

Univar Solutions USA, Inc.

2021 Annual Groundwater Monitoring Report

8201 South 212th Street, Kent, Washington
Agreed Order No. DE 5988

1 March 2022

Project No.: 0629479

The business of sustainability



Signature Page

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CONTENTS

1.	INTRODUCTION	1
2.	SITE DESCRIPTION AND HISTORY	2
3.	SITE CLOSURE REQUIREMENTS	4
4.	WORK PERFORMED IN 2021	5
4.1	Groundwater Monitoring	5
4.1.1	Groundwater Elevations.....	5
4.1.2	Groundwater Quality Results.....	6
4.1.3	Groundwater Quality Trends.....	8
4.1.4	Mann-Kendall Analysis	9
4.2	Recommendations.....	10
5.	WORK PLANNED FOR 2022	11
5.1	Performance Monitoring.....	11
5.2	Communications.....	11
5.3	Environmental Information Management	11
6.	REFERENCES	12

TABLES

FIGURES

APPENDIX A	FIELD FORMS
APPENDIX B	LAB DATA AND VALIDATION MEMOS
APPENDIX C	HISTORICAL GROUNDWATER MONITORING DATA
APPENDIX D	TREND CHARTS
APPENDIX E	MANN-KENDALL ANALYSIS

List of Tables

Table 1: Cleanup Levels for IHSs in Groundwater
Table 2: Performance Monitoring Schedule
Table 3: Groundwater Elevations
Table 4: Groundwater Vertical Gradients
Table 5: Groundwater Field Parameters
Table 6: Concentration of VOCs in Groundwater

List of Figures

Figure 1: Site Location
Figure 2: Site Plan Map
Figure 3: Cross Section A-A'
Figure 4: Shallow Groundwater Elevation Contours, April 2021
Figure 5: Shallow Groundwater Elevation Contours, August 2021
Figure 6: Deep Groundwater Elevation Contours, April 2021
Figure 7: Deep Groundwater Elevation Contours, August 2021
Figure 8: VOC Concentrations in Shallow Groundwater, April 2021
Figure 9: VOC Concentrations in Shallow Groundwater, October 2021
Figure 10: VOC Concentrations in Deep Groundwater, April 2021
Figure 11: VOC Concentrations in Deep Groundwater, October 2021

Acronyms and Abbreviations

°C	degrees Celsius
µS/cm	microSiemens per centimeter
1,1-DCA	1,1-dichloroethane
AO	Agreed Order
AST	aboveground storage tank
cDCE	cis-1,2-dichloroethene
CAP	Cleanup Action Plan
CMP	Compliance Monitoring Plan
CUL	cleanup level
Ecology	Washington State Department of Ecology
EDR	Engineering Design Report
EIM	Environmental Information Management
ERM	ERM-West, Inc.
FFS	Focused Feasibility Study
ft bgs	feet below ground surface
ft/ft	foot/foot
IHS	indicator hazardous substance
mm	millimeters
MW	monitoring well
PCE	tetrachloroethene
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
site	Univar Solutions facility located at 8201 South 212 th Street in Kent, Washington
SOW	scope of work
TCE	trichloroethene
Univar Solutions	Univar Solutions USA, Inc.
UST	underground storage tank
VC	vinyl chloride
VOC	volatile organic compound
WAC	Washington Administrative Code

1. INTRODUCTION

ERM-West, Inc. (ERM) has prepared this 2021 Annual Groundwater Monitoring Report on behalf of Univar Solutions USA, Inc. (Univar Solutions) to present monitoring results and summarize activities performed at the Univar Solutions facility located at 8201 South 212th Street in Kent, Washington (the “site”). The location of the site is shown on Figure 1. This report is being submitted pursuant to the requirements of Agreed Order No. DE 5988 (AO; Ecology 2008) between Univar Solutions and the Washington State Department of Ecology (Ecology). The specific requirements for submittal of this report are in the AO Exhibit B scope of work (SOW) Task 3. This report covers the period beginning 1 January 2021 and ending 31 December 2021 (the “reporting period”).

The work performed during the reporting period included the following:

- Submittal of two Semi-Annual Progress Reports
- Submittal of 2020 Annual Report
- Semi-Annual Groundwater Monitoring (i.e., performance monitoring)

Key communications in 2021 are listed below.

- On 29 January 2021 Univar Solutions submitted the 2020 Semi-Annual Progress Report (S2).
- On 8 March 2021, Univar Solutions submitted the 2020 Annual Groundwater Monitoring Report.
- On 23 February 2021, Ecology provided notification that Ecology Project Manager for this site changed from Thomas Mackie to Valerie Cramer. Additionally, regional management of the site moved from Central to Northwest.
- On 8 March 2021, Ecology issued their approval of the 2020 Annual Groundwater Monitoring Report.
- On 20 April 2021, Univar Solutions, ERM, and Ecology participated in a conference call to discuss transition of the Ecology Project Manager role from Thomas Mackie to Valerie Cramer.
- On 28 July 2021, Univar Solutions submitted the 2021 Semi-Annual Progress Report (S1).
- On 8 October 2021, Ecology provided Univar Solutions with a template for development of an Environmental Covenant to be implemented for soil and groundwater impacts at the property, which will be addressed via institutional controls in accordance with the final cleanup action at the property (see Section 3).

2. SITE DESCRIPTION AND HISTORY

Univar Solutions is a wholesale distributor of chemical products; it stores, packages, and distributes chemical products to meet customer needs. Univar Solutions (formerly Van Waters & Rogers and Univar USA Inc.) has operated at the site since 1974. The current site plan is shown on Figure 2.

Van Waters & Rogers historically operated one 1,500-gallon and one 6,000-gallon aboveground storage tank (AST) containing dangerous waste, as well as 37 underground storage tanks (USTs) containing raw products at the site. The locations of the former ASTs and USTs are shown on Figure 2. According to PES Environmental, Inc. (PES 2009), the dangerous waste ASTs were taken out of service in 1982 (1,500-gallon tank) and in 1985 (6,000-gallon tank). There were no known releases from the former dangerous waste ASTs during their operating history. The 37 raw product USTs were removed in 1985 and 1986 (PES 2005). The former USTs are suspected to have impacted soil and groundwater at the site. The area previously containing the ASTs and USTs is currently covered by a concrete pad constructed in approximately 1985.

Site soil and groundwater investigations completed from 1994 to 2008 indicated that volatile organic compounds (VOCs) were present in the subsurface at concentrations above the applicable Model Toxics Control Act cleanup levels (CULs). Starting in 1998, Univar Solutions conducted environmental investigations under Ecology's Voluntary Cleanup Program; in 2008, Univar Solutions entered into negotiations with Ecology for an AO that would cover future remedial action at the site. The AO was finalized and became effective on 20 November 2008.

A combined revised Remedial Investigation (RI) addendum, Focused Feasibility Study (FFS) addendum, and draft Cleanup Action Plan (CAP) was developed in 2009 (PES 2009). The document summarized the soil and groundwater data that was collected through 2008, developed CULs for soil and groundwater indicator hazardous substances (IHSs) at the site, and recommended cleanup actions. The combined RI, FFS, and draft CAP fulfilled the requirements of the AO Exhibit B SOW Task 1.

The RI addendum identified IHSs immediately east of the warehouse building (Figure 2) in soil and groundwater zones described as follows:

- Vadose zone soil and saturated zone soil to a depth of approximately 25 feet below ground surface (ft bgs);
- Shallow groundwater in the uppermost water-bearing unit (i.e., shallow zone groundwater) approximately 4 to 30 ft bgs; and
- Deep groundwater in the uppermost water-bearing unit (i.e., deep zone groundwater) approximately 30 to 45 ft bgs.

Following Ecology approval of the draft CAP, a Final Engineering Design Report (EDR) was developed in 2010 (PES 2010). The EDR presented the procedures, schedule, and goals for implementation of the cleanup action. A Compliance Monitoring Plan (CMP) was included as an appendix to the EDR to describe monitoring requirements to demonstrate the protection of workers and effectiveness of the cleanup action in accordance with Washington Administrative Code (WAC) 173-340-410 (i.e., protection monitoring, performance monitoring, and conformational monitoring). The CMP fulfilled requirements of the AO Exhibit B SOW Task 2. Univar Solutions began implementation of the cleanup action in 2011 and, in general, it included the following:

- Enhanced bioremediation injections in 2011 at targeted groundwater source areas in the shallow zone (i.e., MW-5 source area) and deep zone (i.e., MW-13/MW-21 source area);
- Monitored natural attenuation to address residual contamination in non-source areas in soil and groundwater; and

- Institutional controls to protect human health and the environment.

Implementation of the final cleanup action was documented in the Construction Report dated 12 May 2012 (PES 2012).

On 23 August 2018, a Resource Conservation and Recovery Act (RCRA) Corrective Action Permit Renewal Application Parts A and B was submitted. A revised application was submitted on 16 December 2019 updating the name from Univar USA Inc. to Univar Solutions USA, Inc. Ecology issued the RCRA Permit Renewal for Public Notice on 22 June 2020 and subsequently finalized the updated 2020 Permit for Corrective Action on 17 August 2020. Accordingly, corrective action activities are complete in accordance with the draft CAP, and monitoring and reporting is in progress in accordance with schedules approved by Ecology.

On 29 November 2018, Ecology informed Univar Solutions and ERM that the downgradient extent of benzene in deep groundwater must be delineated to fulfill the requirements of the AO. ERM installed and sampled monitoring well MW-29D as described in detail in the Groundwater Benzene Delineation Report dated 12 November 2019 (ERM 2019a). After installing MW-29D and conducting groundwater monitoring, benzene impacts are now delineated.

ERM conducted two semi-annual groundwater monitoring events in 2021 in accordance with the Ecology-approved CMP (PES 2010). The first semi-annual groundwater monitoring event was conducted between 12 April and 15 April 2021. The second semi-annual groundwater monitoring event was completed during two mobilizations with water level gauging completed on 31 August 2021 and collection of groundwater samples completed between 5 October and 7 October 2021. ERM initially collected groundwater samples for the second semi-annual groundwater monitoring event between 1 September and 3 September 2021; however, these samples were not analyzed due to quality control concerns and samples were re-collected in October 2021 as noted above. Groundwater monitoring results are described in Section 4.1.2.

3. SITE CLOSURE REQUIREMENTS

The IHSs and associated CULs for the site are presented in Table 1. The CULs for some of the IHSs have been revised by Ecology since they were first documented in the RI addendum, FFS addendum, and draft CAP (PES 2009) as detailed in the 2018 Annual Groundwater Monitoring Report Rev 1 (ERM 2019b). These CULs are consistent with Ecology's current CULs and risk calculation toxicity values updated August 2020 (Ecology 2013).

The standard point of compliance for direct contact with soil throughout the site is from the ground surface to a depth of 15 feet. For groundwater, the standard point of compliance is the affected portion of the aquifer throughout the site; however, in a case when attaining CULs throughout the site is impractical, a conditional point of compliance for groundwater can be established at the downgradient property line (WAC 173-340-720(8)(c)).

The goals of the final cleanup action as summarized in the CAP are as follows:

- Maintain the existing asphalt and concrete cover to minimize the potential for IHSs to leach from soil to groundwater.
- Implement institutional controls for incidental ingestion of and dermal contact with soil exceeding the applicable CULs, and for inhalation of particulates and vapors from soil exceeding the applicable CULs by subsurface construction workers onsite.
- Control migration of groundwater containing IHSs at concentrations exceeding the applicable CULs.
- Control incidental ingestion and dermal contact with groundwater exceeding the applicable CULs, and control inhalation of vapors from groundwater exceeding the applicable CULs by subsurface construction workers onsite.

Compliance monitoring is being conducted to demonstrate protection of workers and effectiveness of the final cleanup action for soil and groundwater in accordance with the CMP (PES 2010). Compliance monitoring includes the following:

- Protection monitoring in accordance with WAC 173-340-410(1)(a), which was conducted to confirm the protection of human health and the environment during implementation of the final cleanup action, and is documented in the Construction Completion Report (PES 2012);
- Performance monitoring in accordance with WAC 173-340-410(1)(b), which consists of groundwater quality and injection performance monitoring and is currently being performed to assess the progress of the cleanup action toward attaining CULs; and
- Confirmational groundwater monitoring in accordance with WAC 173-340-410(1)(c), which will be performed following attainment of CULs to demonstrate the long-term effectiveness of the cleanup action.

Upon consistent attainment of CULs at the point of compliance for IHSs during conformational groundwater monitoring, Univar Solutions understands that Ecology will provide written notification indicating Univar Solutions has completed the corrective actions required by AO No. DE 5988 and that the provisions of the AO will be deemed satisfied.

4. WORK PERFORMED IN 2021

The work performed during the reporting period included groundwater monitoring (Table 2) and waste management as described in the subsections below.

4.1 Groundwater Monitoring

Groundwater monitoring activities were conducted in accordance with the Ecology-approved CMP (PES 2010). This monitoring included collection of water level data from the entire monitoring well network and groundwater samples from monitoring wells identified for groundwater performance monitoring in the CMP (with modifications according to Ecology approval of the modified monitoring schedule presented in the 2018 Annual Groundwater Monitoring Report Rev 1 and the 2020 Annual Groundwater Monitoring Report [PES 2010; ERM 2019b; ERM 2021, Table 2]). Water levels from the monitoring well network were measured on 12 April and 31 August 2021 using an electronic water level meter.

ERM collected groundwater samples between 12 April to 15 April 2021 and 5 October to 7 October 2021. Groundwater samples were collected using standard low flow sampling techniques, a peristaltic pump, and dedicated sampling tubing. Field parameters (temperature, pH, electrical conductivity, oxidation-reduction potential, and dissolved oxygen) were monitored continuously during well purging using a flow-through cell and water quality meter. Purging was considered complete when temperature, pH, and electrical conductivity had stabilized for three consecutive 3-minute intervals. Groundwater samples were collected in laboratory-supplied sample containers, marked with identifying information, and submitted under standard chain-of-custody to SGS Laboratories for analysis of VOCs. All field forms are included as Appendix A; laboratory data and data validation memoranda are included as Appendix B.

4.1.1 Groundwater Elevations

Water level measurements from the monitoring well network and the corresponding groundwater elevation data are summarized in Table 3. Historical groundwater elevations are included as Appendix C.

4.1.1.1 Shallow Zone Groundwater

The groundwater flow in April 2021 was predominately from the vicinity of MW-01 to the north with a hydraulic gradient of approximately 0.0788 foot/foot (ft/ft) (Figure 4). Groundwater flow in August 2021 was from the vicinity of MW-01 to the north, northeast, and east with a hydraulic gradient of approximately 0.0815 ft/ft (Figure 5). Shallow zone groundwater elevations measured in April 2021 were 1 to 2 feet higher than in August 2021. This seasonal variation is consistent with historical trends.

4.1.1.2 Deep Zone Groundwater

The groundwater flow in April 2021 was to the north and northwest with a hydraulic gradient of approximately 0.0084 ft/ft (Figure 6). The groundwater flow in August 2021 was to the north and northwest with a hydraulic gradient of approximately 0.0005 ft/ft (Figure 7). Deep zone groundwater elevations measured in April 2021 were approximately 1 to 1.5 feet higher than in August 2021. This seasonal variation is consistent with historical trends.

4.1.1.3 Vertical Gradients

The differences in hydraulic head and corresponding potential vertical groundwater flow between the shallow zone groundwater and deep zone groundwater at the site were determined by assessing the groundwater elevations at the shallow zone and deep zone groundwater well pairs (MW-1/MW-21; MW-10/MW-18; MW-8/P-1). Analysis of vertical gradients is presented in Table 4 and summarized below:

- Groundwater flow in the vicinity of MW-1/MW-21 is downward.
- Groundwater flow in the vicinity of MW-10/MW-18 is slightly downward.
- Groundwater flow in the vicinity of MW-8/P-1 is slightly downward.

The shallow zone and deep zone groundwater elevations in 2021 are generally consistent with seasonal trends and historical observations.

4.1.2 Groundwater Quality Results

The groundwater sampling field notes, including all field parameter data, are presented in Appendix A. Groundwater field parameters measured immediately prior to sample collection are summarized in Table 5.

IHS concentrations from groundwater samples collected at performance monitoring locations in April and October 2021 are summarized in Table 6. IHS concentrations in groundwater were compared to the CULs. Locations where IHSs were detected at concentrations exceeding their CULs are shown on Figures 8 through 11. A copy of the laboratory analytical data reports is included in Appendix B.

The laboratory analytical data were validated consistent with Section 5.0 of the CMP (Appendix B of the EDR [PES 2010]). The data validation reports are included in Appendix B. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. Notable data issues for groundwater samples include:

- April 2021 Groundwater Samples (FA84754)
 - All analytes for samples MW-13-041321-01, MW-16-041521-01, and MW-20-041521-01 were qualified as either nondetect estimates (UJ) or estimated with low bias (J-) due to headspace (greater than 6 millimeters [mm]).
 - Chloroethane results for samples MW-17-041421-01 and MW-22-041421-01 were qualified as estimated with a low bias (J-) due to headspace (greater than 6 mm).
- October 2021 Groundwater Samples (FA89630 and FA89667)
 - Several samples were analyzed 1 day past the 14-day holding time for Method 8260B due to laboratory backlog. The data validation report included in Appendix B discusses these cases further.
 - Chloroethane results for sample MW-13-20211005, MW-22-20211005, and DUP-01 were qualified as an estimate with a high bias (J+) due to additional high surrogate recovery and the timing of the laboratory analysis.
 - Chloroethane results for sample MW-20-20211007 were qualified as an estimate with a high bias (J+) due to additional high surrogate recovery and the timing of the laboratory analysis.
 - Benzene results for sample MW-17-20211007 were qualified as an estimate with a high bias (J+) due to additional high surrogate recovery and the timing of the laboratory analysis.
 - All analytes, except for chloroethane, for sample MW-17-20211007 were qualified as either nondetect estimates (UJ) or estimated detected results (J) due to additional high surrogate recovery and the timing of the laboratory analysis.
 - Methylene chloride results for sample MW-03-20211007, MW-05-20211005, MW-12-20211005, and MW-20-20211007 were estimated with high bias (J+) due to suspected laboratory contamination.

- Methylene chloride results for samples MW-20-20211007 and MW-28-20211007 were noted to have associated internal standard response outside control limits; suspected laboratory contaminant.
- 1,1-Dichloroethane results for samples MW-03-20211007 and MW-27-20211007 were estimated bias high (J+) due to associated blank spike outside of control limits high and associated internal standard response outside control limits, respectively.

4.1.2.1 Shallow Zone Groundwater

The following observations are provided based on performance monitoring for groundwater quality in the shallow zone:

- Field parameter data collected in April and October 2021 indicate that the shallow zone groundwater has a neutral pH, conductivity range of 135 to 842 microSiemens per centimeter ($\mu\text{S}/\text{cm}$), average temperature of approximately 15 degrees Celsius ($^{\circ}\text{C}$), is reducing to slightly oxidizing, and anoxic (Table 5).
- The April 2021 results show groundwater samples from each of the eight shallow zone monitoring well locations that were sampled (MW-01, MW-03, MW-04, MW-05, MW-08, MW-09, MW-12, and MW-23) had reported concentrations of one or more IHS (i.e., 1,1-dichloroethane [1,1-DCA], benzene, cis-1,2-dichloroethene [cDCE], methylene chloride, tetrachloroethene [PCE], trichloroethene [TCE], and vinyl chloride [VC]) exceeding their respective CULs (Table 6, Figure 8).
- The October 2021 results show groundwater samples from five of the 12 shallow zone monitoring well locations that were sampled (MW-02, MW-06, MW-07, MW-09, and MW-10) had no detectable IHSs or concentrations of IHSs were below the CULs. Groundwater samples from the other seven shallow zone monitoring well locations that were sampled (MW-01, MW-03, MW-05, MW-06, MW-08, MW-12, and MW-23) had reported concentrations of one or more IHS (i.e., 1,1-DCA), benzene, cDCE, methylene chloride, PCE, TCE, and VC) exceeding their respective CULs (Table 6, Figure 9).
- No confirmed offsite migration of groundwater containing IHS concentrations exceeding the applicable CULs was evident within the shallow zone groundwater. However, concentrations of TCE above the CUL were detected in one or both of the eastern site boundary wells (MW-8 and MW-9) during both 2021 monitoring events.

4.1.2.2 Deep Zone Groundwater

The following observations are provided based on the groundwater monitoring in the deep zone:

- Field parameter data collected in April and October indicate that the shallow zone groundwater has a neutral pH, conductivity range of 293 to 1030 $\mu\text{S}/\text{cm}$, average temperature of approximately 15 $^{\circ}\text{C}$, is reducing to slightly oxidizing, and anoxic (Table 5).
- The April 2021 results show groundwater samples from two of 10 deep zone monitoring locations that were sampled (MW-18 and MW-29D) either had no detectable IHSs or concentrations of the IHSs were below the CULs. Groundwater samples from the other eight deep zone monitoring locations that were sampled (MW-13, MW-16, MW-17, MW-19, MW-21, MW-22, MW-20, and MW-27) had reported concentrations of one or more IHS (i.e., 1,2,4-trimethylbenzene, 1,2-dichloroethane, benzene, cDCE, ethylbenzene, methylene chloride, total xylenes, and VC) exceeding the CULs (Table 6, Figure 10).
- The October 2021 results show groundwater samples from three of 12 deep zone monitoring locations that were sampled (MW-13, MW-27, and MW-29D) either had no detectable IHSs or concentrations of the IHSs were below the CULs. Groundwater samples from the other nine deep

zone monitoring locations that were sampled (MW-14, MW-16, MW-17, MW-18, MW-19, MW-21, MW-22, MW-20, and MW-28) had reported concentrations of one or more IHS (i.e., 1,2,4-trimethylbenzene, 1,2-dichloroethane, benzene, cDCE, methylene chloride, total xylenes, and VC) exceeding the CULs (Table 6, Figure 11).

- Groundwater containing IHSs at concentrations exceeding the applicable CULs is controlled onsite with the exception of benzene and VC.
 - Benzene was reported at concentrations exceeding the CUL in groundwater samples from offsite monitoring well MW-20 in April and October 2021.
 - VC reported at concentrations exceeding the CUL in the groundwater sample from offsite monitoring well MW-27 in April 2021.
 - Concentrations of all IHSs at MW-29D were below detection limits or applicable CULs.

4.1.3 Groundwater Quality Trends

Groundwater quality data from April 1995 through 2020 is included in Appendix C, whereas groundwater quality data from 2021 is provided in Table 6. Time versus IHS concentration trend plots have been updated to include the April and October 2021 results (provided in Appendix D). The plots (Figures D1 through D25) include selected parent IHSs (1,1,1-trichloroethane and PCE) and their breakdown products (1,1-DCA, TCE, 1,1-dichloroethene, cDCE, chloroethane, and VC). Concentration trends for benzene at select wells (MW-16, MW-17, MW-19, MW-20, and MW-29D) located within or near the benzene impacts in deep zone groundwater that extend offsite are displayed on Figure D26. Benzene, ethylbenzene, toluene, and total xylenes for deep monitoring well MW-21 are displayed on Figure D27.

4.1.3.1 Shallow Zone Groundwater

ERM observed the following shallow zone groundwater IHS concentration trends based on long-term trend plots (approximate timeframe of 1995 to 2021) in Appendix D:

- The concentrations of IHSs in shallow zone groundwater at MW-02, MW-06, MW-07, and MW-10 have been either stable or decreasing at levels below the CULs.
- The concentrations of PCE and its breakdown products in shallow zone groundwater at MW-01, MW-03, MW-04, MW-05, MW-08, MW-09, MW-11, and MW-12 have been generally stable or slightly decreasing at levels exceeding their CULs.
- The concentrations of PCE and its breakdown products in shallow zone groundwater at MW-23 have been stable or slightly increasing at levels exceeding their CULs.
- The concentrations of reductive dechlorination breakdown products cDCE, chloroethane, and VC have varied in the source area wells over the project duration with some intermittent increases that are indicative of reductive dechlorination.
- IHS concentrations have been generally decreasing or stable since groundwater monitoring began and indicate the long-term effectiveness of 1) enhanced bioremediation, 2) engineering controls (i.e., maintain asphalt and concrete covering), and 3) natural attenuation at controlling migration of shallow zone groundwater containing IHSs at concentrations above the applicable CULs.

4.1.3.2 Deep Zone Groundwater

ERM observed the following deep zone groundwater IHS concentration trends based on long-term trend plots (approximate timeframe of 1995 to 2020) in Appendix D:

- The concentrations of IHSs in deep zone groundwater at MW-14, MW-28, and MW-29D have been either stable or decreasing with current concentrations below the CULs.
- The concentrations of IHSs in deep zone groundwater at offsite wells MW-20 and MW-27 have been generally stable or decreasing with recent detections above CULs for benzene and VC, respectively.
- The concentrations of benzene, ethylbenzene, toluene, and total xylenes in deep zone groundwater throughout the site have been stable or decreasing at levels below the CULs with the following exceptions:
 - Concentration of benzene at MW-17 has been stable or decreasing at levels exceeding the CUL.
 - Concentration of toluene at MW-24 has been stable or decreasing at levels exceeding the CUL.
 - Concentrations of ethylbenzene and total xylenes at MW-21 and MW-24 have been stable or decreasing at levels exceeding the CUL.
- The concentrations of PCE and its breakdown products in deep zone groundwater at MW-13, MW-16, MW-17, MW-18, MW-21, MW-22, MW-24, and MW-25 have been generally stable or slightly decreasing at levels exceeding their CULs. Some intermittent spikes of breakdown products have been observed, which are indicative of reductive dechlorination.
- The concentrations of cDCE, VC, and methylene chloride at MW-19 were observed to increase in October 2021 results; however, concentrations of IHSs at this location have otherwise been generally stable or slightly decreasing according to historical results. Concentrations of IHSs at the downgradient monitoring location (i.e., MW-27) either had no detectable IHSs or concentrations of the IHSs were below the CULs. ERM recommends continued monitoring at this location in accordance with the approved schedule (Table 2).

4.1.4 Mann-Kendall Analysis

The Mann-Kendall test for trend is used to determine the presence or absence of a trend in concentration over time for an individual monitoring location. The Mann-Kendall test and linear regression analysis was performed to evaluate concentration trends at select monitoring locations. This test was used to analyze whether select IHS concentrations exhibited trends at select monitoring wells approximately 6 years following completion of corrective action (i.e., since January 2015). Monitoring well and analyte pairs were selected either due to location within the benzene plume that extends offsite (MW-17 and MW-19, and MW-20) or at perimeter locations with a CUL exceedance in 2021 (MW-08, MW-09, MW-19, MW-23, MW-27, and MW-28).

The Mann-Kendall test value (S) was computed and compared to a 95 percent confidence critical value using the statistical computing and graphics software “R,” version 3.4.1. For results with a confidence level greater than or equal to 95 percent, a positive S value indicates the later concentrations tend to be larger than earlier concentrations, resulting in an increasing trend. For results with a confidence level greater to or equal to 95 percent, a negative S indicates a decreasing trend. If there was no definitive trend, the data is considered stable. Mann-Kendall results are presented in Appendix E and summarized as follows:

- Concentrations of benzene at MW-17 and MW-20 are stable.
- Concentrations of benzene at MW-19 are decreasing.
- Concentrations of cis-1,2-dichloroethene at MW-19 are stable.
- Concentrations of TCE at MW-08 and MW-09 are stable.
- Concentrations of VC at MW-19 are stable.

- Concentrations of PCE at MW-23 are stable.
- Concentrations of TCE at MW-23 are increasing; however, review of long-term trends (Appendix D) indicate these concentrations are generally stable with only a slight increase above the CUL observed in the last 3 years.
- Concentrations of VC at MW-27 are increasing; however, review of long-term trends (Appendix D) indicate these concentrations are generally stable. Additionally, the most recent fall monitoring events (i.e., Fall 2020 and 2021) were below the CUL.
- Trend tests cannot be completed for methylene chloride at MW-19 and MW-28 because these groups did not meet the minimum data requirements of at least five detected values and 50 percent detection frequency.

4.2 Recommendations

Based on the 2021 groundwater monitoring results and review of historical IHS concentration data (including tabulated results and time versus concentration trend plots), ERM recommends the following:

- Performance monitoring at shallow zone groundwater locations should continue in accordance with Table 2 to confirm that no offsite migration is occurring.
- Performance monitoring at deep zone groundwater locations should continue in order to evaluate performance of the cleanup actions against the cleanup action goals.
- Continue evaluation of site boundary monitoring wells to verify trends of IHS concentrations are stable or decreasing at the site boundary.

5. WORK PLANNED FOR 2022

5.1 Performance Monitoring

ERM will conduct semi-annual performance monitoring (i.e., groundwater quality) at the site on behalf of Univar Solutions. The planned activities include:

- Complete water level monitoring to support evaluation of aquifer conditions, including horizontal and vertical flow direction and gradients.
- Collect field parameters for evaluation of geochemical conditions.
- Collect groundwater samples in accordance with the performance monitoring (i.e., groundwater quality) requirements in Table 2.

5.2 Communications

Pursuant to the 2008 AO, Univar Solutions will provide project updates to Ecology via cleanup progress reports on a semi-annual basis. An annual report evaluating overall effectiveness of corrective action activities will be submitted in the first quarter of 2023.

Univar Solutions will prepare and record an Environmental Covenant in accordance with the final cleanup action that includes institutional controls for soil and groundwater impacts within the property boundary (see Section 3).

In accordance with the Ecology email to Univar Solutions on 24 January 2022, Univar Solutions will complete the Model Toxics Control Act 5-year Periodic Review for the site in 2022.

5.3 Environmental Information Management

Analytical and supporting data collected during 2021 will be submitted to Ecology in accordance with the AO Section (VIII)(G) and loaded into Ecology's Environmental Information Management (EIM) database in accordance with the Toxics Cleanup Program Policy 840 within 45 days of completion of the 2021 Annual Groundwater Monitoring Report.

Historical (as available) and current site data collected through 2021 have been uploaded into Ecology's EIM database as summarized in Appendix F.

6. REFERENCES

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TABLES

Table 1
Cleanup Levels for IHSs in Groundwater
2021 Annual Report
Univar Solutions USA, Inc.
Kent, Washington

Indicator Hazardous Substance	2020 Revised Cleanup Level (µg/L)	Rationale ^a
Benzene	0.80	Method B Cancer
Toluene	640	Method B Non-Cancer
Ethylbenzene	700	Federal MCL
Total Xylenes ^b	1,600	Method B Non-Cancer
1,2,4-Trimethylbenzene (1,2,4-TMB)	80	Method B Non-Cancer
1,2-Dichloropropane (1,2-DCP)	1.2	Method B Cancer
Chloroethane ^c	-	No Value ^a
Chloroform	1.4	Method B Cancer
1,1-Dichloroethane (1,1- DCA)	7.7	Method B Cancer
1,2-Dichloroethane (1,2-DCA)	0.48	Method B Cancer
1,1-Dichloroethene (1,1-DCE)	7.0	Federal MCL
Cis-1,2-Dichloroethene (cis-1,2-DCE)	16	Method B Non-Cancer
Methylene Chloride	5.0	Federal MCL
1,1,1-Trichloroethane (TCA)	200	Federal MCL
Trichloroethylene (TCE)	0.54	Method B Cancer
Tetrachloroethylene (PCE)	5.0	Federal MCL
Vinyl chloride (VC)	0.50	WAC 173-340-705; WAC 173-340-707

Notes:

^a = The lower of the Method B groundwater cleanup level or the MCL was used unless the cleanup level was lower than the lowest method reporting limit (MRL) below the lowest MRL reported by the laboratory. Since the Method B cleanup level for vinyl chloride of 0.029 µg/L is two orders of magnitude below the laboratory MRL of 0.5 µg/L, the cleanup level has been set to 0.5 µg/L, consistent with WAC 173-340-705 and WAC 173-340-707.

^b = Total Xylene used xylene; *m*-, *o*-, and *p*- isomers

^c = Cleanup level adjusted to "no value" based on updated toxicity values from the USEPA (December 2010) and based on May 2019 updates to CLARC database. Verified values consistent with August 2020 updates to the CLARC database.

µg/L = micrograms per liter

MCL = Maximum Contaminant Level

Method B Cancer = MTCA Method B standard groundwater cleanup level for carcinogenic risk

Method B Non-Cancer = MTCA Method B standard groundwater cleanup level for non-carcinogenic risk

WAC = Washington Administrative Code

Table 2
Performance Monitoring Schedule
2021 Annual Report
Univar Solutions USA, Inc.
Kent, Washington

Monitoring Well	Groundwater Elevation Measurement	Water Quality VOCs
Shallow Onsite Monitoring Wells		
MW-1	SA	SA
MW-2	SA	A
MW-3	SA	SA
MW-4	SA	SA
MW-5	SA	SA
MW-6	SA	A
MW-7	SA	A
MW-8	SA	SA
MW-9	SA	SA
MW-10	SA	A
MW-11	SA	-
MW-12	SA	SA
MW-23	SA	SA
Deep Onsite Monitoring Wells		
MW-13	SA	SA
MW-14	SA	A
MW-16	SA	SA
MW-17	SA	SA
MW-18	SA	SA
MW-19	SA	SA
MW-21	SA	SA
MW-22	SA	SA
MW-24	SA	-
MW-25	SA	-
P-1	SA	-
Deep Offsite Monitoring Wells		
MW-20	SA	SA
MW-27	SA	SA
MW-28	SA	A
MW-29D	SA	SA

Notes:

A = annual (i.e., during seasonal low groundwater monitoring event)

CULs = cleanup levels

IHSs = indicator hazardous substances

SA = semiannual

VOC = volatile organic compounds

Table 3
Groundwater Elevations
2021 Annual Report
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation ^a (ft)	Screen Interval Depth (ft btoc)	Screen Interval Elevation (ft)	Date	Time	Depth to Water (ft btoc)	Water Elevation (ft)
Shallow On-Site Monitoring Wells							
MW-1	33.09	4 to 19	29.15 to 14.15	04/12/21	14:15	4.25	28.84
	33.09			08/31/21	13:05	5.91	27.18
MW-2	33.76	4 to 19	29.79 to 14.79	04/12/21	13:36	5.47	28.29
	33.76			08/31/21	12:45	7.65	26.11
MW-3	32.86	4 to 19	28.94 to 13.94	04/12/21	15:20	5.30	27.56
	32.86			08/31/21	12:00	7.15	25.71
MW-4	32.82	4.5 to 14.5	28.36 to 18.36	04/12/21	14:35	4.00	28.82
	32.82			08/31/21	13:25	6.40	26.42
MW-5	32.57	4.5 to 14.5	28.10 to 18.10	04/12/21	14:50	5.10	27.47
	32.57			08/31/21	13:40	6.80	25.77
MW-6	33.01	4.5 to 14.5	28.55 to 18.55	04/12/21	14:00	4.00	29.01
	33.01			08/31/21	12:55	7.10	25.91
MW-7	32.91	4.5 to 14.5	28.46 to 18.46	04/12/21	15:00	5.10	27.81
	32.91			08/31/21	11:00	7.15	25.76
MW-8	33.53	4.5 to 14.5	29.07 to 19.07	04/12/21	13:01	5.50	28.03
	33.53			08/31/21	10:25	7.80	25.73
MW-9	33.72	5 to 15	28.77 to 18.77	04/12/21	13:50	6.00	27.72
	33.72			08/31/21	13:55	7.96	25.76
MW-10	32.77	5 to 15	27.89 to 17.89	04/12/21	15:05	5.30	27.47
	32.77			08/31/21	12:15	7.05	25.72
MW-11	32.79	5 to 20	27.79 to 12.79	04/12/21	NM	NM	NM
	32.79			08/31/21	NM	NM	NM
MW-12	32.74	5 to 20	27.81 to 12.81	04/12/21	14:45	5.20	27.54
	32.74			08/31/21	13:45	6.95	25.79
MW-23	32.70	5 to 15	27.78 to 17.78	04/12/21	15:03	4.90	27.80
	32.70			08/31/21	11:15	6.95	25.75

Table 3
Groundwater Elevations
2021 Annual Report
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation ^a (ft)	Screen Interval Depth (ft btoc)	Screen Interval Elevation (ft)	Date	Time	Depth to Water (ft btoc)	Water Elevation (ft)
Deep On-Site Monitoring Wells							
MW-13	32.69	39.6 to 44.1	-6.79 to -11.29	04/12/21	14:20	5.10	27.59
	32.69			08/31/21	13:20	7.10	25.59
MW-14	32.51	32.7 to 42.2	-0.10 to -9.60	04/12/21	14:05	5.85	26.66
	32.51			08/31/21	13:10	6.70	25.81
MW-15	32.57	33.7 to 43.5	-1.13 to -10.93	Well Abandoned 16 February 2016			
MW-16	36.82	37.2 to 47.2	-0.28 to -10.28	04/12/21	14:30	9.20	27.62
	36.82			08/31/21	12:30	11.10	25.72
MW-17	32.51	34.3 to 43.8	-1.70 to -11.2	04/12/21	15:30	5.20	27.31
	32.51			08/31/21	11:45	6.83	25.68
MW-18	32.61	34.0 to 43.5	-1.27 to -10.77	04/12/21	15:08	5.30	27.31
	32.61			08/31/21	12:10	6.90	25.71
MW-19	33.38	39.4 to 49.4	-5.88 to -15.88	04/12/21	15:15	6.00	27.38
	33.38			08/31/21	11:30	7.75	25.63
MW-21	32.8	34.1 to 44.1	-1.24 to -11.24	04/12/21	14:18	5.15	27.65
	32.8			08/31/21	13:15	6.85	25.95
MW-22	33.13	32.2 to 42.2	0.98 to -9.02	04/15/21	12:00	5.90	27.23
	33.13			08/31/21	13:30	7.35	25.78
MW-24	32.66	21.8 to 41.8	10.94 to -9.06	04/12/21	14:50	5.10	27.56
	32.66			08/31/21	NM	NM	NM
MW-25	32.71	21.8 to 41.8	11.00 to -9.00	04/12/21	14:22	5.10	27.61
	32.71			08/31/21	13:07	6.35	26.36
P-1	33.54	39.0 to 44.0	-5.38 to -10.38	04/12/21	14:50	5.70	27.84
	33.54			08/31/21	15:40	7.75	25.79
Deep Off-Site Monitoring Wells							
MW-20	33.04	33.5 to 43.2	-0.35 to -10.05	04/12/21	11:15	5.90	27.14
	33.04			08/31/21	15:55	7.35	25.69
MW-27	32.96	38.0 to 48.0	-5.02 to -15.02	04/12/21	10:42	5.70	27.26
	32.96			08/31/21	14:45	7.30	25.66
MW-28	34.54	35.0 to 45.0	-0.37 to -10.37	04/12/21	NM	NM	NM
	34.54			08/31/21	16:35	8.95	25.59
MW-29D	30.42	30.5 to 40.5	0.33 to -9.67	04/12/21	12:00	4.65	25.77
	30.42			08/30/21	15:30	6.50	23.92

Notes:

^a = Monitoring wells were resurveyed in December 2019

ft btoc = feet below top of casing

Depth = depth in feet to water relative to the top of PVC

Elevation = elevation in feet relative to NAVD 88

NM = not measured

Table 4
Groundwater Vertical Gradients
2021 Annual Report
Univar Solutions USA, Inc.
Kent, Washington

Well Identification		Screen Interval Depth ft btc	Measuring Point Elevation ft	Date	Groundwater Elevation ft	Gradient ^a ft/ft
<i>Vertical Gradients ^b</i>						
Shallow to Deep	MW-1	4 to 19	33.09	4/12/2021	28.84	-0.0788
	MW-21	34.1 to 44.1	32.80	4/12/2021	27.65	
	MW-1	4 to 19	33.09	8/31/2021	27.18	-0.0815
	MW-21	34.1 to 44.1	32.80	8/31/2021	25.95	
	MW-10	5 to 15	32.77	4/12/2021	27.47	-0.0084
	MW-18	34.0 to 43.5	32.61	4/12/2021	27.31	
	MW-10	5 to 15	32.77	8/31/2021	25.72	-0.0005
	MW-18	34.0 to 43.5	32.61	8/31/2021	25.71	
	MW-8	4.5 to 14.5	33.53	4/12/2021	28.03	-0.0078
	P-1	39.0 to 44.0	33.54	4/12/2021	27.84	
MW-8	4.5 to 14.5	33.53	8/31/2021	25.73	0.0024	
P-1	39.0 to 44.0	33.54	8/31/2021	25.79		

Notes:

^a = Positive vertical gradients indicate upward flow; negative vertical gradients indicate downward flow.

^b = Vertical gradients measured using bottom of upper casing screen to top of lower casing screen elevations.

btc = below top of casing

Depth = depth in feet to water relative to the top of PVC

Elevation = elevation in feet relative to NAVD 88

Table 5
Groundwater Field Parameters
2021 Annual Report
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date Collected	pH	Specific Conductance (µS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Ferrous Iron (mg/L)	Oxidation Reduction Potential (mV)
MW-1	4/13/2021	7.13	600	11.9	3.4	0.46		-126.7
	10/6/2021	6.93	831	16.8	5.3	2.35	--	-122.9
MW-2	4/12/2021	--	--	--	--	--	--	--
	10/6/2021	6.42	434	14.9	4.1	2.44	--	-106.2
MW-3	4/15/2021	6.89	576	12.5	8.8	1.00		-120.3
	10/7/2021	6.86	493	14.2	3.1	2.41	--	-94.1
MW-4	4/13/2021	8.38	842	14.5	2.4	0.53		-145.2
	10/5/2021	6.55	771	15.6	3.4	2.33	--	-90.1
MW-5	4/13/2021	7.83	161	14.0	7.6	1.94		-1.0
	10/5/2021	6.16	169	14.7	7.7	2.60	--	36.8
MW-6	4/12/2021	--	--	--	--	--	--	--
	10/6/2021	6.40	509	12.2	4.0	2.72	--	-84.9
MW-7	4/12/2021	--	--	--	--	--	--	--
	10/6/2021	6.59	241	15.7	5.3	2.48	--	25.3
MW-8	4/13/2021	6.61	501	14.0	4.4	1.22		14.4
	10/5/2021	6.25	473	14.7	3.4	2.48	--	67.9
MW-9	4/13/2021	6.30	241	12.6	11.7	1.03		-7.0
	10/5/2021	6.25	375	14.0	8.1	2.51	--	-89.1
MW-10	4/12/2021	--	--	--	--	--	--	--
	10/6/2021	6.80	135	15.6	6.1	2.24	--	-80.9
MW-12	4/13/2021	7.62	201	13.5	7.8	2.11		-1.7
	10/5/2021	6.36	190	15.1	7.5	2.63	--	42.1
MW-23	4/14/2021	7.24	561	13.3	16.7	2.27		-6.9
	10/6/2021	6.55	580	16.7	15.2	2.29	--	42.8
MW-13	4/13/2021	6.92	631	14.9	4.3	0.30		-98.1
	10/5/2021	6.44	626	15.9	7.6	2.19	--	-122.3
MW-14	4/12/2021	--	--	--	--	--	--	--
	10/6/2021	6.56	420	13.6	2.6	2.54	--	-89.3

Table 5
Groundwater Field Parameters
2021 Annual Report
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date Collected	pH	Specific Conductance (µS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Ferrous Iron (mg/L)	Oxidation Reduction Potential (mV)
MW-16	4/15/2021	6.40	790	12.3	1.8	2.70		-76.5
	10/6/2021	6.39	698	13.1	3.1	2.56	--	-89.1
MW-17	4/14/2021	6.40	840	13.7	4.6	2.00		-61.7
	10/7/2021	6.53	809	11.5	93.4	2.85	--	-31.0
MW-18	4/14/2021	6.31	660	15.0	3.5	1.90		-76.2
	10/6/2021	6.48	672	15.4	47.1	2.41	--	-64.1
MW-19	4/14/2021	6.20	593	15.8	1.8	2.10		-75.2
	10/6/2021	6.45	680	16.4	32.2	2.27	--	-74.9
MW-21	4/13/2021	6.36	495	14.3	5.1	0.48		-103.3
	10/5/2021	6.46	478	14.6	20.0	2.36	--	-116.1
MW-22	4/15/2021	6.27	760	14.9	6.6	2.30		-41.3
	10/5/2021	6.07	703	14.7	165.5	2.34	--	-116.7
MW-20	4/15/2021	6.42	1,030	15.9	3.2	2.10		-80.0
	10/7/2021	6.42	903	16.9	5.6	2.91	--	3.2
MW-27	4/15/2021	6.56	517	14.9	1.8	2.40		-63.9
	10/7/2021	6.59	513	16.5	4.6	2.59	--	-43.2
MW-28	4/12/2021	--	--	--	--	--	--	--
	10/7/2021	6.62	749	13.1	9.3	2.50	--	-89.7
MW-29D	4/12/2021	6.47	293	14.9	6.7	0.62		-101.0
	10/7/2021	6.68	432	17.2	20.9	2.31	--	-57.3

Notes:

mS/cm = millisiemens per centimeter

°C = degrees Celsius

NTU = nephelometric turbidity units

mg/L = milligram per liter

mV = millivolts

-- = not measured

Table 6
Concentration of VOCs in Groundwater
2021 Annual Report
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date Collected	1,1-DCA	1,1-DCE	1,2,4-TMB	1,2-DCA	1,2-Dichloro-propane	Benzene	Chloro-ethane ¹	Chloro-form	cis-1,2-DCE	Ethyl-benzene	Methylene Chloride	PCE	1,1,1-TCA	TCE	Toluene	Total Xylenes	Vinyl Chloride	
	2019 Revised Cleanup Levels:	7.7	7.0	80	0.48	1.2	0.80	-	1.4	16	700	5.0	5.0	200	0.54	640	1,600	0.50	
Shallow On-Site Monitoring Wells																			
MW-01	04/13/21	11.6	0.5 U	0.54	0.5 U	0.5 U	0.5 U	22.9	0.5 U	0.94	1.7	2 U	0.42 j	0.25 j	2	0.17 j	12.1	0.43 j	
MW-01	04/13/21 (DUP)	11.6	0.5 U	0.54	0.5 U	0.5 U	0.5 U	22.5	0.5 U	0.94	1.7	2 U	0.45 j	0.27 j	2	0.15 j	12	0.48 j	
MW-01	10/06/21	21.6	0.16 j	0.5 U	0.5 U	0.5 U	0.5 U	29.8	0.5 U	2	0.29 j	2 U	0.57	0.57	4	0.17 j	2.5 j	4.9	
MW-01	10/06/21 (DUP)	21.3	0.15 j	0.5 U	0.5 U	0.5 U	0.5 U	31.3	0.5 U	1.9	0.26 j	2 U	0.58	0.55	3.9	0.17 j	2.48 j	4.8	
MW-02	10/06/21	0.38 j	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.33 j	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	
MW-03	04/15/21	0.17 j	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.25 j	0.5 U	1.3	0.5 U	2 U	0.58	0.5 U	0.5 U	0.5 U	0.24 j	0.6	
MW-03	10/07/21	0.17 J+	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.26 j	1.7 J+	0.5 U	0.69 J+	0.5 U	2 U	0.5 U	0.5 U	0.5 U	1 U	1 J+	
MW-04	04/13/21	0.39 j	0.5 U	0.31 j	0.5 U	0.5 U	1.0	2.3	0.5 U	0.5 U	0.53	2 U	0.5 U	0.5 U	0.5 U	0.19 j	2	0.5 U	
MW-04	10/05/21	0.27 j	0.5 U	0.5 U	0.5 U	0.5 U	1.7	12.6	0.5 U	0.14 j	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.25 j	0.17 j	0.31 j	
MW-05	04/13/21	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	30.5	1 U	4 U	75.6	1 U	12.5	1 U	0.78 j	1 U	
MW-05	10/05/21	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	106	1.3 U	6.8 J+	35.3	1.3 U	21.3	1.3 U	2.5 U	1.3 U	
MW-05	10/05/21 (DUP)	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	117 J+	2.5 U	11.3 J+	37.1	2.5 U	22.3 J+	2.5 U	5 U	2.5 U	
MW-06	10/06/21	0.39 j	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	
MW-07	10/06/21	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.16 j	0.5 U	2 U	1.9	0.5 U	0.34 j	0.5 U	1 U	0.5 U	
MW-08	04/13/21	0.5 U	0.27 j	0.21 j	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.66	0.77	2 U	0.39 j	0.5 U	2.7	0.5 U	3.74 j	0.5 U	
MW-08	10/05/21	0.5 U	2.1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	7	0.5 U	2 U	0.34 j	0.5 U	27.8	0.5 U	1 U	0.67	
MW-09	04/13/21	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.55	0.5 U	2 U	0.5 U	0.5 U	0.84	0.5 U	1 U	0.22 j	
MW-09	10/05/21	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.42 j	0.5 U	0.5 U	0.15 j	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.15 j	
MW-10	10/06/21	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	
MW-12	04/13/21	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	9.5	1 U	3.4 j	94	1 U	5.1	1 U	0.8 j	0.54 j	
MW-12	10/05/21	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	120	2.5 U	11.5 J+	26.4	2.5 U	4.1	2.5 U	5 U	5.7	
MW-23	04/14/21	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.19 j	0.5 U	2 U	14.9	0.5 U	0.81	0.5 U	1 U	0.2 j	
MW-23	10/06/21	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.38 j	0.5 U	2 U	10.2	0.5 U	0.95	0.5 U	1 U	0.5 U	
Deep On-Site Monitoring Wells																			
MW-13	04/13/21	5 UJ	5 UJ	108 J-	5 UJ	5 UJ	5 UJ	97.4 J-	5 UJ	5 UJ	12.6 J-	15.9 J-	5 UJ	5 UJ	5 UJ	5 UJ	234 J-	5 UJ	
MW-13	10/05/21	0.17 j	0.5 U	34.2	0.2 j	0.5 U	0.64	68.7 J+	0.5 U	0.2 j	2.8	2 U	0.5 U	0.5 U	0.5 U	0.42 j	49.34 j	0.29 j	
MW-14	10/06/21	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	
MW-16	04/15/21	0.24 J-	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	1.2 J-	0.5 UJ	0.5 UJ	0.5 UJ	2 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.18 J-	0.45 J-	1.1 J-
MW-16	10/06/21	0.14 j	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.3	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.1	
MW-17	04/14/21	0.5 U	0.5 U	0.48 j	1.2	0.5 U	16.2	177 J-	0.5 U	0.25 j	0.19 j	2 U	0.5 U	0.5 U	0.5 U	0.44 j	2.85 j	0.42 j	
MW-17	10/07/21	0.5 UJ	0.5 UJ	0.16 J	0.76 J	0.5 UJ	9.5 J+	71.2 J+	0.5 UJ	0.5 UJ	0.5 UJ	2 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.42 J	1.71 J	0.5 UJ	
MW-18	04/14/21	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1	0.5 U	0.25 j	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.17 j	
MW-18	10/06/21	0.13 j	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.68	0.5 U	0.27 j	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.46 j	
MW-19	04/14/21	0.33 j	1 UJ	0.36 j	1 U	1 U	1 U	1 U	1 U	48.1	0.29 j	3.6 j	1 U	1 U	1 U	0.58 j	0.49 j	97.4	
MW-19	10/06/21	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	2980 J+	37.1 j	471 J+	100 U	100 U	100 U	91.8 j	200 U	5400 J-	
MW-21	04/13/21	25 U	25 U	372	25 U	25 U	25 U	297	25 U	25 U	767	81.9 j	25 U	25 U	25 U	9.9 j	4343	25 U	
MW-21	04/13/21 (DUP)	25 U	25 U	406	25 U	25 U	25 U	285	25 U	25 U	820	100 U	25 U	25 U	25 U	10.1 j	4913	25 U	
MW-21	10/05/21	50 U	50 U	187	50 U	50 U	50 U	316	50 U	50 U	299	200 U	50 U	50 U	50 U	50 U	3990	50 U	
MW-22	04/15/21	0.18 j	0.5 U	0.38 j	0.14 j	0.5 U	0.65	140 J-	0.5 U	0.62	1.1	2 U	0.5 U	0.5 U	0.5 U	0.77	3.17	1.3	
MW-22	10/05/21	0.16 J+	0.5 U	0.22 j	0.23 j	0.5 U	0.73	77.5 J+	0.5 U	11.8	0.2 j	2 U	0.5 U	0.5 U	0.5 U	0.82	3.18	7.6 J	
MW-22	10/05/21 (DUP)	0.18 j	0.5 U	0.28 j	0.2 j	0.5 U	0.71	74.7 J+	0.5 U	15.3	0.25 j	2 U	0.5 U	0.5 U	0.5 U	0.92	3.2	10.6 J	
Deep Off-Site Monitoring Wells																			
MW-20	04/15/21	0.5 UJ	0.5 UJ	0.29 J-	0.5 UJ	0.5 UJ	7.4 J-	230 J-	0.5 UJ	0.14 J-	0.5 UJ	2 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.78 J-	2.59 J-	0.14 J-	
MW-20	10/07/21	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.6	261 J+	0.5 U	0.5 U	0.5 U	1.1 j	0.5 U	0.5 U	0.5 U	0.54	1.21 j	0.5 U	
MW-27	04/15/21	0.37 j	0.5 U	0.5 U	0.5 U	0.5 U	0.14 j	0.5 U	0.5 U	0.44 j	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.17 j	0.27 j	0.88	
MW-27	10/07/21	0.27 J+	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	2 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	1 UJ	0.5 UJ	
MW-28	10/07/21	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	15.6 J	5 UJ	5 UJ	5 UJ	5 UJ	10 UJ	5 UJ	
MW-29D	04/12/21	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	
MW-29D	10/07/21	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	2 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	1 UJ	0.5 UJ	

Notes:

All results in µg/L.

Only indicator hazardous substances (IHSs) shown.

Detections shown in **bold**.

Shaded results above their respective cleanup level.

J / j = the associated numerical value is an estimated quantity based on data review or laboratory estimate above the MDL but below the MRL

J- = Estimated detection with low bias

Total Xylenes calculated as sum of o-Xylene and m,p-Xylene detections. In case of non-detects, highest non-detect result shown

U = not detected above associated method reporting limit.

