ID: UQ11423-001
Batch: 11423
Analytical Method: 8260B (SIM iso.)

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
1,4-Dioxane	ND		1	3.0	1.0	ug/L	03/27/2019 1230

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		100	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS (SIM with isotope dilution) - LCS

Sample ID: UQ11423-002
Batch: 11423
Analytical Method: 8260B (SIM iso.)

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,4-Dioxane	50	57		1	113	70-130	03/27/2019 1124

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		97	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ11791-001
Batch: 11791
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	03/31/2019 1217
Benzene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Bromodichloromethane	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Bromoform	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Bromomethane (Methyl bromide)	ND		1	2.0	0.40	ug/L	03/31/2019 1217
2-Butanone (MEK)	ND		1	10	2.0	ug/L	03/31/2019 1217
Carbon disulfide	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Carbon tetrachloride	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Chlorobenzene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Chloroethane	ND		1	2.0	0.40	ug/L	03/31/2019 1217
Chloroform	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Chloromethane (Methyl chloride)	ND		1	1.0	0.50	ug/L	03/31/2019 1217
Cyclohexane	ND		1	1.0	0.40	ug/L	03/31/2019 1217
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Dibromochloromethane	ND		1	1.0	0.40	ug/L	03/31/2019 1217
1,2-Dibromoethane (EDB)	ND		1	1.0	0.40	ug/L	03/31/2019 1217
1,2-Dichlorobenzene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
1,3-Dichlorobenzene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
1,4-Dichlorobenzene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Dichlorodifluoromethane	ND		1	2.0	0.60	ug/L	03/31/2019 1217
1,1-Dichloroethane	ND		1	1.0	0.40	ug/L	03/31/2019 1217
1,2-Dichloroethane	ND		1	1.0	0.40	ug/L	03/31/2019 1217
1,1-Dichloroethene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
cis-1,2-Dichloroethene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
trans-1,2-Dichloroethene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
1,2-Dichloropropane	ND		1	1.0	0.40	ug/L	03/31/2019 1217
cis-1,3-Dichloropropene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
trans-1,3-Dichloropropene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Ethylbenzene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
2-Hexanone	ND		1	10	2.0	ug/L	03/31/2019 1217
Isopropylbenzene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Methyl acetate	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	0.40	ug/L	03/31/2019 1217
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	03/31/2019 1217
Methylcyclohexane	ND		1	5.0	0.40	ug/L	03/31/2019 1217
Methylene chloride	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Styrene	ND		1	1.0	0.41	ug/L	03/31/2019 1217
1,1,2,2-Tetrachloroethane	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Tetrachloroethene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Toluene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	1.0	0.42	ug/L	03/31/2019 1217
1,2,4-Trichlorobenzene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
1,1,1-Trichloroethane	ND		1	1.0	0.40	ug/L	03/31/2019 1217
1,1,2-Trichloroethane	ND		1	1.0	0.40	ug/L	03/31/2019 1217

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ11791-001
Batch: 11791
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Trichloroethene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Trichlorofluoromethane	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Vinyl chloride	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Xylenes (total)	ND		1	1.0	0.40	ug/L	03/31/2019 1217

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		101	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ11791-002
Batch: 11791
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	91		1	91	60-140	03/31/2019 1116
Benzene	50	54		1	108	70-130	03/31/2019 1116
Bromodichloromethane	50	54		1	109	70-130	03/31/2019 1116
Bromoform	50	43		1	86	70-130	03/31/2019 1116
Bromomethane (Methyl bromide)	50	44		1	88	70-130	03/31/2019 1116
2-Butanone (MEK)	100	98		1	98	70-130	03/31/2019 1116
Carbon disulfide	50	55		1	109	70-130	03/31/2019 1116
Carbon tetrachloride	50	56		1	112	70-130	03/31/2019 1116
Chlorobenzene	50	51		1	103	70-130	03/31/2019 1116
Chloroethane	50	39		1	79	70-130	03/31/2019 1116
Chloroform	50	52		1	104	70-130	03/31/2019 1116
Chloromethane (Methyl chloride)	50	47		1	93	60-140	03/31/2019 1116
Cyclohexane	50	61		1	122	70-130	03/31/2019 1116
1,2-Dibromo-3-chloropropane (DBCP)	50	55		1	110	70-130	03/31/2019 1116
Dibromochloromethane	50	55		1	109	70-130	03/31/2019 1116
1,2-Dibromoethane (EDB)	50	57		1	115	70-130	03/31/2019 1116
1,2-Dichlorobenzene	50	51		1	102	70-130	03/31/2019 1116
1,3-Dichlorobenzene	50	51		1	101	70-130	03/31/2019 1116
1,4-Dichlorobenzene	50	51		1	101	70-130	03/31/2019 1116
Dichlorodifluoromethane	50	50		1	100	60-140	03/31/2019 1116
1,1-Dichloroethane	50	54		1	108	70-130	03/31/2019 1116
1,2-Dichloroethane	50	59		1	118	70-130	03/31/2019 1116
1,1-Dichloroethene	50	57		1	114	70-130	03/31/2019 1116
cis-1,2-Dichloroethene	50	54		1	107	70-130	03/31/2019 1116
trans-1,2-Dichloroethene	50	55		1	111	70-130	03/31/2019 1116
1,2-Dichloropropane	50	55		1	110	70-130	03/31/2019 1116
cis-1,3-Dichloropropene	50	57		1	113	70-130	03/31/2019 1116
trans-1,3-Dichloropropene	50	56		1	112	70-130	03/31/2019 1116
Ethylbenzene	50	52		1	105	70-130	03/31/2019 1116
2-Hexanone	100	97		1	97	70-130	03/31/2019 1116
Isopropylbenzene	50	52		1	103	70-130	03/31/2019 1116
Methyl acetate	50	60		1	120	70-130	03/31/2019 1116
Methyl tertiary butyl ether (MTBE)	50	58		1	115	70-130	03/31/2019 1116
4-Methyl-2-pentanone	100	100		1	104	70-130	03/31/2019 1116
Methylcyclohexane	50	58		1	117	70-130	03/31/2019 1116
Methylene chloride	50	52		1	105	70-130	03/31/2019 1116
Styrene	50	52		1	103	70-130	03/31/2019 1116
1,1,2,2-Tetrachloroethane	50	54		1	108	70-130	03/31/2019 1116
Tetrachloroethene	50	50		1	99	70-130	03/31/2019 1116
Toluene	50	55		1	109	70-130	03/31/2019 1116
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	57		1	114	70-130	03/31/2019 1116
1,2,4-Trichlorobenzene	50	47		1	93	70-130	03/31/2019 1116
1,1,1-Trichloroethane	50	56		1	112	70-130	03/31/2019 1116
1,1,2-Trichloroethane	50	56		1	112	70-130	03/31/2019 1116

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ11791-002
Batch: 11791
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	56		1	111	70-130	03/31/2019 1116
Trichlorofluoromethane	50	46		1	92	70-130	03/31/2019 1116
Vinyl chloride	50	38		1	76	70-130	03/31/2019 1116
Xylenes (total)	100	100		1	104	70-130	03/31/2019 1116

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		98	70-130
Toluene-d8		102	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ11939-001
Batch: 11939
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	04/02/2019 0007
Benzene	ND		1	1.0	0.40	ug/L	04/02/2019 0007
Bromodichloromethane	ND		1	1.0	0.40	ug/L	04/02/2019 0007
Bromoform	ND		1	1.0	0.40	ug/L	04/02/2019 0007
Bromomethane (Methyl bromide)	ND		1	2.0	0.40	ug/L	04/02/2019 0007
2-Butanone (MEK)	ND		1	10	2.0	ug/L	04/02/2019 0007
Carbon disulfide	ND		1	1.0	0.40	ug/L	04/02/2019 0007
Carbon tetrachloride	ND		1	1.0	0.40	ug/L	04/02/2019 0007
Chlorobenzene	ND		1	1.0	0.40	ug/L	04/02/2019 0007
Chloroethane	ND		1	2.0	0.40	ug/L	04/02/2019 0007
Chloroform	ND		1	1.0	0.40	ug/L	04/02/2019 0007
Chloromethane (Methyl chloride)	ND		1	1.0	0.50	ug/L	04/02/2019 0007
Cyclohexane	ND		1	1.0	0.40	ug/L	04/02/2019 0007
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	1.0	0.40	ug/L	04/02/2019 0007
Dibromochloromethane	ND		1	1.0	0.40	ug/L	04/02/2019 0007
1,2-Dibromoethane (EDB)	ND		1	1.0	0.40	ug/L	04/02/2019 0007
1,2-Dichlorobenzene	ND		1	1.0	0.40	ug/L	04/02/2019 0007
1,3-Dichlorobenzene	ND		1	1.0	0.40	ug/L	04/02/2019 0007
1,4-Dichlorobenzene	ND		1	1.0	0.40	ug/L	04/02/2019 0007
Dichlorodifluoromethane	ND		1	2.0	0.60	ug/L	04/02/2019 0007
1,1-Dichloroethane	ND		1	1.0	0.40	ug/L	04/02/2019 0007
1,2-Dichloroethane	ND		1	1.0	0.40	ug/L	04/02/2019 0007
1,1-Dichloroethene	ND		1	1.0	0.40	ug/L	04/02/2019 0007
cis-1,2-Dichloroethene	ND		1	1.0	0.40	ug/L	04/02/2019 0007
trans-1,2-Dichloroethene	ND		1	1.0	0.40	ug/L	04/02/2019 0007
1,2-Dichloropropane	ND		1	1.0	0.40	ug/L	04/02/2019 0007
cis-1,3-Dichloropropene	ND		1	1.0	0.40	ug/L	04/02/2019 0007
trans-1,3-Dichloropropene	ND		1	1.0	0.40	ug/L	04/02/2019 0007
Ethylbenzene	ND		1	1.0	0.40	ug/L	04/02/2019 0007
2-Hexanone	ND		1	10	2.0	ug/L	04/02/2019 0007
Isopropylbenzene	ND		1	1.0	0.40	ug/L	04/02/2019 0007
Methyl acetate	ND		1	1.0	0.40	ug/L	04/02/2019 0007
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	0.40	ug/L	04/02/2019 0007
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	04/02/2019 0007
Methylcyclohexane	ND		1	5.0	0.40	ug/L	04/02/2019 0007
Methylene chloride	ND		1	1.0	0.40	ug/L	04/02/2019 0007
Styrene	ND		1	1.0	0.41	ug/L	04/02/2019 0007
1,1,2,2-Tetrachloroethane	ND		1	1.0	0.40	ug/L	04/02/2019 0007
Tetrachloroethene	ND		1	1.0	0.40	ug/L	04/02/2019 0007
Toluene	ND		1	1.0	0.40	ug/L	04/02/2019 0007
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	1.0	0.42	ug/L	04/02/2019 0007
1,2,4-Trichlorobenzene	ND		1	1.0	0.40	ug/L	04/02/2019 0007
1,1,1-Trichloroethane	ND		1	1.0	0.40	ug/L	04/02/2019 0007
1,1,2-Trichloroethane	ND		1	1.0	0.40	ug/L	04/02/2019 0007

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ11939-001
Batch: 11939
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Trichloroethene	ND		1	1.0	0.40	ug/L	04/02/2019 0007
Trichlorofluoromethane	ND		1	1.0	0.40	ug/L	04/02/2019 0007
Vinyl chloride	ND		1	1.0	0.40	ug/L	04/02/2019 0007
Xylenes (total)	ND		1	1.0	0.40	ug/L	04/02/2019 0007

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		104	70-130
Bromofluorobenzene		96	70-130
Toluene-d8		105	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
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N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ11939-002
Batch: 11939
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	100		1	101	60-140	04/01/2019 2311
Benzene	50	52		1	104	70-130	04/01/2019 2311
Bromodichloromethane	50	52		1	104	70-130	04/01/2019 2311
Bromoform	50	43		1	86	70-130	04/01/2019 2311
Bromomethane (Methyl bromide)	50	51		1	102	70-130	04/01/2019 2311
2-Butanone (MEK)	100	100		1	101	70-130	04/01/2019 2311
Carbon disulfide	50	49		1	98	70-130	04/01/2019 2311
Carbon tetrachloride	50	54		1	108	70-130	04/01/2019 2311
Chlorobenzene	50	49		1	98	70-130	04/01/2019 2311
Chloroethane	50	45		1	89	70-130	04/01/2019 2311
Chloroform	50	51		1	102	70-130	04/01/2019 2311
Chloromethane (Methyl chloride)	50	60		1	120	60-140	04/01/2019 2311
Cyclohexane	50	57		1	113	70-130	04/01/2019 2311
1,2-Dibromo-3-chloropropane (DBCP)	50	49		1	97	70-130	04/01/2019 2311
Dibromochloromethane	50	54		1	109	70-130	04/01/2019 2311
1,2-Dibromoethane (EDB)	50	57		1	114	70-130	04/01/2019 2311
1,2-Dichlorobenzene	50	47		1	95	70-130	04/01/2019 2311
1,3-Dichlorobenzene	50	48		1	96	70-130	04/01/2019 2311
1,4-Dichlorobenzene	50	47		1	95	70-130	04/01/2019 2311
Dichlorodifluoromethane	50	66		1	132	60-140	04/01/2019 2311
1,1-Dichloroethane	50	52		1	103	70-130	04/01/2019 2311
1,2-Dichloroethane	50	58		1	117	70-130	04/01/2019 2311
1,1-Dichloroethene	50	53		1	107	70-130	04/01/2019 2311
cis-1,2-Dichloroethene	50	52		1	104	70-130	04/01/2019 2311
trans-1,2-Dichloroethene	50	52		1	105	70-130	04/01/2019 2311
1,2-Dichloropropane	50	52		1	104	70-130	04/01/2019 2311
cis-1,3-Dichloropropene	50	54		1	107	70-130	04/01/2019 2311
trans-1,3-Dichloropropene	50	55		1	109	70-130	04/01/2019 2311
Ethylbenzene	50	50		1	100	70-130	04/01/2019 2311
2-Hexanone	100	100		1	101	70-130	04/01/2019 2311
Isopropylbenzene	50	49		1	98	70-130	04/01/2019 2311
Methyl acetate	50	57		1	114	70-130	04/01/2019 2311
Methyl tertiary butyl ether (MTBE)	50	58		1	116	70-130	04/01/2019 2311
4-Methyl-2-pentanone	100	100		1	101	70-130	04/01/2019 2311
Methylcyclohexane	50	54		1	109	70-130	04/01/2019 2311
Methylene chloride	50	51		1	103	70-130	04/01/2019 2311
Styrene	50	49		1	98	70-130	04/01/2019 2311
1,1,2,2-Tetrachloroethane	50	54		1	108	70-130	04/01/2019 2311
Tetrachloroethene	50	47		1	94	70-130	04/01/2019 2311
Toluene	50	53		1	107	70-130	04/01/2019 2311
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	54		1	107	70-130	04/01/2019 2311
1,2,4-Trichlorobenzene	50	39		1	79	70-130	04/01/2019 2311
1,1,1-Trichloroethane	50	53		1	107	70-130	04/01/2019 2311
1,1,2-Trichloroethane	50	56		1	112	70-130	04/01/2019 2311

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ11939-002
Batch: 11939
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	52		1	105	70-130	04/01/2019 2311
Trichlorofluoromethane	50	53		1	105	70-130	04/01/2019 2311
Vinyl chloride	50	46		1	91	70-130	04/01/2019 2311
Xylenes (total)	100	99		1	99	70-130	04/01/2019 2311

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		96	70-130
Toluene-d8		102	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Dissolved Gases - MB

Sample ID: UQ12018-001
Batch: 12018
Analytical Method: RSK - 175

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Ethane	ND		1	10	2.5	ug/L	04/02/2019 1033
Ethene	ND		1	10	2.5	ug/L	04/02/2019 1033
Methane	ND		1	10	2.5	ug/L	04/02/2019 1033
Propane	ND		1	15	5.0	ug/L	04/02/2019 1033

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Dissolved Gases - LCS

Sample ID: UQ12018-002
Batch: 12018
Analytical Method: RSK - 175

Matrix: Aqueous

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Ethane	280	320		1	113	70-130	04/02/2019 1002
Ethene	260	280		1	107	70-130	04/02/2019 1002
Methane	150	170		1	111	70-130	04/02/2019 1002
Propane	420	480		1	116	70-130	04/02/2019 1002

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Dissolved Gases - LCSD

Sample ID: UQ12018-003
Batch: 12018
Analytical Method: RSK - 175

Matrix: Aqueous

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Ethane	280	320		1	113	0.43	70-130	30	04/02/2019 1014
Ethene	260	290		1	109	2.6	70-130	30	04/02/2019 1014
Methane	150	170		1	110	1.0	70-130	30	04/02/2019 1014
Propane	420	480		1	115	1.2	70-130	30	04/02/2019 1014

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Chain of Custody

and

Miscellaneous Documents

Shealy Environmental Services, Inc.
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Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.
106 Vantage Point Drive • West Columbia, SC 29172
Telephone No. 803-791-9700 Fax No. 803-791-9111
www.shealylab.com

Number 91446

Client: EARTHCON	Report to Contact: Carol Northern	Telephone No. / E-mail: 770-973-2100 cnorthern@earthcon.com	Quote No.
Address: 1680 West Oak Pkwy	Sampler's Signature: Tiffany Messick	Analysis (Attach list if more space is needed)	Page 1 of 1
City: Marietta State: GA Zip Code: 30062	Printed Name: Tiffany Messick		
Project Name: Lennox International			UC26059
Project No.: 02.20160378	P.O. No.		LJO

Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	Grab / Composite	Matrix: Aqueous	Soil	Non-Aqueous	No. of Containers by Preservative Type: Unpres	HCl	HNO3	H2SO4	NaOH	Ziploc Kit	VOC	1,4 Dioxane	Diss. Gas	TOC	NO3/SO4 ic/IC	Sulfide
MW-6R	3/26/19	13:15						1		7	1		/	/	/	/	/	/
MW-8		11:35						1		7	1		/	/	/	/	/	/
MW-15		14:20						1		7	1		/	/	/	/	/	/
MW-16	V	14:40						1		7	1		/	/	/	/	/	/
TB-02	3/26/19									2			X					

Turn Around Time Required (Prior lab approval required for expedited TAT.) ☒ Standard ☐ Rush (Specify)

Sample Disposal ☐ Return to Client ☐ Disposal by Lab

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

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished by: Tiffany Messick	3/26/19	1622	1. Received by		
2. Relinquished by			2. Received by		
3. Relinquished by			3. Received by		
4. Relinquished by			4. Laboratory received by: Mallory Cobb	3/26/19	1620

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on Ice (Circle) (Yes) No Ice Pack
Receipt Temp 1.6 °C

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
Document Number: ME0018C-14

Page 1 of 1
Effective Date: 8/2/2018

Sample Receipt Checklist (SRC)

Client: EARTHCON Cooler Inspected by/date: MEC / 03-26-2019 Lot #: UC26059

Means of receipt: ☐ SESI ☑ Client ☐ UPS ☐ FedEx ☐ Other:			
☐ Yes	☑ No		1. Were custody seals present on the cooler?
☐ Yes	☐ No	☑ NA	2. If custody seals were present, were they intact and unbroken?

pH Strip ID: 18-2225 Chlorine Strip ID: 19-152 Tested by: LKH

Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: LKH

1.6 / 1.6 °C NA / NA °C NA / NA °C NA / NA °C

Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: 5 IR Gun Correction Factor: 0 °C

Method of coolant: ☑ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None

☐ Yes	☐ No	☑ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☐ Yes	☐ No	☑ NA	4. Is the commercial courier's packing slip attached to this form?
☑ Yes	☐ No		5. Were proper custody procedures (relinquished/received) followed?
☑ Yes	☐ No		6. Were sample IDs listed on the COC?
☑ Yes	☐ No		7. Were sample IDs listed on all sample containers?
☑ Yes	☐ No		8. Was collection date & time listed on the COC?
☑ Yes	☐ No		9. Was collection date & time listed on all sample containers?
☑ Yes	☐ No		10. Did all container label information (ID, date, time) agree with the COC?
☑ Yes	☐ No		11. Were tests to be performed listed on the COC?
☑ Yes	☐ No		12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
☑ Yes	☐ No		13. Was adequate sample volume available?
☑ Yes	☐ No		14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☐ Yes	☑ No		15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
☐ Yes	☑ No	☑ NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼"or 6mm in diameter) in any of the VOA vials?
☑ Yes	☐ No	☐ NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
☑ Yes	☐ No	☐ NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☑ Yes	☐ No	☐ NA	19. Were all applicable NH3/TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes	☐ No	☑ NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS?
☐ Yes	☑ No		21. Was the quote number listed on the container label? If yes, Quote #

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H2SO4, HNO3, HCl, NaOH using SR # NA.
Time of preservation NA. If more than one preserVative is needed, please note in the comments below.

Sample(s) NA were received with bubbles >6 mm in diameter.

Samples(s) NA were received with TRC > 0.5 mg/L (If #19 is ***no***) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_3$) with Shealy ID: NA.

SR barcode labels applied by: LKH Date: 03-26-2019

Comments:

SHEALY ENVIRONMENTAL SERVICES, INC.

Report of Analysis

EarthCon Consultants, Inc.
1880 West Oak Parkway
Building 100, Suite 106
Marietta, GA 30062
Attention: Carol Northern

Project Name: Lennox International

Project Number: 02.20160378

Lot Number:**UC26062**

Date Completed:04/05/2019

04/08/2019 1:50 PM
Approved and released by:
Lab Director - Greenville: Lucas Odom

The electronic signature above is the equivalent of a handwritten signature.
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Case Narrative
EarthCon Consultants, Inc.
Lot Number: UC26062

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Nitrate

The matrix spike/matrix spike duplicate (MS/MSD) associated with samples -001 through -006 had 0% recovery for target analyte: nitrate. The remaining analytes contained in the spiking solution have 0% recovery. The poor nitrate MS/MSD recoveries are attributed to matrix interference.

VOCs by GC/MS

The continuing calibration verification (CCV) associated with samples UC26062-001, UC26062-002, UC26062-003, UC26062-004, UC26062-005, UC26062-006, UC26062-007 recovered Acetone above the upper control limit. The samples associated with this CCV were non-detect for the affected analytes; therefore, the data has been reported.

Sulfide

Insufficient sample volume was provided to perform matrix spike/matrix spike duplicate (MS/MSD) for analytical batch 12039. An LCS/LCSD was run in lieu of an MS/MSD. A sample duplicate was performed alongside the LCS/LCSD.

Sample Summary

EarthCon Consultants, Inc.

Lot Number: UC26062

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-1	Aqueous	03/26/2019 0920	03/26/2019
002	MW-1D	Aqueous	03/26/2019 1025	03/26/2019
003	MW-2	Aqueous	03/26/2019 0920	03/26/2019
004	MW-2D	Aqueous	03/26/2019 1020	03/26/2019
005	DUP-01	Aqueous	03/26/2019	03/26/2019
006	MW-7	Aqueous	03/26/2019 1135	03/26/2019
007	TRIP BLANK 01	Aqueous	03/26/2019	03/26/2019

(7 samples)

Detection Summary

EarthCon Consultants, Inc.

Lot Number: UC26062

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-1	Aqueous	Chloride	9056A	17		mg/L	7
001	MW-1	Aqueous	Sulfate	9056A	19		mg/L	7
001	MW-1	Aqueous	TOC	9060A	1.2		mg/L	7
001	MW-1	Aqueous	cis-1,2-Dichloroethene	8260B	1400		ug/L	8
001	MW-1	Aqueous	trans-1,2-Dichloroethene	8260B	4.8	J	ug/L	8
001	MW-1	Aqueous	Ethylbenzene	8260B	32		ug/L	8
001	MW-1	Aqueous	Tetrachloroethene	8260B	4.9	J	ug/L	8
001	MW-1	Aqueous	Trichloroethene	8260B	6.3	J	ug/L	8
001	MW-1	Aqueous	Vinyl chloride	8260B	33		ug/L	8
001	MW-1	Aqueous	Xylenes (total)	8260B	200		ug/L	8
001	MW-1	Aqueous	Ethene	RSK - 175	10		ug/L	9
001	MW-1	Aqueous	Methane	RSK - 175	350		ug/L	9
002	MW-1D	Aqueous	Chloride	9056A	2.1		mg/L	10
002	MW-1D	Aqueous	Nitrate - N	9056A	0.091		mg/L	10
002	MW-1D	Aqueous	Sulfate	9056A	0.76	J	mg/L	10
002	MW-1D	Aqueous	Acetone	8260B	3.9	J	ug/L	10
002	MW-1D	Aqueous	Tetrachloroethene	8260B	13		ug/L	11
002	MW-1D	Aqueous	Trichloroethene	8260B	2.7		ug/L	11
003	MW-2	Aqueous	Chloride	9056A	8.0		mg/L	13
003	MW-2	Aqueous	Nitrate - N	9056A	1.4		mg/L	13
003	MW-2	Aqueous	Sulfate	9056A	1.5		mg/L	13
003	MW-2	Aqueous	Acetone	8260B	2.5	J	ug/L	13
004	MW-2D	Aqueous	Chloride	9056A	2.6		mg/L	16
004	MW-2D	Aqueous	Nitrate - N	9056A	0.19		mg/L	16
004	MW-2D	Aqueous	Sulfate	9056A	1.2		mg/L	16
004	MW-2D	Aqueous	Acetone	8260B	3.2	J	ug/L	16
005	DUP-01	Aqueous	Chloride	9056A	19		mg/L	19
005	DUP-01	Aqueous	Sulfate	9056A	18		mg/L	19
005	DUP-01	Aqueous	TOC	9060A	1.2		mg/L	19
005	DUP-01	Aqueous	cis-1,2-Dichloroethene	8260B	1900		ug/L	20
005	DUP-01	Aqueous	trans-1,2-Dichloroethene	8260B	6.4	J	ug/L	20
005	DUP-01	Aqueous	Ethylbenzene	8260B	79		ug/L	20
005	DUP-01	Aqueous	Tetrachloroethene	8260B	4.3	J	ug/L	20
005	DUP-01	Aqueous	Trichloroethene	8260B	5.6	J	ug/L	20
005	DUP-01	Aqueous	Vinyl chloride	8260B	57		ug/L	20
005	DUP-01	Aqueous	Xylenes (total)	8260B	470		ug/L	20
005	DUP-01	Aqueous	Ethene	RSK - 175	8.1	J	ug/L	21
005	DUP-01	Aqueous	Methane	RSK - 175	180		ug/L	21
006	MW-7	Aqueous	Alkalinity	SM 2320B-	46		mg/L	22
006	MW-7	Aqueous	Chloride	9056A	5.3		mg/L	22
006	MW-7	Aqueous	Nitrate - N	9056A	0.056		mg/L	22
006	MW-7	Aqueous	Sulfate	9056A	1.3		mg/L	22
006	MW-7	Aqueous	TOC	9060A	4.5		mg/L	22
006	MW-7	Aqueous	cis-1,2-Dichloroethene	8260B	440		ug/L	23
006	MW-7	Aqueous	Ethylbenzene	8260B	79		ug/L	23

Detection Summary (Continued)

Lot Number: UC26062

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
006	MW-7	Aqueous	Vinyl chloride	8260B	200		ug/L	23
006	MW-7	Aqueous	Xylenes (total)	8260B	210		ug/L	23
006	MW-7	Aqueous	Ethane	RSK - 175	4.7	J	ug/L	24
006	MW-7	Aqueous	Ethene	RSK - 175	17		ug/L	24
006	MW-7	Aqueous	Methane	RSK - 175	120		ug/L	24
007	TRIP BLANK 01	Aqueous	Acetone	8260B	3.4	J	ug/L	25

(51 detections)

Client: EarthCon Consultants, Inc.
Laboratory ID: UC26062-001
Description: MW-1
Matrix: Aqueous
Date Sampled: 03/26/2019 0920
Date Received: 03/26/2019

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/28/2019 0439	KFE		11603
1		(Chloride) 9056A	1	03/27/2019 0922	SLU		11460
1		(Nitrate - N) 9056A	1	03/27/2019 0922	SLU		11461
1		(Sulfate) 9056A	1	03/27/2019 0922	SLU		11463
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 0517	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		9056A	17		1.0	0.20	mg/L	1
Nitrate - N		9056A	ND		0.020	0.0050	mg/L	1
Sulfate		9056A	19		1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		9060A	1.2		1.0	0.42	mg/L	1

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	10	03/31/2019 1835	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		200	20	ug/L	1
Benzene	71-43-2	8260B	ND		10	4.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		10	4.0	ug/L	1
Bromoform	75-25-2	8260B	ND		10	4.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		20	4.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		100	20	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		10	4.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		10	4.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		10	4.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		20	4.0	ug/L	1
Chloroform	67-66-3	8260B	ND		10	4.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		10	5.0	ug/L	1
Cyclohexane	110-82-7	8260B	ND		10	4.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		10	4.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		10	4.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		10	4.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		10	4.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		10	4.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		10	4.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		20	6.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		10	4.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		10	4.0	ug/L	1

TOC Range: 1.117 - 1.252

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Client: EarthCon Consultants, Inc.
Description: MW-1
Date Sampled: 03/26/2019 0920
Date Received: 03/26/2019

Laboratory ID: UC26062-001
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	10	03/31/2019 1835	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		10	4.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	1400		10	4.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	4.8	J	10	4.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		10	4.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		10	4.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		10	4.0	ug/L	1
Ethylbenzene	100-41-4	8260B	32		10	4.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		100	20	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		10	4.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		10	4.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		10	4.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		100	20	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		50	4.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		10	4.0	ug/L	1
Styrene	100-42-5	8260B	ND		10	4.1	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		10	4.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	4.9	J	10	4.0	ug/L	1
Toluene	108-88-3	8260B	ND		10	4.0	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		10	4.2	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		10	4.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		10	4.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		10	4.0	ug/L	1
Trichloroethene	79-01-6	8260B	6.3	J	10	4.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		10	4.0	ug/L	1
Vinyl chloride	75-01-4	8260B	33		10	4.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	200		10	4.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		92	70-130
Toluene-d8		100	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	03/27/2019 1628	ECB		11423

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Laboratory ID: UC26062-001
Description: MW-1
Matrix: Aqueous
Date Sampled: 03/26/2019 0920
Date Received: 03/26/2019

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		97	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/02/2019 1540	JJG		12018

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	10		10	2.5	ug/L	1
Methane	74-82-8	RSK - 175	350		10	2.5	ug/L	1
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
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Client: EarthCon Consultants, Inc.
Description: MW-1D
Date Sampled: 03/26/2019 1025
Date Received: 03/26/2019

Laboratory ID: UC26062-002
Matrix: Aqueous

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/28/2019 0442	KFE		11603
1		(Chloride) 9056A	1	03/27/2019 0948	SLU		11460
1		(Nitrate - N) 9056A	1	03/27/2019 0948	SLU		11461
1		(Sulfate) 9056A	1	03/27/2019 0948	SLU		11463
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 0550	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		9056A	2.1		1.0	0.20	mg/L	1
Nitrate - N		9056A	0.091		0.020	0.0050	mg/L	1
Sulfate		9056A	0.76	J	1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		9060A	ND		1.0	0.42	mg/L	1

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1708	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	3.9	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1

TOC Range: 0.088 - 0.147

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Client: EarthCon Consultants, Inc.
Description: MW-1D
Date Sampled: 03/26/2019 1025
Date Received: 03/26/2019

Laboratory ID: UC26062-002
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1708	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	13		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	2.7		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		94	70-130
Toluene-d8		103	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	03/27/2019 1652	ECB		11423

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
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Client: EarthCon Consultants, Inc.
Laboratory ID: UC26062-002
Description: MW-1D
Matrix: Aqueous
Date Sampled: 03/26/2019 1025
Date Received: 03/26/2019

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		92	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/02/2019 1506	JJG		12018

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	74-82-8	RSK - 175	ND		10	2.5	ug/L	1
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
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Client: EarthCon Consultants, Inc.
Description: MW-2
Date Sampled: 03/26/2019 0920
Date Received: 03/26/2019

Laboratory ID: UC26062-003
Matrix: Aqueous

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/28/2019 0445	KFE		11603
1		(Chloride) 9056A	1	03/27/2019 1014	SLU		11460
1		(Nitrate - N) 9056A	1	03/27/2019 1014	SLU		11461
1		(Sulfate) 9056A	1	03/27/2019 1014	SLU		11463
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 0728	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		9056A	8.0		1.0	0.20	mg/L	1
Nitrate - N		9056A	1.4		0.020	0.0050	mg/L	1
Sulfate		9056A	1.5		1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		9060A	ND		1.0	0.42	mg/L	1

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1730	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	2.5	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1

TOC Range: 0.155 - 0.205

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: MW-2
Date Sampled: 03/26/2019 0920
Date Received: 03/26/2019

Laboratory ID: UC26062-003
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1730	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		101	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	03/27/2019 1716	ECB		11423

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Laboratory ID: UC26062-003
Description: MW-2
Matrix: Aqueous
Date Sampled: 03/26/2019 0920
Date Received: 03/26/2019

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/02/2019 1516	JJG		12018

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	74-82-8	RSK - 175	ND		10	2.5	ug/L	1
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: MW-2D
Date Sampled: 03/26/2019 1020
Date Received: 03/26/2019

Laboratory ID: UC26062-004
Matrix: Aqueous

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/28/2019 0449	KFE		11603
1		(Chloride) 9056A	1	03/27/2019 1040	SLU		11460
1		(Nitrate - N) 9056A	1	03/27/2019 1040	SLU		11461
1		(Sulfate) 9056A	1	03/27/2019 1040	SLU		11463
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 0802	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		9056A	2.6		1.0	0.20	mg/L	1
Nitrate - N		9056A	0.19		0.020	0.0050	mg/L	1
Sulfate		9056A	1.2		1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		9060A	ND		1.0	0.42	mg/L	1

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1751	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	3.2	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1

TOC Range: 0.143 - 0.191

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Client: EarthCon Consultants, Inc.
Description: MW-2D
Date Sampled: 03/26/2019 1020
Date Received: 03/26/2019

Laboratory ID: UC26062-004
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1751	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		101	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	03/27/2019 1740	ECB		11423

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Laboratory ID: UC26062-004
Description: MW-2D
Matrix: Aqueous
Date Sampled: 03/26/2019 1020
Date Received: 03/26/2019

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/02/2019 1530	JJG		12018

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	74-82-8	RSK - 175	ND		10	2.5	ug/L	1
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: DUP-01
Date Sampled: 03/26/2019
Date Received: 03/26/2019