UJ = Compound was analyzed for, but not detected above the reporting limit. The reporting limit is an estimated value

1,1,1-TCA = 1,1,1-trichloroethane

1,1-DCA = 1,1-dichloroethane

1,1-DCE = 1,1-dichloroethene

1,2,3-TCP = 1,2,3-trichloropropane

1,2,4-TCB = 1,2,4-trichlorobenzene

1,2,4-TMB = 1,2,4-trimethylbenzene

1,2-DCA = 1,2-dichloroethane

1,3,5-TMB = 1,3,5-trimethylbenzene

cis-1,2-DCE = cis-1,2-dichloroethene

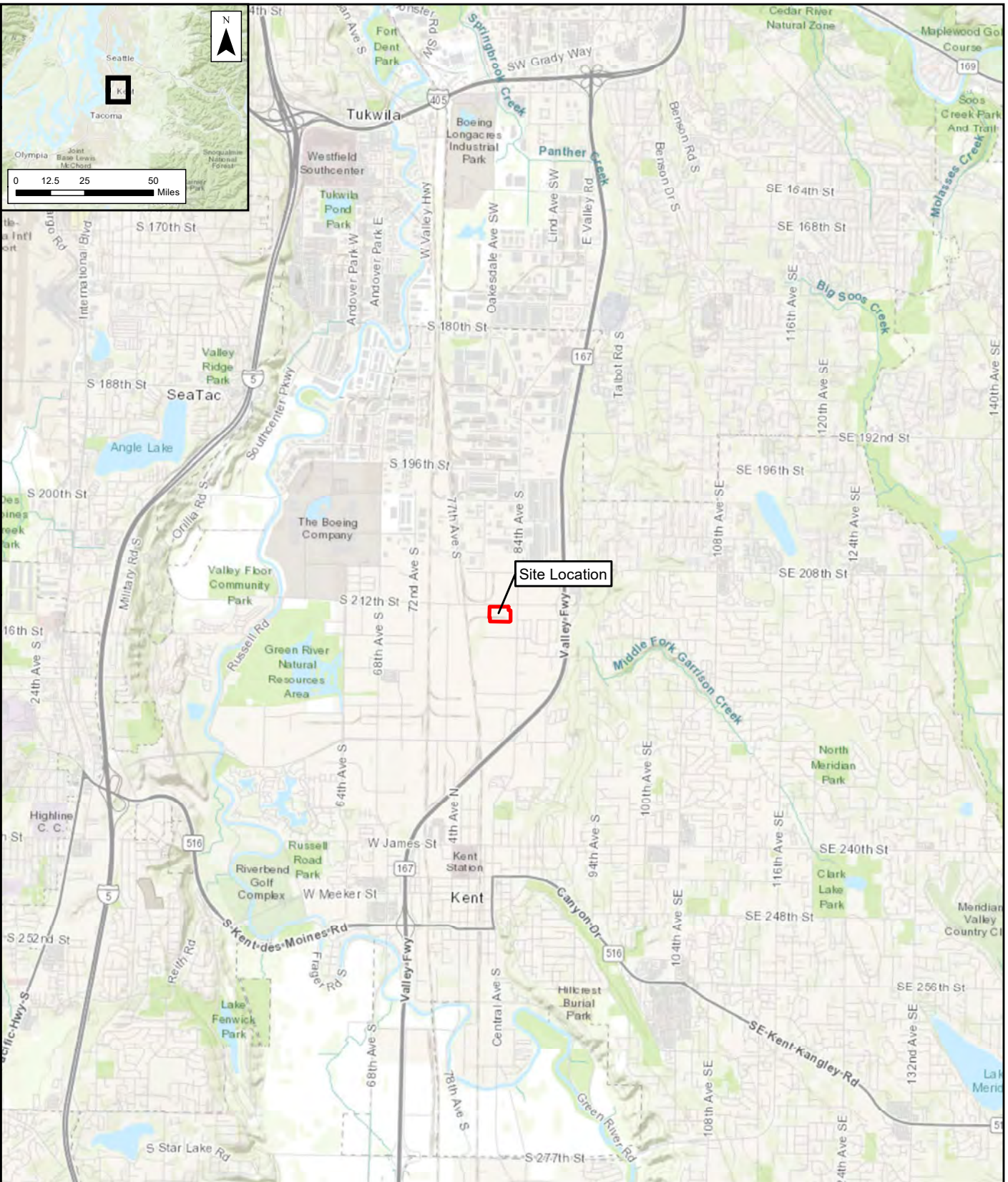
PCE = tetrachloroethene

TCE = trichloroethene

FIGURES

DRAWN BY: Tyler Harris

M:\Projects\Univar\Kent WA 212th St S058\Maps\Annual Monitoring Report 2020\Figure 1 Site Location.mxd, REVISED: 02/25/2021, SCALE: 1:63,360 when printed at 8.5x11



Legend

 Site Boundary

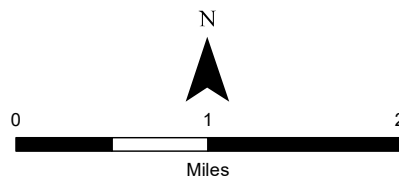


Figure 1
Site Location
 Univar Solutions USA, Inc.
 8201 S 212th St
 Kent, Washington

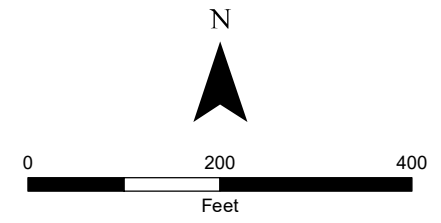
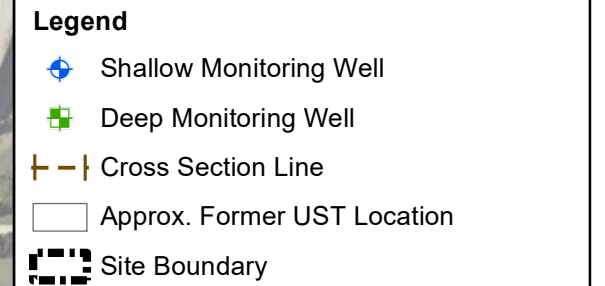
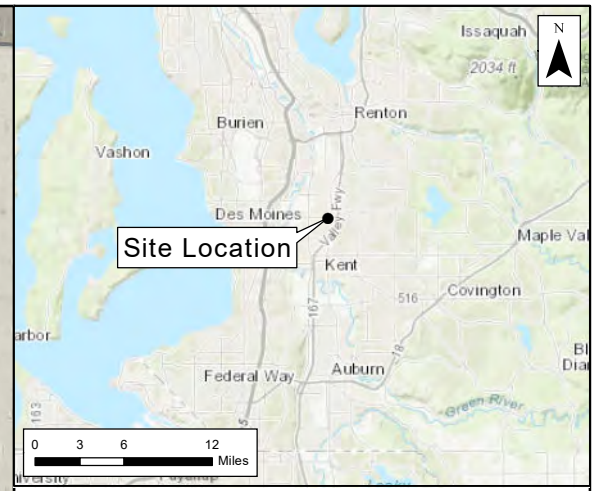
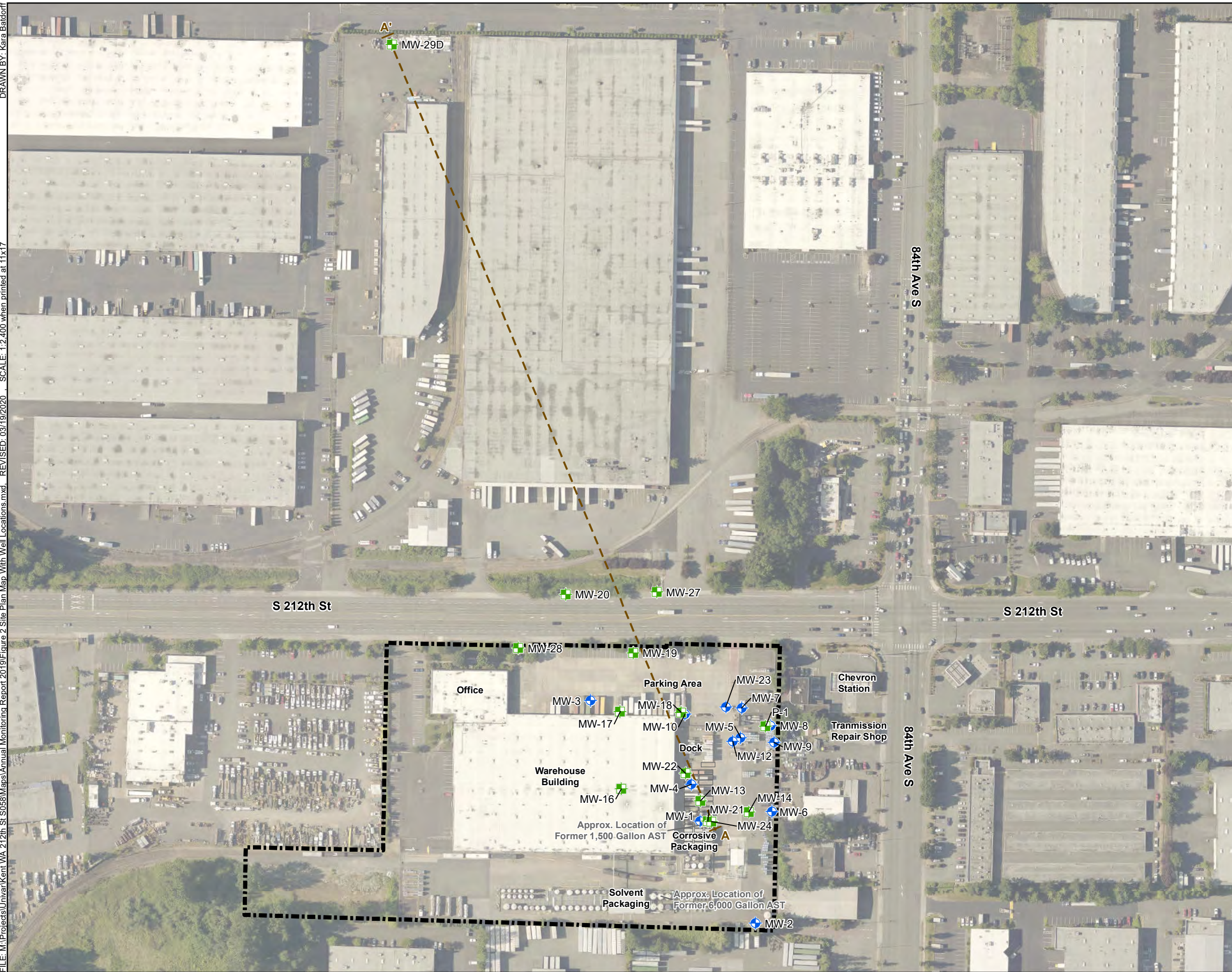
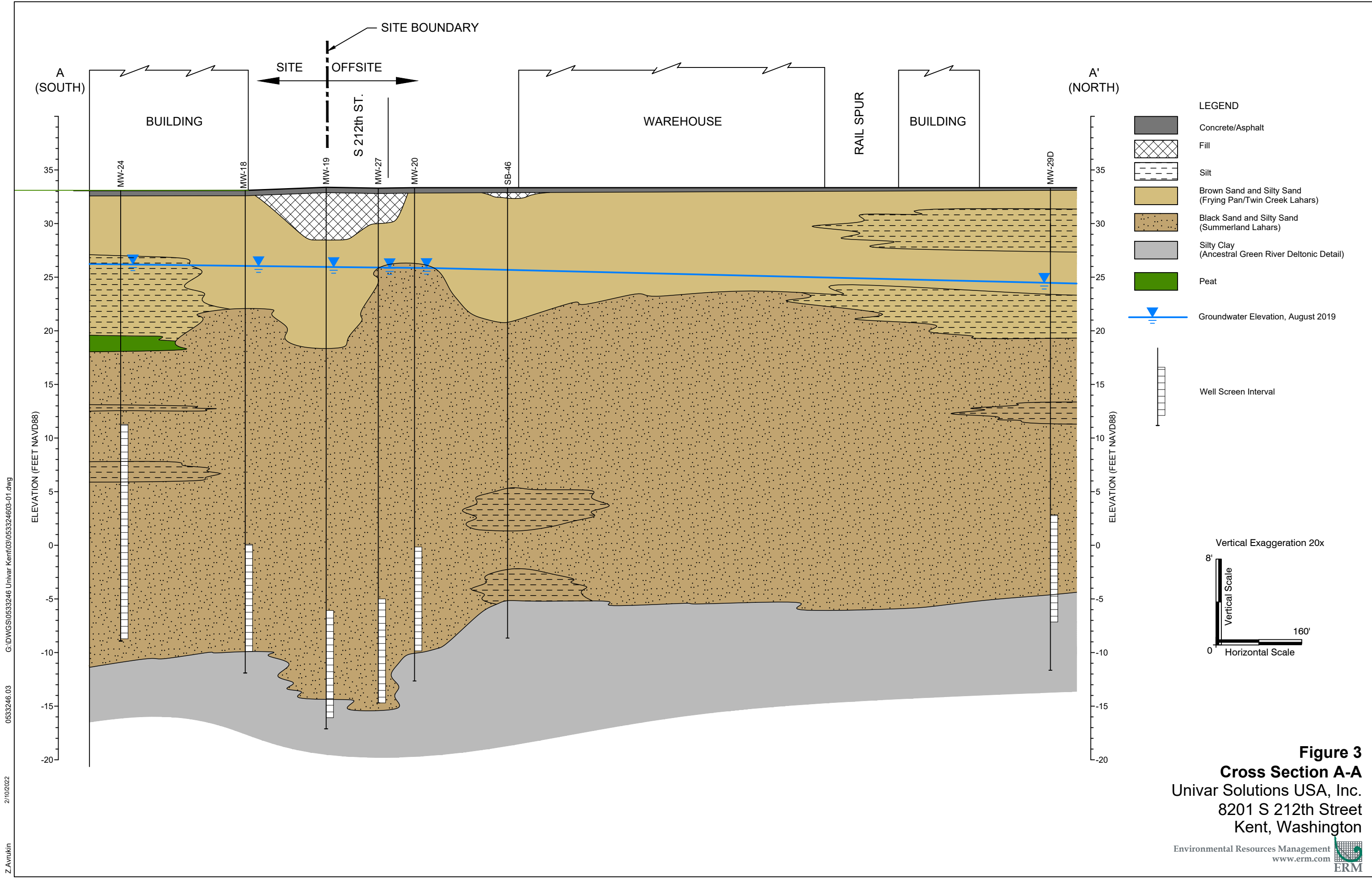


Figure 2
Site Plan Map
 Univar Solutions USA, Inc.
 8201 S 212th St
 Kent, Washington

Source: King County aerial imagery, flown 2017, 3 inches per pixel; NAD 1983 StatePlane Washington North FIPS 4601 Feet

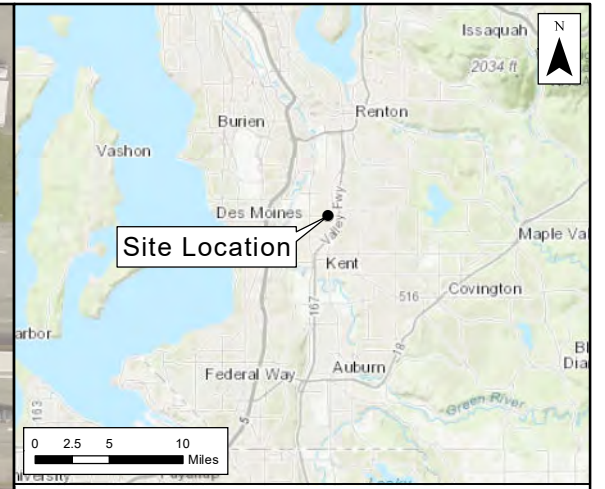


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0533246.03

2/10/2022

Z.Avrakin



- Legend**
- Shallow Monitoring Well
 - Estimated Groundwater Contour
 - Groundwater Contour (0.40 ft)
 - Flow Direction
 - Site Boundary

Notes:
 Groundwater elevations measured April 12, 2021.
 All groundwater elevations given in North American Vertical Datum of 1988 (NAVD88) feet.

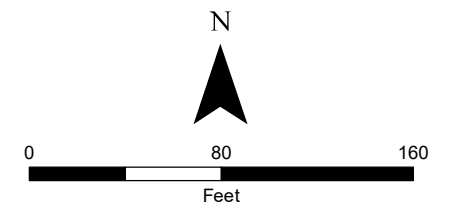


Figure 4
Shallow Groundwater
Elevation Contours
 April 2021
 Univar Solutions USA, Inc.
 8201 S 212th St
 Kent, Washington



- Legend**
- ◆ Shallow Monitoring Well
 - Groundwater Contour (0.60 ft)
 - Flow Direction
 - - - Site Boundary

Notes:
Groundwater elevations measured August 30, 2021.
All groundwater elevations given in North American Vertical Datum of 1988 (NAVD88) feet.

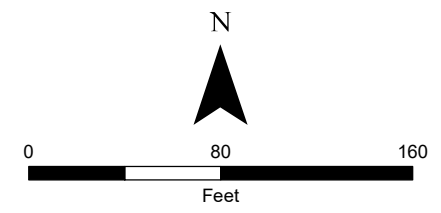


Figure 5
Shallow Groundwater
Elevation Contours
August 2021
Univar Solutions USA, Inc.
8201 S 212th St
Kent, Washington

Source: King County aerial imagery, flown 2019, 3 inches per pixel; NAD 1983 StatePlane Washington North FIPS 4601 Feet



Legend

- Deep Monitoring Well
- Groundwater Contour (0.20 ft)
- Flow Direction
- Site Boundary

Notes:
 NS = Location did not have a GW elevation reading
 Groundwater elevations measured April 12, 2021.
 * Data considered anomalous. Not used for contouring.
 All groundwater elevations given in North American Vertical Datum of 1988 (NAVD88) feet.

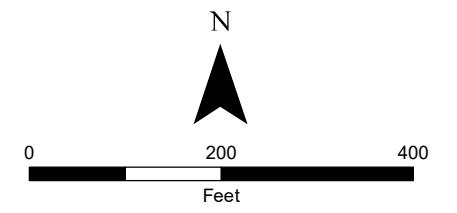
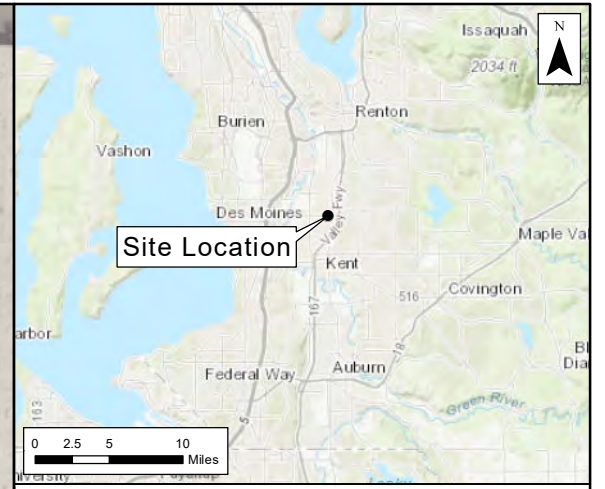


Figure 6
Deep Groundwater
Elevation Contours
 April 2021
 Univar Solutions USA, Inc.
 8201 S 212th St
 Kent, Washington



- Legend**
- Deep Monitoring Well
 - Groundwater Contour (0.20 ft)
 - Flow Direction
 - Site Boundary

Notes:
 Groundwater elevations measured August 30, 2021.
 * Data considered anomalous. Not used for contouring.
 All groundwater elevations given in North American Vertical Datum of 1988 (NAVD88) feet.

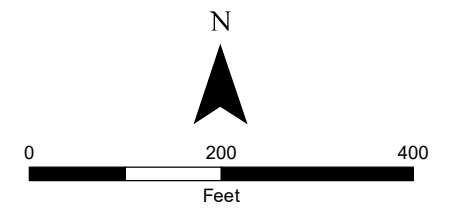
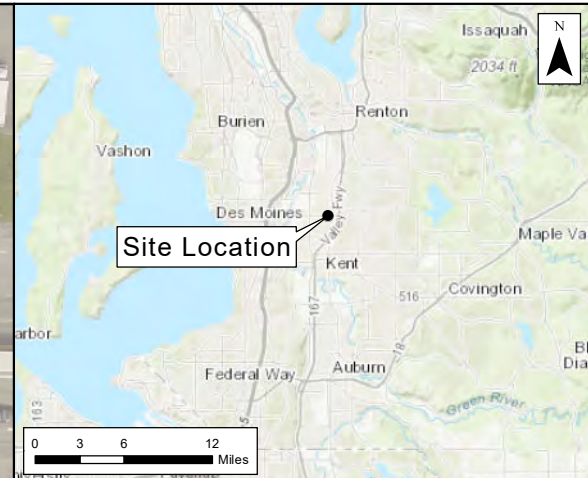


Figure 7
Deep Groundwater
Elevation Contours
 August 2021
 Univar Solutions USA, Inc.
 8201 S 212th St
 Kent, Washington

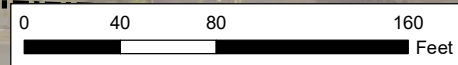


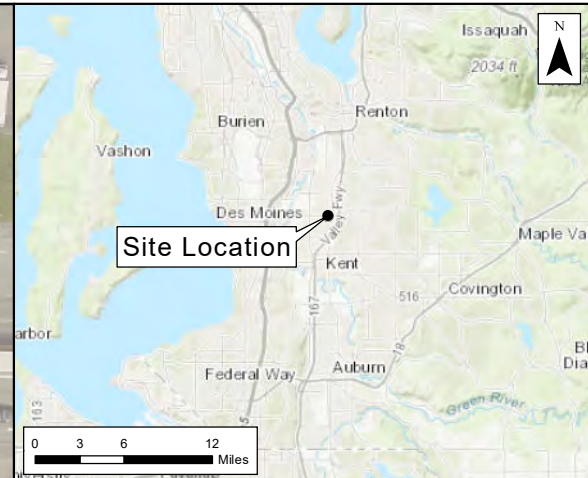
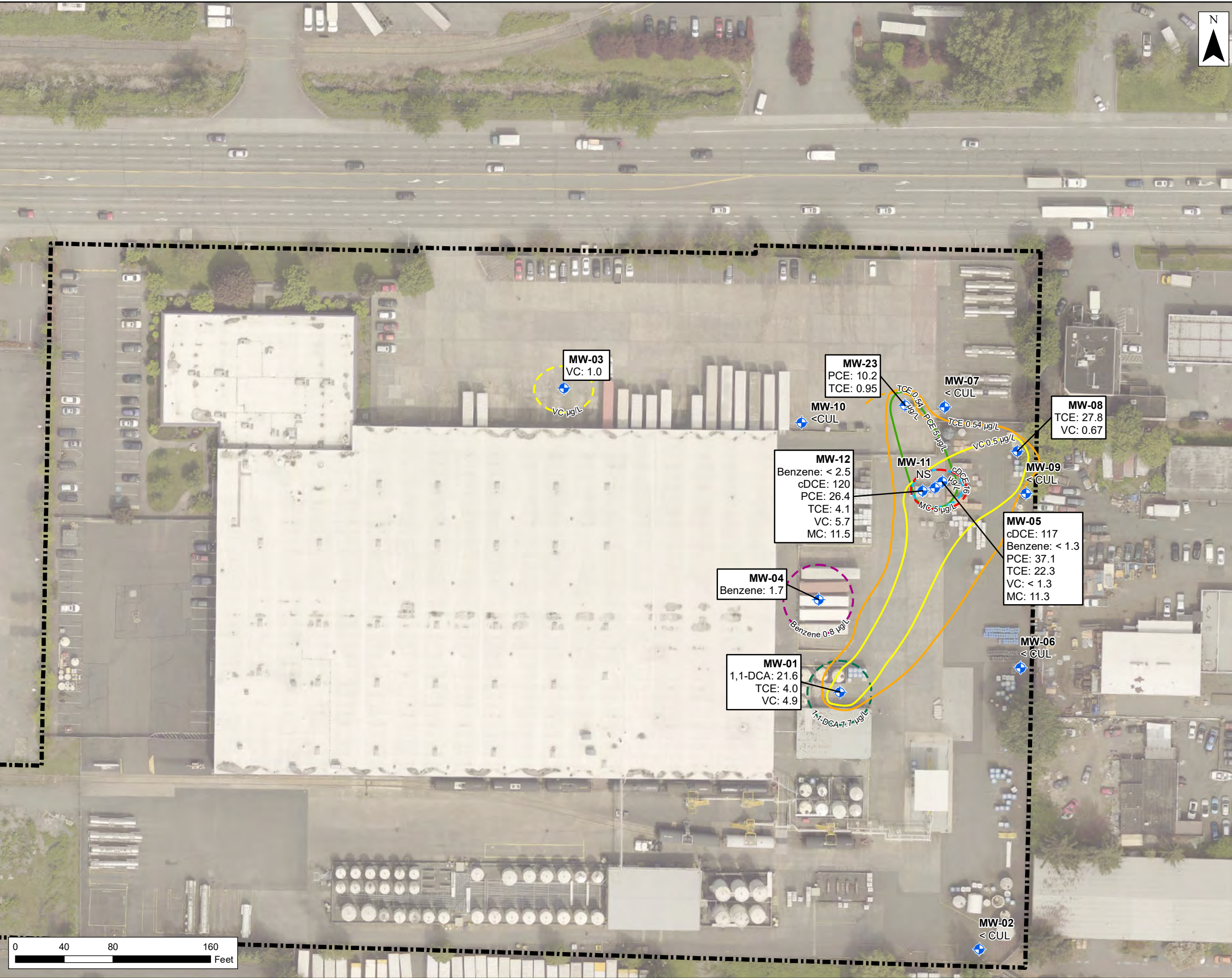
Legend

- ◆ Shallow Monitoring Well
- 1,1-Dichloroethane Isoconcentration Contour
- Benzene Isoconcentration Contour
- cDCE Isoconcentration Contour
- PCE Isoconcentration Contour
- TCE Isoconcentration Contour
- VC Isoconcentration Contour
- Site Boundary

Notes:
 Isoconcentration lines dashed where inferred.
 Results in µg/L (micrograms per liter).
 Samples collected April 13-15, 2021.
 Only chemicals detected above CUL levels are shown.
 Isoconcentration lines developed using all data included in Table 5 of the 2021 Annual Groundwater Monitoring Report.
 NS: Not Sampled
 VOC: Volatile Organic Compound
 1,1-DCA: 1,1-Dichloroethane
 cDCE: cis-1,2-Dichloroethene
 TCE: Trichloroethene
 PCE: Tetrachloroethene
 VC: Vinyl chloride
 Cleanup Levels:
 1,1-DCA: 7.7 µg/L
 Benzene: 0.8 µg/L
 cDCE: 16 µg/L
 TCE: 0.54 µg/L
 PCE: 5.0 µg/L
 VC: 0.5 µg/L

Figure 8
VOC Concentrations in
Shallow Groundwater
 April 2021
 Univair USA, Inc.
 8201 S 212th St
 Kent, Washington





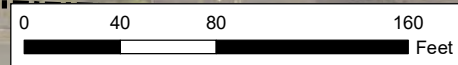
Legend

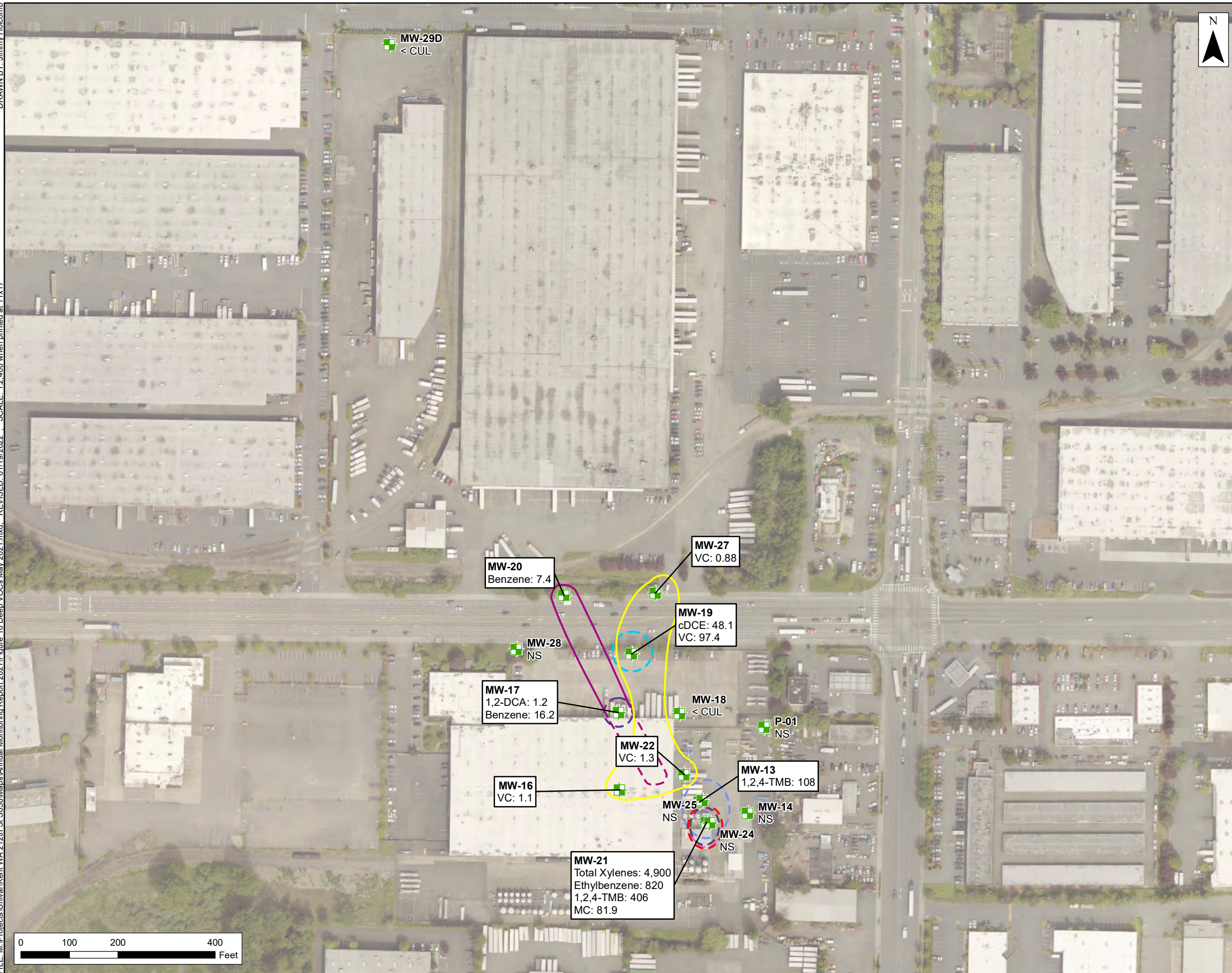
- ◆ Shallow Monitoring Well
- 1,1-Dichloroethane Isoconcentration Contour
- Benzene Isoconcentration Contour
- cDCE Isoconcentration Contour
- PCE Isoconcentration Contour
- TCE Isoconcentration Contour
- VC Isoconcentration Contour
- MC Isoconcentration Contour
- Site Boundary

Notes:
 Isoconcentration lines dashed where inferred.
 Results in µg/L (micrograms per liter).
 Samples collected October 5-6, 2021.
 Only chemicals detected above CUL levels are shown.
 Isoconcentration lines developed using all data included in Table 5 of the 2021 Annual Groundwater Monitoring Report.
 CUL: Cleanup Level
 NS: Not Sampled
 VOC: Volatile Organic Compound
 1,1-DCA: 1,1-Dichloroethane
 cDCE: cis-1,2-Dichloroethene
 TCE: Trichloroethene
 PCE: Tetrachloroethene
 VC: Vinyl chloride
 MC: Methylene Chloride

Cleanup Levels:
 1,1-DCA: 7.7 µg/L
 Benzene: 0.8 µg/L
 cDCE: 16 µg/L
 TCE: 0.54 µg/L
 PCE: 5.0 µg/L
 VC: 0.5 µg/L
 MC: 5.0 µg/L

Figure 9
VOC Concentrations in
Shallow Groundwater
 October 2021
 Univair USA, Inc.
 8201 S 212th St
 Kent, Washington





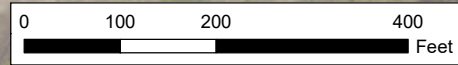
Legend

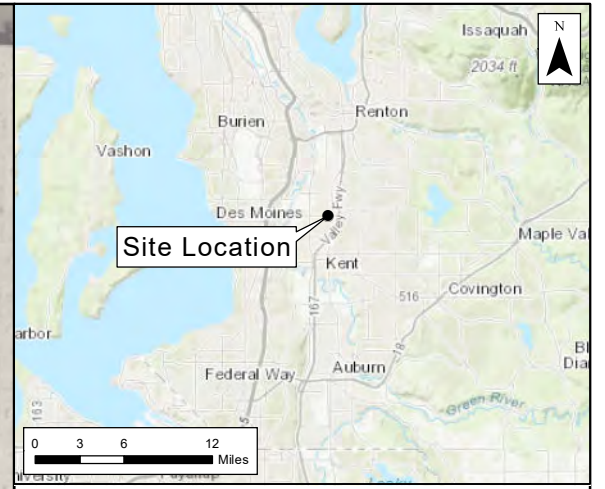
- Deep Monitoring Well
- 1,2,4-Trimethylbenzene Isoconcentration Contour
- 1,2-DCA Isoconcentration Contour
- Benzene Isoconcentration Contour
- Ethylbenzene Isoconcentration Contour
- TCE Isoconcentration Contour
- VC Isoconcentration Contour
- 1,1-DCA Isoconcentration Contour
- Total Xylenes Isoconcentration Contour
- cDCE Isoconcentration Contour
- MC Isoconcentration Contour
- Site Boundary

Isoconcentration lines dashed where inferred.
 Results in µg/L (micrograms per liter).
 Samples collected April 13-15, 2021.
 Only chemicals detected above CUL levels are shown.
 Isoconcentration lines developed using all data included in Table 6 of the 2021 Annual Groundwater Monitoring Report.

CUL: Cleanup Level	Cleanup Levels:
NS: Not Sampled	1,1-DCA: 7.7 µg/L
VOC: Volatile Organic Compound	1,2-DCA: 0.48 µg/L
1,1-DCA: 1,1-Dichloroethane	1,2,4-TMB: 80 µg/L
1,2-DCA: 1,2-Dichloroethane	Benzene: 0.8 µg/L
1,2,4-TMB:	cDCE: 16 µg/L
1,2,4-Trimethylbenzene	Ethylbenzene: 700 µg/L
cDCE: cis-1,2-Dichloroethene	TCE: 0.54 µg/L
TCE: Trichloroethene	VC: 0.5 µg/L
VC: Vinyl chloride	MC: 5.0 µg/L
MC: Methylene Chloride	

Figure 10
VOC Concentrations in
Deep Groundwater
 April 2021
 Univar Solutions USA, Inc.
 8201 S 212th St
 Kent, Washington





Legend

- Deep Monitoring Well
- 1,2,4-Trimethylbenzene Isoconcentration Contour
- 1,2-DCA Isoconcentration Contour
- Benzene Isoconcentration Contour
- Ethylbenzene Isoconcentration Contour
- TCE Isoconcentration Contour
- VC Isoconcentration Contour
- 1,1-DCA Isoconcentration Contour
- cDCE Isoconcentration Contour
- MC Isoconcentration Contour
- Site Boundary

Notes:
 Isoconcentration lines dashed where inferred.
 Results in µg/L (micrograms per liter).
 Samples collected October 5-6, 2021.
 Only chemicals detected above CUL levels are shown.
 Isoconcentration lines developed using all data included in Table 6 of the 2021 Annual Groundwater Monitoring Report.
 J / j = the associated numerical value is an estimated quantity based on data review or laboratory estimate above the MDL but below the MRL.
 J+ = Estimated detection with high bias.
 J- = Estimated detection with low bias.

CUL: Cleanup Level	Cleanup Levels:
NS: Not Sampled	1,1-DCA: 7.7 µg/L
VOC: Volatile Organic Compound	1,2-DCA: 0.48 µg/L
1,1-DCA: 1,1-Dichloroethane	1,2,4-TMB: 80 µg/L
1,2-DCA: 1,2-Dichloroethane	Benzene: 0.8 µg/L
1,2,4-TMB:	cDCE: 16 µg/L
1,2,4-Trimethylbenzene	Ethylbenzene: 700 µg/L
cDCE: cis-1,2-Dichloroethene	TCE: 0.54 µg/L
TCE: Trichloroethene	VC: 0.5 µg/L
VC: Vinyl Chloride	MC: 5.0 µg/L
MC: Methylene Chloride	

Figure 11
VOC Concentrations in
Deep Groundwater
 October 2021
 Univair Solutions USA, Inc.
 8201 S 212th St
 Kent, Washington

APPENDIX A FIELD FORMS

April to May 2021 Field Forms

DATE: 4-12-21

mm
mm level

Water Level Table

Site: Univar- Kent 212 Project Number, Phase: 0533246.03

Well Number	Screened Zone	Total Depth (ft bgs or (oc)	Top of screen (ft bgs)	Bottom of screen (ft bgs)	Measuring Point (ft)	Measured Depth to Water (ft-bit)	Measured Total Depth (ft-bit)	Time	Well Condition/Comments	GW Sample Date (# samples)
MW-01	Shallow	19.0	4.0	19.0	33.15	4.25	19	1415	good	4-13-21
MW-02	Shallow	19.0	4.0	13.0	33.79	5.47	17	1330	good	—
MW-03	Shallow	19.0	4.0	19.0	32.94	5.30	19	1520	water in wellbox	4-15-21
MW-04	Shallow	14.5	4.5	14.5	32.86	4.00	14.5	1435	good	4-13-21
MW-05	Shallow	14.5	4.5	14.5	32.60	5.10	14.5	1450 *	good	4-13-21
MW-06	Shallow	14.5	4.5	14.5	33.05	4.00	14.5	1400	good	4-13-21
MW-07	Shallow	14.5	4.5	14.5	32.96	5.10	14.5	1500 *	water in wellbox	—
MW-08	Shallow	14.5	4.5	14.5	33.57	5.5	14.5	1301	inaccessible-pallets	4-13-21
MW-09	Shallow	15.0	5.0	15.0	33.77	6.00	14.8	1350	good	4-13-21
MW-10	Shallow	15.0	5.0	15.0	32.89	5.30	14.5	1503	good	—
MW-11	Shallow	20.0	5.0	20.0	32.79					—
MW-12	Shallow	20.0	5.0	20.0	32.81	5.20	19.0	1445 *	good	4-13-21
MW-23	Shallow	15.0	5.0	15.0	32.78	4.90	15.0	1503	water in wellbox	4-14-21
Deep On-Site Monitoring Wells										
MW-13	Deep	44.1	39.6	44.1	32.8	5.10	44.0	1420	water in well box	4-13-21
MW-14	Deep	42.2	32.7	42.2	32.6	5.85	42.5	1405	water in well box	—
MW-16	Deep	47.2	37.2	47.2	36.9	9.20	47.2	1430	good	4-15-21
MW-17	Deep	43.8	34.3	43.8	32.6	5.20	43.5	1530	water in wellbox *	4-14-21
MW-18	Deep	43.5	34.0	43.5	32.7	5.30	43.0	1508	good	4-14-21
MW-19	Deep	49.4	39.4	49.4	33.5	6.00	49.4	1515	water in wellbox *	4-14-21
MW-21	Deep	44.1	34.1	44.1	32.9	5.15	42.5	1418	good	4-13-21
MW-22	Deep	42.2	32.2	42.2	33.2	5.90	42	1200	inaccessible-truck	4-15-21
MW-24	Deep	41.8	21.8	41.8	32.7	5.10	41.8	1450	good	—
MW-25	Deep	41.8	21.8	41.8	32.8	5.10	41.8	1432	water in wellbox	—
P-1	Deep	44.0	35.0	44.0	33.6	5.70	44	1450	inaccessible-pallets	—
Deep Off-Site Monitoring Wells										
MW-20	Deep	43.2	33.5	43.2	33.2	5.90	43	1115	good	4-15-21
MW-27	Deep	48.0	38.0	48.0	33.0	5.70	48	1042	good	4-15-21
MW-28	Deep	45.0	35.0	45.0	34.6					—
MW-29D	Deep	40.5	30.5	40.5	30.8	4.65	40.5	1200	water in wellbox	4-12-21

Total Depths based on field measurements or from well logs
Screened interval based on well logs

• in accessible due to pallets
* pressure @ mw-18, -19, -17
€ most pressure bed

ERM - Purge Log

Project Name: Kent 212
 Project Number: 533246.03

Date: 4-13-21
 Set up time: 11:30
 Weather: 60°F sunny
 Field Staff: JC

Well # MW-01

Sample ID: MW-01-041321 + DUP-02

Location: Kent WA
 Construction: 2" PVC
 Groundwater Zone: Shallow

Construction Depth: 19
 Screened Interval: 4-19
 Pump Intake Depth: 12

Purge Start Time: 11:40
 Discharge Rate: 125 ml/min
 Purge End Time: 12:05

Depth to Water: 4.0
 Height of Water Column:
 Volume of one casing:

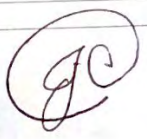
Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1140	0	4.0	12.08	7.08	0.60	5.06	-135.2	0.39	8.10	clear + no od
1143	375		12.01	7.05	0.60	3.83	-139.7	0.39	4.68	" "
1145	625		11.97	7.00	0.60	2.71	-110.2	0.40	2.90	" "
1148	1000		11.93	7.08	0.60	1.92	-110.2	0.40	2.67	" "
1150	1250		11.93	7.05	0.60	1.33	-134.8	0.40	2.44	" "
1153	1625		11.87	7.08	0.60	0.87	-128.5	0.40	2.81	" "
1155	1875	↓	11.86	7.08	0.60	0.75	-126.9	0.40	3.38	" "
1200	2500	4.3	11.86	7.13	0.60	0.46	-126.7	0.40	3.35	" "

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox or alconox scrub, followed by DI water

Sample Time: 12:05

FIELD OBSERVATIONS (Well condition, repairs needed)
 good condition

DUP-02

Sampler Signature(s): 

ERM - Purge Log

Project Name: Kent 212
 Project Number: 533246.03

Date: 4-15-20
 Set up time: 0950
 Weather: 65 Sunny
 Field Staff: JC

Well # MW-03

Sample ID: MW-03041521-01

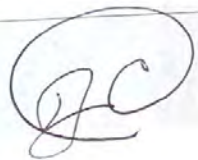
Location: Kent
 Construction: 2" PVC
 Groundwater Zone: Shallow
 Construction Depth: 19'
 Screened Interval: 4-19'
 Pump Intake Depth: ~12'

Purge Start Time: 1000
 Discharge Rate: 125 m³/min
 Purge End Time: 1030
 Depth to Water: 5.6
 Height of Water Column:
 Volume of one casing:

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1000	0	5.6	12.2	6.72	0.579	1.7	-109.4	—	6.14	clear/none
1005	625		12.3	6.76	0.573	0.9	-116.9	—	5.62	slight sheen
1010	1250		12.4	6.82	0.573	1.0	-119.7	—	8.65	" "
1015	1875		12.4	6.83	0.575	1.4	-120.1	—	7.35	" "
1020	2500		12.5	6.90	0.577	1.4	-120.4	—	8.51	" "
1025	3125	5.6	12.5	6.89	0.576	1.0	-120.3	—	8.82	" "

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox or alconox scrub, followed by DI water
 FIELD OBSERVATIONS (Well condition, repairs needed)

water in well box

Sampler Signature(s): 

Sample Time: 1030

ERM - Purge Log

Project Name: Kent 212
 Project Number: 533246.03

Date: 4-13-21
 Set up time: 1420
 Weather: 60 sunny
 Field Staff: JC

Sample ID: MW-4-011321-01

Well # MW-4

Location: Kent
 Construction: 2" pvc
 Groundwater Zone: shallow

Construction Depth: 14.5
 Screened Interval: 4.5-14.5
 Pump Intake Depth: 9.5

Purge Start Time: 1420
 Discharge Rate: 125 ml/min
 Purge End Time: 1450

Depth to Water: 4.7
 Height of Water Column:
 Volume of one casing:

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1420	0	4.7	13.73	7.48	819	9.62	-102.3	0.52	10.0	clear + none
1430	500		14.35	8.03	827	2.06	-121.8	0.52	12.3	" "
1435	1125		14.39	8.09	833	1.06	-129.4	0.52	3.80	" "
1438	1500		14.40	8.15	837	0.72	-136.5	0.52	3.41	" "
1440	1750		14.57	8.17	841	0.57	-132.0	0.52	3.92	" "
1443	2125		14.53	8.32	844	0.83	-142.1	0.53	2.42	" "
1445	2375		14.48	8.37	842	0.77	-144.0	0.53	2.73	" "
1448	2750	4.7	14.50	8.38	842	0.53	-145.2	0.52	2.38	" "
Sample Time: 1450										

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox or alconox scrub, followed by DI water
 FIELD OBSERVATIONS (Well condition, repairs needed)

Sampler Signature(s):

ERM - Purge Log

Project Name: Kent 212
 Project Number: 533246.03

Date: 4-13-21
 Set up time: 1540
 Weather: 60°F Sunny
 Field Staff: JC

Well # MW-05

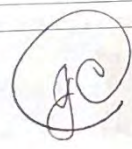
Sample ID: MW-05-041321-01

Location: Kent
 Construction: 2" PVC
 Groundwater Zone: Shallow
 Construction Depth: 14.5
 Screened Interval: 4574.5
 Pump Intake Depth: 9.5

Purge Start Time: 1543
 Discharge Rate: 125 ml/min
 Purge End Time: 1605
 Depth to Water: 5.2
 Height of Water Column:
 Volume of one casing:

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1543	0	5.2	13.17	7.37	159	8.34	12.9	0.10	17.5	clear & no odor
1545	250		13.17	7.73	159	5.05	5.3	0.10	13.7	" "
1548	625		13.38	7.68	161	3.86	3.2	0.10	12.1	" "
1550	875		13.48	7.66	161	3.29	2.1	0.10	10.1	" "
1553	1250		13.63	7.68	162	2.80	1.4	0.10	8.88	" "
1555	1500		13.87	7.78	162	2.00	0.4	0.10	9.05	" "
1558	1875		14.11	7.79	163	2.01	0.4	0.10	7.36	" "
1600	2125	5.4	13.98	7.83	161	1.94	-1.0	0.10	7.62	" "

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox oralconox scrub, followed by DI water
 FIELD OBSERVATIONS (Well condition, repairs needed)
 Sample Time: 1605

Sampler Signature(s): 

ERM - Purge Log
Project Name: Kent 212
Project Number: 533246.03

Date: 4-13-21
 Set up time: ~~8:00~~ ~~8:00~~ 1250
 Weather: 50-60° sunny
 Field Staff: J Cooper

Well # MW-08

Sample ID: MW-08-041321

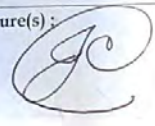
Location: Kent 212
 Construction: 2" PVC
 Groundwater Zone: Shallow
 Construction Depth: 14.5
 Screened Interval: 4.5-14.5
 Pump Intake Depth: ~9

Purge Start Time: 1255
 Discharge Rate: 125 ml/min
 Purge End Time: 1330
 Depth to Water: 5.5
 Height of Water Column:
 Volume of one casing:

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1300	0	5.5	13.28	6.34	0.472	6.83	6.80	0.30	53.3	clear / none
1305	625	↓	12.15	6.46	0.420	5.78	8.00	0.27	38.8	some floating particles
1308	1000		12.04	6.46	0.431	4.74	8.30	0.28	30.1	particles
1310	1250		13.22	6.44	0.464	3.73	11.00	0.29	11.5	clear / none
1313	1625		13.86	6.49	0.487	2.47	13.00	0.30	6.69	" "
1319	2375		13.96	6.57	0.496	1.78	13.9	0.31	5.35	" "
1323	2975		13.91	6.61	0.500	1.35	13.9	0.31	4.66	" "
1325	3125		6.0	14.03	6.61	0.501	1.22	14.4	0.31	4.35

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox or alconox scrub, followed by DI water
 Sample Time: 1330

FIELD OBSERVATIONS (Well condition, repairs needed)
 water in well box

Sampler Signature(s): 

ERM - Purge Log
Project Name: Kent 212
Project Number: 533246.03

Date: 4-13-21
Set up time: 0930
Weather: 55 sunny
Field Staff: JC

Well # MW-09

Sample ID: MW-09-041321-01

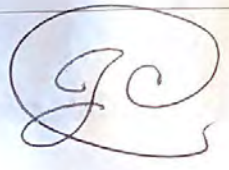
Location: Kent WA
Construction: 2" PVC
Groundwater Zone: shallow
Construction Depth: 15'
Screened Interval: 5-15'
Pump Intake Depth: ~10'

Purge Start Time: 0940
Discharge Rate: 125 m³/min
Purge End Time: 1040
Depth to Water: 6.55
Height of Water Column:
Volume of one casing:

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
0940	0	6.55	11.87	6.95	0.216	8.92	-4.9	0.14	10.6	clear + none
0945	625		11.88	6.29	0.220	2.70	19.00	0.14	67.8	cloudy + none
0950	1250		11.92	6.23	0.220	2.24	23.8	0.14	62.4	" "
0955	1875		11.99	6.16	0.217	2.18	23.6	0.14	54.7	" "
1000	2500		12.10	6.19	0.215	1.83	21.5	0.14	41.1	less cloudy
1003	2875		12.15	6.20	0.216	1.77	19.8	0.14	36.2	clear w/ some
1005	3125		12.20	6.20	0.217	1.73	18.3	0.14	33.3	" floating
1008	3500		12.25	6.21	0.219	1.79	15.0	0.14	29.6	" particles
1010	3750		12.32	6.20	0.220	1.48	12.2	0.14	26.5	" "
1015	4375		12.36	6.23	0.221	1.39	9.6	0.14	20.7	" "
1018	4750		12.39	6.24	0.225	1.25	6.2	0.14	20.0	" "
1020	5000		12.46	6.25	0.228	1.26	3.7	0.14	18.6	" "
1023	5375		12.48	6.27	0.221	1.21	2.3	0.14	17.5	" "
1025	5625		12.51	6.29	0.221	1.06	-0.3	0.15	16.1	" "
1028	6000		12.52	6.28	0.235	1.06	-0.7	0.15	14.9	" "
1030	6250		12.52	6.28	0.236	1.06	-1.3	0.15	13.7	" "
1033	6625		12.58	6.28	0.231	1.06	-4.8	0.15	12.2	" "
1035	6875	↓	12.59	6.30	0.240	1.05	-5.4	0.15	12.2	" "
1040	7500	6.25	12.59	6.20	0.241	1.03	-7.0	0.15	11.7	" "

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox or alconox scrub, followed by DI water
Sample Time: 1040

FIELD OBSERVATIONS (Well condition, repairs needed)
 good condition

Sampler Signature(s):


ERM - Purge Log

Project Name: Kent 212
 Project Number: 533246.03

Date: 4-13-21
 Set up time: 1500
 Weather: 60°F Sunny
 Field Staff: JC

Well # MW-12

Sample ID: MW-12-041321-01

Location: Kent
 Construction: 2" PVC
 Groundwater Zone: Shallow
 Construction Depth: 20
 Screened Interval: 5-20
 Pump Intake Depth: ~12

Purge Start Time: 1511
 Discharge Rate: 125 ml/min
 Purge End Time: 1540

Depth to Water: 5.2
 Height of Water Column:
 Volume of one casing:

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor	
1511	0	5.2	14.02	8.29	218	11.45	-24.2	0.13	12.2	clear + warm	
1515	500	↓	13.45	7.78	210	5.13	-10.7	0.13	9.66	" "	
1520	1125		13.41	7.50	211	3.28	-3.6	0.13	8.61	" "	
1525	1750		13.01	7.48	210	2.75	-0.6	0.13	8.56	" "	
1527	2000		13.52	7.53	208	2.57	0.4	0.13	8.50	" "	
1530	2375		13.45	7.58	205	2.33	-0.5	0.13	7.60	" "	
1533	2750		↓	13.45	7.60	203	2.22	-1.9	0.12	8.31	" "
1535	3000		5.4	13.49	7.62	201	2.11	-1.7	0.12	7.77	" "

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox oralcon scrub, followed by DI water
 FIELD OBSERVATIONS (Well condition, repairs needed)
 Sample Time: 1540

Sampler Signature(s):

ERM - Purge Log

Project Name: Kent 212
Project Number: 533246.03

Date: 4-13-21
Set up time: 1340
Weather: 60 sunny
Field Staff: JC

Well # MW-13

Sample ID: MW-13-041321-01

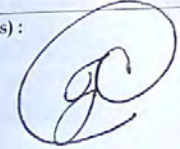
Location: Kent WA
Construction: 2" PVC deep
Groundwater Zone:
Construction Depth: 44.1
Screened Interval: 39.6-44.1
Pump Intake Depth: 42

Purge Start Time: 1345
Discharge Rate: 125 ml/min
Purge End Time: 1410
Depth to Water: 5.3
Height of Water Column:
Volume of one casing:

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1345	0	5.3	14.88	6.88	603	6.65	-69.2	37	11.7	clear/none
1350	625	↓	15.14	6.97	610	2.01	-88.7	37	11.8	" "
1355	1250		15.02	6.88	621	0.70	-97.1	38	8.92	" "
1358	1625		14.91	6.89	624	0.47	-96.1	38	2.39	" "
1400	1875		15.00	6.90	628	0.38	-98.1	36	2.54	" "
1403	2250	↓	14.88	6.91	629	0.32	-98.5	38	4.37	" "
1405	2500	5.4	14.87	6.92	631	0.30	-98.1	39	4.31	" "

Disposal method of purge water: 55-gallon drum
Decontamination procedure: Liquinox or alconox scrub, followed by DI water
Sample Time: 1410

FIELD OBSERVATIONS (Well condition, repairs needed)
water in well box

Sampler Signature(s):


300 1330

ERM - Purge Log
Project Name: Kent 212
Project Number: 533246.03

Date: 4-15-21
 Set up time: 0850
 Weather: 60° sunny
 Field Staff: JC

Well # MW-116

Sample ID: MW-116-041521-01

Location: Kent
 Construction: 2" PVC deep
 Groundwater Zone: deep
 Construction Depth: 47.2'
 Screened Interval: 37.2-47.2'
 Pump Intake Depth: ~42'

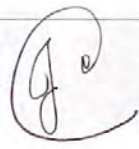
Purge Start Time: 0900
 Discharge Rate: 125 ml/min
 Purge End Time: 0930

Depth to Water: 9.3'
 Height of Water Column:
 Volume of one casing:

Time	Volume (mL)	Depth to Water (ft btoe)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
0900	0	9.3	12.3	6.38	.80	5.3	-59.2	—	4.58	clear + none
0905	625		12.2	6.39	.79	4.0	-67.6	—	2.83	" "
0910	1250		12.3	6.40	.79	3.3	-71.3	—	2.27	" "
0915	1875		12.3	6.40	.79	2.7	-73.1	—	2.01	" "
0920	2500		12.3	6.41	.79	2.6	-75.8	—	1.75	" "
0925	3125	9.3	12.3	6.40	.79	2.7	-76.5	—	1.75	" "
0930	3750									" "

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox or alconox scrub, followed by DI water
 Sample Time: 0930

FIELD OBSERVATIONS (Well condition, repairs needed)
 good condition

Sampler Signature(s): 

ERM - Purge Log

Project Name: Kent 212
 Project Number: 533246.03

Date: 4-14-21
 Set up time: 1425
 Weather: 65 sunny
 Field Staff: JC

Well # MW-17

Sample ID:

Location: Kent
 Construction: 2" PVC deep
 Groundwater Zone:
 Construction Depth:
 Screened Interval: 34.3-49.8
 Pump Intake Depth: ~38

Purge Start Time: 1430
 Discharge Rate: 125 ml/min
 Purge End Time: 1500

Depth to Water: 5.2
 Height of Water Column:
 Volume of one casing:

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1430	0	5.2	14.7	6.47	.68	8.6	-67.5	-	3.47	clear + odorless
1435	625	↓	13.6	6.28	.82	5.5	-54.8	-	3.62	" "
1440	1250	↓	13.8	6.30	.83	3.6	-57.3	-	3.95	" "
1445	1875	↓	13.5	6.34	.83	2.5	-59.8	-	3.72	" "
1450	2500	↓	13.7	6.37	.84	2.3	-60.8	-	4.75	" "
1455	3125	5.4	13.7	6.40	.84	2.0	-61.7	-	4.60	" "

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox oralconox scrub, followed by DI water
 Sample Time: 1500

FIELD OBSERVATIONS (Well condition, repairs needed)
 water in wellbox

Sampler Signature(s):

ERM - Purge Log

Project Name: Kent 212
 Project Number: 533246.03

Date: 4-14-21
 Set up time: 1040
 Weather: 60°F sunny
 Field Staff: JC

Well # MW-18

Sample ID: MW-18-04/421-01

Location: Kent
 Construction: 2" PVC deep
 Groundwater Zone: deep

Construction Depth: 43.5
 Screened Interval: 34-43.5
 Pump Intake Depth: ~38

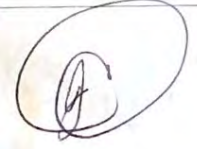
Purge Start Time: ~~1045~~ 1255
 Discharge Rate: 125 ml/min
 Purge End Time: 1330

Depth to Water: 5.2
 Height of Water Column:
 Volume of one casing:

Time	Volume (mL)	Depth to Water (ft btoe)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1045	0	5.2	14.88	6.58	326	10.51	-57.0	29		clear + none
1050	625		14.49							
1055	1250									
1100										
1255	0	5.2	14.9	6.94	67	12.7	-40.1	-	10.6	" v "
1300	625		14.9	6.34	67	7.1	-38.0	-	5.20	" "
1305	1250		14.9	6.22	67	4.1	-51.8	-	2.75	" "
1310	1875		15.0	6.24	67	3.4	-56.5	-	6.01	" "
1312	2500		15.1	6.23	67	3.1	-62.2	-	5.01	" "
1315	2500		14.7	6.25	67	2.7	-69.3	-	5.84	" "
1318	2875		14.7	6.23	67	2.0	-71.4	-	4.50	" "
1320	3125		15.0	6.29	66	1.9	-75.0	-	4.87	" "
1323	3500		15.0	6.30	66	1.9	-75.7	-	3.26	" "
1325	3750		15.0	6.31	66	2.0	-76.2	-	3.52	" "
1328	4000	5.2	15.0	6.31	66	1.9	-76.2	-		" "

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox oralconox scrub, followed by DI water
 Sample Time: 1330

FIELD OBSERVATIONS (Well condition, repairs needed)
 VSI flow cell leaking + had to be exchanged @ PINE ENV.