Laboratory ID: UC26062-005
Matrix: Aqueous

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/28/2019 0452	KFE		11603
1		(Chloride) 9056A	1	03/27/2019 1106	SLU		11460
1		(Nitrate - N) 9056A	1	03/27/2019 1106	SLU		11461
1		(Sulfate) 9056A	1	03/27/2019 1106	SLU		11463
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 0835	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		9056A	19		1.0	0.20	mg/L	1
Nitrate - N		9056A	ND		0.020	0.0050	mg/L	1
Sulfate		9056A	18		1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		9060A	1.2		1.0	0.42	mg/L	1

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	10	03/31/2019 1857	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		200	20	ug/L	1
Benzene	71-43-2	8260B	ND		10	4.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		10	4.0	ug/L	1
Bromoform	75-25-2	8260B	ND		10	4.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		20	4.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		100	20	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		10	4.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		10	4.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		10	4.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		20	4.0	ug/L	1
Chloroform	67-66-3	8260B	ND		10	4.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		10	5.0	ug/L	1
Cyclohexane	110-82-7	8260B	ND		10	4.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		10	4.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		10	4.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		10	4.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		10	4.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		10	4.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		10	4.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		20	6.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		10	4.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		10	4.0	ug/L	1

TOC Range: 1.18 - 1.29

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: DUP-01
Date Sampled: 03/26/2019
Date Received: 03/26/2019

Laboratory ID: UC26062-005
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	10	03/31/2019 1857	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		10	4.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	1900		10	4.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	6.4	J	10	4.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		10	4.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		10	4.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		10	4.0	ug/L	1
Ethylbenzene	100-41-4	8260B	79		10	4.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		100	20	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		10	4.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		10	4.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		10	4.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		100	20	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		50	4.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		10	4.0	ug/L	1
Styrene	100-42-5	8260B	ND		10	4.1	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		10	4.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	4.3	J	10	4.0	ug/L	1
Toluene	108-88-3	8260B	ND		10	4.0	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		10	4.2	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		10	4.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		10	4.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		10	4.0	ug/L	1
Trichloroethene	79-01-6	8260B	5.6	J	10	4.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		10	4.0	ug/L	1
Vinyl chloride	75-01-4	8260B	57		10	4.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	470		10	4.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		106	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		102	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	03/27/2019 1804	ECB		11423

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: DUP-01
Date Sampled: 03/26/2019
Date Received: 03/26/2019

Laboratory ID: UC26062-005
Matrix: Aqueous

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		97	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/02/2019 1449	JJG		12018

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	8.1	J	10	2.5	ug/L	1
Methane	74-82-8	RSK - 175	180		10	2.5	ug/L	1
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: MW-7
Date Sampled: 03/26/2019 1135
Date Received: 03/26/2019

Laboratory ID: UC26062-006
Matrix: Aqueous

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/28/2019 0457	KFE		11603
1		(Chloride) 9056A	1	03/27/2019 1132	SLU		11460
1		(Nitrate - N) 9056A	1	03/27/2019 1132	SLU		11461
1		(Sulfate) 9056A	1	03/27/2019 1132	SLU		11463
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 0909	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	46		20	20	mg/L	1
Chloride		9056A	5.3		1.0	0.20	mg/L	1
Nitrate - N		9056A	0.056		0.020	0.0050	mg/L	1
Sulfate		9056A	1.3		1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		9060A	4.5		1.0	0.42	mg/L	1

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	03/31/2019 1919	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		100	10	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	2.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	2.0	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	2.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		10	2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	2.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	2.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	2.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		10	2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	2.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	2.5	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	2.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	2.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	2.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	2.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	2.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		10	3.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	2.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	2.0	ug/L	1

TOC Range: 4.44 - 4.625

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: MW-7
Date Sampled: 03/26/2019 1135
Date Received: 03/26/2019

Laboratory ID: UC26062-006
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	03/31/2019 1919	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	2.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	440		5.0	2.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	2.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	2.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	2.0	ug/L	1
Ethylbenzene	100-41-4	8260B	79		5.0	2.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	2.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	2.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	2.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		25	2.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	2.0	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	2.1	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	2.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	2.0	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	2.0	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	2.1	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	2.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	2.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	2.0	ug/L	1
Trichloroethene	79-01-6	8260B	ND		5.0	2.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	2.0	ug/L	1
Vinyl chloride	75-01-4	8260B	200		5.0	2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	210		5.0	2.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		100	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	03/27/2019 1828	ECB		11423

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Client: EarthCon Consultants, Inc.
Laboratory ID: UC26062-006
Description: MW-7
Matrix: Aqueous
Date Sampled: 03/26/2019 1135
Date Received: 03/26/2019

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/04/2019 1831	JJG		12263

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	4.7	J	10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	17		10	2.5	ug/L	1
Methane	74-82-8	RSK - 175	120		10	2.5	ug/L	1
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
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W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: TRIP BLANK 01
Date Sampled: 03/26/2019
Date Received: 03/26/2019

Laboratory ID: UC26062-007
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1814	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	3.4	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: TRIP BLANK 01
Date Sampled: 03/26/2019
Date Received: 03/26/2019

Laboratory ID: UC26062-007
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 1814	JJG		11791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		92	70-130
Toluene-d8		101	70-130

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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QC Summary

Inorganic non-metals - MB

Sample ID: UQ11460-001
Batch: 11460
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Chloride	ND		1	1.0	0.20	mg/L	03/27/2019 0804

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - LCS

Sample ID: UQ11460-002
Batch: 11460
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Chloride	20	20		1	102	80-120	03/27/2019 0856

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MB

Sample ID: UQ11461-001
Batch: 11461
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Nitrate - N	ND		1	0.020	0.0050	mg/L	03/27/2019 0804

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - LCS

Sample ID: UQ11461-002
Batch: 11461
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Nitrate - N	0.80	0.79		1	99	80-120	03/27/2019 0856

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MB

Sample ID: UQ11463-001
Batch: 11463
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Sulfate	ND		1	1.0	0.20	mg/L	03/27/2019 0804

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - LCS

Sample ID: UQ11463-002
Batch: 11463
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Sulfate	20	20		1	101	80-120	03/27/2019 0856

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MB

Sample ID: UQ11603-001
Batch: 11603
Analytical Method: SM 2320B-2011

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Alkalinity	ND		1	20	20	mg/L	03/28/2019 0349

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - LCS

Sample ID: UQ11603-002
Batch: 11603
Analytical Method: SM 2320B-2011

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Alkalinity	100	110		1	107	90-110	03/28/2019 0355

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MB

Sample ID: UQ11671-001
Batch: 11671
Analytical Method: 9060A

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
TOC	ND		1	1.0	0.42	mg/L	03/29/2019 2240

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - LCS

Sample ID: UQ11671-002
Batch: 11671
Analytical Method: 9060A

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TOC	20	20		1	99	90-110	03/29/2019 2312

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MS

Sample ID: UC26062-002MS
Batch: 11671
Analytical Method: 9060A

Matrix: Aqueous

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TOC	ND	20	20		1	100	70-130	03/30/2019 0623

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MSD

Sample ID: UC26062-002MD
Batch: 11671
Analytical Method: 9060A
Matrix: Aqueous

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
TOC	ND	20	20		1	100	0.40	70-130	20	03/30/2019 0656

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MB

Sample ID: UQ12039-001
Batch: 12039
Analytical Method: SM 4500-S2 F-2011

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Sulfide	ND		1	1.0	1.0	mg/L	04/02/2019 1446

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - LCS

Sample ID: UQ12039-002
Batch: 12039
Analytical Method: SM 4500-S2 F-2011

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Sulfide	10	9.3		1	93	80-120	04/02/2019 1446

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - LCSD

Sample ID: UQ12039-003
Batch: 12039
Analytical Method: SM 4500-S2 F-2011

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Sulfide	10	9.8		1	98	5.2	80-120	20	04/02/2019 1446

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS (SIM with isotope dilution) - MB

Sample ID: UQ11423-001
Batch: 11423
Analytical Method: 8260B (SIM iso.)

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
1,4-Dioxane	ND		1	3.0	1.0	ug/L	03/27/2019 1230

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		100	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS (SIM with isotope dilution) - LCS

Sample ID: UQ11423-002
Batch: 11423
Analytical Method: 8260B (SIM iso.)

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,4-Dioxane	50	57		1	113	70-130	03/27/2019 1124

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		97	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ11791-001
Batch: 11791
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	03/31/2019 1217
Benzene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Bromodichloromethane	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Bromoform	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Bromomethane (Methyl bromide)	ND		1	2.0	0.40	ug/L	03/31/2019 1217
2-Butanone (MEK)	ND		1	10	2.0	ug/L	03/31/2019 1217
Carbon disulfide	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Carbon tetrachloride	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Chlorobenzene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Chloroethane	ND		1	2.0	0.40	ug/L	03/31/2019 1217
Chloroform	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Chloromethane (Methyl chloride)	ND		1	1.0	0.50	ug/L	03/31/2019 1217
Cyclohexane	ND		1	1.0	0.40	ug/L	03/31/2019 1217
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Dibromochloromethane	ND		1	1.0	0.40	ug/L	03/31/2019 1217
1,2-Dibromoethane (EDB)	ND		1	1.0	0.40	ug/L	03/31/2019 1217
1,2-Dichlorobenzene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
1,3-Dichlorobenzene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
1,4-Dichlorobenzene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Dichlorodifluoromethane	ND		1	2.0	0.60	ug/L	03/31/2019 1217
1,1-Dichloroethane	ND		1	1.0	0.40	ug/L	03/31/2019 1217
1,2-Dichloroethane	ND		1	1.0	0.40	ug/L	03/31/2019 1217
1,1-Dichloroethene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
cis-1,2-Dichloroethene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
trans-1,2-Dichloroethene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
1,2-Dichloropropane	ND		1	1.0	0.40	ug/L	03/31/2019 1217
cis-1,3-Dichloropropene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
trans-1,3-Dichloropropene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Ethylbenzene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
2-Hexanone	ND		1	10	2.0	ug/L	03/31/2019 1217
Isopropylbenzene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Methyl acetate	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	0.40	ug/L	03/31/2019 1217
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	03/31/2019 1217
Methylcyclohexane	ND		1	5.0	0.40	ug/L	03/31/2019 1217
Methylene chloride	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Styrene	ND		1	1.0	0.41	ug/L	03/31/2019 1217
1,1,2,2-Tetrachloroethane	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Tetrachloroethene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Toluene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	1.0	0.42	ug/L	03/31/2019 1217
1,2,4-Trichlorobenzene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
1,1,1-Trichloroethane	ND		1	1.0	0.40	ug/L	03/31/2019 1217
1,1,2-Trichloroethane	ND		1	1.0	0.40	ug/L	03/31/2019 1217

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
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Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ11791-001
Batch: 11791
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Trichloroethene	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Trichlorofluoromethane	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Vinyl chloride	ND		1	1.0	0.40	ug/L	03/31/2019 1217
Xylenes (total)	ND		1	1.0	0.40	ug/L	03/31/2019 1217

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		101	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
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N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ11791-002
Batch: 11791
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	91		1	91	60-140	03/31/2019 1116
Benzene	50	54		1	108	70-130	03/31/2019 1116
Bromodichloromethane	50	54		1	109	70-130	03/31/2019 1116
Bromoform	50	43		1	86	70-130	03/31/2019 1116
Bromomethane (Methyl bromide)	50	44		1	88	70-130	03/31/2019 1116
2-Butanone (MEK)	100	98		1	98	70-130	03/31/2019 1116
Carbon disulfide	50	55		1	109	70-130	03/31/2019 1116
Carbon tetrachloride	50	56		1	112	70-130	03/31/2019 1116
Chlorobenzene	50	51		1	103	70-130	03/31/2019 1116
Chloroethane	50	39		1	79	70-130	03/31/2019 1116
Chloroform	50	52		1	104	70-130	03/31/2019 1116
Chloromethane (Methyl chloride)	50	47		1	93	60-140	03/31/2019 1116
Cyclohexane	50	61		1	122	70-130	03/31/2019 1116
1,2-Dibromo-3-chloropropane (DBCP)	50	55		1	110	70-130	03/31/2019 1116
Dibromochloromethane	50	55		1	109	70-130	03/31/2019 1116
1,2-Dibromoethane (EDB)	50	57		1	115	70-130	03/31/2019 1116
1,2-Dichlorobenzene	50	51		1	102	70-130	03/31/2019 1116
1,3-Dichlorobenzene	50	51		1	101	70-130	03/31/2019 1116
1,4-Dichlorobenzene	50	51		1	101	70-130	03/31/2019 1116
Dichlorodifluoromethane	50	50		1	100	60-140	03/31/2019 1116
1,1-Dichloroethane	50	54		1	108	70-130	03/31/2019 1116
1,2-Dichloroethane	50	59		1	118	70-130	03/31/2019 1116
1,1-Dichloroethene	50	57		1	114	70-130	03/31/2019 1116
cis-1,2-Dichloroethene	50	54		1	107	70-130	03/31/2019 1116
trans-1,2-Dichloroethene	50	55		1	111	70-130	03/31/2019 1116
1,2-Dichloropropane	50	55		1	110	70-130	03/31/2019 1116
cis-1,3-Dichloropropene	50	57		1	113	70-130	03/31/2019 1116
trans-1,3-Dichloropropene	50	56		1	112	70-130	03/31/2019 1116
Ethylbenzene	50	52		1	105	70-130	03/31/2019 1116
2-Hexanone	100	97		1	97	70-130	03/31/2019 1116
Isopropylbenzene	50	52		1	103	70-130	03/31/2019 1116
Methyl acetate	50	60		1	120	70-130	03/31/2019 1116
Methyl tertiary butyl ether (MTBE)	50	58		1	115	70-130	03/31/2019 1116
4-Methyl-2-pentanone	100	100		1	104	70-130	03/31/2019 1116
Methylcyclohexane	50	58		1	117	70-130	03/31/2019 1116
Methylene chloride	50	52		1	105	70-130	03/31/2019 1116
Styrene	50	52		1	103	70-130	03/31/2019 1116
1,1,2,2-Tetrachloroethane	50	54		1	108	70-130	03/31/2019 1116
Tetrachloroethene	50	50		1	99	70-130	03/31/2019 1116
Toluene	50	55		1	109	70-130	03/31/2019 1116
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	57		1	114	70-130	03/31/2019 1116
1,2,4-Trichlorobenzene	50	47		1	93	70-130	03/31/2019 1116
1,1,1-Trichloroethane	50	56		1	112	70-130	03/31/2019 1116
1,1,2-Trichloroethane	50	56		1	112	70-130	03/31/2019 1116

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ11791-002
Batch: 11791
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	56		1	111	70-130	03/31/2019 1116
Trichlorofluoromethane	50	46		1	92	70-130	03/31/2019 1116
Vinyl chloride	50	38		1	76	70-130	03/31/2019 1116
Xylenes (total)	100	100		1	104	70-130	03/31/2019 1116

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		98	70-130
Toluene-d8		102	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MS

Sample ID: UC26062-001MS
Batch: 11791
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	ND	1000	950		10	95	60-140	03/31/2019 1940
Benzene	ND	500	560		10	112	70-130	03/31/2019 1940
Bromodichloromethane	ND	500	560		10	111	70-130	03/31/2019 1940
Bromoform	ND	500	440		10	88	70-130	03/31/2019 1940
Bromomethane (Methyl bromide)	ND	500	550		10	110	70-130	03/31/2019 1940
2-Butanone (MEK)	ND	1000	1100		10	113	70-130	03/31/2019 1940
Carbon disulfide	ND	500	530		10	106	70-130	03/31/2019 1940
Carbon tetrachloride	ND	500	560		10	113	70-130	03/31/2019 1940
Chlorobenzene	ND	500	530		10	106	70-130	03/31/2019 1940
Chloroethane	ND	500	470		10	94	70-130	03/31/2019 1940
Chloroform	ND	500	530		10	107	70-130	03/31/2019 1940
Chloromethane (Methyl chloride)	ND	500	590		10	119	60-140	03/31/2019 1940
Cyclohexane	ND	500	610		10	121	70-130	03/31/2019 1940
1,2-Dibromo-3-chloropropane (DBCP)	ND	500	460		10	93	70-130	03/31/2019 1940
Dibromochloromethane	ND	500	560		10	111	70-130	03/31/2019 1940
1,2-Dibromoethane (EDB)	ND	500	590		10	117	70-130	03/31/2019 1940
1,2-Dichlorobenzene	ND	500	500		10	101	70-130	03/31/2019 1940
1,3-Dichlorobenzene	ND	500	510		10	103	70-130	03/31/2019 1940
1,4-Dichlorobenzene	ND	500	510		10	102	70-130	03/31/2019 1940
Dichlorodifluoromethane	ND	500	630		10	126	60-140	03/31/2019 1940
1,1-Dichloroethane	ND	500	550		10	111	70-130	03/31/2019 1940
1,2-Dichloroethane	ND	500	610		10	121	70-130	03/31/2019 1940
1,1-Dichloroethene	ND	500	590		10	117	70-130	03/31/2019 1940
cis-1,2-Dichloroethene	1400	500	1800		10	81	70-130	03/31/2019 1940
trans-1,2-Dichloroethene	4.8	500	570		10	113	70-130	03/31/2019 1940
1,2-Dichloropropane	ND	500	560		10	111	70-130	03/31/2019 1940
cis-1,3-Dichloropropene	ND	500	570		10	115	70-130	03/31/2019 1940
trans-1,3-Dichloropropene	ND	500	560		10	113	70-130	03/31/2019 1940
Ethylbenzene	32	500	570		10	108	70-130	03/31/2019 1940
2-Hexanone	ND	1000	1100		10	110	70-130	03/31/2019 1940
Isopropylbenzene	ND	500	510		10	103	70-130	03/31/2019 1940
Methyl acetate	ND	500	580		10	116	70-130	03/31/2019 1940
Methyl tertiary butyl ether (MTBE)	ND	500	560		10	112	70-130	03/31/2019 1940
4-Methyl-2-pentanone	ND	1000	1100		10	109	70-130	03/31/2019 1940
Methylcyclohexane	ND	500	590		10	117	70-130	03/31/2019 1940
Methylene chloride	ND	500	550		10	110	70-130	03/31/2019 1940
Styrene	ND	500	530		10	107	70-130	03/31/2019 1940
1,1,2,2-Tetrachloroethane	ND	500	560		10	112	70-130	03/31/2019 1940
Tetrachloroethene	4.9	500	500		10	99	70-130	03/31/2019 1940
Toluene	ND	500	560		10	113	70-130	03/31/2019 1940
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	500	570		10	115	70-130	03/31/2019 1940
1,2,4-Trichlorobenzene	ND	500	390		10	77	70-130	03/31/2019 1940
1,1,1-Trichloroethane	ND	500	560		10	111	70-130	03/31/2019 1940
1,1,2-Trichloroethane	ND	500	590		10	118	70-130	03/31/2019 1940

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MS

Sample ID: UC26062-001MS
Batch: 11791
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	6.3	500	560		10	111	70-130	03/31/2019 1940
Trichlorofluoromethane	ND	500	550		10	110	70-130	03/31/2019 1940
Vinyl chloride	33	500	510		10	95	70-130	03/31/2019 1940
Xylenes (total)	200	1000	1300		10	105	70-130	03/31/2019 1940

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		98	70-130
Toluene-d8		102	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MSD

Sample ID: UC26062-001MD
Batch: 11791
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	ND	1000	1000		10	104	8.7	60-140	20	03/31/2019 2002
Benzene	ND	500	550		10	110	1.1	70-130	20	03/31/2019 2002
Bromodichloromethane	ND	500	550		10	110	0.89	70-130	20	03/31/2019 2002
Bromoform	ND	500	430		10	86	1.6	70-130	20	03/31/2019 2002
Bromomethane (Methyl bromide)	ND	500	540		10	109	0.61	70-130	20	03/31/2019 2002
2-Butanone (MEK)	ND	1000	1200		10	119	4.7	70-130	20	03/31/2019 2002
Carbon disulfide	ND	500	540		10	107	0.94	70-130	20	03/31/2019 2002
Carbon tetrachloride	ND	500	580		10	115	2.2	70-130	20	03/31/2019 2002
Chlorobenzene	ND	500	520		10	105	0.96	70-130	20	03/31/2019 2002
Chloroethane	ND	500	470		10	94	0.071	70-130	20	03/31/2019 2002
Chloroform	ND	500	540		10	108	0.89	70-130	20	03/31/2019 2002
Chloromethane (Methyl chloride)	ND	500	600		10	120	1.2	60-140	20	03/31/2019 2002
Cyclohexane	ND	500	610		10	122	0.51	70-130	20	03/31/2019 2002
1,2-Dibromo-3-chloropropane (DBCP)	ND	500	490		10	97	4.7	70-130	20	03/31/2019 2002
Dibromochloromethane	ND	500	560		10	111	0.046	70-130	20	03/31/2019 2002
1,2-Dibromoethane (EDB)	ND	500	580		10	116	0.78	70-130	20	03/31/2019 2002
1,2-Dichlorobenzene	ND	500	490		10	99	2.1	70-130	20	03/31/2019 2002
1,3-Dichlorobenzene	ND	500	510		10	101	1.9	70-130	20	03/31/2019 2002
1,4-Dichlorobenzene	ND	500	500		10	101	1.5	70-130	20	03/31/2019 2002
Dichlorodifluoromethane	ND	500	630		10	125	0.46	60-140	20	03/31/2019 2002
1,1-Dichloroethane	ND	500	560		10	112	0.72	70-130	20	03/31/2019 2002
1,2-Dichloroethane	ND	500	610		10	122	0.35	70-130	20	03/31/2019 2002
1,1-Dichloroethene	ND	500	580		10	116	0.84	70-130	20	03/31/2019 2002
cis-1,2-Dichloroethene	1400	500	1800		10	87	1.7	70-130	20	03/31/2019 2002
trans-1,2-Dichloroethene	4.8	500	570		10	113	0.15	70-130	20	03/31/2019 2002
1,2-Dichloropropane	ND	500	550		10	110	1.3	70-130	20	03/31/2019 2002
cis-1,3-Dichloropropene	ND	500	560		10	113	1.5	70-130	20	03/31/2019 2002
trans-1,3-Dichloropropene	ND	500	560		10	112	0.82	70-130	20	03/31/2019 2002
Ethylbenzene	32	500	560		10	106	2.3	70-130	20	03/31/2019 2002
2-Hexanone	ND	1000	1100		10	106	4.1	70-130	20	03/31/2019 2002
Isopropylbenzene	ND	500	510		10	102	0.52	70-130	20	03/31/2019 2002
Methyl acetate	ND	500	630		10	126	7.8	70-130	20	03/31/2019 2002
Methyl tertiary butyl ether (MTBE)	ND	500	580		10	116	3.6	70-130	20	03/31/2019 2002
4-Methyl-2-pentanone	ND	1000	1100		10	105	3.2	70-130	20	03/31/2019 2002
Methylcyclohexane	ND	500	580		10	116	1.4	70-130	20	03/31/2019 2002
Methylene chloride	ND	500	550		10	110	0.44	70-130	20	03/31/2019 2002
Styrene	ND	500	530		10	105	1.1	70-130	20	03/31/2019 2002
1,1,2,2-Tetrachloroethane	ND	500	570		10	113	1.1	70-130	20	03/31/2019 2002
Tetrachloroethene	4.9	500	500		10	98	1.2	70-130	20	03/31/2019 2002
Toluene	ND	500	560		10	112	0.70	70-130	20	03/31/2019 2002
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	500	570		10	115	0.011	70-130	20	03/31/2019 2002
1,2,4-Trichlorobenzene	ND	500	390		10	77	0.11	70-130	20	03/31/2019 2002
1,1,1-Trichloroethane	ND	500	560		10	113	1.3	70-130	20	03/31/2019 2002
1,1,2-Trichloroethane	ND	500	580		10	116	2.1	70-130	20	03/31/2019 2002

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.
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Volatile Organic Compounds by GC/MS - MSD

Sample ID: UC26062-001MD
Batch: 11791
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	6.3	500	560		10	111	0.19	70-130	20	03/31/2019 2002
Trichlorofluoromethane	ND	500	560		10	112	1.7	70-130	20	03/31/2019 2002
Vinyl chloride	33	500	510		10	96	0.61	70-130	20	03/31/2019 2002
Xylenes (total)	200	1000	1200		10	104	1.1	70-130	20	03/31/2019 2002

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		97	70-130
Toluene-d8		103	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Dissolved Gases - MB

Sample ID: UQ12018-001
Batch: 12018
Analytical Method: RSK - 175

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Ethane	ND		1	10	2.5	ug/L	04/02/2019 1033
Ethene	ND		1	10	2.5	ug/L	04/02/2019 1033
Methane	ND		1	10	2.5	ug/L	04/02/2019 1033
Propane	ND		1	15	5.0	ug/L	04/02/2019 1033

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Dissolved Gases - LCS

Sample ID: UQ12018-002
Batch: 12018
Analytical Method: RSK - 175

Matrix: Aqueous

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Ethane	280	320		1	113	70-130	04/02/2019 1002
Ethene	260	280		1	107	70-130	04/02/2019 1002
Methane	150	170		1	111	70-130	04/02/2019 1002
Propane	420	480		1	116	70-130	04/02/2019 1002

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Dissolved Gases - LCSD

Sample ID: UQ12018-003
Batch: 12018
Analytical Method: RSK - 175

Matrix: Aqueous

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Ethane	280	320		1	113	0.43	70-130	30	04/02/2019 1014
Ethene	260	290		1	109	2.6	70-130	30	04/02/2019 1014
Methane	150	170		1	110	1.0	70-130	30	04/02/2019 1014
Propane	420	480		1	115	1.2	70-130	30	04/02/2019 1014

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Dissolved Gases - MB

Sample ID: UQ12263-001
Batch: 12263
Analytical Method: RSK - 175

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Ethane	ND		1	10	2.5	ug/L	04/04/2019 1450
Ethene	ND		1	10	2.5	ug/L	04/04/2019 1450
Methane	ND		1	10	2.5	ug/L	04/04/2019 1450
Propane	ND		1	15	5.0	ug/L	04/04/2019 1450

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Dissolved Gases - LCS

Sample ID: UQ12263-002
Batch: 12263
Analytical Method: RSK - 175

Matrix: Aqueous

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Ethane	550	620		1	112	70-130	04/04/2019 1313
Ethene	520	550		1	107	70-130	04/04/2019 1313
Methane	300	330		1	111	70-130	04/04/2019 1313
Propane	810	900		1	110	70-130	04/04/2019 1313

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Dissolved Gases - LCSD

Sample ID: UQ12263-003
Batch: 12263
Analytical Method: RSK - 175

Matrix: Aqueous

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Ethane	550	620		1	112	0.77	70-130	30	04/04/2019 1326
Ethene	520	560		1	108	0.97	70-130	30	04/04/2019 1326
Methane	300	330		1	111	0.28	70-130	30	04/04/2019 1326
Propane	810	900		1	111	0.93	70-130	30	04/04/2019 1326

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.
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Chain of Custody

and

Miscellaneous Documents

SHEALY ENVIRONMENTAL SERVICES, INC.
106 Vantage Point Drive • West Columbia, SC 29172
Telephone No. 803-791-9700 Fax No. 803-791-9111
www.shealylab.com

SHEALY Chain of Custody Record

Number 91447

Client: EARTHCON	Report to Contact: Carol Northern	Telephone No. / E-mail: 770-913-2100 CNORTHERN@EARTHCON.COM	Quote No.
Address: 1800 WEST OAK PKWY	Sampler's Signature: x Tiffany Messier	Analysis (Attach list if more space is needed)	Page ___ of ___
City: Marietta	State: GA	Zip Code: 30067	Printed Name: Tiffany Messier
Project Name: Lennox International			UC26062 LJO
Project No.: 02,20160378	P.O. No.		Remarks / Cooler I.D.

Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	Grab / Composite	Matrix: Aqueous	Matrix: Solid	Matrix: Non-Aqueous	No of Containers by Preservative Type: Unpres.	HNO3	H2SO4	HCl	NaOH	ZnOAc NaOH	VOC	1,4-Dioxane	Diss. Gases	TDC	NO3/SO4/Cl/Alk	Sulfide
MW-1	3/26/17							1		7	1		/	/	/	/	/	/
MW-1D								1		7	1		/	/	/	/	/	/
MW-2								1		7	1		/	/	/	/	/	/
MW-2D								1		7	1		/	/	/	/	/	/
DUP-01								1		7	1		/	/	/	/	/	/
MW-7	3/26/17							1		7	1		/	/	/	/	/	/
Trip blank 07	3/26/17									2			X					

Turn Around Time Required (Prior lab approval required for expedited TAT.): X Standard ☐ Rush (Specify)

Sample Disposal: ☐ Return to Client ☐ Disposal by Lab

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison ☐ Unknown

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished by: Tiffany Messier	3/26/17	1620	1. Received by		
2. Relinquished by	Date	Time	2. Received by	Date	Time
3. Relinquished by	Date	Time	3. Received by	Date	Time
4. Relinquished by	Date	Time	4. Laboratory received by: Wendy Cole	Date: 3/26/17	Time: 1620

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on ice (Circle) (Yes) No Ice Pack Receipt Temp. 2.2 °C

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: F-AD-133 Effective Date: 08-01-2014

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Receipt Checklist (SRC)

Client: EARTHCON Cooler Inspected by/date: MEC / 03-26-2019 Lot #: UC26062--

Means of receipt: ☐ SESI ☑ Client ☐ UPS ☐ FedEx ☐ Other:			
☐ Yes	☑ No		1. Were custody seals present on the cooler?
☐ Yes	☐ No	☑ NA	2. If custody seals were present, were they intact and unbroken?

pH Strip ID: 18-2225 Chlorine Strip ID: 19-152 Tested by: LKH
Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: LKH
2.2 /2.2 °C NA /NA °C NA /NA °C NA /NA °C
Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: 5 IR Gun Correction Factor: 0 °C
Method of coolant: ☑ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None

☐ Yes	☐ No	☑ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☐ Yes	☐ No	☑ NA	4. Is the commercial courier's packing slip attached to this form?
☑ Yes	☐ No		5. Were proper custody procedures (relinquished/received) followed?
☑ Yes	☐ No		6. Were sample IDs listed on the COC?
☑ Yes	☐ No		7. Were sample IDs listed on all sample containers?
☐ Yes	☑ No		8. Was collection date & time listed on the COC? NO COLLECTION TIMES
☐ Yes	☑ No		9. Was collection date & time listed on all sample containers? NOT ALL
☑ Yes	☐ No		10. Did all container label information (ID, date, time) agree with the COC?
☑ Yes	☐ No		11. Were tests to be performed listed on the COC?
☑ Yes	☐ No		12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
☑ Yes	☐ No		13. Was adequate sample volume available?
☑ Yes	☐ No		14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☐ Yes	☑ No		15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
☐ Yes	☑ No	☐ NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼"or 6mm in diameter) in any of the VOA vials?
☑ Yes	☐ No	☐ NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
☑ Yes	☐ No	☐ NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☑ Yes	☐ No	☐ NA	19. Were all applicable NH_3/TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes	☐ No	☑ NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS?
☐ Yes	☑ No		21. Was the quote number listed on the container label? If yes, Quote #

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H2SO4, HNO3, HCl, NaOH using SR # NA.
Time of preservation NA. If more than one preservative is needed, please note in the comments below.

Sample(s) NA were received with bubbles >6 mm in diameter.

Samples(s) NA were received with TRC > 0.5 mg/L (If #19 is *no*) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_3$) with Shealy ID: NA.

SR barcode labels applied by: LKH Date: 03-26-2019

Comments:

SHEALY ENVIRONMENTAL SERVICES, INC.

Report of Analysis

EarthCon Consultants, Inc.
1880 West Oak Parkway
Building 100, Suite 106
Marietta, GA 30062
Attention: Carol Northern

Project Name: Lennox International

Lot Number:**UC27069**

Date Completed:04/05/2019

04/08/2019 2:13 PM
Approved and released by:
Lab Director - Greenville: Lucas Odom

The electronic signature above is the equivalent of a handwritten signature.
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Shealy Environmental Services, Inc.
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Case Narrative
EarthCon Consultants, Inc.
Lot Number: UC27069

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

VOCs by GC/MS

The laboratory control sample (LCS) for analytical batch 11807 exceeded acceptance criteria for Dichlorodifluoromethane. This analyte is biased high but not detected in the samples affected.

Samples in batch UQ11807 were not analyzed with a MS/MSD due to an instrument error. The LCS passed criteria, and the data has been reported.

Sulfide

Insufficient sample volume was provided to perform matrix spike/matrix spike duplicate (MS/MSD) for analytical batch 12039. An LCS/LCSD was run in lieu of an MS/MSD. A sample duplicate was performed alongside the LCS/LCSD.

Sample Summary

EarthCon Consultants, Inc.

Lot Number: UC27069

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-10	Aqueous	03/27/2019 1025	03/27/2019
002	MW-14	Aqueous	03/27/2019 0910	03/27/2019
003	MW-3	Aqueous	03/27/2019 1040	03/27/2019
004	MW-3D	Aqueous	03/27/2019 1000	03/27/2019
005	TB-01	Aqueous	03/27/2019	03/27/2019

(5 samples)

Detection Summary

EarthCon Consultants, Inc.

Lot Number: UC27069

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-10	Aqueous	Chloride	9056A	6.7		mg/L	5
001	MW-10	Aqueous	Sulfate	9056A	19		mg/L	5
001	MW-10	Aqueous	TOC	9060A	2.0		mg/L	5
001	MW-10	Aqueous	Acetone	8260B	3.5	J	ug/L	5
001	MW-10	Aqueous	Methane	RSK - 175	65		ug/L	7
002	MW-14	Aqueous	Chloride	9056A	2.0		mg/L	8
002	MW-14	Aqueous	Sulfate	9056A	16		mg/L	8
002	MW-14	Aqueous	TOC	9060A	0.81	J	mg/L	8
002	MW-14	Aqueous	Acetone	8260B	4.7	J	ug/L	8
002	MW-14	Aqueous	Methane	RSK - 175	100		ug/L	10
003	MW-3	Aqueous	Chloride	9056A	33		mg/L	11
003	MW-3	Aqueous	Sulfate	9056A	0.92	J	mg/L	11
003	MW-3	Aqueous	Sulfide	SM 4500-S2 F-	3.5		mg/L	11
003	MW-3	Aqueous	TOC	9060A	11		mg/L	11
003	MW-3	Aqueous	1,1-Dichloroethane	8260B	1100		ug/L	11
003	MW-3	Aqueous	1,1-Dichloroethene	8260B	540		ug/L	12
003	MW-3	Aqueous	cis-1,2-Dichloroethene	8260B	15000		ug/L	12
003	MW-3	Aqueous	trans-1,2-Dichloroethene	8260B	120	J	ug/L	12
003	MW-3	Aqueous	Ethylbenzene	8260B	310		ug/L	12
003	MW-3	Aqueous	Toluene	8260B	97	J	ug/L	12
003	MW-3	Aqueous	Vinyl chloride	8260B	900		ug/L	12
003	MW-3	Aqueous	Xylenes (total)	8260B	1200		ug/L	12
003	MW-3	Aqueous	1,4-Dioxane	8260B (SIM	310		ug/L	12
003	MW-3	Aqueous	Ethane	RSK - 175	18	J	ug/L	13
003	MW-3	Aqueous	Ethene	RSK - 175	76		ug/L	13
003	MW-3	Aqueous	Methane	RSK - 175	11000		ug/L	13
004	MW-3D	Aqueous	Chloride	9056A	17		mg/L	14
004	MW-3D	Aqueous	Nitrate - N	9056A	4.9		mg/L	14
004	MW-3D	Aqueous	Sulfate	9056A	2.8		mg/L	14
004	MW-3D	Aqueous	Acetone	8260B	2.8	J	ug/L	14
004	MW-3D	Aqueous	Chloroform	8260B	0.46	J	ug/L	14
004	MW-3D	Aqueous	Methane	RSK - 175	2.9	J	ug/L	16
005	TB-01	Aqueous	Acetone	8260B	2.8	J	ug/L	17

(33 detections)

Client: EarthCon Consultants, Inc.
Description: MW-10
Date Sampled: 03/27/2019 1025
Date Received: 03/27/2019

Laboratory ID: UC27069-001
Matrix: Aqueous

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/30/2019 1412	KFE		12031
1		(Chloride) 9056A	1	03/28/2019 0947	SLU		11591
1		(Nitrate - N) 9056A	1	03/28/2019 0947	SLU		11592
1		(Sulfate) 9056A	1	03/28/2019 0947	SLU		11593
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 0943	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		9056A	6.7		1.0	0.20	mg/L	1
Nitrate - N		9056A	ND		0.020	0.0050	mg/L	1
Sulfate		9056A	19		1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		9060A	2.0		1.0	0.42	mg/L	1

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/01/2019 0300	KGT		11807

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	3.5	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1

TOC Range: 1.975 - 2.077

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
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Client: EarthCon Consultants, Inc.
Description: MW-10
Date Sampled: 03/27/2019 1025
Date Received: 03/27/2019

Laboratory ID: UC27069-001
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/01/2019 0300	KGT		11807

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		104	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		104	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	04/01/2019 1235	JJG		11870

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
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Client: EarthCon Consultants, Inc.
Laboratory ID: UC27069-001
Description: MW-10
Matrix: Aqueous
Date Sampled: 03/27/2019 1025
Date Received: 03/27/2019

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/04/2019 1607	JJG		12263

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	74-82-8	RSK - 175	65		10	2.5	ug/L	1
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
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Client: EarthCon Consultants, Inc.
Description: MW-14
Date Sampled: 03/27/2019 0910
Date Received: 03/27/2019

Laboratory ID: UC27069-002
Matrix: Aqueous

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/30/2019 1421	KFE		12031
1		(Chloride) 9056A	1	03/28/2019 1013	SLU		11591
1		(Nitrate - N) 9056A	1	03/28/2019 1013	SLU		11592
1		(Sulfate) 9056A	1	03/28/2019 1013	SLU		11593
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 1016	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		9056A	2.0		1.0	0.20	mg/L	1
Nitrate - N		9056A	ND		0.020	0.0050	mg/L	1
Sulfate		9056A	16		1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		9060A	0.81	J	1.0	0.42	mg/L	1

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/01/2019 0321	KGT		11807

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	4.7	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1

TOC Range: 0.761 - 0.873

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Client: EarthCon Consultants, Inc.
Description: MW-14
Date Sampled: 03/27/2019 0910
Date Received: 03/27/2019

Laboratory ID: UC27069-002
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/01/2019 0321	KGT		11807

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		104	70-130
Bromofluorobenzene		94	70-130
Toluene-d8		102	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	04/01/2019 1259	JJG		11870

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
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Client: EarthCon Consultants, Inc.
Laboratory ID: UC27069-002
Description: MW-14
Matrix: Aqueous
Date Sampled: 03/27/2019 0910
Date Received: 03/27/2019

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/04/2019 1623	JJG		12263

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	74-82-8	RSK - 175	100		10	2.5	ug/L	1
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: MW-3
Date Sampled: 03/27/2019 1040
Date Received: 03/27/2019

Laboratory ID: UC27069-003
Matrix: Aqueous

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/30/2019 1424	KFE		12031
1		(Chloride) 9056A	1	03/28/2019 1039	SLU		11591
1		(Nitrate - N) 9056A	1	03/28/2019 1039	SLU		11592
1		(Sulfate) 9056A	1	03/28/2019 1039	SLU		11593
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 1154	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		9056A	33		1.0	0.20	mg/L	1
Nitrate - N		9056A	ND		0.020	0.0050	mg/L	1
Sulfate		9056A	0.92	J	1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2 F-	3.5		1.0	1.0	mg/L	1
TOC		9060A	11		1.0	0.42	mg/L	1

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	200	04/01/2019 0510	KGT		11807

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		4000	400	ug/L	1
Benzene	71-43-2	8260B	ND		200	80	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		200	80	ug/L	1
Bromoform	75-25-2	8260B	ND		200	80	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		400	80	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		2000	400	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		200	80	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		200	80	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		200	80	ug/L	1
Chloroethane	75-00-3	8260B	ND		400	80	ug/L	1
Chloroform	67-66-3	8260B	ND		200	80	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		200	100	ug/L	1
Cyclohexane	110-82-7	8260B	ND		200	80	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		200	80	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		200	80	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		200	80	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		200	80	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		200	80	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		200	80	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		400	120	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	1100		200	80	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		200	80	ug/L	1

TOC Range: 11.005 - 11.627

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Client: EarthCon Consultants, Inc.
Description: MW-3
Date Sampled: 03/27/2019 1040
Date Received: 03/27/2019

Laboratory ID: UC27069-003
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	200	04/01/2019 0510	KGT		11807

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	540		200	80	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	15000		200	80	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	120	J	200	80	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		200	80	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		200	80	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		200	80	ug/L	1
Ethylbenzene	100-41-4	8260B	310		200	80	ug/L	1
2-Hexanone	591-78-6	8260B	ND		2000	400	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		200	80	ug/L	1
Methyl acetate	79-20-9	8260B	ND		200	80	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		200	80	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		2000	400	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		1000	80	ug/L	1
Methylene chloride	75-09-2	8260B	ND		200	80	ug/L	1
Styrene	100-42-5	8260B	ND		200	82	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		200	80	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		200	80	ug/L	1
Toluene	108-88-3	8260B	97	J	200	80	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		200	84	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		200	80	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		200	80	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		200	80	ug/L	1
Trichloroethene	79-01-6	8260B	ND		200	80	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		200	80	ug/L	1
Vinyl chloride	75-01-4	8260B	900		200	80	ug/L	1
Xylenes (total)	1330-20-7	8260B	1200		200	80	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		102	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	5	04/01/2019 1955	JJG		11870

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	310		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Laboratory ID: UC27069-003
Description: MW-3
Matrix: Aqueous
Date Sampled: 03/27/2019 1040
Date Received: 03/27/2019

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		98	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	5	04/04/2019 1639	JJG		12263

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	18	J	50	13	ug/L	1
Ethene	74-85-1	RSK - 175	76		50	13	ug/L	1
Methane	74-82-8	RSK - 175	11000		50	13	ug/L	1
Propane	74-98-6	RSK - 175	ND		75	25	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: MW-3D
Date Sampled: 03/27/2019 1000
Date Received: 03/27/2019

Laboratory ID: UC27069-004
Matrix: Aqueous

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/30/2019 1427	KFE		12031
1		(Chloride) 9056A	1	03/28/2019 1105	SLU		11591
1		(Nitrate - N) 9056A	1	03/28/2019 1105	SLU		11592
1		(Sulfate) 9056A	1	03/28/2019 1105	SLU		11593
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 1228	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		9056A	17		1.0	0.20	mg/L	1
Nitrate - N		9056A	4.9		0.020	0.0050	mg/L	1
Sulfate		9056A	2.8		1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		9060A	ND		1.0	0.42	mg/L	1

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/01/2019 0343	KGT		11807

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	2.8	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	0.46	J	1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1

TOC Range: 0.127 - 0.242

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: MW-3D
Date Sampled: 03/27/2019 1000
Date Received: 03/27/2019

Laboratory ID: UC27069-004
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/01/2019 0343	KGT		11807

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		107	70-130
Bromofluorobenzene		95	70-130
Toluene-d8		105	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	04/01/2019 1324	JJG		11870

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
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E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Laboratory ID: UC27069-004
Description: MW-3D
Matrix: Aqueous
Date Sampled: 03/27/2019 1000
Date Received: 03/27/2019

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/04/2019 1655	JJG		12263

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	74-82-8	RSK - 175	2.9	J	10	2.5	ug/L	1
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: TB-01
Date Sampled: 03/27/2019
Date Received: 03/27/2019

Laboratory ID: UC27069-005
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 2300	KGT		11807

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	2.8	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: TB-01
Date Sampled: 03/27/2019
Date Received: 03/27/2019

Laboratory ID: UC27069-005
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/31/2019 2300	KGT		11807

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		105	70-130
Bromofluorobenzene		95	70-130
Toluene-d8		103	70-130

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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QC Summary

Inorganic non-metals - MB

Sample ID: UQ11591-001
Batch: 11591
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Chloride	ND		1	1.0	0.20	mg/L	03/28/2019 0829

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - LCS

Sample ID: UQ11591-002
Batch: 11591
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Chloride	20	20		1	101	80-120	03/28/2019 0921

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MB

Sample ID: UQ11592-001
Batch: 11592
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Nitrate - N	ND		1	0.020	0.0050	mg/L	03/28/2019 0829

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - LCS

Sample ID: UQ11592-002
Batch: 11592
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Nitrate - N	0.80	0.79		1	99	80-120	03/28/2019 0921

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MB

Sample ID: UQ11593-001
Batch: 11593
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Sulfate	ND		1	1.0	0.20	mg/L	03/28/2019 0829

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - LCS

Sample ID: UQ11593-002
Batch: 11593
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Sulfate	20	20		1	102	80-120	03/28/2019 0921

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MB

Sample ID: UQ11671-001
Batch: 11671
Analytical Method: 9060A

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
TOC	ND		1	1.0	0.42	mg/L	03/29/2019 2240

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - LCS

Sample ID: UQ11671-002
Batch: 11671
Analytical Method: 9060A

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TOC	20	20		1	99	90-110	03/29/2019 2312

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MB

Sample ID: UQ12031-001
Batch: 12031
Analytical Method: SM 2320B-2011

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Alkalinity	ND		1	20	20	mg/L	03/30/2019 1331

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - LCS

Sample ID: UQ12031-002
Batch: 12031
Analytical Method: SM 2320B-2011

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Alkalinity	100	110		1	107	90-110	03/30/2019 1337

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - Duplicate

Sample ID: UC27069-001DU
Batch: 12031
Analytical Method: SM 2320B-2011

Matrix: Aqueous

Parameter	Sample Amount (mg/L)	Result (mg/L)	Q	Dil	% RPD	% RPD Limit	Analysis Date
Alkalinity	ND	ND		1	0.00	20	03/30/2019 1416

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MB

Sample ID: UQ12039-001
Batch: 12039
Analytical Method: SM 4500-S2 F-2011

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Sulfide	ND		1	1.0	1.0	mg/L	04/02/2019 1446

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - LCS

Sample ID: UQ12039-002
Batch: 12039
Analytical Method: SM 4500-S2 F-2011

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Sulfide	10	9.3		1	93	80-120	04/02/2019 1446

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - LCSD

Sample ID: UQ12039-003
Batch: 12039
Analytical Method: SM 4500-S2 F-2011

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Sulfide	10	9.8		1	98	5.2	80-120	20	04/02/2019 1446

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ11807-001
Batch: 11807
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	03/31/2019 2156
Benzene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Bromodichloromethane	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Bromoform	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Bromomethane (Methyl bromide)	ND		1	2.0	0.40	ug/L	03/31/2019 2156
2-Butanone (MEK)	ND		1	10	2.0	ug/L	03/31/2019 2156
Carbon disulfide	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Carbon tetrachloride	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Chlorobenzene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Chloroethane	ND		1	2.0	0.40	ug/L	03/31/2019 2156
Chloroform	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Chloromethane (Methyl chloride)	ND		1	1.0	0.50	ug/L	03/31/2019 2156
Cyclohexane	ND		1	1.0	0.40	ug/L	03/31/2019 2156
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Dibromochloromethane	ND		1	1.0	0.40	ug/L	03/31/2019 2156
1,2-Dibromoethane (EDB)	ND		1	1.0	0.40	ug/L	03/31/2019 2156
1,2-Dichlorobenzene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
1,3-Dichlorobenzene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
1,4-Dichlorobenzene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Dichlorodifluoromethane	ND		1	2.0	0.60	ug/L	03/31/2019 2156
1,1-Dichloroethane	ND		1	1.0	0.40	ug/L	03/31/2019 2156
1,2-Dichloroethane	ND		1	1.0	0.40	ug/L	03/31/2019 2156
1,1-Dichloroethene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
cis-1,2-Dichloroethene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
trans-1,2-Dichloroethene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
1,2-Dichloropropane	ND		1	1.0	0.40	ug/L	03/31/2019 2156
cis-1,3-Dichloropropene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
trans-1,3-Dichloropropene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Ethylbenzene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
2-Hexanone	ND		1	10	2.0	ug/L	03/31/2019 2156
Isopropylbenzene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Methyl acetate	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	0.40	ug/L	03/31/2019 2156
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	03/31/2019 2156
Methylcyclohexane	ND		1	5.0	0.40	ug/L	03/31/2019 2156
Methylene chloride	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Styrene	ND		1	1.0	0.41	ug/L	03/31/2019 2156
1,1,2,2-Tetrachloroethane	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Tetrachloroethene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Toluene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	1.0	0.42	ug/L	03/31/2019 2156
1,2,4-Trichlorobenzene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
1,1,1-Trichloroethane	ND		1	1.0	0.40	ug/L	03/31/2019 2156
1,1,2-Trichloroethane	ND		1	1.0	0.40	ug/L	03/31/2019 2156

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ11807-001
Batch: 11807
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Trichloroethene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Trichlorofluoromethane	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Vinyl chloride	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Xylenes (total)	ND		1	1.0	0.40	ug/L	03/31/2019 2156

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		102	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ11807-002
Batch: 11807
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	100		1	104	60-140	03/31/2019 2112
Benzene	50	58		1	116	70-130	03/31/2019 2112
Bromodichloromethane	50	57		1	115	70-130	03/31/2019 2112
Bromoform	50	46		1	93	70-130	03/31/2019 2112
Bromomethane (Methyl bromide)	50	57		1	115	70-130	03/31/2019 2112
2-Butanone (MEK)	100	110		1	113	70-130	03/31/2019 2112
Carbon disulfide	50	56		1	112	70-130	03/31/2019 2112
Carbon tetrachloride	50	60		1	120	70-130	03/31/2019 2112
Chlorobenzene	50	55		1	110	70-130	03/31/2019 2112
Chloroethane	50	49		1	99	70-130	03/31/2019 2112
Chloroform	50	56		1	111	70-130	03/31/2019 2112
Chloromethane (Methyl chloride)	50	65		1	130	60-140	03/31/2019 2112
Cyclohexane	50	64		1	129	70-130	03/31/2019 2112
1,2-Dibromo-3-chloropropane (DBCP)	50	51		1	101	70-130	03/31/2019 2112
Dibromochloromethane	50	59		1	118	70-130	03/31/2019 2112
1,2-Dibromoethane (EDB)	50	61		1	122	70-130	03/31/2019 2112
1,2-Dichlorobenzene	50	52		1	103	70-130	03/31/2019 2112
1,3-Dichlorobenzene	50	53		1	106	70-130	03/31/2019 2112
1,4-Dichlorobenzene	50	53		1	106	70-130	03/31/2019 2112
Dichlorodifluoromethane	50	77	N	1	153	60-140	03/31/2019 2112
1,1-Dichloroethane	50	58		1	116	70-130	03/31/2019 2112
1,2-Dichloroethane	50	64		1	128	70-130	03/31/2019 2112
1,1-Dichloroethene	50	61		1	121	70-130	03/31/2019 2112
cis-1,2-Dichloroethene	50	58		1	116	70-130	03/31/2019 2112
trans-1,2-Dichloroethene	50	59		1	118	70-130	03/31/2019 2112
1,2-Dichloropropane	50	58		1	116	70-130	03/31/2019 2112
cis-1,3-Dichloropropene	50	60		1	120	70-130	03/31/2019 2112
trans-1,3-Dichloropropene	50	60		1	119	70-130	03/31/2019 2112
Ethylbenzene	50	56		1	112	70-130	03/31/2019 2112
2-Hexanone	100	110		1	107	70-130	03/31/2019 2112
Isopropylbenzene	50	54		1	107	70-130	03/31/2019 2112
Methyl acetate	50	63		1	126	70-130	03/31/2019 2112
Methyl tertiary butyl ether (MTBE)	50	60		1	120	70-130	03/31/2019 2112
4-Methyl-2-pentanone	100	110		1	108	70-130	03/31/2019 2112
Methylcyclohexane	50	63		1	126	70-130	03/31/2019 2112
Methylene chloride	50	57		1	113	70-130	03/31/2019 2112
Styrene	50	55		1	110	70-130	03/31/2019 2112
1,1,2,2-Tetrachloroethane	50	58		1	116	70-130	03/31/2019 2112
Tetrachloroethene	50	53		1	105	70-130	03/31/2019 2112
Toluene	50	59		1	118	70-130	03/31/2019 2112
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	61		1	123	70-130	03/31/2019 2112
1,2,4-Trichlorobenzene	50	42		1	83	70-130	03/31/2019 2112
1,1,1-Trichloroethane	50	59		1	119	70-130	03/31/2019 2112
1,1,2-Trichloroethane	50	60		1	120	70-130	03/31/2019 2112

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ11807-002
Batch: 11807
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	59		1	118	70-130	03/31/2019 2112
Trichlorofluoromethane	50	60		1	120	70-130	03/31/2019 2112
Vinyl chloride	50	53		1	105	70-130	03/31/2019 2112
Xylenes (total)	100	110		1	110	70-130	03/31/2019 2112

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		98	70-130
Toluene-d8		104	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS (SIM with isotope dilution) - MB

Sample ID: UQ11870-001
Batch: 11870
Analytical Method: 8260B (SIM iso.)

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
1,4-Dioxane	ND		1	3.0	1.0	ug/L	04/01/2019 1140

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		95	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS (SIM with isotope dilution) - LCS

Sample ID: UQ11870-002
Batch: 11870
Analytical Method: 8260B (SIM iso.)

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,4-Dioxane	50	59		1	117	70-130	04/01/2019 1051

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		95	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS (SIM with isotope dilution) - MS

Sample ID: UC27069-003MS
Batch: 11870
Analytical Method: 8260B (SIM iso.)

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,4-Dioxane	310	250	510		5	83	43-173	04/01/2019 2020

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		103	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS (SIM with isotope dilution) - MSD

Sample ID: UC27069-003MD
Batch: 11870
Analytical Method: 8260B (SIM iso.)

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
1,4-Dioxane	310	250	520		5	85	0.68	43-173	20	04/01/2019 2044

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		99	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Dissolved Gases - MB

Sample ID: UQ12263-001
Batch: 12263
Analytical Method: RSK - 175

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Ethane	ND		1	10	2.5	ug/L	04/04/2019 1450
Ethene	ND		1	10	2.5	ug/L	04/04/2019 1450
Methane	ND		1	10	2.5	ug/L	04/04/2019 1450
Propane	ND		1	15	5.0	ug/L	04/04/2019 1450

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Dissolved Gases - LCS

Sample ID: UQ12263-002
Batch: 12263
Analytical Method: RSK - 175

Matrix: Aqueous

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Ethane	550	620		1	112	70-130	04/04/2019 1313
Ethene	520	550		1	107	70-130	04/04/2019 1313
Methane	300	330		1	111	70-130	04/04/2019 1313
Propane	810	900		1	110	70-130	04/04/2019 1313

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Dissolved Gases - LCSD

Sample ID: UQ12263-003
Batch: 12263
Analytical Method: RSK - 175

Matrix: Aqueous

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Ethane	550	620		1	112	0.77	70-130	30	04/04/2019 1326
Ethene	520	560		1	108	0.97	70-130	30	04/04/2019 1326
Methane	300	330		1	111	0.28	70-130	30	04/04/2019 1326
Propane	810	900		1	111	0.93	70-130	30	04/04/2019 1326

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.
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Chain of Custody

and

Miscellaneous Documents

SHEALY

Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.
106 Vantage Point Drive • West Columbia, SC 29172
Telephone No. 803-791-9700 Fax No. 803-791-9111
www.shealylab.com

Number 91448

Client: Eartthcon
Address: 1880 ~~Parkway~~ West Oak Pkw
City: Marietta State: GA Zip Code: 30067
Project Name: Lennox International
Project No.:
P.O. No.:
Report to Contact: Carol Northern
Telephone No. / E-mail: 770-973-2100 cnorthern@earthcon.com
Sampler's Signature: x Tiffany Messier
Printed Name: Tiffany Messier
Quote No.:
Page 1 of 1

UC27069

Analysis (Attach list if more space is needed): VOC, 1,4 Dioxane, Diss Gas, TOC, Nit/Sul/Cl/Alk, Sulfate

Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	G=Grab C=Composite	Aqueous	Solid	Non-Aqueous	Unpres.	H2SO4	HNO3	HCl	NaOH	Sodium thio	VOC	1,4 Dioxane	Diss Gas	TOC	Nit/Sul/Cl/Alk	Sulfate	Remarks / Cooler I.D.
MW-10	3/27/19	10:25					1	1		7	1								
MW-14		09:10					1	1		7	1								
MW-3		10:40					1	1		7	1								
MW-3D		10:00					1	1		7	1								
TB-01	3/27/19	—								2									

Turn Around Time Required (Prior lab approval required for expedited TAT.) ☒ Standard ☐ Rush (Specify)

Sample Disposal: ☒ Return to Client ☐ Disposal by Lab

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison ☐ Unknown

QC Requirements (Specify)

Relinquished by	Date	Time	Received by	Date	Time
1. Tiffany Messier	3/27/19	1730	1. Received by		
2. Relinquished by			2. Received by		
3. Relinquished by			3. Received by		
4. Relinquished by			4. Laboratory received by: Erin Br...	3.27.19	1730

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on ice (Circle) (Yes) No Ice Pack
Receipt Temp. 1.3 °C

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: F-AD-133 Effective Date: 08-01-2014

Shealy Environmental Services, Inc.
Document Number: MF0018C-14

Effective Date: 8/2/2018

Sample Receipt Checklist (SRC)

Client: EARTHCON Cooler Inspected by/date: LKH / 03-27-2019 Lot #: UC27069

Means of receipt: ☐ SESI ☑ Client ☐ UPS ☐ FedEx ☐ Other: _____

☐ Yes	☑ No		1. Were custody seals present on the cooler?
☐ Yes	☐ No	☑ NA	2. If custody seals were present, were they intact and unbroken?

pH Strip ID: 18-2225 Chlorine Strip ID: 19-152 Tested by: LKH

Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: NA

1.3 / 1.3 °C NA / NA °C NA / NA °C NA / NA °C

Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: 5 IR Gun Correction Factor: 0 °C

Method of coolant: ☑ Wet Ice ☐ Ice Packs ☐ Dry Ice ☑ None

☐ Yes	☐ No	☑ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☑ Yes	☐ No	☑ NA	4. Is the commercial courier's packing slip attached to this form?
☑ Yes	☐ No		5. Were proper custody procedures (relinquished/received) followed?
☑ Yes	☐ No		6. Were sample IDs listed on the COC?
☑ Yes	☐ No		7. Were sample IDs listed on all sample containers?
☑ Yes	☐ No		8. Was collection date & time listed on the COC?
☑ Yes	☐ No		9. Was collection date & time listed on all sample containers?
☑ Yes	☐ No		10. Did all container label information (ID, date, time) agree with the COC?
☑ Yes	☐ No		11. Were tests to be performed listed on the COC?
☑ Yes	☐ No		12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)? _____
☑ Yes	☐ No		13. Was adequate sample volume available?
☑ Yes	☐ No		14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☐ Yes	☑ No		15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
☐ Yes	☑ No	☐ NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼"or 6mm in diameter) in any of the VOA vials?
☑ Yes	☐ No	☐ NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
☑ Yes	☐ No	☐ NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☑ Yes	☐ No	☐ NA	19. Were all applicable NH_3/TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes	☐ No	☑ NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS?
☐ Yes	☑ No		21. Was the quote number listed on the container label? If yes, Quote # _____

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) NA _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H2SO4, HNO3, HCl, NaOH using SR # NA.

Time of preservation NA. If more than one preservative is needed, please note in the comments below.

Sample(s) NA were received with bubbles >6 mm in diameter.

Samples(s) NA were received with TRC > 0.5 mg/L (If #19 is ***no***) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_3$) with Shealy ID: NA.

SR barcode labels applied by: LKH Date: 03-27-2019

Comments:

SHEALY ENVIRONMENTAL SERVICES, INC.

Report of Analysis

EarthCon Consultants, Inc.
1880 West Oak Parkway
Building 100, Suite 106
Marietta, GA 30062
Attention: Carol Northern

Project Name: Lennox

Project Number: 02.20160378.00

Lot Number:**UC27071**

Date Completed:04/05/2019

04/08/2019 2:15 PM
Approved and released by:
Lab Director - Greenville: Lucas Odom

The electronic signature above is the equivalent of a handwritten signature.
This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

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Case Narrative
EarthCon Consultants, Inc.
Lot Number: UC27071

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

VOCs by G/MS

The laboratory control sample (LCS) for analytical batch 11807 exceeded acceptance criteria for Dichlorodifluoromethane. This analyte is biased high but not detected in the samples affected.

Samples in batch UQ11807 were not analyzed with a MS/MSD due to an instrument error. The LCS passed criteria, and the data has been reported.

The continuing calibration verification (CCV) associated with samples UC27071-001, UC27071-003, UC27071-004, UC27071-005, UC27071-006 recovered Acetone above the upper control limit. The samples associated with this CCV were non-detect for the affected analytes; therefore, the data has been reported.

The laboratory control sample (LCS) for analytical batch 12007 exceeded acceptance criteria for Acetone. This analytes is biased high but not detected in the samples affected.

Sulfide

Insufficient sample volume was provided to perform matrix spike/matrix spike duplicate (MS/MSD) for analytical batch 12039. An LCS/LCSD was run in lieu of an MS/MSD. A sample duplicate was performed alongside the LCS/LCSD.

Sample Summary

EarthCon Consultants, Inc.

Lot Number: UC27071

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-4	Aqueous	03/27/2019 1410	03/27/2019
002	MW-4D	Aqueous	03/27/2019 1450	03/27/2019
003	MW-5	Aqueous	03/27/2019 1600	03/27/2019
004	DUP-02	Aqueous	03/27/2019	03/27/2019
005	TB-02	Aqueous	03/27/2019	03/27/2019
006	MW-11	Aqueous	03/27/2019 1220	03/27/2019

(6 samples)

Detection Summary

EarthCon Consultants, Inc.

Lot Number: UC27071

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-4	Aqueous	Chloride	9056A	8.3		mg/L	7
001	MW-4	Aqueous	Sulfate	9056A	12		mg/L	7
001	MW-4	Aqueous	TOC	9060A	0.71	J	mg/L	7
001	MW-4	Aqueous	Acetone	8260B	4.2	J	ug/L	7
001	MW-4	Aqueous	cis-1,2-Dichloroethene	8260B	4.1		ug/L	8
001	MW-4	Aqueous	Tetrachloroethene	8260B	2.4		ug/L	8
001	MW-4	Aqueous	1,1,2-Trichloroethane	8260B	0.67	J	ug/L	8
001	MW-4	Aqueous	Trichloroethene	8260B	4.6		ug/L	8
001	MW-4	Aqueous	Methane	RSK - 175	3.3	J	ug/L	9
002	MW-4D	Aqueous	Chloride	9056A	1.8		mg/L	10
002	MW-4D	Aqueous	Nitrate - N	9056A	0.065		mg/L	10
002	MW-4D	Aqueous	Sulfate	9056A	2.9		mg/L	10
002	MW-4D	Aqueous	Acetone	8260B	2.9	J	ug/L	10
002	MW-4D	Aqueous	Tetrachloroethene	8260B	19		ug/L	11
002	MW-4D	Aqueous	Trichloroethene	8260B	0.53	J	ug/L	11
003	MW-5	Aqueous	Chloride	9056A	17		mg/L	13
003	MW-5	Aqueous	Nitrate - N	9056A	0.61		mg/L	13
003	MW-5	Aqueous	Sulfate	9056A	3.3		mg/L	13
003	MW-5	Aqueous	TOC	9060A	0.52	J	mg/L	13
003	MW-5	Aqueous	1,1-Dichloroethane	8260B	4.6	J	ug/L	13
003	MW-5	Aqueous	cis-1,2-Dichloroethene	8260B	320		ug/L	14
003	MW-5	Aqueous	trans-1,2-Dichloroethene	8260B	2.9	J	ug/L	14
003	MW-5	Aqueous	Tetrachloroethene	8260B	130		ug/L	14
003	MW-5	Aqueous	Trichloroethene	8260B	250		ug/L	14
003	MW-5	Aqueous	Vinyl chloride	8260B	3.5	J	ug/L	14
003	MW-5	Aqueous	1,4-Dioxane	8260B (SIM	9.7		ug/L	14
003	MW-5	Aqueous	Methane	RSK - 175	2200		ug/L	15
004	DUP-02	Aqueous	Chloride	9056A	17		mg/L	16
004	DUP-02	Aqueous	Nitrate - N	9056A	0.60		mg/L	16
004	DUP-02	Aqueous	Sulfate	9056A	4.0		mg/L	16
004	DUP-02	Aqueous	TOC	9060A	0.60	J	mg/L	16
004	DUP-02	Aqueous	1,1-Dichloroethane	8260B	5.2		ug/L	16
004	DUP-02	Aqueous	cis-1,2-Dichloroethene	8260B	310		ug/L	17
004	DUP-02	Aqueous	trans-1,2-Dichloroethene	8260B	2.8	J	ug/L	17
004	DUP-02	Aqueous	Tetrachloroethene	8260B	120		ug/L	17
004	DUP-02	Aqueous	Trichloroethene	8260B	240		ug/L	17
004	DUP-02	Aqueous	Vinyl chloride	8260B	3.3	J	ug/L	17
004	DUP-02	Aqueous	1,4-Dioxane	8260B (SIM	11		ug/L	17
004	DUP-02	Aqueous	Methane	RSK - 175	2200		ug/L	18
005	TB-02	Aqueous	Acetone	8260B	5.9	J	ug/L	19
006	MW-11	Aqueous	Alkalinity	SM 2320B-	59		mg/L	21
006	MW-11	Aqueous	Chloride	9056A	2.8		mg/L	21
006	MW-11	Aqueous	Sulfate	9056A	6.9		mg/L	21
006	MW-11	Aqueous	TOC	9060A	3.8		mg/L	21
006	MW-11	Aqueous	Acetone	8260B	6.5	J	ug/L	21

Detection Summary (Continued)

Lot Number: UC27071

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
006	MW-11	Aqueous	Methane	RSK - 175	14		ug/L	23

(46 detections)

Client: EarthCon Consultants, Inc.
Description: MW-4
Date Sampled: 03/27/2019 1410
Date Received: 03/27/2019

Laboratory ID: UC27071-001
Matrix: Aqueous

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/30/2019 1430	KFE		12031
1		(Chloride) 9056A	1	03/28/2019 1131	SLU		11591
1		(Nitrate - N) 9056A	1	03/28/2019 1131	SLU		11592
1		(Sulfate) 9056A	1	03/28/2019 1131	SLU		11593
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 1302	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		9056A	8.3		1.0	0.20	mg/L	1
Nitrate - N		9056A	ND		0.020	0.0050	mg/L	1
Sulfate		9056A	12		1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		9060A	0.71	J	1.0	0.42	mg/L	1

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/02/2019 1337	BWS		12007

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	4.2	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1

TOC Range: 0.659 - 0.751

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Client: EarthCon Consultants, Inc.
Description: MW-4
Date Sampled: 03/27/2019 1410
Date Received: 03/27/2019

Laboratory ID: UC27071-001
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/02/2019 1337	BWS		12007

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	4.1		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	2.4		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	0.67	J	1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	4.6		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	70-130
Bromofluorobenzene		98	70-130
Toluene-d8		94	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	04/01/2019 1348	JJG		11870

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Client: EarthCon Consultants, Inc.
Laboratory ID: UC27071-001
Description: MW-4
Matrix: Aqueous
Date Sampled: 03/27/2019 1410
Date Received: 03/27/2019

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/04/2019 1711	JJG		12263

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	74-82-8	RSK - 175	3.3	J	10	2.5	ug/L	1
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: MW-4D
Date Sampled: 03/27/2019 1450
Date Received: 03/27/2019

Laboratory ID: UC27071-002
Matrix: Aqueous

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/30/2019 1445	KFE		12031
1		(Chloride) 9056A	1	03/28/2019 1157	SLU		11591
1		(Nitrate - N) 9056A	1	03/28/2019 1157	SLU		11592
1		(Sulfate) 9056A	1	03/28/2019 1157	SLU		11593
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 1336	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		9056A	1.8		1.0	0.20	mg/L	1
Nitrate - N		9056A	0.065		0.020	0.0050	mg/L	1
Sulfate		9056A	2.9		1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		9060A	ND		1.0	0.42	mg/L	1

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/01/2019 0405	KGT		11807

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	2.9	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1