Sampler Signature(s):


ERM - Purge Log

Project Name: Kent 212
Project Number: 533246.03

Date: 4/4-21
Set up time: 1345
Weather: 65 Sunny
Field Staff: JC

Well # MW-19

Sample ID: MW-19-041421-01

Location: Kent
Construction: 2" PVC
Groundwater Zone: deep

Construction Depth: 49.4
Screened Interval: 39.4 - 49.4
Pump Intake Depth: ~44.4

Purge Start Time: 1348
Discharge Rate: 125 ml/min
Purge End Time: 1415

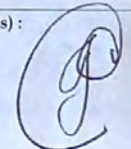
Depth to Water: 6.2
Height of Water Column:
Volume of one casing:

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L) %	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1348	0	6.2	16.2	6.31	593	12.4	-52.4	-	3.92	clear/colorless
1350	250	↓	16.2	6.17	592	9.6	-55.1	-	2.43	" "
1355	875	↓	16.1	6.08	589	3.0	-61.8	-	2.31	" "
1400	1500	↓	16.0	6.04	589	2.3	-65.5	-	1.77	" "
1405	2125	↓	15.9	6.16	591	2.3	-73.7	-	2.00	" "
1408	2500	↓	15.8	6.19	592	2.1	-74.6	-	1.97	" "
1410	2750	6.2	15.8	6.20	593	2.1	-75.2	-	1.80	" "

Disposal method of purge water: 55-gallon drum
Decontamination procedure: Liquinox or alconox scrub, followed by DI water

Sample Time: 1415

FIELD OBSERVATIONS (Well condition, repairs needed)
water in well baf

Sampler Signature(s): 

ERM - Purge Log

Project Name: Kent 212
Project Number: 533246.03

Date: 4-15-21
Set up time: 1115
Weather: 65°F Sunny
Field Staff: JC

Well # MW-20

Sample ID: MW-20-041521-01

Location: Kent
Construction: 2" PVC
Groundwater Zone: deep

Construction Depth: 43.2
Screened Interval: 33.5-43.2
Pump Intake Depth: ~38

Purge Start Time: 1120
Discharge Rate: 125 ml/min
Purge End Time: 1145

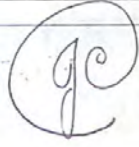
Depth to Water: 5.9
Height of Water Column:
Volume of one casing:

Time	Volume (mL)	Depth to Water (ft bwc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1120	0	5.9	14.9	6.45	0.98	1.7	-62.1	—	2.04	clear
1125	625	↑	15.9	6.38	1.01	1.5	-64.2	—	2.54	" "
1130	1250	↓	15.9	6.37	1.02	1.9	-72.8	—	2.99	" "
1135	1875	↓	15.9	6.42	1.02	2.0	-77.6	—	3.67	" "
1140	2500	↓	15.9	6.43	1.02	1.9	-79.2	—	3.08	" "
1145	3125	10.0	15.9	6.42	1.03	2.1	-80.0	—	3.20	" "

Disposal method of purge water: 55-gallon drum
Decontamination procedure: Liquinox or alconox scrub, followed by DI water
FIELD OBSERVATIONS (Well condition, repairs needed)

Sample Time: 1145

good condition

Sampler Signature(s): 

ERM - Purge Log

Project Name: Kent 212
 Project Number: 533246.03

Date: 4-13-21
 Set up time: 1045
 Weather: 60 Sunny
 Field Staff: JC

Well # MW-21

Sample ID: MW-21-041321
 DUP-01

Location: Kent WA
 2nd PUG
 deers
 Construction Depth: 44.1
 Screened Interval: 34.1 - 44.1
 Pump Intake Depth: ~ 39

Purge Start Time: 1050
 Discharge Rate: 12.5 ml/min
 Purge End Time: 1110
 Depth to Water: _____
 Height of Water Column: _____
 Volume of one casing: _____

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1050	0	5.3	14.43	6.31	0.486	4.00	-95.2	0.30	9.90	clear/none
1055	625		14.37	6.30	0.488	1.74	-110.2	0.30	7.80	" "
1058	1000		14.32	6.36	0.493	0.78	-116.4	0.30	10.6	" "
1100	1250		14.30	6.34	0.495	0.55	-115.7	0.30	7.65	" "
1103	1625	↓	14.24	6.35	0.495	0.50	-106.7	0.30	5.81	" "
1105	1875	5.3	14.27	6.36	0.495	0.48	-103.3	0.30	5.06	" "

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox oralconox scrub, followed by DI water
 Sample Time: 1110

FIELD OBSERVATIONS (Well condition, repairs needed)
 in good condition
 DUP-01

Sampler Signature(s):
 (Signature)

ERM - Purge Log

Project Name: Kent 212
 Project Number: 533246.03

Date: 4-14-21
 Set up time: 0945
 Weather: 55 sunny
 Field Staff: JC

Well # MW-23

Sample ID: MW-23-041421-01

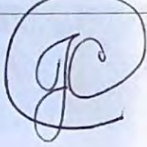
Location: Kent
 Construction: 2" PVC Shallow
 Groundwater Zone:
 Construction Depth: 15'
 Screened Interval: 5-15'
 Pump Intake Depth: 10'

Purge Start Time: 1005
 Discharge Rate: 125 ml/min
 Purge End Time: 1030
 Depth to Water: 5.4'
 Height of Water Column:
 Volume of one casing:

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1005	0	5.4	13.27	7.30	0.555	4.41	-3.0	0.35	60.6	some floating particles
1010	625	↓	13.29	7.24	0.558	2.88	-5.5	0.35	34.6	particles
1015	1250	↓	13.18	7.22	0.560	2.32	-6.2	0.36	23.6	nu odor
1020	1875	↓	13.21	7.21	0.562	2.00	-6.8	0.36	18.6	more clear
1025	2500	5.4	13.26	7.24	0.561	2.27	-6.9	0.36	16.7	" "

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox or alconox scrub, followed by DI water
 Sample Time: 1030

FIELD OBSERVATIONS (Well condition, repairs needed)
 water in wellbox
 MW-23-041421-01

Sampler Signature(s): 

ERM - Purge Log

Project Name: Kent 212
Project Number: 533246.03

Date: 4-15-21
Set up time: 1040
Weather: 65°F + Sunny
Field Staff: JC

Well # MW-27

Sample ID: MW-27-041521-01

Location: Kent
Construction: 2" PVC deep
Groundwater Zone:

Construction Depth: 48'
Screened Interval: 38-48'
Pump Intake Depth: ~ 42'

Purge Start Time: 1045
Discharge Rate: 125 ml/min
Purge End Time: 1110

Depth to Water: 5.7
Height of Water Column:
Volume of one casing:

Time	Volume (mL)	Depth to Water (ft bto)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1045	0	5.7	14.7	6.73	0.522	4.5	-84.8	—	3.72	clear + none
1050	625		14.8	6.72	0.520	3.8	-80.4	—	2.96	" "
1055	1250		14.8	6.63	0.516	2.4	-76.1	—	2.98	" "
1100	1875		14.8	6.60	0.516	2.7	-66.8	—	1.86	" "
1105	2500		14.9	6.58	0.516	2.2	-65.0	—	1.81	" "
1110	3125	5.7	14.9	6.56	0.517	2.4	-63.9	—	1.84	" "

Disposal method of purge water: 55-gallon drum
Decontamination procedure: Liquinox oralconox scrub, followed by DI water

Sample Time: 1110

FIELD OBSERVATIONS (Well condition, repairs needed)
good condition MS/MSD

Sampler Signature(s):

ERM - Purge Log

Project Name: Kent 212
 Project Number: 533246.03

Date: 4-12-21
 Set up time: 1200
 Weather: 50 + sunny
 Field Staff: JCOOPER

Well # MW-29D

Sample ID: MW-29D-041221-01

Location: Kent 212th
 Construction: 2" PVC
 Groundwater Zone: Deep
 Construction Depth: 40.5
 Screened Interval: 30.5 - 40.5
 Pump Intake Depth: 35

Purge Start Time: 1245
 Discharge Rate: 125 ml/min
 Purge End Time: 1315

Depth to Water: 4.65
 Height of Water Column: 35.85
 Volume of one casing: 22.139 L


Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1245	0	4.65	15.44	6.23	273	2.57	-6.3	0.16	16.4	Clear + none
1250	625		15.22	6.21	284	2.30	-44.8	0.17	8.93	" "
1255	1250		15.22	6.50	228	1.55	-64.5	0.17	6.25	" "
1300	1875		15.15	6.41	292	0.76	-91.4	0.17	6.89	" "
1303	2250		14.94	6.40	296	0.67	-98.5	0.17	6.19	" "
1305	2500		14.89	6.50	292	0.67	-100.2	0.17	7.80	" "
1308	2875		14.84	6.52	293	0.62	-101.8	0.18	5.61	" "
1310	3125	4.65	14.89	6.47	293	0.62	-101.0	0.18	6.66	" "

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox or alconox scrub, followed by DI water
 Sample Time: 1315

FIELD OBSERVATIONS (Well condition, repairs needed)

Water in well box

Sampler Signature(s):



$$\begin{array}{r} 40.5 \\ - 4.65 \\ \hline 35.85 \end{array}$$

$$\begin{array}{r} V = 1351.51 \text{ } ^{13} \\ \downarrow \\ 0.782 \text{ } ^{13} \\ \downarrow \\ 22.139 \text{ L} \end{array}$$

$$\begin{array}{r} 125 \text{ ml/min} \\ \times 5 \text{ min} = 625 \text{ ml} \\ = 0.625 \text{ L} \end{array}$$

ERM - Purge Log

Project Name: Kent 212
 Project Number: 533246.03

Date: 5-15-21
 Set up time: 1200
 Weather: 65 sunny
 Field Staff: JC

Well # MW-22

Sample ID: MW-22-~~0004~~1521-01


Location: Kent
 Construction: 2" PVC deep
 Groundwater Zone:
 Construction Depth: 42
 Screened Interval: 32-42
 Pump Intake Depth: 37

Purge Start Time: 1210
 Discharge Rate: 125 ml/min
 Purge End Time: 1250
 Depth to Water: 5.8
 Height of Water Column:
 Volume of one casing:

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1210	0	5.8	12.3	6.45	6.04	19.5	-70.9	—	33.5	clear + none
1215	625		16.0	6.45	7.7	20.0	-42.0	—	8.04	Some floating particles
1220	1250		14.9	6.44	7.7	18.2	-40.7	—	3.37	" "
1225	1875		15.1	6.27	7.6	6.8	-33.1	—	4.01	" "
1230	2500		15.2	6.23	7.6	3.0	-34.8	—	6.60	" "
1235	3125		15.0	6.27	7.6	2.0	-40.5	—		" "
1240	3750		15.0	6.24	7.6	2.2	-40.9	—		" "
1245	4375		14.9	6.27	7.6	2.3	-41.3	—		" "

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox or alconox scrub, followed by DI water
 Sample Time: 1250

FIELD OBSERVATIONS (Well condition, repairs needed)
 good

Sampler Signature(s): 

August 2021 Field Forms

DATE: 8-30-21/8-31-21

* Add to Excel for next time: P-1, MW-25, MW-11, MW-24,

Water Level Table

Site: Univar- Kent 212 Project Number, Phase: 0577675.04

Well Number	Screened Zone	Total Depth (ft bgs or toc)	Top of screen (ft bgs)	Bottom of screen (ft bgs)	Measuring Point (ft)	Measured Depth to Water (ft-btc)	Measured Total Depth (ft-btc)	Time	Pump Intake Depth ft-bgs	Well Condition/Comments	GW Sample Date (# samples)
MW-01	Shallow	19.0	4.0	19.0	33.15	5.91'	19'	13:05	12'	good	9-1-21
MW-02	Shallow	19.0	4.0	19.0	33.79	7.65'	19'	12:45	12'	good; bugs in well box	9-1-21
MW-03	Shallow	19.0	4.0	19.0	32.94	7.15'	19'	12:00	13'	good (w)	9-5-21
MW-04	Shallow	14.5	4.5	14.5	32.86	6.40'	14'	13:25	9'	good	9-1-21
MW-05	Shallow	14.5	4.5	14.5	32.60	6.80'	14'	13:40	10'	good	9-1-21
MW-06	Shallow	14.5	4.5	14.5	33.05	7.10'	14'	12:55	10'	good	9-1-21
MW-07	Shallow	14.5	4.5	14.5	32.96	7.15'	14'	11:00	10'	missing 1 bolt	9-2-21
MW-08	Shallow	14.5	4.5	14.5	33.57	7.80'	14'	10:25	9'	(w)	9-2-21
MW-09	Shallow	15.0	5.0	15.0	33.77	7.96'	15'	13:55	10'	good	9-2-21
MW-10	Shallow	15.0	5.0	15.0	32.89	7.05'	15'	12:15	10'	good	9-2-21
MW-12	Shallow	20.0	5.0	20.0	32.81	6.95'	20'	13:45	12'	good	9-2-21
MW-23	Shallow	15.0	5.0	15.0	32.78	6.95'	15'	11:15	10'	missing 1 bolt (w)	9-2-21
Deep On-Site Monitoring Wells											
MW-13	Deep	44.1	39.6	44.1	32.8	7.20'	44'	13:20	42'	INACCESSIBLE	DO NOT SAMPLE
MW-14	Deep	42.2	32.7	42.2	32.6	6.70'	42'	13:00	37'	good (p)	9-1-21
MW-16	Deep	47.2	37.2	47.2	36.9	11.10'	47'	12:30	42'	good	9-1-21
MW-17	Deep	43.8	34.3	43.8	32.6	6.83'	43'	11:45	39'	(w)(p)!	9-3-21
MW-18	Deep	43.5	34.0	43.5	32.7	6.90'	43'	12:10	40'	good	9-2-21
MW-19	Deep	49.4	39.4	49.4	33.5	7.75'	49'	11:30	45'	missing 3 bolts (w)	9-2-21
MW-21	Deep	44.1	34.1	44.1	32.9	6.85'	43'	13:15	40'	missing 3 bolts	9-1-21
MW-22	Deep	42.2	32.2	42.2	33.2	7.35'	42'	13:20	37'	good (p)	INACCESSIBLE - 9-8-21
Deep Off-Site Monitoring Wells											
MW-25	Deep					6.35'				good	DO NOT SAMPLE
MW-20	Deep	43.2	33.5	43.2	33.2	7.35'	43'	15:55	38'	(w)(p)	8-31-21
MW-27	Deep	48.0	38.0	48.0	33.0	7.30'	47'	14:45	43'	missing 3 bolts	8-31-21
MW-28	Deep	45.0	35.0	45.0	34.6	8.95'	45'	16:35	40'	(w)(p)	8-31-21
MW-29D	Deep	40.5	30.5	40.5	30.8	6.50'	40'	15:30	35'	good	8-30-21
P-1	Deep					7.75'	45.3'	19:40		good	DO NOT SAMPLE

Total Depths based on field measurements or from well logs
Screened interval based on well logs

(w) water in well box
(p) pressure

wells to gauge but not sample
P-1 7.75' btoC
MW-11 inaccessible
MW-25 6.35'

Thurs:

MW-22	MW-22
MW-23	MW-23
MW-24	MW-24
MW-25	MW-25
MW-26	MW-26
MW-27	MW-27
MW-28	MW-28
MW-29	MW-29
MW-30	MW-30

8/30/21: mw-29D
8/31/21: gauge all wells
sample mw-28, mw-20, mw-27
9/1/21: sample mw-21, 22, 23, 24, 25, 26, 27, 28, 29, 30
9/2/21: sample (mw-21, 22, 23, 24, 25, 26, 27, 28, 29, 30)
9/3/21: sample mw-21, 22, 23, 24, 25, 26, 27, 28, 29, 30

(12) 15:00 time, P-1, mw-25, -12, -8, -9 (18)
(22) finish
(25) Post field + shipping

October 2021 Field Forms

DATE: 10-5-21, 10/6/21, 10/7/21

Water Level Table

Site: Univar- Kent 212 Project Number, Phase: 0577675.04

Well Number	Screened Zone	Total Depth (ft bgs or loc)	Top of screen (ft bgs)	Bottom of screen (ft bgs)	Measuring Point (ft)	Measured Depth to Water (ft-btc)	Measured Total Depth (ft-btc)	Time	Well Condition/Comments	GW Sample Date (# samples)	
DUP-02 MW-01	Shallow	19.0	4.0	19.0	33.15	5.11		1030	DUP-03	10/6	
MW-02	Shallow	19.0	4.0	19.0	33.79	7.20		0920		10/6	
MW-03	Shallow	19.0	4.0	19.0	32.94	6.80		0947		10/7	
DUP MW-04	Shallow	14.5	4.5	14.5	32.86	5.07		1415	DUP-02	10/5	
MW-05	Shallow	14.5	4.5	14.5	32.60	6.50		1040		10/5	
MW-06	Shallow	14.5	4.5	14.5	33.05	6.13		0900		10/6	
MW-07	Shallow	14.5	4.5	14.5	32.96	6.82		1218		10/6	
MW-08	Shallow	14.5	4.5	14.5	33.57	7.46		1210		10/5	
MW-09	Shallow	15.0	5.0	15.0	33.77	7.63		1250		10/5	
MW-10	Shallow	15.0	5.0	15.0	32.89	6.69		1338		10/6	
MW-12	Shallow	20.0	5.0	20.0	32.81	6.62		1326		10/5	
MW-23	Shallow	15.0	5.0	15.0	32.78	6.61		1305		10/6	
Deep On-Site Monitoring Wells											
MW-13	Deep	44.1	39.6	44.1	32.8	6.61		1500	DUP-01	10/5	
MW-14	Deep	42.2	32.7	42.2	32.6	6.34		0935		10/6	
MW-16	Deep	47.2	37.2	47.2	36.9	10.75		1105		10/6	
MW-17	Deep	43.8	34.3	43.8	32.6	6.43		0820		10/7	
MW-18	Deep	43.5	34.0	43.5	32.7	6.50		1425		10/6	
MW-19	Deep	49.4	39.4	49.4	33.5	7.39		1505		10/6	
MW-21	Deep	44.1	34.1	44.1	32.9	6.68		1545		10/6	
MW-22	Deep	42.2	32.2	42.2	33.2	7.03		930		10/5	
Deep Off-Site Monitoring Wells											
MW-20	Deep	43.2	33.5	43.2	33.2	7.65		1230		← 1330	10/7
MW-27	Deep	48.0	38.0	48.0	33.0	6.93		1100	10/7		
MW-28	Deep	45.0	35.0	45.0	34.6	8.65		1018	10/7		
MW-29	Deep	40.5	30.5	40.5	30.8	6.12		1130	10/7		

Total Depths based on field measurements or from well logs
 Screened interval based on well logs

ERM - Purge Log

Project Name: Kent 212
 Project Number: 577675.04

Date: 10-5-21
 Set up time:
 Weather: ~50 rainy
 Field Staff: Matt Crandal

Well # MW-22

Sample ID: MW-22-20211005 & DUP-01

Location: Kent 212th
 Construction: deep 2" PVC
 Groundwater Zone:
 Construction Depth: 42
 Screened Interval: 32-42
 Pump Intake Depth: 37

Purge Start Time: 0943
 Discharge Rate: 150 mL
 Purge End Time:

Depth to Water: 7.03
 Height of Water Column: ~35
 Volume of one casing: 6.055-gal

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
0943	0	7.03								
0950	1050	7.04								
0957	2100	7.04	14.7	6.06	701	2.49	-112.00	0.43	24.5	colorless
1001	2700	7.04	14.7	6.07	700	2.40	-115.8	0.43	25.8	odorless
1005	3300	7.04	14.6	6.07	699	2.38	-116.4	0.43	25.26	
1009	3900	7.04	14.6	6.07	702	2.37	-116.2	0.43	22.7	
1013	4500	7.04	14.7	6.07	703	2.34	-116.7	0.43	165.5	

(added sal on ysl, so ignore cross out; good data)

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox or alconox scrub, followed by DI water
 Sample Time: 1014

FIELD OBSERVATIONS (Well condition, repairs needed)

DUP-01
 Sampler Signature(s): JC, MC

$$\begin{array}{r}
 \text{Height} \\
 150 \\
 \times 7 \\
 \hline
 1050
 \end{array}$$

$$\begin{array}{r}
 150 \\
 \times 4 \\
 \hline
 600
 \end{array}$$

ERM - Purge Log
 Project Name: Kent 212
 Project Number: 577675.04

Date: 10/5/2021
 Set up time: 1040
 Weather: Rain
 Field Staff: MC, JC

Well # MW-05

Sample ID: MW-05 DUP-02

Location: OS
 Construction: 2" PVC
 Groundwater Zone: Shallow
 Construction Depth: 14.5'
 Screened Interval: 4.5-14.5'
 Pump Intake Depth: 10'


Purge Start Time: 1050
 Discharge Rate: 1530
 Purge End Time: 1123

Depth to Water: 6.50'
 Height of Water Column: 8.00'
 Volume of one casing: 1.38 gallons

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1058	1200	6.7	14.5	6.08	0.159	3.28	60.2	0.09	75.78	colorless/odorless
1102	1800	6.7	15.1	6.09	0.162	3.13	59.2	0.09	77.78	" "
1106	2400	6.7	14.7	6.12	0.164	2.82	54.5	0.10	19.41	" "
1110	3000	6.7	14.7	6.13	0.165	2.70	48.1	0.10	10.38	" "
1114	3600	6.7	15.1	6.14	0.168	2.64	44.1	0.10	9.16	" "
1118	4200	6.7	14.7	6.15	0.168	2.62	40.7	0.10	10.86	" "
1122	4800	6.7	14.7	6.16	0.169	2.60	36.8	0.10	7.69	" "

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox or alconox scrub, followed by DI water
 Sample Time: 1123

FIELD OBSERVATIONS (Well condition, repairs needed)
 DUP-02

Sampler Signature(s): 

$$\begin{array}{r} 4 \\ 150 \\ \times 8 \\ \hline 1200 \end{array}$$

ERM - Purge Log
Project Name: Kent 212
Project Number: 577675.04

Date: 10/05/2021
Set up time: 12:10
Weather: breezy, 55°F
Field Staff: MC

Well # MW-08

Sample ID: MW-08-20211005

Location: 08
Construction: 2" PVC
Groundwater Zone: Shallow
Construction Depth: 14.5'
Screened Interval: 4.5-14.5'
Pump Intake Depth: 11'

Purge Start Time: 12:17
Discharge Rate: ~150 ml/min
Purge End Time: 12:44
Depth to Water: 7.46'
Height of Water Column: 7.04'
Volume of one casing: 1.22 gallons

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1224	150	7.91	14.8	6.23	0.473	2.80	56.8	0.29	3.86	clear, no
1228	100	8.01	14.8	6.24	0.474	2.58	62.8	0.29	3.48	odor
1232		8.02	14.7	6.24	0.473	2.53	66.5	0.29	3.24	
1236		—	14.7	6.25	0.473	2.50	67.6	0.29	3.32	
1240		8.03	14.7	6.25	0.473	2.48	67.9	0.29	3.39	

Disposal method of purge water: 55-gallon drum
Decontamination procedure: Liquinox or alconox scrub, followed by DI water
FIELD OBSERVATIONS (Well condition, repairs needed)
Sample Time: 1241

Sampler Signature(s):

ERM - Purge Log

Project Name: Kent 212
 Project Number: 577675.04

Date: 10/5/21
 Set up time: 1250
 Weather: Dri 2nd, 56°F
 Field Staff: MC

Well #: MW-09

Sample ID: MW-09-20211005

Location: 09
 Construction: 2" PVC
 Groundwater Zone: Shallow
 Construction Depth: 15'
 Screened Interval: 5-15'
 Pump Intake Depth: 11'

Purge Start Time: 1254
 Discharge Rate: ~150 mL/min
 Purge End Time: 1325 + 330 (AP)
 Depth to Water: 7.63'
 Height of Water Column: 7.37'
 Volume of one casing: 1.28 gallons

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1300	150	7.75	14.1	6.22	0.383	3.31	-69.6	0.23	12.30	clear,
1304		7.76	14.1	6.23	0.381	2.91	-77.1	0.23	6.53	no odor
1308		/	14.1	6.24	0.379	2.64	-84.0	0.23	6.13	
1312		7.76	14.0	6.25	0.376	2.54	-87.8	0.23	8.47	
1316		7.76	14.0	6.25	0.375	2.51	-89.1	0.23	8.12	

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox or alconox scrub, followed by DI water
 FIELD OBSERVATIONS (Well condition, repairs needed)
 Sample Time: 1317

Sampler Signature(s)

ERM - Purge Log
 Project Name: Kent 212
 Project Number: 577675.04

Date: 10/5/2021
 Set up time: 1326
 Weather: Drizzle, 56°F
 Field Staff: MC

Well # MW-12

Sample ID: MW-12-2021005

Location: 12
 Construction: 2" PVC
 Groundwater Zone: Shallow
 Construction Depth: 20'
 Screened Interval: 5-20'
 Pump Intake Depth: 13'

Purge Start Time: 1340
 Discharge Rate: ~150 mL/min
 Purge End Time: 1406
 Depth to Water: 6.62'
 Height of Water Column: 13.38'
 Volume of one casing: 2.31 gallons

Time	Volume (mL)	Depth to Water (ft bloc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1346	150	6.69	14.8	6.41	0.145	3.66	5.9	0.12	25.74	Clear, no odor
1350	100	6.73	14.9	6.36	0.185	2.91	34.9	0.11	13.97	odor
1354	1	6.75	14.9	6.35	0.189	2.87	36.9	0.11	16.97	
1358	1	-	15.0	6.36	0.190	2.71	39.1	0.11	7.37	
1402	1	6.79	15.1	6.36	0.190	2.63	42.1	0.11	7.46	

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox or alconox scrub, followed by DI water
 FIELD OBSERVATIONS (Well condition, repairs needed)
 Sample Time: 1403

Sampler Signature(s):

ERM - Purge Log

Project Name: Kent 212
Project Number: 577675.04

Date: 10/5/2021
Set up time: 14:15
Weather: Drizzle, 56°
Field Staff: MC

Well # MW-04

Sample ID: MW-04-20211005

Location: 04
Construction: 2" PVC
Groundwater Zone: Shallow
Construction Depth: 14.5
Screened Interval: 4.5 - 14.5
Pump Intake Depth: 10'

Purge Start Time: 1425
Discharge Rate: ~150 mL/min
Purge End Time: 1454
Depth to Water: 5.07'
Height of Water Column: 9.43'
Volume of one casing: 1.63 gallons

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1432	2150	5.47	15.7	6.48	0.787	2.60	-76.0	0.47	3.56	Clear
1436		/	15.7	6.51	0.777	2.47	-82.3	0.47	3.39	sulfur-like
1440		5.52	15.8	6.53	0.774	2.38	-86.5	0.47	3.17	odor, musty
1444		-	15.6	6.54	0.770	2.37	-88.4	0.47	3.36	
1448		5.56	15.6	6.55	0.771	2.33	-90.1	0.47	3.40	

Disposal method of purge water: 55-gallon drum
Decontamination procedure: Liquinox or alconox scrub, followed by DI water
FIELD OBSERVATIONS (Well condition, repairs needed)
Sample Time: 1449

Sampler Signature(s):

ERM - Purge Log

Project Name: Kent 212
Project Number: 577675.04

Date: 10/5/21
Set up time: 1500
Weather: Drizzle, 56°
Field Staff: MC

Well # MW-13


Sample ID: MW-13-20211605

Location: 13
Construction: 2" PVC
Groundwater Zone: Deep
Construction Depth: 44'
Screened Interval: 39-44'
Pump Intake Depth: 41.5'

Purge Start Time: 1515
Discharge Rate: ~150 ml/min
Purge End Time: 1542
Depth to Water: 6.61'
Height of Water Column: 37.39'
Volume of one casing: 6.47 gallons

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1522	150	6.69	15.8	6.43	0.619	2.64	-105.2	0.37	12.85	clear
1526	↓	✓	15.8	6.44	0.628	2.27	-119.1	0.37	8.52	misty
1530	↓	6.69	15.8	6.44	0.628	2.25	-120.3	0.38	8.02	sulfur like
1534	↓	✓	15.9	6.44	0.627	2.21	-121.1	0.38	7.91	odor
1538	↓	6.69	15.9	6.44	0.626	2.19	-122.3	0.38	7.63	

Disposal method of purge water: 55-gallon drum
Decontamination procedure: Liquinox or alconox scrub, followed by DI water
FIELD OBSERVATIONS (Well condition, repairs needed)
Sample Time: 1539

Sampler Signature(s): 

ERM - Purge Log
 Project Name: Kent 212
 Project Number: 577675.04

Date: 10/5/2021
 Set up time: 1545
 Weather: Rain, 56°
 Field Staff: MC

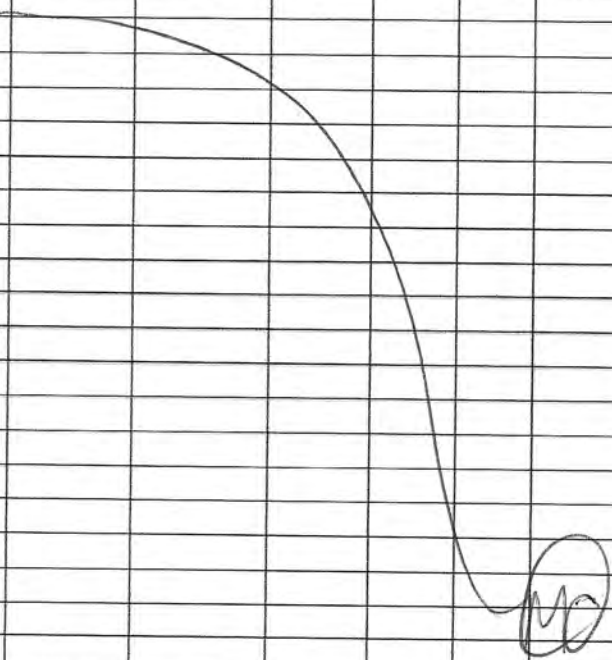
Well # MW-21

Sample ID: MW-21-20211005


Location: 21
 Construction: 2nd pre
 Groundwater Zone: Deep
 Construction Depth: 44'
 Screened Interval: 34-44'
 Pump Intake Depth: 39'

Purge Start Time: 1604
 Discharge Rate: ~150 ml/min
 Purge End Time: 1630

Depth to Water: 6.68'
 Height of Water Column: 37.32'
 Volume of one casing: 6.46 gallons

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1610	~150	6.68	14.7	6.47	0.475	2.82	-96.0	0.29	24.12	clear
1614		—	14.7	6.46	0.478	2.54	-106.6	0.29	32.17	murky
1618		6.71	14.7	6.46	0.478	2.42	-112.3	0.29	29.79	sulfur
1622		—	14.6	6.46	0.478	2.38	-114.0	0.29	26.98	like odor
1626		6.71	14.6	6.46	0.478	2.36	-116.1	0.29	20.02	
										

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox or alconox scrub, followed by DI water
 FIELD OBSERVATIONS (Well condition, repairs needed)
 Sample Time: 1627

Sampler Signature(s):


ERM - Purge Log
 Project Name: Kent 212
 Project Number: 577675.04

Date: 10/6/21
 Set up time: 0820
 Weather: clouds, 40°
 Field Staff: MC

Well # MW-02

Sample ID: MW-02-20211006


Location: 02
 Construction: 2" PVC
 Groundwater Zone: Shallow
 Construction Depth: 19'
 Screened Interval: 4-19'
 Pump Intake Depth: 13'

Purge Start Time: 0827
 Discharge Rate: ~150 mL/min
 Purge End Time: 0853

Depth to Water: 7.20'
 Height of Water Column: 11.80'
 Volume of one casing: 2.04 gallons

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
0832	150	/	14.6	6.41	0.431	2.65	-94.8	0.26	3.10	clear,
0836		7.58	14.6	6.41	0.432	2.60	-97.0	0.26	3.48	no odor
0840		7.66	14.7	6.42	0.433	2.52	-102.3	0.26	3.03	
0844		7.72	14.8	6.42	0.434	2.47	-104.1	0.26	4.30	
0848		7.80	14.9	6.42	0.434	2.44	-106.2	0.26	4.12	

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox or alconox scrub, followed by DI water
 FIELD OBSERVATIONS (Well condition, repairs needed)
 Sample Time: 0849

Sampler Signature(s): 

ERM - Purge Log

Project Name: Kent 212
 Project Number: 577675.04

Date: 10/6/21
 Set up time: 0900
 Weather: Cloudy, 49°
 Field Staff: MC

Well # MW-06

Sample ID: MW-06-20211006

Location: 06
 Construction: 2" PVC
 Groundwater Zone: Shallow
 Construction Depth: 14.5'
 Screened Interval: 4.5-14.5'
 Pump Intake Depth: 10'

Purge Start Time: 0905
 Discharge Rate: ~150 mL/min
 Purge End Time: 0931
 Depth to Water: 6.13'
 Height of Water Column: 8.37'
 Volume of one casing: 1.49 gallons

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
0910	~150	6.35	11.7	6.35	0.508	3.42	-58.4	0.34	6.22	clear
0914		6.37	11.7	6.35	0.510	3.34	-63.4	0.34	4.73	no odor
0918		6.40	12.0	6.37	0.510	2.99	-79.3	0.33	5.36	
0922		6.43	12.1	6.39	0.510	2.85	-82.3	0.33	4.17	
0926		6.47	12.2	6.40	0.509	2.72	-84.9	0.33	3.99	

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox or alconox scrub, followed by DI water
 FIELD OBSERVATIONS (Well condition, repairs needed)
 Sample Time: 0927

Sampler Signature(s):

ERM - Purge Log

Project Name: Kent 212
Project Number: 577675.04

Date: 10/6/21
Set up time: 0935
Weather: clouds, 49°
Field Staff: MC

Well # MW-14

Sample ID: MW-14-2021006

Location: 14
Construction: 2" PVC
Groundwater Zone: Deep

Construction Depth: 42'
Screened Interval: 32-42'
Pump Intake Depth: 37'

Purge Start Time: 0940
Discharge Rate: 2150 mL/min
Purge End Time: 1006

Depth to Water: 6.34'
Height of Water Column: 35.66'
Volume of one casing: 6.17 gallons

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
0946	150	6.34	13.3	6.55	0.460	2.98	-67.4	0.29	3.07	clear,
0950		✓	12.6	6.54	0.442	2.71	-73.1	0.27	3.01	very
0954		6.34	13.9	6.55	0.425	2.60	-82.3	0.26	2.94	slight
0958		✓	13.7	6.55	0.421	2.58	-86.1	0.25	2.62	sulfur-like
1002		6.34	13.6	6.56	0.420	2.54	-89.3	0.25	2.59	odor
Disposal method of purge water: 55-gallon drum									Sample Time: 1003	
Decontamination procedure: Liquinox or alconox scrub, followed by DI water										
FIELD OBSERVATIONS (Well condition, repairs needed)										

Sampler Signature(s): *MC*

ERM - Purge Log
 Project Name: Kent 212
 Project Number: 577675.04

Date: 10/6/21
 Set up time: 1030
 Weather: Clouds, 50°
 Field Staff: MC

Well # MW-01 Sample ID: MW-01-20211006

Location: 61 2" PVC shallow Construction Depth: 19'
 Construction: 2" PVC Screened Interval: 4-19'
 Groundwater Zone: shallow Pump Intake Depth: 12'

Purge Start Time: 1033
 Discharge Rate: ~150 mL/min
 Purge End Time: 1100

Depth to Water: 5.11'
 Height of Water Column: 13.89'
 Volume of one casing: ~~18.20~~ 2.4 gal/cas

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1036	150	5.50	16.5	6.89	0.816	2.79	-73.2	0.48	6.67	clear
1040		5.51	16.7	6.92	0.829	2.43	-10.1	0.49	6.00	musty
1044			16.9	6.92	0.830	2.41	-118.9	0.49	5.60	sulfur-like
1048		5.51	16.8	6.93	0.831	2.38	-121.2	0.49	5.11	odor
1052		5.51	16.8	6.93	0.831	2.35	-122.9	0.49	5.34	

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox or alconox scrub, followed by DI water
 FIELD OBSERVATIONS (Well condition, repairs needed)
 Sample Time: 1053

Sampler Signature(s):

MC
+ DUP-03

ERM - Purge Log
 Project Name: Kent 212
 Project Number: 577675.04

Date: 10/6/2021
 Set up time: 1105
 Weather: clouds, 52°
 Field Staff: MC

Well # MW-16

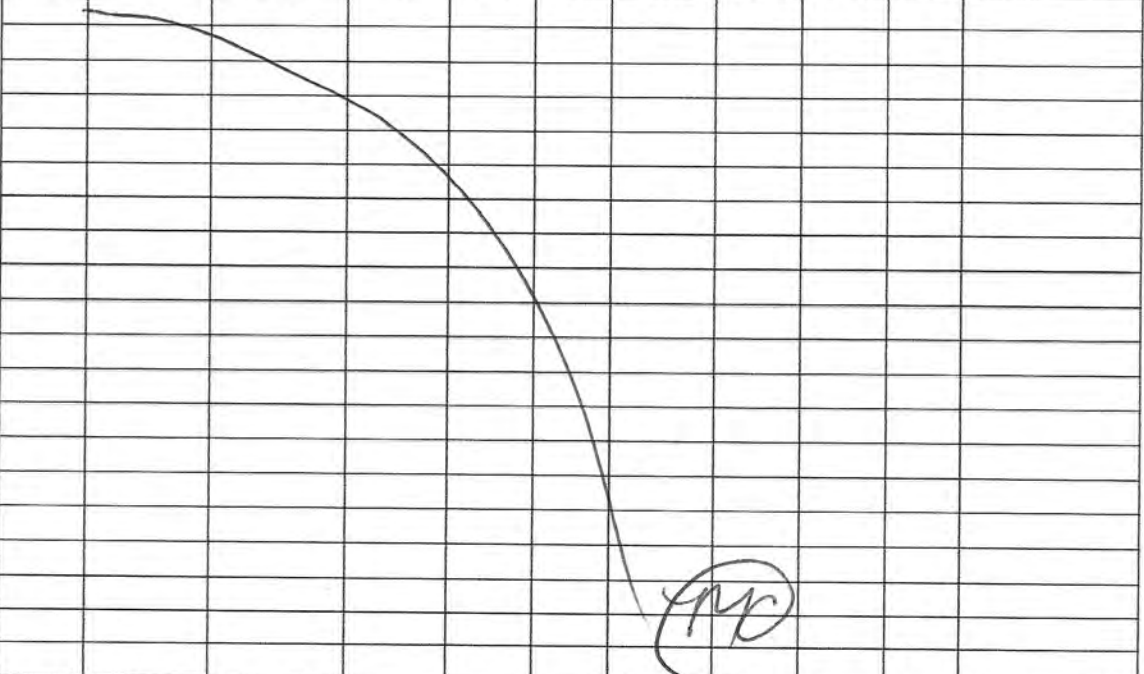
Sample ID: MW-16-2021006

Location: 16
 Construction: 2nd PVC
 Groundwater Zone: Deep
 Construction Depth: 47'
 Screened Interval: 37-47'
 Pump Intake Depth: 40'

Purge Start Time: 1120
 Discharge Rate: ~150 mL/min
 Purge End Time: 1147

Depth to Water: 10.75'
 Height of Water Column: 36.25'
 Volume of one casing: 6.27 gallons

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1126	~150	10.80	13.2	6.38	0.695	2.87	-51.9	0.45	3.40	clear
1130		—	13.2	6.38	0.698	2.72	-73.2	0.45	6.47	misty
1134		10.81	13.2	6.39	0.699	2.68	-83.1	0.45	3.15	
1138		—	13.1	6.39	0.698	2.58	-85.2	0.45	2.83	
1142		10.81	13.1	6.39	0.698	2.56	-89.1	0.45	3.12	



Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox or alconox scrub, followed by DI water
 FIELD OBSERVATIONS (Well condition, repairs needed)
 Sample Time: 1143

Sampler Signature(s):

(Handwritten signature)

ERM - Purge Log

Project Name: Kent 212
 Project Number: 577675.04

Date: 10/6/2021
 Set up time: 12:18
 Weather: Drizzle, 53°F
 Field Staff: MC

Well # MW-07

Sample ID: MW-07-2021006

Location: 07
 Construction: 2" PVC
 Groundwater Zone: Shallow
 Construction Depth: 14.5'
 Screened Interval: 4.5-14.5'
 Pump Intake Depth: 11'

Purge Start Time: 1233
 Discharge Rate: ~150 gal/min
 Purge End Time: 1300
 Depth to Water: 6.82'
 Height of Water Column: 7.68'
 Volume of one casing: 1.33 gallons

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1238	150	6.86	15.7	6.66	0.241	3.17	19.6	0.14	6.40	clear
1242		/	15.3	6.61	0.239	2.77	21.1	0.14	7.38	no odor
1246		6.87	15.4	6.59	0.242	2.58	23.8	0.14	5.56	
1250		/	15.7	6.58	0.241	2.51	24.8	0.14	5.41	
1254		6.87	15.7	6.59	0.241	2.48	25.3	0.14	5.27	

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox oralconox scrub, followed by DI water
 FIELD OBSERVATIONS (Well condition, repairs needed)
 Sample Time: 1255

Sampler Signature(s):

ERM - Purge Log
 Project Name: Kent 212
 Project Number: 577675.04

Date: 10/6/21
 Set up time: 1305
 Weather: Drizzle, 56°F
 Field Staff: MC

Well # MW-23

Sample ID: MW-23-202/1006

Location: 23
 Construction: 2" PVC
 Groundwater Zone: Shallow
 Construction Depth: 15'
 Screened Interval: 5-15'
 Pump Intake Depth: 11'

Purge Start Time: 1306
 Discharge Rate: ~150 mL/min
 Purge End Time: 1333

Depth to Water: 6.61'
 Height of Water Column: 8.39'
 Volume of one casing: 1.45 gallons

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1311	150	6.62	16.5	6.55	0.565	3.13	41.0	0.33	22.11	Clear,
1315		✓	16.5	6.54	0.574	2.68	46.8	0.34	21.18	no odor
1319		6.63	16.6	6.55	0.574	2.42	42.0	0.34	19.81	
1324		✓	16.6	6.55	0.580	2.28	42.4	0.34	15.41	
1328		6.63	16.7	6.55	0.580	2.29	42.8	0.34	15.24	

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox or alconox scrub, followed by DI water
 FIELD OBSERVATIONS (Well condition, repairs needed)

Sample Time: 1329

Sampler Signature(s):

ERM - Purge Log

Project Name: Kent 212
 Project Number: 577675.04

Date: 10/6/21
 Set up time: 1338
 Weather: Cloudy, 54°F
 Field Staff: MC

Well # MW-10

Sample ID: MW-10-2021006

Location: 10
 Construction: 2" PVC
 Groundwater Zone: Shallow

Construction Depth: 15'
 Screened Interval: 5-15'
 Pump Intake Depth: 11'


Purge Start Time: 1353
 Discharge Rate: ~150 gal/min
 Purge End Time: 1420

Depth to Water: 6.69'
 Height of Water Column: 8.31'
 Volume of one casing: 1.44 gallons

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1400	150	6.70	16.3	6.80	0.139	3.14	-16.5	0.08	5.37	clear no
1404		/	16.6	6.77	0.137	2.37	-56.6	0.08	6.98	odor
1408		6.70	16.6	6.77	0.137	2.29	-72.4	0.08	5.25	
1412		/	15.9	6.79	0.135	2.27	-72.1	0.08	8.52	
1416		6.70	15.6	6.80	0.135	2.24	-80.9	0.08	6.12	

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox or alconox scrub, followed by DI water
 FIELD OBSERVATIONS (Well condition, repairs needed)

Sample Time: 1417

Sampler Signature(s):


ERM - Purge Log

Project Name: Kent 212
 Project Number: 577675.04

Date: 10/6/21
 Set up time: 1425
 Weather: Cloudy, 58°
 Field Staff: MC

Well # MW-18

Sample ID: MW-18-20211006

Location: 18
 Construction: 2" PVC
 Groundwater Zone: Deep

Construction Depth: 43'
 Screened Interval: 34-43'
 Pump Intake Depth: 39'

Purge Start Time: 1430
 Discharge Rate: ~150 mL/min
 Purge End Time: 1450

Depth to Water: (170 + 1425) 6.50
 Height of Water Column: 36.50
 Volume of one casing: 0.31 gallons

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1430										
1437	150	6.52	15.3	6.50	0.684	4.37	-15.2	0.42	31.11	Clear, no
1441		-	15.2	6.49	0.675	2.61	-52.1	0.41	41.19	odor
1445		6.54	15.3	6.49	0.672	2.55	-56.1	0.41	41.91	
1449		-	15.3	6.49	0.672	2.48	-60.3	0.41	48.18	
1453		6.54	15.4	6.48	0.672	2.41	-64.1	0.41	47.13	

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox or alconox scrub, followed by DI water
 FIELD OBSERVATIONS (Well condition, repairs needed)

Sample Time: 1454

Sampler Signature(s):

ERM - Purge Log

Project Name: Kent 212
 Project Number: 577675.04

Date: 10/6/21
 Set up time: 1505
 Weather: Cloudy, 56°
 Field Staff: MC

Well # MW-19

Sample ID: MW-19-20211006

Location: 19
 Construction: 2" PVC
 Groundwater Zone: Deep

Construction Depth: 49'
 Screened Interval: 39-49'
 Pump Intake Depth: 44'

Purge Start Time: 1511
 Discharge Rate: ~150 mL/min
 Purge End Time: 1540

Depth to Water: 7.39'
 Height of Water Column: 41.61'
 Volume of one casing: 7.20 gallons

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1517	150	7.41	16.3	6.45	0.682	2.44	-52.6	0.40	51.46	clear, no
1521	1	7.41	16.4	6.45	0.681	2.39	-56.0	0.40	58.91	odor
1525	1	7.41	16.3	6.46	0.680	2.33	-67.6	0.40	65.19	
1529	1	7.41	16.4	6.45	0.680	2.30	-72.1	0.40	39.12	
1534	1	7.41	16.4	6.45	0.680	2.27	-74.9	0.40	32.19	

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox or alconox scrub, followed by DI water
 FIELD OBSERVATIONS (Well condition, repairs needed)

Sample Time: 1535

Sampler Signature(s):

ERM - Purge Log
 Project Name: Kent 212
 Project Number: 577675.04

Date: 10/7/2021
 Set up time: 0820
 Weather: Sun, 44°F
 Field Staff: MC

Well # MW-17 Sample ID: MW-17-20211007

Location: 17
 Construction: 2" PVC
 Groundwater Zone: Deep
 Construction Depth: 44'
 Screened Interval: 34-44'
 Pump Intake Depth: 39'

Purge Start Time: 0836
 Discharge Rate: ~150 mL/min
 Purge End Time: 0905
 Depth to Water: 6.43'
 Height of Water Column: 37.57'
 Volume of one casing: 6.50 gallons

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
0842	150	—	11.8	6.50	0.816	3.41	-8.9	0.54	98.42	Clear,
0846		6.44	11.7	6.52	0.813	3.02	-14.8	0.54	96.12	very
0850		—	11.6	6.53	0.810	2.90	-23.8	0.54	93.19	slight
0854		6.44	11.6	6.53	0.809	2.87	-27.9	0.54	94.14	sulfur
0858		6.44	11.5	6.53	0.809	2.85	-36.0	0.54	93.39	like odor

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox oralcon scrub, followed by DI water
 Sample Time: 0859

FIELD OBSERVATIONS (Well condition, repairs needed)
 Groundwater sample reacts w/ HCl in vial, causing effervescence

Sampler Signature(s):

ERM - Purge Log
 Project Name: Kent 212
 Project Number: 577675.04

Date: 10/7/21
 Set up time: 0910
 Weather: Sun 46°F
 Field Staff: MC

Well # MW-03

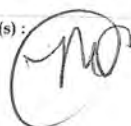
Sample ID: MW-03-20211007

Location: 03
 Construction: 2" PVC
 Groundwater Zone: Shallow
 Construction Depth: 19'
 Screened Interval: 4-19'
 Pump Intake Depth: 13'

Purge Start Time: 0925
 Discharge Rate: ~150 mL/min
 Purge End Time: 0950
 Depth to Water: 6.80'
 Height of Water Column: 12.20'
 Volume of one casing: 2.11 gallons

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
0930	150	6.80	14.0	6.84	0.490	2.89	-80.5	0.30	3.79	clear, no
0934		-	14.0	6.84	0.491	2.83	-82.9	0.30	3.72	odor
0938		6.80	14.0	6.84	0.492	2.75	-88.8	0.30	3.81	
0942		-	14.2	6.86	0.493	2.53	-90.2	0.30	3.43	
0946		6.80	14.2	6.86	0.493	2.41	-94.1	0.30	3.12	

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox or alconox scrub, followed by DI water
 FIELD OBSERVATIONS (Well condition, repairs needed)
 Sample Time: 0947

Sampler Signature(s): 

ERM - Purge Log
 Project Name: Kent 212
 Project Number: 577675.04

Date: 10/7/21
 Set up time: 10:18
 Weather: Clouds, 49°
 Field Staff: MC

Well # MW-28

Sample ID: MW-28-26211007

Location: 28
 Construction: 2" PVC
 Groundwater Zone: Deep
 Construction Depth: 45'
 Screened Interval: 35-45'
 Pump Intake Depth: 40'

Purge Start Time: 1025
 Discharge Rate: ~150 mL/min
 Purge End Time: 1052

Depth to Water: 8.65'
 Height of Water Column: 36.35'
 Volume of one casing: 6.29 gallons

Time	Volume (mL)	Depth to Water (ft btoe)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1031	150	8.65	12.7	6.60	0.775	2.86	-26.8	0.50	34.04	clear, no
1035		✓	12.8	6.61	0.751	2.65	-62.7	0.49	32.54	odor
1039		8.65	12.9	6.62	0.749	2.56	-82.2	0.48	16.11	
1043		✓	13.0	6.62	0.749	2.55	-85.1	0.48	8.62	
1047		8.65	13.1	6.62	0.749	2.56	-89.7	0.48	9.30	

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox or alconox scrub, followed by DI water
 FIELD OBSERVATIONS (Well condition, repairs needed)
 Sample Time: 1048

Sampler Signature(s):

ERM - Purge Log

Project Name: Kent 212
Project Number: 577675.04

Date: 10/7/21
Set up time: 1130
Weather: Sun / Clouds, 53°F
Field Staff: MC

Well # MW-29D

Sample ID: MW-29D-20211007

Location: 29D
Construction: 2" PVC
Groundwater Zone: Deep
Construction Depth: 40'
Screened Interval: 30-40'
Pump Intake Depth: 35'

Purge Start Time: 1136
Discharge Rate: ~150 ml/min
Purge End Time: 1241
Depth to Water: 6.12'
Height of Water Column: 33.88'
Volume of one casing: 5.86 gallons

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1142	150	6.12	17.2	6.65	0.488	2.60	-34.4	0.28	12.62	clear
1146			17.1	6.62	0.488	2.56	-37.3	0.28	13.96	no odor
1150		6.12	17.0	6.62	0.483	2.52	-42.8	0.28	17.69	
1154			17.1	6.67	0.434	2.36	-49.1	0.28	24.51	
1158		6.12	17.2	6.67	0.432	2.35	-55.2	0.28	20.99	
1207			17.2	6.68	0.432	2.31	-57.3	0.28	20.91	

Disposal method of purge water: 55-gallon drum
Decontamination procedure: Liquinox or alconox scrub, followed by DI water
FIELD OBSERVATIONS (Well condition, repairs needed)

Sample Time: 1203

Sampler Signature(s): MC

+ MW-29D-20211007-MS
MW-29D-20211007-MSD @ 1203

ERM - Purge Log

Project Name: Kent 212
 Project Number: 577675.04

Date: 10/7/21
 Set up time: 1230
 Weather: Sun/clouds, 55°F
 Field Staff: MC

Well # MW-20

Sample ID: MW-20-20211007

Location: 20
 Construction: 2" PVC
 Groundwater Zone: Deep
 Construction Depth: 43'
 Screened Interval: 33-43'
 Pump Intake Depth: 38'


Purge Start Time: 1242
 Discharge Rate: ~150 mL/min
 Purge End Time: 1312

Depth to Water: ~~10.43~~ 7.05'
 Height of Water Column: ~~10.33~~ 35.95'
 Volume of one casing: 6.22 gallons

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1250	150	7.05	16.6	6.40	0.902	3.31	28.5	0.54	7.34	Clear, no
1254		/	16.7	6.40	0.963	3.11	17.9	0.54	5.91	odor
1258		7.05	16.7	6.41	0.963	3.02	10.9	0.54	5.76	
1302		/	16.8	6.42	0.963	2.98	6.1	0.54	5.55	
1306		7.05	16.9	6.42	0.903	2.91	3.2	0.54	5.61	

Disposal method of purge water: 55-gallon drum
 Decontamination procedure: Liquinox oralconox scrub, followed by DI water
 FIELD OBSERVATIONS (Well condition, repairs needed)

Sample Time: 1307

Sampler Signature(s): 

ERM - Purge Log

Project Name: Kent 212
 Project Number: 577675.04

Date: 10/7/21
 Set up time: 1330
 Weather: Mostly Sunny, 56 °F
 Field Staff: MC

Well # MW-27

Sample ID: MW-27-20211007

Location: 27 Construction Depth: 48'
 Construction: 2" PVC Screened Interval: 38-48'
 Groundwater Zone: Deep Pump Intake Depth: 43'

Purge Start Time: 1340
 Discharge Rate: ~150 gal/min
 Purge End Time: 1406

Depth to Water: 6.93'
 Height of Water Column: 41.07'
 Volume of one casing: 7.11 gallons

Time	Volume (mL)	Depth to Water (ft btoc)	Temp.	pH	EC (mS/cm)	D.O. (mg/L)	Redox	Salinity (ppt)	Turbidity (ntu)	Color and Odor
1346	150	6.93	17.2	6.58	0.515	3.17	-16.9	0.30	5.16	clear, no
1350		✓	17.0	6.58	0.514	2.87	-26.7	0.30	4.67	odor
1354		6.93	16.8	6.58	0.513	2.75	-35.2	0.30	4.12	
1358		✓	16.6	6.59	0.513	2.62	-41.3	0.30	4.72	
1402		6.93	16.5	6.59	0.513	2.59	-43.2	0.30	4.58	

Disposal method of purge water: 55-gallon drum Sample Time: 1403
 Decontamination procedure: Liquinox or alconox scrub, followed by DI water

FIELD OBSERVATIONS (Well condition, repairs needed)

Sampler Signature(s):

APPENDIX B LAB DATA AND VALIDATION MEMOS

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Univar

ERMORP: Univar; 8201 S 212th St, Kent, WA

0577675

SGS Job Number: FA84754

Sampling Dates: 04/12/21 - 04/15/21



Report to:

ERM
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Portland, OR 97204
Dylan.Stankus@erm.com; Jessie.Cooper@erm.com;
Stephanie.Frith@erm.com
ATTN: Dylan Stankus

Total number of pages in report: 79



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Elvin Kumar 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), IL(200063), NC(573), NJ(FL002), NY(12022), SC(96038001)
DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177),
AK, AR, IA, KY, MA, MS, ND, NH, NV, OK, OR, UT, WA, WV

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Test results relate only to samples analyzed.

Table of Contents

-1-

Section 1: Sample Summary	3
Section 2: Case Narrative/Conformance Summary	5
Section 3: Summary of Hits	7
Section 4: Sample Results	13
4.1: FA84754-1: MW-29D-041221-01	14
4.2: FA84754-2: TB-040221-01	16
4.3: FA84754-3: MW-09-041321-01	18
4.4: FA84754-4: MW-21-041321-01	20
4.5: FA84754-5: DUP-01	22
4.6: FA84754-6: MW-01-041321-01	24
4.7: FA84754-7: DUP-02	26
4.8: FA84754-8: MW-08-041321-01	28
4.9: FA84754-9: MW-13-041321-01	30
4.10: FA84754-10: MW-04-041321-01	32
4.11: FA84754-11: MW-05-041321-01	34
4.12: FA84754-12: MW-12-041321-01	36
4.13: FA84754-13: MW-23-041421-01	38
4.14: FA84754-14: MW-18-041421-01	40
4.15: FA84754-15: MW-19-041421-01	42
4.16: FA84754-16: MW-17-041421-01	44
4.17: FA84754-17: MW-16-041521-01	46
4.18: FA84754-18: MW-03-041521-01	48
4.19: FA84754-19: MW-27-041521-01	50
4.20: FA84754-20: MW-20-041521-01	52
4.21: FA84754-21: MW-22-041521-01	54
Section 5: Misc. Forms	56
5.1: Chain of Custody	57
Section 6: MS Volatiles - QC Data Summaries	61
6.1: Method Blank Summary	62
6.2: Blank Spike Summary	68
6.3: Matrix Spike/Matrix Spike Duplicate Summary	74



Sample Summary

Univar

Job No: FA84754

ERMORP: Univar; 8201 S 212th St, Kent, WA
 Project No: 0577675

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
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This report contains results reported as ND = Not detected. The following applies:
 Organics ND = Not detected above the MDL

FA84754-1	04/12/21	13:15	JC	04/16/21	AQ	Ground Water	MW-29D-041221-01
FA84754-2	04/12/21	14:00	JC	04/16/21	AQ	Trip Blank Water	TB-040221-01
FA84754-3	04/13/21	10:40	JC	04/16/21	AQ	Ground Water	MW-09-041321-01
FA84754-4	04/13/21	11:10	JC	04/16/21	AQ	Ground Water	MW-21-041321-01
FA84754-5	04/13/21	00:00	JC	04/16/21	AQ	Ground Water	DUP-01
FA84754-6	04/13/21	12:05	JC	04/16/21	AQ	Ground Water	MW-01-041321-01
FA84754-7	04/13/21	00:00	JC	04/16/21	AQ	Ground Water	DUP-02
FA84754-8	04/13/21	13:30	JC	04/16/21	AQ	Ground Water	MW-08-041321-01
FA84754-9	04/13/21	14:10	JC	04/16/21	AQ	Ground Water	MW-13-041321-01
FA84754-10	04/13/21	14:50	JC	04/16/21	AQ	Ground Water	MW-04-041321-01
FA84754-11	04/13/21	16:05	JC	04/16/21	AQ	Ground Water	MW-05-041321-01
FA84754-12	04/13/21	15:40	JC	04/16/21	AQ	Ground Water	MW-12-041321-01



Sample Summary

(continued)

Univar

Job No: FA84754

ERMORP: Univar; 8201 S 212th St, Kent, WA
 Project No: 0577675

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
FA84754-13	04/14/21	10:30 JC	04/16/21	AQ	Ground Water	MW-23-041421-01
FA84754-14	04/14/21	13:30 JC	04/16/21	AQ	Ground Water	MW-18-041421-01
FA84754-15	04/14/21	14:15 JC	04/16/21	AQ	Ground Water	MW-19-041421-01
FA84754-16	04/14/21	15:00 JC	04/16/21	AQ	Ground Water	MW-17-041421-01
FA84754-17	04/15/21	09:30 JC	04/16/21	AQ	Ground Water	MW-16-041521-01
FA84754-18	04/15/21	10:30 JC	04/16/21	AQ	Ground Water	MW-03-041521-01
FA84754-19	04/15/21	11:10 JC	04/16/21	AQ	Ground Water	MW-27-041521-01
FA84754-19D	04/15/21	11:10 JC	04/16/21	AQ	Water Dup/MSD	MW-27-041521-01
FA84754-19S	04/15/21	11:10 JC	04/16/21	AQ	Water Matrix Spike	MW-27-041521-01
FA84754-20	04/15/21	11:45 JC	04/16/21	AQ	Ground Water	MW-20-041521-01
FA84754-21	04/15/21	12:50 JC	04/16/21	AQ	Ground Water	MW-22-041521-01

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Univar

Job No: FA84754

Site: ERMORP: Univar; 8201 S 212th St, Kent, WA

Report Date 4/30/2021 12:53:20

20 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on between 04/12/2021 and 04/15/2021 and were received at SGS North America Inc - Orlando on 04/16/2021 properly preserved, at 5.4 Deg. C and intact. These Samples received an SGS Orlando job number of FA84754. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section. Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

MS Volatiles By Method SW846 8260B

Matrix: AQ

Batch ID: VE2457

All samples were analyzed within the recommended method holding time.

Sample(s) FA84570-3MS, FA84570-3MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Matrix Spike Recovery(s) for 1,1-Dichloroethane are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for 1,1-Dichloroethane are outside control limits. Probable cause is due to matrix interference.

FA84754-1 for Chloroethane: Associated CCV outside of control limits high, sample was ND.

FA84754-1 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.

FA84754-1 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA84754-2: Confirmation run.

FA84754-3 for Chloroethane: Associated CCV outside of control limits high, sample was ND.

FA84754-3 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.

FA84754-3 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA84754-5 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.

FA84754-5 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA84754-6 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.

FA84754-6 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA84754-7 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.

FA84754-7 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA84754-8 for Chloroethane: Associated CCV outside of control limits high, sample was ND.

FA84754-8 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.

FA84754-8 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA84754-11 for Chloroethane: Associated CCV outside of control limits high, sample was ND.

FA84754-11 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.

FA84754-11 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

Matrix: AQ

Batch ID: VE2458

All samples were analyzed within the recommended method holding time.

Sample(s) FA84754-15MS, FA84754-15MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Matrix Spike Recovery(s) for 1,1-Dichloroethane, 1,1-Dichloroethylene, Bromoform, Dibromochloromethane, Hexane, Methylene Chloride, trans-1,2-Dichloroethylene are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for 1,1-Dichloroethylene, Bromodichloromethane, Bromoform, Chloroethane, Dibromochloromethane, Hexane, Methyl Bromide, trans-1,2-Dichloroethylene are outside control limits. Probable cause is due to matrix interference.

RPD(s) for MSD for Bromoform, Chloroethane, Dibromochloromethane, Dichlorodifluoromethane, Methyl Bromide, Methyl Chloride, Trichlorofluoromethane are outside control limits for sample FA84754-15MSD. Probable cause is due to sample non-homogeneity.

FA84754-2 for Chloroethane: Associated CCV and ECC outside of control limits high, sample was ND.

FA84754-2 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.

FA84754-2 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA84754-12 for Chloroethane: Associated CCV and ECC outside of control limits high, sample was ND.

FA84754-12 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.

FA84754-12 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.
 FA84754-13 for Chloroethane: Associated CCV and ECC outside of control limits high, sample was ND.
 FA84754-13 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.
 FA84754-13 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.
 FA84754-14 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.
 FA84754-14 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.
 FA84754-15 for Chloroethane: Associated CCV and ECC outside of control limits high, sample was ND.
 FA84754-15 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.
 FA84754-15 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.
 FA84754-16 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.
 FA84754-16 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.
 FA84754-17 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.
 FA84754-17 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.
 FA84754-18 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.
 FA84754-18 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.
 FA84754-19 for Chloroethane: Associated CCV and ECC outside of control limits high, sample was ND.
 FA84754-19 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.
 FA84754-19 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.
 FA84754-20 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.
 FA84754-20 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.
 FA84754-21 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.
 FA84754-21 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

Matrix: AQ

Batch ID: VE2461

All samples were analyzed within the recommended method holding time.

Sample(s) FA84754-19MS, FA84754-19MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Matrix Spike Recovery(s) for Bromoform, Dibromochloromethane are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for Bromoform, Dibromochloromethane are outside control limits. Probable cause is due to matrix interference.

FA84754-9: Sample vial(s) contained significant headspace; reported results are considered minimum values.

FA84754-16: Sample vial(s) contained significant headspace; reported results are considered minimum values.

FA84754-19: Confirmation run.

FA84754-20: Sample was not preserved to a pH < 2.

FA84754-21: Sample vial(s) contained significant headspace; reported results are considered minimum values.

SGS Orlando certifies that this report meets the project requirements for analytical data produced for the samples as received at SGS Orlando and as stated on the COC. SGS Orlando certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SGS Orlando Quality Manual except as noted above. This report is to be used in its entirety. SGS Orlando is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

 Ariel Hartney, Client Services (signature on file)

Summary of Hits

Job Number: FA84754
Account: Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA
Collected: 04/12/21 thru 04/15/21



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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FA84754-1 MW-29D-041221-01

Acetone	2.1 J	10	2.0	ug/l	SW846 8260B
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FA84754-2 TB-040221-01

No hits reported in this sample.