TOC Range: 0.061 - 0.1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: MW-4D
Date Sampled: 03/27/2019 1450
Date Received: 03/27/2019

Laboratory ID: UC27071-002
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/01/2019 0405	KGT		11807

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	19		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	0.53	J	1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		90	70-130
Toluene-d8		100	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	04/01/2019 1412	JJG		11870

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Laboratory ID: UC27071-002
Description: MW-4D
Matrix: Aqueous
Date Sampled: 03/27/2019 1450
Date Received: 03/27/2019

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/04/2019 1727	JJG		12263

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	74-82-8	RSK - 175	ND		10	2.5	ug/L	1
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: MW-5
Date Sampled: 03/27/2019 1600
Date Received: 03/27/2019

Laboratory ID: UC27071-003
Matrix: Aqueous

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/30/2019 1447	KFE		12031
1		(Chloride) 9056A	1	03/28/2019 1223	SLU		11591
1		(Nitrate - N) 9056A	1	03/28/2019 1223	SLU		11592
1		(Sulfate) 9056A	1	03/28/2019 1223	SLU		11593
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 1409	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		9056A	17		1.0	0.20	mg/L	1
Nitrate - N		9056A	0.61		0.020	0.0050	mg/L	1
Sulfate		9056A	3.3		1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		9060A	0.52	J	1.0	0.42	mg/L	1

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	04/02/2019 1729	BWS		12007

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		100	10	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	2.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	2.0	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	2.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		10	2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	2.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	2.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	2.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		10	2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	2.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	2.5	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	2.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	2.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	2.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	2.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	2.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		10	3.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	4.6	J	5.0	2.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	2.0	ug/L	1

TOC Range: 0.498 - 0.536

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: MW-5
Date Sampled: 03/27/2019 1600
Date Received: 03/27/2019

Laboratory ID: UC27071-003
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	04/02/2019 1729	BWS		12007

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	2.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	320		5.0	2.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	2.9	J	5.0	2.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	2.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	2.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	2.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	2.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	2.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	2.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		25	2.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	2.0	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	2.1	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	2.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	130		5.0	2.0	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	2.0	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	2.1	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	2.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	2.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	2.0	ug/L	1
Trichloroethene	79-01-6	8260B	250		5.0	2.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	2.0	ug/L	1
Vinyl chloride	75-01-4	8260B	3.5	J	5.0	2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	2.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		93	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	04/01/2019 1437	JJG		11870

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	9.7		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Laboratory ID: UC27071-003
Description: MW-5
Matrix: Aqueous
Date Sampled: 03/27/2019 1600
Date Received: 03/27/2019

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/04/2019 1743	JJG		12263

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	74-82-8	RSK - 175	2200		10	2.5	ug/L	1
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: DUP-02
Date Sampled: 03/27/2019
Date Received: 03/27/2019

Laboratory ID: UC27071-004
Matrix: Aqueous

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/30/2019 1450	KFE		12031
1		(Chloride) 9056A	1	03/28/2019 1249	SLU		11591
1		(Nitrate - N) 9056A	1	03/28/2019 1249	SLU		11592
1		(Sulfate) 9056A	1	03/28/2019 1249	SLU		11593
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	03/30/2019 1443	DMA		11671

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	ND		20	20	mg/L	1
Chloride		9056A	17		1.0	0.20	mg/L	1
Nitrate - N		9056A	0.60		0.020	0.0050	mg/L	1
Sulfate		9056A	4.0		1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		9060A	0.60	J	1.0	0.42	mg/L	1

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	04/02/2019 1752	BWS		12007

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		100	10	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	2.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	2.0	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	2.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		10	2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	2.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	2.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	2.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		10	2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	2.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	2.5	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	2.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	2.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	2.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	2.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	2.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		10	3.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	5.2		5.0	2.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	2.0	ug/L	1

TOC Range: 0.564 - 0.624

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: DUP-02
Date Sampled: 03/27/2019
Date Received: 03/27/2019

Laboratory ID: UC27071-004
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	04/02/2019 1752	BWS		12007

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	2.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	310		5.0	2.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	2.8	J	5.0	2.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	2.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	2.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	2.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	2.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	2.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	2.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		25	2.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	2.0	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	2.1	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	2.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	120		5.0	2.0	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	2.0	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	2.1	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	2.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	2.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	2.0	ug/L	1
Trichloroethene	79-01-6	8260B	240		5.0	2.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	2.0	ug/L	1
Vinyl chloride	75-01-4	8260B	3.3	J	5.0	2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	2.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130
Bromofluorobenzene		98	70-130
Toluene-d8		95	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	04/01/2019 1501	JJG		11870

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	11		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: DUP-02
Date Sampled: 03/27/2019
Date Received: 03/27/2019

Laboratory ID: UC27071-004
Matrix: Aqueous

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/04/2019 1759	JJG		12263

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	74-82-8	RSK - 175	2200		10	2.5	ug/L	1
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: TB-02
Date Sampled: 03/27/2019
Date Received: 03/27/2019

Laboratory ID: UC27071-005
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/02/2019 1205	BWS		12007

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	5.9	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
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W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: TB-02
Date Sampled: 03/27/2019
Date Received: 03/27/2019

Laboratory ID: UC27071-005
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/02/2019 1205	BWS		12007

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		109	70-130
Bromofluorobenzene		107	70-130
Toluene-d8		105	70-130

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
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Client: EarthCon Consultants, Inc.
Description: MW-11
Date Sampled: 03/27/2019 1220
Date Received: 03/27/2019

Laboratory ID: UC27071-006
Matrix: Aqueous

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	03/30/2019 1456	KFE		12031
1		(Chloride) 9056A	1	03/28/2019 1407	SLU		11591
1		(Nitrate - N) 9056A	1	03/28/2019 1407	SLU		11592
1		(Sulfate) 9056A	1	03/28/2019 1407	SLU		11593
1		(Sulfide) SM 4500-S2 F-2011	1	04/02/2019 1446	HET		12039
1		(TOC) 9060A	1	04/01/2019 2350	DMA		11885

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Alkalinity		SM 2320B-	59		20	20	mg/L	1
Chloride		9056A	2.8		1.0	0.20	mg/L	1
Nitrate - N		9056A	ND		0.020	0.0050	mg/L	1
Sulfate		9056A	6.9		1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2 F-	ND		1.0	1.0	mg/L	1
TOC		9060A	3.8		1.0	0.42	mg/L	1

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/02/2019 1401	BWS		12007

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	6.5	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1

TOC Range: 3.647 - 3.872

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: MW-11
Date Sampled: 03/27/2019 1220
Date Received: 03/27/2019

Laboratory ID: UC27071-006
Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/02/2019 1401	BWS		12007

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130
Bromofluorobenzene		97	70-130
Toluene-d8		96	70-130

Volatile Organic Compounds by GC/MS (SIM with isotope dilution)

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B (SIM iso.)	1	04/01/2019 1526	JJG		11870

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,4-Dioxane	123-91-1	8260B (SIM is	ND		3.0	1.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Client: EarthCon Consultants, Inc.
Description: MW-11
Date Sampled: 03/27/2019 1220
Date Received: 03/27/2019

Laboratory ID: UC27071-006
Matrix: Aqueous

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130

Dissolved Gases

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		RSK - 175	1	04/04/2019 1815	JJG		12263

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Ethane	74-84-0	RSK - 175	ND		10	2.5	ug/L	1
Ethene	74-85-1	RSK - 175	ND		10	2.5	ug/L	1
Methane	74-82-8	RSK - 175	14		10	2.5	ug/L	1
Propane	74-98-6	RSK - 175	ND		15	5.0	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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QC Summary

Inorganic non-metals - MB

Sample ID: UQ11591-001
Batch: 11591
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Chloride	ND		1	1.0	0.20	mg/L	03/28/2019 0829

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - LCS

Sample ID: UQ11591-002
Batch: 11591
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Chloride	20	20		1	101	80-120	03/28/2019 0921

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MS

Sample ID: UC27071-006MS
Batch: 11591
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Chloride	2.8	20	22		1	98	80-120	03/28/2019 1433

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - MSD

Sample ID: UC27071-006MD
Batch: 11591
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Chloride	2.8	20	23		1	99	0.45	80-120	20	03/28/2019 1459

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MB

Sample ID: UQ11592-001
Batch: 11592
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Nitrate - N	ND		1	0.020	0.0050	mg/L	03/28/2019 0829

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - LCS

Sample ID: UQ11592-002
Batch: 11592
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Nitrate - N	0.80	0.79		1	99	80-120	03/28/2019 0921

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MS

Sample ID: UC27071-006MS
Batch: 11592
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Nitrate - N	ND	0.80	0.76		1	95	80-120	03/28/2019 1433

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MSD

Sample ID: UC27071-006MD
Batch: 11592
Analytical Method: 9056A
Matrix: Aqueous

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Nitrate - N	ND	0.80	0.76		1	95	0.00	80-120	20	03/28/2019 1459

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MB

Sample ID: UQ11593-001
Batch: 11593
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Sulfate	ND		1	1.0	0.20	mg/L	03/28/2019 0829

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - LCS

Sample ID: UQ11593-002
Batch: 11593
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Sulfate	20	20		1	102	80-120	03/28/2019 0921

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MS

Sample ID: UC27071-006MS
Batch: 11593
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Sulfate	6.9	20	26		1	97	80-120	03/28/2019 1433

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - MSD

Sample ID: UC27071-006MD
Batch: 11593
Analytical Method: 9056A

Matrix: Aqueous

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Sulfate	6.9	20	26		1	96	0.38	80-120	20	03/28/2019 1459

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MB

Sample ID: UQ11671-001
Batch: 11671
Analytical Method: 9060A

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
TOC	ND		1	1.0	0.42	mg/L	03/29/2019 2240

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - LCS

Sample ID: UQ11671-002
Batch: 11671
Analytical Method: 9060A

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TOC	20	20		1	99	90-110	03/29/2019 2312

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MB

Sample ID: UQ11885-001
Batch: 11885
Analytical Method: 9060A

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
TOC	ND		1	1.0	0.42	mg/L	04/01/2019 2246

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - LCS

Sample ID: UQ11885-002
Batch: 11885
Analytical Method: 9060A

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TOC	20	20		1	99	90-110	04/01/2019 2318

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MB

Sample ID: UQ12031-001
Batch: 12031
Analytical Method: SM 2320B-2011

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Alkalinity	ND		1	20	20	mg/L	03/30/2019 1331

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - LCS

Sample ID: UQ12031-002
Batch: 12031
Analytical Method: SM 2320B-2011

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Alkalinity	100	110		1	107	90-110	03/30/2019 1337

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - MB

Sample ID: UQ12039-001
Batch: 12039
Analytical Method: SM 4500-S2 F-2011

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Sulfide	ND		1	1.0	1.0	mg/L	04/02/2019 1446

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - LCS

Sample ID: UQ12039-002
Batch: 12039
Analytical Method: SM 4500-S2 F-2011

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Sulfide	10	9.3		1	93	80-120	04/02/2019 1446

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Inorganic non-metals - LCSD

Sample ID: UQ12039-003
Batch: 12039
Analytical Method: SM 4500-S2 F-2011

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Sulfide	10	9.8		1	98	5.2	80-120	20	04/02/2019 1446

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ11807-001
Batch: 11807
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	03/31/2019 2156
Benzene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Bromodichloromethane	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Bromoform	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Bromomethane (Methyl bromide)	ND		1	2.0	0.40	ug/L	03/31/2019 2156
2-Butanone (MEK)	ND		1	10	2.0	ug/L	03/31/2019 2156
Carbon disulfide	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Carbon tetrachloride	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Chlorobenzene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Chloroethane	ND		1	2.0	0.40	ug/L	03/31/2019 2156
Chloroform	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Chloromethane (Methyl chloride)	ND		1	1.0	0.50	ug/L	03/31/2019 2156
Cyclohexane	ND		1	1.0	0.40	ug/L	03/31/2019 2156
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Dibromochloromethane	ND		1	1.0	0.40	ug/L	03/31/2019 2156
1,2-Dibromoethane (EDB)	ND		1	1.0	0.40	ug/L	03/31/2019 2156
1,2-Dichlorobenzene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
1,3-Dichlorobenzene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
1,4-Dichlorobenzene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Dichlorodifluoromethane	ND		1	2.0	0.60	ug/L	03/31/2019 2156
1,1-Dichloroethane	ND		1	1.0	0.40	ug/L	03/31/2019 2156
1,2-Dichloroethane	ND		1	1.0	0.40	ug/L	03/31/2019 2156
1,1-Dichloroethene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
cis-1,2-Dichloroethene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
trans-1,2-Dichloroethene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
1,2-Dichloropropane	ND		1	1.0	0.40	ug/L	03/31/2019 2156
cis-1,3-Dichloropropene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
trans-1,3-Dichloropropene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Ethylbenzene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
2-Hexanone	ND		1	10	2.0	ug/L	03/31/2019 2156
Isopropylbenzene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Methyl acetate	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	0.40	ug/L	03/31/2019 2156
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	03/31/2019 2156
Methylcyclohexane	ND		1	5.0	0.40	ug/L	03/31/2019 2156
Methylene chloride	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Styrene	ND		1	1.0	0.41	ug/L	03/31/2019 2156
1,1,2,2-Tetrachloroethane	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Tetrachloroethene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Toluene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	1.0	0.42	ug/L	03/31/2019 2156
1,2,4-Trichlorobenzene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
1,1,1-Trichloroethane	ND		1	1.0	0.40	ug/L	03/31/2019 2156
1,1,2-Trichloroethane	ND		1	1.0	0.40	ug/L	03/31/2019 2156

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ11807-001
Batch: 11807
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Trichloroethene	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Trichlorofluoromethane	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Vinyl chloride	ND		1	1.0	0.40	ug/L	03/31/2019 2156
Xylenes (total)	ND		1	1.0	0.40	ug/L	03/31/2019 2156

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		102	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ11807-002
Batch: 11807
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	100		1	104	60-140	03/31/2019 2112
Benzene	50	58		1	116	70-130	03/31/2019 2112
Bromodichloromethane	50	57		1	115	70-130	03/31/2019 2112
Bromoform	50	46		1	93	70-130	03/31/2019 2112
Bromomethane (Methyl bromide)	50	57		1	115	70-130	03/31/2019 2112
2-Butanone (MEK)	100	110		1	113	70-130	03/31/2019 2112
Carbon disulfide	50	56		1	112	70-130	03/31/2019 2112
Carbon tetrachloride	50	60		1	120	70-130	03/31/2019 2112
Chlorobenzene	50	55		1	110	70-130	03/31/2019 2112
Chloroethane	50	49		1	99	70-130	03/31/2019 2112
Chloroform	50	56		1	111	70-130	03/31/2019 2112
Chloromethane (Methyl chloride)	50	65		1	130	60-140	03/31/2019 2112
Cyclohexane	50	64		1	129	70-130	03/31/2019 2112
1,2-Dibromo-3-chloropropane (DBCP)	50	51		1	101	70-130	03/31/2019 2112
Dibromochloromethane	50	59		1	118	70-130	03/31/2019 2112
1,2-Dibromoethane (EDB)	50	61		1	122	70-130	03/31/2019 2112
1,2-Dichlorobenzene	50	52		1	103	70-130	03/31/2019 2112
1,3-Dichlorobenzene	50	53		1	106	70-130	03/31/2019 2112
1,4-Dichlorobenzene	50	53		1	106	70-130	03/31/2019 2112
Dichlorodifluoromethane	50	77	N	1	153	60-140	03/31/2019 2112
1,1-Dichloroethane	50	58		1	116	70-130	03/31/2019 2112
1,2-Dichloroethane	50	64		1	128	70-130	03/31/2019 2112
1,1-Dichloroethene	50	61		1	121	70-130	03/31/2019 2112
cis-1,2-Dichloroethene	50	58		1	116	70-130	03/31/2019 2112
trans-1,2-Dichloroethene	50	59		1	118	70-130	03/31/2019 2112
1,2-Dichloropropane	50	58		1	116	70-130	03/31/2019 2112
cis-1,3-Dichloropropene	50	60		1	120	70-130	03/31/2019 2112
trans-1,3-Dichloropropene	50	60		1	119	70-130	03/31/2019 2112
Ethylbenzene	50	56		1	112	70-130	03/31/2019 2112
2-Hexanone	100	110		1	107	70-130	03/31/2019 2112
Isopropylbenzene	50	54		1	107	70-130	03/31/2019 2112
Methyl acetate	50	63		1	126	70-130	03/31/2019 2112
Methyl tertiary butyl ether (MTBE)	50	60		1	120	70-130	03/31/2019 2112
4-Methyl-2-pentanone	100	110		1	108	70-130	03/31/2019 2112
Methylcyclohexane	50	63		1	126	70-130	03/31/2019 2112
Methylene chloride	50	57		1	113	70-130	03/31/2019 2112
Styrene	50	55		1	110	70-130	03/31/2019 2112
1,1,2,2-Tetrachloroethane	50	58		1	116	70-130	03/31/2019 2112
Tetrachloroethene	50	53		1	105	70-130	03/31/2019 2112
Toluene	50	59		1	118	70-130	03/31/2019 2112
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	61		1	123	70-130	03/31/2019 2112
1,2,4-Trichlorobenzene	50	42		1	83	70-130	03/31/2019 2112
1,1,1-Trichloroethane	50	59		1	119	70-130	03/31/2019 2112
1,1,2-Trichloroethane	50	60		1	120	70-130	03/31/2019 2112

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ11807-002
Batch: 11807
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	59		1	118	70-130	03/31/2019 2112
Trichlorofluoromethane	50	60		1	120	70-130	03/31/2019 2112
Vinyl chloride	50	53		1	105	70-130	03/31/2019 2112
Xylenes (total)	100	110		1	110	70-130	03/31/2019 2112

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		98	70-130
Toluene-d8		104	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS (SIM with isotope dilution) - MB

Sample ID: UQ11870-001
Batch: 11870
Analytical Method: 8260B (SIM iso.)

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
1,4-Dioxane	ND		1	3.0	1.0	ug/L	04/01/2019 1140

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		95	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS (SIM with isotope dilution) - LCS

Sample ID: UQ11870-002
Batch: 11870
Analytical Method: 8260B (SIM iso.)

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,4-Dioxane	50	59		1	117	70-130	04/01/2019 1051

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		95	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ12007-001
Batch: 12007
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	04/02/2019 1123
Benzene	ND		1	1.0	0.40	ug/L	04/02/2019 1123
Bromodichloromethane	ND		1	1.0	0.40	ug/L	04/02/2019 1123
Bromoform	ND		1	1.0	0.40	ug/L	04/02/2019 1123
Bromomethane (Methyl bromide)	ND		1	2.0	0.40	ug/L	04/02/2019 1123
2-Butanone (MEK)	ND		1	10	2.0	ug/L	04/02/2019 1123
Carbon disulfide	ND		1	1.0	0.40	ug/L	04/02/2019 1123
Carbon tetrachloride	ND		1	1.0	0.40	ug/L	04/02/2019 1123
Chlorobenzene	ND		1	1.0	0.40	ug/L	04/02/2019 1123
Chloroethane	ND		1	2.0	0.40	ug/L	04/02/2019 1123
Chloroform	ND		1	1.0	0.40	ug/L	04/02/2019 1123
Chloromethane (Methyl chloride)	ND		1	1.0	0.50	ug/L	04/02/2019 1123
Cyclohexane	ND		1	1.0	0.40	ug/L	04/02/2019 1123
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	1.0	0.40	ug/L	04/02/2019 1123
Dibromochloromethane	ND		1	1.0	0.40	ug/L	04/02/2019 1123
1,2-Dibromoethane (EDB)	ND		1	1.0	0.40	ug/L	04/02/2019 1123
1,2-Dichlorobenzene	ND		1	1.0	0.40	ug/L	04/02/2019 1123
1,3-Dichlorobenzene	ND		1	1.0	0.40	ug/L	04/02/2019 1123
1,4-Dichlorobenzene	ND		1	1.0	0.40	ug/L	04/02/2019 1123
Dichlorodifluoromethane	ND		1	2.0	0.60	ug/L	04/02/2019 1123
1,1-Dichloroethane	ND		1	1.0	0.40	ug/L	04/02/2019 1123
1,2-Dichloroethane	ND		1	1.0	0.40	ug/L	04/02/2019 1123
1,1-Dichloroethene	ND		1	1.0	0.40	ug/L	04/02/2019 1123
cis-1,2-Dichloroethene	ND		1	1.0	0.40	ug/L	04/02/2019 1123
trans-1,2-Dichloroethene	ND		1	1.0	0.40	ug/L	04/02/2019 1123
1,2-Dichloropropane	ND		1	1.0	0.40	ug/L	04/02/2019 1123
cis-1,3-Dichloropropene	ND		1	1.0	0.40	ug/L	04/02/2019 1123
trans-1,3-Dichloropropene	ND		1	1.0	0.40	ug/L	04/02/2019 1123
Ethylbenzene	ND		1	1.0	0.40	ug/L	04/02/2019 1123
2-Hexanone	ND		1	10	2.0	ug/L	04/02/2019 1123
Isopropylbenzene	ND		1	1.0	0.40	ug/L	04/02/2019 1123
Methyl acetate	ND		1	1.0	0.40	ug/L	04/02/2019 1123
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	0.40	ug/L	04/02/2019 1123
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	04/02/2019 1123
Methylcyclohexane	ND		1	5.0	0.40	ug/L	04/02/2019 1123
Methylene chloride	ND		1	1.0	0.40	ug/L	04/02/2019 1123
Styrene	ND		1	1.0	0.41	ug/L	04/02/2019 1123
1,1,2,2-Tetrachloroethane	ND		1	1.0	0.40	ug/L	04/02/2019 1123
Tetrachloroethene	ND		1	1.0	0.40	ug/L	04/02/2019 1123
Toluene	ND		1	1.0	0.40	ug/L	04/02/2019 1123
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	1.0	0.42	ug/L	04/02/2019 1123
1,2,4-Trichlorobenzene	ND		1	1.0	0.40	ug/L	04/02/2019 1123
1,1,1-Trichloroethane	ND		1	1.0	0.40	ug/L	04/02/2019 1123
1,1,2-Trichloroethane	ND		1	1.0	0.40	ug/L	04/02/2019 1123

LOQ = Limit of Quantitation
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J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ12007-001
Batch: 12007
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Trichloroethene	ND		1	1.0	0.40	ug/L	04/02/2019 1123
Trichlorofluoromethane	ND		1	1.0	0.40	ug/L	04/02/2019 1123
Vinyl chloride	ND		1	1.0	0.40	ug/L	04/02/2019 1123
Xylenes (total)	ND		1	1.0	0.40	ug/L	04/02/2019 1123

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		100	70-130
Toluene-d8		96	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
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ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ12007-002
Batch: 12007
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	190	N	1	192	60-140	04/02/2019 1011
Benzene	50	49		1	97	70-130	04/02/2019 1011
Bromodichloromethane	50	47		1	94	70-130	04/02/2019 1011
Bromoform	50	43		1	87	70-130	04/02/2019 1011
Bromomethane (Methyl bromide)	50	54		1	107	70-130	04/02/2019 1011
2-Butanone (MEK)	100	130		1	126	70-130	04/02/2019 1011
Carbon disulfide	50	53		1	106	70-130	04/02/2019 1011
Carbon tetrachloride	50	49		1	99	70-130	04/02/2019 1011
Chlorobenzene	50	44		1	88	70-130	04/02/2019 1011
Chloroethane	50	43		1	85	70-130	04/02/2019 1011
Chloroform	50	48		1	96	70-130	04/02/2019 1011
Chloromethane (Methyl chloride)	50	52		1	104	60-140	04/02/2019 1011
Cyclohexane	50	57		1	113	70-130	04/02/2019 1011
1,2-Dibromo-3-chloropropane (DBCP)	50	48		1	96	70-130	04/02/2019 1011
Dibromochloromethane	50	45		1	91	70-130	04/02/2019 1011
1,2-Dibromoethane (EDB)	50	48		1	97	70-130	04/02/2019 1011
1,2-Dichlorobenzene	50	43		1	86	70-130	04/02/2019 1011
1,3-Dichlorobenzene	50	41		1	83	70-130	04/02/2019 1011
1,4-Dichlorobenzene	50	41		1	83	70-130	04/02/2019 1011
Dichlorodifluoromethane	50	63		1	126	60-140	04/02/2019 1011
1,1-Dichloroethane	50	51		1	102	70-130	04/02/2019 1011
1,2-Dichloroethane	50	56		1	112	70-130	04/02/2019 1011
1,1-Dichloroethene	50	54		1	107	70-130	04/02/2019 1011
cis-1,2-Dichloroethene	50	51		1	102	70-130	04/02/2019 1011
trans-1,2-Dichloroethene	50	51		1	102	70-130	04/02/2019 1011
1,2-Dichloropropane	50	46		1	92	70-130	04/02/2019 1011
cis-1,3-Dichloropropene	50	48		1	96	70-130	04/02/2019 1011
trans-1,3-Dichloropropene	50	47		1	94	70-130	04/02/2019 1011
Ethylbenzene	50	44		1	89	70-130	04/02/2019 1011
2-Hexanone	100	86		1	86	70-130	04/02/2019 1011
Isopropylbenzene	50	45		1	90	70-130	04/02/2019 1011
Methyl acetate	50	57		1	113	70-130	04/02/2019 1011
Methyl tertiary butyl ether (MTBE)	50	52		1	104	70-130	04/02/2019 1011
4-Methyl-2-pentanone	100	89		1	89	70-130	04/02/2019 1011
Methylcyclohexane	50	53		1	107	70-130	04/02/2019 1011
Methylene chloride	50	51		1	101	70-130	04/02/2019 1011
Styrene	50	44		1	88	70-130	04/02/2019 1011
1,1,2,2-Tetrachloroethane	50	45		1	90	70-130	04/02/2019 1011
Tetrachloroethene	50	47		1	94	70-130	04/02/2019 1011
Toluene	50	46		1	92	70-130	04/02/2019 1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	56		1	112	70-130	04/02/2019 1011
1,2,4-Trichlorobenzene	50	41		1	82	70-130	04/02/2019 1011
1,1,1-Trichloroethane	50	50		1	100	70-130	04/02/2019 1011
1,1,2-Trichloroethane	50	45		1	90	70-130	04/02/2019 1011

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ12007-002
Batch: 12007
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	51		1	101	70-130	04/02/2019 1011
Trichlorofluoromethane	50	51		1	102	70-130	04/02/2019 1011
Vinyl chloride	50	50		1	99	70-130	04/02/2019 1011
Xylenes (total)	100	90		1	90	70-130	04/02/2019 1011

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		97	70-130
Bromofluorobenzene		97	70-130
Toluene-d8		94	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Dissolved Gases - MB

Sample ID: UQ12263-001
Batch: 12263
Analytical Method: RSK - 175

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Ethane	ND		1	10	2.5	ug/L	04/04/2019 1450
Ethene	ND		1	10	2.5	ug/L	04/04/2019 1450
Methane	ND		1	10	2.5	ug/L	04/04/2019 1450
Propane	ND		1	15	5.0	ug/L	04/04/2019 1450

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Dissolved Gases - LCS

Sample ID: UQ12263-002
Batch: 12263
Analytical Method: RSK - 175

Matrix: Aqueous

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Ethane	550	620		1	112	70-130	04/04/2019 1313
Ethene	520	550		1	107	70-130	04/04/2019 1313
Methane	300	330		1	111	70-130	04/04/2019 1313
Propane	810	900		1	110	70-130	04/04/2019 1313

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Dissolved Gases - LCSD

Sample ID: UQ12263-003
Batch: 12263
Analytical Method: RSK - 175

Matrix: Aqueous

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Ethane	550	620		1	112	0.77	70-130	30	04/04/2019 1326
Ethene	520	560		1	108	0.97	70-130	30	04/04/2019 1326
Methane	300	330		1	111	0.28	70-130	30	04/04/2019 1326
Propane	810	900		1	111	0.93	70-130	30	04/04/2019 1326

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Chain of Custody

and

Miscellaneous Documents

Chain of Custody Record

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106 Vantage Point Drive • West Columbia, SC 29172
Telephone No. 803-791-9700 Fax No. 803-791-9111
www.shealylab.com

Number 95077

Client: EARTHCON
Address: 1880 West Oak PKWY
City: Marietta State: GA Zip Code: 30067
Project Name: Lennox
Project No.: 02.20160378.00
P.O. No.:
Report to Contact: Carol Northern
Sampler's Signature: x [signature]
Printed Name: Tiffany Messier
Telephone No. / E-mail: 770-973-2100 cnorthern@earthcon.com
Quote No.:
Page 1 of 1
UC27071
LJO

Analysis (Attach list if more space is needed)

Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	G-Grab C-Composite	Matrix: Aqueous	Matrix: Solid	Matrix: Non Aqueous	Unpres	H2SO4	HNO3	HCl	NaOH	Zn Ac	VOC	1,4 Dioxane	Diss. Gases	TOC	NO3/SO4/Cl/Alk	Sulfate	Remarks / Cooler I.D.
MW-4	3/27/19	14:10					1	1		7	1		/	/	/	/	/	/	
MW-4D	↓	14:50					1	1		7	1		/	/	/	/	/	/	
MW-5	↓	16:00					1	1		7	1		/	/	/	/	/	/	
DUP-02	↓	—					1	1		7	1		/	/	/	/	/	/	
TB-02	3/27/19	—								2			X						
MW-11	3/27/19	12:20					1	1		7	1		/	/	/	/	/	/	

Turn Around Time Required (Prior lab approval required for expedited TAT.): ☒ Standard ☐ Rush (Specify)

Sample Disposal: ☐ Return to Client ☒ Disposal by Lab

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison ☐ Unknown

QC Requirements (Specify):

Relinquished by	Date	Time	Received by	Date	Time
1. [signature]	3/27/19	1730	1.		
2.			2.		
3.			3.		
4.			4. Laboratory received by [signature]	3.27.19	1730

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on ice (Circle) (Yes) No Ice Pack
Receipt Temp. 3.9 °C

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: F-AD-133 Effective Date: 09-01-2014

Shealy Environmental Services, Inc.
Document Number: ME0018C-14

Page: 1 of 1
Effective Date: 8/2/2018

Sample Receipt Checklist (SRC)

Client: EARTHCON Cooler Inspected by/date: LKH / 03-27-2019 Lot #: UC27071

Means of receipt: ☐ SESI ☑ Client ☐ UPS ☐ FedEx ☐ Other: _____

☐ Yes	☑ No		1. Were custody seals present on the cooler?
☐ Yes	☐ No	☑ NA	2. If custody seals were present, were they intact and unbroken?

pH Strip ID: 18-2225 Chlorine Strip ID: 19-152 Tested by: LKH

Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: NA

1.3 / 1.3 °C NA / NA °C NA / NA °C NA / NA °C

Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: 5 IR Gun Correction Factor: 0 °C

Method of coolant: ☑ Wet Ice ☐ Ice Packs ☐ Dry Ice ☑ None

☐ Yes	☐ No	☑ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☑ Yes	☐ No	☑ NA	4. Is the commercial courier's packing slip attached to this form?
☑ Yes	☐ No		5. Were proper custody procedures (relinquished/received) followed?
☑ Yes	☐ No		6. Were sample IDs listed on the COC?
☑ Yes	☐ No		7. Were sample IDs listed on all sample containers?
☑ Yes	☐ No		8. Was collection date & time listed on the COC?
☑ Yes	☐ No		9. Was collection date & time listed on all sample containers?
☑ Yes	☐ No		10. Did all container label information (ID, date, time) agree with the COC?
☑ Yes	☐ No		11. Were tests to be performed listed on the COC?
☑ Yes	☐ No		12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
☑ Yes	☐ No		13. Was adequate sample volume available?
☑ Yes	☐ No		14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☐ Yes	☑ No		15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
☐ Yes	☑ No	☐ NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼"or 6mm in diameter) in any of the VOA vials?
☑ Yes	☐ No	☐ NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
☑ Yes	☐ No	☐ NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☑ Yes	☐ No	☐ NA	19. Were all applicable NH_3/TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes	☐ No	☑ NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS?
☐ Yes	☑ No		21. Was the quote number listed on the container label? If yes, Quote # _____

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H_2SO_4, HNO_3, HCl, NaOH using SR # NA.
Time of preservation NA. If more than one preservative is needed, please note in the comments below.

Sample(s) NA were received with bubbles >6 mm in diameter.

Samples(s) NA were received with TRC > 0.5 mg/L (If #19 is ***no***) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_3$) with Shealy ID: NA.