FA84754-3 MW-09-041321-01

cis-1,2-Dichloroethylene	0.55	0.50	0.13	ug/l	SW846 8260B
Trichloroethylene	0.84	0.50	0.13	ug/l	SW846 8260B
Vinyl Chloride	0.22 J	0.50	0.13	ug/l	SW846 8260B

FA84754-4 MW-21-041321-01

Chloroethane	297	25	10	ug/l	SW846 8260B
trans-1,2-Dichloroethylene	10.8 J	25	6.3	ug/l	SW846 8260B
Ethylbenzene	767	25	6.3	ug/l	SW846 8260B
Isopropylbenzene	81.4	25	6.3	ug/l	SW846 8260B
Methylene Chloride	81.9 J	100	50	ug/l	SW846 8260B
n-Propylbenzene	135	25	6.3	ug/l	SW846 8260B
Toluene	9.9 J	25	6.3	ug/l	SW846 8260B
1,2,4-Trimethylbenzene	372	25	6.3	ug/l	SW846 8260B
1,3,5-Trimethylbenzene	183	25	6.3	ug/l	SW846 8260B
m,p-Xylene	4210	50	6.3	ug/l	SW846 8260B
o-Xylene	133	25	6.3	ug/l	SW846 8260B

FA84754-5 DUP-01

Chloroethane	285	25	10	ug/l	SW846 8260B
trans-1,2-Dichloroethylene	12.0 J	25	6.3	ug/l	SW846 8260B
Ethylbenzene	820	25	6.3	ug/l	SW846 8260B
Isopropylbenzene	85.6	25	6.3	ug/l	SW846 8260B
n-Propylbenzene	145	25	6.3	ug/l	SW846 8260B
Toluene	10.1 J	25	6.3	ug/l	SW846 8260B
1,2,4-Trimethylbenzene	406	25	6.3	ug/l	SW846 8260B
1,3,5-Trimethylbenzene	203	25	6.3	ug/l	SW846 8260B
m,p-Xylene	4780	50	6.3	ug/l	SW846 8260B
o-Xylene	133	25	6.3	ug/l	SW846 8260B

FA84754-6 MW-01-041321-01

n-Butylbenzene	0.27 J	0.50	0.13	ug/l	SW846 8260B
sec-Butylbenzene	0.77	0.50	0.13	ug/l	SW846 8260B

Summary of Hits

Job Number: FA84754
Account: Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA
Collected: 04/12/21 thru 04/15/21



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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Chloroethane		22.9	1.0	0.40	ug/l	SW846 8260B
1,1-Dichloroethane		11.6	0.50	0.13	ug/l	SW846 8260B
cis-1,2-Dichloroethylene		0.94	0.50	0.13	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		0.27 J	0.50	0.13	ug/l	SW846 8260B
Ethylbenzene		1.7	0.50	0.13	ug/l	SW846 8260B
Isopropylbenzene		7.6	0.50	0.13	ug/l	SW846 8260B
n-Propylbenzene		10.0	0.50	0.13	ug/l	SW846 8260B
Tetrachloroethylene		0.42 J	0.50	0.13	ug/l	SW846 8260B
Toluene		0.17 J	0.50	0.13	ug/l	SW846 8260B
1,1,1-Trichloroethane		0.25 J	0.50	0.13	ug/l	SW846 8260B
Trichloroethylene		2.0	0.50	0.13	ug/l	SW846 8260B
1,2,4-Trimethylbenzene		0.54	0.50	0.13	ug/l	SW846 8260B
1,3,5-Trimethylbenzene		0.30 J	0.50	0.13	ug/l	SW846 8260B
Vinyl Chloride		0.43 J	0.50	0.13	ug/l	SW846 8260B
m,p-Xylene		7.7	1.0	0.13	ug/l	SW846 8260B
o-Xylene		4.4	0.50	0.13	ug/l	SW846 8260B

FA84754-7 DUP-02

Acetone		2.3 J	10	2.0	ug/l	SW846 8260B
n-Butylbenzene		0.26 J	0.50	0.13	ug/l	SW846 8260B
sec-Butylbenzene		0.79	0.50	0.13	ug/l	SW846 8260B
Chloroethane		22.5	1.0	0.40	ug/l	SW846 8260B
1,1-Dichloroethane		11.6	0.50	0.13	ug/l	SW846 8260B
cis-1,2-Dichloroethylene		0.94	0.50	0.13	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		0.28 J	0.50	0.13	ug/l	SW846 8260B
Ethylbenzene		1.7	0.50	0.13	ug/l	SW846 8260B
Isopropylbenzene		7.6	0.50	0.13	ug/l	SW846 8260B
n-Propylbenzene		10.2	0.50	0.13	ug/l	SW846 8260B
Tetrachloroethylene		0.45 J	0.50	0.13	ug/l	SW846 8260B
Toluene		0.15 J	0.50	0.13	ug/l	SW846 8260B
1,1,1-Trichloroethane		0.27 J	0.50	0.13	ug/l	SW846 8260B
Trichloroethylene		2.0	0.50	0.13	ug/l	SW846 8260B
1,2,4-Trimethylbenzene		0.54	0.50	0.13	ug/l	SW846 8260B
1,3,5-Trimethylbenzene		0.29 J	0.50	0.13	ug/l	SW846 8260B
Vinyl Chloride		0.48 J	0.50	0.13	ug/l	SW846 8260B
m,p-Xylene		7.6	1.0	0.13	ug/l	SW846 8260B
o-Xylene		4.4	0.50	0.13	ug/l	SW846 8260B

FA84754-8 MW-08-041321-01

1,1-Dichloroethylene		0.27 J	0.50	0.13	ug/l	SW846 8260B
cis-1,2-Dichloroethylene		0.66	0.50	0.13	ug/l	SW846 8260B
Ethylbenzene		0.77	0.50	0.13	ug/l	SW846 8260B
Tetrachloroethylene		0.39 J	0.50	0.13	ug/l	SW846 8260B

Summary of Hits

Job Number: FA84754
Account: Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA
Collected: 04/12/21 thru 04/15/21



Lab Sample ID	Client Sample ID	Result/ Analyte	RL	MDL	Units	Method
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Trichloroethylene		2.7	0.50	0.13	ug/l	SW846 8260B
1,2,4-Trimethylbenzene		0.21 J	0.50	0.13	ug/l	SW846 8260B
m,p-Xylene		3.6	1.0	0.13	ug/l	SW846 8260B
o-Xylene		0.14 J	0.50	0.13	ug/l	SW846 8260B

FA84754-9 MW-13-041321-01

Chloroethane ^a		97.4	5.0	2.0	ug/l	SW846 8260B
trans-1,2-Dichloroethylene ^a		3.2 J	5.0	1.3	ug/l	SW846 8260B
Ethylbenzene ^a		12.6	5.0	1.3	ug/l	SW846 8260B
Hexane ^a		5.6 J	10	2.0	ug/l	SW846 8260B
Isopropylbenzene ^a		21.8	5.0	1.3	ug/l	SW846 8260B
Methylene Chloride ^a		15.9 J	20	10	ug/l	SW846 8260B
n-Propylbenzene ^a		31.6	5.0	1.3	ug/l	SW846 8260B
1,2,4-Trimethylbenzene ^a		108	5.0	1.3	ug/l	SW846 8260B
1,3,5-Trimethylbenzene ^a		1.9 J	5.0	1.3	ug/l	SW846 8260B
m,p-Xylene ^a		234	10	1.3	ug/l	SW846 8260B

FA84754-10 MW-04-041321-01

Benzene		1.0	0.50	0.13	ug/l	SW846 8260B
n-Butylbenzene		0.38 J	0.50	0.13	ug/l	SW846 8260B
sec-Butylbenzene		2.0	0.50	0.13	ug/l	SW846 8260B
tert-Butylbenzene		0.27 J	0.50	0.13	ug/l	SW846 8260B
Chloroethane		2.3	0.50	0.20	ug/l	SW846 8260B
1,1-Dichloroethane		0.39 J	0.50	0.13	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		0.30 J	0.50	0.13	ug/l	SW846 8260B
Ethylbenzene		0.53	0.50	0.13	ug/l	SW846 8260B
Isopropylbenzene		23.4	0.50	0.13	ug/l	SW846 8260B
n-Propylbenzene		26.8	0.50	0.13	ug/l	SW846 8260B
Toluene		0.19 J	0.50	0.13	ug/l	SW846 8260B
1,2,4-Trimethylbenzene		0.31 J	0.50	0.13	ug/l	SW846 8260B
m,p-Xylene		2.0	1.0	0.13	ug/l	SW846 8260B

FA84754-11 MW-05-041321-01

cis-1,2-Dichloroethylene		30.5	1.0	0.25	ug/l	SW846 8260B
Tetrachloroethylene		75.6	1.0	0.25	ug/l	SW846 8260B
Trichloroethylene		12.5	1.0	0.25	ug/l	SW846 8260B
m,p-Xylene		0.78 J	2.0	0.25	ug/l	SW846 8260B

FA84754-12 MW-12-041321-01

cis-1,2-Dichloroethylene		9.5	1.0	0.25	ug/l	SW846 8260B
Methylene Chloride		3.4 J	4.0	2.0	ug/l	SW846 8260B

Summary of Hits

Job Number: FA84754
Account: Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA
Collected: 04/12/21 thru 04/15/21



Lab Sample ID	Client Sample ID	Result/ Analyte	RL	MDL	Units	Method
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Tetrachloroethylene		94.0	1.3	0.31	ug/l	SW846 8260B
Trichloroethylene		5.1	1.0	0.25	ug/l	SW846 8260B
Vinyl Chloride		0.54 J	1.0	0.25	ug/l	SW846 8260B
m,p-Xylene		0.80 J	2.0	0.25	ug/l	SW846 8260B

FA84754-13 MW-23-041421-01

cis-1,2-Dichloroethylene		0.19 J	0.50	0.13	ug/l	SW846 8260B
Tetrachloroethylene		14.9	0.50	0.13	ug/l	SW846 8260B
Trichloroethylene		0.81	0.50	0.13	ug/l	SW846 8260B
Vinyl Chloride		0.20 J	0.50	0.13	ug/l	SW846 8260B

FA84754-14 MW-18-041421-01

Chloroethane		1.0	0.50	0.20	ug/l	SW846 8260B
cis-1,2-Dichloroethylene		0.25 J	0.50	0.13	ug/l	SW846 8260B
Vinyl Chloride		0.17 J	0.50	0.13	ug/l	SW846 8260B

FA84754-15 MW-19-041421-01

1,1-Dichloroethane		0.33 J	1.0	0.25	ug/l	SW846 8260B
cis-1,2-Dichloroethylene		48.1	1.0	0.25	ug/l	SW846 8260B
Ethylbenzene		0.29 J	1.0	0.25	ug/l	SW846 8260B
Methylene Chloride		3.6 J	4.0	2.0	ug/l	SW846 8260B
Toluene		0.58 J	1.0	0.25	ug/l	SW846 8260B
1,2,4-Trimethylbenzene		0.36 J	1.0	0.25	ug/l	SW846 8260B
Vinyl Chloride		97.4	1.0	0.25	ug/l	SW846 8260B
m,p-Xylene		0.49 J	2.0	0.25	ug/l	SW846 8260B

FA84754-16 MW-17-041421-01

Acetone		2.6 J	10	2.0	ug/l	SW846 8260B
Benzene		16.2	0.50	0.13	ug/l	SW846 8260B
Chloroethane ^a		177	5.0	2.0	ug/l	SW846 8260B
1,2-Dichloroethane		1.2	0.50	0.13	ug/l	SW846 8260B
cis-1,2-Dichloroethylene		0.25 J	0.50	0.13	ug/l	SW846 8260B
Ethylbenzene		0.19 J	0.50	0.13	ug/l	SW846 8260B
Toluene		0.44 J	0.50	0.13	ug/l	SW846 8260B
1,2,4-Trimethylbenzene		0.48 J	0.50	0.13	ug/l	SW846 8260B
Vinyl Chloride		0.42 J	0.50	0.13	ug/l	SW846 8260B
m,p-Xylene		2.4	1.0	0.13	ug/l	SW846 8260B
o-Xylene		0.45 J	0.50	0.13	ug/l	SW846 8260B

Summary of Hits

Job Number: FA84754
Account: Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA
Collected: 04/12/21 thru 04/15/21



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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FA84754-17 MW-16-041521-01

Chloroethane	1.2	0.50	0.20	ug/l	SW846 8260B
1,1-Dichloroethane	0.24 J	0.50	0.13	ug/l	SW846 8260B
Toluene	0.18 J	0.50	0.13	ug/l	SW846 8260B
Vinyl Chloride	1.1	0.50	0.13	ug/l	SW846 8260B
m,p-Xylene	0.45 J	1.0	0.13	ug/l	SW846 8260B

FA84754-18 MW-03-041521-01

Benzene	0.25 J	0.50	0.13	ug/l	SW846 8260B
Chloroethane	1.3	0.50	0.20	ug/l	SW846 8260B
1,1-Dichloroethane	0.17 J	0.50	0.13	ug/l	SW846 8260B
cis-1,2-Dichloroethylene	0.58	0.50	0.13	ug/l	SW846 8260B
trans-1,2-Dichloroethylene	0.18 J	0.50	0.13	ug/l	SW846 8260B
Vinyl Chloride	0.60	0.50	0.13	ug/l	SW846 8260B
m,p-Xylene	0.24 J	1.0	0.13	ug/l	SW846 8260B

FA84754-19 MW-27-041521-01

Benzene	0.14 J	0.50	0.13	ug/l	SW846 8260B
1,1-Dichloroethane	0.37 J	0.50	0.13	ug/l	SW846 8260B
cis-1,2-Dichloroethylene	0.44 J	0.50	0.13	ug/l	SW846 8260B
Toluene	0.17 J	0.50	0.13	ug/l	SW846 8260B
Vinyl Chloride	0.88	0.50	0.13	ug/l	SW846 8260B
m,p-Xylene	0.27 J	1.0	0.13	ug/l	SW846 8260B

FA84754-20 MW-20-041521-01

Benzene	7.4	0.50	0.13	ug/l	SW846 8260B
Chloroethane ^b	230	5.0	2.0	ug/l	SW846 8260B
cis-1,2-Dichloroethylene	0.14 J	0.50	0.13	ug/l	SW846 8260B
Toluene	0.78	0.50	0.13	ug/l	SW846 8260B
1,2,4-Trimethylbenzene	0.29 J	0.50	0.13	ug/l	SW846 8260B
Vinyl Chloride	0.14 J	0.50	0.13	ug/l	SW846 8260B
m,p-Xylene	1.6	1.0	0.13	ug/l	SW846 8260B
o-Xylene	0.99	0.50	0.13	ug/l	SW846 8260B

FA84754-21 MW-22-041521-01

Benzene	0.65	0.50	0.13	ug/l	SW846 8260B
sec-Butylbenzene	0.17 J	0.50	0.13	ug/l	SW846 8260B
Chloroethane ^a	140	5.0	2.0	ug/l	SW846 8260B
1,1-Dichloroethane	0.18 J	0.50	0.13	ug/l	SW846 8260B
1,2-Dichloroethane	0.14 J	0.50	0.13	ug/l	SW846 8260B

Summary of Hits

Job Number: FA84754
Account: Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA
Collected: 04/12/21 thru 04/15/21

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
		0.62	0.50	0.13	ug/l	SW846 8260B
		2.5	0.50	0.13	ug/l	SW846 8260B
		1.1	0.50	0.13	ug/l	SW846 8260B
		2.0	1.0	0.20	ug/l	SW846 8260B
		10.1	0.50	0.13	ug/l	SW846 8260B
		8.9	0.50	0.13	ug/l	SW846 8260B
		0.77	0.50	0.13	ug/l	SW846 8260B
		0.38 J	0.50	0.13	ug/l	SW846 8260B
		1.3	0.50	0.13	ug/l	SW846 8260B
		2.4	1.0	0.13	ug/l	SW846 8260B
		0.77	0.50	0.13	ug/l	SW846 8260B

- (a) Sample vial(s) contained significant headspace; reported results are considered minimum values.
- (b) Sample was not preserved to a pH < 2.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW-29D-041221-01	Date Sampled:	04/12/21
Lab Sample ID:	FA84754-1	Date Received:	04/16/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E106629.D	1	04/19/21 16:47	LR	n/a	n/a	VE2457
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	2.1	10	2.0	ug/l	J
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane ^a	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-29D-041221-01	Date Sampled:	04/12/21
Lab Sample ID:	FA84754-1	Date Received:	04/16/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide ^a	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane ^a	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	ND	0.50	0.13	ug/l	
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		83-118%
17060-07-0	1,2-Dichloroethane-D4	104%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	95%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-040221-01	Date Sampled:	04/12/21
Lab Sample ID:	FA84754-2	Date Received:	04/16/21
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E106650.D	1	04/20/21 11:48	LR	n/a	n/a	VE2458
Run #2 ^a	E106621.D	1	04/19/21 13:41	LR	n/a	n/a	VE2457

Run #	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane ^b	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-040221-01	Date Sampled:	04/12/21
Lab Sample ID:	FA84754-2	Date Received:	04/16/21
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide ^c	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane ^c	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	ND	0.50	0.13	ug/l	
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	102%	79-125%
2037-26-5	Toluene-D8	100%	99%	85-112%
460-00-4	4-Bromofluorobenzene	97%	96%	83-118%

(a) Confirmation run.

(b) Associated CCV and ECC outside of control limits high, sample was ND.

(c) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-09-041321-01		Date Sampled: 04/13/21
Lab Sample ID: FA84754-3		Date Received: 04/16/21
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E106634.D	1	04/19/21 18:42	LR	n/a	n/a	VE2457
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane ^a	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.55	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.3
4

Report of Analysis

Client Sample ID: MW-09-041321-01		Date Sampled: 04/13/21
Lab Sample ID: FA84754-3		Date Received: 04/16/21
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide ^a	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	0.84	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane ^a	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	0.22	0.50	0.13	ug/l	J
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		83-118%
17060-07-0	1,2-Dichloroethane-D4	103%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.3
4

Report of Analysis

Client Sample ID: MW-21-041321-01		
Lab Sample ID: FA84754-4		Date Sampled: 04/13/21
Matrix: AQ - Ground Water		Date Received: 04/16/21
Method: SW846 8260B		Percent Solids: n/a
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E106689.D	50	04/22/21 14:04	LR	n/a	n/a	VE2461
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	500	100	ug/l	
71-43-2	Benzene	ND	25	6.3	ug/l	
108-86-1	Bromobenzene	ND	25	6.3	ug/l	
75-27-4	Bromodichloromethane	ND	25	6.3	ug/l	
75-25-2	Bromoform	ND	25	6.3	ug/l	
104-51-8	n-Butylbenzene	ND	25	6.3	ug/l	
135-98-8	sec-Butylbenzene	ND	25	6.3	ug/l	
98-06-6	tert-Butylbenzene	ND	25	6.3	ug/l	
56-23-5	Carbon Tetrachloride	ND	25	6.3	ug/l	
108-90-7	Chlorobenzene	ND	25	6.3	ug/l	
75-00-3	Chloroethane	297	25	10	ug/l	
67-66-3	Chloroform	ND	25	6.3	ug/l	
95-49-8	o-Chlorotoluene	ND	25	6.3	ug/l	
106-43-4	p-Chlorotoluene	ND	25	6.3	ug/l	
124-48-1	Dibromochloromethane	ND	25	6.3	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	25	12	ug/l	
106-93-4	1,2-Dibromoethane	ND	25	6.3	ug/l	
75-71-8	Dichlorodifluoromethane	ND	25	10	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	25	6.3	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	25	6.3	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	25	6.3	ug/l	
75-34-3	1,1-Dichloroethane	ND	25	6.3	ug/l	
107-06-2	1,2-Dichloroethane	ND	25	6.3	ug/l	
75-35-4	1,1-Dichloroethylene	ND	25	6.3	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	25	6.3	ug/l	
156-60-5	trans-1,2-Dichloroethylene	10.8	25	6.3	ug/l	J
78-87-5	1,2-Dichloropropane	ND	25	6.3	ug/l	
142-28-9	1,3-Dichloropropane	ND	25	6.3	ug/l	
594-20-7	2,2-Dichloropropane	ND	25	6.3	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	25	6.3	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	25	6.3	ug/l	
100-41-4	Ethylbenzene	767	25	6.3	ug/l	

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

4.4
4

Report of Analysis

Client Sample ID:	MW-21-041321-01	Date Sampled:	04/13/21
Lab Sample ID:	FA84754-4	Date Received:	04/16/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	50	10	ug/l	
98-82-8	Isopropylbenzene	81.4	25	6.3	ug/l	
99-87-6	p-Isopropyltoluene	ND	25	6.3	ug/l	
74-83-9	Methyl Bromide	ND	25	10	ug/l	
74-87-3	Methyl Chloride	ND	25	10	ug/l	
74-95-3	Methylene Bromide	ND	25	6.3	ug/l	
75-09-2	Methylene Chloride	81.9	100	50	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	130	63	ug/l	
103-65-1	n-Propylbenzene	135	25	6.3	ug/l	
100-42-5	Styrene	ND	25	6.3	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	25	6.3	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	25	6.3	ug/l	
127-18-4	Tetrachloroethylene	ND	25	6.3	ug/l	
108-88-3	Toluene	9.9	25	6.3	ug/l	J
120-82-1	1,2,4-Trichlorobenzene	ND	25	6.3	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	25	6.3	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	25	6.3	ug/l	
79-01-6	Trichloroethylene	ND	25	6.3	ug/l	
75-69-4	Trichlorofluoromethane	ND	25	10	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	25	6.3	ug/l	
95-63-6	1,2,4-Trimethylbenzene	372	25	6.3	ug/l	
108-67-8	1,3,5-Trimethylbenzene	183	25	6.3	ug/l	
75-01-4	Vinyl Chloride	ND	25	6.3	ug/l	
	m,p-Xylene	4210	50	6.3	ug/l	
95-47-6	o-Xylene	133	25	6.3	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		83-118%
17060-07-0	1,2-Dichloroethane-D4	98%		79-125%
2037-26-5	Toluene-D8	101%		85-112%
460-00-4	4-Bromofluorobenzene	99%		83-118%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: DUP-01		Date Sampled: 04/13/21
Lab Sample ID: FA84754-5		Date Received: 04/16/21
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E106641.D	50	04/19/21 21:24	LR	n/a	n/a	VE2457
Run #2	E106690.D	50	04/22/21 14:27	LR	n/a	n/a	VE2461

Run #	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	500	100	ug/l	
71-43-2	Benzene	ND	25	6.3	ug/l	
108-86-1	Bromobenzene	ND	25	6.3	ug/l	
75-27-4	Bromodichloromethane	ND	25	6.3	ug/l	
75-25-2	Bromoform	ND	25	6.3	ug/l	
104-51-8	n-Butylbenzene	ND	25	6.3	ug/l	
135-98-8	sec-Butylbenzene	ND	25	6.3	ug/l	
98-06-6	tert-Butylbenzene	ND	25	6.3	ug/l	
56-23-5	Carbon Tetrachloride	ND	25	6.3	ug/l	
108-90-7	Chlorobenzene	ND	25	6.3	ug/l	
75-00-3	Chloroethane	285 ^a	25	10	ug/l	
67-66-3	Chloroform	ND	25	6.3	ug/l	
95-49-8	o-Chlorotoluene	ND	25	6.3	ug/l	
106-43-4	p-Chlorotoluene	ND	25	6.3	ug/l	
124-48-1	Dibromochloromethane	ND	25	6.3	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	25	12	ug/l	
106-93-4	1,2-Dibromoethane	ND	25	6.3	ug/l	
75-71-8	Dichlorodifluoromethane	ND	25	10	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	25	6.3	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	25	6.3	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	25	6.3	ug/l	
75-34-3	1,1-Dichloroethane	ND	25	6.3	ug/l	
107-06-2	1,2-Dichloroethane	ND	25	6.3	ug/l	
75-35-4	1,1-Dichloroethylene	ND	25	6.3	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	25	6.3	ug/l	
156-60-5	trans-1,2-Dichloroethylene	12.0	25	6.3	ug/l	J
78-87-5	1,2-Dichloropropane	ND	25	6.3	ug/l	
142-28-9	1,3-Dichloropropane	ND	25	6.3	ug/l	
594-20-7	2,2-Dichloropropane	ND	25	6.3	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	25	6.3	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	25	6.3	ug/l	
100-41-4	Ethylbenzene	820	25	6.3	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.5
4

Report of Analysis

Client Sample ID:	DUP-01	Date Sampled:	04/13/21
Lab Sample ID:	FA84754-5	Date Received:	04/16/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	50	10	ug/l	
98-82-8	Isopropylbenzene	85.6	25	6.3	ug/l	
99-87-6	p-Isopropyltoluene	ND	25	6.3	ug/l	
74-83-9	Methyl Bromide ^b	ND	25	10	ug/l	
74-87-3	Methyl Chloride	ND	25	10	ug/l	
74-95-3	Methylene Bromide	ND	25	6.3	ug/l	
75-09-2	Methylene Chloride	ND	100	50	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	130	63	ug/l	
103-65-1	n-Propylbenzene	145	25	6.3	ug/l	
100-42-5	Styrene	ND	25	6.3	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	25	6.3	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	25	6.3	ug/l	
127-18-4	Tetrachloroethylene	ND	25	6.3	ug/l	
108-88-3	Toluene	10.1	25	6.3	ug/l	J
120-82-1	1,2,4-Trichlorobenzene	ND	25	6.3	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	25	6.3	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	25	6.3	ug/l	
79-01-6	Trichloroethylene	ND	25	6.3	ug/l	
75-69-4	Trichlorofluoromethane ^b	ND	25	10	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	25	6.3	ug/l	
95-63-6	1,2,4-Trimethylbenzene	406	25	6.3	ug/l	
108-67-8	1,3,5-Trimethylbenzene	203	25	6.3	ug/l	
75-01-4	Vinyl Chloride	ND	25	6.3	ug/l	
	m,p-Xylene	4780	50	6.3	ug/l	
95-47-6	o-Xylene	133	25	6.3	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	98%	83-118%
17060-07-0	1,2-Dichloroethane-D4	102%	98%	79-125%
2037-26-5	Toluene-D8	100%	101%	85-112%
460-00-4	4-Bromofluorobenzene	96%	100%	83-118%

- (a) Result is from Run# 2
 (b) Associated CCV outside of control limits high, sample was ND.

ND = Not detected	MDL = Method Detection Limit	J = Indicates an estimated value
RL = Reporting Limit		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

 4.5
4

Report of Analysis

Client Sample ID:	MW-01-041321-01	Date Sampled:	04/13/21
Lab Sample ID:	FA84754-6	Date Received:	04/16/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E106639.D	1	04/19/21 20:38	LR	n/a	n/a	VE2457
Run #2	E106691.D	2	04/22/21 14:49	LR	n/a	n/a	VE2461

Run #	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	0.27	0.50	0.13	ug/l	J
135-98-8	sec-Butylbenzene	0.77	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	22.9 ^a	1.0	0.40	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	11.6	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.94	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.27	0.50	0.13	ug/l	J
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	1.7	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-01-041321-01	Date Sampled: 04/13/21
Lab Sample ID: FA84754-6	Date Received: 04/16/21
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	7.6	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide ^b	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	10.0	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	0.42	0.50	0.13	ug/l	J
108-88-3	Toluene	0.17	0.50	0.13	ug/l	J
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25	0.50	0.13	ug/l	J
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	2.0	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane ^b	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.54	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.30	0.50	0.13	ug/l	J
75-01-4	Vinyl Chloride	0.43	0.50	0.13	ug/l	J
	m,p-Xylene	7.7	1.0	0.13	ug/l	
95-47-6	o-Xylene	4.4	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	105%	103%	79-125%
2037-26-5	Toluene-D8	98%	93%	85-112%
460-00-4	4-Bromofluorobenzene	96%	102%	83-118%

(a) Result is from Run# 2

(b) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: DUP-02		Date Sampled: 04/13/21
Lab Sample ID: FA84754-7		Date Received: 04/16/21
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E106642.D	1	04/19/21 21:47	LR	n/a	n/a	VE2457
Run #2	E106692.D	2	04/22/21 15:13	LR	n/a	n/a	VE2461

Run #	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	2.3	10	2.0	ug/l	J
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	0.26	0.50	0.13	ug/l	J
135-98-8	sec-Butylbenzene	0.79	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	22.5 ^a	1.0	0.40	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	11.6	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.94	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.28	0.50	0.13	ug/l	J
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	1.7	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUP-02	Date Sampled:	04/13/21
Lab Sample ID:	FA84754-7	Date Received:	04/16/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	7.6	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide ^b	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	10.2	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	0.45	0.50	0.13	ug/l	J
108-88-3	Toluene	0.15	0.50	0.13	ug/l	J
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	0.27	0.50	0.13	ug/l	J
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	2.0	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane ^b	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.54	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.29	0.50	0.13	ug/l	J
75-01-4	Vinyl Chloride	0.48	0.50	0.13	ug/l	J
	m,p-Xylene	7.6	1.0	0.13	ug/l	
95-47-6	o-Xylene	4.4	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	103%	79-125%
2037-26-5	Toluene-D8	98%	93%	85-112%
460-00-4	4-Bromofluorobenzene	99%	102%	83-118%

(a) Result is from Run# 2

(b) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-08-041321-01		Date Sampled: 04/13/21
Lab Sample ID: FA84754-8		Date Received: 04/16/21
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E106640.D	1	04/19/21 21:01	LR	n/a	n/a	VE2457
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane ^a	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	0.27	0.50	0.13	ug/l	J
156-59-2	cis-1,2-Dichloroethylene	0.66	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	0.77	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-08-041321-01	Date Sampled:	04/13/21
Lab Sample ID:	FA84754-8	Date Received:	04/16/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide ^a	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	0.39	0.50	0.13	ug/l	J
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	2.7	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane ^a	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.21	0.50	0.13	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	ND	0.50	0.13	ug/l	
	m,p-Xylene	3.6	1.0	0.13	ug/l	
95-47-6	o-Xylene	0.14	0.50	0.13	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		83-118%
17060-07-0	1,2-Dichloroethane-D4	103%		79-125%
2037-26-5	Toluene-D8	100%		85-112%
460-00-4	4-Bromofluorobenzene	98%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected	MDL = Method Detection Limit	J = Indicates an estimated value
RL = Reporting Limit		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-13-041321-01		Date Sampled: 04/13/21
Lab Sample ID: FA84754-9		Date Received: 04/16/21
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	E106693.D	10	04/22/21 15:36	LR	n/a	n/a	VE2461
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	100	20	ug/l	
71-43-2	Benzene	ND	5.0	1.3	ug/l	
108-86-1	Bromobenzene	ND	5.0	1.3	ug/l	
75-27-4	Bromodichloromethane	ND	5.0	1.3	ug/l	
75-25-2	Bromoform	ND	5.0	1.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.3	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	1.3	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	1.3	ug/l	
56-23-5	Carbon Tetrachloride	ND	5.0	1.3	ug/l	
108-90-7	Chlorobenzene	ND	5.0	1.3	ug/l	
75-00-3	Chloroethane	97.4	5.0	2.0	ug/l	
67-66-3	Chloroform	ND	5.0	1.3	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	1.3	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	1.3	ug/l	
124-48-1	Dibromochloromethane	ND	5.0	1.3	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	2.5	ug/l	
106-93-4	1,2-Dibromoethane	ND	5.0	1.3	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	1.3	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.3	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.3	ug/l	
75-34-3	1,1-Dichloroethane	ND	5.0	1.3	ug/l	
107-06-2	1,2-Dichloroethane	ND	5.0	1.3	ug/l	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.3	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.3	ug/l	
156-60-5	trans-1,2-Dichloroethylene	3.2	5.0	1.3	ug/l	J
78-87-5	1,2-Dichloropropane	ND	5.0	1.3	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	1.3	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.3	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.3	ug/l	
100-41-4	Ethylbenzene	12.6	5.0	1.3	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.9
4

Report of Analysis

Client Sample ID:	MW-13-041321-01	Date Sampled:	04/13/21
Lab Sample ID:	FA84754-9	Date Received:	04/16/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	5.6	10	2.0	ug/l	J
98-82-8	Isopropylbenzene	21.8	5.0	1.3	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	1.3	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	5.0	2.0	ug/l	
74-95-3	Methylene Bromide	ND	5.0	1.3	ug/l	
75-09-2	Methylene Chloride	15.9	20	10	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	25	13	ug/l	
103-65-1	n-Propylbenzene	31.6	5.0	1.3	ug/l	
100-42-5	Styrene	ND	5.0	1.3	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.3	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.3	ug/l	
127-18-4	Tetrachloroethylene	ND	5.0	1.3	ug/l	
108-88-3	Toluene	ND	5.0	1.3	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.3	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.3	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.3	ug/l	
79-01-6	Trichloroethylene	ND	5.0	1.3	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.3	ug/l	
95-63-6	1,2,4-Trimethylbenzene	108	5.0	1.3	ug/l	
108-67-8	1,3,5-Trimethylbenzene	1.9	5.0	1.3	ug/l	J
75-01-4	Vinyl Chloride	ND	5.0	1.3	ug/l	
	m,p-Xylene	234	10	1.3	ug/l	
95-47-6	o-Xylene	ND	5.0	1.3	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		83-118%
17060-07-0	1,2-Dichloroethane-D4	103%		79-125%
2037-26-5	Toluene-D8	100%		85-112%
460-00-4	4-Bromofluorobenzene	101%		83-118%

(a) Sample vial(s) contained significant headspace; reported results are considered minimum values.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-04-041321-01	Date Sampled: 04/13/21
Lab Sample ID: FA84754-10	Date Received: 04/16/21
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E106685.D	1	04/22/21 12:32	LR	n/a	n/a	VE2461
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	1.0	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	0.38	0.50	0.13	ug/l	J
135-98-8	sec-Butylbenzene	2.0	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	0.27	0.50	0.13	ug/l	J
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	2.3	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	0.39	0.50	0.13	ug/l	J
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.30	0.50	0.13	ug/l	J
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	0.53	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-04-041321-01	
Lab Sample ID: FA84754-10	Date Sampled: 04/13/21
Matrix: AQ - Ground Water	Date Received: 04/16/21
Method: SW846 8260B	Percent Solids: n/a
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA	

4.10
4

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	23.4	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	26.8	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	0.19	0.50	0.13	ug/l	J
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.31	0.50	0.13	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	ND	0.50	0.13	ug/l	
	m,p-Xylene	2.0	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		83-118%
17060-07-0	1,2-Dichloroethane-D4	101%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	106%		83-118%

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-05-041321-01	Date Sampled: 04/13/21
Lab Sample ID: FA84754-11	Date Received: 04/16/21
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E106638.D	2	04/19/21 20:15	LR	n/a	n/a	VE2457
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20	4.0	ug/l	
71-43-2	Benzene	ND	1.0	0.25	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.25	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.25	ug/l	
75-25-2	Bromoform	ND	1.0	0.25	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.25	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.25	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.25	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.25	ug/l	
75-00-3	Chloroethane ^a	ND	1.0	0.40	ug/l	
67-66-3	Chloroform	ND	1.0	0.25	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.0	0.49	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.25	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.40	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.25	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
156-59-2	cis-1,2-Dichloroethylene	30.5	1.0	0.25	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.25	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.25	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.25	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.11
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Report of Analysis

Client Sample ID: MW-05-041321-01		Date Sampled: 04/13/21
Lab Sample ID: FA84754-11		Date Received: 04/16/21
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	2.0	0.40	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.25	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.25	ug/l	
74-83-9	Methyl Bromide ^a	ND	1.0	0.40	ug/l	
74-87-3	Methyl Chloride	ND	1.0	0.40	ug/l	
74-95-3	Methylene Bromide	ND	1.0	0.25	ug/l	
75-09-2	Methylene Chloride	ND	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	2.5	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.25	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.25	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.25	ug/l	
127-18-4	Tetrachloroethylene	75.6	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.25	ug/l	
79-01-6	Trichloroethylene	12.5	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane ^a	ND	1.0	0.40	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	1.0	0.25	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.25	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.25	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.25	ug/l	
	m,p-Xylene	0.78	2.0	0.25	ug/l	J
95-47-6	o-Xylene	ND	1.0	0.25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		83-118%
17060-07-0	1,2-Dichloroethane-D4	104%		79-125%
2037-26-5	Toluene-D8	100%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.11
4

Report of Analysis

Client Sample ID:	MW-12-041321-01	Date Sampled:	04/13/21
Lab Sample ID:	FA84754-12	Date Received:	04/16/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E106653.D	2	04/20/21 12:57	LR	n/a	n/a	VE2458
Run #2	E106694.D	2.5	04/22/21 15:59	LR	n/a	n/a	VE2461

Run #	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20	4.0	ug/l	
71-43-2	Benzene	ND	1.0	0.25	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.25	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.25	ug/l	
75-25-2	Bromoform	ND	1.0	0.25	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.25	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.25	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.25	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.25	ug/l	
75-00-3	Chloroethane ^a	ND	1.0	0.40	ug/l	
67-66-3	Chloroform	ND	1.0	0.25	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.0	0.49	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.25	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.40	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.25	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
156-59-2	cis-1,2-Dichloroethylene	9.5	1.0	0.25	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.25	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.25	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.25	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-12-041321-01	Date Sampled:	04/13/21
Lab Sample ID:	FA84754-12	Date Received:	04/16/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	2.0	0.40	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.25	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.25	ug/l	
74-83-9	Methyl Bromide ^b	ND	1.0	0.40	ug/l	
74-87-3	Methyl Chloride	ND	1.0	0.40	ug/l	
74-95-3	Methylene Bromide	ND	1.0	0.25	ug/l	
75-09-2	Methylene Chloride	3.4	4.0	2.0	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	2.5	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.25	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.25	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.25	ug/l	
127-18-4	Tetrachloroethylene	94.0 ^c	1.3	0.31	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.25	ug/l	
79-01-6	Trichloroethylene	5.1	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane ^b	ND	1.0	0.40	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	1.0	0.25	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.25	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.25	ug/l	
75-01-4	Vinyl Chloride	0.54	1.0	0.25	ug/l	J
	m,p-Xylene	0.80	2.0	0.25	ug/l	J
95-47-6	o-Xylene	ND	1.0	0.25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%	98%	83-118%
17060-07-0	1,2-Dichloroethane-D4	102%	100%	79-125%
2037-26-5	Toluene-D8	100%	99%	85-112%
460-00-4	4-Bromofluorobenzene	97%	101%	83-118%

- (a) Associated CCV and ECC outside of control limits high, sample was ND.
- (b) Associated CCV outside of control limits high, sample was ND.
- (c) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.12
4

Report of Analysis

Client Sample ID: MW-23-041421-01	Date Sampled: 04/14/21
Lab Sample ID: FA84754-13	Date Received: 04/16/21
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E106651.D	1	04/20/21 12:11	LR	n/a	n/a	VE2458
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane ^a	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.19	0.50	0.13	ug/l	J
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.13
4

Report of Analysis

Client Sample ID: MW-23-041421-01	Date Sampled: 04/14/21
Lab Sample ID: FA84754-13	Date Received: 04/16/21
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide ^b	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	14.9	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	0.81	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane ^b	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	0.20	0.50	0.13	ug/l	J
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		83-118%
17060-07-0	1,2-Dichloroethane-D4	102%		79-125%
2037-26-5	Toluene-D8	100%		85-112%
460-00-4	4-Bromofluorobenzene	97%		83-118%

(a) Associated CCV and ECC outside of control limits high, sample was ND.
 (b) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-18-041421-01	Date Sampled: 04/14/21
Lab Sample ID: FA84754-14	Date Received: 04/16/21
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E106652.D	1	04/20/21 12:34	LR	n/a	n/a	VE2458
Run #2	E106686.D	1	04/22/21 12:55	LR	n/a	n/a	VE2461

Run #	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	1.0 ^a	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.25	0.50	0.13	ug/l	J
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.14
 4

Report of Analysis

Client Sample ID:	MW-18-041421-01	Date Sampled:	04/14/21
Lab Sample ID:	FA84754-14	Date Received:	04/16/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide ^b	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane ^b	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	0.17	0.50	0.13	ug/l	J
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	102%	101%	79-125%
2037-26-5	Toluene-D8	100%	97%	85-112%
460-00-4	4-Bromofluorobenzene	93%	102%	83-118%

(a) Result is from Run# 2

(b) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-19-041421-01	Date Sampled: 04/14/21
Lab Sample ID: FA84754-15	Date Received: 04/16/21
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E106654.D	2	04/20/21 13:19	LR	n/a	n/a	VE2458
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20	4.0	ug/l	
71-43-2	Benzene	ND	1.0	0.25	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.25	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.25	ug/l	
75-25-2	Bromoform	ND	1.0	0.25	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.25	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.25	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.25	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.25	ug/l	
75-00-3	Chloroethane ^a	ND	1.0	0.40	ug/l	
67-66-3	Chloroform	ND	1.0	0.25	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.0	0.49	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.25	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.40	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.25	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	0.33	1.0	0.25	ug/l	J
107-06-2	1,2-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
156-59-2	cis-1,2-Dichloroethylene	48.1	1.0	0.25	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.25	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.25	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.25	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
100-41-4	Ethylbenzene	0.29	1.0	0.25	ug/l	J

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.15
4

Report of Analysis

Client Sample ID: MW-19-041421-01	Date Sampled: 04/14/21
Lab Sample ID: FA84754-15	Date Received: 04/16/21
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	2.0	0.40	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.25	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.25	ug/l	
74-83-9	Methyl Bromide ^b	ND	1.0	0.40	ug/l	
74-87-3	Methyl Chloride	ND	1.0	0.40	ug/l	
74-95-3	Methylene Bromide	ND	1.0	0.25	ug/l	
75-09-2	Methylene Chloride	3.6	4.0	2.0	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	2.5	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.25	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.25	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.25	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	0.58	1.0	0.25	ug/l	J
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.25	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane ^b	ND	1.0	0.40	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	1.0	0.25	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.36	1.0	0.25	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.25	ug/l	
75-01-4	Vinyl Chloride	97.4	1.0	0.25	ug/l	
	m,p-Xylene	0.49	2.0	0.25	ug/l	J
95-47-6	o-Xylene	ND	1.0	0.25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		83-118%
17060-07-0	1,2-Dichloroethane-D4	107%		79-125%
2037-26-5	Toluene-D8	94%		85-112%
460-00-4	4-Bromofluorobenzene	95%		83-118%

(a) Associated CCV and ECC outside of control limits high, sample was ND.

(b) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-17-041421-01		Date Sampled: 04/14/21
Lab Sample ID: FA84754-16		Date Received: 04/16/21
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E106659.D	1	04/20/21 15:15	LR	n/a	n/a	VE2458
Run #2 ^a	E106695.D	10	04/22/21 16:22	LR	n/a	n/a	VE2461

Run #	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	2.6	10	2.0	ug/l	J
71-43-2	Benzene	16.2	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	177 ^b	5.0	2.0	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	1.2	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.25	0.50	0.13	ug/l	J
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	0.19	0.50	0.13	ug/l	J

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.16
4

Report of Analysis

Client Sample ID: MW-17-041421-01	Date Sampled: 04/14/21
Lab Sample ID: FA84754-16	Date Received: 04/16/21
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide ^c	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	0.44	0.50	0.13	ug/l	J
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane ^c	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.48	0.50	0.13	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	0.42	0.50	0.13	ug/l	J
	m,p-Xylene	2.4	1.0	0.13	ug/l	
95-47-6	o-Xylene	0.45	0.50	0.13	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	105%	101%	79-125%
2037-26-5	Toluene-D8	97%	100%	85-112%
460-00-4	4-Bromofluorobenzene	96%	100%	83-118%

(a) Sample vial(s) contained significant headspace; reported results are considered minimum values.

(b) Result is from Run# 2

(c) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-16-041521-01		Date Sampled: 04/15/21
Lab Sample ID: FA84754-17		Date Received: 04/16/21
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E106660.D	1	04/20/21 15:39	LR	n/a	n/a	VE2458
Run #2	E106687.D	1	04/22/21 13:18	LR	n/a	n/a	VE2461

Run #	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	1.2 ^a	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	0.24	0.50	0.13	ug/l	J
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.17
4

Report of Analysis

Client Sample ID: MW-16-041521-01	Date Sampled: 04/15/21
Lab Sample ID: FA84754-17	Date Received: 04/16/21
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide ^b	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	0.18	0.50	0.13	ug/l	J
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane ^b	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	1.1	0.50	0.13	ug/l	
	m,p-Xylene	0.45	1.0	0.13	ug/l	J
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	104%	100%	79-125%
2037-26-5	Toluene-D8	100%	100%	85-112%
460-00-4	4-Bromofluorobenzene	96%	100%	83-118%

- (a) Result is from Run# 2
- (b) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.17
4

Report of Analysis

Client Sample ID: MW-03-041521-01		
Lab Sample ID: FA84754-18		Date Sampled: 04/15/21
Matrix: AQ - Ground Water		Date Received: 04/16/21
Method: SW846 8260B		Percent Solids: n/a
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E106661.D	1	04/20/21 16:02	LR	n/a	n/a	VE2458
Run #2	E106688.D	1	04/22/21 13:41	LR	n/a	n/a	VE2461

Run #	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	0.25	0.50	0.13	ug/l	J
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	1.3 ^a	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	0.17	0.50	0.13	ug/l	J
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.58	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.18	0.50	0.13	ug/l	J
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-03-041521-01	Date Sampled:	04/15/21
Lab Sample ID:	FA84754-18	Date Received:	04/16/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide ^b	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane ^b	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	0.60	0.50	0.13	ug/l	
	m,p-Xylene	0.24	1.0	0.13	ug/l	J
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	106%	100%	79-125%
2037-26-5	Toluene-D8	99%	99%	85-112%
460-00-4	4-Bromofluorobenzene	97%	101%	83-118%

(a) Result is from Run# 2

(b) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-27-041521-01	
Lab Sample ID: FA84754-19	Date Sampled: 04/15/21
Matrix: AQ - Ground Water	Date Received: 04/16/21
Method: SW846 8260B	Percent Solids: n/a
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E106662.D	1	04/20/21 16:26	LR	n/a	n/a	VE2458
Run #2 ^a	E106684.D	1	04/22/21 12:09	LR	n/a	n/a	VE2461

Run #	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	0.14	0.50	0.13	ug/l	J
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane ^b	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	0.37	0.50	0.13	ug/l	J
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.44	0.50	0.13	ug/l	J
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID: MW-27-041521-01	Date Sampled: 04/15/21
Lab Sample ID: FA84754-19	Date Received: 04/16/21
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide ^c	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	0.17	0.50	0.13	ug/l	J
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane ^c	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	0.88	0.50	0.13	ug/l	
	m,p-Xylene	0.27	1.0	0.13	ug/l	J
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	105%	100%	79-125%
2037-26-5	Toluene-D8	98%	99%	85-112%
460-00-4	4-Bromofluorobenzene	98%	101%	83-118%

(a) Confirmation run.

(b) Associated CCV and ECC outside of control limits high, sample was ND.

(c) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-20-041521-01	Date Sampled:	04/15/21
Lab Sample ID:	FA84754-20	Date Received:	04/16/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E106663.D	1	04/20/21 16:49	LR	n/a	n/a	VE2458
Run #2 ^a	E106696.D	10	04/22/21 16:46	LR	n/a	n/a	VE2461

Run #	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	7.4	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	230 ^b	5.0	2.0	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.14	0.50	0.13	ug/l	J
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-20-041521-01	Date Sampled:	04/15/21
Lab Sample ID:	FA84754-20	Date Received:	04/16/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide ^c	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	0.78	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane ^c	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.29	0.50	0.13	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	0.14	0.50	0.13	ug/l	J
	m,p-Xylene	1.6	1.0	0.13	ug/l	
95-47-6	o-Xylene	0.99	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	104%	101%	79-125%
2037-26-5	Toluene-D8	101%	101%	85-112%
460-00-4	4-Bromofluorobenzene	99%	99%	83-118%

(a) Sample was not preserved to a pH < 2.

(b) Result is from Run# 2

(c) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-22-041521-01	Date Sampled:	04/15/21
Lab Sample ID:	FA84754-21	Date Received:	04/16/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E106664.D	1	04/20/21 17:13	LR	n/a	n/a	VE2458
Run #2 ^a	E106697.D	10	04/22/21 17:09	LR	n/a	n/a	VE2461

Run #	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	0.65	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	0.17	0.50	0.13	ug/l	J
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	140 ^b	5.0	2.0	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	0.18	0.50	0.13	ug/l	J
107-06-2	1,2-Dichloroethane	0.14	0.50	0.13	ug/l	J
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.62	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	2.5	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	1.1	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-22-041521-01	Date Sampled: 04/15/21
Lab Sample ID: FA84754-21	Date Received: 04/16/21
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	2.0	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	10.1	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide ^c	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	8.9	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	0.77	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane ^c	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.38	0.50	0.13	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	1.3	0.50	0.13	ug/l	
	m,p-Xylene	2.4	1.0	0.13	ug/l	
95-47-6	o-Xylene	0.77	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	106%	101%	79-125%
2037-26-5	Toluene-D8	99%	101%	85-112%
460-00-4	4-Bromofluorobenzene	96%	100%	83-118%

- (a) Sample vial(s) contained significant headspace; reported results are considered minimum values.
- (b) Result is from Run# 2
- (c) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.21
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Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



SGS North America Inc - Orlando

Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, FL 32811
TEL: 407-425-6700 FAX: 407-425-0707
www.sgs.com

FA84754

SGS - ORLANDO JOB #:

PAGE 1 OF 2

SGS - ORLANDO Quote #

SKIFF #

Client / Reporting Information			Project Information			Analytical Information										Matrix Codes								
Company Name: ERM			Project Name: Univer Kent 212th			VOC S-8260										DW - Drinking Water								
Address: 1418 3rd St Suite 1422			Street: 8201 S 212th St													GW - Ground Water								
City: Seattle State: WA Zip: 98101			City: Kent State: WA													WW - Water								
Project Contact: Jessie Cooper Email: jessie.cooper@erm.com			Project # 0577675													SW - Surface Water								
Phone #: 914-714-1243			Fax #			SO - Soil																		
Sampler(s) Name(s) (Printed): JCOOPER Sampler 2:			Client Purchase Order #			SL - Sludge																		
SGS Orlando Sample #	Field ID / Point of Collection		DATE		TIME		SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	IC1	IC2	IC3	IC4	IC5	IC6	IC7	IC8	IC9	IC10	IC11	IC12	LAB USE ONLY
1	mw-290-041221-01		4-12-21		1315		JC	GW	3															
2	TB-040221-01		4-2-21		1400				2															
3	mw-09-041321-01		4-13-21		1040		JC	GW	3															
4	mw-21-041321-01		4-13-21		1110		JC	GW	3															
5	DUP-01						JC	GW	3															
6	mw-01-041321-01		4-13-21		1000		JC	GW	3															
7	DUP-02						JC	GW	3															
8	mw-08-041321-01		4-13-21		1330		JC	GW	3															
9	mw-13-041321-01		4-13-21		1410		JC	GW	3															
10	mw-04-041321-01		4-13-21		1450		JC	GW	3															
11	mw-05-041321-01		4-13-21		1455		JC	GW	3															
12	mw-12-041321-01		4-13-21		1540		JC	GW	3															
Turnaround Time (Business days)			Data Deliverable Information			Comments / Remarks																		
<input checked="" type="checkbox"/> 10 Day (Business) <input type="checkbox"/> 7 Day <input type="checkbox"/> 5 Day <input type="checkbox"/> 3 Day RUSH <input type="checkbox"/> 2 Day RUSH <input type="checkbox"/> 1 Day RUSH <input type="checkbox"/> Other			Approved By / Date:			<input type="checkbox"/> COMMERCIAL "A" (RESULTS ONLY) <input type="checkbox"/> COMMERCIAL "B" (RESULTS PLUS QC) <input type="checkbox"/> REDT1 (EPA LEVEL 3) <input type="checkbox"/> FULLT1 (EPA LEVEL 4) <input type="checkbox"/> EDD'S																		
Rush T/A Data Available VIA Email or Lablink												Sample Custody must be documented below each time samples change possession, including courier delivery.												
Relinquished by Sampler/Affiliation		Date Time:		Received By/Affiliation		Relinquished By/Affiliation		Received By/Affiliation		Date Time:		Received By/Affiliation												
1 Jessie Cooper		4-15-21		2 FX		3 FX		4		4/16/21		4 [Signature]												
5				6		7		8				8												
Lab Use Only : Cooler Temperature (s) Celsius (corrected): 5.4												http://www.sgs.com/en/terms-and-conditions												

5.1 5

FA84754: Chain of Custody

Page 1 of 4





SGS North America Inc - Orlando
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, FL 32811
TEL: 407-425-6700 FAX: 407-425-0707
www.sgs.com

FA84754

SGS - ORLANDO JOB #:

PAGE 2 OF 2

Client / Reporting Information		Project Information		Analytical Information										Matrix Codes		
Company Name: ERM		Project Name: Univar Kent 212th		VOC S-820										DW - Drinking Water		
Address: 1218 3rd Ave Ste 1422		Street: 8201 S 212th St												GW - Ground Water		
City: Spottie State: WA Zip: 98101		City: Kent State: WA												WW - Water		
Project Contact: Jessie Cooper Email: jessie.cooper@erm.com		Project # 0577675												SW - Surface Water		
Phone #: 914-714-1243		Fax #		SO - Soil												
Sampler(s) Name(s) (Printed): Sampler 1: J Cooper Sampler 2:		Client Purchase Order #		SL - Sludge												
SGS Orlando Sample #	Field ID / Point of Collection	DATE	TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	ICI	MSH	FINO3	P2004	NACH-ZINA	DI WATER	MSH	LIQ - Other Liquid
13	MW-23-041421-01	4-14-21	1030	JC	GW	3			X							OL - Oil
14	MW-18-041421-01	4-14-21	1330	JC	GW	3			X							LIQ - Air
15	MW-19-041421-01	4-14-21	1415	JC	GW	3			X							SOL - Other Solid
16	MW-17-041421-01	4-14-21	1500	JC	GW	3			X							
17	MW-16-041521-01	4-15-21	0930	JC	GW	3			X							
18	MW-05-041521-01	4-15-21	1030	JC	GW	3			X							
19	MW-27-041521-01	4-15-21	1110	JC	GW	3			X							
20	MW-20-041521-01	4-15-21	1145	JC	GW	3			X							
21	MW-22-041521-01	4-15-21	1250	JC	GW	3			X							
21	MS/MSD	4-15-21		JC	GW	3			X							
Turnaround Time (Business days)		Data Deliverable Information		Comments / Remarks												
<input checked="" type="checkbox"/> 10 Day (Business) <input type="checkbox"/> 7 Day <input type="checkbox"/> 5 Day <input type="checkbox"/> 3 Day RUSH <input type="checkbox"/> 2 Day RUSH <input type="checkbox"/> 1 Day RUSH <input type="checkbox"/> Other		Approved By: / Date: _____ <input type="checkbox"/> COMMERCIAL "A" (RESULTS ONLY) <input type="checkbox"/> COMMERCIAL "B" (RESULTS PLUS QC) <input type="checkbox"/> REDT1 (EPA LEVEL 3) <input type="checkbox"/> FULLT1 (EPA LEVEL 4) <input type="checkbox"/> EDD'S														
Rush T/A Data Available VIA Email or Lablink												Sample Custody must be documented below each time samples change possession, including courier delivery.				
Relinquished by Sampler/Affiliation Jessie Cooper		Date Time: 4-15-21		Received By/Affiliation RX		Date Time: 4/16/21		Relinquished By/Affiliation FX		Date Time: 4/16/21		Received By/Affiliation Jessie Cooper				
Relinquished by/Affiliation		Date Time:		Received By/Affiliation		Date Time:		Relinquished By/Affiliation		Date Time:		Received By/Affiliation				
5				6				7				8				

Lab Use Only : Cooler Temperature (s) Celsius (corrected):

http://www.sgs.com/en/terms-and-conditions

ORLD-SMT-0001-03-FORM-COC (4).xls Rev 031318

FA84754: Chain of Custody

Page 2 of 4



SGS Sample Receipt Summary

Job Number: FA84754

Client: ERM/UNIVAR

Project: UNIVER KENT 212TH

Date / Time Received: 4/16/2021 10:00:00 AM

Delivery Method: FedEx

Airbill #s: 791144247661, 791144247650

Therm ID: IR4; Therm CF: -0.8; # of Coolers: 2
 Cooler Temps (Raw Measured) °C: Cooler 1: (6.2); Cooler 2: (5.8);
 Cooler Temps (Corrected) °C: Cooler 1: (5.4); Cooler 2: (5.0);

Cooler Information	Y	or	N
1. Custody Seals Present	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Custody Seals Intact	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Temp criteria achieved	<input checked="" type="checkbox"/>		<input type="checkbox"/>
4. Cooler temp verification	<u>IR Gun</u>		
5. Cooler media	<u>Ice (Bag)</u>		

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Samples preserved properly	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
3. Sufficient volume/containers recvd for analysis:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Condition of sample	<u>Intact</u>			
5. Sample recvd within HT	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
6. Dates/Times/IDs on COC match Sample Label	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
7. VOCs have headspace	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
8. Bottles received for unspecified tests	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
9. Compositing instructions clear	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
10. Voa Soil Kits/Jars received past 48hrs?	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
11. % Solids Jar received?	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
12. Residual Chlorine Present?	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
2. Trip Blank listed on COC	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
	W	or	S	N/A
3. Type Of TB Received	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____
 Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____
 Residual Chlorine Test Strip Lot #: _____

Comments All vials contain Headspace for samples: MW-13-041321-01, MW-16-041521-01, MW-20-041521-01
 2 of the vials contain Headspace for samples: MW-08-041321-01 & MW-17-041421-01
 1 of the vial contain Headspace for sample MW-18-041421-01

 Primary sample for MS/MSD not identified on the COC

Technician: CARLOSD

Date: 4/16/2021 10:00:00 A

Reviewer: PH

Date: 4/20/2021

SM001
Rev. Date 05/24/17

FA84754: Chain of Custody

Page 3 of 4



5.1
5

CSR: Elvin Kumar

Response Date: 04/19/21

Response: Per Jessie Cooper, MS/MSD is associated with parent sample MW-27-041521-01
Sample was re-labeled as Lab Sample ID FA84754-19

SM001
Rev. Date 05/24/17

FA84754: Chain of Custody
Page 4 of 4

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA84754
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE2457-MB	E106618.D	1	04/19/21	LR	n/a	n/a	VE2457

The QC reported here applies to the following samples:

Method: SW846 8260B

FA84754-1, FA84754-3, FA84754-5, FA84754-6, FA84754-7, FA84754-8, FA84754-11

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	

Method Blank Summary

Job Number: FA84754
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE2457-MB	E106618.D	1	04/19/21	LR	n/a	n/a	VE2457

The QC reported here applies to the following samples:

Method: SW846 8260B

FA84754-1, FA84754-3, FA84754-5, FA84754-6, FA84754-7, FA84754-8, FA84754-11

CAS No.	Compound	Result	RL	MDL	Units	Q
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	ND	0.50	0.13	ug/l	
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	102%	79-125%
2037-26-5	Toluene-D8	100%	85-112%
460-00-4	4-Bromofluorobenzene	97%	83-118%