SR barcode labels applied by: LKH Date: 03-27-2019

Comments:

Appendix E

Groundwater Historical Data Summary

APPENDIX E: GROUNDWATER HISTORICAL DATA SUMMARY

Well	Sample Date	Acetone	Benzene	2-Butanone (MEK)	Carbon disulfide	Cabon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Dibromochloromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	MTBE	4-Methyl-2-pentanone	Methylene Choiride	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Vinyl Chloride	Xylenes	1,1,1,2-Tetrachloroethane	n-Butylbenzene	sec-Butylbenzene	p-Isopropyltoluene	n-Propylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Naphthalene	1,4-Dioxane
MONITORING WELLS																																						
MW-1	09/01/99	<10	<2	<10	**10.6**	<2	<2	<2	<2	<2	<2	<2	**3.1**	**22.5**	**12,000**	**40.6**	**1,380**	**14.1**	--	**17.3**	<10	--	**78.5**	**685**	<2	<2	**60.2**	**49.1**	**5,820**	<2	<2	<2	<2	**21.7**	**178**	**31.2**	**11.9**	--
	09/24/99	ND	**2.2**	ND	**9.2**	ND	ND	ND	ND	ND	ND	ND	**4.2**	**25.7**	**18,000**	**60.1**	**1,950**	**18**	ND	**23.8**	ND	--	**15.8**	**1,050**	ND	ND	**24.6**	**43.1**	**8,260**	ND	ND	**3.8**	ND	**38.3**	**215**	**54.9**	**22.6**	--
	05/16/00	ND	**15.7**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**68.4**	**17,600**	**361**	**1,890**	ND	**27.1**	ND	ND	--	ND	**979**	ND	ND	**29.4**	ND	**7,820**	ND	ND	ND	ND	ND	ND	ND	ND	--
	04/10/01	ND	**1.28**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.31**	**27.4**	**10,600**	**46.4**	**1,050**	**13.3**	ND	ND	ND	--	**16.4**	**436**	ND	ND	**24.1**	**105**	**4,260**	ND	ND	ND	ND	**24.9**	**54.3**	**34.3**	**14.5**	--
	06/27/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.2**	ND	**10.1**	**3,310**	**78**	**412**	**3.6**	ND	ND	ND	--	**2.6**	**372**	ND	ND	**19.7**	**45**	**3,360**	ND	ND	ND	ND	**12.6**	**41.8**	**14.2**	**32.8**	--
	08/09/01	ND	**1.1**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.9**	ND	**8,580**	**54**	**854**	**10.8**	ND	ND	ND	--	**5.6**	**396**	ND	ND	**8.9**	**76**	**2,720**	ND	ND	ND	ND	ND	**118.0**	**25.4**	**10.3**	--
	03/18/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**4.5**	**12.4**	**6,900**	**22**	**635**	**5.4**	ND	ND	ND	--	**4.6**	**317**	ND	ND	**8.0**	ND	**2,680**	ND	ND	ND	ND	**10.7**	**72.7**	**74.3**	**7.3**	--
	06/27/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**11.5**	**5,090**	**24**	ND	**6.0**	ND	ND	ND	--	**4.5**	ND	ND	ND	**4.6**	**29**	ND	ND	ND	ND	ND	**10.1**	**71.5**	**13.4**	ND	--
	07/15/02	ND	**1.2**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.9**	**13.1**	**6,550**	**63**	**813**	**8.6**	ND	ND	ND	--	**4.8**	**344**	ND	ND	**7.3**	**65**	**3,349**	ND	ND	**1.6**	ND	**14.8**	**87.8**	**18.9**	**9.4**	--
	10/16/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.0**	**647**	**10**	**1,900**	**13.8**	ND	ND	ND	--	**11.8**	**89**	ND	**11.8**	**14.1**	**7**	**9,870**	ND	ND	ND	ND	**2.8**	**6.4**	**2.7**	**1.8**	--
	11/01/02	ND	**1.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6.6**	**2,010**	**12**	**1,380**	**7.6**	ND	ND	ND	--	**17.5**	**106**	ND	ND	**13.4**	**15**	**7,230**	ND	ND	ND	ND	ND	**4.5**	**2.5**	ND	--
	12/12/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**19.1**	**3,630**	**80**	**613**	**3.4**	ND	ND	ND	--	**4.1**	**201**	ND	ND	**5.4**	**18**	**2,454**	ND	ND	**1.4**	ND	**5.3**	**35.2**	**8.0**	**2.1**	--
	03/11/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.5**	ND	**20.1**	**8,820**	**48**	**875**	**8.3**	ND	ND	ND	--	**4.4**	**265**	ND	ND	**5.0**	**99**	**3,130**	ND	ND	ND	ND	ND	**90.5**	**19.4**	**8.7**	--
	06/17/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.0**	**16.3**	**6,810**	**47**	**938**	**8.3**	ND	ND	ND	--	**2.2**	**239**	ND	ND	**3.6**	**110**	**4,040**	ND	ND	1.4	ND	**13.8**	**91.8**	**18.4**	**5.8**	--
	08/14/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.3**	ND	**1.3**	**6,130**	**14.5**	**441**	ND	ND	ND	ND	--	ND	**19**	ND	ND	ND	**5.77**	**2,193**	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/13/04	ND	**1.21**	ND	ND	ND	ND	ND	ND	ND	ND	**153**	**1.93**	**21.3**	**10,200**	**153**	**1040**	**13.0**	ND	ND	**9.44**	--	**5.96**	**355**	ND	ND	**4.23**	**92.8**	**4,970**	ND	**1.98**	**1.78**	**3.30**	**1.96**	**136**	**29.6**	**11.9**	--
	06/02/04	ND	**1.3**	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.20	**25.1**	**12,300**	**127**	**1,910**	**15.0**	ND	ND	ND	--	**1.10**	**766**	ND	ND	**1.80**	**120**	**9,220**	ND	**3.20**	ND	**1.10**	**24.8**	**176**	**34.6**	**13.9**	--
	10/07/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**17.5**	**5,200**	**49.3**	**680**	ND	ND	ND	ND	--	ND	**422**	ND	ND	**1.50**	**76.8**	**3,220**	ND	ND	ND	ND	ND	ND	ND	**14.2**	--
	02/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**16.0**	**2,580**	**50.5**	**764**	**8.10**	ND	ND	ND	--	**18.1**	**238**	ND	ND	**9.10**	**85.6**	**3,530**	ND	**2.30**	**1.20**	ND	**13.8**	**92.2**	**19.8**	**9.00**	--
	06/02/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**15.0**	**8,200**	**57.5**	**820**	ND	ND	ND	ND	--	<5	**264**	ND	ND	<5	**75**	**3,940**	ND	ND	ND	ND	ND	ND	ND	<25	--
	09/28/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**17.8**	**12,400**	**133**	**1,380**	ND	ND	ND	ND	--	ND	**524**	ND	ND	ND	**112**	**6,580**	ND	ND	ND	ND	ND	ND	ND	**11.90**	--
	12/20/05	ND	**0.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**15.6**	**11,900**	**28**	**1,300**	ND	ND	ND	ND	--	**0.94**	**394**	ND	ND	**2.37**	**97.5**	**5,830**	ND	ND	ND	ND	ND	ND	ND	**5.39**	--
	06/26/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5,280**	ND	**520**	ND	ND	ND	ND	--	ND	**110**	ND	ND	ND	**75**	**2,430**	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/27/06	<2	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	**17.8**	**7,530**	**31.8**	**922**	**9.29**	<1	<1	<1	--	<1	**209**	<1	<1	**1.49**	**104**	**3,910**	<1	<1	**1.90**	**2.54**	**13.9**	**91.6**	**19.4**	**6.95**	--
	03/29/07	**14.3**	<10	<20	<10	<10	<10	<20	<10	<10	<10	**7.4**	<10	**13.5**	**3,120**	**14.1**	**159**	<10	<10	<10	<10	--	**8.6**	**25.7**	<10	<10	**13.9**	**58.9**	**736**	<10	<10	<10	<10	**12.8**	<10	<10	<10	--
	09/07/07	<100	<5	<50	<5	<5	<5	<5	<10	<5	<5	<5	<5	<5	<5	**700**	<5	**13**	<5	<5	<50	<5	--	<5	<5	<5	<5	<5	**19**	**5.2**	<5	<5	<5	<5	<5	<5	<5	<5	--
	03/10/08	<400	<20	<200	<20	<20	<20	<40	<20	<20	<20	<20	<20	<20	**4,800**	**22**	**460**	<20	<20	<200	<20	--	<20	**64**	<20	<20	<20	**86**	**1,900**	<20	<20	<20	<20	<20	**36**	<20	<20	--
	09/22/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2,200**	ND	**94**	ND	ND	ND	ND	--	ND	**28**	ND	ND	ND	**32**	**460**	ND	ND	ND	ND	ND	ND	ND	ND	--
	04/20/09	<200	<10	120	<10	<10	<10	<20	<10	<10	<10	<10	<10	<10	**2,800**	**15**	**270**	<10	<10	<100	<10	--	<10	**18**	<10	<10	<10	**98**	**1,000**	<10	<10	<10	<10	**22**	<10	<10	--
	06/30/09	<40	<2	<20	<2	<2	<2	<4	<2	<2	<2	<2	<2	**5.3**	**2,200**	**12**	**220**	<2	<2	<20	<2	--	<2	**11**	<2	<2	<2	**84**	**900**	<2	<2	<2	<2	2.7	**18**	**3.9**	**3.1**	--
	09/09/09	<400	<20	<200	<20	<20	<20	<40	<20	<20	<20	<20	<20	<20	**6,500**	**28**	**550**	<20	<20	<200	<20	--	<20	**69**	<20	<20	<20	**150**	**2,300**	<20	<20	<20	<20	<20	**40**	<20	<20	--
	03/02/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5,300**	**21**	**450**	ND	ND	ND	ND	--	ND	**20**	ND	ND	ND	**170**	**1,900**	ND	ND	ND	ND	ND	**30**	ND	ND	--
	10/07/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1,200**	**5.6**	**45**	ND	ND	ND	ND	--	ND	**2.5**	ND	ND	ND	**28**	**160**	ND	ND	ND	ND	ND	**2.6**	ND	ND	--
	09/27/12	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	**1,650**	<100	<100	<100	<100	<100	<100	--	<100	<100	<100	<100	<100	<100	**403**	<100	<100	<100	<100	<100	<100	<100	<100	--
	10/01/14	<25	<1	<50	<1	<1	<1	<1	<1	<1	<1	<1	<1	**1.77**	**734**	**4.33**	**32.8**	<1	<1	<10	<5	--	<1	**7.76**	<1	<1	<1	**22**	**99.3**	<1	<1	<1	<1	<1	**1.83**	<1	<5	--
	01/31/17	<400	<20	<200	<20	<20	<20	<40	<20	<20	<20	<20	<20	<20	**1,800**	<20	**81**	<20	<20	<200	<20	**8.7 J**	<20	**15 J**	<20	<20	<20	**67**	**380**	--	--	--	--	--	--	--	--	<1
	10/18/17	<200	<10	<100	<10	<10	<10	<20	<10	<10	<10	<10	<10	<10	**1,100**	**11**	**10**	<10	<10	<100	<10	<10	<10	**5.0 J**	<10	<10	<10	**58**	**53**	--	--	--	--	--	--	--	--	<1
	03/27/18	<100	<5	<50	<5	<5	<5	<10	<5	<5	<5	<5	<5	<5	**420**	**2.0 J**	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	**8.4**	**12**	--	--	--	--	--	--	--	--	<1
	10/02/18	<400	<20	<200	<20	<20	<20	<40	<20	<20	<20	<20	<20	<20	**890**	<20	**33**	<20	<20	<200	<20	<20	<20	<20	<20	<20	<20	**56**	**140**	--	--	--	--	--	--	--	--	<1
	03/26/19	<200	<10	<100	<10	<10	<10	<20	<10	<10	<10	<10	<10	<10	**1400 J**	**4.8 J**	**32 J**	<10	<10	<100	<10	<10	**4.9 J**	<10	<10	<10	**6.3 J**	**33 J**	**200 J**	--	--	--	--	--	--	--	--	<1
MW-1D	09/01/99	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	--	<10	<10	--	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	--
	05/16/00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.53**	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	04/10/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/27/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	03/18/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/27/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	12/12/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	03/11/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/17/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	08/14/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/13/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	10/07/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	**1.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	**4.0**	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**1.2**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/28/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**1.64**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	12/20/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**1.91**	ND	ND	ND	**0.34**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/26/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**1.78**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/27/06	<2	<1	<2	<1	<1	<1	<2	<1	**1.31**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	**3.18**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/29/07	<2	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	**1.15**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/06/07	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	**8.2**	<1	<1	<1	**1.5**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/10/08	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	**6.9**	<1	<1	<1	**1.2**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/22/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**15.0**	ND	ND	ND	**2.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	04/20/09	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	**1.9**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	06/30/09	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	**9.1**	<1	<1	<1	**1.3**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/09/09	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	**14.0**	<1	<1	<1	**2.4**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/02/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**31.0**	ND	ND	ND	**5.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	10/07/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**4.8**	ND	ND	ND	**1**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/27/12	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	--	**51.9**	<5	<5	<5	**7.21**	<5	<15	<5	<5	<5	<5	<5	<5	<5	<5	--
	10/01/14	<25	<1	<50	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<5	--	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<5	--
	01/31/17	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	**4.7**	<1	<1	<1	<1	**0.77 J**	<1	<1	--	--	--	--	--	--	--	<1
	10/18/17	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	**6.3**	<1	<1	<1	**1.2**	<1	<1	--	--	--	--	--	--	--	--	<1
	03/27/18	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	**11**	<1	<1	<1	**2.2**	<1	<1.3	--	--	--	--	--	--	--	--	<1
	10/02/18	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	**14**	<1	<1	<1	**2.6**	<1	<1.3	--	--	--	--	--	--	--	--	<1
	03/26/19	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	**13**	<1	<1	<1	**2.7**	<1	<1.3	--	--	--	--	--	--	--	--	<1

APPENDIX E: GROUNDWATER HISTORICAL DATA SUMMARY

Well	Sample Date	Acetone	Benzene	2-Butanone (MEK)	Carbon disulfide	Cabon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Dibromochloromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	MTBE	4-Methyl-2-pentanone	Methylene Choiride	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Vinyl Chloride	Xylenes	1,1,1,2-Tetrachloroethane	n-Butylbenzene	sec-Butylbenzene	p-Isopropyltoluene	n-Propylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Naphthalene	1,4-Dioxane
MW-2	09/01/99	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	--	<10	<10	--	**6.9**	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	--
	09/24/99	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**4.1**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.5**	--
	05/16/00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.58**	ND	ND	--	**7.97**	ND	ND	ND	**1.98**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	07/10/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**7.06**	ND	ND	ND	ND	ND	ND	ND	ND	**5.77**	ND	ND	**4.28**	**1.98**	**1.84**	--
	03/18/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**7.2**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/27/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**5.07**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	12/16/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**8.76**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	03/11/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**3.79**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/17/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**4.01**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	08/14/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**3.59**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/13/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**4.01**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	**3.60**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	10/07/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	**4.40**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	**4.20**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**2.50**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/28/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**2.72**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	12/20/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**2.32**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/26/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**1.30**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	03/02/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**1.30**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	10/07/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/27/12	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	--	<5	<5	<5	<5	<5	<5	<15	<5	<5	<5	<5	<5	<5	<5	<5	--
	10/01/14	<25	<1	<50	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<5	--	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<5	--
	02/01/17	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	**4.8**	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	<1
	10/18/17	<20	<1	**4.2 J**	<1	<1	<1	<2	<1	<2	<1	<1	<1	<1	<1	<1	<1	**0.46 J**	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	**1.4**	--	--	--	--	--	--	--	--	--	<1
	03/27/18	<20	<1	<10	<1	<1	<1	<2	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	<1
	10/02/18	<20	<1	<10	<1	<1	<1	<2	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	<1
	03/26/19	<20	<1	<10	<1	<1	<1	<2	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	<1
	09/03/99	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	--	<10	<10	--	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	--
	05/16/00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.5**	ND	ND	--	**2.57**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	03/11/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/17/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	08/14/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/13/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	10/07/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/28/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	12/20/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/26/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
MW-2D	03/29/07	<2	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	**37.6**	<1	**3.95**	<1	<1	<1	<1	--	**8.2**	<1	<1	<1	**32.7**	<1	**15.2**	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/06/07	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/11/08	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/22/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	04/20/09	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/09/09	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/02/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	10/07/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/27/12	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	--	<5	<5	<5	<5	<5	<5	<15	<5	<5	<5	<5	<5	<5	<5	<5	--
	10/01/14	<25	<1	<50	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<5	--	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<5	--
	02/01/17	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	**1.4**	<1	<1	<1	<1	<1	**0.50 J**	--	--	--	--	--	--	--	--	<1
	10/19/17	**3.4 J**	<1	**12**	<1	<1	<1	**0.50 J**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	<1
	03/27/18	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	<1
	10/02/18	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	<1
	03/26/19	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	<1

APPENDIX E: GROUNDWATER HISTORICAL DATA SUMMARY

Well	Sample Date	Acetone	Benzene	2-Butanone (MEK)	Carbon disulfide	Cabon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Dibromochloromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	MTBE	4-Methyl-2-pentanone	Methylene Choiride	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Vinyl Chloride	Xylenes	1,1,1,2-Tetrachloroethane	n-Butylbenzene	sec-Butylbenzene	p-Isopropyltoluene	n-Propylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Naphthalene	1,4-Dioxane
MW-3	09/01/99	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	**11.4**	<2	**250**	<2	--	<10	<10	--	**4,700**	<2	<2	<2	**34.2**	<2	**1,480**	<2	<2	<2	<2	<2	<2	<2	<2	<2	--
	09/24/99	ND	ND	ND	ND	ND	ND	**12**	ND	ND	ND	**127**	**7.8**	**40.2**	**660**	**14**	ND	ND	ND	ND	ND	--	**2,040**	ND	**19.5**	**19.6**	**60.4**	**63**	**42.8**	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	05/16/00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**460**	ND	**247**	**2,540**	**40**	**21.4**	ND	ND	ND	ND	--	ND	**7.87**	**383**	ND	ND	**325**	**68.8**	ND	ND	ND	ND	ND	ND	ND	**1.84**	--
	07/10/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**133**	**11.2**	**167**	**1,570**	ND	**9.95**	ND	ND	ND	ND	--	**297**	**3.34**	ND	**78**	**86.6**	ND	**61.9**	ND	ND	ND	ND	ND	ND	ND	ND	--
	03/18/02	ND	ND	ND	ND	ND	ND	**50.7**	ND	ND	ND	**1,900**	**57.3**	**1,220**	**13,800**	**123**	**386**	ND	ND	ND	**19.6**	--	**125**	**121**	**1,740**	**727**	**2,180**	**1,420**	**1,530**	ND	ND	ND	ND	ND	**4.2**	**2.4**	**21.4**	--
	06/27/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**729**	**26.2**	**306**	**6,800**	**81.5**	**119**	ND	ND	ND	ND	--	**37.8**	**28.6**	**451**	**231**	**183**	**242**	**327.1**	ND	ND	ND	ND	ND	ND	ND	ND	--
	12/12/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3,040**	**26.2**	**2,560**	**20,600**	**240**	**900**	ND	ND	ND	ND	--	**147**	**228**	**451**	**231**	**1,610**	**1,260**	**3,828**	ND	ND	ND	ND	ND	ND	ND	ND	--
	03/11/03	ND	ND	ND	ND	ND	ND	**51.7**	ND	ND	ND	**3,060**	**68.5**	**2,740**	**17,700**	**190**	**669**	ND	ND	ND	ND	--	**709**	**253**	**4,600**	**1,670**	**3,870**	**1,810**	**2,912**	ND	ND	ND	ND	ND	**10.1**	**1.1**	**36.2**	--
	06/17/03	ND	ND	ND	ND	ND	ND	**5.38**	ND	ND	ND	ND	ND	**411**	**4,120**	**42.5**	**38**	ND	ND	ND	ND	--	**107**	**12**	**588**	**12.9**	**84**	**329**	**213**	ND	ND	ND	ND	ND	ND	ND	**5.98**	--
	08/14/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**214**	**17.3**	**176**	**2,760**	**88.4**	**12.6**	ND	ND	ND	ND	--	**40.9**	**4.46**	**145**	**105**	**50.9**	**136**	**60**	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/13/04	ND	ND	ND	ND	ND	ND	**3.29**	ND	ND	ND	**486**	ND	**480**	**1,600**	**53.2**	**1.29**	ND	ND	ND	**3.91**	--	**273**	ND	**316**	**144**	**185**	**195**	**8.38**	**316**	ND	ND	ND	ND	ND	ND	**3.20**	--
	06/02/04	ND	ND	ND	ND	ND	ND	**1.70**	ND	ND	ND	**264**	**5.7**	**175**	**1,600**	**21.7**	ND	ND	--	ND	**3.40**	--	**144**	ND	**78.2**	ND	**86.8**	**96.1**	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	10/07/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**270**	**1,920**	**35.3**	ND	ND	--	ND	ND	--	**251**	ND	ND	ND	**197**	**154**	**2.0**	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/18/05	ND	ND	ND	ND	ND	ND	**3.60**	ND	ND	ND	**208**	**7.3**	**189**	**2,060**	**31.3**	**2.6**	ND	--	ND	**5.1**	--	**277**	ND	**102**	**89.6**	**181**	**98.7**	**12.8**	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**122**	**1,440**	**18.2**	**4**	ND	ND	ND	ND	--	**455**	ND	ND	ND	**139**	**52.0**	**43.2**	ND	ND	ND	ND	ND	ND	ND	<5	--
	09/28/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**132**	**1,280**	**14.6**	ND	ND	ND	ND	ND	--	**228**	ND	ND	ND	**122**	**45.5**	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	12/20/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**186**	**3,500**	**18.8**	**4.86**	ND	ND	ND	ND	--	**763**	**1.77**	ND	ND	**521**	**62.7**	**43.2**	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/28/06	ND	ND	ND	ND	ND	ND	**5.65**	ND	ND	ND	**339**	**11.9**	**195**	**2,840**	**34.6**	ND	ND	ND	ND	ND	--	**108**	ND	**50.0**	**73.0**	**185**	**154**	**15.8**	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/27/06	<2	<1	<2	<1	<1	<1	**11.1 J**	<1	**1.95**	<1	**235**	**12.3**	**164**	**2,450**	**35.7**	**13**	<1	<1	<1	<1	--	**187**	**3.92**	**27.7**	**21.7**	**77.0**	**259**	**71.9**	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/29/07	**51.1**	<10	<20	<10	**111**	<10	**18.7**	<10	<10	<10	**1,200**	**32.2**	**954**	**13,100**	**140**	**339**	<10	<10	<10	**28.7**	--	**35**	**68.4**	**734**	**407**	**484**	**817**	**1,400**	<10	<10	<10	<10	<10	<10	<10	**11.2**	--
	09/07/07	<2,000	<100	<1,000	<100	<100	<100	<200	<100	<100	<100	**2,400**	<100	**2,300**	**29,000**	**220**	**820**	<100	<100	<1,000	<100	--	<100	**220**	**2,600**	**1,200**	**2,400**	**1,400**	**3,300**	<100	<100	<100	<100	<100	<100	<100	<100	--
	02/08/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1,500**	**34**	**1,100**	**15,000**	**120**	**410**	ND	ND	ND	**27**	--	**290**	**110**	**1,300**	**690**	**650**	**780**	**1,600**	ND	ND	ND	ND	ND	ND	ND	ND	--
	03/10/08	<2,000	<100	<1,000	<100	<100	<100	<200	<100	<100	<100	**1,800**	<100	**1,700**	**21,000**	**170**	**580**	<100	<100	<1,000	<100	--	<100	**170**	**1,700**	**650**	**1,000**	**1,100**	**2,300**	<100	<100	<100	<100	<100	<100	<100	<100	--
	09/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3,900**	ND	**3,000**	**46,000**	**300**	**1,200**	ND	ND	ND	ND	--	**760**	**400**	**2,900**	**3,200**	**2,900**	**1,600**	**4,500**	ND	ND	ND	ND	ND	ND	ND	ND	--
	04/20/09	<4,000	<200	<2,000	<200	<200	<200	<400	<200	<200	<200	**4,100**	<200	**3,800**	**42,000**	**370**	**1,300**	<200	<200	<2,000	<200	--	**1,500**	**520**	**4,400**	**4,200**	**5,600**	**1,700**	**4,800**	<200	<200	<200	<200	<200	<200	<200	<200	--
	09/09/09	<4,000	<200	<2,000	<200	<200	<200	<400	<200	<200	<200	**4,000**	<200	**2,500**	**45,000**	**320**	**920**	<200	<200	<2,000	<200	--	**320**	**380**	**2,400**	**3,800**	**1,400**	**710**	**3,600**	<200	<200	<200	<200	<200	<200	<200	<200	--
	03/03/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3,800**	ND	**2,400**	**45,000**	**270**	**1,100**	ND	ND	ND	ND	--	**290**	**390**	**2,400**	**3,100**	**1,000**	**1,700**	**4,600**	ND	ND	ND	ND	ND	ND	ND	ND	--
	10/08/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3,900**	ND	**2,100**	**41,000**	**320**	**920**	ND	ND	ND	ND	--	**380**	**350**	**1,400**	**2,700**	**1,600**	**2,200**	**3,600**	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/27/12	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	**4,140**	<2,500	<2,500	**46,100**	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	--	<2,500	<2,500	<2,500	**2,860**	<2,500	<2,500	<7,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	--
	10/02/14	**148**	<1	<50	**2.48**	<1	<1	<1	<1	<1	<1	**908**	**27.8**	**616**	**9,460**	**179**	**196**	<1	<1	<1	**21.2**	**11.8**	--	**2.43**	**77.0**	**20.3**	**87.8**	**17.8**	**709**	**817**	<1	<1	<1	**5.72**	<1	**2.27**	<1	**16.0**	--
	01/31/17	<4,000	<200	<2,000	<200	<200	<200	<400	<200	<200	<200	**890**	<200	**420**	**11,000**	**85 J**	**130 J**	<200	<200	<2,000	<200	<200	<200	<200	<200	<200	<200	**700**	**530**	--	--	--	--	--	--	--	--	**190**
	10/18/17	<2,000	<100	<1,000	<100	<100	<100	<200	<100	<100	<100	**680**	**43 J**	**330**	**7,300**	**53 J**	**90 J**	<100	<100	<1,000	<100	<100	<100	<100	<100	<100	<100	**520 J**	**320**	--	--	--	--	--	--	--	--	**130**
	03/27/18	<4,000	<200	<2,000	<200	<200	<200	<400	<200	<200	<200	**1,200**	<200	**690**	**16,000**	**170 J**	**330**	<200	<200	<2,000	<200	<200	<200	**110 J**	<200	<200	<200	**1,200**	**1,300**	--	--	--	--	--	--	--	--	**290**
	10/02/18	<10,000	<500	**1,600 J**	<500	<500	<500	<1,000	<500	<500	<500	**1,800**	<500	**950**	**24,000**	**270 J**	**530**	<500	<500	<5,000	<500	<500	<500	<500	<500	<500	<500	**2,000**	**2,100**	--	--	--	--	--	--	--	--	**350**
	03/27/19	<4,000	<200	<2,000	<200	<200	<200	<400	<200	<200	<200	**1,100**	<200	**540**	**15,000**	**120 J**	**310**	<200	<200	<2,000	<200	<200	<200	**97 J**	<200	<200	<200	**900**	**1,200**	--	--	--	--	--	--	--	--	**310**
MW-3D	09/03/99	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	--	<10	<10	--	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	--
	07/10/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**1.41**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	03/18/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.5**	**10.8**	ND	ND	ND	ND	ND	ND	--	**1.5**	ND	**1.8**	**1.6**	**2.7**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	03/11/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3.38**	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/17/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.39**	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	08/14/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3.6**	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/13/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	10/07/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.2**	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3.80**	ND	ND	ND	--	ND	ND	--	**1.00**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/28/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	12/20/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**0.39**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/28/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/27/06	<2	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	**1.0**	<1	<1	<1	<1	<1	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/29/07	<2	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/06/07	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	**1.5**	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/10/08	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	**1.7**	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3.6**	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	04/20/09	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/09/09	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	**2.8**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/03/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**3.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	10/08/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**5.5**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/27/12	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	--	<5	<5	<5	<5	<5	<5	<15	<5	<5	<5	<5	<5	<5	<5	<5	--
	10/02/14	<25	<1	<50	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<5	--	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<5	--
	02/01/17	<20	<1	<10	<1	<1	<1	<2	**0.63 J**	<1	<1	<1	<1	<1	**0.55 J**	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	<1
	10/18/17	<20	<1	**7.0 J**	<1	<1	<1	<2	**0.43 J**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	<1
	03/27/18	<20	<1	<1	<1	<1	<1	<2	**0.49 J**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	<1
	10/02/18	<20	<1	<1	<1	<1	<1	<2	**0.53 J**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	<1
	03/27/19	<20	<1	<1	<1	<1	<1	<2	**0.46 J**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	<1

APPENDIX E: GROUNDWATER HISTORICAL DATA SUMMARY

Well	Sample Date	Acetone	Benzene	2-Butanone (MEK)	Carbon disulfide	Cabon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Dibromochloromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	MTBE	4-Methyl-2-pentanone	Methylene Choiride	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Vinyl Chloride	Xylenes	1,1,1,2-Tetrachloroethane	n-Butylbenzene	sec-Butylbenzene	p-Isopropyltoluene	n-Propylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Naphthalene	1,4-Dioxane
MW-4	09/01/99	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	**2.9**	<2	<2	<2	--	<10	<10	--	**2.4**	<2	<2	<2	**7.4**	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	--
	09/24/99	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**4.5**	ND	ND	ND	ND	ND	ND	--	**2.2**	ND	ND	ND	**2**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	05/16/00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	03/18/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.6**	ND	ND	ND	ND	ND	ND	--	**1.0**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/27/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**4.31**	ND	ND	ND	ND	ND	ND	--	**3.13**	ND	ND	ND	**2.2**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	12/12/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**1.16**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	03/11/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/17/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	08/14/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.18**	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/13/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.30**	ND	ND	ND	--	ND	ND	--	**1.70**	ND	ND	ND	**1.60**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	10/07/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	**1.8**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/28/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.47**	ND	ND	ND	ND	ND	ND	--	**1.24**	ND	ND	ND	**1.01**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	12/20/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.82**	ND	0.66	ND	ND	ND	ND	--	**5.27**	ND	ND	ND	**2.95**	ND	2.45	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/26/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/27/06	<2	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	**1.18**	<1	<1	<1	<1	<1	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/30/07	<2	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	**10.2**	<1	<1	<1	<1	<1	<1	--	**2.11**	<1	<1	<1	**4.36**	<1	3.3	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/06/07	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	**2.7**	<1	<1	<1	<1	<1	<10	<1	--	**2.4**	<1	<1	<1	**2.2**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/10/08	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/22/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	--	**11**	ND	ND	ND	**19**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	04/20/09	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/09/09	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	**5.8**	<1	<1	<1	<1	<1	<10	<1	--	**4**	<1	<1	<1	**5**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/02/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	10/07/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.6**	ND	ND	ND	ND	ND	ND	--	**3.1**	ND	ND	ND	**3.3**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/27/12	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	--	<5	<5	<5	<5	<5	<5	<15	<5	<5	<5	<5	<5	<5	<5	<5	--
	10/01/14	<25	<1	<50	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**4.78**	<1	<1	<1	<1	<1	<10	<5	--	**3.99**	<1	<1	<1	**4.89**	<1	<2	<1	<1	<1	<1	<1	<1	<5	--
	02/02/17	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	**1.1**	<1	<1	<1	<1	<1	<10	<1	<1	**0.67 J**	<1	<1	<1	**1.3**	<1	<1	--	--	--	--	--	--	--	<1
	10/19/17	**2.0 J**	<1	**2.1 J**	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	**6.8**	<1	<1	<1	<1	<1	<10	<1	<1	**2.4**	<1	<1	**0.84 J**	**5.3**	<1	<1	--	--	--	--	--	--	--	**2.1 J**
	03/27/18	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	**6.8**	<1	<1	<1	<1	<1	<10	<1	<1	**4.6**	<1	<1	**0.99 J**	**5.9**	<1	<1	--	--	--	--	--	--	--	<1
	10/03/18	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	**5.9**	<1	<1	<1	<1	<1	<10	<1	<1	**2.0**	<1	<1	**0.67 J**	**4.7**	<1	<1	--	--	--	--	--	--	--	<1
	03/27/19	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	**4.1**	<1	<1	<1	<1	<1	<10	<1	<1	**2.4**	<1	<1	**0.67 J**	**4.6**	<1	<1	--	--	--	--	--	--	--	<1
MW-4D	07/10/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	03/18/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/27/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	12/12/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	03/11/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/17/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	08/14/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/13/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	10/07/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/28/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	12/20/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.24**	ND	ND	ND	ND	--	**2.01**	ND	ND	ND	**1.24**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.6**	--
	06/26/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/27/06	<2	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	**1.78**	<1	<1	<1	<1	--	<1	<1	<1	<1	<1	<1	**8.35**	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/30/07	<2	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	**21.6**	<1	**1.03**	<1	<1	<1	<1	--	**2.76**	<1	<1	<1	**6.91**	<1	**3.75**	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/06/07	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/10/08	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/22/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**1.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	04/20/09	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	**1.3**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/09/09	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	**1.2**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/02/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**1.3**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	10/07/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**1.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/27/12	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	--	<5	<5	<5	<5	<5	<5	<15	<5	<5	<5	<5	<5	<5	<5	--
	10/01/14	<25	<1	<50	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<5	--	**7.29**	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<5	--
	02/02/17	**3.5 J**	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	**5.3**	<1	<1	<1	**0.42 J**	<1	<1	--	--	--	--	--	--	--	<1
	10/19/17	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	**7.8**	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	<1
	03/27/18	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	**16**	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	<1
	10/03/18	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	**19**	<1	<1	<1	**0.41 J**	<1	<1	--	--	--	--	--	--	--	<1
	03/27/19	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	**19**	<1	<1	<1	**0.53 J**	<1	<1	--	--	--	--	--	--	--	<1