Method Blank Summary

Job Number: FA84754
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE2458-MB	E106649.D	1	04/20/21	LR	n/a	n/a	VE2458

The QC reported here applies to the following samples:

Method: SW846 8260B

FA84754-2, FA84754-12, FA84754-13, FA84754-14, FA84754-15, FA84754-16, FA84754-17, FA84754-18, FA84754-19, FA84754-20, FA84754-21

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	

Method Blank Summary

Job Number: FA84754
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE2458-MB	E106649.D	1	04/20/21	LR	n/a	n/a	VE2458

The QC reported here applies to the following samples:

Method: SW846 8260B

FA84754-2, FA84754-12, FA84754-13, FA84754-14, FA84754-15, FA84754-16, FA84754-17, FA84754-18, FA84754-19, FA84754-20, FA84754-21

CAS No.	Compound	Result	RL	MDL	Units	Q
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	ND	0.50	0.13	ug/l	
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	79-125%
2037-26-5	Toluene-D8	100%	85-112%
460-00-4	4-Bromofluorobenzene	98%	83-118%

Method Blank Summary

Job Number: FA84754
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE2461-MB	E106683.D	1	04/22/21	LR	n/a	n/a	VE2461

The QC reported here applies to the following samples:

Method: SW846 8260B

FA84754-4, FA84754-5, FA84754-6, FA84754-7, FA84754-9, FA84754-10, FA84754-12, FA84754-14, FA84754-16, FA84754-17, FA84754-18, FA84754-20, FA84754-21

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	

Method Blank Summary

Job Number: FA84754
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE2461-MB	E106683.D	1	04/22/21	LR	n/a	n/a	VE2461

The QC reported here applies to the following samples:

Method: SW846 8260B

FA84754-4, FA84754-5, FA84754-6, FA84754-7, FA84754-9, FA84754-10, FA84754-12, FA84754-14, FA84754-16, FA84754-17, FA84754-18, FA84754-20, FA84754-21

CAS No.	Compound	Result	RL	MDL	Units	Q
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	ND	0.50	0.13	ug/l	
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	97%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	79-125%
2037-26-5	Toluene-D8	100%	85-112%
460-00-4	4-Bromofluorobenzene	102%	83-118%

Blank Spike Summary

Job Number: FA84754
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE2457-BS	E106616.D	1	04/19/21	LR	n/a	n/a	VE2457

The QC reported here applies to the following samples:

Method: SW846 8260B

FA84754-1, FA84754-3, FA84754-5, FA84754-6, FA84754-7, FA84754-8, FA84754-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	56.5	113	50-147
71-43-2	Benzene	10	11.2	112	81-122
108-86-1	Bromobenzene	10	10.3	103	80-121
75-27-4	Bromodichloromethane	10	10.9	109	79-123
75-25-2	Bromoform	10	9.9	99	66-123
104-51-8	n-Butylbenzene	10	10.6	106	79-126
135-98-8	sec-Butylbenzene	10	11.2	112	83-133
98-06-6	tert-Butylbenzene	10	10.6	106	80-133
56-23-5	Carbon Tetrachloride	10	11.8	118	76-136
108-90-7	Chlorobenzene	10	10.6	106	82-124
75-00-3	Chloroethane	10	10.7	107	62-144
67-66-3	Chloroform	10	11.1	111	80-124
95-49-8	o-Chlorotoluene	10	10.5	105	81-127
106-43-4	p-Chlorotoluene	10	10.5	105	83-130
124-48-1	Dibromochloromethane	10	10.2	102	78-122
96-12-8	1,2-Dibromo-3-chloropropane	10	8.9	89	64-123
106-93-4	1,2-Dibromoethane	10	9.8	98	75-120
75-71-8	Dichlorodifluoromethane	10	8.7	87	42-167
95-50-1	1,2-Dichlorobenzene	10	10.3	103	82-124
541-73-1	1,3-Dichlorobenzene	10	10.6	106	84-125
106-46-7	1,4-Dichlorobenzene	10	10.4	104	78-120
75-34-3	1,1-Dichloroethane	10	12.0	120	81-122
107-06-2	1,2-Dichloroethane	10	10.6	106	75-125
75-35-4	1,1-Dichloroethylene	10	12.9	129	78-137
156-59-2	cis-1,2-Dichloroethylene	10	11.2	112	78-120
156-60-5	trans-1,2-Dichloroethylene	10	12.0	120	76-127
78-87-5	1,2-Dichloropropane	10	10.8	108	76-124
142-28-9	1,3-Dichloropropane	10	9.9	99	80-118
594-20-7	2,2-Dichloropropane	10	11.5	115	74-139
10061-01-5	cis-1,3-Dichloropropene	10	9.8	98	75-118
10061-02-6	trans-1,3-Dichloropropene	10	10.4	104	80-120
100-41-4	Ethylbenzene	10	11.0	110	81-121
110-54-3	Hexane	10	11.2	112	69-132
98-82-8	Isopropylbenzene	10	10.8	108	83-132
99-87-6	p-Isopropyltoluene	10	10.9	109	79-130
74-83-9	Methyl Bromide	10	11.0	110	59-143

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA84754
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE2457-BS	E106616.D	1	04/19/21	LR	n/a	n/a	VE2457

The QC reported here applies to the following samples:

Method: SW846 8260B

FA84754-1, FA84754-3, FA84754-5, FA84754-6, FA84754-7, FA84754-8, FA84754-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-87-3	Methyl Chloride	10	10	100	50-159
74-95-3	Methylene Bromide	10	10.2	102	78-119
75-09-2	Methylene Chloride	10	10	100	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	50	49.8	100	66-122
103-65-1	n-Propylbenzene	10	10.8	108	82-133
100-42-5	Styrene	10	9.8	98	78-119
630-20-6	1,1,1,2-Tetrachloroethane	10	10.6	106	77-122
79-34-5	1,1,2,2-Tetrachloroethane	10	10	100	72-120
127-18-4	Tetrachloroethylene	10	11.5	115	76-135
108-88-3	Toluene	10	10.8	108	80-120
120-82-1	1,2,4-Trichlorobenzene	10	10.1	101	73-129
71-55-6	1,1,1-Trichloroethane	10	11.4	114	75-130
79-00-5	1,1,2-Trichloroethane	10	10.5	105	76-119
79-01-6	Trichloroethylene	10	10.7	107	81-126
75-69-4	Trichlorofluoromethane	10	11.6	116	71-156
96-18-4	1,2,3-Trichloropropane	10	10.1	101	77-120
95-63-6	1,2,4-Trimethylbenzene	10	10.1	101	79-120
108-67-8	1,3,5-Trimethylbenzene	10	10.8	108	79-120
75-01-4	Vinyl Chloride	10	10.3	103	69-159
	m,p-Xylene	20	21.8	109	79-126
95-47-6	o-Xylene	10	10.4	104	80-127

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	105%	79-125%
2037-26-5	Toluene-D8	100%	85-112%
460-00-4	4-Bromofluorobenzene	96%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA84754
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE2458-BS	E106647.D	1	04/20/21	LR	n/a	n/a	VE2458

The QC reported here applies to the following samples:

Method: SW846 8260B

FA84754-2, FA84754-12, FA84754-13, FA84754-14, FA84754-15, FA84754-16, FA84754-17, FA84754-18, FA84754-19, FA84754-20, FA84754-21

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	57.6	115	50-147
71-43-2	Benzene	10	11.1	111	81-122
108-86-1	Bromobenzene	10	10.2	102	80-121
75-27-4	Bromodichloromethane	10	10.7	107	79-123
75-25-2	Bromoform	10	9.3	93	66-123
104-51-8	n-Butylbenzene	10	10.5	105	79-126
135-98-8	sec-Butylbenzene	10	11.0	110	83-133
98-06-6	tert-Butylbenzene	10	10.4	104	80-133
56-23-5	Carbon Tetrachloride	10	11.4	114	76-136
108-90-7	Chlorobenzene	10	10.3	103	82-124
75-00-3	Chloroethane	10	14.2	142	62-144
67-66-3	Chloroform	10	10.9	109	80-124
95-49-8	o-Chlorotoluene	10	10.4	104	81-127
106-43-4	p-Chlorotoluene	10	10.4	104	83-130
124-48-1	Dibromochloromethane	10	10	100	78-122
96-12-8	1,2-Dibromo-3-chloropropane	10	8.7	87	64-123
106-93-4	1,2-Dibromoethane	10	9.7	97	75-120
75-71-8	Dichlorodifluoromethane	10	10.3	103	42-167
95-50-1	1,2-Dichlorobenzene	10	9.9	99	82-124
541-73-1	1,3-Dichlorobenzene	10	10.3	103	84-125
106-46-7	1,4-Dichlorobenzene	10	10.1	101	78-120
75-34-3	1,1-Dichloroethane	10	11.8	118	81-122
107-06-2	1,2-Dichloroethane	10	10.7	107	75-125
75-35-4	1,1-Dichloroethylene	10	12.6	126	78-137
156-59-2	cis-1,2-Dichloroethylene	10	10.8	108	78-120
156-60-5	trans-1,2-Dichloroethylene	10	11.7	117	76-127
78-87-5	1,2-Dichloropropane	10	10.8	108	76-124
142-28-9	1,3-Dichloropropane	10	10.0	100	80-118
594-20-7	2,2-Dichloropropane	10	11.0	110	74-139
10061-01-5	cis-1,3-Dichloropropene	10	9.9	99	75-118
10061-02-6	trans-1,3-Dichloropropene	10	10.5	105	80-120
100-41-4	Ethylbenzene	10	10.7	107	81-121
110-54-3	Hexane	10	11.2	112	69-132
98-82-8	Isopropylbenzene	10	10.4	104	83-132
99-87-6	p-Isopropyltoluene	10	10.6	106	79-130
74-83-9	Methyl Bromide	10	14.0	140	59-143

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA84754
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE2458-BS	E106647.D	1	04/20/21	LR	n/a	n/a	VE2458

The QC reported here applies to the following samples:

Method: SW846 8260B

FA84754-2, FA84754-12, FA84754-13, FA84754-14, FA84754-15, FA84754-16, FA84754-17, FA84754-18, FA84754-19, FA84754-20, FA84754-21

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-87-3	Methyl Chloride	10	12.0	120	50-159
74-95-3	Methylene Bromide	10	10.3	103	78-119
75-09-2	Methylene Chloride	10	10.5	105	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	50	50.9	102	66-122
103-65-1	n-Propylbenzene	10	10.8	108	82-133
100-42-5	Styrene	10	9.6	96	78-119
630-20-6	1,1,1,2-Tetrachloroethane	10	10	100	77-122
79-34-5	1,1,2,2-Tetrachloroethane	10	10.1	101	72-120
127-18-4	Tetrachloroethylene	10	11.0	110	76-135
108-88-3	Toluene	10	10.5	105	80-120
120-82-1	1,2,4-Trichlorobenzene	10	9.8	98	73-129
71-55-6	1,1,1-Trichloroethane	10	11.2	112	75-130
79-00-5	1,1,2-Trichloroethane	10	10.4	104	76-119
79-01-6	Trichloroethylene	10	10.3	103	81-126
75-69-4	Trichlorofluoromethane	10	13.8	138	71-156
96-18-4	1,2,3-Trichloropropane	10	10.2	102	77-120
95-63-6	1,2,4-Trimethylbenzene	10	9.9	99	79-120
108-67-8	1,3,5-Trimethylbenzene	10	10.6	106	79-120
75-01-4	Vinyl Chloride	10	12.5	125	69-159
	m,p-Xylene	20	21.2	106	79-126
95-47-6	o-Xylene	10	9.9	99	80-127

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	107%	79-125%
2037-26-5	Toluene-D8	100%	85-112%
460-00-4	4-Bromofluorobenzene	97%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA84754
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE2461-BS	E106681.D	1	04/22/21	LR	n/a	n/a	VE2461

The QC reported here applies to the following samples:

Method: SW846 8260B

FA84754-4, FA84754-5, FA84754-6, FA84754-7, FA84754-9, FA84754-10, FA84754-12, FA84754-14, FA84754-16, FA84754-17, FA84754-18, FA84754-20, FA84754-21

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	54.1	108	50-147
71-43-2	Benzene	10	9.5	95	81-122
108-86-1	Bromobenzene	10	9.5	95	80-121
75-27-4	Bromodichloromethane	10	10	100	79-123
75-25-2	Bromoform	10	8.8	88	66-123
104-51-8	n-Butylbenzene	10	9.3	93	79-126
135-98-8	sec-Butylbenzene	10	9.6	96	83-133
98-06-6	tert-Butylbenzene	10	9.4	94	80-133
56-23-5	Carbon Tetrachloride	10	10.2	102	76-136
108-90-7	Chlorobenzene	10	9.3	93	82-124
75-00-3	Chloroethane	10	9.3	93	62-144
67-66-3	Chloroform	10	9.4	94	80-124
95-49-8	o-Chlorotoluene	10	9.5	95	81-127
106-43-4	p-Chlorotoluene	10	9.7	97	83-130
124-48-1	Dibromochloromethane	10	9.1	91	78-122
96-12-8	1,2-Dibromo-3-chloropropane	10	9.3	93	64-123
106-93-4	1,2-Dibromoethane	10	9.6	96	75-120
75-71-8	Dichlorodifluoromethane	10	7.7	77	42-167
95-50-1	1,2-Dichlorobenzene	10	9.4	94	82-124
541-73-1	1,3-Dichlorobenzene	10	9.6	96	84-125
106-46-7	1,4-Dichlorobenzene	10	9.0	90	78-120
75-34-3	1,1-Dichloroethane	10	10.1	101	81-122
107-06-2	1,2-Dichloroethane	10	9.3	93	75-125
75-35-4	1,1-Dichloroethylene	10	10.1	101	78-137
156-59-2	cis-1,2-Dichloroethylene	10	9.8	98	78-120
156-60-5	trans-1,2-Dichloroethylene	10	9.8	98	76-127
78-87-5	1,2-Dichloropropane	10	9.5	95	76-124
142-28-9	1,3-Dichloropropane	10	9.4	94	80-118
594-20-7	2,2-Dichloropropane	10	10.3	103	74-139
10061-01-5	cis-1,3-Dichloropropene	10	9.0	90	75-118
10061-02-6	trans-1,3-Dichloropropene	10	9.3	93	80-120
100-41-4	Ethylbenzene	10	9.6	96	81-121
110-54-3	Hexane	10	9.5	95	69-132
98-82-8	Isopropylbenzene	10	9.3	93	83-132
99-87-6	p-Isopropyltoluene	10	9.7	97	79-130
74-83-9	Methyl Bromide	10	9.0	90	59-143

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA84754
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE2461-BS	E106681.D	1	04/22/21	LR	n/a	n/a	VE2461

The QC reported here applies to the following samples:

Method: SW846 8260B

FA84754-4, FA84754-5, FA84754-6, FA84754-7, FA84754-9, FA84754-10, FA84754-12, FA84754-14, FA84754-16, FA84754-17, FA84754-18, FA84754-20, FA84754-21

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-87-3	Methyl Chloride	10	8.8	88	50-159
74-95-3	Methylene Bromide	10	9.3	93	78-119
75-09-2	Methylene Chloride	10	8.9	89	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	50	45.7	91	66-122
103-65-1	n-Propylbenzene	10	9.7	97	82-133
100-42-5	Styrene	10	9.0	90	78-119
630-20-6	1,1,1,2-Tetrachloroethane	10	9.4	94	77-122
79-34-5	1,1,2,2-Tetrachloroethane	10	9.1	91	72-120
127-18-4	Tetrachloroethylene	10	10.0	100	76-135
108-88-3	Toluene	10	9.4	94	80-120
120-82-1	1,2,4-Trichlorobenzene	10	8.9	89	73-129
71-55-6	1,1,1-Trichloroethane	10	10	100	75-130
79-00-5	1,1,2-Trichloroethane	10	9.6	96	76-119
79-01-6	Trichloroethylene	10	9.2	92	81-126
75-69-4	Trichlorofluoromethane	10	9.5	95	71-156
96-18-4	1,2,3-Trichloropropane	10	9.2	92	77-120
95-63-6	1,2,4-Trimethylbenzene	10	8.8	88	79-120
108-67-8	1,3,5-Trimethylbenzene	10	9.3	93	79-120
75-01-4	Vinyl Chloride	10	9.0	90	69-159
	m,p-Xylene	20	18.3	92	79-126
95-47-6	o-Xylene	10	9.0	90	80-127

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	79-125%
2037-26-5	Toluene-D8	101%	85-112%
460-00-4	4-Bromofluorobenzene	103%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA84754
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA84570-3MS	E106630.D	10	04/19/21	LR	n/a	n/a	VE2457
FA84570-3MSD	E106631.D	10	04/19/21	LR	n/a	n/a	VE2457
FA84570-3	E106622.D	2	04/19/21	LR	n/a	n/a	VE2457

The QC reported here applies to the following samples:

Method: SW846 8260B

FA84754-1, FA84754-3, FA84754-5, FA84754-6, FA84754-7, FA84754-8, FA84754-11

CAS No.	Compound	FA84570-3 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	500	472	94	500	484	97	3	50-147/21
71-43-2	Benzene	ND	100	115	115	100	116	116	1	81-122/14
108-86-1	Bromobenzene	ND	100	102	102	100	104	104	2	80-121/14
75-27-4	Bromodichloromethane	ND	100	107	107	100	109	109	2	79-123/19
75-25-2	Bromoform	ND	100	88.6	89	100	87.6	88	1	66-123/21
104-51-8	n-Butylbenzene	ND	100	105	105	100	106	106	1	79-126/16
135-98-8	sec-Butylbenzene	ND	100	113	113	100	113	113	0	83-133/16
98-06-6	tert-Butylbenzene	ND	100	105	105	100	106	106	1	80-133/16
56-23-5	Carbon Tetrachloride	ND	100	119	119	100	121	121	2	76-136/23
108-90-7	Chlorobenzene	ND	100	107	107	100	107	107	0	82-124/14
75-00-3	Chloroethane	ND	100	128	128	100	137	137	7	62-144/20
67-66-3	Chloroform	ND	100	115	115	100	117	117	2	80-124/15
95-49-8	o-Chlorotoluene	ND	100	105	105	100	106	106	1	81-127/15
106-43-4	p-Chlorotoluene	ND	100	102	102	100	105	105	3	83-130/15
124-48-1	Dibromochloromethane	ND	100	95.4	95	100	97.8	98	2	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	ND	100	90.8	91	100	91.6	92	1	64-123/18
106-93-4	1,2-Dibromoethane	ND	100	93.9	94	100	97.2	97	3	75-120/13
75-71-8	Dichlorodifluoromethane	ND	100	90.0	90	100	101	101	12	42-167/19
95-50-1	1,2-Dichlorobenzene	ND	100	103	103	100	103	103	0	82-124/14
541-73-1	1,3-Dichlorobenzene	ND	100	106	106	100	106	106	0	84-125/14
106-46-7	1,4-Dichlorobenzene	ND	100	103	103	100	104	104	1	78-120/15
75-34-3	1,1-Dichloroethane	ND	100	125	125*	100	125	125*	0	81-122/15
107-06-2	1,2-Dichloroethane	ND	100	108	108	100	109	109	1	75-125/14
75-35-4	1,1-Dichloroethylene	ND	100	137	137	100	135	135	1	78-137/18
156-59-2	cis-1,2-Dichloroethylene	ND	100	114	114	100	114	114	0	78-120/15
156-60-5	trans-1,2-Dichloroethylene	ND	100	124	124	100	123	123	1	76-127/17
78-87-5	1,2-Dichloropropane	ND	100	108	108	100	112	112	4	76-124/14
142-28-9	1,3-Dichloropropane	ND	100	96.7	97	100	99.6	100	3	80-118/13
594-20-7	2,2-Dichloropropane	ND	100	112	112	100	115	115	3	74-139/17
10061-01-5	cis-1,3-Dichloropropene	ND	100	94.7	95	100	96.9	97	2	75-118/23
10061-02-6	trans-1,3-Dichloropropene	ND	100	99.6	100	100	102	102	2	80-120/22
100-41-4	Ethylbenzene	ND	100	111	111	100	112	112	1	81-121/14
110-54-3	Hexane	ND	100	111	111	100	113	113	2	69-132/20
98-82-8	Isopropylbenzene	ND	100	108	108	100	109	109	1	83-132/15
99-87-6	p-Isopropyltoluene	ND	100	109	109	100	109	109	0	79-130/16
74-83-9	Methyl Bromide	ND	100	132	132	100	140	140	6	59-143/19

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA84754
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA84570-3MS	E106630.D	10	04/19/21	LR	n/a	n/a	VE2457
FA84570-3MSD	E106631.D	10	04/19/21	LR	n/a	n/a	VE2457
FA84570-3	E106622.D	2	04/19/21	LR	n/a	n/a	VE2457

The QC reported here applies to the following samples:

Method: SW846 8260B

FA84754-1, FA84754-3, FA84754-5, FA84754-6, FA84754-7, FA84754-8, FA84754-11

CAS No.	Compound	FA84570-3 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
74-87-3	Methyl Chloride	ND	100	107	107	100	119	119	11	50-159/19
74-95-3	Methylene Bromide	ND	100	105	105	100	105	105	0	78-119/14
75-09-2	Methylene Chloride	ND	100	106	106	100	106	106	0	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	500	491	98	500	500	100	2	66-122/16
103-65-1	n-Propylbenzene	ND	100	108	108	100	109	109	1	82-133/15
100-42-5	Styrene	ND	100	94.6	95	100	97.5	98	3	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	ND	100	107	107	100	107	107	0	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	ND	100	101	101	100	102	102	1	72-120/14
127-18-4	Tetrachloroethylene	49.2	100	158	109	100	160	111	1	76-135/16
108-88-3	Toluene	ND	100	109	109	100	109	109	0	80-120/14
120-82-1	1,2,4-Trichlorobenzene	ND	100	102	102	100	102	102	0	73-129/20
71-55-6	1,1,1-Trichloroethane	ND	100	119	119	100	118	118	1	75-130/16
79-00-5	1,1,2-Trichloroethane	ND	100	104	104	100	106	106	2	76-119/14
79-01-6	Trichloroethylene	1.7	100	109	107	100	111	109	2	81-126/15
75-69-4	Trichlorofluoromethane	ND	100	128	128	100	139	139	8	71-156/21
96-18-4	1,2,3-Trichloropropane	ND	100	99.2	99	100	101	101	2	77-120/16
95-63-6	1,2,4-Trimethylbenzene	ND	100	102	102	100	102	102	0	79-120/18
108-67-8	1,3,5-Trimethylbenzene	ND	100	109	109	100	109	109	0	79-120/19
75-01-4	Vinyl Chloride	ND	100	109	109	100	122	122	11	69-159/18
	m,p-Xylene	ND	200	218	109	200	220	110	1	79-126/15
95-47-6	o-Xylene	ND	100	102	102	100	103	103	1	80-127/14

CAS No.	Surrogate Recoveries	MS	MSD	FA84570-3	Limits
1868-53-7	Dibromofluoromethane	104%	105%	104%	83-118%
17060-07-0	1,2-Dichloroethane-D4	107%	107%	101%	79-125%
2037-26-5	Toluene-D8	100%	99%	101%	85-112%
460-00-4	4-Bromofluorobenzene	92%	94%	91%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA84754
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA84754-15MS	E106655.D	10	04/20/21	LR	n/a	n/a	VE2458
FA84754-15MSD	E106656.D	10	04/20/21	LR	n/a	n/a	VE2458
FA84754-15	E106654.D	2	04/20/21	LR	n/a	n/a	VE2458

The QC reported here applies to the following samples:

Method: SW846 8260B

FA84754-2, FA84754-12, FA84754-13, FA84754-14, FA84754-15, FA84754-16, FA84754-17, FA84754-18, FA84754-19, FA84754-20, FA84754-21

CAS No.	Compound	FA84754-15 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD	
67-64-1	Acetone	ND		500	398	80	500	383	77	4	50-147/21
71-43-2	Benzene	ND		100	83.3	83	100	83.6	84	0	81-122/14
108-86-1	Bromobenzene	ND		100	101	101	100	99.5	100	1	80-121/14
75-27-4	Bromodichloromethane	ND		100	84.7	85	100	75.8	76*	11	79-123/19
75-25-2	Bromoform	ND		100	45.5	46*	100	34.5	35*	28*	66-123/21
104-51-8	n-Butylbenzene	ND		100	104	104	100	105	105	1	79-126/16
135-98-8	sec-Butylbenzene	ND		100	110	110	100	112	112	2	83-133/16
98-06-6	tert-Butylbenzene	ND		100	103	103	100	106	106	3	80-133/16
56-23-5	Carbon Tetrachloride	ND		100	83.9	84	100	83.0	83	1	76-136/23
108-90-7	Chlorobenzene	ND		100	102	102	100	101	101	1	82-124/14
75-00-3	Chloroethane	ND		100	114	114	100	162	162*	35*	62-144/20
67-66-3	Chloroform	ND		100	92.1	92	100	92.2	92	0	80-124/15
95-49-8	o-Chlorotoluene	ND		100	103	103	100	103	103	0	81-127/15
106-43-4	p-Chlorotoluene	ND		100	102	102	100	102	102	0	83-130/15
124-48-1	Dibromochloromethane	ND		100	62.7	63*	100	51.4	51*	20*	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	ND		100	84.4	84	100	87.7	88	4	64-123/18
106-93-4	1,2-Dibromoethane	ND		100	90.6	91	100	88.8	89	2	75-120/13
75-71-8	Dichlorodifluoromethane	ND		100	77.8	78	100	108	108	33*	42-167/19
95-50-1	1,2-Dichlorobenzene	ND		100	99.9	100	100	101	101	1	82-124/14
541-73-1	1,3-Dichlorobenzene	ND		100	104	104	100	105	105	1	84-125/14
106-46-7	1,4-Dichlorobenzene	ND		100	103	103	100	102	102	1	78-120/15
75-34-3	1,1-Dichloroethane	0.33	J	100	79.7	79*	100	82.0	82	3	81-122/15
107-06-2	1,2-Dichloroethane	ND		100	89.6	90	100	87.9	88	2	75-125/14
75-35-4	1,1-Dichloroethylene	ND		100	31.4	31*	100	31.4	31*	0	78-137/18
156-59-2	cis-1,2-Dichloroethylene	48.1		100	127	79	100	131	83	3	78-120/15
156-60-5	trans-1,2-Dichloroethylene	ND		100	63.7	64*	100	65.2	65*	2	76-127/17
78-87-5	1,2-Dichloropropane	ND		100	95.8	96	100	94.7	95	1	76-124/14
142-28-9	1,3-Dichloropropane	ND		100	95.8	96	100	92.4	92	4	80-118/13
594-20-7	2,2-Dichloropropane	ND		100	76.6	77	100	77.5	78	1	74-139/17
10061-01-5	cis-1,3-Dichloropropene	ND		100	91.0	91	100	86.9	87	5	75-118/23
10061-02-6	trans-1,3-Dichloropropene	ND		100	97.1	97	100	94.4	94	3	80-120/22
100-41-4	Ethylbenzene	0.29	J	100	106	106	100	105	105	1	81-121/14
110-54-3	Hexane	ND		100	39.3	39*	100	39.7	40*	1	69-132/20
98-82-8	Isopropylbenzene	ND		100	103	103	100	104	104	1	83-132/15
99-87-6	p-Isopropyltoluene	ND		100	106	106	100	108	108	2	79-130/16
74-83-9	Methyl Bromide	ND		100	118	118	100	164	164*	33*	59-143/19

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA84754
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA84754-15MS	E106655.D	10	04/20/21	LR	n/a	n/a	VE2458
FA84754-15MSD	E106656.D	10	04/20/21	LR	n/a	n/a	VE2458
FA84754-15	E106654.D	2	04/20/21	LR	n/a	n/a	VE2458

The QC reported here applies to the following samples:

Method: SW846 8260B

FA84754-2, FA84754-12, FA84754-13, FA84754-14, FA84754-15, FA84754-16, FA84754-17, FA84754-18, FA84754-19, FA84754-20, FA84754-21

CAS No.	Compound	FA84754-15 Spike		MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
		ug/l	Q							
74-87-3	Methyl Chloride	ND	100	94.9	95	100	127	127	29*	50-159/19
74-95-3	Methylene Bromide	ND	100	91.7	92	100	92.2	92	1	78-119/14
75-09-2	Methylene Chloride	3.6	J 100	69.9	66*	100	74.5	71	6	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	500	430	86	500	428	86	0	66-122/16
103-65-1	n-Propylbenzene	ND	100	107	107	100	107	107	0	82-133/15
100-42-5	Styrene	ND	100	92.8	93	100	90.8	91	2	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	ND	100	99.8	100	100	100	100	0	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	ND	100	98.8	99	100	99.7	100	1	72-120/14
127-18-4	Tetrachloroethylene	ND	100	99.9	100	100	100	100	0	76-135/16
108-88-3	Toluene	0.58	J 100	95.6	95	100	96.5	96	1	80-120/14
120-82-1	1,2,4-Trichlorobenzene	ND	100	95.9	96	100	100	100	4	73-129/20
71-55-6	1,1,1-Trichloroethane	ND	100	83.8	84	100	85.0	85	1	75-130/16
79-00-5	1,1,2-Trichloroethane	ND	100	105	105	100	99.6	100	5	76-119/14
79-01-6	Trichloroethylene	ND	100	87.6	88	100	89.1	89	2	81-126/15
75-69-4	Trichlorofluoromethane	ND	100	110	110	100	148	148	29*	71-156/21
96-18-4	1,2,3-Trichloropropane	ND	100	97.4	97	100	97.1	97	0	77-120/16
95-63-6	1,2,4-Trimethylbenzene	0.36	J 100	99.9	100	100	101	101	1	79-120/18
108-67-8	1,3,5-Trimethylbenzene	ND	100	106	106	100	107	107	1	79-120/19
75-01-4	Vinyl Chloride	97.4	100	179	82	100	213	116	17	69-159/18
	m,p-Xylene	0.49	J 200	209	104	200	209	104	0	79-126/15
95-47-6	o-Xylene	ND	100	97.4	97	100	98.1	98	1	80-127/14

CAS No.	Surrogate Recoveries	MS	MSD	FA84754-15	Limits
1868-53-7	Dibromofluoromethane	100%	100%	104%	83-118%
17060-07-0	1,2-Dichloroethane-D4	107%	105%	107%	79-125%
2037-26-5	Toluene-D8	100%	101%	94%	85-112%
460-00-4	4-Bromofluorobenzene	95%	95%	95%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA84754
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA84754-19MS	E106698.D	5	04/22/21	LR	n/a	n/a	VE2461
FA84754-19MSD	E106699.D	5	04/22/21	LR	n/a	n/a	VE2461
FA84754-19 ^a	E106684.D	1	04/22/21	LR	n/a	n/a	VE2461

The QC reported here applies to the following samples:

Method: SW846 8260B

FA84754-4, FA84754-5, FA84754-6, FA84754-7, FA84754-9, FA84754-10, FA84754-12, FA84754-14, FA84754-16, FA84754-17, FA84754-18, FA84754-20, FA84754-21

CAS No.	Compound	FA84754-19 Spike		MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
		ug/l	Q							
67-64-1	Acetone	ND	250	221	88	250	229	92	4	50-147/21
71-43-2	Benzene	ND	50	53.9	108	50	53.0	106	2	81-122/14
108-86-1	Bromobenzene	ND	50	50.8	102	50	50.5	101	1	80-121/14
75-27-4	Bromodichloromethane	ND	50	48.0	96	50	45.3	91	6	79-123/19
75-25-2	Bromoform	ND	50	29.2	58*	50	29.4	59*	1	66-123/21
104-51-8	n-Butylbenzene	ND	50	50.3	101	50	49.4	99	2	79-126/16
135-98-8	sec-Butylbenzene	ND	50	53.4	107	50	52.2	104	2	83-133/16
98-06-6	tert-Butylbenzene	ND	50	51.2	102	50	50.0	100	2	80-133/16
56-23-5	Carbon Tetrachloride	ND	50	53.6	107	50	52.4	105	2	76-136/23
108-90-7	Chlorobenzene	ND	50	51.4	103	50	50.1	100	3	82-124/14
75-00-3	Chloroethane	ND	50	55.3	111	50	63.3	127	13	62-144/20
67-66-3	Chloroform	ND	50	53.1	106	50	51.7	103	3	80-124/15
95-49-8	o-Chlorotoluene	ND	50	52.6	105	50	51.3	103	3	81-127/15
106-43-4	p-Chlorotoluene	ND	50	52.7	105	50	51.4	103	2	83-130/15
124-48-1	Dibromochloromethane	ND	50	36.2	72*	50	35.1	70*	3	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	ND	50	48.2	96	50	45.9	92	5	64-123/18
106-93-4	1,2-Dibromoethane	ND	50	49.8	100	50	49.2	98	1	75-120/13
75-71-8	Dichlorodifluoromethane	ND	50	41.9	84	50	48.5	97	15	42-167/19
95-50-1	1,2-Dichlorobenzene	ND	50	51.1	102	50	50.2	100	2	82-124/14
541-73-1	1,3-Dichlorobenzene	ND	50	52.8	106	50	51.5	103	2	84-125/14
106-46-7	1,4-Dichlorobenzene	ND	50	49.8	100	50	48.6	97	2	78-120/15
75-34-3	1,1-Dichloroethane	0.33	J 50	58.2	116	50	56.5	112	3	81-122/15
107-06-2	1,2-Dichloroethane	ND	50	51.0	102	50	49.6	99	3	75-125/14
75-35-4	1,1-Dichloroethylene	ND	50	57.5	115	50	55.8	112	3	78-137/18
156-59-2	cis-1,2-Dichloroethylene	0.44	J 50	55.3	110	50	53.6	106	3	78-120/15
156-60-5	trans-1,2-Dichloroethylene	ND	50	55.9	112	50	54.7	109	2	76-127/17
78-87-5	1,2-Dichloropropane	ND	50	52.9	106	50	51.8	104	2	76-124/14
142-28-9	1,3-Dichloropropane	ND	50	49.1	98	50	48.8	98	1	80-118/13
594-20-7	2,2-Dichloropropane	ND	50	55.5	111	50	53.7	107	3	74-139/17
10061-01-5	cis-1,3-Dichloropropene	ND	50	43.3	87	50	41.3	83	5	75-118/23
10061-02-6	trans-1,3-Dichloropropene	ND	50	45.9	92	50	44.1	88	4	80-120/22
100-41-4	Ethylbenzene	ND	50	53.9	108	50	52.6	105	2	81-121/14
110-54-3	Hexane	ND	50	51.8	104	50	51.6	103	0	69-132/20
98-82-8	Isopropylbenzene	ND	50	51.7	103	50	50.6	101	2	83-132/15
99-87-6	p-Isopropyltoluene	ND	50	52.2	104	50	51.4	103	2	79-130/16
74-83-9	Methyl Bromide	ND	50	53.3	107	50	60.5	121	13	59-143/19

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA84754
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA84754-19MS	E106698.D	5	04/22/21	LR	n/a	n/a	VE2461
FA84754-19MSD	E106699.D	5	04/22/21	LR	n/a	n/a	VE2461
FA84754-19 ^a	E106684.D	1	04/22/21	LR	n/a	n/a	VE2461

The QC reported here applies to the following samples:

Method: SW846 8260B

FA84754-4, FA84754-5, FA84754-6, FA84754-7, FA84754-9, FA84754-10, FA84754-12, FA84754-14, FA84754-16, FA84754-17, FA84754-18, FA84754-20, FA84754-21

CAS No.	Compound	FA84754-19 Spike		MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
		ug/l	Q							
74-87-3	Methyl Chloride	ND	50	49.1	98	50	57.4	115	16	50-159/19
74-95-3	Methylene Bromide	ND	50	50.5	101	50	49.1	98	3	78-119/14
75-09-2	Methylene Chloride	ND	50	59.1	118	50	60.6	121	3	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	250	225	90	250	228	91	1	66-122/16
103-65-1	n-Propylbenzene	ND	50	53.0	106	50	52.4	105	1	82-133/15
100-42-5	Styrene	ND	50	47.7	95	50	48.8	98	2	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	ND	50	52.5	105	50	51.2	102	3	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	50.6	101	50	49.1	98	3	72-120/14
127-18-4	Tetrachloroethylene	ND	50	55.2	110	50	54.2	108	2	76-135/16
108-88-3	Toluene	0.17	J 50	52.5	105	50	51.4	102	2	80-120/14
120-82-1	1,2,4-Trichlorobenzene	ND	50	47.6	95	50	46.3	93	3	73-129/20
71-55-6	1,1,1-Trichloroethane	ND	50	55.1	110	50	54.2	108	2	75-130/16
79-00-5	1,1,2-Trichloroethane	ND	50	51.1	102	50	50.6	101	1	76-119/14
79-01-6	Trichloroethylene	0.14	J 50	51.1	102	50	50.0	100	2	81-126/15
75-69-4	Trichlorofluoromethane	ND	50	53.4	107	50	60.5	121	12	71-156/21
96-18-4	1,2,3-Trichloropropane	ND	50	49.1	98	50	48.1	96	2	77-120/16
95-63-6	1,2,4-Trimethylbenzene	ND	50	48.5	97	50	47.7	95	2	79-120/18
108-67-8	1,3,5-Trimethylbenzene	ND	50	50.9	102	50	49.9	100	2	79-120/19
75-01-4	Vinyl Chloride	0.80	50	49.2	97	50	56.9	112	15	69-159/18
	m,p-Xylene	0.27	J 100	102	102	100	100	100	2	79-126/15
95-47-6	o-Xylene	ND	50	50.2	100	50	49.4	99	2	80-127/14

CAS No.	Surrogate Recoveries	MS	MSD	FA84754-19	Limits
1868-53-7	Dibromofluoromethane	100%	99%	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	103%	100%	79-125%
2037-26-5	Toluene-D8	100%	100%	99%	85-112%
460-00-4	4-Bromofluorobenzene	98%	100%	101%	83-118%

(a) Confirmation run.

* = Outside of Control Limits.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Univar

ERMORP: Univar; 8201 S 212th St, Kent, WA

577675.04

SGS Job Number: FA89630

Sampling Dates: 10/05/21 - 10/06/21



Report to:

ERM
1050 SW 6th Ave Suite 1650
Portland, OR 97204
Dylan.Stankus@erm.com; Jessie.Cooper@erm.com;
Stephanie.Frith@erm.com
ATTN: Dylan Stankus

Total number of pages in report: **79**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Elvin Kumar 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001)
DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177),
AL, AK, AR, CT, IA, KY, MA, MI, MS, ND, NH, NV, OK, OR, UT, VT, WA, WV

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Test results relate only to samples analyzed.

Table of Contents

-1-

Section 1: Sample Summary	3
Section 2: Case Narrative/Conformance Summary	5
Section 3: Summary of Hits	7
Section 4: Sample Results	13
4.1: FA89630-1: MW-22-20211005	14
4.2: FA89630-2: TB-20211005-01	16
4.3: FA89630-3: MW-05-20211005	18
4.4: FA89630-4: MW-08-20211005	20
4.5: FA89630-5: MW-09-20211005	22
4.6: FA89630-6: MW-12-20211005	24
4.7: FA89630-7: MW-04-20211005	26
4.8: FA89630-8: MW-13-20211005	28
4.9: FA89630-9: MW-21-20211005	30
4.10: FA89630-10: TB-20211006-01	32
4.11: FA89630-11: DUP-02	34
4.12: FA89630-12: DUP-01	36
4.13: FA89630-13: MW-02-20211006	38
4.14: FA89630-14: MW-06-20211006	40
4.15: FA89630-15: MW-14-20211006	42
4.16: FA89630-16: MW-01-20211006	44
4.17: FA89630-17: MW-16-20211006	46
4.18: FA89630-18: MW-07-20211006	48
4.19: FA89630-19: MW-23-20211006	50
4.20: FA89630-20: DUP-03	52
4.21: FA89630-21: MW-10-20211006	54
4.22: FA89630-22: MW-18-20211006	56
4.23: FA89630-23: MW-19-20211006	58
Section 5: Misc. Forms	60
5.1: Chain of Custody	61
Section 6: MS Volatiles - QC Data Summaries	64
6.1: Method Blank Summary	65
6.2: Blank Spike Summary	70
6.3: Matrix Spike/Matrix Spike Duplicate Summary	75



Sample Summary

Univar

Job No: FA89630

ERMORP: Univar; 8201 S 212th St, Kent, WA
 Project No: 577675.04

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
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This report contains results reported as ND = Not detected. The following applies:
 Organics ND = Not detected above the MDL

FA89630-1	10/05/21	10:14	MCJC	10/07/21	AQ	Ground Water	MW-22-20211005
FA89630-2	10/05/21	00:00	MCJC	10/07/21	AQ	Trip Blank Water	TB-20211005-01
FA89630-3	10/05/21	11:23	MCJC	10/07/21	AQ	Ground Water	MW-05-20211005
FA89630-4	10/05/21	12:41	MCJC	10/07/21	AQ	Ground Water	MW-08-20211005
FA89630-5	10/05/21	13:17	MCJC	10/07/21	AQ	Ground Water	MW-09-20211005
FA89630-6	10/05/21	14:03	MCJC	10/07/21	AQ	Ground Water	MW-12-20211005
FA89630-7	10/05/21	14:49	MCJC	10/07/21	AQ	Ground Water	MW-04-20211005
FA89630-8	10/05/21	15:39	MCJC	10/07/21	AQ	Ground Water	MW-13-20211005
FA89630-9	10/05/21	16:27	MCJC	10/07/21	AQ	Ground Water	MW-21-20211005
FA89630-10	10/06/21	00:00	MCJC	10/07/21	AQ	Trip Blank Water	TB-20211006-01
FA89630-11	10/05/21	00:00	MCJC	10/07/21	AQ	Ground Water	DUP-02
FA89630-12	10/05/21	00:00	MCJC	10/07/21	AQ	Ground Water	DUP-01



Sample Summary

(continued)

Univar

Job No: FA89630

ERMORP: Univar; 8201 S 212th St, Kent, WA
 Project No: 577675.04

Sample Number	Collected		Matrix Code	Received	Type	Client Sample ID
	Date	Time By				
FA89630-13	10/06/21	08:49 MCJC	10/07/21	AQ	Ground Water	MW-02-20211006
FA89630-14	10/06/21	09:27 MCJC	10/07/21	AQ	Ground Water	MW-06-20211006
FA89630-15	10/06/21	10:03 MCJC	10/07/21	AQ	Ground Water	MW-14-20211006
FA89630-16	10/06/21	10:53 MCJC	10/07/21	AQ	Ground Water	MW-01-20211006
FA89630-17	10/06/21	11:43 MCJC	10/07/21	AQ	Ground Water	MW-16-20211006
FA89630-18	10/06/21	12:55 MCJC	10/07/21	AQ	Ground Water	MW-07-20211006
FA89630-19	10/06/21	13:29 MCJC	10/07/21	AQ	Ground Water	MW-23-20211006
FA89630-20	10/06/21	00:00 MCJC	10/07/21	AQ	Ground Water	DUP-03
FA89630-21	10/06/21	14:17 MCJC	10/07/21	AQ	Ground Water	MW-10-20211006
FA89630-22	10/06/21	14:54 MCJC	10/07/21	AQ	Ground Water	MW-18-20211006
FA89630-23	10/06/21	15:35 MCJC	10/07/21	AQ	Ground Water	MW-19-20211006

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Univar

Job No: FA89630

Site: ERMORP: Univar; 8201 S 212th St, Kent, WA

Report Date 11/3/2021 1:06:17 PM

On 10/07/2021, 21 Sample(s), 2 Trip Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 5.8 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of FA89630 was Assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

MS Volatiles By Method SW846 8260B

Matrix: AQ

Batch ID: VA2965

Sample(s) FA89630-1MS, FA89630-1MSD were used as the QC samples indicated.

Sample(s) FA89630-11, FA89630-16, FA89630-20, FA89630-3, FA89630-6, FA89630-9 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.

Blank Spike Recovery(s) for 4-Methyl-2-pentanone (MIBK) are outside control limits.

Matrix Spike Recovery(s) for 1,1-Dichloroethane, Chloroethane, Chloroform, Methylene Chloride, Trichloroethylene are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for 1,1-Dichloroethane, Benzene, Chloroethane, Chloroform, Trichloroethylene are outside control limits. Probable cause is due to matrix interference.

RPD(s) for MSD for Methylene Chloride are outside control limits for sample FA89630-1MSD. Probable cause is due to sample non-homogeneity.

Sample(s) FA89630-11, FA89630-9 have surrogates outside control limits.

FA89630-1 for 4-Methyl-2-pentanone (MIBK): Associated BS recovery outside control limits high; however sample is ND.

FA89630-2 for 4-Methyl-2-pentanone (MIBK): Associated BS recovery outside control limits high; however sample is ND.

FA89630-3 for 4-Methyl-2-pentanone (MIBK): Associated BS recovery outside control limits high; however sample is ND.

FA89630-3 for Methylene Chloride: Suspected laboratory contaminant.

FA89630-4 for 4-Methyl-2-pentanone (MIBK): Associated BS recovery outside control limits high; however sample is ND.

FA89630-5 for 4-Methyl-2-pentanone (MIBK): Associated BS recovery outside control limits high; however sample is ND.

FA89630-6 for 4-Methyl-2-pentanone (MIBK): Associated BS recovery outside control limits high; however sample is ND.

FA89630-6 for Methylene Chloride: Suspected laboratory contaminant.

FA89630-7 for 4-Methyl-2-pentanone (MIBK): Associated BS recovery outside control limits high; however sample is ND.

FA89630-8 for 4-Methyl-2-pentanone (MIBK): Associated BS recovery outside control limits high; however sample is ND.

FA89630-9 for 4-Methyl-2-pentanone (MIBK): Associated BS recovery outside control limits high; however sample is ND.

FA89630-9 for Dibromofluoromethane: Outside control limits.

FA89630-9 for Methylene Chloride: Suspected laboratory contaminant.

FA89630-10 for 4-Methyl-2-pentanone (MIBK): Associated BS recovery outside control limits high; however sample is ND.

FA89630-11 for 4-Methyl-2-pentanone (MIBK): Associated BS recovery outside control limits high; however sample is ND.

FA89630-11 for Dibromofluoromethane: Outside control limits.

FA89630-11 for Methylene Chloride: Suspected laboratory contaminant.

FA89630-12 for 4-Methyl-2-pentanone (MIBK): Associated BS recovery outside control limits high; however sample is ND.

FA89630-13 for 4-Methyl-2-pentanone (MIBK): Associated BS recovery outside control limits high; however sample is ND.

FA89630-14 for 4-Methyl-2-pentanone (MIBK): Associated BS recovery outside control limits high; however sample is ND.

FA89630-15 for 4-Methyl-2-pentanone (MIBK): Associated BS recovery outside control limits high; however sample is ND.

FA89630-16 for 4-Methyl-2-pentanone (MIBK): Associated BS recovery outside control limits high; however sample is ND.

FA89630-16 for Methylene Chloride: Suspected laboratory contaminant.

FA89630-17 for 4-Methyl-2-pentanone (MIBK): Associated BS recovery outside control limits high; however sample is ND.

FA89630-18 for 4-Methyl-2-pentanone (MIBK): Associated BS recovery outside control limits high; however sample is ND.

FA89630-19 for 4-Methyl-2-pentanone (MIBK): Associated BS recovery outside control limits high; however sample is ND.

FA89630-20 for 4-Methyl-2-pentanone (MIBK): Associated BS recovery outside control limits high; however sample is ND.

FA89630-20 for Methylene Chloride: Suspected laboratory contaminant.

Matrix: AQ**Batch ID:** VA2972

Sample(s) FA89630-23MS, FA89630-23MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for 1,1,1-Trichloroethane, 1,1-Dichloroethane, Benzene, Carbon Tetrachloride, Chloroethane, Chloroform, cis-1,2-Dichloroethylene, Methyl Bromide, Trichloroethylene, Vinyl Chloride are outside control limits. Outside control limits due to high level in sample relative to spike amount.

Matrix Spike Duplicate Recovery(s) for 1,1,1-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethylene, Benzene, Carbon Tetrachloride, Chloroethane, Chloroform, cis-1,2-Dichloroethylene, Methyl Bromide, Trichloroethylene, Vinyl Chloride are outside control limits. Probable cause is due to matrix interference.

Sample(s) FA89630-21, FA89630-23 have surrogates outside control limits.

FA89630-21 for 2,2-Dichloropropane: Associated CCV recovery outside control limits high, sample was ND.

FA89630-21 for Dibromofluoromethane: Outside control limits; however, sample is ND.

FA89630-22 for 2,2-Dichloropropane: Associated CCV recovery outside control limits high, sample was ND.

FA89630-23 for 1,2-Dichloroethane-D4: Outside control limits.

FA89630-23 for 2,2-Dichloropropane: Associated CCV recovery outside control limits high, sample was ND.

FA89630-23 for Dibromofluoromethane: Outside control limits.

Matrix: AQ**Batch ID:** VA2973

Sample(s) FA89667-2MS, FA89667-2MSD were used as the QC samples indicated.

The following samples were run outside of holding time for method SW846 8260B: FA89630-1, FA89630-12, FA89630-8

Matrix Spike Recovery(s) for Chloroethane are outside control limits. Probable cause is due to matrix interference.

RPD(s) for MSD for Chloroethane are outside control limits for sample FA89667-2MSD. Probable cause is due to sample non-homogeneity.

Sample(s) FA89630-1, FA89630-12, FA89630-8 have surrogates outside control limits.

FA89630-1: Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA89630-8: Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA89630-9: Confirmation run beyond holdtime.

FA89630-11: Confirmation run beyond holdtime.

FA89630-12: Sample re-analyzed beyond hold time; reported results are considered minimum values.

VA2973-BS: No MS/MSD available for this run.

Matrix: AQ**Batch ID:** VE2563

Sample(s) FA89630-22, FA89630-23 have surrogates outside control limits. No ECC available for this run. Confirmation run for surrogate recoveries.

FA89630-23: No ECC available for this run. Confirmation run for surrogate recoveries.

FA89630-22: No ECC available for this run. Confirmation run.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

Ariel Hartney, Client Services (signature on file)

Summary of Hits

Job Number: FA89630
Account: Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA
Collected: 10/05/21 thru 10/06/21



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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FA89630-1 MW-22-20211005

Benzene	0.73	0.50	0.13	ug/l	SW846 8260B
sec-Butylbenzene	0.83	0.50	0.13	ug/l	SW846 8260B
Chloroethane ^a	77.5	2.5	1.0	ug/l	SW846 8260B
1,1-Dichloroethane	0.16 J	0.50	0.13	ug/l	SW846 8260B
1,2-Dichloroethane	0.23 J	0.50	0.13	ug/l	SW846 8260B
cis-1,2-Dichloroethylene	11.8	0.50	0.13	ug/l	SW846 8260B
trans-1,2-Dichloroethylene	0.58	0.50	0.13	ug/l	SW846 8260B
Ethylbenzene	0.20 J	0.50	0.13	ug/l	SW846 8260B
Hexane	2.1	1.0	0.20	ug/l	SW846 8260B
Isopropylbenzene	0.41 J	0.50	0.13	ug/l	SW846 8260B
n-Propylbenzene	0.33 J	0.50	0.13	ug/l	SW846 8260B
Toluene	0.82	0.50	0.13	ug/l	SW846 8260B
1,2,4-Trimethylbenzene	0.22 J	0.50	0.13	ug/l	SW846 8260B
Vinyl Chloride	7.6	0.50	0.13	ug/l	SW846 8260B
m,p-Xylene	2.6	1.0	0.13	ug/l	SW846 8260B
o-Xylene	0.58	0.50	0.13	ug/l	SW846 8260B

FA89630-2 TB-20211005-01

No hits reported in this sample.

FA89630-3 MW-05-20211005

cis-1,2-Dichloroethylene	106	1.3	0.31	ug/l	SW846 8260B
Methylene Chloride ^b	6.8 B	5.0	2.5	ug/l	SW846 8260B
Tetrachloroethylene	35.3	1.3	0.31	ug/l	SW846 8260B
Trichloroethylene	21.3	1.3	0.31	ug/l	SW846 8260B

FA89630-4 MW-08-20211005

1,1-Dichloroethylene	2.1	0.50	0.13	ug/l	SW846 8260B
cis-1,2-Dichloroethylene	7.0	0.50	0.13	ug/l	SW846 8260B
trans-1,2-Dichloroethylene	0.50	0.50	0.13	ug/l	SW846 8260B
Tetrachloroethylene	0.34 J	0.50	0.13	ug/l	SW846 8260B
Trichloroethylene	27.8	0.50	0.13	ug/l	SW846 8260B
Vinyl Chloride	0.67	0.50	0.13	ug/l	SW846 8260B

FA89630-5 MW-09-20211005

Benzene	0.42 J	0.50	0.13	ug/l	SW846 8260B
cis-1,2-Dichloroethylene	0.15 J	0.50	0.13	ug/l	SW846 8260B
trans-1,2-Dichloroethylene	0.36 J	0.50	0.13	ug/l	SW846 8260B
Vinyl Chloride	0.15 J	0.50	0.13	ug/l	SW846 8260B

Summary of Hits

Job Number: FA89630
Account: Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA
Collected: 10/05/21 thru 10/06/21



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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FA89630-6 MW-12-20211005

cis-1,2-Dichloroethylene	120	2.5	0.63	ug/l	SW846 8260B
Methylene Chloride ^b	11.5 B	10	5.0	ug/l	SW846 8260B
Tetrachloroethylene	26.4	2.5	0.63	ug/l	SW846 8260B
Trichloroethylene	4.1	2.5	0.63	ug/l	SW846 8260B
Vinyl Chloride	5.7	2.5	0.63	ug/l	SW846 8260B

FA89630-7 MW-04-20211005

Benzene	1.7	0.50	0.13	ug/l	SW846 8260B
sec-Butylbenzene	0.96	0.50	0.13	ug/l	SW846 8260B
Chloroethane	12.6	0.50	0.20	ug/l	SW846 8260B
1,1-Dichloroethane	0.27 J	0.50	0.13	ug/l	SW846 8260B
cis-1,2-Dichloroethylene	0.14 J	0.50	0.13	ug/l	SW846 8260B
trans-1,2-Dichloroethylene	0.49 J	0.50	0.13	ug/l	SW846 8260B
Hexane	0.21 J	1.0	0.20	ug/l	SW846 8260B
Isopropylbenzene	0.69	0.50	0.13	ug/l	SW846 8260B
n-Propylbenzene	0.37 J	0.50	0.13	ug/l	SW846 8260B
Toluene	0.25 J	0.50	0.13	ug/l	SW846 8260B
Vinyl Chloride	0.31 J	0.50	0.13	ug/l	SW846 8260B
m,p-Xylene	0.17 J	1.0	0.13	ug/l	SW846 8260B

FA89630-8 MW-13-20211005

Benzene	0.64	0.50	0.13	ug/l	SW846 8260B
sec-Butylbenzene	1.1	0.50	0.13	ug/l	SW846 8260B
Chloroethane ^a	68.7	2.5	1.0	ug/l	SW846 8260B
1,1-Dichloroethane	0.17 J	0.50	0.13	ug/l	SW846 8260B
1,2-Dichloroethane	0.20 J	0.50	0.13	ug/l	SW846 8260B
cis-1,2-Dichloroethylene	0.20 J	0.50	0.13	ug/l	SW846 8260B
trans-1,2-Dichloroethylene	2.3	0.50	0.13	ug/l	SW846 8260B
Ethylbenzene	2.8	0.50	0.13	ug/l	SW846 8260B
Hexane	2.7	1.0	0.20	ug/l	SW846 8260B
Isopropylbenzene	9.4	0.50	0.13	ug/l	SW846 8260B
n-Propylbenzene	12.7	0.50	0.13	ug/l	SW846 8260B
Toluene	0.42 J	0.50	0.13	ug/l	SW846 8260B
1,2,4-Trimethylbenzene	34.2	0.50	0.13	ug/l	SW846 8260B
1,3,5-Trimethylbenzene	0.20 J	0.50	0.13	ug/l	SW846 8260B
Vinyl Chloride	0.29 J	0.50	0.13	ug/l	SW846 8260B
m,p-Xylene	49.1	1.0	0.13	ug/l	SW846 8260B
o-Xylene	0.24 J	0.50	0.13	ug/l	SW846 8260B

Summary of Hits

Job Number: FA89630
Account: Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA
Collected: 10/05/21 thru 10/06/21



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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FA89630-9 MW-21-20211005

Chloroethane	316	50	20	ug/l	SW846 8260B
Ethylbenzene	299	50	13	ug/l	SW846 8260B
Isopropylbenzene	43.0 J	50	13	ug/l	SW846 8260B
Methylene Chloride ^b	185 JB	200	100	ug/l	SW846 8260B
n-Propylbenzene	88.4	50	13	ug/l	SW846 8260B
1,2,4-Trimethylbenzene	187	50	13	ug/l	SW846 8260B
1,3,5-Trimethylbenzene	115	50	13	ug/l	SW846 8260B
m,p-Xylene	3990	100	13	ug/l	SW846 8260B

FA89630-10 TB-20211006-01

No hits reported in this sample.

FA89630-11 DUP-02

cis-1,2-Dichloroethylene	117	2.5	0.63	ug/l	SW846 8260B
Methylene Chloride ^b	11.3 B	10	5.0	ug/l	SW846 8260B
Tetrachloroethylene	37.1	2.5	0.63	ug/l	SW846 8260B
Trichloroethylene	22.3	2.5	0.63	ug/l	SW846 8260B

FA89630-12 DUP-01

Benzene	0.71	0.50	0.13	ug/l	SW846 8260B
sec-Butylbenzene	0.83	0.50	0.13	ug/l	SW846 8260B
Chloroethane ^a	74.7	2.5	1.0	ug/l	SW846 8260B
1,1-Dichloroethane	0.18 J	0.50	0.13	ug/l	SW846 8260B
1,2-Dichloroethane	0.20 J	0.50	0.13	ug/l	SW846 8260B
cis-1,2-Dichloroethylene	15.3	0.50	0.13	ug/l	SW846 8260B
trans-1,2-Dichloroethylene	0.61	0.50	0.13	ug/l	SW846 8260B
Ethylbenzene	0.25 J	0.50	0.13	ug/l	SW846 8260B
Hexane	2.2	1.0	0.20	ug/l	SW846 8260B
Isopropylbenzene	0.42 J	0.50	0.13	ug/l	SW846 8260B
n-Propylbenzene	0.35 J	0.50	0.13	ug/l	SW846 8260B
Toluene	0.92	0.50	0.13	ug/l	SW846 8260B
1,2,4-Trimethylbenzene	0.28 J	0.50	0.13	ug/l	SW846 8260B
Vinyl Chloride	10.6	0.50	0.13	ug/l	SW846 8260B
m,p-Xylene	2.6	1.0	0.13	ug/l	SW846 8260B
o-Xylene	0.60	0.50	0.13	ug/l	SW846 8260B

FA89630-13 MW-02-20211006

1,1-Dichloroethane	0.38 J	0.50	0.13	ug/l	SW846 8260B
cis-1,2-Dichloroethylene	0.33 J	0.50	0.13	ug/l	SW846 8260B

Summary of Hits

Job Number: FA89630
Account: Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA
Collected: 10/05/21 thru 10/06/21



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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FA89630-14 MW-06-20211006

1,1-Dichloroethane	0.39 J	0.50	0.13	ug/l	SW846 8260B
trans-1,2-Dichloroethylene	0.18 J	0.50	0.13	ug/l	SW846 8260B

FA89630-15 MW-14-20211006

No hits reported in this sample.