APPENDIX E: GROUNDWATER HISTORICAL DATA SUMMARY

Well	Sample Date	Acetone	Benzene	2-Butanone (MEK)	Carbon disulfide	Cabon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Dibromochloromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	MTBE	4-Methyl-2-pentanone	Methylene Choiride	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Vinyl Chloride	Xylenes	1,1,1,2-Tetrachloroethane	n-Butylbenzene	sec-Butylbenzene	p-Isopropyltoluene	n-Propylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Naphthalene	1,4-Dioxane
MW-5	05/16/00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6.87**	ND	**2.87**	ND	**6.03**	ND	ND	ND	ND	ND	--	**2,230**	ND	ND	ND	**1,970**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	07/10/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**4.77**	ND	**3.5**	**636**	**7.63**	ND	ND	ND	ND	ND	--	**872**	ND	ND	**2.53**	**1,190**	**9.09**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/21/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.9**	ND	**4.4**	**1140**	**10.7**	ND	ND	ND	ND	ND	--	**1,920**	ND	ND	ND	**2,710**	**7**	ND	ND	ND	ND	ND	ND	ND	ND	**9.5**	--
	03/18/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.9**	ND	**4.4**	**1160**	**13.2**	ND	ND	ND	ND	**1.2**	--	**2470**	ND	ND	**1.2**	**3380**	**8**	ND	ND	ND	ND	ND	ND	ND	ND	**12.3**	--
	04/19/02	ND	**15.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.2**	**5**	**953**	**11.1**	ND	ND	**12.3**	ND	ND	--	**1240**	ND	ND	ND	**2280**	**4.9**	ND	ND	ND	ND	ND	ND	ND	ND	**7.4**	--
	06/27/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3.88**	**1,280**	**21.9**	**25.1**	ND	ND	ND	ND	--	**1,700**	**1.56**	ND	ND	**2,560**	**4.41**	**144.6**	ND	ND	ND	ND	ND	ND	ND	**2.03**	--
	07/15/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3.46**	**1,290**	**21.4**	**1.63**	ND	ND	ND	ND	--	**1,350**	ND	ND	ND	**2,360**	**4.37**	**3.33**	ND	ND	ND	ND	ND	ND	ND	**2.11**	--
	12/16/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.62**	ND	**5.53**	**1,080**	**20.8**	ND	ND	ND	ND	ND	--	**1,850**	ND	ND	ND	**1,780**	**7.48**	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	03/11/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	1.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/17/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**978**	**23.7**	ND	ND	ND	ND	ND	--	**1,120**	ND	ND	ND	**1,560**	1.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	08/14/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.64**	**1,110**	**15.8**	ND	ND	ND	ND	ND	--	**1,570**	ND	ND	**1.55**	**1,630**	**2.55**	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/13/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.25**	ND	ND	**288**	**1.70**	ND	ND	ND	ND	ND	--	**1,330**	ND	ND	ND	**604**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/04	**123**	ND	ND	ND	ND	ND	ND	ND	ND	**2.60**	ND	ND	**4.40**	**1,120**	**14.0**	ND	ND	--	ND	ND	--	**1,160**	ND	ND	ND	**1,640**	**7.90**	**3.5**	ND	ND	ND	ND	ND	ND	ND	ND	--
	08/18/04	**354**	ND	ND	**36.8**	ND	ND	ND	ND	ND	ND	**4.40**	ND	**5.10**	**1,510**	**21.4**	ND	ND	--	ND	ND	--	**2,710**	ND	ND	ND	**2,210**	**7.20**	ND	ND	ND	ND	ND	ND	ND	ND	**18.2**	--
	10/07/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**4.6**	**2,000**	**18.6**	ND	ND	--	ND	ND	--	**1,820**	ND	ND	ND	**2,540**	**7.3**	ND	ND	ND	ND	ND	ND	ND	ND	**20.5**	--
	02/18/05	**261**	ND	**119**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6.00**	**1,040**	**26.3**	ND	ND	--	ND	ND	--	**630**	ND	ND	ND	**855**	**5.60**	ND	ND	ND	ND	ND	ND	ND	ND	**9.3**	--
	06/02/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6.00**	**1,860**	**20.9**	**1.5**	ND	--	ND	ND	--	**800**	ND	ND	ND	**1,870**	**7.00**	**6.4**	ND	ND	ND	ND	ND	ND	ND	**18.8**	--
	09/28/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6.79**	**3,010**	**26.2**	**2.53**	ND	--	ND	ND	--	**253**	ND	ND	ND	**1,530**	**6.99**	**11.3**	ND	ND	ND	ND	ND	ND	ND	**24.2**	--
	12/20/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**7.91**	**2,860**	**19.7**	**2.97**	ND	--	ND	ND	--	**184**	**0.25**	ND	ND	**764**	**5.08**	**12.7**	ND	ND	ND	ND	ND	ND	ND	**28.6**	--
	06/28/06	**607**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2,850**	**17.1**	ND	ND	ND	ND	ND	--	**336**	ND	ND	ND	**878**	**7.25**	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/27/06	**241**	<1	**5.20**	<1	<1	<1	<2	<1	**2.34**	<1	**4.16**	<1	**8.24**	**2,620**	**20.0**	<1	<1	<1	<1	<1	--	**275**	<1	<1	<1	**722**	**9.34**	**1.45**	<1	<1	**1.11**	<1	<1	<1	<1	**31.7**	--
	03/30/07	**509**	<10	<20	<10	<10	<10	<20	<10	<10	<10	**4.40**	<10	<10	**3,060**	**19.9**	<10	<10	<10	<10	<10	--	**326**	<10	<10	<10	**690**	**11.6**	<10	<10	<10	<10	<10	<10	<10	<10	19.0	--
	09/07/07	<400	<20	<200	<20	<20	<20	<40	<20	<20	<20	<20	<20	<20	**3,500**	**24**	<20	<20	<20	<200	<20	--	<20	<20	<20	<20	<20	**79**	<20	<20	<20	<20	<20	<20	<20	<20	<20	--
	03/11/08	<200	<10	<100	<10	<10	<10	<20	<10	<10	<10	<10	<10	<10	**2,200**	**16**	<10	<10	<10	<100	<10	--	**290**	<10	<10	<10	**560**	**43**	<10	<10	<10	<10	<10	<10	<10	<10	<10	--
	09/23/08	**360**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2,800**	**18.0**	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	**160**	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	04/20/09	<200	<10	<100	<10	<10	<10	<20	<10	<10	<10	<10	<10	<10	**2,400**	**15**	<10	<10	<10	<100	<10	--	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	--
	09/09/09	<200	<10	<100	<10	<10	<10	<20	<10	<10	<10	<10	<10	<10	**2,000**	**14**	<10	<10	<10	<100	<10	--	<10	<10	<10	<10	<10	**480**	<10	<10	<10	<10	<10	<10	<10	<10	<10	--
	03/02/10	ND	ND	ND	ND	**13**	ND	ND	ND	ND	ND	**6.3**	ND	**5.9**	**2,100**	**10**	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	**9.2**	ND	ND	ND	ND	ND	ND	ND	ND	**29**	--
	10/07/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1,600**	**9**	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	**81**	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/27/12	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**750**	<25	<25	<25	<25	<25	<25	--	**70.0**	<25	<25	<25	**244**	<25	<75	<25	<25	<25	<25	<25	<25	<25	<25	--
	02/02/17	<100	<5	<50	<5	<5	<5	<10	<5	<5	<5	**3.7 J**	<5	<5	**800**	**9.2**	<5	<5	<5	<50	<5	<5	**120**	<5	<5	<5	**170**	**6.6**	<5	--	--	--	--	--	--	--	--	**14**
	10/19/17	<200	<10	**30 J**	<10	<10	<10	<20	<10	<10	<10	<10	<10	<10	**490**	**6.6 J**	<10	<10	<10	<100	<10	<10	**110**	<10	<10	<10	**190**	**6.7 J**	<10	--	--	--	--	--	--	--	--	**7**
	03/28/18	<100	<5	<50	<5	<5	<5	<10	<5	<5	<5	**6.6**	<5	<5	**280**	**2.6 J**	<5	<5	<5	<50	<5	<5	**85**	<5	<5	**2.1 J**	**230**	**3.4 J**	<5	--	--	--	--	--	--	--	--	**10**
	10/03/18	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	**5.3**	**0.75 J**	**1.7**	**300**	**3.4**	<1	<1	<1	<10	<1	<1	**130**	<1	<1	**1.0**	**220**	**5.7**	<1	--	--	--	--	--	--	--	--	**7.6**
	03/27/19	<100	<5	<50	<5	<5	<5	<10	<5	<5	<5	**4.6 J**	<5	<5	**320**	**2.9 J**	<5	<5	<5	<50	<5	<5	**130**	<5	<5	<5	**250**	**3.5 J**	<5	--	--	--	--	--	--	--	--	**9.7**
MW-6R	09/27/12	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	--	<5	<5	<5	<5	<5	<5	<15	<5	<5	<5	<5	<5	<5	<5	<5	--
	10/02/14	<25	<1	<50	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<5	--	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<5	--
	01/31/17	<20	<1	<10	<1	<1	<1	<2	**0.62 J**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	<1
	10/18/17	<20	<1	**15**	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	<1
	03/27/18	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	<1
	10/03/18	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	<1
	03/26/19	**7.7 J**	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	<1
MW-7	04/10/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.42**	**982**	**7.47**	**69.2**	ND	ND	ND	ND	--	**758**	**11.1**	ND	ND	**677**	**20.6**	**395.4**	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/27/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.86**	**5,880**	**68.7**	**1,020**	**2.86**	ND	ND	ND	--	**7,860**	**69.3**	ND	ND	**4,150**	**190**	**3,430**	ND	ND	**1.38**	ND	ND	**1.48**	ND	ND	--
	08/09/01	ND	**1.2**	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.01	**24**	**10,900**	**53.5**	**1,010**	**11.6**	ND	ND	ND	--	**5.1**	**446**	ND	ND	**9.62**	**69.1**	**3,016**	ND	ND	ND	ND	ND	**120**	**26.3**	ND	--
	02/21/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**9.1**	**3,460**	**25.1**	**618**	ND	ND	ND	**5.2**	--	**6,250**	**35.3**	ND	ND	**3,690**	**136**	**3,219**	ND	ND	ND	ND	ND	ND	ND	ND	--
	03/18/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**12**	**7,250**	**46.3**	**1,580**	**7.7**	ND	ND	**5.9**	--	**16,400**	**70**	ND	**7.7**	**>6,920**	**240**	**8,000**	ND	ND	ND	ND	**2.3**	**4.9**	**12.5**	**3.1**	--
	04/19/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3.6**	**2,240**	**17**	**263**	**1.1**	ND	ND	ND	ND	--	**4,410**	**13.4**	ND	ND	**2,560**	**50.6**	**1,719**	ND	ND	ND	ND	ND	ND	**2**	ND	--
	06/27/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**8.06**	**4,140**	**39.1**	**332**	**2.65**	ND	ND	ND	ND	--	**4,630**	**25.9**	ND	**4.58**	**2,950**	**149**	**2,230**	ND	ND	ND	ND	ND	**1.31**	ND	ND	--
	07/15/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**8.89**	**4,150**	**52.6**	**809**	**4.08**	ND	ND	ND	ND	--	**7,760**	**39.3**	10.2	**6.4**	**4,270**	**55.2**	**4,270**	ND	ND	ND	ND	ND	**2.63**	**1.25**	**1.05**	--
	10/16/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**15.9**	**8,480**	**103**	**1900**	**13.8**	ND	ND	ND	ND	--	**11,700**	**89.4**	ND	**11.8**	**7,700**	**294**	**9,870**	ND	ND	ND	ND	**2.84**	**6.35**	**2.73**	**1.8**	--
	11/01/02	ND	**1.35**	ND	ND	ND	ND	ND	ND	ND	ND	**21.7**	**4,880**	**74**	**1,380**	**7.59**	ND	ND	ND	ND	--	**1,860**	**106**	ND	ND	**6,280**	ND	**7,230**	ND	ND	ND	ND	ND	**4.49**	**2.51**	ND	--
	12/12/02	ND	**1.14**	ND	ND	ND	ND	ND	ND	ND	ND	**20.9**	**6,440**	**78.8**	**1,450**	**11.7**	ND	ND	ND	ND	--	**9,980**	**116**	ND	**10**	**4,690**	**239**	**10,950**	ND	ND	ND	ND	**2.63**	**4.41**	**2.24**	ND	--
	06/17/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.1**	**2,480**	**61.8**	**356**	ND	ND	ND	ND	ND	--	**1,280**	**19**	ND	ND	**1,030**	**103**	**1,606**	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/13/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**7.89**	**6,660**	**97.3**	**2,190**	**12.9**	ND	ND	**9.44**	--	ND	**17.7**	--	**13,200**	**114**	ND	ND	**5,250**	**641**	**9,770**	ND	ND	ND	ND	**1.96**	**8.11**	**2.26**	**1.16**	--
	08/18/04	ND	ND	ND	**1.5**	ND	ND	ND	ND	ND	ND	**11.5**	**6,500**	**150**	**2,140**	**7.3**	--	ND	**17.7**	--	**12,300**	**57.2**	ND	ND	**5,900**	**137**	**9,000**	**5.00**	ND	ND	ND	**1.80**	**3.80**	**1.60**	ND	--
	02/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**7.50**	**780**	**35.0**	**1,110**	**6.50**	--	ND	**7.10**	--	**2,480**	**35.3**	ND	3.90	**1,280**	**104**	**4,170**	ND	ND	ND	ND	ND	**3.5**	**1.40**	ND	--
	06/02/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6.1**	**2,690**	**33.7**	**620**	ND	ND	ND	ND	ND	--	**6,440**	**26.8**	ND	ND	**3,090**	**81.9**	**2,810**	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/28/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**7.9**	**4,010**	**30.2**	ND	ND	ND	ND	ND	ND	--	**4,980**	**22.8**	ND	ND	**5,390**	**96.8**	**2,660**	ND	ND	ND	ND	ND	ND	ND	ND	--
	12/20/05	ND	**0.59**	ND	ND	ND	ND	ND	ND	ND	ND	**13.3**	**5,290**	**43.5**	**1,350**	ND	ND	ND	ND	ND	--	**6,560**	**59.0**	ND	ND	**4,840**	**156**	**5,440**	ND	ND	ND	ND	ND	ND	ND	**0.18**	--
	06/26/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2,930**	ND	**1,020**	ND	ND	ND	ND	--	**6,060**	ND	ND	ND	**4,640**	**120**	**4,040**	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/28/06	**2.44**	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	**8.60**	**2,480**	**15.5**	**625**	**5.63**	<1	<1	**1.54**	--	**2,900**	**23.0**	<1	**3.19**	**3,220**	**81.2**	**2,350**	**1.98**	<1	<1	<1	**1.24**	**3.25**	**1.17**	<1	--
	03/29/07	**21.0**	<1	**20.7**	**1.53**	<1	<1	<2	<1	<1	<1	<1	<1	**15.2**	**5,810**	**23.9**	**1,240**	**7.20**	<1	<1	**5.60**	--	**3,530**	**39.4**	**1.23**	**4.88**	**5,850**	**132**	**4,650**	<1	<1	<1	<1	**2.02**	**7.08**	**2.39**	<1	--
	09/07/07	<2,000	<100	<1,000	<100	<100	<100	<200	<100	<100	<100	<100	<100	<100	**21,000**	<100	**1,900**	<100	<100	<1,000	<100	--	<100	<100	<100	<100	**1,300**	**350**	**7,300**	<100	<100	<100	<100	<100	<100	<100	<100	--
	03/10/08	<400	<20	<200	<20	<20	<20	<40	<20	<20	<20	<20	<20	<20	**3,900**	<20	**340**	<20	<20	<200	<20	--	**41**	<20	<20	<20	**250**	**170**	**1,500**	<20	<20	<20	<20	<20	<20	<20	<20	--
	09/22/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**7,300**	ND	**810**	ND	ND	ND	ND	--	ND	**27.0**	ND	ND	**38**	**400**	**3,400**	ND	ND	ND	ND	ND	ND	ND	ND	--
	04/21/09	<200	<10	<100	<10	<10	<10	<20	<10	<10	<10	<10	<10	<10	**550**	<10	**200**	<10	<10	<100	<10	--	<10	<10	<10	<10	<10	**340**	**790**	<10	<10	<10	<10	<10	<10	<10	<10	--
	09/09/09	<200	<10	<100	<10	<10	<10	<20	<10	<10	<10	<10	<10	<10	**340**	<10	**750**	<10	<10	<100	<10	--	<10	**25**	<10	<10	<10	**450**	**3,300**	<10	<10	<10	<10	<10	<10	<10	<10	--
	03/02/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**870**	ND	**1,300**	ND	ND	ND	ND	--	ND	**33**	ND	ND	ND	**730**	**5,700**	ND	ND	ND	ND	ND	ND	ND	ND	--
	10/07/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**850**	ND	**210**	ND	ND	ND	ND	--	ND	**7.2**	ND	ND	ND	**140**	**870**	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/27/12	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	**1,890**	<100	**431**	<100	<100	<100	<100	--	<100	<100	<100	<100	<100	**472**	**1,720**	<100	<100	<100	<100	<100	<100	<100	<100	--
	10/02/14	<25	<1	<50	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**200**	**1.57**	**104**	<1	<1	<10	<5	--	<1	**2.82**	<1	<1	<1	**319**	**373**	<1	<1	<1	<1	<1	<1	<1	<5	--
	01/31/17	<100	<5	<50	<5	<5	<5	<10	<5	<5	<5	<5	<5	<5	**640**	<5	**84**	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	**200**	**320**	--	--	--	--	--	--	--	--	<1
	10/18/17	<400	<20	<200	<20	<20	<20	<40	<20	<20	<20	<20	<20	<20	**1,100**	<20	**130**	<20	<20	<200	<20	<20	<20	<20	<20	<20	<20	**710**	**420**	--	--	--	--	--	--	--	--	<1
	03/27/18	<400	<20	<200	<20	<20	<20	<40	<20	<20	<20	<20	<20	<20	**1,700 J**	<20	**100**	<20	<20	<200	<20	<20	<20	<20	<20	<20	<20	**460**	**310**	--	--	--	--	--	--	--	--	<1
	10/03/18	<1,000	<50	<500	<50	<50	<50	<100	<50	<50	<50	<50	<50	<50	**3,100**	<50	**220**	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	**510**	**960**	--	--	--	--	--	--	--	--	<1
	03/26/19	<100	<5	<50	<5	<5	<5	<10	<5	<5	<5	<5	<5	<5	**440**	<5	**79**	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	**200**	**210**	--	--	--	--	--	--	--	--	<1

APPENDIX E: GROUNDWATER HISTORICAL DATA SUMMARY

Well	Sample Date	Acetone	Benzene	2-Butanone (MEK)	Carbon disulfide	Cabon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Dibromochloromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	MTBE	4-Methyl-2-pentanone	Methylene Choiride	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Vinyl Chloride	Xylenes	1,1,1,2-Tetrachloroethane	n-Butylbenzene	sec-Butylbenzene	p-Isopropyltoluene	n-Propylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Naphthalene	1,4-Dioxane
MW-8	02/13/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	10/07/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**20.5**	ND	**9.1**	ND	--	ND	ND	--	**50.6**	ND	ND	ND	**39.5**	ND	**32.5**	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/28/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	12/20/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.28**	--
	06/26/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**1.93**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/28/06	<2	<1	<2	<1	<1	<1	<2	<1	**2.57**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/29/07	<2	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	**11.6**	<1	<1	<1	<1	<1	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/06/07	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/10/08	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/22/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	**1.9**	ND	ND	ND	ND	ND	ND	ND	ND	--
	04/21/09	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/09/09	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/03/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	10/08/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	03/27/18	**4.2 J**	<1	<10	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1.1	--	--	--	--	--	--	--	--	**1.7 J**
	10/03/18	<20	<1	<10	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1.1	--	--	--	--	--	--	--	--	**2.3 J**
	03/26/19	**11 J**	<1	<10	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1.1	--	--	--	--	--	--	--	--	**3.2**
MW-9	03/18/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	12/16/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**3.31**	ND	ND	ND	**2.75**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	08/14/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/13/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	10/07/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/28/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	12/20/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.28**	ND	ND	ND	ND	ND	ND	--	**1.49**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.56**	--
	06/28/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/27/06	<2	<1	<2	<1	<1	<1	<2	<1	**1.72**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/29/07	<2	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	**7.69**	<1	**1.94**	<1	<1	<1	<1	--	**4.31**	<1	<1	<1	<1	**12.4**	<1	**7.58**	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/07/07	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/10/08	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	04/21/09	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/10/09	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/03/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	10/08/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	03/27/18	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	<1
	10/03/18	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	<1
	03/26/19	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	<1
MW-10	07/10/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.33**	ND	ND	ND	ND	ND	ND	--	**8.63**	ND	ND	ND	**3.58**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	03/18/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3.4**	ND	ND	ND	ND	ND	**1.2**	--	**7.9**	ND	ND	ND	**3.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/27/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.5**	ND	ND	ND	ND	ND	ND	--	**8.7**	ND	ND	ND	**3.47**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	12/12/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**4.27**	ND	ND	ND	ND	ND	ND	--	--	ND	ND	ND	**1.15**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	03/11/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.74**	ND	ND	ND	ND	ND	ND	--	**16.6**	ND	ND	ND	**3.34**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/17/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.13**	ND	ND	ND	ND	ND	ND	--	**7.55**	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	08/14/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3.35**	ND	ND	ND	ND	ND	ND	--	**4.38**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/13/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	**1.19**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.50**	ND	ND	ND	--	ND	ND	--	**10.7**	ND	ND	ND	**2.40**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	10/07/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.0**	ND	ND	ND	--	ND	ND	--	**6.0**	ND	ND	ND	**1.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.0**	ND	ND	ND	--	ND	ND	--	**2.6**	ND	ND	ND	**1.0**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**1.8**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/28/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.7**	ND	ND	ND	ND	ND	ND	--	**1.2**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	12/20/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.9**	ND	ND	ND	ND	ND	ND	--	**1.5**	ND	ND	ND	**1.4**	ND	0.39	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/26/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**2.69**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/28/06	<2	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	**1.29**	<1	<1	<1	<1	<1	<1	--	**4.11**	<1	<1	<1	**1.12**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/29/07	<2	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	**19.8**	<1	**3.19**	<1	<1	<1	<1	--	**7.52**	<1	<1	<1	**23.5**	<1	**12.0**	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/07/07	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/11/08	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/22/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	04/21/09	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/10/09	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/02/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	10/07/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/27/12	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	--	<5	<5	<5	<5	<5	<5	<15	<5	<5	<5	<5	<5	<5	<5	<5	--
	10/01/14	<25	<1	<50	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<5	--	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<5	--
	02/01/17	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	<1
	10/18/17	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	<1
	03/28/18	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	<1
	10/03/18	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	<1
	03/27/19	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	<1

APPENDIX E: GROUNDWATER HISTORICAL DATA SUMMARY

Well	Sample Date	Acetone	Benzene	2-Butanone (MEK)	Carbon disulfide	Cabon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Dibromochloromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	MTBE	4-Methyl-2-pentanone	Methylene Choiride	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Vinyl Chloride	Xylenes	1,1,1,2-Tetrachloroethane	n-Butylbenzene	sec-Butylbenzene	p-Isopropyltoluene	n-Propylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Naphthalene	1,4-Dioxane
MW-11	03/18/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.2**	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	08/14/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/13/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	10/07/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/28/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	12/20/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.32**	ND	ND	ND	ND	ND	ND	ND	--	**1.05**	ND	ND	ND	**0.44**	ND	**0.36**	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/28/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/09/09	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/27/12	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	--	<5	<5	<5	<5	<5	<5	<5	<15	<5	<5	<5	<5	<5	<5	<5	--
	10/01/14	<25	<1	<50	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<5	--	<1	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	--
	02/01/17	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	<1
	10/19/17	**2.5 J**	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	<1
	03/28/18	**3.1 J**	<1	<10	**12**	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	<1
	10/03/18	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	<1
	03/27/19	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	<1
MW-12	03/18/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.3**	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	12/12/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	03/11/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.49**	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/17/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	08/14/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	**2.47**	ND	ND	ND	ND	**1.9**	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/13/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	10/07/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/28/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	12/20/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/26/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/28/06	<2	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
MW-13	08/14/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**37.4**	ND	ND	ND	ND	ND	ND	--	ND	**2.47**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/13/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**11.9**	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.10**	ND	**2.2**	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.5**	ND	ND	ND	--	ND	ND	--	ND	**2.0**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3**	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/28/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.7**	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	12/20/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.59**	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/26/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.72**	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
MW-14	08/14/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/13/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	**1.23**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	**11.4**	ND	ND	**2.60**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	**1.90**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	**2.10**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/28/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	**2.24**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	12/20/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.54**	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	**2.10**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/26/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	**1.66**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/10/09	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/27/12	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	--	<5	<5	<5	<5	<5	<5	<5	<15	<5	<5	<5	<5	<5	<5	<5	--
	10/01/14	<25	<1	<50	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<5	--	<1	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	--
	02/01/17	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--
	10/18/17	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	<1
	03/28/18	<20	<1	<10	**16**	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	<1
	10/03/18	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	<1
	03/27/19	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	<1
MW-15	09/27/12	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	--	<5	<5	<5	<5	<5	<5	<5	<15	<5	<5	<5	<5	<5	<5	<5	--
	10/01/14	<25	<1	<50	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<5	--	<1	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	--
	02/01/17	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	<1
	10/18/17	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	<1
	03/27/18	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	<1
	10/03/18	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	<1
	03/26/19	**2.7 J**	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	<1
MW-16	10/19/17	**2.2 J**	<1	<10	<1	<1	<1	<2	**1.9**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	<1
	03/27/18	<20	<1	<10	<1	<1	<1	<2	**1.9**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	<1
	10/03/18	<20	<1	<10	<1	<1	<1	<2	**1.8**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	<1
	03/26/19	<20	<1	<10	<1	<1	<1	<2	**1.6**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	<1

APPENDIX E: GROUNDWATER HISTORICAL DATA SUMMARY

Well	Sample Date	Acetone	Benzene	2-Butanone (MEK)	Carbon disulfide	Cabon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Dibromochloromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	MTBE	4-Methyl-2-pentanone	Methylene Choiride	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Vinyl Chloride	Xylenes	1,1,1,2-Tetrachloroethane	n-Butylbenzene	sec-Butylbenzene	p-Isopropyltoluene	n-Propylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Naphthalene	1,4-Dioxane
WATER SUPPLY WELLS																																						
	12/12/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.26**	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	**2.17**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	03/11/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/17/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	08/14/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	**1.23**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/13/04	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	10/07/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.23**	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.23**	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/28/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
WS-1	12/20/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.92**	ND	**0.38**	ND	ND	ND	ND	--	**2.98**	ND	ND	ND	**1.62**	ND	**0.97**	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/26/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	09/28/06	<2	<1	<2	<1	<1	<1	<2	<1	**1.55**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/30/07	<2	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/06/07	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/10/08	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/22/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	04/21/09	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	09/09/09	<20	<1	<10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	03/02/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	10/07/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	12/12/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.03**	ND	ND	ND	ND	ND	ND	--	**2.17**	ND	ND	ND	**3.55**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	03/11/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	**1.19**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/17/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
WS-3	08/14/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**37.4**	ND	ND	ND	ND	ND	ND	--	ND	**2.5**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	02/13/04	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	**11.9**	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	06/02/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	10/07/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--

Notes:
Concentrations reported in micrograms per liter
< - concentration less than the stated reporting limit (RL), practical quantitation limit (PQL) or Limit of Quantitation (LOQ); detection limit for 1,4-dioxane is the detection limit (DL)
ND - not detected above the RL , PQL or LOQ (limits not provided)
J - estimated concentration
-- constituent not analyzed

Prepared by: JLF 4/12/19
Checked by: CDN 4/15/19

Appendix F

Ricker Method® Plume Stability Analysis Input Data and Metrics Summary

Ricker Method® Plume Stability Analysis Input Data

Ricker Method® Input Data: PCE Upper Shallow

	Sep. 1999	Mar. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002	Mar. 2003	Sep. 2003
MW-1	79	<2.0	16	5.6	4.6	18	4.4	<2.0
MW-2	6.9	8.0	NS (7.4)	7.1	7.2	8.8	4.0	3.6
MW-3	4,700	<2.0	NS (198)	297	125	147	709	41
MW-4	2.4	<2.0	NS (2.6)	NS (2.8)	3.1	1.2	<2.0	<2.0
MW-5	NA	2,230	NS (1,327)	872	2,470	1,850	1,120	1,570
MW-6R	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	NA	NA	7,860	5.1	16,400	11,700	1,280	NS (7,273)
MW-8	NA	NA	NA	NA	NA	NA	NA	NA
MW-9	NA	NA	NA	NA	<2.0	3.3	NS (2.7)	<2.0
MW-10	NA	NA	NA	8.6	8.7	NS (13)	17	4.4
MW-11	NA	NA	NA	NA	<2.0	NS (<2.0)	NS (<2.0)	<2.0
MW-12	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0
MW-13	NA	NA	NA	NA	NA	NA	NA	<2.0
MW-14	NA	NA	NA	NA	NA	NA	NA	<2.0
MW-15	NA	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: PCE Upper Shallow

	Mar. 2004	Sep. 2004	Mar. 2005	Sep. 2005	Mar. 2006	Sep. 2006	Mar. 2007	Sep. 2007
MW-1	6.0	<2.0	18	0.94	<1.0	<1.0	8.6	<5.0
MW-2	4.0	4.4	4.2	2.7	1.3	NS (1.3)	NS (1.3)	NS (1.3)
MW-3	273	251	455	763	108	187	35	<100 (100)
MW-4	1.7	1.8	<5.0	5.3	<1.0	<1.0	2.1	2.4
MW-5	1,330	2,710	800	253	336	275	326	<20 (20)
MW-6R	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	13,200	12,300	6,440	6,560	6,060	2,900	3,530	<100 (100)
MW-8	<2.0	<2.0	51	<5.0	1.9	<1.0	<1.0	<1.0
MW-9	<2.0	<2.0	<5.0	1.5	<1.0	<1.0	4.3	<1.0
MW-10	11	6.0	2.6	1.5	2.7	4.1	7.5	<1.0
MW-11	<2.0	<2.0	<5.0	1.1	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-12	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	NS (<1.0)	NS (<1.0)
MW-13	<2.0	NS (<2.0)	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	<2.0	NS (<2.0)	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-15	NA	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: PCE Upper Shallow

	Mar. 2008	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Sep. 2010
MW-1	<20 (5.0)	<1.0	<2.0	<20 (2.0)	<1.0	<1.0
MW-2	NS (1.3)	NS (1.3)	NS (1.3)	NS (1.3)	1.3	<1.0
MW-3	290	760	1,500	320	290	380
MW-4	<1.0	11	<1.0	4.0	<1.0	3.1
MW-5	290	<1.0	<10	<10 (1.0)	<1.0	<1.0
MW-6R	NA	NA	NA	NA	NA	NA
MW-7	41	<1.0	<10	<10 (1.0)	<1.0	<1.0
MW-8	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-11	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	NS (<1.0)	NS (<1.0)
MW-12	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-13	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	NS (<1.0)	NS (<1.0)
MW-15	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: PCE Upper Shallow

	Sep. 2012	Sep. 2014	Feb. 2017	Oct. 2017	Mar. 2018	Oct. 2018	Mar. 2019
MW-1	<100 (1.0)	<1.0	<20 (3.1)	<10 (3.7)	<5.0	<20 (4.5)	4.9
MW-2	<5.0	<1.0	4.8	<1.0	<1.0	<1.0	<1.0
MW-3	<2,500 (191)	2.4	<200 (2.0)	<100 (2.0)	<200 (2.0)	<500 (2.0)	<200 (2.0)
MW-4	<5.0	4.0	0.67	2.4	4.6	2.0	2.4
MW-5	70	NS (93)	120	110	85	130	130
MW-6R	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-7	<100 (1.0)	<1.0	<5.0	<20 (1.0)	<20 (1.0)	<50 (1.0)	<5.0
MW-8	<5.0	<1.0	NS (<1.0)	<1.0	<1.0	<1.0	<1.0
MW-9	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-10	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-11	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-12	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-13	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-15	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-16	NA	NA	NA	<1.0	<1.0	<1.0	<1.0

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: TCE Upper Shallow

	Sep. 1999	Mar. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002	Mar. 2003
MW-1	60	29	24	8.9	8.0	14	5.0
MW-2	<2.0	2.0	NS (2.0)	<2.0	<2.0	<2.0	<2.0
MW-3	60	<2.0	NS (58)	87	2,180	1,610	3,870
MW-4	7.4	<2.0	NS (2.1)	NS (2.2)	2.2	<2.0	<2.0
MW-5	NA	1,970	NS (1,451)	1,190	3,380	2,360	1,560
MW-6R	NA	NA	NA	NA	NA	NA	NA
MW-7	NA	NA	4,150	9.6	3,690	7,700	1,030
MW-8	NA	NA	NA	NA	NA	NA	NA
MW-9	NA	NA	NA	NA	<2.0	2.8	NS (2.4)
MW-10	NA	NA	NA	3.6	3.5	1.2	3.3
MW-11	NA	NA	NA	NA	<2.0	NS (<2.0)	NS (<2.0)
MW-12	NA	NA	NA	NA	<2.0	<2.0	<2.0
MW-13	NA	NA	NA	NA	NA	NA	NA
MW-14	NA	NA	NA	NA	NA	NA	NA
MW-15	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: TCE Upper Shallow

	Sep. 2003	Mar. 2004	Sep. 2004	Mar. 2005	Sep. 2005	Mar. 2006	Sep. 2006
MW-1	<2.0	4.2	1.5	9.1	2.4	<1.0	1.5
MW-2	<2.0	<2.0	<2.0	<5.0	<5.0	<1.0	NS (<1.0)
MW-3	51	185	197	181	521	185	77
MW-4	<2.0	1.6	<2.0	<5.0	3.0	<1.0	<1.0
MW-5	1,630	1,640	2,540	1,870	1,530	878	722
MW-6R	NA	NA	NA	NA	NA	NA	NA
MW-7	NS (3,152)	5,250	5,900	3,090	5,390	4,640	3,220
MW-8	NA	<2.0	<2.0	40	<5.0	<1.0	<1.0
MW-9	<2.0	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0
MW-10	<2.0	2.4	1.4	1.0	1.4	<1.0	1.1
MW-11	<2.0	<2.0	<2.0	<5.0	0.44	<1.0	NS (<1.0)
MW-12	<2.0	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0
MW-13	<2.0	<2.0	NS (<2.0)	<5.0	<5.0	<1.0	NS (<1.0)
MW-14	<2.0	2.6	NS (2.3)	2.1	2.2	1.7	NS (1.6)
MW-15	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: TCE Upper Shallow

	Mar. 2007	Sep. 2007	Mar. 2008	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010
MW-1	14	<5.0	<20 (2.0)	<1.0	<2.0	<20 (2.0)	<1.0
MW-2	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0
MW-3	484	2,400	1,000	2,900	5,600	1,400	1,000
MW-4	4.4	2.2	<1.0	19	<1.0	5.0	<1.0
MW-5	690	<20 (20)	560	<1.0	<10 (1.0)	<10 (1.0)	<1.0
MW-6R	NA	NA	NA	NA	NA	NA	NA
MW-7	5,850	1,300	250	38	<10 (1.0)	<10 (1.0)	<1.0
MW-8	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-9	12	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-10	24	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-11	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	NS (<1.0)
MW-12	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-13	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	NS (1.5)	NS (1.4)	NS (1.3)	NS (1.2)	NS (1.1)	<1.0	NS (<1.0)
MW-15	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: TCE Upper Shallow

	Sep. 2010	Sep. 2012	Sep. 2014	Feb. 2017	Oct. 2017	Mar. 2018	Oct. 2018
MW-1	<1.0	<100 (1.0)	<1.0	<20 (3.9)	<10 (4.6)	<5.0 (5.1)	<20 (5.8)
MW-2	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-3	1,600	<2,500 (808)	18	<200 (20)	<100 (20)	<200 (20)	<500 (20)
MW-4	3.3	<5.0	4.9	1.3	5.3	5.9	4.7
MW-5	<1.0	244	NS (211)	170	190	230	220
MW-6R	NA	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-7	<1.0	<100 (1.0)	<1.0	<5.0	<20 (1.0)	<20 (1.0)	<50 (1.0)
MW-8	<1.0	<5.0	<1.0	NS (<1.0)	<1.0	<1.0	<1.0
MW-9	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-10	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-11	NS (<1.0)	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-12	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-13	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	NS (<1.0)	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-15	NA	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-16	NA	NA	NA	NA	<1.0	<1.0	<1.0