FA89630-16 MW-01-20211006

sec-Butylbenzene	1.1	0.50	0.13	ug/l	SW846 8260B
Chloroethane	29.8	0.50	0.20	ug/l	SW846 8260B
1,1-Dichloroethane	21.6	0.50	0.13	ug/l	SW846 8260B
1,1-Dichloroethylene	0.16 J	0.50	0.13	ug/l	SW846 8260B
cis-1,2-Dichloroethylene	2.0	0.50	0.13	ug/l	SW846 8260B
trans-1,2-Dichloroethylene	0.23 J	0.50	0.13	ug/l	SW846 8260B
Ethylbenzene	0.29 J	0.50	0.13	ug/l	SW846 8260B
Isopropylbenzene	3.0	0.50	0.13	ug/l	SW846 8260B
Methylene Chloride ^b	1.7 JB	2.0	1.0	ug/l	SW846 8260B
n-Propylbenzene	4.1	0.50	0.13	ug/l	SW846 8260B
Tetrachloroethylene	0.57	0.50	0.13	ug/l	SW846 8260B
Toluene	0.17 J	0.50	0.13	ug/l	SW846 8260B
1,1,1-Trichloroethane	0.57	0.50	0.13	ug/l	SW846 8260B
Trichloroethylene	4.0	0.50	0.13	ug/l	SW846 8260B
Vinyl Chloride	4.9	0.50	0.13	ug/l	SW846 8260B
m,p-Xylene	0.20 J	1.0	0.13	ug/l	SW846 8260B
o-Xylene	2.3	0.50	0.13	ug/l	SW846 8260B

FA89630-17 MW-16-20211006

Chloroethane	1.3	0.50	0.20	ug/l	SW846 8260B
1,1-Dichloroethane	0.14 J	0.50	0.13	ug/l	SW846 8260B
Vinyl Chloride	1.1	0.50	0.13	ug/l	SW846 8260B

FA89630-18 MW-07-20211006

cis-1,2-Dichloroethylene	0.16 J	0.50	0.13	ug/l	SW846 8260B
Tetrachloroethylene	1.9	0.50	0.13	ug/l	SW846 8260B
Trichloroethylene	0.34 J	0.50	0.13	ug/l	SW846 8260B

FA89630-19 MW-23-20211006

cis-1,2-Dichloroethylene	0.38 J	0.50	0.13	ug/l	SW846 8260B
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Summary of Hits

Job Number: FA89630
Account: Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA
Collected: 10/05/21 thru 10/06/21



Lab Sample ID	Client Sample ID	Result/ Analyte	RL	MDL	Units	Method
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Tetrachloroethylene		10.2	0.50	0.13	ug/l	SW846 8260B
Trichloroethylene		0.95	0.50	0.13	ug/l	SW846 8260B

FA89630-20 DUP-03

sec-Butylbenzene		1.1	0.50	0.13	ug/l	SW846 8260B
Chloroethane		31.3	0.50	0.20	ug/l	SW846 8260B
1,1-Dichloroethane		21.3	0.50	0.13	ug/l	SW846 8260B
1,1-Dichloroethylene		0.15 J	0.50	0.13	ug/l	SW846 8260B
cis-1,2-Dichloroethylene		1.9	0.50	0.13	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		0.22 J	0.50	0.13	ug/l	SW846 8260B
Ethylbenzene		0.26 J	0.50	0.13	ug/l	SW846 8260B
Isopropylbenzene		2.9	0.50	0.13	ug/l	SW846 8260B
Methylene Chloride ^b		1.6 JB	2.0	1.0	ug/l	SW846 8260B
n-Propylbenzene		4.0	0.50	0.13	ug/l	SW846 8260B
Tetrachloroethylene		0.58	0.50	0.13	ug/l	SW846 8260B
Toluene		0.17 J	0.50	0.13	ug/l	SW846 8260B
1,1,1-Trichloroethane		0.55	0.50	0.13	ug/l	SW846 8260B
Trichloroethylene		3.9	0.50	0.13	ug/l	SW846 8260B
Vinyl Chloride		4.8	0.50	0.13	ug/l	SW846 8260B
m,p-Xylene		0.18 J	1.0	0.13	ug/l	SW846 8260B
o-Xylene		2.3	0.50	0.13	ug/l	SW846 8260B

FA89630-21 MW-10-20211006

No hits reported in this sample.

FA89630-22 MW-18-20211006

sec-Butylbenzene		0.89	0.50	0.13	ug/l	SW846 8260B
Chloroethane		0.68	0.50	0.20	ug/l	SW846 8260B
1,1-Dichloroethane		0.13 J	0.50	0.13	ug/l	SW846 8260B
cis-1,2-Dichloroethylene		0.27 J	0.50	0.13	ug/l	SW846 8260B
Hexane		0.24 J	1.0	0.20	ug/l	SW846 8260B
Vinyl Chloride		0.46 J	0.50	0.13	ug/l	SW846 8260B

FA89630-23 MW-19-20211006

cis-1,2-Dichloroethylene		2980	100	25	ug/l	SW846 8260B
Ethylbenzene		37.1 J	100	25	ug/l	SW846 8260B
Methylene Chloride		471	400	200	ug/l	SW846 8260B
Toluene		91.8 J	100	25	ug/l	SW846 8260B
Vinyl Chloride		5400	100	25	ug/l	SW846 8260B

(a) Sample re-analyzed beyond hold time; reported results are considered minimum values. Values estimated due to

Summary of Hits

Job Number: FA89630
Account: Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA
Collected: 10/05/21 thru 10/06/21



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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surrogate failure.
(b) Suspected laboratory contaminant.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW-22-20211005	Date Sampled:	10/05/21
Lab Sample ID:	FA89630-1	Date Received:	10/07/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0227998.D	1	10/13/21 12:29	JL	n/a	n/a	VA2965
Run #2 ^a	A0228193.D	5	10/20/21 18:05	JL	n/a	n/a	VA2973

Run #	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	0.73	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	0.83	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane ^b	77.5 ^c	2.5	1.0	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	0.16	0.50	0.13	ug/l	J
107-06-2	1,2-Dichloroethane	0.23	0.50	0.13	ug/l	J
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	11.8	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.58	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	0.20	0.50	0.13	ug/l	J

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-22-20211005	Date Sampled:	10/05/21
Lab Sample ID:	FA89630-1	Date Received:	10/07/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	2.1	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	0.41	0.50	0.13	ug/l	J
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIB) ^d	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	0.33	0.50	0.13	ug/l	J
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	0.82	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.22	0.50	0.13	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	7.6	0.50	0.13	ug/l	
	m,p-Xylene	2.6	1.0	0.13	ug/l	
95-47-6	o-Xylene	0.58	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%	123% ^e	83-118%
17060-07-0	1,2-Dichloroethane-D4	110%	129% ^e	79-125%
2037-26-5	Toluene-D8	101%	102%	85-112%
460-00-4	4-Bromofluorobenzene	89%	88%	83-118%

(a) Sample re-analyzed beyond hold time; reported results are considered minimum values.

(b) Values estimated due to surrogate failure.

(c) Result is from Run# 2

(d) Associated BS recovery outside control limits high; however sample is ND.

(e) Outside control limits.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TB-20211005-01		Date Sampled: 10/05/21
Lab Sample ID: FA89630-2		Date Received: 10/07/21
Matrix: AQ - Trip Blank Water		Percent Solids: n/a
Method: SW846 8260B		
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0227996.D	1	10/13/21 11:46	JL	n/a	n/a	VA2965
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-20211005-01	Date Sampled:	10/05/21
Lab Sample ID:	FA89630-2	Date Received:	10/07/21
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIB ^a)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	ND	0.50	0.13	ug/l	
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		83-118%
17060-07-0	1,2-Dichloroethane-D4	109%		79-125%
2037-26-5	Toluene-D8	101%		85-112%
460-00-4	4-Bromofluorobenzene	95%		83-118%

(a) Associated BS recovery outside control limits high; however sample is ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-05-20211005		Date Sampled: 10/05/21
Lab Sample ID: FA89630-3		Date Received: 10/07/21
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	A0228012.D	2.5	10/13/21 17:38	JL	n/a	n/a	VA2965

Run #1	Purge Volume
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	5.0	ug/l	
71-43-2	Benzene	ND	1.3	0.31	ug/l	
108-86-1	Bromobenzene	ND	1.3	0.31	ug/l	
75-27-4	Bromodichloromethane	ND	1.3	0.31	ug/l	
75-25-2	Bromoform	ND	1.3	0.31	ug/l	
104-51-8	n-Butylbenzene	ND	1.3	0.31	ug/l	
135-98-8	sec-Butylbenzene	ND	1.3	0.31	ug/l	
98-06-6	tert-Butylbenzene	ND	1.3	0.31	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.3	0.31	ug/l	
108-90-7	Chlorobenzene	ND	1.3	0.31	ug/l	
75-00-3	Chloroethane	ND	1.3	0.50	ug/l	
67-66-3	Chloroform	ND	1.3	0.31	ug/l	
95-49-8	o-Chlorotoluene	ND	1.3	0.31	ug/l	
106-43-4	p-Chlorotoluene	ND	1.3	0.31	ug/l	
124-48-1	Dibromochloromethane	ND	1.3	0.31	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.3	0.62	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.3	0.31	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.3	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.3	0.31	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.3	0.31	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.3	0.31	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.3	0.31	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.3	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.3	0.31	ug/l	
156-59-2	cis-1,2-Dichloroethylene	106	1.3	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.3	0.31	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.3	0.31	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.3	0.31	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.3	0.31	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.3	0.31	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.3	0.31	ug/l	
100-41-4	Ethylbenzene	ND	1.3	0.31	ug/l	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-05-20211005	Date Sampled:	10/05/21
Lab Sample ID:	FA89630-3	Date Received:	10/07/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	2.5	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.3	0.31	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.3	0.31	ug/l	
74-83-9	Methyl Bromide	ND	1.3	0.50	ug/l	
74-87-3	Methyl Chloride	ND	1.3	0.50	ug/l	
74-95-3	Methylene Bromide	ND	1.3	0.31	ug/l	
75-09-2	Methylene Chloride ^a	6.8	5.0	2.5	ug/l	B
108-10-1	4-Methyl-2-pentanone (MIB) ^b	ND	6.3	3.1	ug/l	
103-65-1	n-Propylbenzene	ND	1.3	0.31	ug/l	
100-42-5	Styrene	ND	1.3	0.31	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.3	0.31	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.3	0.31	ug/l	
127-18-4	Tetrachloroethylene	35.3	1.3	0.31	ug/l	
108-88-3	Toluene	ND	1.3	0.31	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.3	0.31	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.3	0.31	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.3	0.31	ug/l	
79-01-6	Trichloroethylene	21.3	1.3	0.31	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.3	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	1.3	0.31	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.3	0.31	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.3	0.31	ug/l	
75-01-4	Vinyl Chloride	ND	1.3	0.31	ug/l	
	m,p-Xylene	ND	2.5	0.31	ug/l	
95-47-6	o-Xylene	ND	1.3	0.31	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%		83-118%
17060-07-0	1,2-Dichloroethane-D4	117%		79-125%
2037-26-5	Toluene-D8	101%		85-112%
460-00-4	4-Bromofluorobenzene	93%		83-118%

(a) Suspected laboratory contaminant.

(b) Associated BS recovery outside control limits high; however sample is ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-08-20211005	Date Sampled:	10/05/21
Lab Sample ID:	FA89630-4	Date Received:	10/07/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0227999.D	1	10/13/21 12:51	JL	n/a	n/a	VA2965
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	2.1	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	7.0	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-08-20211005	Date Sampled:	10/05/21
Lab Sample ID:	FA89630-4	Date Received:	10/07/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIB ^a)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	0.34	0.50	0.13	ug/l	J
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	27.8	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	0.67	0.50	0.13	ug/l	
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		83-118%
17060-07-0	1,2-Dichloroethane-D4	111%		79-125%
2037-26-5	Toluene-D8	101%		85-112%
460-00-4	4-Bromofluorobenzene	95%		83-118%

(a) Associated BS recovery outside control limits high; however sample is ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-09-20211005		
Lab Sample ID: FA89630-5		Date Sampled: 10/05/21
Matrix: AQ - Ground Water		Date Received: 10/07/21
Method: SW846 8260B		Percent Solids: n/a
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0228000.D	1	10/13/21 13:14	JL	n/a	n/a	VA2965
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	0.42	0.50	0.13	ug/l	J
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.15	0.50	0.13	ug/l	J
156-60-5	trans-1,2-Dichloroethylene	0.36	0.50	0.13	ug/l	J
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.5
4

Report of Analysis

Client Sample ID: MW-09-20211005		Date Sampled: 10/05/21
Lab Sample ID: FA89630-5		Date Received: 10/07/21
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIB ^a)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	0.15	0.50	0.13	ug/l	J
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	112%		83-118%
17060-07-0	1,2-Dichloroethane-D4	112%		79-125%
2037-26-5	Toluene-D8	100%		85-112%
460-00-4	4-Bromofluorobenzene	97%		83-118%

(a) Associated BS recovery outside control limits high; however sample is ND.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.5
4

Report of Analysis

Client Sample ID: MW-12-20211005	Date Sampled: 10/05/21
Lab Sample ID: FA89630-6	Date Received: 10/07/21
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0228013.D	5	10/13/21 18:00	JL	n/a	n/a	VA2965
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	10	ug/l	
71-43-2	Benzene	ND	2.5	0.63	ug/l	
108-86-1	Bromobenzene	ND	2.5	0.63	ug/l	
75-27-4	Bromodichloromethane	ND	2.5	0.63	ug/l	
75-25-2	Bromoform	ND	2.5	0.63	ug/l	
104-51-8	n-Butylbenzene	ND	2.5	0.63	ug/l	
135-98-8	sec-Butylbenzene	ND	2.5	0.63	ug/l	
98-06-6	tert-Butylbenzene	ND	2.5	0.63	ug/l	
56-23-5	Carbon Tetrachloride	ND	2.5	0.63	ug/l	
108-90-7	Chlorobenzene	ND	2.5	0.63	ug/l	
75-00-3	Chloroethane	ND	2.5	1.0	ug/l	
67-66-3	Chloroform	ND	2.5	0.63	ug/l	
95-49-8	o-Chlorotoluene	ND	2.5	0.63	ug/l	
106-43-4	p-Chlorotoluene	ND	2.5	0.63	ug/l	
124-48-1	Dibromochloromethane	ND	2.5	0.63	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	1.2	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.5	0.63	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.5	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2.5	0.63	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2.5	0.63	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2.5	0.63	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.5	0.63	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.5	0.63	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.5	0.63	ug/l	
156-59-2	cis-1,2-Dichloroethylene	120	2.5	0.63	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.5	0.63	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.5	0.63	ug/l	
142-28-9	1,3-Dichloropropane	ND	2.5	0.63	ug/l	
594-20-7	2,2-Dichloropropane	ND	2.5	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.5	0.63	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.5	0.63	ug/l	
100-41-4	Ethylbenzene	ND	2.5	0.63	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.6
 4

Report of Analysis

Client Sample ID: MW-12-20211005		Date Sampled: 10/05/21
Lab Sample ID: FA89630-6		Date Received: 10/07/21
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	5.0	1.0	ug/l	
98-82-8	Isopropylbenzene	ND	2.5	0.63	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.5	0.63	ug/l	
74-83-9	Methyl Bromide	ND	2.5	1.0	ug/l	
74-87-3	Methyl Chloride	ND	2.5	1.0	ug/l	
74-95-3	Methylene Bromide	ND	2.5	0.63	ug/l	
75-09-2	Methylene Chloride ^a	11.5	10	5.0	ug/l	B
108-10-1	4-Methyl-2-pentanone (MIB) ^b	ND	13	6.3	ug/l	
103-65-1	n-Propylbenzene	ND	2.5	0.63	ug/l	
100-42-5	Styrene	ND	2.5	0.63	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2.5	0.63	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.5	0.63	ug/l	
127-18-4	Tetrachloroethylene	26.4	2.5	0.63	ug/l	
108-88-3	Toluene	ND	2.5	0.63	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	0.63	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.5	0.63	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.5	0.63	ug/l	
79-01-6	Trichloroethylene	4.1	2.5	0.63	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.5	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.5	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.5	0.63	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.5	0.63	ug/l	
75-01-4	Vinyl Chloride	5.7	2.5	0.63	ug/l	
	m,p-Xylene	ND	5.0	0.63	ug/l	
95-47-6	o-Xylene	ND	2.5	0.63	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	117%		83-118%
17060-07-0	1,2-Dichloroethane-D4	118%		79-125%
2037-26-5	Toluene-D8	102%		85-112%
460-00-4	4-Bromofluorobenzene	92%		83-118%

(a) Suspected laboratory contaminant.

(b) Associated BS recovery outside control limits high; however sample is ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-04-20211005	Date Sampled:	10/05/21
Lab Sample ID:	FA89630-7	Date Received:	10/07/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0228001.D	1	10/13/21 13:36	JL	n/a	n/a	VA2965
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	1.7	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	0.96	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	12.6	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	0.27	0.50	0.13	ug/l	J
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.14	0.50	0.13	ug/l	J
156-60-5	trans-1,2-Dichloroethylene	0.49	0.50	0.13	ug/l	J
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-04-20211005		Date Sampled: 10/05/21
Lab Sample ID: FA89630-7		Date Received: 10/07/21
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	0.21	1.0	0.20	ug/l	J
98-82-8	Isopropylbenzene	0.69	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIB ^a)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	0.37	0.50	0.13	ug/l	J
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	0.25	0.50	0.13	ug/l	J
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	0.31	0.50	0.13	ug/l	J
	m,p-Xylene	0.17	1.0	0.13	ug/l	J
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		83-118%
17060-07-0	1,2-Dichloroethane-D4	114%		79-125%
2037-26-5	Toluene-D8	94%		85-112%
460-00-4	4-Bromofluorobenzene	100%		83-118%

(a) Associated BS recovery outside control limits high; however sample is ND.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.7
4

Report of Analysis

Client Sample ID:	MW-13-20211005	
Lab Sample ID:	FA89630-8	Date Sampled: 10/05/21
Matrix:	AQ - Ground Water	Date Received: 10/07/21
Method:	SW846 8260B	Percent Solids: n/a
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0228002.D	1	10/13/21 13:58	JL	n/a	n/a	VA2965
Run #2 ^a	A0228188.D	5	10/20/21 16:15	JL	n/a	n/a	VA2973

Run #	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	0.64	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	1.1	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane ^b	68.7 ^c	2.5	1.0	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	0.17	0.50	0.13	ug/l	J
107-06-2	1,2-Dichloroethane	0.20	0.50	0.13	ug/l	J
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.20	0.50	0.13	ug/l	J
156-60-5	trans-1,2-Dichloroethylene	2.3	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	2.8	0.50	0.13	ug/l	

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-13-20211005	Date Sampled:	10/05/21
Lab Sample ID:	FA89630-8	Date Received:	10/07/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	2.7	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	9.4	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIB) ^d	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	12.7	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	0.42	0.50	0.13	ug/l	J
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	34.2	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.20	0.50	0.13	ug/l	J
75-01-4	Vinyl Chloride	0.29	0.50	0.13	ug/l	J
	m,p-Xylene	49.1	1.0	0.13	ug/l	
95-47-6	o-Xylene	0.24	0.50	0.13	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%	124% ^e	83-118%
17060-07-0	1,2-Dichloroethane-D4	112%	126% ^e	79-125%
2037-26-5	Toluene-D8	100%	101%	85-112%
460-00-4	4-Bromofluorobenzene	95%	88%	83-118%

(a) Sample re-analyzed beyond hold time; reported results are considered minimum values.

(b) Values estimated due to surrogate failure.

(c) Result is from Run# 2

(d) Associated BS recovery outside control limits high; however sample is ND.

(e) Outside control limits.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-21-20211005		Date Sampled: 10/05/21
Lab Sample ID: FA89630-9		Date Received: 10/07/21
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0228015.D	100	10/13/21 18:44	JL	n/a	n/a	VA2965
Run #2 ^a	A0228189.D	50	10/20/21 16:37	JL	n/a	n/a	VA2973

Run #	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	1000	200	ug/l	
71-43-2	Benzene	ND	50	13	ug/l	
108-86-1	Bromobenzene	ND	50	13	ug/l	
75-27-4	Bromodichloromethane	ND	50	13	ug/l	
75-25-2	Bromoform	ND	50	13	ug/l	
104-51-8	n-Butylbenzene	ND	50	13	ug/l	
135-98-8	sec-Butylbenzene	ND	50	13	ug/l	
98-06-6	tert-Butylbenzene	ND	50	13	ug/l	
56-23-5	Carbon Tetrachloride	ND	50	13	ug/l	
108-90-7	Chlorobenzene	ND	50	13	ug/l	
75-00-3	Chloroethane	316	50	20	ug/l	
67-66-3	Chloroform	ND	50	13	ug/l	
95-49-8	o-Chlorotoluene	ND	50	13	ug/l	
106-43-4	p-Chlorotoluene	ND	50	13	ug/l	
124-48-1	Dibromochloromethane	ND	50	13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	50	25	ug/l	
106-93-4	1,2-Dibromoethane	ND	50	13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	50	20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	50	13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	50	13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	50	13	ug/l	
75-34-3	1,1-Dichloroethane	ND	50	13	ug/l	
107-06-2	1,2-Dichloroethane	ND	50	13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	50	13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	50	13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	50	13	ug/l	
78-87-5	1,2-Dichloropropane	ND	50	13	ug/l	
142-28-9	1,3-Dichloropropane	ND	50	13	ug/l	
594-20-7	2,2-Dichloropropane	ND	50	13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	50	13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	50	13	ug/l	
100-41-4	Ethylbenzene	299	50	13	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.9
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Report of Analysis

Client Sample ID:	MW-21-20211005	Date Sampled:	10/05/21
Lab Sample ID:	FA89630-9	Date Received:	10/07/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	100	20	ug/l	
98-82-8	Isopropylbenzene	43.0	50	13	ug/l	J
99-87-6	p-Isopropyltoluene	ND	50	13	ug/l	
74-83-9	Methyl Bromide	ND	50	20	ug/l	
74-87-3	Methyl Chloride	ND	50	20	ug/l	
74-95-3	Methylene Bromide	ND	50	13	ug/l	
75-09-2	Methylene Chloride ^b	185	200	100	ug/l	JB
108-10-1	4-Methyl-2-pentanone (MIB) ^c	ND	250	130	ug/l	
103-65-1	n-Propylbenzene	88.4	50	13	ug/l	
100-42-5	Styrene	ND	50	13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	50	13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	13	ug/l	
127-18-4	Tetrachloroethylene	ND	50	13	ug/l	
108-88-3	Toluene	ND	50	13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	50	13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	50	13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	50	13	ug/l	
79-01-6	Trichloroethylene	ND	50	13	ug/l	
75-69-4	Trichlorofluoromethane	ND	50	20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	50	13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	187	50	13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	115	50	13	ug/l	
75-01-4	Vinyl Chloride	ND	50	13	ug/l	
	m,p-Xylene	3990	100	13	ug/l	
95-47-6	o-Xylene	ND	50	13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	120% ^d	116%	83-118%
17060-07-0	1,2-Dichloroethane-D4	120%	121%	79-125%
2037-26-5	Toluene-D8	100%	100%	85-112%
460-00-4	4-Bromofluorobenzene	91%	92%	83-118%

(a) Confirmation run beyond holdtime.

(b) Suspected laboratory contaminant.

(c) Associated BS recovery outside control limits high; however sample is ND.

(d) Outside control limits.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TB-20211006-01		Date Sampled: 10/06/21
Lab Sample ID: FA89630-10		Date Received: 10/07/21
Matrix: AQ - Trip Blank Water		Percent Solids: n/a
Method: SW846 8260B		
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0227997.D	1	10/13/21 12:07	JL	n/a	n/a	VA2965
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TB-20211006-01		Date Sampled: 10/06/21
Lab Sample ID: FA89630-10		Date Received: 10/07/21
Matrix: AQ - Trip Blank Water		Percent Solids: n/a
Method: SW846 8260B		
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIB ^a)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	ND	0.50	0.13	ug/l	
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		83-118%
17060-07-0	1,2-Dichloroethane-D4	109%		79-125%
2037-26-5	Toluene-D8	101%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Associated BS recovery outside control limits high; however sample is ND.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.10
4

Report of Analysis

Client Sample ID:	DUP-02	Date Sampled:	10/05/21
Lab Sample ID:	FA89630-11	Date Received:	10/07/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0228014.D	5	10/13/21 18:22	JL	n/a	n/a	VA2965
Run #2 ^a	A0228190.D	5	10/20/21 16:59	JL	n/a	n/a	VA2973

Run #	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	10	ug/l	
71-43-2	Benzene	ND	2.5	0.63	ug/l	
108-86-1	Bromobenzene	ND	2.5	0.63	ug/l	
75-27-4	Bromodichloromethane	ND	2.5	0.63	ug/l	
75-25-2	Bromoform	ND	2.5	0.63	ug/l	
104-51-8	n-Butylbenzene	ND	2.5	0.63	ug/l	
135-98-8	sec-Butylbenzene	ND	2.5	0.63	ug/l	
98-06-6	tert-Butylbenzene	ND	2.5	0.63	ug/l	
56-23-5	Carbon Tetrachloride	ND	2.5	0.63	ug/l	
108-90-7	Chlorobenzene	ND	2.5	0.63	ug/l	
75-00-3	Chloroethane	ND	2.5	1.0	ug/l	
67-66-3	Chloroform	ND	2.5	0.63	ug/l	
95-49-8	o-Chlorotoluene	ND	2.5	0.63	ug/l	
106-43-4	p-Chlorotoluene	ND	2.5	0.63	ug/l	
124-48-1	Dibromochloromethane	ND	2.5	0.63	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	1.2	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.5	0.63	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.5	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2.5	0.63	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2.5	0.63	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2.5	0.63	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.5	0.63	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.5	0.63	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.5	0.63	ug/l	
156-59-2	cis-1,2-Dichloroethylene	117	2.5	0.63	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.5	0.63	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.5	0.63	ug/l	
142-28-9	1,3-Dichloropropane	ND	2.5	0.63	ug/l	
594-20-7	2,2-Dichloropropane	ND	2.5	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.5	0.63	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.5	0.63	ug/l	
100-41-4	Ethylbenzene	ND	2.5	0.63	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: DUP-02		Date Sampled: 10/05/21
Lab Sample ID: FA89630-11		Date Received: 10/07/21
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	5.0	1.0	ug/l	
98-82-8	Isopropylbenzene	ND	2.5	0.63	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.5	0.63	ug/l	
74-83-9	Methyl Bromide	ND	2.5	1.0	ug/l	
74-87-3	Methyl Chloride	ND	2.5	1.0	ug/l	
74-95-3	Methylene Bromide	ND	2.5	0.63	ug/l	
75-09-2	Methylene Chloride ^b	11.3	10	5.0	ug/l	B
108-10-1	4-Methyl-2-pentanone (MIB ^c)	ND	13	6.3	ug/l	
103-65-1	n-Propylbenzene	ND	2.5	0.63	ug/l	
100-42-5	Styrene	ND	2.5	0.63	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2.5	0.63	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.5	0.63	ug/l	
127-18-4	Tetrachloroethylene	37.1	2.5	0.63	ug/l	
108-88-3	Toluene	ND	2.5	0.63	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	0.63	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.5	0.63	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.5	0.63	ug/l	
79-01-6	Trichloroethylene	22.3	2.5	0.63	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.5	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.5	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.5	0.63	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.5	0.63	ug/l	
75-01-4	Vinyl Chloride	ND	2.5	0.63	ug/l	
	m,p-Xylene	ND	5.0	0.63	ug/l	
95-47-6	o-Xylene	ND	2.5	0.63	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	119% ^d	117%	83-118%
17060-07-0	1,2-Dichloroethane-D4	119%	122%	79-125%
2037-26-5	Toluene-D8	102%	102%	85-112%
460-00-4	4-Bromofluorobenzene	96%	96%	83-118%

- (a) Confirmation run beyond holdtime.
- (b) Suspected laboratory contaminant.
- (c) Associated BS recovery outside control limits high; however sample is ND.
- (d) Outside control limits.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.11
4

Report of Analysis

Client Sample ID:	DUP-01	Date Sampled:	10/05/21
Lab Sample ID:	FA89630-12	Date Received:	10/07/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0228003.D	1	10/13/21 14:20	JL	n/a	n/a	VA2965
Run #2 ^a	A0228191.D	5	10/20/21 17:21	JL	n/a	n/a	VA2973

Run #	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	0.71	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	0.83	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane ^b	74.7 ^c	2.5	1.0	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	0.18	0.50	0.13	ug/l	J
107-06-2	1,2-Dichloroethane	0.20	0.50	0.13	ug/l	J
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	15.3	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.61	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	0.25	0.50	0.13	ug/l	J

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUP-01	Date Sampled:	10/05/21
Lab Sample ID:	FA89630-12	Date Received:	10/07/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	2.2	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	0.42	0.50	0.13	ug/l	J
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIB) ^d	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	0.35	0.50	0.13	ug/l	J
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	0.92	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.28	0.50	0.13	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	10.6	0.50	0.13	ug/l	
	m,p-Xylene	2.6	1.0	0.13	ug/l	
95-47-6	o-Xylene	0.60	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%	125% ^e	83-118%
17060-07-0	1,2-Dichloroethane-D4	110%	126% ^e	79-125%
2037-26-5	Toluene-D8	101%	102%	85-112%
460-00-4	4-Bromofluorobenzene	90%	90%	83-118%

- (a) Sample re-analyzed beyond hold time; reported results are considered minimum values.
- (b) Values estimated due to surrogate failure.
- (c) Result is from Run# 2
- (d) Associated BS recovery outside control limits high; however sample is ND.
- (e) Outside control limits.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.12
4

Report of Analysis

Client Sample ID: MW-02-20211006	Date Sampled: 10/06/21
Lab Sample ID: FA89630-13	Date Received: 10/07/21
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0228004.D	1	10/13/21 14:42	JL	n/a	n/a	VA2965
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	0.38	0.50	0.13	ug/l	J
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.33	0.50	0.13	ug/l	J
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.13
4

Report of Analysis

Client Sample ID: MW-02-20211006	Date Sampled: 10/06/21
Lab Sample ID: FA89630-13	Date Received: 10/07/21
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIB ^a)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	ND	0.50	0.13	ug/l	
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		83-118%
17060-07-0	1,2-Dichloroethane-D4	113%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	95%		83-118%

(a) Associated BS recovery outside control limits high; however sample is ND.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound



Report of Analysis

Client Sample ID:	MW-06-20211006	Date Sampled:	10/06/21
Lab Sample ID:	FA89630-14	Date Received:	10/07/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0228005.D	1	10/13/21 15:04	JL	n/a	n/a	VA2965
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	0.39	0.50	0.13	ug/l	J
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.18	0.50	0.13	ug/l	J
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-06-20211006	Date Sampled:	10/06/21
Lab Sample ID:	FA89630-14	Date Received:	10/07/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIB ^a)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	ND	0.50	0.13	ug/l	
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	112%		83-118%
17060-07-0	1,2-Dichloroethane-D4	115%		79-125%
2037-26-5	Toluene-D8	100%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Associated BS recovery outside control limits high; however sample is ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-14-20211006		Date Sampled: 10/06/21
Lab Sample ID: FA89630-15		Date Received: 10/07/21
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0228006.D	1	10/13/21 15:26	JL	n/a	n/a	VA2965
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound



Report of Analysis

Client Sample ID: MW-14-20211006	Date Sampled: 10/06/21
Lab Sample ID: FA89630-15	Date Received: 10/07/21
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIB ^a)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	ND	0.50	0.13	ug/l	
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	116%		83-118%
17060-07-0	1,2-Dichloroethane-D4	117%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Associated BS recovery outside control limits high; however sample is ND.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.15
4

Report of Analysis

Client Sample ID:	MW-01-20211006	Date Sampled:	10/06/21
Lab Sample ID:	FA89630-16	Date Received:	10/07/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0228007.D	1	10/13/21 15:48	JL	n/a	n/a	VA2965
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	1.1	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	29.8	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	21.6	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	0.16	0.50	0.13	ug/l	J
156-59-2	cis-1,2-Dichloroethylene	2.0	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.23	0.50	0.13	ug/l	J
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	0.29	0.50	0.13	ug/l	J

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-01-20211006		Date Sampled: 10/06/21
Lab Sample ID: FA89630-16		Date Received: 10/07/21
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	3.0	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride ^a	1.7	2.0	1.0	ug/l	JB
108-10-1	4-Methyl-2-pentanone (MIB) ^b	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	4.1	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	0.57	0.50	0.13	ug/l	
108-88-3	Toluene	0.17	0.50	0.13	ug/l	J
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	0.57	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	4.0	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	4.9	0.50	0.13	ug/l	
	m,p-Xylene	0.20	1.0	0.13	ug/l	J
95-47-6	o-Xylene	2.3	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		83-118%
17060-07-0	1,2-Dichloroethane-D4	117%		79-125%
2037-26-5	Toluene-D8	91%		85-112%
460-00-4	4-Bromofluorobenzene	103%		83-118%

(a) Suspected laboratory contaminant.

(b) Associated BS recovery outside control limits high; however sample is ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16-20211006	Date Sampled:	10/06/21
Lab Sample ID:	FA89630-17	Date Received:	10/07/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	A0228008.D	1	10/13/21 16:10	JL	n/a	n/a	VA2965

Run #1	Purge Volume
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	1.3	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	0.14	0.50	0.13	ug/l	J
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-16-20211006		Date Sampled: 10/06/21
Lab Sample ID: FA89630-17		Date Received: 10/07/21
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIB ^a)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	1.1	0.50	0.13	ug/l	
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		83-118%
17060-07-0	1,2-Dichloroethane-D4	116%		79-125%
2037-26-5	Toluene-D8	102%		85-112%
460-00-4	4-Bromofluorobenzene	95%		83-118%

(a) Associated BS recovery outside control limits high; however sample is ND.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.17
4

Report of Analysis

Client Sample ID: MW-07-20211006	Date Sampled: 10/06/21
Lab Sample ID: FA89630-18	Date Received: 10/07/21
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0228009.D	1	10/13/21 16:32	JL	n/a	n/a	VA2965
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.16	0.50	0.13	ug/l	J
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.18
 4

Report of Analysis

Client Sample ID:	MW-07-20211006	Date Sampled:	10/06/21
Lab Sample ID:	FA89630-18	Date Received:	10/07/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIB ^a)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	1.9	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	0.34	0.50	0.13	ug/l	J
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	ND	0.50	0.13	ug/l	
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%		83-118%
17060-07-0	1,2-Dichloroethane-D4	117%		79-125%
2037-26-5	Toluene-D8	101%		85-112%
460-00-4	4-Bromofluorobenzene	94%		83-118%

(a) Associated BS recovery outside control limits high; however sample is ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-23-20211006	Date Sampled: 10/06/21
Lab Sample ID: FA89630-19	Date Received: 10/07/21
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	A0228010.D	1	10/13/21 16:54	JL	n/a	n/a	VA2965

Run #1	Purge Volume
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.38	0.50	0.13	ug/l	J
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.19
4

Report of Analysis

Client Sample ID:	MW-23-20211006	Date Sampled:	10/06/21
Lab Sample ID:	FA89630-19	Date Received:	10/07/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIB ^a)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	10.2	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	0.95	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	ND	0.50	0.13	ug/l	
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	116%		83-118%
17060-07-0	1,2-Dichloroethane-D4	118%		79-125%
2037-26-5	Toluene-D8	100%		85-112%
460-00-4	4-Bromofluorobenzene	94%		83-118%

(a) Associated BS recovery outside control limits high; however sample is ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: DUP-03		Date Sampled: 10/06/21
Lab Sample ID: FA89630-20		Date Received: 10/07/21
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0228011.D	1	10/13/21 17:16	JL	n/a	n/a	VA2965
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	1.1	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	31.3	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	21.3	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	0.15	0.50	0.13	ug/l	J
156-59-2	cis-1,2-Dichloroethylene	1.9	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22	0.50	0.13	ug/l	J
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	0.26	0.50	0.13	ug/l	J

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUP-03	Date Sampled:	10/06/21
Lab Sample ID:	FA89630-20	Date Received:	10/07/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	2.9	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride ^a	1.6	2.0	1.0	ug/l	JB
108-10-1	4-Methyl-2-pentanone (MIB) ^b	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	4.0	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	0.58	0.50	0.13	ug/l	
108-88-3	Toluene	0.17	0.50	0.13	ug/l	J
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	0.55	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	3.9	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	4.8	0.50	0.13	ug/l	
	m,p-Xylene	0.18	1.0	0.13	ug/l	J
95-47-6	o-Xylene	2.3	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%		83-118%
17060-07-0	1,2-Dichloroethane-D4	117%		79-125%
2037-26-5	Toluene-D8	93%		85-112%
460-00-4	4-Bromofluorobenzene	103%		83-118%

(a) Suspected laboratory contaminant.

(b) Associated BS recovery outside control limits high; however sample is ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-10-20211006	Date Sampled:	10/06/21
Lab Sample ID:	FA89630-21	Date Received:	10/07/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0228154.D	1	10/19/21 13:29	JL	n/a	n/a	VA2972
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane ^a	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-10-20211006	Date Sampled: 10/06/21
Lab Sample ID: FA89630-21	Date Received: 10/07/21
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	ND	0.50	0.13	ug/l	
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	120% ^b		83-118%
17060-07-0	1,2-Dichloroethane-D4	119%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	95%		83-118%

(a) Associated CCV recovery outside control limits high, sample was ND.

(b) Outside control limits; however, sample is ND.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.21
4

Report of Analysis

Client Sample ID:	MW-18-20211006	Date Sampled:	10/06/21
Lab Sample ID:	FA89630-22	Date Received:	10/07/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0228155.D	1	10/19/21 13:51	JL	n/a	n/a	VA2972
Run #2 ^a	E108964.D	1	10/13/21 18:40	JL	n/a	n/a	VE2563

Run #	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	0.89	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	0.68	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	0.13	0.50	0.13	ug/l	J
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.27	0.50	0.13	ug/l	J
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane ^b	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-18-20211006	Date Sampled: 10/06/21
Lab Sample ID: FA89630-22	Date Received: 10/07/21
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	0.24	1.0	0.20	ug/l	J
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	0.46	0.50	0.13	ug/l	J
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	118%	113%	83-118%
17060-07-0	1,2-Dichloroethane-D4	122%	133% ^c	79-125%
2037-26-5	Toluene-D8	102%	93%	85-112%
460-00-4	4-Bromofluorobenzene	92%	103%	83-118%

- (a) No ECC available for this run. Confirmation run.
- (b) Associated CCV recovery outside control limits high, sample was ND.
- (c) Outside control limits.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.22
4

Report of Analysis

Client Sample ID: MW-19-20211006		Date Sampled: 10/06/21
Lab Sample ID: FA89630-23		Date Received: 10/07/21
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0228171.D	200	10/19/21 19:43	JL	n/a	n/a	VA2972
Run #2 ^a	E108965.D	100	10/13/21 19:03	JL	n/a	n/a	VE2563

Run #	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	2000	400	ug/l	
71-43-2	Benzene	ND	100	25	ug/l	
108-86-1	Bromobenzene	ND	100	25	ug/l	
75-27-4	Bromodichloromethane	ND	100	25	ug/l	
75-25-2	Bromoform	ND	100	25	ug/l	
104-51-8	n-Butylbenzene	ND	100	25	ug/l	
135-98-8	sec-Butylbenzene	ND	100	25	ug/l	
98-06-6	tert-Butylbenzene	ND	100	25	ug/l	
56-23-5	Carbon Tetrachloride	ND	100	25	ug/l	
108-90-7	Chlorobenzene	ND	100	25	ug/l	
75-00-3	Chloroethane	ND	100	40	ug/l	
67-66-3	Chloroform	ND	100	25	ug/l	
95-49-8	o-Chlorotoluene	ND	100	25	ug/l	
106-43-4	p-Chlorotoluene	ND	100	25	ug/l	
124-48-1	Dibromochloromethane	ND	100	25	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	100	49	ug/l	
106-93-4	1,2-Dibromoethane	ND	100	25	ug/l	
75-71-8	Dichlorodifluoromethane	ND	100	40	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	100	25	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	100	25	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	100	25	ug/l	
75-34-3	1,1-Dichloroethane	ND	100	25	ug/l	
107-06-2	1,2-Dichloroethane	ND	100	25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	100	25	ug/l	
156-59-2	cis-1,2-Dichloroethylene	2980	100	25	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	100	25	ug/l	
78-87-5	1,2-Dichloropropane	ND	100	25	ug/l	
142-28-9	1,3-Dichloropropane	ND	100	25	ug/l	
594-20-7	2,2-Dichloropropane ^b	ND	100	25	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	100	25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	100	25	ug/l	
100-41-4	Ethylbenzene	37.1	100	25	ug/l	J

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.23
4

Report of Analysis

Client Sample ID: MW-19-20211006	Date Sampled: 10/06/21
Lab Sample ID: FA89630-23	Date Received: 10/07/21
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	200	40	ug/l	
98-82-8	Isopropylbenzene	ND	100	25	ug/l	
99-87-6	p-Isopropyltoluene	ND	100	25	ug/l	
74-83-9	Methyl Bromide	ND	100	40	ug/l	
74-87-3	Methyl Chloride	ND	100	40	ug/l	
74-95-3	Methylene Bromide	ND	100	25	ug/l	
75-09-2	Methylene Chloride	471	400	200	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	500	250	ug/l	
103-65-1	n-Propylbenzene	ND	100	25	ug/l	
100-42-5	Styrene	ND	100	25	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	100	25	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	100	25	ug/l	
127-18-4	Tetrachloroethylene	ND	100	25	ug/l	
108-88-3	Toluene	91.8	100	25	ug/l	J
120-82-1	1,2,4-Trichlorobenzene	ND	100	25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	100	25	ug/l	
79-01-6	Trichloroethylene	ND	100	25	ug/l	
75-69-4	Trichlorofluoromethane	ND	100	40	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	100	25	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	100	25	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	100	25	ug/l	
75-01-4	Vinyl Chloride	5400	100	25	ug/l	
	m,p-Xylene	ND	200	25	ug/l	
95-47-6	o-Xylene	ND	100	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	129% ^c	111%	83-118%
17060-07-0	1,2-Dichloroethane-D4	129% ^c	130% ^c	79-125%
2037-26-5	Toluene-D8	102%	94%	85-112%
460-00-4	4-Bromofluorobenzene	91%	106%	83-118%

- (a) No ECC available for this run. Confirmation run for surrogate recoveries.
(b) Associated CCV recovery outside control limits high, sample was ND.
(c) Outside control limits.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



SGS North America Inc - Orlando
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, FL 32811
TEL: 407-425-6700 FAX: 407-425-0707
WWW.SGS.COM

FA89630

SGS - ORLANDO JOB #:

PAGE 1 OF 2

Client / Reporting Information			Project Information			Analytical Information										Matrix Codes			
Company Name: ERM			Project Name: Univax Kent 212th													DW - Drinking Water			
Address: 1218 3rd Ave Ste 1412			Street: S. 212th													GW - Ground Water			
City: Seattle State: WA Zip: 98101			City: Kent State: WA													WW - Water			
Project Contact: Dylan Stankus Email:			Project #: 577675.04													SW - Surface Water			
Phone #: 803.634.9703			Fax #:													SO - Soil			
Sampler(s) Name(s) (Printed)			Client Purchase Order #													SL - Sludge			
Sampler 1: Matt Crandell Sampler 2: Je Kirk Cooper																OI - Oil			
SGS Orlando Sample #	Field ID / Point of Collection	DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	CONTAINER INFORMATION										LAB USE ONLY		
							OTHER	NONE	ICI	MeOH	MeOH	MeOH	MeOH	MeOH	MeOH	MeOH		MeOH	MeOH
1	MW-22-20211005	10/5/21	1014	MC	GW	3												X	
2	TB-20211005-01					2													X
3	MW-05-20211005		1123	JC	GW	3													X
4	MW-08-20211005		1241	MC		3													X
5	MW-09-20211005		1317	MC		3													X
6	MW-12-20211005		1403	MC		3													X
7	MW-04-20211005		1449	MC		3													X
8	MW-13-20211005		1539	MC		3													X
9	MW-21-20211005		1627	MC		3													X
10	TB-20211006-01	10/6/21				2													X
11	DUP-02				GW	3													X
12	DUP-01				GW	3													X
Turnaround Time (Business days)			Data Deliverable Information			Comments / Remarks													
<input checked="" type="checkbox"/> 10 Day (Business) <input type="checkbox"/> 7 Day <input type="checkbox"/> 5 Day <input type="checkbox"/> 3 Day RUSH <input type="checkbox"/> 2 Day RUSH <input type="checkbox"/> 1 Day RUSH <input type="checkbox"/> Other			Approved By: / Date:			<input type="checkbox"/> COMMERCIAL "A" (RESULTS ONLY) <input checked="" type="checkbox"/> COMMERCIAL "B" (RESULTS PLUS QC) <input type="checkbox"/> REDT1 (EPA LEVEL 3) <input type="checkbox"/> FULLT1 (EPA LEVEL 4) <input type="checkbox"/> EDD'S										INITIAL ASSESSMENT LABEL VERIFICATION			
Rush T/A Data Available VIA Email or Lablink						10/5/21 10/17/21													
Relinquished by Sampler/Affiliation		Date Time:		Received By/Affiliation		Date Time:		Relinquished By/Affiliation		Date Time:		Received By/Affiliation		Date Time:		Received By/Affiliation		Date Time:	
1 Matt Crandell / ERM		10/6/21, 1645		Caitlin R. Wiegand		10/17/21													
5				6		7													
Lab Use Only : Cooler Temperature (s) Celsius (corrected): 5.6-10.1																			

ORLD-SMT-0001-03-FORM-COC (4).xls Rev 031318

http://www.sgs.com/en/terms-and-conditions

FA89630: Chain of Custody

Page 1 of 3





Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, FL 32811
TEL: 407-425-6700 FAX: 407-425-0707
www.sgs.com

SGS - ORLANDO Quote #

SKIFF #

Client / Reporting Information			Project Information			Analytical Information										Matrix Codes							
Company Name: ERM			Project Name: Univar Kent 212th													DW - Drinking Water							
Address: 1218 3rd Ave Ste 1412			Street: S 212th St													GW - Ground Water							
City: Seattle State: WA Zip: 98101			City: Kent State: WA													WW - Water							
Project Contact: Dylan Stankus Email:			Project # 577675.04													SW - Surface Water							
Phone #: 803.634.9703			Fax #													SO - Soil							
Sampler(s) Name(s) (Printed)			Client Purchase Order #													SL - Sludge							
Sampler 1: Matt Sampler 2:																OI - Oil							
SGS Orlando Sample #			COLLECTION			CONTAINER INFORMATION										LIQ - Other Liquid							
Field ID / Point of Collection			DATE	TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	ICI	MECH	IN03	IN04	IN05	IN06	IN07	IN08	IN09	IN10	IN11	IN12	LAB USE ONLY	
13	MW-02-20211006		10/6/21	0849	MC	GW	3																
14	MW-06-20211006			0927	MC	GW	3																
15	MW-14-20211006			1003	MC	GW	3																
16	MW-01-20211006			1053	MC	GW	3																
17	MW-16-20211006			1143	MC	GW	3																
18	MW-07-20211006			1255	MC	GW	3																
19	MW-23-20211006			1329	MC	GW	3																
20	DWP-03				MC	GW	3																
21	MW-10-20211006		10/6/21	1417	MC	GW	3																
22	MW-18-20211006			1454	MC	GW	3																
23	MW-19-20211006			1535	MC	GW	3																
Turnaround Time (Business days)			Data Deliverable Information			Comments / Remarks																	
<input checked="" type="checkbox"/> 10 Day (Business) <input type="checkbox"/> 7 Day <input type="checkbox"/> 5 Day <input type="checkbox"/> 3 Day RUSH <input type="checkbox"/> 2 Day RUSH <input type="checkbox"/> 1 Day RUSH <input type="checkbox"/> Other			Approved By: / Date:			<input type="checkbox"/> COMMERCIAL "A" (RESULTS ONLY) <input checked="" type="checkbox"/> COMMERCIAL "B" (RESULTS PLUS QC) <input type="checkbox"/> REDT1 (EPA LEVEL 3) <input type="checkbox"/> FULLT1 (EPA LEVEL 4) <input type="checkbox"/> EDD'S																	
Rush T/A Data Available VIA Email or Lablink			Sample Custody must be documented below each time samples change possession, including courier delivery.																				
Relinquished by Sampler/Affiliation		Date Time:		Received By/Affiliation		Relinquished By/Affiliation		Date Time:		Received By/Affiliation		Relinquished By/Affiliation		Date Time:		Received By/Affiliation							
1 Matt Crandell / ERM		10/6/21, 1645		2 [Signature] / [Affiliation]		3		10/7/21 1000		4		5		6		7							
5		6		7		8		9		10		11		12		13							

5.1
5



SGS Sample Receipt Summary

Job Number: FA89630

Client: ERM/UNIVAR

Project: UNIVAR KENT 212TH

Date / Time Received: 10/7/2021 10:00:00 AM

Delivery Method: UPS

Airbill #'s: 1Z0F4247Y040956130, 1Z0F4247Y042066142

Therm ID: IR 1;

Therm CF: 0.2;

of Coolers: 2

Cooler Temps (Raw Measured) °C: Cooler 1: (5.6); Cooler 2: (5.8);

Cooler Temps (Corrected) °C: Cooler 1: (5.8); Cooler 2: (6.0);

Cooler Information

Y or N

- 1. Custody Seals Present
- 2. Custody Seals Intact
- 3. Temp criteria achieved
- 4. Cooler temp verification IR Gun
- 5. Cooler media Ice (Bag)

Trip Blank Information

Y or N N/A

- 1. Trip Blank present / cooler
 - 2. Trip Blank listed on COC
- W or S N/A
- 3. Type Of TB Received

Sample Information

Y or N N/A

- 1. Sample labels present on bottles
- 2. Samples preserved properly
- 3. Sufficient volume/containers recvd for analysis:
- 4. Condition of sample Intact
- 5. Sample recvd within HT
- 6. Dates/Times/IDs on COC match Sample Label
- 7. VOCs have headspace
- 8. Bottles received for unspecified tests
- 9. Compositing instructions clear
- 10. Voa Soil Kits/Jars received past 48hrs?
- 11. % Solids Jar received?
- 12. Residual Chlorine Present?

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____

Number of 5035 Field Kits: _____

Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315

pH 10-12 219813A

Other: (Specify) _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: CARLOSD

Date: 10/7/2021 10:00:00 A

Reviewer: PH

Date: 10/12/2021

FA89630: Chain of Custody

Page 3 of 3

5.1
5

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA89630
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA2965-MB	A0227995.D	1	10/13/21	JL	n/a	n/a	VA2965

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89630-1, FA89630-2, FA89630-3, FA89630-4, FA89630-5, FA89630-6, FA89630-7, FA89630-8, FA89630-9, FA89630-10, FA89630-11, FA89630-12, FA89630-13, FA89630-14, FA89630-15, FA89630-16, FA89630-17, FA89630-18, FA89630-19, FA89630-20

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	

Method Blank Summary

Job Number: FA89630
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA2965-MB	A0227995.D	1	10/13/21	JL	n/a	n/a	VA2965

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89630-1, FA89630-2, FA89630-3, FA89630-4, FA89630-5, FA89630-6, FA89630-7, FA89630-8, FA89630-9, FA89630-10, FA89630-11, FA89630-12, FA89630-13, FA89630-14, FA89630-15, FA89630-16, FA89630-17, FA89630-18, FA89630-19, FA89630-20

CAS No.	Compound	Result	RL	MDL	Units	Q
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	1.4	2.0	1.0	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	ND	0.50	0.13	ug/l	
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	108%	83-118%
17060-07-0	1,2-Dichloroethane-D4	106%	79-125%
2037-26-5	Toluene-D8	101%	85-112%
460-00-4	4-Bromofluorobenzene	96%	83-118%

Method Blank Summary

Job Number: FA89630
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA2972-MB	A0228151.D	1	10/19/21	JL	n/a	n/a	VA2972

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89630-21, FA89630-22, FA89630-23

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	

Method Blank Summary

Job Number: FA89630
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA2972-MB	A0228151.D	1	10/19/21	JL	n/a	n/a	VA2972

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89630-21, FA89630-22, FA89630-23

CAS No.	Compound	Result	RL	MDL	Units	Q
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	ND	0.50	0.13	ug/l	
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	112%	83-118%
17060-07-0	1,2-Dichloroethane-D4	116%	79-125%
2037-26-5	Toluene-D8	102%	85-112%
460-00-4	4-Bromofluorobenzene	96%	83-118%

Method Blank Summary

Job Number: FA89630
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA2973-MB	A0228181.D	1	10/20/21	JL	n/a	n/a	VA2973

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89630-1, FA89630-8, FA89630-12

CAS No.	Compound	Result	RL	MDL	Units	Q
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	115%	83-118%
17060-07-0	1,2-Dichloroethane-D4	116%	79-125%
2037-26-5	Toluene-D8	102%	85-112%
460-00-4	4-Bromofluorobenzene	99%	83-118%

Blank Spike Summary

Job Number: FA89630
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA2965-BS	A0227992.D	1	10/13/21	JL	n/a	n/a	VA2965

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89630-1, FA89630-2, FA89630-3, FA89630-4, FA89630-5, FA89630-6, FA89630-7, FA89630-8, FA89630-9, FA89630-10, FA89630-11, FA89630-12, FA89630-13, FA89630-14, FA89630-15, FA89630-16, FA89630-17, FA89630-18, FA89630-19, FA89630-20

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	54.5	109	50-147
71-43-2	Benzene	10	9.1	91	81-122
108-86-1	Bromobenzene	10	8.5	85	80-121
75-27-4	Bromodichloromethane	10	8.4	84	79-123
75-25-2	Bromoform	10	8.1	81	66-123
104-51-8	n-Butylbenzene	10	8.2	82	79-126
135-98-8	sec-Butylbenzene	10	9.6	96	83-133
98-06-6	tert-Butylbenzene	10	8.8	88	80-133
56-23-5	Carbon Tetrachloride	10	9.4	94	76-136
108-90-7	Chlorobenzene	10	8.8	88	82-124
75-00-3	Chloroethane	10	10.7	107	62-144
67-66-3	Chloroform	10	8.6	86	80-124
95-49-8	o-Chlorotoluene	10	8.7	87	81-127
106-43-4	p-Chlorotoluene	10	8.5	85	83-130
124-48-1	Dibromochloromethane	10	7.9	79	78-122
96-12-8	1,2-Dibromo-3-chloropropane	10	8.3	83	64-123
106-93-4	1,2-Dibromoethane	10	8.3	83	75-120
75-71-8	Dichlorodifluoromethane	10	11.8	118	42-167
95-50-1	1,2-Dichlorobenzene	10	8.9	89	82-124
541-73-1	1,3-Dichlorobenzene	10	9.4	94	84-125
106-46-7	1,4-Dichlorobenzene	10	8.7	87	78-120
75-34-3	1,1-Dichloroethane	10	9.2	92	81-122
107-06-2	1,2-Dichloroethane	10	8.2	82	75-125
75-35-4	1,1-Dichloroethylene	10	9.7	97	78-137
156-59-2	cis-1,2-Dichloroethylene	10	9.0	90	78-120
156-60-5	trans-1,2-Dichloroethylene	10	9.1	91	76-127
78-87-5	1,2-Dichloropropane	10	8.6	86	76-124
142-28-9	1,3-Dichloropropane	10	8.1	81	80-118
594-20-7	2,2-Dichloropropane	10	9.9	99	74-139
10061-01-5	cis-1,3-Dichloropropene	10	7.9	79	75-118
10061-02-6	trans-1,3-Dichloropropene	10	8.5	85	80-120
100-41-4	Ethylbenzene	10	9.2	92	81-121
110-54-3	Hexane	10	8.4	84	69-132
98-82-8	Isopropylbenzene	10	8.9	89	83-132
99-87-6	p-Isopropyltoluene	10	9.0	90	79-130
74-83-9	Methyl Bromide	10	10.6	106	59-143

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA89630
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA2965-BS	A0227992.D	1	10/13/21	JL	n/a	n/a	VA2965

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89630-1, FA89630-2, FA89630-3, FA89630-4, FA89630-5, FA89630-6, FA89630-7, FA89630-8, FA89630-9, FA89630-10, FA89630-11, FA89630-12, FA89630-13, FA89630-14, FA89630-15, FA89630-16, FA89630-17, FA89630-18, FA89630-19, FA89630-20

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-87-3	Methyl Chloride	10	10.4	104	50-159
74-95-3	Methylene Bromide	10	7.8	78	78-119
75-09-2	Methylene Chloride	10	8.3	83	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	50	63.4	127*	66-122
103-65-1	n-Propylbenzene	10	8.9	89	82-133
100-42-5	Styrene	10	8.2	82	78-119
630-20-6	1,1,1,2-Tetrachloroethane	10	8.6	86	77-122
79-34-5	1,1,2,2-Tetrachloroethane	10	8.0	80	72-120
127-18-4	Tetrachloroethylene	10	9.4	94	76-135
108-88-3	Toluene	10	8.7	87	80-120
120-82-1	1,2,4-Trichlorobenzene	10	7.9	79	73-129
71-55-6	1,1,1-Trichloroethane	10	9.0	90	75-130
79-00-5	1,1,2-Trichloroethane	10	8.2	82	76-119
79-01-6	Trichloroethylene	10	9.0	90	81-126
75-69-4	Trichlorofluoromethane	10	12.1	121	71-156
96-18-4	1,2,3-Trichloropropane	10	7.9	79	77-120
95-63-6	1,2,4-Trimethylbenzene	10	8.4	84	79-120
108-67-8	1,3,5-Trimethylbenzene	10	8.5	85	79-120
75-01-4	Vinyl Chloride	10	11.0	110	69-159
	m,p-Xylene	20	17.2	86	79-126
95-47-6	o-Xylene	10	8.5	85	80-127

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	98%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA89630
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA2972-BS	A0228148.D	1	10/19/21	JL	n/a	n/a	VA2972

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89630-21, FA89630-22, FA89630-23

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	37.8	76	50-147
71-43-2	Benzene	10	10.8	108	81-122
108-86-1	Bromobenzene	10	9.8	98	80-121
75-27-4	Bromodichloromethane	10	10.0	100	79-123
75-25-2	Bromoform	10	9.1	91	66-123
104-51-8	n-Butylbenzene	10	9.2	92	79-126
135-98-8	sec-Butylbenzene	10	10.8	108	83-133
98-06-6	tert-Butylbenzene	10	10.1	101	80-133
56-23-5	Carbon Tetrachloride	10	11.5	115	76-136
108-90-7	Chlorobenzene	10	10.1	101	82-124
75-00-3	Chloroethane	10	14.0	140	62-144
67-66-3	Chloroform	10	10.5	105	80-124
95-49-8	o-Chlorotoluene	10	10.3	103	81-127
106-43-4	p-Chlorotoluene	10	9.9	99	83-130
124-48-1	Dibromochloromethane	10	8.9	89	78-122
96-12-8	1,2-Dibromo-3-chloropropane	10	8.4	84	64-123
106-93-4	1,2-Dibromoethane	10	9.0	90	75-120
75-71-8	Dichlorodifluoromethane	10	9.6	96	42-167
95-50-1	1,2-Dichlorobenzene	10	9.7	97	82-124
541-73-1	1,3-Dichlorobenzene	10	10.3	103	84-125
106-46-7	1,4-Dichlorobenzene	10	9.9	99	78-120
75-34-3	1,1-Dichloroethane	10	11.2	112	81-122
107-06-2	1,2-Dichloroethane	10	9.9	99	75-125
75-35-4	1,1-Dichloroethylene	10	11.8	118	78-137
156-59-2	cis-1,2-Dichloroethylene	10	10.2	102	78-120
156-60-5	trans-1,2-Dichloroethylene	10	11.0	110	76-127
78-87-5	1,2-Dichloropropane	10	10.1	101	76-124
142-28-9	1,3-Dichloropropane	10	9.0	90	80-118
594-20-7	2,2-Dichloropropane	10	12.7	127	74-139
10061-01-5	cis-1,3-Dichloropropene	10	9.3	93	75-118
10061-02-6	trans-1,3-Dichloropropene	10	9.8	98	80-120
100-41-4	Ethylbenzene	10	10.4	104	81-121
110-54-3	Hexane	10	9.8	98	69-132
98-82-8	Isopropylbenzene	10	9.6	96	83-132
99-87-6	p-Isopropyltoluene	10	9.8	98	79-130
74-83-9	Methyl Bromide	10	13.7	137	59-143

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA89630
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA2972-BS	A0228148.D	1	10/19/21	JL	n/a	n/a	VA2972

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89630-21, FA89630-22, FA89630-23

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-87-3	Methyl Chloride	10	10.2	102	50-159
74-95-3	Methylene Bromide	10	9.2	92	78-119
75-09-2	Methylene Chloride	10	8.8	88	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	50	55.6	111	66-122
103-65-1	n-Propylbenzene	10	10.2	102	82-133
100-42-5	Styrene	10	9.0	90	78-119
630-20-6	1,1,1,2-Tetrachloroethane	10	9.7	97	77-122
79-34-5	1,1,2,2-Tetrachloroethane	10	9.5	95	72-120
127-18-4	Tetrachloroethylene	10	10.5	105	76-135
108-88-3	Toluene	10	9.8	98	80-120
120-82-1	1,2,4-Trichlorobenzene	10	7.5	75	73-129
71-55-6	1,1,1-Trichloroethane	10	11.0	110	75-130
79-00-5	1,1,2-Trichloroethane	10	9.4	94	76-119
79-01-6	Trichloroethylene	10	10.6	106	81-126
75-69-4	Trichlorofluoromethane	10	12.5	125	71-156
96-18-4	1,2,3-Trichloropropane	10	9.3	93	77-120
95-63-6	1,2,4-Trimethylbenzene	10	9.5	95	79-120
108-67-8	1,3,5-Trimethylbenzene	10	9.5	95	79-120
75-01-4	Vinyl Chloride	10	10.9	109	69-159
	m,p-Xylene	20	19.5	98	79-126
95-47-6	o-Xylene	10	9.2	92	80-127

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	104%	79-125%
2037-26-5	Toluene-D8	98%	85-112%
460-00-4	4-Bromofluorobenzene	98%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA89630
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA2973-BS ^a	A0228178.D	1	10/20/21	JL	n/a	n/a	VA2973

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89630-1, FA89630-8, FA89630-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
75-00-3	Chloroethane	10	9.6	96	62-144

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	106%	79-125%
2037-26-5	Toluene-D8	98%	85-112%
460-00-4	4-Bromofluorobenzene	97%	83-118%

(a) No MS/MSD available for this run.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA89630
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA89630-23MS	A0228172.D	200	10/19/21	JL	n/a	n/a	VA2972
FA89630-23MSD	A0228173.D	200	10/19/21	JL	n/a	n/a	VA2972
FA89630-23	A0228171.D	200	10/19/21	JL	n/a	n/a	VA2972

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89630-21, FA89630-22, FA89630-23

CAS No.	Compound	FA89630-23 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD	
67-64-1	Acetone	ND		10000	5800	58	10000	6700	67	14	50-147/21
71-43-2	Benzene	ND		2000	2560	128*	2000	2530	127*	1	81-122/14
108-86-1	Bromobenzene	ND		2000	2210	111	2000	2230	112	1	80-121/14
75-27-4	Bromodichloromethane	ND		2000	2440	122	2000	2380	119	2	79-123/19
75-25-2	Bromoform	ND		2000	2050	103	2000	2080	104	1	66-123/21
104-51-8	n-Butylbenzene	ND		2000	1920	96	2000	1970	99	3	79-126/16
135-98-8	sec-Butylbenzene	ND		2000	2300	115	2000	2370	119	3	83-133/16
98-06-6	tert-Butylbenzene	ND		2000	2140	107	2000	2220	111	4	80-133/16
56-23-5	Carbon Tetrachloride	ND		2000	2880	144*	2000	2800	140*	3	76-136/23
108-90-7	Chlorobenzene	ND		2000	2340	117	2000	2310	116	1	82-124/14
75-00-3	Chloroethane	ND		2000	3020	151*	2000	3120	156*	3	62-144/20
67-66-3	Chloroform	ND		2000	2610	131*	2000	2560	128*	2	80-124/15
95-49-8	o-Chlorotoluene	ND		2000	2270	114	2000	2320	116	2	81-127/15
106-43-4	p-Chlorotoluene	ND		2000	2100	105	2000	2180	109	4	83-130/15
124-48-1	Dibromochloromethane	ND		2000	1960	98	2000	1990	100	2	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	ND		2000	1770	89	2000	1900	95	7	64-123/18
106-93-4	1,2-Dibromoethane	ND		2000	1870	94	2000	1930	97	3	75-120/13
75-71-8	Dichlorodifluoromethane	ND		2000	2130	107	2000	2160	108	1	42-167/19
95-50-1	1,2-Dichlorobenzene	ND		2000	2170	109	2000	2190	110	1	82-124/14
541-73-1	1,3-Dichlorobenzene	ND		2000	2300	115	2000	2320	116	1	84-125/14
106-46-7	1,4-Dichlorobenzene	ND		2000	2300	115	2000	2260	113	2	78-120/15
75-34-3	1,1-Dichloroethane	ND		2000	2570	129*	2000	2640	132*	3	81-122/15
107-06-2	1,2-Dichloroethane	ND		2000	2430	122	2000	2390	120	2	75-125/14
75-35-4	1,1-Dichloroethylene	ND		2000	2700	135	2000	2780	139*	3	78-137/18
156-59-2	cis-1,2-Dichloroethylene	2980		2000	5480	125*	2000	5590	131*	2	78-120/15
156-60-5	trans-1,2-Dichloroethylene	ND		2000	2420	121	2000	2520	126	4	76-127/17
78-87-5	1,2-Dichloropropane	ND		2000	2320	116	2000	2340	117	1	76-124/14
142-28-9	1,3-Dichloropropane	ND		2000	1880	94	2000	1950	98	4	80-118/13
594-20-7	2,2-Dichloropropane	ND		2000	2560	128	2000	2500	125	2	74-139/17
10061-01-5	cis-1,3-Dichloropropene	ND		2000	1950	98	2000	2010	101	3	75-118/23
10061-02-6	trans-1,3-Dichloropropene	ND		2000	2020	101	2000	2100	105	4	80-120/22
100-41-4	Ethylbenzene	37.1	J	2000	2380	117	2000	2410	119	1	81-121/14
110-54-3	Hexane	ND		2000	1980	99	2000	2090	105	5	69-132/20
98-82-8	Isopropylbenzene	ND		2000	2010	101	2000	2070	104	3	83-132/15
99-87-6	p-Isopropyltoluene	ND		2000	2100	105	2000	2160	108	3	79-130/16
74-83-9	Methyl Bromide	ND		2000	3160	158*	2000	3120	156*	1	59-143/19

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA89630
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA89630-23MS	A0228172.D	200	10/19/21	JL	n/a	n/a	VA2972
FA89630-23MSD	A0228173.D	200	10/19/21	JL	n/a	n/a	VA2972
FA89630-23	A0228171.D	200	10/19/21	JL	n/a	n/a	VA2972

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89630-21, FA89630-22, FA89630-23

CAS No.	Compound	FA89630-23 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD	
74-87-3	Methyl Chloride	ND	2000	2260	113	2000	2390	120	6	50-159/19	
74-95-3	Methylene Bromide	ND	2000	2200	110	2000	2190	110	0	78-119/14	
75-09-2	Methylene Chloride	471	2000	2120	82	2000	2310	92	9	69-135/16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	10000	9330	93	10000	9940	99	6	66-122/16	
103-65-1	n-Propylbenzene	ND	2000	2170	109	2000	2240	112	3	82-133/15	
100-42-5	Styrene	ND	2000	1930	97	2000	1970	99	2	78-119/23	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2000	2230	112	2000	2240	112	0	77-122/19	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2000	2150	108	2000	2160	108	0	72-120/14	
127-18-4	Tetrachloroethylene	ND	2000	2420	121	2000	2380	119	2	76-135/16	
108-88-3	Toluene	91.8	J	2000	2240	107	2000	2270	109	1	80-120/14
120-82-1	1,2,4-Trichlorobenzene	ND	2000	1490	75	2000	1580	79	6	73-129/20	
71-55-6	1,1,1-Trichloroethane	ND	2000	2660	133*	2000	2610	131*	2	75-130/16	
79-00-5	1,1,2-Trichloroethane	ND	2000	2110	106	2000	2110	106	0	76-119/14	
79-01-6	Trichloroethylene	ND	2000	2570	129*	2000	2530	127*	2	81-126/15	
75-69-4	Trichlorofluoromethane	ND	2000	2820	141	2000	2750	138	3	71-156/21	
96-18-4	1,2,3-Trichloropropane	ND	2000	2010	101	2000	2080	104	3	77-120/16	
95-63-6	1,2,4-Trimethylbenzene	ND	2000	2120	106	2000	2150	108	1	79-120/18	
108-67-8	1,3,5-Trimethylbenzene	ND	2000	2080	104	2000	2150	108	3	79-120/19	
75-01-4	Vinyl Chloride	5400	2000	6470	54* a	2000	6750	68* a	4	69-159/18	
	m,p-Xylene	ND	4000	4340	109	4000	4370	109	1	79-126/15	
95-47-6	o-Xylene	ND	2000	1860	93	2000	1950	98	5	80-127/14	

CAS No.	Surrogate Recoveries	MS	MSD	FA89630-23	Limits
1868-53-7	Dibromofluoromethane	113%	109%	129% * b	83-118%
17060-07-0	1,2-Dichloroethane-D4	112%	110%	129% * b	79-125%
2037-26-5	Toluene-D8	92%	94%	102%	85-112%
460-00-4	4-Bromofluorobenzene	85%	92%	91%	83-118%

(a) Outside control limits due to high level in sample relative to spike amount.
 (b) Outside control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA89630
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA89630-1MS	A0228195.D	5	10/20/21	JL	n/a	n/a	VA2965
FA89630-1MSD	A0228196.D	5	10/20/21	JL	n/a	n/a	VA2965
FA89630-1	A0227998.D	1	10/13/21	JL	n/a	n/a	VA2965

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89630-1, FA89630-2, FA89630-3, FA89630-4, FA89630-5, FA89630-6, FA89630-7, FA89630-8, FA89630-10, FA89630-11, FA89630-12, FA89630-13, FA89630-14, FA89630-15, FA89630-16, FA89630-17, FA89630-18, FA89630-19, FA89630-20

CAS No.	Compound	FA89630-1 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	88	250	229	92	4	50-147/21
71-43-2	Benzene	0.73		50	61.9	122	50	63.1	2	81-122/14
108-86-1	Bromobenzene	ND		50	53.5	107	50	55.0	3	80-121/14
75-27-4	Bromodichloromethane	ND		50	54.0	108	50	54.7	1	79-123/19
75-25-2	Bromoform	ND		50	37.6	75	50	39.1	4	66-123/21
104-51-8	n-Butylbenzene	ND		50	49.3	99	50	52.2	6	79-126/16
135-98-8	sec-Butylbenzene	0.83		50	56.5	111	50	59.1	4	83-133/16
98-06-6	tert-Butylbenzene	ND		50	53.6	107	50	55.9	4	80-133/16
56-23-5	Carbon Tetrachloride	ND		50	66.4	133	50	66.9	1	76-136/23
108-90-7	Chlorobenzene	ND		50	56.3	113	50	57.8	3	82-124/14
75-00-3	Chloroethane	ND		50	141	282*	50	158	11	62-144/20
67-66-3	Chloroform	ND		50	63.4	127*	50	62.6	1	80-124/15
95-49-8	o-Chlorotoluene	ND		50	55.1	110	50	57.4	4	81-127/15
106-43-4	p-Chlorotoluene	ND		50	50.8	102	50	53.7	6	83-130/15
124-48-1	Dibromochloromethane	ND		50	39.9	80	50	42.4	6	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	ND		50	47.9	96	50	50.1	4	64-123/18
106-93-4	1,2-Dibromoethane	ND		50	46.7	93	50	49.7	6	75-120/13
75-71-8	Dichlorodifluoromethane	ND		50	50.3	101	50	51.9	3	42-167/19
95-50-1	1,2-Dichlorobenzene	ND		50	53.2	106	50	55.1	4	82-124/14
541-73-1	1,3-Dichlorobenzene	ND		50	55.5	111	50	57.9	4	84-125/14
106-46-7	1,4-Dichlorobenzene	ND		50	55.2	110	50	56.9	3	78-120/15
75-34-3	1,1-Dichloroethane	0.16	J	50	62.4	124*	50	64.5	3	81-122/15
107-06-2	1,2-Dichloroethane	0.23	J	50	60.5	121	50	60.3	0	75-125/14
75-35-4	1,1-Dichloroethylene	ND		50	64.1	128	50	67.8	6	78-137/18
156-59-2	cis-1,2-Dichloroethylene	11.8		50	63.3	103	50	66.5	5	78-120/15
156-60-5	trans-1,2-Dichloroethylene	0.58		50	60.6	120	50	63.0	4	76-127/17
78-87-5	1,2-Dichloropropane	ND		50	57.1	114	50	59.1	3	76-124/14
142-28-9	1,3-Dichloropropane	ND		50	47.1	94	50	49.8	6	80-118/13
594-20-7	2,2-Dichloropropane	ND		50	62.3	125	50	63.6	2	74-139/17
10061-01-5	cis-1,3-Dichloropropene	ND		50	39.6	79	50	42.6	7	75-118/23
10061-02-6	trans-1,3-Dichloropropene	ND		50	49.6	99	50	53.1	7	80-120/22
100-41-4	Ethylbenzene	0.20	J	50	57.0	114	50	59.1	4	81-121/14
110-54-3	Hexane	2.1		50	51.7	99	50	54.2	5	69-132/20
98-82-8	Isopropylbenzene	0.41	J	50	50.1	99	50	54.0	7	83-132/15
99-87-6	p-Isopropyltoluene	ND		50	51.8	104	50	54.8	6	79-130/16
74-83-9	Methyl Bromide	ND		50	59.3	119	50	64.0	8	59-143/19

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA89630
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA89630-1MS	A0228195.D	5	10/20/21	JL	n/a	n/a	VA2965
FA89630-1MSD	A0228196.D	5	10/20/21	JL	n/a	n/a	VA2965
FA89630-1	A0227998.D	1	10/13/21	JL	n/a	n/a	VA2965

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89630-1, FA89630-2, FA89630-3, FA89630-4, FA89630-5, FA89630-6, FA89630-7, FA89630-8, FA89630-10, FA89630-11, FA89630-12, FA89630-13, FA89630-14, FA89630-15, FA89630-16, FA89630-17, FA89630-18, FA89630-19, FA89630-20

CAS No.	Compound	FA89630-1 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
74-87-3	Methyl Chloride	ND	50	52.7	105	50	55.1	110	4	50-159/19
74-95-3	Methylene Bromide	ND	50	53.9	108	50	54.7	109	1	78-119/14
75-09-2	Methylene Chloride	ND	50	75.4	151*	50	61.8	124	20*	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	250	245	98	250	269	108	9	66-122/16
103-65-1	n-Propylbenzene	0.33	J 50	53.4	106	50	56.3	112	5	82-133/15
100-42-5	Styrene	ND	50	46.8	94	50	49.8	100	6	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	ND	50	54.0	108	50	55.6	111	3	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	49.3	99	50	52.5	105	6	72-120/14
127-18-4	Tetrachloroethylene	ND	50	58.6	117	50	60.3	121	3	76-135/16
108-88-3	Toluene	0.82	50	52.9	104	50	55.4	109	5	80-120/14
120-82-1	1,2,4-Trichlorobenzene	ND	50	39.7	79	50	43.2	86	8	73-129/20
71-55-6	1,1,1-Trichloroethane	ND	50	63.9	128	50	65.0	130	2	75-130/16
79-00-5	1,1,2-Trichloroethane	ND	50	51.7	103	50	54.3	109	5	76-119/14
79-01-6	Trichloroethylene	ND	50	64.6	129*	50	63.4	127*	2	81-126/15
75-69-4	Trichlorofluoromethane	ND	50	66.6	133	50	67.1	134	1	71-156/21
96-18-4	1,2,3-Trichloropropane	ND	50	49.7	99	50	51.1	102	3	77-120/16
95-63-6	1,2,4-Trimethylbenzene	0.22	J 50	51.5	103	50	53.7	107	4	79-120/18
108-67-8	1,3,5-Trimethylbenzene	ND	50	51.0	102	50	53.5	107	5	79-120/19
75-01-4	Vinyl Chloride	7.6	50	58.9	103	50	64.5	114	9	69-159/18
	m,p-Xylene	2.6	100	108	105	100	113	110	5	79-126/15
95-47-6	o-Xylene	0.58	50	47.1	93	50	50.7	100	7	80-127/14

CAS No.	Surrogate Recoveries	MS	MSD	FA89630-1	Limits
1868-53-7	Dibromofluoromethane	108%	106%	107%	83-118%
17060-07-0	1,2-Dichloroethane-D4	114%	111%	110%	79-125%
2037-26-5	Toluene-D8	90%	93%	101%	85-112%
460-00-4	4-Bromofluorobenzene	88%	92%	89%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA89630
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA89667-2MS	A0228197.D	5	10/20/21	JL	n/a	n/a	VA2973
FA89667-2MSD	A0228198.D	5	10/20/21	JL	n/a	n/a	VA2973
FA89667-2	A0228194.D	5	10/20/21	JL	n/a	n/a	VA2973

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89630-1, FA89630-8, FA89630-12

CAS No.	Compound	FA89667-2 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
75-00-3	Chloroethane	71.2	50	148	154*	50	105	68	34*	62-144/20

CAS No.	Surrogate Recoveries	MS	MSD	FA89667-2	Limits
1868-53-7	Dibromofluoromethane	105%	102%	121% * a	83-118%
17060-07-0	1,2-Dichloroethane-D4	104%	107%	127% * a	79-125%
2037-26-5	Toluene-D8	95%	94%	102%	85-112%
460-00-4	4-Bromofluorobenzene	97%	95%	94%	83-118%

(a) Outside control limits.

* = Outside of Control Limits.

The results set forth herein are provided by SGS North America Inc.

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Automated Report

Technical Report for

Univar

ERMORP: Univar; 8201 S 212th St, Kent, WA

577675.04

SGS Job Number: FA89667

Sampling Date: 10/07/21

Report to:

ERM
1050 SW 6th Ave Suite 1650
Portland, OR 97204
Dylan.Stankus@erm.com; Jessie.Cooper@erm.com;
Stephanie.Frith@erm.com
ATTN: Dylan Stankus

Total number of pages in report: 47



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

A handwritten signature in black ink that reads "Norm Farmer".

Norm Farmer
Technical Director

Client Service contact: Elvin Kumar 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001)
DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177),
AL, AK, AR, CT, IA, KY, MA, MI, MS, ND, NH, NV, OK, OR, UT, VT, WA, WV

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Test results relate only to samples analyzed.

Table of Contents

-1-

Section 1: Sample Summary	3
Section 2: Case Narrative/Conformance Summary	4
Section 3: Summary of Hits	6
Section 4: Sample Results	8
4.1: FA89667-1: TB-20211007-01	9
4.2: FA89667-2: MW-17-20211007	11
4.3: FA89667-3: MW-03-20211007	13
4.4: FA89667-4: MW-28-20211007	15
4.5: FA89667-5: MW-29D-20211007	17
4.6: FA89667-6: MW-20-20211007	19
4.7: FA89667-7: MW-27-20211007	21
Section 5: Misc. Forms	23
5.1: Chain of Custody	24
Section 6: MS Volatiles - QC Data Summaries	26
6.1: Method Blank Summary	27
6.2: Blank Spike Summary	34
6.3: Matrix Spike/Matrix Spike Duplicate Summary	41

1

2

3

4

5

6



Sample Summary

Univar

Job No: FA89667

ERMORP: Univar; 8201 S 212th St, Kent, WA
 Project No: 577675.04

Sample Number	Collected Date	Time By	Matrix Received	Code Type	Client Sample ID
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This report contains results reported as ND = Not detected. The following applies:
 Organics ND = Not detected above the MDL

FA89667-1	10/07/21	00:00 MC	10/08/21	AQ	Trip Blank Water	TB-20211007-01
FA89667-2	10/07/21	08:59 MC	10/08/21	AQ	Ground Water	MW-17-20211007
FA89667-3	10/07/21	09:47 MC	10/08/21	AQ	Ground Water	MW-03-20211007
FA89667-4	10/07/21	10:48 MC	10/08/21	AQ	Ground Water	MW-28-20211007
FA89667-5	10/07/21	12:03 MC	10/08/21	AQ	Ground Water	MW-29D-20211007
FA89667-5D	10/07/21	12:03 MC	10/08/21	AQ	Water Dup/MSD	MW-29D-20211007
FA89667-5S	10/07/21	12:03 MC	10/08/21	AQ	Water Matrix Spike	MW-29D-20211007
FA89667-6	10/07/21	13:07 MC	10/08/21	AQ	Ground Water	MW-20-20211007
FA89667-7	10/07/21	14:03 MC	10/08/21	AQ	Ground Water	MW-27-20211007

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Univar

Job No: FA89667

Site: ERMORP: Univar; 8201 S 212th St, Kent, WA

Report Date 11/3/2021 1:19:27 PM

On 10/08/2021, 6 Sample(s), 1 Trip Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 3.4 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of FA89667 was Assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

MS Volatiles By Method SW846 8260B

Matrix: AQ

Batch ID: VA2968

Sample(s) FA89667-3MS, FA89667-3MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for 1,1-Dichloroethane are outside control limits.

FA89667-1 for 1,1-Dichloroethane: Associated BS recovery outside control limits high; however sample is ND.

FA89667-2 for 1,1-Dichloroethane: Associated BS recovery outside control limits high; however sample is ND.

FA89667-2: Sample was not preserved to a pH < 2; reported results are considered minimum values.

FA89667-3: Confirmation run.

Matrix: AQ

Batch ID: VA2970

Sample(s) FA89667-5MS, FA89667-5MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for 1,1-Dichloroethane, Chloroethane, Methyl Bromide are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for 1,1-Dichloroethane are outside control limits. Probable cause is due to matrix interference.

RPD(s) for MSD for Acetone, Methyl Bromide are outside control limits for sample FA89667-5MSD. Probable cause is due to sample non-homogeneity.

Sample(s) FA89667-4, FA89667-5, FA89667-7 have surrogates outside control limits.

FA89667-4 for 2,2-Dichloropropane: Associated CCV recovery outside control limits high, sample was ND.

FA89667-4 for Methylene Chloride: Suspected laboratory contaminant.

FA89667-4: Associated internal standard response outside control limits.

FA89667-5 for 2,2-Dichloropropane: Associated CCV recovery outside control limits high, sample was ND.

FA89667-5: Associated internal standard response outside control limits.

FA89667-6 for 2,2-Dichloropropane: Associated CCV recovery outside control limits high, sample was ND.

FA89667-6 for Methylene Chloride: Suspected laboratory contaminant.

FA89667-7 for 2,2-Dichloropropane: Associated CCV recovery outside control limits high, sample was ND.

FA89667-7: Associated internal standard response outside control limits.

Matrix: AQ

Batch ID: VA2973

Sample(s) FA89667-2MS, FA89667-2MSD were used as the QC samples indicated.

Sample(s) FA89667-3 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.

Blank Spike Recovery(s) for 1,1-Dichloroethane, 2,2-Dichloropropane are outside control limits.

Matrix Spike Recovery(s) for 1,1-Dichloroethane, 1,1-Dichloroethylene, Benzene, Chloroethane, Chloroform, Ethylbenzene, trans-1,2-Dichloroethylene are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for 1,1-Dichloroethane, Benzene are outside control limits. Probable cause is due to matrix interference.

RPD(s) for MSD for Acetone, Chloroethane, Methyl Bromide are outside control limits for sample FA89667-2MSD. Probable cause is due to sample non-homogeneity.

Sample(s) FA89667-2, FA89667-3 have surrogates outside control limits.

VA2973-BS: No MS/MSD available for this run.

VA2973-BS for 1,1-Dichloroethane: Sporadic marginal failure.

FA89667-2 for 1,2-Dichloroethane-D4: Outside control limits.

FA89667-2 for Chloroethane: Values estimated due to surrogate failure.

FA89667-2 for Dibromofluoromethane: Outside control limits.

FA89667-3 for 1,1-Dichloroethane: Associated BS outside control limits high.

FA89667-3 for 2,2-Dichloropropane: Associated BS recovery outside control limits high; however sample is ND.

FA89667-3 for Dibromofluoromethane: Outside control limits.

FA89667-3 for Methylene Chloride: Suspected laboratory contaminant.

Matrix: AQ

Batch ID: VA2974

Sample(s) FA89962-1MS, FA89962-1MSD were used as the QC samples indicated.

The following samples were run outside of holding time for method SW846 8260B: FA89667-6

Sample(s) FA89667-6 have compounds reported with "E" qualifiers indicating estimated value exceeding calibration range.

Matrix Spike Recovery(s) for Chloroethane are outside control limits. Probable cause is due to matrix interference.

Sample(s) FA89667-4, FA89667-5, FA89667-6, FA89667-7 have surrogates outside control limits.

FA89667-4: Confirmation run beyond holdtime.

FA89667-5: Confirmation run beyond holdtime.

FA89667-6: Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA89667-7: Confirmation run beyond holdtime.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

Ariel Hartney, Client Services (signature on file)

Summary of Hits

Job Number: FA89667
Account: Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA
Collected: 10/07/21



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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FA89667-1 TB-20211007-01

No hits reported in this sample.

FA89667-2 MW-17-20211007

Benzene ^a	9.5	0.50	0.13	ug/l	SW846 8260B
Chloroethane ^b	71.2	2.5	1.0	ug/l	SW846 8260B
1,2-Dichloroethane ^a	0.76	0.50	0.13	ug/l	SW846 8260B
Toluene ^a	0.42 J	0.50	0.13	ug/l	SW846 8260B
1,2,4-Trimethylbenzene ^a	0.16 J	0.50	0.13	ug/l	SW846 8260B
m,p-Xylene ^a	1.3	1.0	0.13	ug/l	SW846 8260B
o-Xylene ^a	0.41 J	0.50	0.13	ug/l	SW846 8260B

FA89667-3 MW-03-20211007

Benzene	0.26 J	0.50	0.13	ug/l	SW846 8260B
Chloroethane	1.7	0.50	0.20	ug/l	SW846 8260B
1,1-Dichloroethane ^c	0.17 J	0.50	0.13	ug/l	SW846 8260B
cis-1,2-Dichloroethylene	0.69	0.50	0.13	ug/l	SW846 8260B
Methylene Chloride ^d	1.1 JB	2.0	1.0	ug/l	SW846 8260B
Vinyl Chloride	1.0	0.50	0.13	ug/l	SW846 8260B

FA89667-4 MW-28-20211007

Methylene Chloride ^e	15.6 J	20	10	ug/l	SW846 8260B
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FA89667-5 MW-29D-20211007

No hits reported in this sample.

FA89667-6 MW-20-20211007

Benzene	2.6	0.50	0.13	ug/l	SW846 8260B
Chloroethane ^f	261 E	2.5	1.0	ug/l	SW846 8260B
Methylene Chloride ^d	1.1 J	2.0	1.0	ug/l	SW846 8260B
Toluene	0.54	0.50	0.13	ug/l	SW846 8260B
m,p-Xylene	0.71 J	1.0	0.13	ug/l	SW846 8260B
o-Xylene	0.50	0.50	0.13	ug/l	SW846 8260B

FA89667-7 MW-27-20211007

1,1-Dichloroethane ^g	0.27 J	0.50	0.13	ug/l	SW846 8260B
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(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.

Summary of Hits

Job Number: FA89667
Account: Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA
Collected: 10/07/21



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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- (b) Values estimated due to surrogate failure.
- (c) Associated BS outside control limits high.
- (d) Suspected laboratory contaminant.
- (e) Associated internal standard response outside control limits. Suspected laboratory contaminant.
- (f) Sample re-analyzed beyond hold time; reported results are considered minimum values. Associated CCV outside control limits high; no sample available for re-analysis.
- (g) Associated internal standard response outside control limits.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: TB-20211007-01	Date Sampled: 10/07/21
Lab Sample ID: FA89667-1	Date Received: 10/08/21
Matrix: AQ - Trip Blank Water	Percent Solids: n/a
Method: SW846 8260B	
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0228058.D	1	10/15/21 12:38	JL	n/a	n/a	VA2968
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane ^a	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-20211007-01	Date Sampled:	10/07/21
Lab Sample ID:	FA89667-1	Date Received:	10/08/21
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	ND	0.50	0.13	ug/l	
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		83-118%
17060-07-0	1,2-Dichloroethane-D4	114%		79-125%
2037-26-5	Toluene-D8	102%		85-112%
460-00-4	4-Bromofluorobenzene	97%		83-118%

(a) Associated BS recovery outside control limits high; however sample is ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-17-20211007	Date Sampled:	10/07/21
Lab Sample ID:	FA89667-2	Date Received:	10/08/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	A0228060.D	1	10/15/21 13:21	JL	n/a	n/a	VA2968
Run #2	A0228194.D	5	10/20/21 18:27	JL	n/a	n/a	VA2973

	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	9.5	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane ^b	71.2 ^c	2.5	1.0	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane ^d	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	0.76	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-17-20211007	Date Sampled:	10/07/21
Lab Sample ID:	FA89667-2	Date Received:	10/08/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	0.42	0.50	0.13	ug/l	J
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.16	0.50	0.13	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	ND	0.50	0.13	ug/l	
	m,p-Xylene	1.3	1.0	0.13	ug/l	
95-47-6	o-Xylene	0.41	0.50	0.13	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%	121% ^e	83-118%
17060-07-0	1,2-Dichloroethane-D4	114%	127% ^e	79-125%
2037-26-5	Toluene-D8	102%	102%	85-112%
460-00-4	4-Bromofluorobenzene	104%	94%	83-118%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.

(b) Values estimated due to surrogate failure.

(c) Result is from Run# 2

(d) Associated BS recovery outside control limits high; however sample is ND.

(e) Outside control limits.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-03-20211007	Date Sampled:	10/07/21
Lab Sample ID:	FA89667-3	Date Received:	10/08/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0228187.D	1	10/20/21 15:53	JL	n/a	n/a	VA2973
Run #2 ^a	A0228069.D	20	10/15/21 16:39	JL	n/a	n/a	VA2968

Run #	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	0.26	0.50	0.13	ug/l	J
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	1.7	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane ^b	0.17	0.50	0.13	ug/l	J
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.69	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane ^c	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-03-20211007	
Lab Sample ID: FA89667-3	Date Sampled: 10/07/21
Matrix: AQ - Ground Water	Date Received: 10/08/21
Method: SW846 8260B	Percent Solids: n/a
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride ^d	1.1	2.0	1.0	ug/l	JB
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	1.0	0.50	0.13	ug/l	
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	119% ^e	112%	83-118%
17060-07-0	1,2-Dichloroethane-D4	124%	117%	79-125%
2037-26-5	Toluene-D8	100%	101%	85-112%
460-00-4	4-Bromofluorobenzene	94%	95%	83-118%

- (a) Confirmation run.
- (b) Associated BS outside control limits high.
- (c) Associated BS recovery outside control limits high; however sample is ND.
- (d) Suspected laboratory contaminant.
- (e) Outside control limits.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-28-20211007	Date Sampled:	10/07/21
Lab Sample ID:	FA89667-4	Date Received:	10/08/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	A0228134.D	10	10/18/21 19:08	JL	n/a	n/a	VA2970
Run #2 ^b	A0228228.D	1	10/22/21 17:49	JL	n/a	n/a	VA2974

	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	100	20	ug/l	
71-43-2	Benzene	ND	5.0	1.3	ug/l	
108-86-1	Bromobenzene	ND	5.0	1.3	ug/l	
75-27-4	Bromodichloromethane	ND	5.0	1.3	ug/l	
75-25-2	Bromoform	ND	5.0	1.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.3	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	1.3	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	1.3	ug/l	
56-23-5	Carbon Tetrachloride	ND	5.0	1.3	ug/l	
108-90-7	Chlorobenzene	ND	5.0	1.3	ug/l	
75-00-3	Chloroethane ^c	ND	5.0	2.0	ug/l	
67-66-3	Chloroform	ND	5.0	1.3	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	1.3	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	1.3	ug/l	
124-48-1	Dibromochloromethane	ND	5.0	1.3	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	2.5	ug/l	
106-93-4	1,2-Dibromoethane	ND	5.0	1.3	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	1.3	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.3	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.3	ug/l	
75-34-3	1,1-Dichloroethane	ND	5.0	1.3	ug/l	
107-06-2	1,2-Dichloroethane	ND	5.0	1.3	ug/l	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.3	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.3	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.3	ug/l	
78-87-5	1,2-Dichloropropane	ND	5.0	1.3	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	1.3	ug/l	
594-20-7	2,2-Dichloropropane ^c	ND	5.0	1.3	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.3	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.3	ug/l	
100-41-4	Ethylbenzene	ND	5.0	1.3	ug/l	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-28-20211007	Date Sampled:	10/07/21
Lab Sample ID:	FA89667-4	Date Received:	10/08/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	1.3	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	1.3	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	5.0	2.0	ug/l	
74-95-3	Methylene Bromide	ND	5.0	1.3	ug/l	
75-09-2	Methylene Chloride ^d	15.6	20	10	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	25	13	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	1.3	ug/l	
100-42-5	Styrene	ND	5.0	1.3	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.3	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.3	ug/l	
127-18-4	Tetrachloroethylene	ND	5.0	1.3	ug/l	
108-88-3	Toluene	ND	5.0	1.3	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.3	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.3	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.3	ug/l	
79-01-6	Trichloroethylene	ND	5.0	1.3	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.3	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.3	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.3	ug/l	
75-01-4	Vinyl Chloride	ND	5.0	1.3	ug/l	
	m,p-Xylene	ND	10	1.3	ug/l	
95-47-6	o-Xylene	ND	5.0	1.3	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	123% ^e	124% ^e	83-118%
17060-07-0	1,2-Dichloroethane-D4	127% ^e	127% ^e	79-125%
2037-26-5	Toluene-D8	104%	102%	85-112%
460-00-4	4-Bromofluorobenzene	92%	93%	83-118%

- (a) Associated internal standard response outside control limits.
 (b) Confirmation run beyond holdtime.
 (c) Associated CCV recovery outside control limits high, sample was ND.
 (d) Suspected laboratory contaminant.
 (e) Outside control limits.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-29D-20211007	Date Sampled:	10/07/21
Lab Sample ID:	FA89667-5	Date Received:	10/08/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	A0228131.D	1	10/18/21 18:02	JL	n/a	n/a	VA2970
Run #2 ^b	A0228229.D	1	10/22/21 18:11	JL	n/a	n/a	VA2974

	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane ^c	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane ^c	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-29D-20211007	Date Sampled:	10/07/21
Lab Sample ID:	FA89667-5	Date Received:	10/08/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	ND	0.50	0.13	ug/l	
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	124% ^d	126% ^d	83-118%
17060-07-0	1,2-Dichloroethane-D4	125%	130% ^d	79-125%
2037-26-5	Toluene-D8	101%	100%	85-112%
460-00-4	4-Bromofluorobenzene	94%	91%	83-118%

- (a) Associated internal standard response outside control limits.
- (b) Confirmation run beyond holdtime.
- (c) Associated CCV recovery outside control limits high, sample was ND.
- (d) Outside control limits.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-20-20211007	Date Sampled:	10/07/21
Lab Sample ID:	FA89667-6	Date Received:	10/08/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0228132.D	1	10/18/21 18:24	JL	n/a	n/a	VA2970
Run #2 ^a	A0228231.D	5	10/22/21 18:55	JL	n/a	n/a	VA2974

Run #	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	2.6	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane ^b	261 ^c	2.5	1.0	ug/l	E
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane ^d	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-20-20211007	Date Sampled:	10/07/21
Lab Sample ID:	FA89667-6	Date Received:	10/08/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride ^e	1.1	2.0	1.0	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	0.54	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	ND	0.50	0.13	ug/l	
	m,p-Xylene	0.71	1.0	0.13	ug/l	J
95-47-6	o-Xylene	0.50	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	112%	125% ^f	83-118%
17060-07-0	1,2-Dichloroethane-D4	117%	130% ^f	79-125%
2037-26-5	Toluene-D8	105%	102%	85-112%
460-00-4	4-Bromofluorobenzene	91%	93%	83-118%

(a) Sample re-analyzed beyond hold time; reported results are considered minimum values.

(b) Associated CCV outside control limits high; no sample available for re-analysis.

(c) Result is from Run# 2

(d) Associated CCV recovery outside control limits high, sample was ND.

(e) Suspected laboratory contaminant.

(f) Outside control limits.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-27-20211007	Date Sampled:	10/07/21
Lab Sample ID:	FA89667-7	Date Received:	10/08/21
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	ERMORP: Univar; 8201 S 212th St, Kent, WA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	A0228133.D	1	10/18/21 18:46	JL	n/a	n/a	VA2970
Run #2 ^b	A0228230.D	1	10/22/21 18:33	JL	n/a	n/a	VA2974

	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane ^c	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	0.27	0.50	0.13	ug/l	J
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane ^c	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



SGS North America Inc - Orlando
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, FL 32811
TEL: 407-425-6700 FAX: 407-425-0707
www.sgs.com

FA89667

SGS - ORLANDO JOB #: PAGE 1 OF 1

SGS - ORLANDO Quote # SKIFF #

Client / Reporting Information			Project Information				Analytical Information										Matrix Codes
Company Name: ERM			Project Name: Univar Kent 212th														DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge OL - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid
Address: 1218 3rd Ave Ste 1412			Street: S 212th														
City: Seattle State: WA Zip: 98101			City: Kent State: WA														
Project Contact: Dylan Stankov Email: 803-634-9703			Project #: 577675.04														
Phone #: 803-634-9703			Client Purchase Order #														
Sampler(s) Name(s) (Printed) Sampler 1: Matt Crandell Sampler 2:																	
SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION		CONTAINER INFORMATION										LAB USE ONLY			
		DATE	TIME	SAMPLED BY	MATRIX	TOTAL # OR BOTTLES	OTHER	NONE	ICI	MSH	MSO4	MSO4/MSO4	DI WATER		MSO4		
1	TB-20211007-01	10/7/21		W	2											X	
2	MW-17-20211007	10/7/21	0859	MC	GW	3										X	
3	MW-03-20211007		0947	MC	GW	3										X	
4	MW-28-20211007		1048	MC	GW	3										X	
5	MW-29D-20211007		1203	MC	GW	3										X	
5	MW-29D-20211007-MS		1203	MC	GW	3									X	X	
5	MW-29D-20211007-MSD		1203	MC	GW	3									X	X	
6	MW-20-20211007		1307	MC	GW	3										X	
7	MW-27-20211007		1403	MC	GW	3										X	
Turnaround Time (Business days)			Data Deliverable Information				Comments / Remarks										
<input checked="" type="checkbox"/> 10 Day (Business) <input type="checkbox"/> 7 Day <input type="checkbox"/> 5 Day <input type="checkbox"/> 3 Day RUSH <input type="checkbox"/> 2 Day RUSH <input type="checkbox"/> 1 Day RUSH <input type="checkbox"/> Other			Approved By: / Date: _____ <input type="checkbox"/> COMMERCIAL "A" (RESULTS ONLY) <input checked="" type="checkbox"/> COMMERCIAL "B" (RESULTS PLUS QC) <input type="checkbox"/> REDT1 (EPA LEVEL 3) <input type="checkbox"/> FULLT1 (EPA LEVEL 4) <input type="checkbox"/> EDD'S				INITIAL ASSESSMENT BB										
Rush T/A Data Available VIA Email or Lablink			Sample Custody must be documented below each time samples change possession, including Lab's custody.														
Relinquished by Sampler/Affiliation		Date Time:		Received By/Affiliation		Date Time:		Relinquished By/Affiliation		Date Time:		Received By/Affiliation		Date Time:		Received By/Affiliation	
1 Matt Crandell /ERM		10/7/21/1600		2		10/8/21		3		10/8/21		4		10/8/21		5	
5				6				7				8				9	

Lab Use Only : Cooler Temperature (s) Celsius (corrected): **3.4**

ORLD-SMT-0001-03-FORM-COC (4).xls Rev 031318

http://www.sgs.com/en/terms-and-conditions

FA89667: Chain of Custody

Page 1 of 2



5.1
5

SGS Sample Receipt Summary

Job Number: FA89667

Client: ERM/UNIVAR

Project: UNIVAR KENT 212TH

Date / Time Received: 10/8/2021 9:30:00 AM

Delivery Method: UPS

Airbill #'s: 1Z0F4247Y040212157

Therm ID: IR 1;

Therm CF: 0.2;

of Coolers: 1

Cooler Temps (Raw Measured) °C: Cooler 1: (3.2);

Cooler Temps (Corrected) °C: Cooler 1: (3.4);

Cooler Information

Y or N

- 1. Custody Seals Present
- 2. Custody Seals Intact
- 3. Temp criteria achieved
- 4. Cooler temp verification IR Gun
- 5. Cooler media Ice (Bag)

Trip Blank Information

Y or N

N/A

- 1. Trip Blank present / cooler
 - 2. Trip Blank listed on COC
- W or S N/A
- 3. Type Of TB Received

Sample Information

Y or N

N/A

- 1. Sample labels present on bottles
- 2. Samples preserved properly
- 3. Sufficient volume/containers recvd for analysis:
- 4. Condition of sample Intact
- 5. Sample recvd within HT
- 6. Dates/Times/IDs on COC match Sample Label
- 7. VOCs have headspace
- 8. Bottles received for unspecified tests
- 9. Compositing instructions clear
- 10. Voa Soil Kits/Jars received past 48hrs?
- 11. % Solids Jar received?
- 12. Residual Chlorine Present?

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____

Number of 5035 Field Kits: _____

Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315

pH 10-12 219813A

Other: (Specify) _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: STEPHENP

Date: 10/8/2021 9:30:00 AM

Reviewer: PH

Date: 10/12/2021

FA89667: Chain of Custody

Page 2 of 2

5.1
5

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA89667
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA2968-MB	A0228057.D	1	10/15/21	JL	n/a	n/a	VA2968

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89667-1, FA89667-2

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	

Method Blank Summary

Job Number: FA89667
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA2968-MB	A0228057.D	1	10/15/21	JL	n/a	n/a	VA2968

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89667-1, FA89667-2

CAS No.	Compound	Result	RL	MDL	Units	Q
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	ND	0.50	0.13	ug/l	
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	109%	83-118%
17060-07-0	1,2-Dichloroethane-D4	113%	79-125%
2037-26-5	Toluene-D8	102%	85-112%
460-00-4	4-Bromofluorobenzene	96%	83-118%

Method Blank Summary

Job Number: FA89667
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA2970-MB	A0228120.D	1	10/18/21	JL	n/a	n/a	VA2970

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89667-4, FA89667-5, FA89667-6, FA89667-7

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	

Method Blank Summary

Job Number: FA89667
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA2970-MB	A0228120.D	1	10/18/21	JL	n/a	n/a	VA2970

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89667-4, FA89667-5, FA89667-6, FA89667-7

CAS No.	Compound	Result	RL	MDL	Units	Q
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	ND	0.50	0.13	ug/l	
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	109%	83-118%
17060-07-0	1,2-Dichloroethane-D4	112%	79-125%
2037-26-5	Toluene-D8	102%	85-112%
460-00-4	4-Bromofluorobenzene	96%	83-118%

Method Blank Summary

Job Number: FA89667
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA2973-MB	A0228181.D	1	10/20/21	JL	n/a	n/a	VA2973

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89667-2, FA89667-3

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.13	ug/l	
108-86-1	Bromobenzene	ND	0.50	0.13	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.13	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	0.13	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	0.13	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	0.13	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.13	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.13	ug/l	
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.13	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	0.13	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	0.13	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.13	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	0.13	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.13	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.13	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.13	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.13	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	0.13	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	0.13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.13	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.13	ug/l	
110-54-3	Hexane	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	0.50	0.13	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	0.13	ug/l	
74-83-9	Methyl Bromide	ND	0.50	0.20	ug/l	

Method Blank Summary

Job Number: FA89667
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA2973-MB	A0228181.D	1	10/20/21	JL	n/a	n/a	VA2973

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89667-2, FA89667-3

CAS No.	Compound	Result	RL	MDL	Units	Q
74-87-3	Methyl Chloride	ND	0.50	0.20	ug/l	
74-95-3	Methylene Bromide	ND	0.50	0.13	ug/l	
75-09-2	Methylene Chloride	1.7	2.0	1.0	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2.5	1.3	ug/l	
103-65-1	n-Propylbenzene	ND	0.50	0.13	ug/l	
100-42-5	Styrene	ND	0.50	0.13	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.13	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.13	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.13	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	0.13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.13	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.13	ug/l	
75-01-4	Vinyl Chloride	ND	0.50	0.13	ug/l	
	m,p-Xylene	ND	1.0	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.13	ug/l	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	115%	83-118%
17060-07-0	1,2-Dichloroethane-D4	116%	79-125%
2037-26-5	Toluene-D8	102%	85-112%
460-00-4	4-Bromofluorobenzene	99%	83-118%

Method Blank Summary

Job Number: FA89667
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA2974-MB	A0228213.D	1	10/22/21	JL	n/a	n/a	VA2974

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89667-6

CAS No.	Compound	Result	RL	MDL	Units	Q
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	112%	83-118%
17060-07-0	1,2-Dichloroethane-D4	119%	79-125%
2037-26-5	Toluene-D8	101%	85-112%
460-00-4	4-Bromofluorobenzene	95%	83-118%

6.1.4
6

Blank Spike Summary

Job Number: FA89667
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA2968-BS	A0228055.D	1	10/15/21	JL	n/a	n/a	VA2968

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89667-1, FA89667-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	31.9	64	50-147
71-43-2	Benzene	10	12.0	120	81-122
108-86-1	Bromobenzene	10	11.4	114	80-121
75-27-4	Bromodichloromethane	10	11.4	114	79-123
75-25-2	Bromoform	10	10.3	103	66-123
104-51-8	n-Butylbenzene	10	10.8	108	79-126
135-98-8	sec-Butylbenzene	10	12.6	126	83-133
98-06-6	tert-Butylbenzene	10	12.1	121	80-133
56-23-5	Carbon Tetrachloride	10	13.0	130	76-136
108-90-7	Chlorobenzene	10	11.6	116	82-124
75-00-3	Chloroethane	10	11.2	112	62-144
67-66-3	Chloroform	10	11.8	118	80-124
95-49-8	o-Chlorotoluene	10	11.9	119	81-127
106-43-4	p-Chlorotoluene	10	11.6	116	83-130
124-48-1	Dibromochloromethane	10	10.3	103	78-122
96-12-8	1,2-Dibromo-3-chloropropane	10	9.5	95	64-123
106-93-4	1,2-Dibromoethane	10	10.3	103	75-120
75-71-8	Dichlorodifluoromethane	10	8.8	88	42-167
95-50-1	1,2-Dichlorobenzene	10	11.3	113	82-124
541-73-1	1,3-Dichlorobenzene	10	12.0	120	84-125
106-46-7	1,4-Dichlorobenzene	10	11.5	115	78-120
75-34-3	1,1-Dichloroethane	10	12.4	124*	81-122
107-06-2	1,2-Dichloroethane	10	11.1	111	75-125
75-35-4	1,1-Dichloroethylene	10	12.8	128	78-137
156-59-2	cis-1,2-Dichloroethylene	10	11.6	116	78-120
156-60-5	trans-1,2-Dichloroethylene	10	12.0	120	76-127
78-87-5	1,2-Dichloropropane	10	11.6	116	76-124
142-28-9	1,3-Dichloropropane	10	10.4	104	80-118
594-20-7	2,2-Dichloropropane	10	13.6	136	74-139
10061-01-5	cis-1,3-Dichloropropene	10	10.3	103	75-118
10061-02-6	trans-1,3-Dichloropropene	10	11.1	111	80-120
100-41-4	Ethylbenzene	10	12.1	121	81-121
110-54-3	Hexane	10	10.4	104	69-132
98-82-8	Isopropylbenzene	10	11.4	114	83-132
99-87-6	p-Isopropyltoluene	10	11.8	118	79-130
74-83-9	Methyl Bromide	10	11.7	117	59-143

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA89667
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA2968-BS	A0228055.D	1	10/15/21	JL	n/a	n/a	VA2968

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89667-1, FA89667-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-87-3	Methyl Chloride	10	9.2	92	50-159
74-95-3	Methylene Bromide	10	10.3	103	78-119
75-09-2	Methylene Chloride	10	11.6	116	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	50	57.8	116	66-122
103-65-1	n-Propylbenzene	10	12.1	121	82-133
100-42-5	Styrene	10	10.5	105	78-119
630-20-6	1,1,1,2-Tetrachloroethane	10	11.3	113	77-122
79-34-5	1,1,2,2-Tetrachloroethane	10	10.9	109	72-120
127-18-4	Tetrachloroethylene	10	12.3	123	76-135
108-88-3	Toluene	10	11.3	113	80-120
120-82-1	1,2,4-Trichlorobenzene	10	9.0	90	73-129
71-55-6	1,1,1-Trichloroethane	10	12.4	124	75-130
79-00-5	1,1,2-Trichloroethane	10	11.0	110	76-119
79-01-6	Trichloroethylene	10	11.8	118	81-126
75-69-4	Trichlorofluoromethane	10	10.5	105	71-156
96-18-4	1,2,3-Trichloropropane	10	10.1	101	77-120
95-63-6	1,2,4-Trimethylbenzene	10	11.2	112	79-120
108-67-8	1,3,5-Trimethylbenzene	10	11.4	114	79-120
75-01-4	Vinyl Chloride	10	9.1	91	69-159
	m,p-Xylene	20	22.5	113	79-126
95-47-6	o-Xylene	10	10.8	108	80-127

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA89667
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA2970-BS	A0228117.D	1	10/18/21	JL	n/a	n/a	VA2970

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89667-4, FA89667-5, FA89667-6, FA89667-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	33.0	66	50-147
71-43-2	Benzene	10	11.4	114	81-122
108-86-1	Bromobenzene	10	10.6	106	80-121
75-27-4	Bromodichloromethane	10	10.8	108	79-123
75-25-2	Bromoform	10	10.4	104	66-123
104-51-8	n-Butylbenzene	10	10.1	101	79-126
135-98-8	sec-Butylbenzene	10	11.8	118	83-133
98-06-6	tert-Butylbenzene	10	11.2	112	80-133
56-23-5	Carbon Tetrachloride	10	12.2	122	76-136
108-90-7	Chlorobenzene	10	10.9	109	82-124
75-00-3	Chloroethane	10	10.9	109	62-144
67-66-3	Chloroform	10	11.1	111	80-124
95-49-8	o-Chlorotoluene	10	11.1	111	81-127
106-43-4	p-Chlorotoluene	10	10.9	109	83-130
124-48-1	Dibromochloromethane	10	10	100	78-122
96-12-8	1,2-Dibromo-3-chloropropane	10	9.5	95	64-123
106-93-4	1,2-Dibromoethane	10	10.2	102	75-120
75-71-8	Dichlorodifluoromethane	10	8.4	84	42-167
95-50-1	1,2-Dichlorobenzene	10	10.5	105	82-124
541-73-1	1,3-Dichlorobenzene	10	11.1	111	84-125
106-46-7	1,4-Dichlorobenzene	10	10.6	106	78-120
75-34-3	1,1-Dichloroethane	10	11.8	118	81-122
107-06-2	1,2-Dichloroethane	10	10.7	107	75-125
75-35-4	1,1-Dichloroethylene	10	12.6	126	78-137
156-59-2	cis-1,2-Dichloroethylene	10	11.1	111	78-120
156-60-5	trans-1,2-Dichloroethylene	10	11.7	117	76-127
78-87-5	1,2-Dichloropropane	10	11.1	111	76-124
142-28-9	1,3-Dichloropropane	10	10.2	102	80-118
594-20-7	2,2-Dichloropropane	10	13.2	132	74-139
10061-01-5	cis-1,3-Dichloropropene	10	10.0	100	75-118
10061-02-6	trans-1,3-Dichloropropene	10	10.6	106	80-120
100-41-4	Ethylbenzene	10	11.3	113	81-121
110-54-3	Hexane	10	10.9	109	69-132
98-82-8	Isopropylbenzene	10	10.7	107	83-132
99-87-6	p-Isopropyltoluene	10	11.0	110	79-130
74-83-9	Methyl Bromide	10	10.8	108	59-143

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA89667
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA2970-BS	A0228117.D	1	10/18/21	JL	n/a	n/a	VA2970

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89667-4, FA89667-5, FA89667-6, FA89667-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-87-3	Methyl Chloride	10	9.9	99	50-159
74-95-3	Methylene Bromide	10	10.0	100	78-119
75-09-2	Methylene Chloride	10	10.2	102	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	50	47.8	96	66-122
103-65-1	n-Propylbenzene	10	11.2	112	82-133
100-42-5	Styrene	10	10.1	101	78-119
630-20-6	1,1,1,2-Tetrachloroethane	10	10.4	104	77-122
79-34-5	1,1,2,2-Tetrachloroethane	10	10.6	106	72-120
127-18-4	Tetrachloroethylene	10	11.4	114	76-135
108-88-3	Toluene	10	10.7	107	80-120
120-82-1	1,2,4-Trichlorobenzene	10	8.7	87	73-129
71-55-6	1,1,1-Trichloroethane	10	11.5	115	75-130
79-00-5	1,1,2-Trichloroethane	10	10.4	104	76-119
79-01-6	Trichloroethylene	10	11.1	111	81-126
75-69-4	Trichlorofluoromethane	10	10	100	71-156
96-18-4	1,2,3-Trichloropropane	10	10.0	100	77-120
95-63-6	1,2,4-Trimethylbenzene	10	10.4	104	79-120
108-67-8	1,3,5-Trimethylbenzene	10	10.6	106	79-120
75-01-4	Vinyl Chloride	10	9.0	90	69-159
	m,p-Xylene	20	21.3	107	79-126
95-47-6	o-Xylene	10	10.4	104	80-127

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	102%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA89667
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA2973-BS ^a	A0228178.D	1	10/20/21	JL	n/a	n/a	VA2973

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89667-2, FA89667-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	51.3	103	50-147
71-43-2	Benzene	10	12.1	121	81-122
108-86-1	Bromobenzene	10	10.8	108	80-121
75-27-4	Bromodichloromethane	10	11.4	114	79-123
75-25-2	Bromoform	10	10.5	105	66-123
104-51-8	n-Butylbenzene	10	10.8	108	79-126
135-98-8	sec-Butylbenzene	10	12.3	123	83-133
98-06-6	tert-Butylbenzene	10	11.6	116	80-133
56-23-5	Carbon Tetrachloride	10	12.9	129	76-136
108-90-7	Chlorobenzene	10	11.3	113	82-124
75-00-3	Chloroethane	10	9.6	96	62-144
67-66-3	Chloroform	10	11.8	118	80-124
95-49-8	o-Chlorotoluene	10	11.6	116	81-127
106-43-4	p-Chlorotoluene	10	11.2	112	83-130
124-48-1	Dibromochloromethane	10	10.1	101	78-122
96-12-8	1,2-Dibromo-3-chloropropane	10	10.5	105	64-123
106-93-4	1,2-Dibromoethane	10	10.3	103	75-120
75-71-8	Dichlorodifluoromethane	10	8.1	81	42-167
95-50-1	1,2-Dichlorobenzene	10	11.2	112	82-124
541-73-1	1,3-Dichlorobenzene	10	11.8	118	84-125
106-46-7	1,4-Dichlorobenzene	10	11.2	112	78-120
75-34-3	1,1-Dichloroethane	10	12.6	126* ^b	81-122
107-06-2	1,2-Dichloroethane	10	11.4	114	75-125
75-35-4	1,1-Dichloroethylene	10	13.3	133	78-137
156-59-2	cis-1,2-Dichloroethylene	10	11.6	116	78-120
156-60-5	trans-1,2-Dichloroethylene	10	12.5	125	76-127
78-87-5	1,2-Dichloropropane	10	11.5	115	76-124
142-28-9	1,3-Dichloropropane	10	10.3	103	80-118
594-20-7	2,2-Dichloropropane	10	14.0	140* ^b	74-139
10061-01-5	cis-1,3-Dichloropropene	10	10.5	105	75-118
10061-02-6	trans-1,3-Dichloropropene	10	11.1	111	80-120
100-41-4	Ethylbenzene	10	11.9	119	81-121
110-54-3	Hexane	10	11.2	112	69-132
98-82-8	Isopropylbenzene	10	11.2	112	83-132
99-87-6	p-Isopropyltoluene	10	11.6	116	79-130
74-83-9	Methyl Bromide	10	9.6	96	59-143

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA89667
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA2973-BS ^a	A0228178.D	1	10/20/21	JL	n/a	n/a	VA2973