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: TCE Upper Shallow

	Mar. 2019
MW-1	6.3
MW-2	<1.0
MW-3	<200 (20)
MW-4	4.6
MW-5	250
MW-6R	<1.0
MW-7	<5.0
MW-8	<1.0
MW-9	NS (<1.0)
MW-10	<1.0
MW-11	<1.0
MW-12	NS (<1.0)
MW-13	NS (<1.0)
MW-14	<1.0
MW-15	<1.0
MW-16	<1.0

Ricker Method® Input Data: cis-1,2-DCE Upper Shallow

	Sep. 1999	Mar. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002	Mar. 2003	Sep. 2003
MW-1	18,000	17,600	10,600	8,580	5,090	6,550	8,820	6,130
MW-2	<2.0	<2.0	NS (<2.0)	<2.0	<2.0	<2.0	<2.0	<2.0
MW-3	660	2,540	NS (1,895)	1,570	6,800	20,600	17,700	2,760
MW-4	4.5	<2.0	NS (3.2)	NS (3.7)	4.3	<2.0	<2.0	1.2
MW-5	NA	<2.0	NS (424)	636	1,280	1,290	978	1,110
MW-6R	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	NA	NA	5,880	10,900	4,140	8,480	2,480	NS (4,581)
MW-8	NA	NA	NA	NA	NA	NA	NA	NA
MW-9	NA	NA	NA	NA	<2.0	<2.0	NS (<2.0)	<2.0
MW-10	NA	NA	NA	2.3	5.5	4.3	1.7	3.4
MW-11	NA	NA	NA	NA	<2.0	NS (<2.0)	NS (<2.0)	<2.0
MW-12	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0
MW-13	NA	NA	NA	NA	NA	NA	NA	37
MW-14	NA	NA	NA	NA	NA	NA	NA	<2.0
MW-15	NA	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: cis-1,2-DCE Upper Shallow

	Mar. 2004	Sep. 2004	Mar. 2005	Sep. 2005	Mar. 2006	Sep. 2006	Mar. 2007	Sep. 2007
MW-1	12,300	5,200	8,200	12,400	5,280	7,530	3,120	700
MW-2	<2.0	<2.0	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-3	1,600	1,920	2,060	3,500	2,840	2,450	13,100	29,000
MW-4	2.3	<2.0	<5.0	2.5	<1.0	1.2	10	2.7
MW-5	1,120	2,000	1,860	3,010	2,850	2,620	3,060	3,500
MW-6R	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	6,660	6,500	2,690	5,290	2,930	2,480	5,810	21,000
MW-8	<2.0	<2.0	21	<5.0	<1.0	<1.0	12	<1.0
MW-9	<2.0	<2.0	<5.0	0.28	<1.0	<1.0	7.7	<1.0
MW-10	1.5	2.0	1.0	1.9	<1.0	1.3	20	<1.0
MW-11	<2.0	<2.0	<5.0	0.32	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-12	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	NS (<1.0)	NS (<1.0)
MW-13	12	NS (7.4)	3.0	2.7	1.7	NS	NS	NS
MW-14	<2.0	NS (<2.0)	<5.0	0.54	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-15	NA	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: cis-1,2-DCE Upper Shallow

	Mar. 2008	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Sep. 2010	Sep. 2012	Sep. 2014
MW-1	4,800	2,200	2,800	6,500	5,300	1,200	1,650	734
MW-2	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	<1.0	<5.0	<1.0
MW-3	21,000	46,000	42,000	45,000	45,000	41,000	46,100	9,460
MW-4	<1.0	11	<1.0	5.8	<1.0	2.6	<5.0	4.8
MW-5	2,200	2,800	2,400	2,000	2,100	1,600	750	NS (750)
MW-6R	NA	NA	NA	NA	NA	NA	<5.0	<1.0
MW-7	3,900	7,300	550	340	870	850	1,890	200
MW-8	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0
MW-9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS (<1.0)	NS (<1.0)
MW-10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0
MW-11	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	NS (<1.0)	NS (<1.0)	<5.0	<1.0
MW-12	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-13	NS	NS	NS	NS	NS	NS	NS	NS
MW-14	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	NS (<1.0)	NS (<1.0)	<5.0	<1.0
MW-15	NA	NA	NA	NA	NA	NA	<5.0	<1.0
MW-16	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: cis-1,2-DCE Upper Shallow

	Feb. 2017	Oct. 2017	Mar. 2018	Oct. 2018	Mar. 2019
MW-1	1,800	1,100	420	890	1,400
MW-2	<1.0	<1.0	<1.0	<1.0	<1.0
MW-3	11,000	7,300	16,000	24,000	15,000
MW-4	1.1	6.8	6.8	5.9	4.1
MW-5	800	490	280	300	320
MW-6R	<1.0	<1.0	<1.0	<1.0	<1.0
MW-7	640	1,100	1,700	3,100	440
MW-8	NS (<1.0)	<1.0	<1.0	<1.0	<1.0
MW-9	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-10	<1.0	<1.0	<1.0	<1.0	<1.0
MW-11	<1.0	<1.0	<1.0	<1.0	<1.0
MW-12	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-13	NS	NS	NS	NS	NS
MW-14	<1.0	<1.0	<1.0	<1.0	<1.0
MW-15	<1.0	<1.0	<1.0	<1.0	<1.0
MW-16	NA	<1.0	<1.0	<1.0	<1.0

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: trans-1,2-DCE Upper Shallow

	Sep. 1999	Mar. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002	Mar. 2003	Sep. 2003
MW-1	60	361	78	54	24	80	48	15
MW-2	<2.0	<2.0	NS (<2.0)	<2.0	<2.0	<2.0	<2.0	<2.0
MW-3	14	40	NS (15)	<2.0	123	240	190	88
MW-4	<2.0	<2.0	NS (<2.0)	NS (<2.0)	<2.0	<2.0	<2.0	<2.0
MW-5	NA	6.0	NS (7.1)	7.6	22	21	24	16
MW-6R	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	NA	NA	69	54	46	103	62	NS (80)
MW-8	NA	NA	NA	NA	NA	NA	NA	NA
MW-9	NA	NA	NA	NA	<2.0	<2.0	NS (<2.0)	<2.0
MW-10	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	<2.0
MW-11	NA	NA	NA	NA	<2.0	NS (<2.0)	NS (<2.0)	<2.0
MW-12	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0
MW-13	NA	NA	NA	NA	NA	NA	NA	<2.0
MW-14	NA	NA	NA	NA	NA	NA	NA	<2.0
MW-15	NA	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: trans-1,2-DCE Upper Shallow

	Mar. 2004	Sep. 2004	Mar. 2005	Sep. 2005	Mar. 2006	Sep. 2006	Mar. 2007	Sep. 2007
MW-1	153	49	58	133	<1.0	32	14	<5.0
MW-2	<2.0	<2.0	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-3	53	35	31	19	35	36	140	220
MW-4	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0
MW-5	14	21	26	26	17	20	20	24
MW-6R	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	97	150	35	44	<1.0	16	24	<100 (16)
MW-8	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0
MW-9	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0
MW-10	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0
MW-11	<2.0	<2.0	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-12	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	NS (<1.0)	NS (<1.0)
MW-13	<2.0	NS (<2.0)	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	<2.0	NS (<2.0)	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-15	NA	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: trans-1,2-DCE Upper Shallow

	Mar. 2008	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Sep. 2010	Sep. 2012	Sep. 2014
MW-1	22	<1.0	15	28	21	5.6	<100 (5.0)	4.3
MW-2	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	<1.0	<5.0	<1.0
MW-3	170	300	370	320	270	320	<2,500 (250	179
MW-4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0
MW-5	16	18	15	14	10	9.2	<25 (9.2)	NS (9.2)
MW-6R	NA	NA	NA	NA	NA	NA	<5.0	<1.0
MW-7	<20 (8.7)	<1.0	<10 (1.0)	<10 (1.0)	<1.0	<1.0	<100 (1.0)	1.6
MW-8	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0
MW-9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS (<1.0)	NS (<1.0)
MW-10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0
MW-11	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	NS (<1.0)	NS (<1.0)	<5.0	<1.0
MW-12	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-13	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	NS (<1.0)	NS (<1.0)	<5.0	<1.0
MW-15	NA	NA	NA	NA	NA	NA	<5.0	<1.0
MW-16	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: trans-1,2-DCE Upper Shallow

	Feb. 2017	Oct. 2017	Mar. 2018	Oct. 2018	Mar. 2019
MW-1	<20 (9.6)	11	2.0	<20 (3.6)	4.8
MW-2	<1.0	<1.0	<1.0	<1.0	<1.0
MW-3	85	53	170	270	120
MW-4	<1.0	<1.0	<1.0	<1.0	<1.0
MW-5	9.2	6.6	2.6	3.4	2.9
MW-6R	<1.0	<1.0	<1.0	<1.0	<1.0
MW-7	<5.0	<20 (1.0)	<20 (1.0)	<50 (1.0)	<5.0
MW-8	NS (<1.0)	<1.0	<1.0	<1.0	<1.0
MW-9	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-10	<1.0	<1.0	<1.0	<1.0	<1.0
MW-11	<1.0	<1.0	<1.0	<1.0	<1.0
MW-12	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-13	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	<1.0	<1.0	<1.0	<1.0	<1.0
MW-15	<1.0	<1.0	<1.0	<1.0	<1.0
MW-16	NA	<1.0	<1.0	<1.0	<1.0

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: 1,1-DCE Upper Shallow

	Sep. 1999	Mar. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002	Mar. 2003	Sep. 2003
MW-1	26	68	27	<2.0	12	19	20	1.3
MW-2	<2.0	<2.0	NS (<2.0)	<2.0	<2.0	<2.0	<2.0	<2.0
MW-3	40	247	NS (194)	167	1,220	2,560	2,740	176
MW-4	<2.0	<2.0	NS (<2.0)	NS (<2.0)	<2.0	<2.0	<2.0	<2.0
MW-5	NA	2.9	NS (3.3)	3.5	5.0	5.5	<2.0	2.6
MW-6R	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	NA	NA	2.9	24	12	22	5.1	NS (6.5)
MW-8	NA	NA	NA	NA	NA	NA	NA	NA
MW-9	NA	NA	NA	NA	<2.0	<2.0	NS (<2.0)	<2.0
MW-10	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	<2.0
MW-11	NA	NA	NA	NA	<2.0	NS (<2.0)	NS (<2.0)	<2.0
MW-12	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0
MW-13	NA	NA	NA	NA	NA	NA	NA	<2.0
MW-14	NA	NA	NA	NA	NA	NA	NA	<2.0
MW-15	NA	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: 1,1-DCE Upper Shallow

	Mar. 2004	Sep. 2004	Mar. 2005	Sep. 2005	Mar. 2006	Sep. 2006	Mar. 2007	Sep. 2007
MW-1	25	18	16	18	<1.0	18	14	<5.0
MW-2	<2.0	<2.0	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-3	480	270	189	186	195	164	954	2,300
MW-4	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0
MW-5	4.4	5.1	6.0	7.9	<1.0	8.2	<10 (5.0)	<20 (5.0)
MW-6R	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	7.9	12	7.5	13	<1.0	8.6	15	<100 (10)
MW-8	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0
MW-9	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0
MW-10	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0
MW-11	<2.0	<2.0	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-12	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	NS (<1.0)	NS (<1.0)
MW-13	<2.0	NS (<2.0)	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	<2.0	NS (<2.0)	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-15	NA	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: 1,1-DCE Upper Shallow

	Mar. 2008	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Sep. 2010	Sep. 2012	Sep. 2014
MW-1	<20	<1.0	5.3	<20	<1.0	2.0	<100 (1.0)	1.8
MW-2	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	<1.0	<5.0	<1.0
MW-3	1,700	3,000	3,800	2,500	2,400	2,100	<2,500 (1,250)	616
MW-4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0
MW-5	<10 (5.0)	<1.0	<10	<10	5.9	<1.0	<25 (2.5)	NS (<2.5)
MW-6R	NA	NA	NA	NA	NA	NA	<5.0	<1.0
MW-7	<20 (2.0)	<1.0	<10 (1.0)	<10 (1.0)	<1.0	<1.0	<100 (1.0)	<1.0
MW-8	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0
MW-9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS (<1.0)	NS (<1.0)
MW-10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0
MW-11	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	NS (<1.0)	NS (<1.0)	<5.0	<1.0
MW-12	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-13	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	NS (<1.0)	NS (<1.0)	<5.0	<1.0
MW-15	NA	NA	NA	NA	NA	NA	<5.0	<1.0
MW-16	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: 1,1-DCE Upper Shallow

	Feb. 2017	Oct. 2017	Mar. 2018	Oct. 2018	Mar. 2019
MW-1	<20 (1.0)	<10 (1.0)	<5.0	<20 (1.0)	<10 (1.0)
MW-2	<1.0	<1.0	<1.0	<1.0	<1.0
MW-3	420	330	690	950	540
MW-4	<1.0	<1.0	<1.0	<1.0	<1.0
MW-5	<5.0	<10 (5.0)	6.6	1.7	<5.0
MW-6R	<1.0	<1.0	<1.0	<1.0	<1.0
MW-7	<5.0	<20 (1.0)	<20 (1.0)	<50 (1.0)	<5.0
MW-8	NS (<1.0)	<1.0	<1.0	<1.0	<1.0
MW-9	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-10	<1.0	<1.0	<1.0	<1.0	<1.0
MW-11	<1.0	<1.0	<1.0	<1.0	<1.0
MW-12	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-13	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	<1.0	<1.0	<1.0	<1.0	<1.0
MW-15	<1.0	<1.0	<1.0	<1.0	<1.0
MW-16	NA	<1.0	<1.0	<1.0	<1.0

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: vinyl chloride Upper Shallow

	Sep. 1999	Mar. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002	Mar. 2003	Sep. 2003
MW-1	49	<2.0	105	76	29	65	110	5.8
MW-2	<2.0	<2.0	NS (<2.0)	<2.0	<2.0	<2.0	<2.0	<2.0
MW-3	63	325	NS (110)	<2.0	1,420	1,260	1,810	136
MW-4	<2.0	<2.0	NS (<2.0)	NS (<2.0)	<2.0	<2.0	<2.0	<2.0
MW-5	NA	<2.0	NS (6.7)	9.1	8.0	7.5	1.2	2.6
MW-6R	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	NA	NA	190	69	240	294	103	NS (373)
MW-8	NA	NA	NA	NA	NA	NA	NA	NA
MW-9	NA	NA	NA	NA	<2.0	<2.0	NS (<2.0)	<2.0
MW-10	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	<2.0
MW-11	NA	NA	NA	NA	<2.0	NS (<2.0)	NS (<2.0)	<2.0
MW-12	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0
MW-13	NA	NA	NA	NA	NA	NA	NA	<2.0
MW-14	NA	NA	NA	NA	NA	NA	NA	<2.0
MW-15	NA	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: vinyl chloride Upper Shallow

	Mar. 2004	Sep. 2004	Mar. 2005	Sep. 2005	Mar. 2006	Sep. 2006	Mar. 2007	Sep. 2007
MW-1	120	77	86	112	75	104	59	19
MW-2	<2.0	<2.0	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-3	195	154	99	63	154	259	817	1,400
MW-4	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0
MW-5	7.9	7.3	7.0	7.0	7.3	9.3	12	79
MW-6R	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	641	137	104	156	120	81	132	350
MW-8	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0
MW-9	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0
MW-10	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0
MW-11	<2.0	<2.0	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-12	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	NS (<1.0)	NS (<1.0)
MW-13	<2.0	NS (<2.0)	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	<2.0	NS (<2.0)	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-15	NA	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: vinyl chloride Upper Shallow

	Mar. 2008	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Sep. 2010	Sep. 2012	Sep. 2014
MW-1	86	32	98	150	170	28	<100 (10)	22
MW-2	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	<1.0	<5.0	<1.0
MW-3	1,100	1,600	1,700	710	1,700	2,200	<2,500 (1,250)	709
MW-4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0
MW-5	43	160	<10	480	9.2	81	<25 (25)	NS (17)
MW-6R	NA	NA	NA	NA	NA	NA	<5.0	<1.0
MW-7	170	400	340	450	730	140	472	319
MW-8	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0
MW-9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS (<1.0)	NS (<1.0)
MW-10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0
MW-11	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	NS (<1.0)	NS (<1.0)	<5.0	<1.0
MW-12	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-13	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	NS (<1.0)	NS (<1.0)	<5.0	<1.0
MW-15	NA	NA	NA	NA	NA	NA	<5.0	<1.0
MW-16	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: vinyl chloride Upper Shallow

	Feb. 2017	Oct. 2017	Mar. 2018	Oct. 2018	Mar. 2019
MW-1	67	58	8.4	56	33
MW-2	<1.0	<1.0	<1.0	<1.0	<1.0
MW-3	700	520	1,200	2,000	900
MW-4	<1.0	<1.0	<1.0	<1.0	<1.0
MW-5	6.6	6.7	3.4	5.7	3.5
MW-6R	<1.0	<1.0	<1.0	<1.0	<1.0
MW-7	200	710	460	510	200
MW-8	NS (<1.0)	<1.0	<1.0	<1.0	<1.0
MW-9	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-10	<1.0	<1.0	<1.0	<1.0	<1.0
MW-11	<1.0	<1.0	<1.0	<1.0	<1.0
MW-12	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-13	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	<1.0	<1.0	<1.0	<1.0	<1.0
MW-15	<1.0	<1.0	<1.0	<1.0	<1.0
MW-16	NA	<1.0	<1.0	<1.0	<1.0

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: 1,1,1-TCA Upper Shallow

	Sep. 1999	Mar. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002	Mar. 2003	Sep. 2003
MW-1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
MW-2	<2.0	<2.0	NS (<2.0)	<2.0	<2.0	<2.0	<2.0	<2.0
MW-3	20	383	NS (130)	<2.0	1,740	451	4,600	145
MW-4	<2.0	<2.0	NS (<2.0)	NS (<2.0)	<2.0	<2.0	<2.0	<2.0
MW-5	NA	<2.0	NS (<2.0)	<2.0	<2.0	<2.0	<2.0	<2.0
MW-6R	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	NA	NA	<2.0	<2.0	<2.0	10	<2.0	NS (<2.0)
MW-8	NA	NA	NA	NA	NA	NA	NA	NA
MW-9	NA	NA	NA	NA	<2.0	<2.0	NS (<2.0)	<2.0
MW-10	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	<2.0
MW-11	NA	NA	NA	NA	<2.0	NS (<2.0)	NS (<2.0)	<2.0
MW-12	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0
MW-13	NA	NA	NA	NA	NA	NA	NA	<2.0
MW-14	NA	NA	NA	NA	NA	NA	NA	<2.0
MW-15	NA	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: 1,1,1-TCA Upper Shallow

Mar. 2004	Sep. 2004	Mar. 2005	Sep. 2005	Mar. 2006	Sep. 2006	Mar. 2007	Sep. 2007	Mar. 2008
<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<10 (1.0)	<5.0	<20 (1.0)
<2.0	<2.0	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
316	<2.0	102	<5.0	50	28	734	2,600	1,700
<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0
<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<10 (1.0)	<20 (1.0)	<10 (1.0)
NA	NA	NA	NA	NA	NA	NA	NA	NA
<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	1.2	<100 (1.0)	<20 (1.0)
<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0
<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0
<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0
<2.0	<2.0	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
<2.0	NS (<2.0)	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
<2.0	NS (<2.0)	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: 1,1,1-TCA Upper Shallow

Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Sep. 2010	Sep. 2012	Sep. 2014	Feb. 2017	Oct. 2017
<1.0	<2.0	<20 (1.0)	<1.0	<1.0	<100 (1.0)	<1.0	<20 (1.0)	<10 (1.0)
NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0
2,900	4,400	2,400	2,400	1,400	<2,500 (1,250)	20	<200 (20)	<100 (20)
<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0
<1.0	<10 (1.0)	<10 (1.0)	<1.0	<1.0	<25 (1.0)	NS (<1.0)	<5.0	<10 (1.0)
NA	NA	NA	NA	NA	<5.0	<1.0	<1.0	<1.0
<1.0	<10	<10	<1.0	<1.0	<100 (1.0)	<1.0	<5.0	<20 (1.0)
<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	NS (<1.0)	<1.0
<1.0	<1.0	<1.0	<1.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0
NS (<1.0)	NS (<1.0)	<1.0	NS (<1.0)	NS (<1.0)	<5.0	<1.0	<1.0	<1.0
NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
NS (<1.0)	NS (<1.0)	<1.0	NS (<1.0)	NS (<1.0)	<5.0	<1.0	<1.0	<1.0
NA	NA	NA	NA	NA	<5.0	<1.0	<1.0	<1.0
NA	NA	NA	NA	NA	NA	NA	NA	<1.0

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: 1,1,1-TCA Upper Shallow

Mar. 2018	Oct. 2018	Mar. 2019
<5.0	<20 (1.0)	<10 (1.0)
<1.0	<1.0	<1.0
<200 (20)	<500 (20)	<200 (20)
<1.0	<1.0	<1.0
<5.0	<1.0	<5.0
<1.0	<1.0	<1.0
<20 (1.0)	<50 (1.0)	<5.0
<1.0	<1.0	<1.0
NS (<1.0)	NS (<1.0)	NS (<1.0)
<1.0	<1.0	<1.0
<1.0	<1.0	<1.0
NS (<1.0)	NS (<1.0)	NS (<1.0)
NS (<1.0)	NS (<1.0)	NS (<1.0)
<1.0	<1.0	<1.0
<1.0	<1.0	<1.0
<1.0	<1.0	<1.0

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: 1,1,2-TCA Upper Shallow

	Sep. 1999	Mar. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002	Mar. 2003	Sep. 2003
MW-1	<2.0	<2.0	<2.0	<2.0	<2.0	12	<2.0	<2.0
MW-2	<2.0	<2.0	NS (<2.0)	<2.0	<2.0	<2.0	<2.0	<2.0
MW-3	20	<2.0	NS (53)	78	727	231	1,670	105
MW-4	<2.0	<2.0	NS (<2.0)	NS (<2.0)	<2.0	<2.0	<2.0	<2.0
MW-5	NA	<2.0	NS (2.4)	2.5	1.2	<2.0	<2.0	1.6
MW-6R	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	NA	NA	<2.0	<2.0	7.7	12	<2.0	NS (<2.0)
MW-8	NA	NA	NA	NA	NA	NA	NA	NA
MW-9	NA	NA	NA	NA	<2.0	<2.0	NS (<2.0)	<2.0
MW-10	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	<2.0
MW-11	NA	NA	NA	NA	<2.0	NS (<2.0)	NS (<2.0)	<2.0
MW-12	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0
MW-13	NA	NA	NA	NA	NA	NA	NA	<2.0
MW-14	NA	NA	NA	NA	NA	NA	NA	<2.0
MW-15	NA	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: 1,1,2-TCA Upper Shallow

	Mar. 2004	Sep. 2004	Mar. 2005	Sep. 2005	Mar. 2006	Sep. 2006	Mar. 2007	Sep. 2007
MW-1	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<10 (1.0)	<5.0
MW-2	<2.0	<2.0	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-3	144	<2.0	90	<5.0	73	22	407	1,200
MW-4	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0
MW-5	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<10	<20
MW-6R	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	<2.0	<2.0	3.9	<5.0	<1.0	3.2	4.9	<100 (2.5)
MW-8	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0
MW-9	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0
MW-10	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0
MW-11	<2.0	<2.0	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-12	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	NS (<1.0)	NS (<1.0)
MW-13	<2.0	NS (<2.0)	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	<2.0	NS (<2.0)	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-15	NA	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: 1,1,2-TCA Upper Shallow

	Mar. 2008	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Sep. 2010	Sep. 2012	Sep. 2014
MW-1	<20 (1.0)	<1.0	<2.0	<20 (2.0)	<1.0	<1.0	<100 (1.0)	<1.0
MW-2	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	<1.0	<5.0	<1.0
MW-3	690	3,200	4,200	3,800	3,100	2,700	2,860	88
MW-4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0
MW-5	<10	<1.0	<10	<10	<1.0	<1.0	<25 (1.0)	NS (<1.0)
MW-6R	NA	NA	NA	NA	NA	NA	<5.0	<1.0
MW-7	<20 (1.0)	<1.0	<10 (1.0)	<10 (1.0)	<1.0	<1.0	<100 (1.0)	<1.0
MW-8	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0
MW-9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS (<1.0)	NS (<1.0)
MW-10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0
MW-11	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	NS (1.0)	NS (1.0)	<5.0	<1.0
MW-12	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-13	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	NS (1.0)	NS (1.0)	<5.0	<1.0
MW-15	NA	NA	NA	NA	NA	NA	<5.0	<1.0
MW-16	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: 1,1,2-TCA Upper Shallow

	Feb. 2017	Oct. 2017	Mar. 2018	Oct. 2018	Mar. 2019
MW-1	<20	<10	<5.0	<20 (1.0)	<10 (1.0)
MW-2	<1.0	<1.0	<1.0	<1.0	<1.0
MW-3	<200 (100)	<100 (50)	<200 (50)	<500 (50)	<200 (50)
MW-4	<1.0	0.84	0.99	0.67	0.67
MW-5	<5.0	<10	2.1	1.0	<5.0
MW-6R	<1.0	<1.0	<1.0	<1.0	<1.0
MW-7	<5.0	<20 (1.0)	<20 (1.0)	<50 (1.0)	<5.0
MW-8	NS (<1.0)	<1.0	<1.0	<1.0	<1.0
MW-9	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-10	<1.0	<1.0	<1.0	<1.0	<1.0
MW-11	<1.0	<1.0	<1.0	<1.0	<1.0
MW-12	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-13	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	<1.0	<1.0	<1.0	<1.0	<1.0
MW-15	<1.0	<1.0	<1.0	<1.0	<1.0
MW-16	NA	<1.0	<1.0	<1.0	<1.0

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: 1,1-DCA Upper Shallow

	Sep. 1999	Mar. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002	Mar. 2003	Sep. 2003
MW-1	<2.0	<2.0	2.2	<2.0	<2.0	<2.0	1.5	1.3
MW-2	<2.0	<2.0	NS (<2.0)	<2.0	<2.0	<2.0	<2.0	<2.0
MW-3	127	460	NS (243)	133	1,900	3,040	3,060	214
MW-4	<2.0	<2.0	NS (<2.0)	NS (<2.0)	<2.0	<2.0	<2.0	<2.0
MW-5	NA	6.9	NS (5.5)	4.8	1.9	1.6	<2.0	<2.0
MW-6R	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	NA	NA	<2.0	<2.0	<2.0	<2.0	<2.0	NS (<2.0)
MW-8	NA	NA	NA	NA	NA	NA	NA	NA
MW-9	NA	NA	NA	NA	<2.0	<2.0	NS (<2.0)	<2.0
MW-10	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	<2.0
MW-11	NA	NA	NA	NA	<2.0	NS (<2.0)	NS (<2.0)	<2.0
MW-12	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0
MW-13	NA	NA	NA	NA	NA	NA	NA	<2.0
MW-14	NA	NA	NA	NA	NA	NA	NA	<2.0
MW-15	NA	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: 1,1-DCA Upper Shallow

	Mar. 2004	Sep. 2004	Mar. 2005	Sep. 2005	Mar. 2006	Sep. 2006	Mar. 2007	Sep. 2007
MW-1	153	<2.0	<5.0	<5.0	<1.0	<1.0	7.4	<5.0
MW-2	<2.0	<2.0	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-3	486	<2.0	208	<5.0	339	235	1,200	2,400
MW-4	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0
MW-5	2.3	4.4	<5.0	<5.0	<1.0	4.2	4.4	<20 (2.0)
MW-6R	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0	<100 (1.0)
MW-8	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0
MW-9	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0
MW-10	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0
MW-11	<2.0	<2.0	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-12	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	NS (<1.0)	NS (<1.0)
MW-13	<2.0	NS (<2.0)	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	<2.0	NS (<2.0)	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-15	NA	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: 1,1-DCA Upper Shallow

	Mar. 2008	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Sep. 2010	Sep. 2012	Sep. 2014
MW-1	<20 (2.0)	<1.0	<2.0	<20 (2.0)	<1.0	<1.0	<100 (1.0)	<1.0
MW-2	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	<1.0	<5.0	<1.0
MW-3	1,800	3,900	4,100	4,000	3,800	3,900	4,140	908
MW-4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0
MW-5	<10 (1.0)	<1.0	<10 (1.0)	<10 (1.0)	6.3	<1.0	<25 (1.0)	NS (<1.0)
MW-6R	NA	NA	NA	NA	NA	NA	<5.0	<1.0
MW-7	<20 (1.0)	<1.0	<10 (1.0)	<10 (1.0)	<1.0	<1.0	<100 (1.0)	<1.0
MW-8	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0
MW-9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS (<1.0)	NS (<1.0)
MW-10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0
MW-11	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	NS (<1.0)	NS (<1.0)	<5.0	<1.0
MW-12	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-13	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	NS (<1.0)	NS (<1.0)	<5.0	<1.0
MW-15	NA	NA	NA	NA	NA	NA	<5.0	<1.0
MW-16	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: 1,1-DCA Upper Shallow

	Feb. 2017	Oct. 2017	Mar. 2018	Oct. 2018	Mar. 2019
MW-1	<20 (1.0)	<10 (1.0)	<5.0	<20 (1.0)	<10 (1.0)
MW-2	<1.0	<1.0	<1.0	<1.0	<1.0
MW-3	890	680	1,200	1,800	1,100
MW-4	<1.0	<1.0	<1.0	<1.0	<1.0
MW-5	3.7	<10 (5.0)	6.6	5.3	4.6
MW-6R	<1.0	<1.0	<1.0	<1.0	<1.0
MW-7	<5.0	<20 (1.0)	<20 (1.0)	<50 (1.0)	<5.0
MW-8	NS (<1.0)	<1.0	<1.0	<1.0	<1.0
MW-9	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-10	<1.0	<1.0	<1.0	<1.0	<1.0
MW-11	<1.0	<1.0	<1.0	<1.0	<1.0
MW-12	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-13	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	<1.0	<1.0	<1.0	<1.0	<1.0
MW-15	<1.0	<1.0	<1.0	<1.0	<1.0
MW-16	NA	<1.0	<1.0	<1.0	<1.0

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: 1,2-DCA Upper Shallow

	Sep. 1999	Mar. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002	Mar. 2003
MW-1	4.2	<2.0	2.3	1.9	4.5	1.9	1.0
MW-2	<2.0	<2.0	NS (<2.0)	<2.0	<2.0	<2.0	<2.0
MW-3	7.8	<2.0	NS (8.1)	11	57	26	69
MW-4	<2.0	<2.0	NS (<2.0)	NS (<2.0)	<2.0	<2.0	<2.0
MW-5	NA	<2.0	NS (<2.0)	<2.0	1.2	<2.0	<2.0
MW-6R	NA	NA	NA	NA	NA	NA	NA
MW-7	NA	NA	<2.0	2.0	<2.0	<2.0	<2.0
MW-8	NA	NA	NA	NA	NA	NA	NA
MW-9	NA	NA	NA	NA	<2.0	<2.0	NS (<2.0)
MW-10	NA	NA	NA	<2.0	<2.0	<2.0	<2.0
MW-11	NA	NA	NA	NA	<2.0	NS (<2.0)	NS (<2.0)
MW-12	NA	NA	NA	NA	<2.0	<2.0	<2.0
MW-13	NA	NA	NA	NA	NA	NA	NA
MW-14	NA	NA	NA	NA	NA	NA	NA
MW-15	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: 1,2-DCA Upper Shallow

	Sep. 2003	Mar. 2004	Sep. 2004	Mar. 2005	Sep. 2005	Mar. 2006	Sep. 2006
MW-1	<2.0	2.2	<2.0	<5.0	<5.0	<1.0	<1.0
MW-2	<2.0	<2.0	<2.0	<5.0	<5.0	<1.0	NS (<1.0)
MW-3	17	5.7	<2.0	7.3	<5.0	12	12
MW-4	<2.0	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0
MW-5	<2.0	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0
MW-6R	NA	NA	NA	NA	NA	NA	NA
MW-7	NS (<2.0)	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0
MW-8	NA	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0
MW-9	<2.0	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0
MW-10	<2.0	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0
MW-11	<2.0	<2.0	<2.0	<5.0	<5.0	<1.0	NS (<1.0)
MW-12	<2.0	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0
MW-13	<2.0	<2.0	NS (<2.0)	<5.0	<5.0	<1.0	NS (<1.0)
MW-14	<2.0	<2.0	NS (<2.0)	<5.0	<5.0	<1.0	NS (<1.0)
MW-15	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: 1,2-DCA Upper Shallow

	Mar. 2007	Sep. 2007	Mar. 2008	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Sep. 2010
MW-1	<10 (1.0)	<5.0	<20 (1.0)	<1.0	<2.0	<20 (2.0)	<1.0	<1.0
MW-2	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	<1.0
MW-3	32	<100 (30)	34	<1.0	<200 (1.0)	<200 (1.0)	<1.0	<1.0
MW-4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-5	<10 (1.0)	<20 (1.0)	<10 (1.0)	<1.0	<10 (1.0)	<10 (1.0)	<1.0	<1.0
MW-6R	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	<1.0	<100 (1.0)	<20 (1.0)	<1.0	<10 (1.0)	<10 (1.0)	<1.0	<1.0
MW-8	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-11	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	NS (<1.0)	NS (<1.0)
MW-12	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-13	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	NS (<1.0)	NS (<1.0)
MW-15	NA	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: 1,2-DCA Upper Shallow

	Sep. 2012	Sep. 2014	Feb. 2017	Oct. 2017	Mar. 2018	Oct. 2018	Mar. 2019
MW-1	<100 (1.0)	<1.0	<20 (1.0)	<10 (1.0)	<5.0	<20 (1.0)	<10 (1.0)
MW-2	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-3	<2,500 (25)	28	<200 (40)	43	<200 (43)	<500 (43)	<200 (43)
MW-4	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-5	<25 (1.0)	NS (<1.0)	<5.0	<10 (1.0)	<5.0	0.75	<5.0
MW-6R	<5.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0
MW-7	<100 (1.0)	<1.0	<5.0	<20 (1.0)	<20 (1.0)	<50 (1.0)	<5.0
MW-8	<5.0	<1.0	NS (<1.0)	<1.0	<1.0	<1.0	<1.0
MW-9	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-10	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-11	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-12	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-13	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-15	<5.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0
MW-16	NA	NA	NA	<1.0	<1.0	<1.0	<1.0

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: Toluene Upper Shallow

	Sep. 1999	Mar. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002	Mar. 2003	Sep. 2003
MW-1	1,050	979	436	396	317	344	265	19
MW-2	<2.0	<2.0	NS (<2.0)	<2.0	<2.0	<2.0	<2.0	<2.0
MW-3	<2.0	7.9	NS (4.9)	3.3	121	228	253	4.5
MW-4	<2.0	<2.0	NS (<2.0)	NS (<2.0)	<2.0	<2.0	<2.0	<2.0
MW-5	NA	<2.0	NS (<2.0)	<2.0	1.6	<2.0	<2.0	<2.0
MW-6R	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	NA	NA	69	446	70	116	19	NS (67)
MW-8	NA	NA	NA	NA	NA	NA	NA	NA
MW-9	NA	NA	NA	NA	<2.0	<2.0	NS (<2.0)	<2.0
MW-10	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	<2.0
MW-11	NA	NA	NA	NA	<2.0	NS (<2.0)	NS (<2.0)	<2.0
MW-12	NA	NA	NA	NA	<2.0	<2.0	<2.0	2.5
MW-13	NA	NA	NA	NA	NA	NA	NA	2.5
MW-14	NA	NA	NA	NA	NA	NA	NA	<2.0
MW-15	NA	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: Toluene Upper Shallow

	Mar. 2004	Sep. 2004	Mar. 2005	Sep. 2005	Mar. 2006	Sep. 2006	Mar. 2007
MW-1	766	422	264	524	110	209	26
MW-2	<2.0	<2.0	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)
MW-3	<2.0	<2.0	<5.0	1.8	<1.0	3.9	68
MW-4	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0
MW-5	<2.0	<2.0	<5.0	0.25	<1.0	<1.0	<10 (1.0)
MW-6R	NA	NA	NA	NA	NA	NA	NA
MW-7	114	57	35	59	<1.0	23	39
MW-8	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0
MW-9	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0
MW-10	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	<1.0
MW-11	<2.0	<2.0	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)
MW-12	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	NS (<1.0)
MW-13	<2.0	NS (2.0)	2.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)
MW-14	11	NS (8.2)	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)
MW-15	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: Toluene Upper Shallow

	Sep. 2007	Mar. 2008	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Sep. 2010
MW-1	<5.0	64	28	18	69	20	2.5
MW-2	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	<1.0
MW-3	220	170	400	520	380	390	350
MW-4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-5	<20 (1.0)	<10 (1.0)	<1.0	<10 (1.0)	<10 (1.0)	<1.0	<1.0
MW-6R	NA	NA	NA	NA	NA	NA	NA
MW-7	<100 (10)	<20 (10)	27	<10	25	33	7.2
MW-8	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-11	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	NS (<1.0)	NS (<1.0)
MW-12	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-13	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	NS (<1.0)	NS (<1.0)
MW-15	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: Toluene Upper Shallow

	Sep. 2012	Sep. 2014	Feb. 2017	Oct. 2017	Mar. 2018	Oct. 2018	Mar. 2019
MW-1	<100 (5.0)	7.8	15	5.0	<5.0	<20 (2.5)	<10 (5.0)
MW-2	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-3	<2,500 (250)	77	<200 (100)	<100	110	<500 (110)	97
MW-4	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-5	<25 (1.0)	NS (<1.0)	<5.0	<10 (1.0)	<5.0	<1.0	<5.0
MW-6R	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-7	<100 (5.0)	2.8	<5.0	<20 (2.5)	<20 (2.5)	<50 (2.5)	<5.0
MW-8	<5.0	<1.0	NS (<1.0)	<1.0	<1.0	<1.0	<1.0
MW-9	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-10	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-11	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-12	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-13	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-15	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-16	NA	NA	NA	<1.0	<1.0	<1.0	<1.0

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: Ethylbenzene Upper Shallow

	Sep. 1999	Mar. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002	Mar. 2003	Sep. 2003
MW-1	1,950	1,890	1,050	854	635	1,900	938	441
MW-2	<2.0	<2.0	NS (<2.0)	<2.0	<2.0	<2.0	<2.0	<2.0
MW-3	250	21	NS (14)	10.0	386	900	669	13
MW-4	<2.0	<2.0	NS (<2.0)	NS (<2.0)	<2.0	<2.0	<2.0	<2.0
MW-5	NA	<2.0	NS (<2.0)	<2.0	25	1.6	<2.0	<2.0
MW-6R	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	NA	NA	1,020	1,010	1,580	1,900	356	NS (1,278)
MW-8	NA	NA	NA	NA	NA	NA	NA	NA
MW-9	NA	NA	NA	NA	<2.0	<2.0	NS (<2.0)	<2.0
MW-10	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	<2.0
MW-11	NA	NA	NA	NA	<2.0	NS (<2.0)	NS (<2.0)	<2.0
MW-12	NA	NA	NA	NA	<2.0	2.0	1.5	<2.0
MW-13	NA	NA	NA	NA	NA	NA	NA	<2.0
MW-14	NA	NA	NA	NA	NA	NA	NA	<2.0
MW-15	NA	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: Ethylbenzene Upper Shallow

	Mar. 2004	Sep. 2004	Mar. 2005	Sep. 2005	Mar. 2006	Sep. 2006	Mar. 2007
MW-1	1,910	680	820	1,380	520	922	159
MW-2	<2.0	<2.0	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)
MW-3	1.3	<2.0	4.0	4.9	<1.0	13	339
MW-4	<2.0	<2.0	<5.0	0.66	<1.0	<1.0	<1.0
MW-5	<2.0	<2.0	1.5	3.0	<1.0	<1.0	<10 (1.0)
MW-6R	NA	NA	NA	NA	NA	NA	NA
MW-7	2,190	2,140	1,110	1,350	1,020	625	1,240
MW-8	<2.0	<2.0	9.1	<5.0	<1.0	<1.0	<1.0
MW-9	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	1.9
MW-10	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	3.2
MW-11	<2.0	<2.0	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)
MW-12	<2.0	<2.0	<5.0	<5.0	<1.0	<1.0	NS (<1.0)
MW-13	2.2	NS (2.4)	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)
MW-14	<2.0	NS (<2.0)	<5.0	<5.0	<1.0	NS (<1.0)	NS (<1.0)
MW-15	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: Ethylbenzene Upper Shallow

	Sep. 2007	Mar. 2008	Sep. 2008	Mar. 2009	Sep. 2009	Mar. 2010	Sep. 2010
MW-1	13	460	94	270	550	450	45
MW-2	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	<1.0
MW-3	820	580	1,200	1,300	920	1,100	920
MW-4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-5	<20 (1.0)	<10 (1.0)	<1.0	<10 (1.0)	<10 (1.0)	<1.0	<1.0
MW-6R	NA	NA	NA	NA	NA	NA	NA
MW-7	1,900	340	810	200	750	1,300	210
MW-8	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-11	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	NS (<1.0)	NS (<1.0)
MW-12	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-13	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	<1.0	NS (<1.0)	NS (<1.0)
MW-15	NA	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: Ethylbenzene Upper Shallow

	Sep. 2012	Sep. 2014	Feb. 2017	Oct. 2017	Mar. 2018	Oct. 2018	Mar. 2019
MW-1	<100 (10)	33	81	10	<5.0	33	32
MW-2	<5.0	<1.0	<1.0	0.46	<1.0	<1.0	<1.0
MW-3	<2,500 (250)	196	130	90	330	530	310
MW-4	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-5	<25 (1.0)	NS (<1.0)	<5.0	<10 (1.0)	<5.0	<1.0	<5.0
MW-6R	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-7	431	104	84	130	100	200	79
MW-8	<5.0	<1.0	NS (<1.0)	<1.0	<1.0	<1.0	<1.0
MW-9	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-10	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-11	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-12	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-13	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-15	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-16	NA	NA	NA	<1.0	<1.0	<1.0	<1.0

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: Xylenes Upper Shallow

	Sep. 1999	Mar. 2000	Mar. 2001	Sep. 2001	Mar. 2002	Sep. 2002
MW-1	8,260	7,820	4,260	2,720	2,680	9,870
MW-2	<2.0	<2.0	NS (<2.0)	<2.0	<2.0	<2.0
MW-3	1,480	69	NS (64)	62	1,530	3,828
MW-4	<2.0	<2.0	NS (<2.0)	NS (<2.0)	<2.0	<2.0
MW-5	NA	<2.0	NS (<2.0)	<2.0	145	3.3
MW-6R	NA	NA	NA	NA	NA	NA
MW-7	NA	NA	3,430	3,016	8,000	10,950
MW-8	NA	NA	NA	NA	NA	NA
MW-9	NA	NA	NA	NA	<2.0	<2.0
MW-10	NA	NA	NA	<2.0	<2.0	<2.0
MW-11	NA	NA	NA	NA	<2.0	NS (<2.0)
MW-12	NA	NA	NA	NA	<2.0	<2.0
MW-13	NA	NA	NA	NA	NA	NA
MW-14	NA	NA	NA	NA	NA	NA
MW-15	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: Xylenes Upper Shallow

	Mar. 2003	Sep. 2003	Mar. 2004	Sep. 2004	Mar. 2005	Sep. 2005
MW-1	4,040	2,193	9,220	3,220	3,940	6,580
MW-2	<2.0	<2.0	<2.0	<2.0	<5.0	<5.0
MW-3	2,912	60	8.4	2.0	43	43
MW-4	<2.0	<2.0	<2.0	<2.0	<5.0	2.5
MW-5	<2.0	<2.0	3.5	<2.0	6.4	13
MW-6R	NA	NA	NA	NA	NA	NA
MW-7	1,606	NS (5,710)	9,770	9,000	4,170	5,440
MW-8	NA	NA	<2.0	<2.0	33	<5.0
MW-9	NS (<2.0)	<2.0	<2.0	<2.0	<5.0	<5.0
MW-10	<2.0	<2.0	<2.0	<2.0	<5.0	0.39
MW-11	NS (<2.0)	<2.0	<2.0	<2.0	<5.0	0.36
MW-12	<2.0	1.9	<2.0	<2.0	<5.0	<5.0
MW-13	NA	<2.0	<2.0	NS (<1.0)	<5.0	<5.0
MW-14	NA	<2.0	<2.0	NS (<1.0)	<5.0	<5.0
MW-15	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: Xylenes Upper Shallow

	Mar. 2006	Sep. 2006	Mar. 2007	Sep. 2007	Mar. 2008	Sep. 2008
MW-1	2,430	3,910	736	5.2	1,900	460
MW-2	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-3	16	72	1,400	3,300	2,300	4,500
MW-4	<1.0	<1.0	3.3	<1.0	<1.0	<1.0
MW-5	<1.0	1.5	<10 (1.0)	<20 (1.0)	<10 (1.0)	<1.0
MW-6R	NA	NA	NA	NA	NA	NA
MW-7	4,040	2,350	4,650	7,300	1,500	3,400
MW-8	<1.0	<1.0	<1.0	<1.0	<1.0	1.9
MW-9	<1.0	<1.0	7.6	<1.0	<1.0	<1.0
MW-10	<1.0	<1.0	12	<1.0	<1.0	<1.0
MW-11	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-12	<1.0	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-13	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	<1.0	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-15	NA	NA	NA	NA	NA	NA
MW-16	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: Xylenes Upper Shallow

	Mar. 2009	Sep. 2009	Mar. 2010	Sep. 2010	Sep. 2012	Sep. 2014
MW-1	1,000	2,300	1,900	160	403	99
MW-2	NS (<1.0)	NS (<1.0)	<1.0	<1.0	<15 (2.0)	<2.0
MW-3	4,800	3,600	4,600	3,600	<7,500 (3,750)	817
MW-4	<1.0	<1.0	<1.0	<1.0	<15 (2.0)	<2.0
MW-5	<10 (1.0)	<10 (1.0)	<1.0	<1.0	<75 (1.0)	NS (<1.0)
MW-6R	NA	NA	NA	NA	<15 (2.0)	<2.0
MW-7	790	3,300	5,700	870	1,720	373
MW-8	<1.0	<1.0	<1.0	<1.0	<15 (2.0)	<2.0
MW-9	<1.0	<1.0	<1.0	<1.0	NS (<1.0)	NS (<1.0)
MW-10	<1.0	<1.0	<1.0	<1.0	<15 (2.0)	<2.0
MW-11	NS (<1.0)	<1.0	NS (<1.0)	NS (<1.0)	<15 (2.0)	<2.0
MW-12	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-13	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	NS (<1.0)	<1.0	NS (<1.0)	NS (<1.0)	<15 (2.0)	<2.0
MW-15	NA	NA	NA	NA	<15 (2.0)	<2.0
MW-16	NA	NA	NA	NA	NA	NA

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Input Data: Xylenes Upper Shallow

	Feb. 2017	Oct. 2017	Mar. 2018	Oct. 2018	Mar. 2019
MW-1	380	53	12	140	200
MW-2	<1.0	1.4	<1.0	<1.0	<1.0
MW-3	530	320	1,300	2,100	1,200
MW-4	<1.0	<1.0	<1.0	<1.0	<1.0
MW-5	<5.0	<10 (1.0)	<5.0	<1.0	<5.0
MW-6R	<1.0	<1.0	<1.0	<1.0	<1.0
MW-7	320	420	310	960	210
MW-8	NS (<2.0)	<1.0	<1.1	<1.1	<1.0
MW-9	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-10	<1.0	<1.0	<1.0	<1.0	<1.0
MW-11	<1.0	<1.0	<1.0	<1.0	<1.0
MW-12	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-13	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)	NS (<1.0)
MW-14	<1.0	<1.0	<1.0	<1.0	<1.0
MW-15	<1.0	<1.0	<1.0	<1.0	<1.0
MW-16	NA	<1.0	<1.0	<1.0	<1.0

Notes:

All concentrations in µg/l

NA: Well not installed, abandoned or otherwise not utilized.

<5.00: Analyte not detected. (In general, non-detect values were used in the analysis at one-half the reported detection limit.)

<100 (21.0): Analyte not detected. Elevated detection limit, interpolated or extrapolated value shown.

NS: Well not sampled, interpolated or extrapolated value shown - refer to shading for more specific explanation.

Non-Sampled well assumed non-detect

Interpolated between two sampling events.

Ricker Method® Plume Stability Analysis Metrics Summary

Ricker Method® Plume Stability Characteristics PCE Upper Shallow			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-1999	16.6	497	67.3
Mar-2000	12.7	72	7.4
Mar-2001	19.6	347	55.4
Sep-2001	19.5	72	11.5
Mar-2002	18.8	144	22.1
Sep-2002	18.6	155	23.5
Mar-2003	18.7	140	21.3
Sep-2003	17.0	80	11.1
Mar-2004	17.1	158	22.1
Sep-2004	16.7	161	21.9
Mar-2005	17.4	170	24.1
Sep-2005	15.2	150	18.5
Mar-2006	13.7	66	7.3
Sep-2006	13.5	69	7.5
Mar-2007	14.7	64	7.7
Sep-2007	12.5	31	3.2
Mar-2008	14.0	69	7.8
Sep-2008	8.1	131	8.6
Mar-2009	7.7	205	12.8
Sep-2009	7.6	65	4.0
Mar-2010	6.3	60	3.1
Sep-2010	7.0	75	4.3
Sep-2012	10.5	29	2.5
Sep-2014	6.3	14	0.7
Feb-2017	6.7	17	0.9
Oct-2017	6.5	16	0.8
Mar-2018	7.1	14	0.8
Oct-2018	6.9	17	1.0
Mar-2019	7.1	17	1.0

Ricker Method® Plume Stability Characteristics TCE Upper Shallow			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-1999	14.9	36	4.3
Mar-2000	14.4	71	8.4
Mar-2001	17.0	230	32.0
Sep-2001	17.4	62	8.8
Mar-2002	17.0	397	55.0
Sep-2002	16.8	374	51.2
Mar-2003	16.7	438	59.8
Sep-2003	16.5	73	9.9
Mar-2004	15.8	124	16.0
Sep-2004	15.6	132	16.9
Mar-2005	17.1	128	17.9
Sep-2005	15.5	178	22.5
Mar-2006	13.9	90	10.3
Sep-2006	13.9	64	7.3
Mar-2007	15.7	228	29.2
Sep-2007	12.5	322	32.9
Mar-2008	14.0	157	17.9
Sep-2008	9.8	384	30.7
Mar-2009	8.2	597	39.7
Sep-2009	8.3	201	13.7
Mar-2010	7.1	153	8.8
Sep-2010	7.7	227	14.3
Sep-2012	12.6	71	7.3
Sep-2014	10.4	22	1.9
Feb-2017	10.7	19	1.7
Oct-2017	11.2	22	2.0
Mar-2018	11.4	24	2.3
Oct-2018	11.4	23	2.2
Mar-2019	11.5	25	2.4

Ricker Method® Plume Stability Characteristics cis-1,2-DCE Upper Shallow			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-1999	15.6	2,658	337
Mar-2000	13.9	4,222	479
Mar-2001	16.7	2,190	298
Sep-2001	17.0	2,397	333
Mar-2002	17.2	1,913	268
Sep-2002	16.9	3,718	512
Mar-2003	16.7	3,244	442
Sep-2003	16.7	1,355	185
Mar-2004	16.5	1,708	230
Sep-2004	16.6	1,455	197
Mar-2005	17.1	1,425	198
Sep-2005	16.4	2,446	326
Mar-2006	15.7	1,693	217
Sep-2006	15.8	1,737	223
Mar-2007	17.0	3,362	467
Sep-2007	15.9	4,664	605
Mar-2008	15.6	4,350	554
Sep-2008	16.1	7,049	924
Mar-2009	15.6	5,157	658
Sep-2009	16.1	6,206	813
Mar-2010	15.6	6,129	782
Sep-2010	15.7	4,635	595
Sep-2012	15.5	1,607	203
Sep-2014	15.6	614	78
Feb-2017	15.2	708	88
Oct-2017	15.5	401	51
Mar-2018	15.3	440	55
Oct-2018	15.4	629	79
Mar-2019	15.3	515	64

Ricker Method® Plume Stability Characteristics trans-1,2-DCE Upper Shallow			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-1999	12.3	22	2.26
Mar-2000	13.9	87	9.85
Mar-2001	13.5	26	2.81
Sep-2001	9.6	18	1.44
Mar-2002	14.8	35	4.27
Sep-2002	15.0	66	8.09
Mar-2003	15.0	52	6.30
Sep-2003	14.3	28	3.31
Mar-2004	13.7	42	4.66
Sep-2004	13.9	29	3.33
Mar-2005	19.1	22	3.37
Sep-2005	19.1	23	3.66
Mar-2006	8.4	12	0.85
Sep-2006	12.4	21	2.11
Mar-2007	12.4	37	3.77
Sep-2007	12.0	44	4.28
Mar-2008	12.2	41	4.10
Sep-2008	9.8	48	3.81
Mar-2009	11.7	60	5.68
Sep-2009	11.8	57	5.52
Mar-2010	11.3	49	4.58
Sep-2010	10.5	52	4.41
Sep-2012	9.5	25	1.96
Sep-2014	9.2	21	1.59
Feb-2017	9.6	15	1.20
Oct-2017	8.0	11	0.72
Mar-2018	5.1	18	0.77
Oct-2018	6.6	22	1.18
Mar-2019	6.0	15	0.73

Ricker Method® Plume Stability Characteristics 1,1-DCE Upper Shallow			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-1999	10.92	24	2.1
Mar-2000	11.94	86	8.3
Mar-2001	10.68	43	3.8
Sep-2001	8.17	49	3.3
Mar-2002	11.00	161	14.4
Sep-2002	11.84	284	27.5
Mar-2003	10.37	313	26.5
Sep-2003	6.77	46	2.5
Mar-2004	10.56	89	7.6
Sep-2004	10.46	59	5.0
Mar-2005	11.94	43	4.1
Sep-2005	12.98	42	4.5
Mar-2006	5.32	51	2.2
Sep-2006	10.34	42	3.5
Mar-2007	10.08	146	12.0
Sep-2007	9.55	282	22.0
Mar-2008	8.26	225	15.2
Sep-2008	6.91	399	22.5
Mar-2009	9.18	408	30.6
Sep-2009	8.27	303	20.4
Mar-2010	7.97	295	19.2
Sep-2010	7.11	294	17.1
Sep-2012	7.65	93	5.8
Sep-2014	5.90	54	2.6
Feb-2017	5.27	44	1.9
Oct-2017	4.55	30	1.1
Mar-2018	5.61	42	1.9
Oct-2018	4.69	56	2.1
Mar-2019	4.44	40	1.5

Ricker Method® Plume Stability Characteristics Vinyl Chloride Upper Shallow			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-1999	14.2	31	3.6
Mar-2000	11.6	45	4.2
Mar-2001	15.3	65	8.1
Sep-2001	14.0	17	1.9
Mar-2002	15.3	162	20.2
Sep-2002	15.3	164	20.4
Mar-2003	13.6	215	23.8
Sep-2003	13.4	32	3.5
Mar-2004	14.6	79	9.5
Sep-2004	14.5	50	6.0
Mar-2005	14.5	40	4.7
Sep-2005	14.5	37	4.4
Mar-2006	14.5	49	5.8
Sep-2006	14.8	67	8.1
Mar-2007	14.9	130	15.8
Sep-2007	16.0	186	24.2
Mar-2008	15.8	177	22.9
Sep-2008	16.4	227	30.4
Mar-2009	14.8	248	30.0
Sep-2009	16.9	209	28.8
Mar-2010	14.8	291	35.0
Sep-2010	16.1	248	32.5
Sep-2012	15.3	57	7.2
Sep-2014	15.5	45	5.7
Feb-2017	14.5	46	5.5
Oct-2017	14.3	35	4.1
Mar-2018	13.0	37	4.0
Oct-2018	14.3	62	7.2
Mar-2019	13.5	36	3.9

Ricker Method® Plume Stability Characteristics Total Chloroethenes Upper Shallow			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-1999	17.09	28,978	1,833
Mar-2000	19.57	33,353	2,415
Mar-2001	19.58	24,164	1,751
Sep-2001	19.73	22,788	1,664
Mar-2002	18.84	25,051	1,746
Sep-2002	18.82	42,527	2,962
Mar-2003	18.71	38,582	2,671
Sep-2003	17.46	15,253	986
Mar-2004	17.75	20,171	1,325
Sep-2004	17.54	17,368	1,127
Mar-2005	19.08	15,998	1,129
Sep-2005	19.09	24,502	1,731
Mar-2006	15.69	19,476	1,131
Sep-2006	15.76	20,244	1,180
Mar-2007	17.08	39,671	2,507
Sep-2007	16.07	54,835	3,261
Mar-2008	15.81	50,317	2,943
Sep-2008	16.48	78,961	4,816
Mar-2009	15.66	62,972	3,650
Sep-2009	16.92	67,211	4,209
Mar-2010	15.65	70,363	4,074
Sep-2010	16.10	53,607	3,193
Sep-2012	15.62	18,551	1,073
Sep-2014	15.81	7,440	435
Feb-2017	15.82	8,125	476
Oct-2017	15.67	4,923	286
Mar-2018	15.41	5,415	309
Oct-2018	15.51	7,804	448
Mar-2019	15.53	6,114	351

Ricker Method® Plume Stability Characteristics 1,1,2-TCA Upper Shallow			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-1999	4.81	8.2	0.32
Mar-2000	0.00	5.0	0.00
Mar-2001	6.46	13.2	0.70
Sep-2001	6.96	16.3	0.93
Mar-2002	8.60	64.3	4.51
Sep-2002	10.94	30.3	2.70
Mar-2003	8.62	118.0	8.30
Sep-2003	6.66	19.5	1.06
Mar-2004	7.19	23.3	1.36
Sep-2004	0.00	5.0	0.00
Mar-2005	7.75	17.3	1.10
Sep-2005	0.00	5.0	0.00
Mar-2006	4.87	16.3	0.65
Sep-2006	3.24	8.6	0.23
Mar-2007	6.79	46.6	2.58
Sep-2007	7.20	98.2	5.77
Mar-2008	6.69	67.0	3.66
Sep-2008	7.44	200.5	12.18
Mar-2009	7.99	241.5	15.75
Sep-2009	7.96	224.1	14.54
Mar-2010	7.43	195.9	11.88
Sep-2010	7.37	176.8	10.63
Sep-2012	7.36	125.5	7.53
Sep-2014	4.33	15.6	0.55
Feb-2017	4.47	16.6	0.61
Oct-2017	3.14	11.3	0.29
Mar-2018	3.22	11.2	0.30
Oct-2018	2.76	11.5	0.26
Mar-2019	2.51	11.6	0.24

Ricker Method® Plume Stability Characteristics 1,1,1-TCA Upper Shallow			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-1999	4.79	8.1	0.32
Mar-2000	7.92	43.3	2.80
Mar-2001	7.22	22.1	1.30
Sep-2001	0.00	5.0	0.00
Mar-2002	8.64	121.5	8.57
Sep-2002	8.96	45.9	3.35
Mar-2003	8.99	248.5	18.22
Sep-2003	7.21	23.5	1.38
Mar-2004	7.78	37.8	2.40
Sep-2004	0.00	5.0	0.00
Mar-2005	6.87	19.0	1.07
Sep-2005	0.00	5.0	0.00
Mar-2006	4.39	13.2	0.47
Sep-2006	3.48	9.7	0.27
Mar-2007	6.77	69.9	3.86
Sep-2007	7.36	172.1	10.33
Mar-2008	7.16	126.3	7.38
Sep-2008	7.40	186.4	11.26
Mar-2009	8.01	250.1	16.34
Sep-2009	7.32	162.2	9.69
Mar-2010	7.32	162.2	9.69
Sep-2010	7.07	109.8	6.33
Sep-2012	8.13	70.7	4.69
Sep-2014	2.15	8.2	0.14
Feb-2017	2.13	8.1	0.14
Oct-2017	1.62	8.0	0.11
Mar-2018	1.62	8.0	0.11
Oct-2018	1.62	8.0	0.11
Mar-2019	1.44	8.1	0.09

Ricker Method® Plume Stability Characteristics 1,2-DCA Upper Shallow			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-1999	3.08	5.79	0.15
Mar-2000	0.00	5.00	0.00
Mar-2001	1.32	5.88	0.06
Sep-2001	2.34	6.59	0.13
Mar-2002	6.85	13.57	0.76
Sep-2002	4.87	9.30	0.37
Mar-2003	5.86	15.39	0.74
Sep-2003	3.77	7.78	0.24
Mar-2004	0.13	5.22	0.01
Sep-2004	0.00	5.00	0.00
Mar-2005	1.08	5.67	0.05
Sep-2005	0.00	5.00	0.00
Mar-2006	1.50	6.76	0.08
Sep-2006	1.59	6.84	0.09
Mar-2007	3.73	10.46	0.32
Sep-2007	3.62	10.09	0.30
Mar-2008	3.82	10.76	0.34
Sep-2008	0.00	5.00	0.00
Mar-2009	0.00	5.00	0.00
Sep-2009	0.00	5.00	0.00
Mar-2010	0.00	5.00	0.00
Sep-2010	0.00	5.00	0.00
Sep-2012	3.33	8.98	0.24
Sep-2014	2.70	9.27	0.20
Feb-2017	3.26	10.79	0.29
Oct-2017	2.66	10.75	0.23
Mar-2018	2.42	10.82	0.21
Oct-2018	2.55	10.78	0.22
Mar-2019	2.39	10.84	0.21

Ricker Method® Plume Stability Characteristics 1,1-DCA Upper Shallow			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-1999	7.94	21	1.37
Mar-2000	9.87	45	3.61
Mar-2001	9.32	30	2.30
Sep-2001	8.53	21	1.48
Mar-2002	8.63	130	9.14
Sep-2002	8.67	184	13.03
Mar-2003	8.62	185	13.02
Sep-2003	7.12	30	1.74
Mar-2004	11.43	65	6.03
Sep-2004	0.00	5	0.00
Mar-2005	8.24	28	1.91
Sep-2005	0.00	5	0.00
Mar-2006	6.24	42	2.12
Sep-2006	7.26	31	1.82
Mar-2007	10.02	89	7.28
Sep-2007	9.08	151	11.19
Mar-2008	7.65	129	8.08
Sep-2008	7.52	232	14.26
Mar-2009	7.98	237	15.45
Sep-2009	7.97	233	15.15
Mar-2010	9.24	203	15.26
Sep-2010	7.52	232	14.26
Sep-2012	7.50	162	9.89
Sep-2014	6.31	57	2.95
Feb-2017	7.41	54	3.26
Oct-2017	6.85	36	2.00
Mar-2018	8.39	48	3.27
Oct-2018	7.47	63	3.85
Mar-2019	6.95	48	2.71

Ricker Method® Plume Stability Characteristics Total Chloroethanes Upper Shallow			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-1999	7.90	314	9
Mar-2000	9.82	721	26
Mar-2001	9.27	516	18
Sep-2001	8.49	337	11
Mar-2002	9.24	2,642	90
Sep-2002	11.11	2,007	83
Mar-2003	8.94	4,658	154
Sep-2003	7.25	652	17
Mar-2004	11.38	965	41
Sep-2004	0.00	0	0
Mar-2005	8.20	542	16
Sep-2005	0.00	0	0
Mar-2006	6.20	610	14
Sep-2006	7.22	394	11
Mar-2007	9.97	1,546	57
Sep-2007	9.04	3,231	108
Mar-2008	7.61	2,719	77
Sep-2008	7.48	5,272	146
Mar-2009	7.97	6,140	181
Sep-2009	7.93	5,204	153
Mar-2010	9.19	4,236	144
Sep-2010	7.48	4,473	124
Sep-2012	8.21	2,914	89
Sep-2014	6.26	728	17
Feb-2017	7.36	692	19
Oct-2017	6.80	462	12
Mar-2018	8.33	564	17
Oct-2018	7.42	727	20
Mar-2019	6.89	571	15

Ricker Method® Plume Stability Characteristics Toluene Upper Shallow			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-1999	10.61	145.8	12.62
Mar-2000	11.66	145.6	13.85
Mar-2001	10.40	44.2	3.75
Sep-2001	9.73	84.3	6.70
Mar-2002	12.47	58.3	5.94
Sep-2002	12.81	83.7	8.75
Mar-2003	12.71	69.6	7.22
Sep-2003	7.22	11.0	0.65
Mar-2004	7.90	47.3	3.05
Sep-2004	7.39	32.1	1.93
Mar-2005	5.13	25.4	1.06
Sep-2005	5.47	37.8	1.69
Mar-2006	2.76	14.1	0.32
Sep-2006	6.78	20.9	1.16
Mar-2007	9.22	28.3	2.13
Sep-2007	8.42	47.3	3.25
Mar-2008	9.83	47.8	3.83
Sep-2008	9.82	82.3	6.60
Mar-2009	9.55	91.2	7.11
Sep-2009	10.17	86.2	7.15
Mar-2010	9.67	80.0	6.31
Sep-2010	7.96	66.1	4.29
Sep-2012	7.01	25.7	1.47
Sep-2014	6.45	13.7	0.72
Feb-2017	7.46	15.9	0.97
Oct-2017	4.91	14.0	0.56
Mar-2018	6.00	14.2	0.70
Oct-2018	4.16	15.4	0.52
Mar-2019	5.86	13.5	0.64

Ricker Method® Plume Stability Characteristics Ethylbenzene Upper Shallow			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-1999	14.54	443	52.6
Mar-2000	12.79	266	27.8
Mar-2001	12.37	166	16.8
Sep-2001	11.95	153	14.9
Mar-2002	15.26	192	23.9
Sep-2002	13.19	354	38.1
Mar-2003	13.18	204	21.9
Sep-2003	12.04	66	6.5
Mar-2004	7.71	164	10.3
Sep-2004	7.69	108	6.8
Mar-2005	8.82	84	6.1
Sep-2005	9.71	111	8.8
Mar-2006	5.94	81	3.9
Sep-2006	9.77	83	6.6
Mar-2007	10.46	161	13.7
Sep-2007	9.77	192	15.3
Mar-2008	10.90	198	17.6
Sep-2008	10.58	267	23.1
Mar-2009	10.90	276	24.5
Sep-2009	11.01	296	26.6
Mar-2010	10.98	342	30.6
Sep-2010	10.30	180	15.1
Sep-2012	8.71	28	2.0
Sep-2014	9.24	25	1.9
Feb-2017	9.47	24	1.9
Oct-2017	6.93	15	0.8
Mar-2018	7.22	24	1.4
Oct-2018	8.80	36	2.6
Mar-2019	8.08	26	1.7

Ricker Method® Plume Stability Characteristics Xylene Upper Shallow			
Event	**Area (acres)**	**Average Concentration (µg/L)**	**Mass Indicator (lbs)**
Sep-1999	14.92	2,026	246.6
Mar-2000	13.41	986	107.9
Mar-2001	13.30	554	60.1
Sep-2001	13.22	451	48.6
Mar-2002	16.16	739	97.5
Sep-2002	13.99	1,418	161.9
Mar-2003	13.53	726	80.2
Sep-2003	13.03	237	25.2
Mar-2004	11.84	481	46.4
Sep-2004	8.41	341	23.4
Mar-2005	13.71	262	29.3
Sep-2005	13.92	382	43.4
Mar-2006	10.18	224	18.6
Sep-2006	11.17	289	26.3
Mar-2007	11.58	635	60.0
Sep-2007	9.65	559	44.0
Mar-2008	11.38	699	64.9
Sep-2008	11.31	880	81.2
Mar-2009	11.35	902	83.5
Sep-2009	11.45	1,050	98.0
Mar-2010	11.43	1,264	117.9
Sep-2010	10.90	602	53.5
Sep-2012	11.61	202	19.2
Sep-2014	10.98	68	6.1
Feb-2017	10.80	65	5.7
Oct-2017	8.87	34	2.4
Mar-2018	9.34	53	4.0
Oct-2018	9.84	95	7.6
Mar-2019	10.44	71	6.1

Appendix G

Groundwater Plume Analytics® Presentation.pptx

(on disc)