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89667-2, FA89667-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-87-3	Methyl Chloride	10	8.9	89	50-159
74-95-3	Methylene Bromide	10	10.5	105	78-119
75-09-2	Methylene Chloride	10	11.4	114	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	50	57.1	114	66-122
103-65-1	n-Propylbenzene	10	11.4	114	82-133
100-42-5	Styrene	10	10.3	103	78-119
630-20-6	1,1,1,2-Tetrachloroethane	10	11.0	110	77-122
79-34-5	1,1,2,2-Tetrachloroethane	10	10.3	103	72-120
127-18-4	Tetrachloroethylene	10	11.9	119	76-135
108-88-3	Toluene	10	11.2	112	80-120
120-82-1	1,2,4-Trichlorobenzene	10	9.6	96	73-129
71-55-6	1,1,1-Trichloroethane	10	12.3	123	75-130
79-00-5	1,1,2-Trichloroethane	10	10.6	106	76-119
79-01-6	Trichloroethylene	10	12.1	121	81-126
75-69-4	Trichlorofluoromethane	10	10.4	104	71-156
96-18-4	1,2,3-Trichloropropane	10	10.2	102	77-120
95-63-6	1,2,4-Trimethylbenzene	10	10.9	109	79-120
108-67-8	1,3,5-Trimethylbenzene	10	11.0	110	79-120
75-01-4	Vinyl Chloride	10	9.4	94	69-159
	m,p-Xylene	20	22.3	112	79-126
95-47-6	o-Xylene	10	10.7	107	80-127

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	106%	79-125%
2037-26-5	Toluene-D8	98%	85-112%
460-00-4	4-Bromofluorobenzene	97%	83-118%

- (a) No MS/MSD available for this run.
- (b) Sporadic marginal failure.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA89667
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA2974-BS	A0228210.D	1	10/22/21	JL	n/a	n/a	VA2974

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89667-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
75-00-3	Chloroethane	10	10.5	105	62-144

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	108%	79-125%
2037-26-5	Toluene-D8	96%	85-112%
460-00-4	4-Bromofluorobenzene	97%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA89667
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA89667-3MS	A0228070.D	20	10/15/21	JL	n/a	n/a	VA2968
FA89667-3MSD	A0228071.D	20	10/15/21	JL	n/a	n/a	VA2968
FA89667-3 ^a	A0228069.D	20	10/15/21	JL	n/a	n/a	VA2968

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89667-1, FA89667-2

CAS No.	Compound	FA89667-3 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	1000	639	64	1000	608	61	5	50-147/21
71-43-2	Benzene	ND	200	227	114	200	224	112	1	81-122/14
108-86-1	Bromobenzene	ND	200	209	105	200	208	104	0	80-121/14
75-27-4	Bromodichloromethane	ND	200	219	110	200	215	108	2	79-123/19
75-25-2	Bromoform	ND	200	188	94	200	187	94	1	66-123/21
104-51-8	n-Butylbenzene	ND	200	188	94	200	186	93	1	79-126/16
135-98-8	sec-Butylbenzene	ND	200	224	112	200	226	113	1	83-133/16
98-06-6	tert-Butylbenzene	ND	200	209	105	200	213	107	2	80-133/16
56-23-5	Carbon Tetrachloride	ND	200	249	125	200	238	119	5	76-136/23
108-90-7	Chlorobenzene	ND	200	216	108	200	215	108	0	82-124/14
75-00-3	Chloroethane	ND	200	246	123	200	278	139	12	62-144/20
67-66-3	Chloroform	ND	200	228	114	200	222	111	3	80-124/15
95-49-8	o-Chlorotoluene	ND	200	215	108	200	216	108	0	81-127/15
106-43-4	p-Chlorotoluene	ND	200	204	102	200	207	104	1	83-130/15
124-48-1	Dibromochloromethane	ND	200	187	94	200	188	94	1	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	ND	200	173	87	200	183	92	6	64-123/18
106-93-4	1,2-Dibromoethane	ND	200	184	92	200	187	94	2	75-120/13
75-71-8	Dichlorodifluoromethane	ND	200	187	94	200	213	107	13	42-167/19
95-50-1	1,2-Dichlorobenzene	ND	200	208	104	200	208	104	0	82-124/14
541-73-1	1,3-Dichlorobenzene	ND	200	219	110	200	221	111	1	84-125/14
106-46-7	1,4-Dichlorobenzene	ND	200	213	107	200	213	107	0	78-120/15
75-34-3	1,1-Dichloroethane	ND	200	232	116	200	232	116	0	81-122/15
107-06-2	1,2-Dichloroethane	ND	200	213	107	200	209	105	2	75-125/14
75-35-4	1,1-Dichloroethylene	ND	200	231	116	200	229	115	1	78-137/18
156-59-2	cis-1,2-Dichloroethylene	ND	200	210	105	200	212	106	1	78-120/15
156-60-5	trans-1,2-Dichloroethylene	ND	200	219	110	200	220	110	0	76-127/17
78-87-5	1,2-Dichloropropane	ND	200	215	108	200	213	107	1	76-124/14
142-28-9	1,3-Dichloropropane	ND	200	186	93	200	189	95	2	80-118/13
594-20-7	2,2-Dichloropropane	ND	200	228	114	200	219	110	4	74-139/17
10061-01-5	cis-1,3-Dichloropropene	ND	200	185	93	200	186	93	1	75-118/23
10061-02-6	trans-1,3-Dichloropropene	ND	200	191	96	200	195	98	2	80-120/22
100-41-4	Ethylbenzene	ND	200	221	111	200	219	110	1	81-121/14
110-54-3	Hexane	ND	200	181	91	200	183	92	1	69-132/20
98-82-8	Isopropylbenzene	ND	200	200	100	200	203	102	1	83-132/15
99-87-6	p-Isopropyltoluene	ND	200	205	103	200	209	105	2	79-130/16
74-83-9	Methyl Bromide	ND	200	245	123	200	283	142	14	59-143/19

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA89667
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA89667-3MS	A0228070.D	20	10/15/21	JL	n/a	n/a	VA2968
FA89667-3MSD	A0228071.D	20	10/15/21	JL	n/a	n/a	VA2968
FA89667-3 ^a	A0228069.D	20	10/15/21	JL	n/a	n/a	VA2968

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89667-1, FA89667-2

CAS No.	Compound	FA89667-3 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
74-87-3	Methyl Chloride	ND	200	201	101	200	234	117	15	50-159/19
74-95-3	Methylene Bromide	ND	200	196	98	200	193	97	2	78-119/14
75-09-2	Methylene Chloride	39.5	J 200	199	80	200	201	81	1	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	1000	1000	100	1000	978	98	2	66-122/16
103-65-1	n-Propylbenzene	ND	200	212	106	200	215	108	1	82-133/15
100-42-5	Styrene	ND	200	189	95	200	190	95	1	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	ND	200	210	105	200	208	104	1	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	ND	200	205	103	200	206	103	0	72-120/14
127-18-4	Tetrachloroethylene	ND	200	225	113	200	223	112	1	76-135/16
108-88-3	Toluene	ND	200	205	103	200	207	104	1	80-120/14
120-82-1	1,2,4-Trichlorobenzene	ND	200	163	82	200	163	82	0	73-129/20
71-55-6	1,1,1-Trichloroethane	ND	200	235	118	200	230	115	2	75-130/16
79-00-5	1,1,2-Trichloroethane	ND	200	198	99	200	200	100	1	76-119/14
79-01-6	Trichloroethylene	ND	200	224	112	200	221	111	1	81-126/15
75-69-4	Trichlorofluoromethane	ND	200	226	113	200	249	125	10	71-156/21
96-18-4	1,2,3-Trichloropropane	ND	200	191	96	200	189	95	1	77-120/16
95-63-6	1,2,4-Trimethylbenzene	ND	200	199	100	200	201	101	1	79-120/18
108-67-8	1,3,5-Trimethylbenzene	ND	200	202	101	200	204	102	1	79-120/19
75-01-4	Vinyl Chloride	ND	200	190	95	200	219	110	14	69-159/18
	m,p-Xylene	ND	400	408	102	400	410	103	0	79-126/15
95-47-6	o-Xylene	ND	200	187	94	200	193	97	3	80-127/14

CAS No.	Surrogate Recoveries	MS	MSD	FA89667-3	Limits
1868-53-7	Dibromofluoromethane	107%	105%	112%	83-118%
17060-07-0	1,2-Dichloroethane-D4	107%	105%	117%	79-125%
2037-26-5	Toluene-D8	95%	97%	101%	85-112%
460-00-4	4-Bromofluorobenzene	93%	96%	95%	83-118%

(a) Confirmation run.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA89667
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA89667-5MS	A0228137.D	1	10/18/21	JL	n/a	n/a	VA2970
FA89667-5MSD	A0228138.D	1	10/18/21	JL	n/a	n/a	VA2970
FA89667-5 ^a	A0228131.D	1	10/18/21	JL	n/a	n/a	VA2970

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89667-4, FA89667-5, FA89667-6, FA89667-7

CAS No.	Compound	FA89667-5 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	50	26.0	52	50	47.1	94	58*	50-147/21
71-43-2	Benzene	ND	10	12.2	122	10	12.2	122	0	81-122/14
108-86-1	Bromobenzene	ND	10	11.1	111	10	10.9	109	2	80-121/14
75-27-4	Bromodichloromethane	ND	10	11.1	111	10	11.1	111	0	79-123/19
75-25-2	Bromoform	ND	10	8.7	87	10	9.1	91	4	66-123/21
104-51-8	n-Butylbenzene	ND	10	9.9	99	10	10.4	104	5	79-126/16
135-98-8	sec-Butylbenzene	ND	10	12.0	120	10	12.0	120	0	83-133/16
98-06-6	tert-Butylbenzene	ND	10	11.3	113	10	11.3	113	0	80-133/16
56-23-5	Carbon Tetrachloride	ND	10	13.3	133	10	13.2	132	1	76-136/23
108-90-7	Chlorobenzene	ND	10	11.4	114	10	11.6	116	2	82-124/14
75-00-3	Chloroethane	ND	10	14.7	147*	10	12.4	124	17	62-144/20
67-66-3	Chloroform	ND	10	12.2	122	10	12.1	121	1	80-124/15
95-49-8	o-Chlorotoluene	ND	10	11.5	115	10	11.5	115	0	81-127/15
106-43-4	p-Chlorotoluene	ND	10	11.1	111	10	11.1	111	0	83-130/15
124-48-1	Dibromochloromethane	ND	10	9.2	92	10	9.3	93	1	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	9.2	92	10	10.1	101	9	64-123/18
106-93-4	1,2-Dibromoethane	ND	10	9.7	97	10	10.1	101	4	75-120/13
75-71-8	Dichlorodifluoromethane	ND	10	11.1	111	10	10.9	109	2	42-167/19
95-50-1	1,2-Dichlorobenzene	ND	10	10.8	108	10	11.3	113	5	82-124/14
541-73-1	1,3-Dichlorobenzene	ND	10	11.6	116	10	11.7	117	1	84-125/14
106-46-7	1,4-Dichlorobenzene	ND	10	11.3	113	10	11.2	112	1	78-120/15
75-34-3	1,1-Dichloroethane	ND	10	12.9	129*	10	13.0	130*	1	81-122/15
107-06-2	1,2-Dichloroethane	ND	10	11.5	115	10	11.6	116	1	75-125/14
75-35-4	1,1-Dichloroethylene	ND	10	13.7	137	10	13.4	134	2	78-137/18
156-59-2	cis-1,2-Dichloroethylene	ND	10	11.7	117	10	11.8	118	1	78-120/15
156-60-5	trans-1,2-Dichloroethylene	ND	10	12.5	125	10	12.5	125	0	76-127/17
78-87-5	1,2-Dichloropropane	ND	10	11.5	115	10	11.7	117	2	76-124/14
142-28-9	1,3-Dichloropropane	ND	10	9.9	99	10	10.2	102	3	80-118/13
594-20-7	2,2-Dichloropropane	ND	10	13.4	134	10	12.7	127	5	74-139/17
10061-01-5	cis-1,3-Dichloropropene	ND	10	8.3	83	10	8.6	86	4	75-118/23
10061-02-6	trans-1,3-Dichloropropene	ND	10	10.3	103	10	10.7	107	4	80-120/22
100-41-4	Ethylbenzene	ND	10	11.7	117	10	11.9	119	2	81-121/14
110-54-3	Hexane	ND	10	10.5	105	10	10.9	109	4	69-132/20
98-82-8	Isopropylbenzene	ND	10	10.6	106	10	11.1	111	5	83-132/15
99-87-6	p-Isopropyltoluene	ND	10	10.9	109	10	11.3	113	4	79-130/16
74-83-9	Methyl Bromide	ND	10	15.4	154*	10	11.6	116	28*	59-143/19

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA89667
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA89667-5MS	A0228137.D	1	10/18/21	JL	n/a	n/a	VA2970
FA89667-5MSD	A0228138.D	1	10/18/21	JL	n/a	n/a	VA2970
FA89667-5 ^a	A0228131.D	1	10/18/21	JL	n/a	n/a	VA2970

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89667-4, FA89667-5, FA89667-6, FA89667-7

CAS No.	Compound	FA89667-5 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
74-87-3	Methyl Chloride	ND	10	10.8	108	10	10.8	108	0	50-159/19
74-95-3	Methylene Bromide	ND	10	10.4	104	10	10.8	108	4	78-119/14
75-09-2	Methylene Chloride	ND	10	9.5	95	10	9.5	95	0	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	50	48.0	96	50	53.9	108	12	66-122/16
103-65-1	n-Propylbenzene	ND	10	11.4	114	10	11.3	113	1	82-133/15
100-42-5	Styrene	ND	10	9.4	94	10	9.8	98	4	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	ND	10	11.1	111	10	11.2	112	1	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	ND	10	11.0	110	10	10.4	104	6	72-120/14
127-18-4	Tetrachloroethylene	ND	10	12.0	120	10	12.0	120	0	76-135/16
108-88-3	Toluene	ND	10	11.0	110	10	11.1	111	1	80-120/14
120-82-1	1,2,4-Trichlorobenzene	ND	10	8.1	81	10	9.1	91	12	73-129/20
71-55-6	1,1,1-Trichloroethane	ND	10	12.7	127	10	12.5	125	2	75-130/16
79-00-5	1,1,2-Trichloroethane	ND	10	10.6	106	10	10.8	108	2	76-119/14
79-01-6	Trichloroethylene	ND	10	11.9	119	10	12.3	123	3	81-126/15
75-69-4	Trichlorofluoromethane	ND	10	13.2	132	10	13.0	130	2	71-156/21
96-18-4	1,2,3-Trichloropropane	ND	10	10	100	10	10.2	102	2	77-120/16
95-63-6	1,2,4-Trimethylbenzene	ND	10	10.6	106	10	10.7	107	1	79-120/18
108-67-8	1,3,5-Trimethylbenzene	ND	10	10.6	106	10	10.6	106	0	79-120/19
75-01-4	Vinyl Chloride	ND	10	11.6	116	10	11.8	118	2	69-159/18
	m,p-Xylene	ND	20	21.7	109	20	22.1	111	2	79-126/15
95-47-6	o-Xylene	ND	10	9.9	99	10	10.5	105	6	80-127/14

CAS No.	Surrogate Recoveries	MS	MSD	FA89667-5	Limits
1868-53-7	Dibromofluoromethane	106%	103%	124% * b	83-118%
17060-07-0	1,2-Dichloroethane-D4	105%	106%	125%	79-125%
2037-26-5	Toluene-D8	94%	95%	101%	85-112%
460-00-4	4-Bromofluorobenzene	96%	94%	94%	83-118%

(a) Associated internal standard response outside control limits.

(b) Outside control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA89667
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA89667-2MS	A0228197.D	5	10/20/21	JL	n/a	n/a	VA2973
FA89667-2MSD	A0228198.D	5	10/20/21	JL	n/a	n/a	VA2973
FA89667-2	A0228194.D	5	10/20/21	JL	n/a	n/a	VA2973

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89667-2, FA89667-3

CAS No.	Compound	FA89667-2 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	250	161	64	250	259	104	47*	50-147/21
71-43-2	Benzene	7.3	50	73.4	132*	50	70.7	127*	4	81-122/14
108-86-1	Bromobenzene	ND	50	57.3	115	50	54.0	108	6	80-121/14
75-27-4	Bromodichloromethane	ND	50	55.6	111	50	52.7	105	5	79-123/19
75-25-2	Bromoform	ND	50	39.2	78	50	37.8	76	4	66-123/21
104-51-8	n-Butylbenzene	ND	50	53.2	106	50	51.4	103	3	79-126/16
135-98-8	sec-Butylbenzene	ND	50	61.8	124	50	60.0	120	3	83-133/16
98-06-6	tert-Butylbenzene	ND	50	58.7	117	50	56.7	113	3	80-133/16
56-23-5	Carbon Tetrachloride	ND	50	67.5	135	50	64.6	129	4	76-136/23
108-90-7	Chlorobenzene	ND	50	59.9	120	50	57.2	114	5	82-124/14
75-00-3	Chloroethane	71.2	50	148	154*	50	105	68	34*	62-144/20
67-66-3	Chloroform	ND	50	62.6	125*	50	60.3	121	4	80-124/15
95-49-8	o-Chlorotoluene	ND	50	60.1	120	50	56.9	114	5	81-127/15
106-43-4	p-Chlorotoluene	ND	50	58.4	117	50	55.5	111	5	83-130/15
124-48-1	Dibromochloromethane	ND	50	42.8	86	50	40.8	82	5	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	ND	50	48.3	97	50	51.3	103	6	64-123/18
106-93-4	1,2-Dibromoethane	ND	50	51.9	104	50	50.2	100	3	75-120/13
75-71-8	Dichlorodifluoromethane	ND	50	47.3	95	50	41.5	83	13	42-167/19
95-50-1	1,2-Dichlorobenzene	ND	50	56.7	113	50	55.5	111	2	82-124/14
541-73-1	1,3-Dichlorobenzene	ND	50	60.1	120	50	58.2	116	3	84-125/14
106-46-7	1,4-Dichlorobenzene	ND	50	58.3	117	50	56.1	112	4	78-120/15
75-34-3	1,1-Dichloroethane	ND	50	66.0	132*	50	63.4	127*	4	81-122/15
107-06-2	1,2-Dichloroethane	0.94	J 50	60.2	119	50	58.1	114	4	75-125/14
75-35-4	1,1-Dichloroethylene	ND	50	69.6	139*	50	66.7	133	4	78-137/18
156-59-2	cis-1,2-Dichloroethylene	ND	50	59.4	119	50	57.9	116	3	78-120/15
156-60-5	trans-1,2-Dichloroethylene	ND	50	64.4	129*	50	61.9	124	4	76-127/17
78-87-5	1,2-Dichloropropane	ND	50	61.2	122	50	58.3	117	5	76-124/14
142-28-9	1,3-Dichloropropane	ND	50	53.0	106	50	51.0	102	4	80-118/13
594-20-7	2,2-Dichloropropane	ND	50	65.8	132	50	62.2	124	6	74-139/17
10061-01-5	cis-1,3-Dichloropropene	ND	50	48.1	96	50	46.8	94	3	75-118/23
10061-02-6	trans-1,3-Dichloropropene	ND	50	55.2	110	50	53.2	106	4	80-120/22
100-41-4	Ethylbenzene	ND	50	61.7	123*	50	58.7	117	5	81-121/14
110-54-3	Hexane	ND	50	56.0	112	50	53.0	106	6	69-132/20
98-82-8	Isopropylbenzene	ND	50	56.0	112	50	53.8	108	4	83-132/15
99-87-6	p-Isopropyltoluene	ND	50	57.3	115	50	55.7	111	3	79-130/16
74-83-9	Methyl Bromide	ND	50	69.0	138	50	51.6	103	29*	59-143/19

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA89667
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA89667-2MS	A0228197.D	5	10/20/21	JL	n/a	n/a	VA2973
FA89667-2MSD	A0228198.D	5	10/20/21	JL	n/a	n/a	VA2973
FA89667-2	A0228194.D	5	10/20/21	JL	n/a	n/a	VA2973

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89667-2, FA89667-3

CAS No.	Compound	FA89667-2 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
74-87-3	Methyl Chloride	ND	50	52.6	105	50	45.5	91	14	50-159/19
74-95-3	Methylene Bromide	ND	50	54.4	109	50	53.9	108	1	78-119/14
75-09-2	Methylene Chloride	22.4	B 50	75.2	106	50	65.0	85	15	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	250	260	104	250	304	122	16	66-122/16
103-65-1	n-Propylbenzene	ND	50	59.8	120	50	56.3	113	6	82-133/15
100-42-5	Styrene	ND	50	52.5	105	50	50.6	101	4	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	ND	50	56.7	113	50	54.7	109	4	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	57.6	115	50	51.6	103	11	72-120/14
127-18-4	Tetrachloroethylene	ND	50	62.2	124	50	58.6	117	6	76-135/16
108-88-3	Toluene	ND	50	58.0	116	50	55.3	111	5	80-120/14
120-82-1	1,2,4-Trichlorobenzene	ND	50	42.5	85	50	46.7	93	9	73-129/20
71-55-6	1,1,1-Trichloroethane	ND	50	64.8	130	50	61.9	124	5	75-130/16
79-00-5	1,1,2-Trichloroethane	ND	50	56.0	112	50	52.7	105	6	76-119/14
79-01-6	Trichloroethylene	ND	50	61.9	124	50	60.0	120	3	81-126/15
75-69-4	Trichlorofluoromethane	ND	50	61.2	122	50	53.7	107	13	71-156/21
96-18-4	1,2,3-Trichloropropane	ND	50	53.1	106	50	49.7	99	7	77-120/16
95-63-6	1,2,4-Trimethylbenzene	ND	50	55.9	112	50	54.1	108	3	79-120/18
108-67-8	1,3,5-Trimethylbenzene	ND	50	56.2	112	50	53.7	107	5	79-120/19
75-01-4	Vinyl Chloride	ND	50	53.2	106	50	48.7	97	9	69-159/18
	m,p-Xylene	0.96	J 100	117	116	100	112	111	4	79-126/15
95-47-6	o-Xylene	ND	50	54.0	108	50	52.3	105	3	80-127/14

CAS No.	Surrogate Recoveries	MS	MSD	FA89667-2	Limits
1868-53-7	Dibromofluoromethane	105%	102%	121% * a	83-118%
17060-07-0	1,2-Dichloroethane-D4	104%	107%	127% * a	79-125%
2037-26-5	Toluene-D8	95%	94%	102%	85-112%
460-00-4	4-Bromofluorobenzene	97%	95%	94%	83-118%

(a) Outside control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA89667
Account: UNIVAR Univar
Project: ERMORP: Univar; 8201 S 212th St, Kent, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA89962-1MS	A0228232.D	5	10/22/21	JL	n/a	n/a	VA2974
FA89962-1MSD	A0228233.D	5	10/22/21	JL	n/a	n/a	VA2974
FA89962-1	A0228214.D	1	10/22/21	JL	n/a	n/a	VA2974

The QC reported here applies to the following samples:

Method: SW846 8260B

FA89667-6

CAS No.	Compound	FA89962-1 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
75-00-3	Chloroethane	ND	50	76.4	153*	50	63.0	126	19	62-144/20

CAS No.	Surrogate Recoveries	MS	MSD	FA89962-1	Limits
1868-53-7	Dibromofluoromethane	113%	107%	114%	83-118%
17060-07-0	1,2-Dichloroethane-D4	114%	112%	120%	79-125%
2037-26-5	Toluene-D8	90%	92%	102%	85-112%
460-00-4	4-Bromofluorobenzene	87%	89%	95%	83-118%

* = Outside of Control Limits.



Memorandum

To	Dylan Stankus
From	Rachel James
Date	6 May 2021
Reference	0577675
Subject	Data Review of Univar Kent, Washington April 2021 Groundwater Samples: SGS North America, Inc. Data Package FA84754.

The data quality was assessed and any necessary qualifiers were applied following the *USEPA National Functional Guidelines for Organic Superfund Methods Data Review*, January 2017. Field duplicates were assessed following *Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures*, June 2018.

CHAIN-OF-CUSTODY DISCREPANCIES

The laboratory noted that the chain-of-custody (COC) listed a sample named MS/MSD, but did not identify which primary sample it was associated with. ERM was contacted and provided the parent sample ID.

HOLDING TIME AND PRESERVATION EVALUATION

The samples were prepared and analyzed within the method-prescribed time period from the date of collection. The sample shipments were received at the laboratory within the method-prescribed temperature preservation requirements of less than 6°C.

The laboratory indicated samples MW-08-041321-01 and MW-18-041421-01 had vials that contained headspace. In these instances, the laboratory used a vial for analysis that was headspace free and qualifications were not necessary. The vials used for at least one analytical run for samples MW-13-041321-01, MW-17-041421-01, MW-16-041521-01, MW-20-041521-01, and MW-22-041521-01 contained headspace. For samples MW-17-041421-01 and MW-22-041521-01, only chloroethane was affected and those results were qualified as estimates with a low bias (J-). For samples MW-13-041321-01, MW-16-041521-01, and MW-20-041521-01 all reported analytes were affected. A comparison of historical results indicated consistency of detected and non-detected results between the last several historical sampling events (taking into consideration a higher reporting limit for some non-detected results). Therefore, the non-detected results were qualified as estimates (JJ) and were not rejected. The detected results were qualified as estimates with a low bias (J-). Qualifications applied due to headspace are displayed in Table 1.

Additionally, the laboratory stated that the vial used for run #2 for sample MW-20-0415-21-01 had a pH greater than two; however, the analysis was completed within the shortened holding time of 7 days for unpreserved samples and qualification was not necessary. The sample that exceeded the preservation requirement is displayed in Table 1.

BLANK EVALUATION

The method and trip blank sample results were non-detected for each of the target analytes. No data were qualified on the basis of the blank evaluation. The blank results indicate that no contaminants were introduced to the samples during processing or analysis in the laboratory or during shipment, handling, and storage.

CALIBRATION VERIFICATION EVALUATION

The continuing calibration verification (CCV) recoveries were within the laboratory's limits of acceptance, with some exceptions. CCV percent recoveries were greater than the upper control limits for target analytes chloroethane, methyl bromide, and trichlorofluoromethane. All sample results associated with the CCVs were non-detected and were not affected by the high recoveries. No qualifications were applied. The CCV recoveries that did not meet control limits are presented in Table 2.

BLANK SPIKE EVALUATION

The laboratory control sample (LCS) recoveries were within the laboratory's limits of acceptance. The LCS recoveries indicate acceptable laboratory accuracy.

MATRIX SPIKE EVALUATION

The laboratory prepared one non-project sample for matrix spike (MS) and matrix spike duplicate (MSD) analysis. The matrix spike sample from a non-project parent sample is not representative of the matrix for this project and was therefore not reviewed in this validation effort.

The MS and MSD recoveries and relative percent differences (RPDs) were within laboratory limits of acceptance with several exceptions. No data were qualified if the outlier could be verified by an in-control result. Sample results associated with low MS and MSD recoveries were non-detected and the results were qualified as estimated (UJ). The outliers and associated qualifications can be found in Table 3.

SURROGATE SPIKE EVALUATION

The surrogate recoveries were within acceptable limits. No qualifications were required based on surrogate recoveries. The surrogate recoveries indicate minimal matrix interference in the samples.

FIELD DUPLICATE EVALUATION

Two samples were collected and submitted in duplicate. ERM calculated the differences or RPDs between detected results in Table 4. An RPD control limit of 30 for aqueous samples was used when both the sample and the field duplicate results were greater than or equal to five times the reporting limit. A control limit of \pm two times the reporting limit was used when at least one of the results was less than five times the reporting limit. Control limits were not applicable when both results were below the reporting limit. All analytes in the parent sample/field duplicate pairs met the control limits.

OVERALL ASSESSMENT

None of the data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

Table 1
Samples with Exceeded Preservation Requirements
2021 April Groundwater Samples
Univar USA, Inc.
Kent, Washington

Lab Package	Sample ID	Method	Affected Analyte	Preservation Condition	Limits	ERM Qualifier
FA84754	MW-13-041321-01	8260B	Detects	Significant headspace	No headspace	J-
			Non-detects			UJ
	MW-17-041421-01		Chloroethane			J-
	MW-16-041521-01		Detects			J-
			Non-detects			UJ
	MW-20-041521-01		Detects			J-
			Non-detects			UJ
	MW-22-041521-01	Chloroethane	J-			
	MW-20-041521-01	8260B	Chloroethane	pH > 2	pH < 2	--

Lab package reviewed: FA84754

Notes:

J- = Detected results are estimated with a low bias

UJ = Non-detected, estimated report limit

Table 2
Calibration Verification Recoveries Outside of Acceptable Limits
2021 April Groundwater Samples
Univar USA, Inc.
Kent, Washington

Lab Package	CCV Sample ID	Analyte	CCV Recovery (%)	CCV Limits (%)	Associated Sample	Reported Concentration	Units	ERM Qualifier
FA84754	Batch VE2457 CCV	Chloroethane	High	NR	None for qualification	--	--	--
		Methyl Bromide						
		Trichlorofluoromethane						
	Batch VE2458 CCV	Chloroethane	High	NR	None for qualification	--	--	--
		Methyl Bromide						
		Trichlorofluoromethane						

Lab package reviewed: FA84754

Notes:

CCV = Continuing calibration verification

High = Recovery above maximum acceptable limit

NR = Not reported

Table 3
Spike Recoveries Outside of Acceptable Limits
2021 April Groundwater Samples
Univar USA, Inc.
Kent, Washington

Lab Package	Spike Sample ID	Associated Sample	Analyte	Recovery (%)	Limit (%)	RPD	RPD Limit	Result	Units	ERM Qualifier
MS/MSD										
FA84754	MW-19-041421-01 MS/MSD	MW-19-041421-01	Bromodichloromethane	85/76	79-123	11	19	--	--	--
			Bromoform	46/35	66-123	28	21	ND	µg/L	UJ
			Chloroethane	114/162	62-144	35	20	--	--	--
			Dibromochloromethane	63/51	78-122	20	19	ND	µg/L	UJ
			Dichlorodifluoromethane	78/108	42-167	33	19	--	--	--
			1,1-Dichloroethane	79/82	81-122	3	15	--	--	--
			1,1-Dichloroethylene	31/31	78-137	0	18	ND	µg/L	UJ
			trans-1,2-Dichloroethylene	64/65	76-127	2	17	ND	µg/L	UJ
			Hexane	39/40	69-132	1	20	ND	µg/L	UJ
			Methyl Bromide	118/164	39-143	33	19	--	--	--
			Methyl Chloride	95/127	50-159	29	19	--	--	--
	Methylene Chloride	66/71	69-135	6	16	--	--	--		
	Trichlorofluoromethane	110/148	71-156	29	21	--	--	--		
MW-27-041521-01 MS/MSD	MW-27-041521-01	Bromoform	58/59	66-123	1	21	ND	µg/L	UJ	
		Dibromochloromethane	72/70	78-122	3	19	ND	µg/L	UJ	

Lab package reviewed: FA84754

Notes:

MS/MSD - Matrix spike/matrix spike duplicate

ND = Not detected

RPD = Relative percent difference

µg/L = Micrograms per liter

UJ = Nondetected, estimated report limit

Table 4
Field Duplicate Assessment
2021 April Groundwater Samples
Univar USA, Inc.
Kent, Washington

Lab Package	Primary/Duplicate Sample ID	Analyte	Concentration		Report Limit		Difference	Difference Limit	Units	RPD	RPD Limit	ERM Qualifier
			Sample	Duplicate	Sample	Duplicate						
FA84754	MW-21-041321-01/ DUP-01	Chloroethane	297	285	25	25	--	--	µg/L	4.1	30	--
		trans-1,2-Dichloroethylene	10.8	12.0	25	25	NA	NA	µg/L	NA	NA	--
		Ethylbenzene	767	820	25	25	--	--	µg/L	6.7	30	--
		Isopropylbenzene	81.4	85.6	25	25	4.2	50	µg/L	--	--	--
		Methylene Chloride	81.9	ND	100	100	NA	NA	µg/L	NA	NA	--
		n-Propylbenzene	135	145	25	25	10	50	µg/L	7.1	30	--
		Toluene	9.9	10.1	25	25	NA	NA	µg/L	NA	NA	--
		1,2,4-Trimethylbenzene	372	406	25	25	--	--	µg/L	8.7	30	--
		1,3,5-Trimethylbenzene	183	203	25	25	--	--	µg/L	10	30	--
		m,p-Xylene	4210	4780	50	50	--	--	µg/L	13	30	--
	o-Xylene	133	133	25	25	--	--	µg/L	0	30	--	
	MW-01-041321-01/ DUP-02	Acetone	ND	2.3	10	10	NA	NA	µg/L	NA	NA	--
		n-Butylbenzene	0.27	0.26	0.50	0.50	NA	NA	µg/L	NA	NA	--
		sec-Butylbenzene	0.77	0.79	0.50	0.50	0.020	1.0	µg/L	--	--	--
		Chloroethane	22.9	22.5	1.0	1.0	--	--	µg/L	1.8	30	--
		1,1-Dichloroethane	11.6	11.6	0.50	0.50	--	--	µg/L	0	30	--
		cis-1,2-Dichloroethylene	0.94	0.94	0.50	0.50	0	1.0	µg/L	--	--	--
		trans-1,2-Dichloroethylene	0.27	0.28	0.50	0.50	NA	NA	µg/L	NA	NA	--
		Ethylbenzene	1.7	1.7	0.50	0.50	0	1.0	µg/L	--	--	--
		Isopropylbenzene	7.6	7.6	0.50	0.50	--	--	µg/L	0	30	--
		n-Propylbenzene	10.0	10.2	0.50	0.50	--	--	µg/L	2.0	30	--
		Tetrachloroethylene	0.42	0.45	0.50	0.50	NA	NA	µg/L	NA	NA	--
Toluene		0.17	0.15	0.50	0.50	NA	NA	µg/L	NA	NA	--	
1,1,1-Trichloroethane	0.25	0.27	0.50	0.50	0.020	1.0	µg/L	--	--	--		

Table 4
Field Duplicate Assessment
2021 April Groundwater Samples
Univar USA, Inc.
Kent, Washington

Lab Package	Primary/Duplicate Sample ID	Analyte	Concentration		Report Limit		Difference	Difference Limit	Units	RPD	RPD Limit	ERM Qualifier
			Sample	Duplicate	Sample	Duplicate						
FA84754	MW-01-041321-01/ DUP-02	Trichloroethylene	2.0	2.0	0.50	0.50	0	1.0	µg/L	--	--	--
		1,2,4-Trimethylbenzene	0.54	0.54	0.50	0.50	0	1.0	µg/L	--	--	--
		1,3,5-Trimethylbenzene	0.30	0.29	0.50	0.50	NA	NA	µg/L	NA	NA	--
		Vinyl Chloride	0.43	0.48	0.50	0.50	NA	NA	µg/L	NA	NA	--
		m,p-Xylene	7.7	7.6	1.0	1.0	--	--	µg/L	1.3	30	--
		o-Xylene	4.4	4.4	0.50	0.50	--	--	µg/L	0	30	--

Lab package reviewed: FA84754

Notes:

NA = Not applicable

ND = Not detected

RPD = Relative percent difference

µg/L = Micrograms per liter



Memorandum

To	Dylan Stankus
From	Rachel James
Date	12 January 2022
Reference	0629479
Subject	Data Review of Univar Kent, Washington October 2021 Groundwater Samples: SGS North America, Inc. Data Packages FA89630 and FA89667.

The data quality was assessed and any necessary qualifiers were applied following the *USEPA National Functional Guidelines for Organic Superfund Methods Data Review*, November 2020. Field duplicates were assessed following *Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures*, September 2020.

HOLDING TIME AND PRESERVATION EVALUATION

The sample shipments were received at the laboratory within the method-prescribed temperature preservation requirements of less than 6°C. The samples were prepared and analyzed within the method-prescribed time period from the date of collection, with the exceptions noted in Table 1. Several samples were analyzed one day past the 14 day holding time (or 7 day holding time for unpreserved samples) for Method 8260B. Affected results were qualified as estimates (J for detects and UJ for non-detects) except the chloroethane results for samples MW-22-20211005, MW-13-20211005, DUP-01, and MW-20-20211007 and the benzene result for sample MW-17-20211007, which were qualified as estimates with a high bias (J+) due to additional high surrogate recovery. The affected non-detect results for sample MW-17-20211007 were consistent with historical results; therefore, they were qualified as estimates (UJ) rather than rejected.

BLANK EVALUATION

The method and trip blank sample results were non-detected for each of the target analytes with the exceptions noted in Table 2. Methylene chloride was detected below the reporting limit in two method blank samples. Associated results within ten times the blank concentration or less than the reporting limit (RL) were qualified as non-detect (U) at the RL. Associated results within ten times the blank concentration and greater than the RL were qualified as estimated with a high bias (J+).

CALIBRATION VERIFICATION EVALUATION

The continuing calibration verification (CCV) recoveries were within the laboratory's limits of acceptance, with the exceptions noted in Table 3. CCV percent recoveries were greater than the upper control limits for target analyte 2-2-dichloropropane; however, sample results associated with the CCVs were non-detected and were not affected by the high recoveries. No qualifications were applied.

BLANK SPIKE EVALUATION

The laboratory control sample (LCS) recoveries were within the laboratory's limits of acceptance with the exceptions noted in Table 4. No qualifications were required based upon high LCS recoveries if the associated samples were non-detected. The detected 1,1-dichloroethane result for sample MW-03-20211007 was qualified as an estimate with a high bias (J+) due to high LCS recovery.

MATRIX SPIKE EVALUATION

The laboratory prepared both project and non-project samples for matrix spike (MS) and matrix spike duplicate (MSD) analysis. Matrix spike samples from non-project parent samples are not representative of the matrix for this project and were therefore not reviewed in this validation effort. For the MS/MSDs prepared from project samples, the recoveries and RPDs were within laboratory limits of acceptance with the exceptions noted in Table 4. No data were qualified if the outlier could be verified by an in-control result or if a high recovery was associated with a non-detect result. Samples were qualified as estimated with a low or high bias (J- or J+) due to low or high MS/MSD recoveries. The chloroethane result for sample MW-17-20211007 was qualified as an estimate with a high bias (J+) due to RPD exceedance and additional high surrogate recovery.

SURROGATE SPIKE EVALUATION

The surrogate recoveries were within acceptable limits with the exceptions noted in Table 5. Data were not qualified if the dilution factor was 10 times or greater or if associated results were reported from another analytical run with acceptable surrogate recoveries. Remaining results for analytes associated with high surrogate recoveries were qualified as estimates with a high bias (J+), with the exception of the methylene chloride result for sample MW-03-20211007, which was qualified as non-detect (U) at the reporting limit due to additional blank contamination.

CALIBRATION RANGE EXCEEDANCES

The chloroethane result for sample MW-20-20211007 exceeded the instrument calibration range as noted in Table 6. The result was qualified as an estimate with a high bias (J+) due to uncertainty beyond the calibration range and additional high surrogate recovery.

INTERNAL STANDARD EVALUATION

The internal standard recoveries were within acceptable limits, with the exceptions noted in Table 7. Internal standard recoveries in samples MW-28-20211007, MW-29D-20211007, and MW-27-20211007 were outside the control limits (high/low bias not specified by the laboratory). The associated results were qualified as estimates (J for detects and UJ for non-detects), with the exception of 1,1-dichloroethane for sample MW-27-20211007, which was qualified as an estimate with a high bias (J+) due to additional high surrogate recovery.

FIELD DUPLICATE EVALUATION

Three samples were collected and submitted in duplicate. ERM calculated the differences or RPDs between detected results in Table 8. An RPD control limit of 30 for aqueous samples was used when both the sample and the field duplicate results were greater than or equal to five times the RL. A control limit of \pm two times the RL was used when at least one of the results was

less than five times the RL. Control limits were not applicable when both results were below the reporting limit. Vinyl chloride in sample pair MW-22-20211005/DUP-01 did not meet the field duplicate criteria and the results in the primary and field duplicate samples were qualified as estimates (J).

OVERALL ASSESSMENT

None of the data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

Table 1
Samples with Exceeded Holding Times
2021 October Groundwater Samples
Univar USA, Inc.
Kent, Washington

Lab Package	Sample ID	Method	Extraction Holding Time	Time Exceeded	Analysis Holding Time	Time Exceeded	Affected Analyte	ERM Qualifier
FA89630	MW-22-20211005	8260B	--	--	14 days	1 day	Chloroethane	J+ ¹
	MW-13-20211005							J+ ¹
	DUP-01							J+ ¹
FA89667	MW-17-20211007	8260B	--	--	7 days (unpreserved)	1 day	Benzene Remaining VOCs except chloroethane	J+ ¹ J detects UJ non-detects
	MW-20-20211007	8260B	--	--	14 days	1 day	Chloroethane	J+ ¹

Lab packages reviewed: FA89630 and FA89667

Notes:

1 = Qualified as an estimate with a high bias due to additional high surrogate recovery

J = Estimated detected result

J+ = Detected results are estimated with a high bias

UJ = Nondetected, estimated report limit

Table 2
Blank and Associated Suspect Sample Detections
2021 October Groundwater Samples
Univar USA, Inc.
Kent, Washington

Lab Package	Blank ID	Detected Analyte	Reported Blank Concentration	Blank Report Limit	Associated Sample	Associated Sample Result	Associated Sample Report Limit	Units	ERM Qualifier
FA89630	VA2965-MB	Methylene Chloride	1.4	2.0	MW-05-20211005	6.8	5.0	µg/L	J+
					MW-12-20211005	11.5	10	µg/L	J+
					MW-21-20211005	185	200	µg/L	200 U
					DUP-02	11.3	10	µg/L	J+
					MW-01-20211006	1.7	2.0	µg/L	2.0 U
					DUP-03	1.6	2.0	µg/L	2.0 U
					MW-19-20211006	471	400	µg/L	J+
FA89667	VA2973-MB	Methylene Chloride	1.7	2.0	MW-03-20211007	1.1	2.0	µg/L	2.0 U

Lab packages reviewed: FA89630 and FA89667

Notes:

MB = Method blank

J+ = Detected results are estimated with a high bias

U = Nondetected

µg/L = Micrograms per liter

Table 3
Calibration Verification Recoveries Outside of Acceptable Limits
2021 October Groundwater Samples
Univar USA, Inc.
Kent, Washington

Lab Package	CCV Sample ID	Analyte	CCV Recovery (%)	CCV Limits (%)	Associated Sample	Reported Concentration	Units	ERM Qualifier
FA89630	Batch VA2972 CCV	2,2-Dichloropropane	High	NR	None for qualification	--	--	--
FA89667	Batch VA2970 CCV	2,2-Dichloropropane	High	NR	None for qualification	--	--	--

Lab packages reviewed: FA89630 and FA89667

Notes:

CCV = Continuing calibration verification

High = Recovery above maximum acceptable limit

NR = Not reported

Table 4
Spike Recoveries Outside of Acceptable Limits
2021 October Groundwater Samples
Univar USA, Inc.
Kent, Washington

Lab Package	Spike Sample ID	Associated Sample	Analyte	Recovery (%)	Limit (%)	RPD	RPD Limit	Result	Units	ERM Qualifier
LCS/LCSD										
FA89630	VA2965-BS	None for qualification	4-Methyl-2-pentanone	127	66-122	--	--	--	--	--
FA89667	VA2968-BS	None for qualification	1,1-Dichloroethane	124	81-122	--	--	--	--	--
	VA2973-BS	MW-03-20211007	1,1-Dichloroethane	126	81-122	--	--	0.17	µg/L	J+
		None for qualification	2,2-Dichloropropane	140	74-139	--	--	--	--	--
MS/MSD										
FA89630	MW-19-20211006 MS/MSD	MW-19-20211006	Benzene	128/127	81-122	1	14	ND	µg/L	--
			Carbon Tetrachloride	144/140	76-136	3	23	ND	µg/L	--
			Chloroethane	151/156	62-144	3	20	ND	µg/L	--
			Chloroform	131/128	80-124	2	15	ND	µg/L	--
			1,1-Dichloroethane	129/132	81-122	3	15	ND	µg/L	--
			1,1-Dichloroethylene	135/139	78-137	3	18	--	--	--
			cis-1,2-Dichloroethylene	125/131	78-120	2	15	2980	µg/L	J+
			Methyl Bromide	158/156	59-143	1	19	ND	µg/L	--
			1,1,1-Trichloroethane	133/131	75-130	2	16	ND	µg/L	--
			Trichloroethylene	129/127	81-126	2	15	ND	µg/L	--
	Vinyl Chloride	54/68	69-159	4	18	5400	µg/L	J-		
	MW-22-20211005 MS/MSD	MW-22-20211005	Benzene	122/125	81-122	2	14	--	--	--
			Chloroethane	282/316	62-144	11	20	ND	µg/L	--
			Chloroform	127/125	80-124	1	15	ND	µg/L	--
			1,1-Dichloroethane	124/129	81-122	3	15	0.16	µg/L	J+
			Methylene Chloride	151/124	69-135	20	16	ND	µg/L	--
			Trichloroethylene	129/127	81-126	2	15	ND	µg/L	--

Table 4
Spike Recoveries Outside of Acceptable Limits
2021 October Groundwater Samples
Univar USA, Inc.
Kent, Washington

Lab Package	Spike Sample ID	Associated Sample	Analyte	Recovery (%)	Limit (%)	RPD	RPD Limit	Result	Units	ERM Qualifier
FA89667	MW-29D-20211007 MS/MSD	MW-29D-20211007	Acetone	52/94	50-147	58	21	ND	µg/L	--
			Chloroethane	147/124	62-144	17	20	--	--	--
			1,1-Dichloroethane	129/130	81-122	1	15	ND	µg/L	--
			Methyl Bromide	154/116	59-143	28	19	ND	µg/L	--
	MW-17-20211007 MS/MSD	MW-17-20211007	Acetone	64/104	50-147	47	21	ND	µg/L	--
			Benzene	132/127	81-122	4	14	7.3	µg/L	J+
			Chloroethane	154/68	62-144	34	20	71.2	µg/L	J+ ¹
			Chloroform	125/121	80-124	4	15	--	--	--
			1,1-Dichloroethane	132/127	81-122	4	15	ND	µg/L	--
			1,1-Dichloroethylene	139/133	78-137	4	18	--	--	--
			trans-1,2-Dichloroethylene	129/124	76-127	4	17	--	--	--
			Ethylbenzene	123/117	81-121	5	14	--	--	--
			Methyl Bromide	138/103	59-143	29	19	ND	µg/L	--

Lab packages reviewed: FA89630 and FA89667

Notes:

1 = Qualified as an estimate with a high bias due to additional high surrogate recovery

J = Estimated detected result

J- = Detected results are estimated with a low bias

J+ = Detected results are estimated with a high bias

LCS/LCSD = Laboratory control sample/laboratory control sample duplicate

MS/MSD = Matrix spike/matrix spike duplicate

ND = Not detected

RPD = Relative percent difference

µg/L = Micrograms per liter

Table 5
Surrogate Recovery Results out of Acceptable Limits
2021 October Groundwater Samples
Univar USA, Inc.
Kent, Washington

Lab Package	Sample ID	Method	Surrogate	Recovery (%)	Limit (%)	Affected Analyte	Dilution Factor	ERM Qualifier
FA89630	MW-22-20211005 Run #2	8260B	Dibromofluoromethane	123	83-118	Chloroethane	5	J+
			1,2-Dichloroethane-D4	129	79-125			
	MW-13-20211005 Run #2	8260B	Dibromofluoromethane	124	83-118	Chloroethane	5	J+
			1,2-Dichloroethane-D4	126	79-125			
	MW-21-20211005 Run #1	8260B	Dibromofluoromethane	120	83-118	None for qualification	100	--
	DUP-02 Run #1	8260B	Dibromofluoromethane	119	83-118	cis-1,2-Dichloroethylene	5	J+
						Methylene Chloride		
						Trichloroethylene		
	DUP-01 Run #2	8260B	Dibromofluoromethane	125	83-118	Chloroethane	5	J+
			1,2-Dichloroethane-D4	126	79-125			
MW-10-20211006 Run #1	8260B	Dibromofluoromethane	120	83-118	None for qualification	1	--	
MW-18-20211006 Run #2	8260B	1,2-Dichloroethane-D4	133	79-125	None for qualification	1	--	
MW-19-20211006 Run #1	8260B	Dibromofluoromethane	129	83-118	None for qualification	200	--	
		1,2-Dichloroethane-D4	129	79-125				
MW-19-20211006 Run #2	8260B	1,2-Dichloroethane-D4	130	79-125	None for qualification	100	--	

Table 5
Surrogate Recovery Results out of Acceptable Limits
2021 October Groundwater Samples
Univar USA, Inc.
Kent, Washington

Lab Package	Sample ID	Method	Surrogate	Recovery (%)	Limit (%)	Affected Analyte	Dilution Factor	ERM Qualifier
FA89667	MW-17-20211007 Run #2	8260B	Dibromofluoromethane	121	83-118	Chloroethane	5	J+
			1,2-Dichloroethane-D4	127	79-125			
	MW-03-20211007 Run #1	8260B	Dibromofluoromethane	119	83-118	Chloroethane	1	J+
						1,1-Dichloroethane		
						cis-1,2-Dichloroethylene		
						Methylene Chloride		
	MW-28-20211007 Run #1	8260B	Dibromofluoromethane	123	83-118	None for qualification	10	--
			1,2-Dichloroethane-D4	127	79-125			
	MW-28-20211007 Run #2	8260B	Dibromofluoromethane	124	83-118	None for qualification	1	--
			1,2-Dichloroethane-D4	127	79-125			
	MW-29D-20211007 Run #1	8260B	Dibromofluoromethane	124	83-118	None for qualification	1	--
	MW-29D-20211007 Run #2	8260B	Dibromofluoromethane	126	83-118	None for qualification	1	--
1,2-Dichloroethane-D4			130	79-125				
MW-20-20211007 Run #2	8260B	Dibromofluoromethane	125	83-118	Chloroethane	5	J+	
		1,2-Dichloroethane-D4	130	79-125				
MW-27-20211007 Run #1	8260B	Dibromofluoromethane	123	83-118	1,1-Dichloroethane	1	J+	
MW-27-20211007 Run #2	8260B	Dibromofluoromethane	126	83-118	None for qualification	1	--	
		1,2-Dichloroethane-D4	130	79-125				

Lab packages reviewed: FA89630 and FA89667

Notes:

1 = Qualified as non-detect at the reporting limit due to additional blank contamination

J+ = Detected results are estimated with a high bias

U = Nondetected

Table 6
Calibration Range Exceedances
2021 October Groundwater Samples
Univar USA, Inc.
Kent, Washington

Lab Package	Sample ID	Analyte	Reported Concentration	Units	ERM Qualifier
FA89667	MW-20-20211007	Chloroethane	261	µg/L	J+ ¹

Lab packages reviewed: FA89630 and FA89667

Notes:

1 = Qualified as an estimate with a high bias due to additional high surrogate recovery

J+ = Detected results are estimated with a high bias

µg/L = Micrograms per liter

Table 7
Internal Standard Recoveries Outside of Acceptable Limits
2021 October Groundwater Samples
Univar USA, Inc.
Kent, Washington

Lab Package	Sample ID	Method	Internal Standard	Recovery (%)	Limit (%)	Affected Analyte	ERM Qualifier
FA89667	MW-28-20211007	8260B	NR	Out	NR	All	J detects UJ non-detects
	MW-29D-20211007					1,1-Dichloroethane	J+ ¹
	MW-27-20211007					Remaining analytes	J detects UJ non-detects

Lab packages reviewed: FA89630 and FA89667

Notes:

1 = Qualified as an estimate with a high bias due to additional high surrogate recovery

J = Estimated detected result

J+ = Detected results are estimated with a high bias

NR = Not reported

Out = Recovery outside acceptable limits (high/low unspecified)

UJ = Nondetected, estimated report limit

Table 8
Field Duplicate Assessment
2021 October Groundwater Samples
Univar USA, Inc.
Kent, Washington

Lab Package	Primary/Duplicate Sample ID	Analyte	Concentration		Report Limit		Difference	Difference Limit	Units	RPD	RPD Limit	ERM Qualifier
			Sample	Duplicate	Sample	Duplicate						
FA89630	MW-22-20211005/ DUP-01	Benzene	0.73	0.71	0.50	0.50	0.02	1.00	µg/L	--	--	--
		sec-Butylbenzene	0.83	0.83	0.50	0.50	0.00	1.00	µg/L	--	--	--
		Chloroethane	77.5	74.7	2.5	2.5	--	--	µg/L	3.7	30	--
		1,1-Dichloroethane	0.16	0.18	0.50	0.50	NA	NA	µg/L	NA	NA	--
		1,2-Dichloroethane	0.23	0.20	0.50	0.50	NA	NA	µg/L	NA	NA	--
		cis-1,2-Dichloroethylene	11.8	15.3	0.50	0.50	--	--	µg/L	26	30	--
		trans-1,2-Dichloroethylene	0.58	0.61	0.50	0.50	0.03	1.00	µg/L	--	--	--
		Ethylbenzene	0.20	0.25	0.50	0.50	NA	NA	µg/L	NA	NA	--
		Hexane	2.1	2.2	1.0	1.0	0.1	2.0	µg/L	--	--	--
		Isopropylbenzene	0.41	0.42	0.50	0.50	NA	NA	µg/L	NA	NA	--
		n-Propylbenzene	0.33	0.35	0.50	0.50	NA	NA	µg/L	NA	NA	--
		Toluene	0.82	0.92	0.50	0.50	0.10	1.00	µg/L	--	--	--
		1,2,4-Trimethylbenzene	0.22	0.28	0.50	0.50	NA	NA	µg/L	NA	NA	--
		Vinyl Chloride	7.6	10.6	0.50	0.50	--	--	µg/L	33	30	J
	m,p-Xylene	2.6	2.6	1.0	1.0	0.0	2.0	µg/L	--	--	--	
	o-Xylene	0.58	0.60	0.50	0.50	0.02	1.00	µg/L	--	--	--	
		MW-05-20211005/ DUP-02	cis-1,2-Dichloroethylene	106	117	1.3	2.5	--	--	µg/L	9.9	30
	Methylene Chloride		6.8	11.3	5.0	10	4.5	20	µg/L	--	--	--
	Tetrachloroethylene		35.3	37.1	1.3	2.5	--	--	µg/L	5.0	30	--
	Trichloroethylene		21.3	22.3	1.3	2.5	--	--	µg/L	4.6	30	--

Table 8
Field Duplicate Assessment
2021 October Groundwater Samples
Univar USA, Inc.
Kent, Washington

Lab Package	Primary/Duplicate Sample ID	Analyte	Concentration		Report Limit		Difference	Difference Limit	Units	RPD	RPD Limit	ERM Qualifier
			Sample	Duplicate	Sample	Duplicate						
FA89630	MW-01-20211006/ DUP-03	sec-Butylbenzene	1.1	1.1	0.50	0.50	0.00	1.00	µg/L	--	--	--
		Chloroethane	29.8	31.3	0.50	0.50	--	--	µg/L	4.9	30	--
		1,1-Dichloroethane	21.6	21.3	0.50	0.50	--	--	µg/L	1.4	30	--
		1,1-Dichloroethylene	0.16	0.15	0.50	0.50	NA	NA	µg/L	NA	NA	--
		cis-1,2-Dichloroethylene	2.0	1.9	0.50	0.50	0.10	1.00	µg/L	--	--	--
		trans-1,2-Dichloroethylene	0.23	0.22	0.50	0.50	NA	NA	µg/L	NA	NA	--
		Ethylbenzene	0.29	0.26	0.50	0.50	NA	NA	µg/L	NA	NA	--
		Isopropylbenzene	3.0	2.9	0.50	0.50	--	--	µg/L	3.4	30	--
		Methylene Chloride	1.7	1.6	2.0	2.0	NA	NA	µg/L	NA	NA	--
		n-Propylbenzene	4.1	4.0	0.50	0.50	--	--	µg/L	2.5	30	--
		Tetrachloroethylene	0.57	0.58	0.50	0.50	0.01	1.00	µg/L	--	--	--
		Toluene	0.17	0.17	0.50	0.50	NA	NA	µg/L	NA	NA	--
		1,1,1-Trichloroethane	0.57	0.55	0.50	0.50	0.02	1.00	µg/L	--	--	--
		Trichloroethylene	4.0	3.9	0.50	0.50	--	--	µg/L	2.5	30	--
		Vinyl Chloride	4.9	4.8	0.50	0.50	--	--	µg/L	2.1	30	--
		m,p-Xylene	0.20	0.18	1.0	1.0	NA	NA	µg/L	NA	NA	--
o-Xylene	2.3	2.3	0.50	0.50	0.00	1.00	µg/L	--	--	--		

Lab packages reviewed: FA89630 and FA89667

Notes:

J = Estimated detected result

NA = Not applicable

RPD = Relative percent difference

µg/L = Micrograms per liter

APPENDIX C HISTORICAL GROUNDWATER MONITORING DATA

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
Shallow Onsite Monitoring and Pilot Test Wells					
MW-1	33.45	04/17/95	12:14	4.70	28.75
		09/07/95	NR	6.24	27.21
		11/10/95	NR	5.86	27.59
		12/07/95	NR	5.13	28.32
		01/29/96	NR	4.57	28.88
		09/04/96	13:50	6.04	27.41
		10/11/96	11:00	6.04	27.41
		11/06/96	9:25	5.53	27.92
		12/10/96	10:55	4.46	28.99
		01/10/97	NR	4.20	29.25
		02/21/97	12:45	4.33	29.12
		03/04/97	9:55	4.33	29.12
		06/27/97	10:57	4.81	28.64
		09/04/97	11:08	5.63	27.82
		12/22/97	8:46	4.82	28.63
		03/06/98	10:03	4.50	28.95
		06/18/98	9:19	5.02	28.43
		09/29/98	9:25	6.52	26.93
		12/15/98	9:45	4.78	28.67
		01/07/99	9:02	4.33	29.12
		01/13/99	9:29	4.35	29.10
		03/02/99	12:43	3.60	29.85
		06/16/99	10:26	4.87	28.58
		09/16/99	10:43	5.72	27.73
		12/08/99	8:43	4.63	28.82
	03/07/00	8:58	4.28	29.17	
	06/21/00	9:45	4.80	28.65	
	09/12/00	9:30	5.81	27.64	
	12/07/00	8:45	5.36	28.09	
	03/15/01	9:30	4.91	28.54	
	07/12/01	11:00	5.10	28.35	
	09/24/01	11:29	5.95	27.50	
	01/02/02	11:07	4.35	28.80	
	03/27/02	9:55	4.12	29.03	
	06/11/02	10:42	4.75	28.40	
	09/17/02	12:36	6.03	27.12	
	12/16/02	11:40	5.60	27.55	
	03/17/03	11:00	4.91	28.24	
	06/10/03	NR	5.11	28.04	
	09/11/03	10:05	6.66	26.49	
	12/04/03	7:30	4.96	28.19	
	01/12/04	11:12	4.70	28.45	
	03/16/04	12:20	4.80	28.35	
	06/10/04	8:25	5.25	27.90	
	09/22/04	11:15	5.88	27.27	
	04/04/05	13:40	5.03	28.12	
	09/20/05	9:40	6.77	26.38	
	01/25/06	15:15	4.45	28.70	
	03/14/06	10:30	4.60	28.55	
	03/15/06	0:00	4.56	28.59	
05/19/06	12:30	4.91	28.24		
06/09/06	14:12	4.70	28.45		
09/12/06	12:32	6.85	26.30		
04/03/07	10:30	4.51	28.64		
04/03/07	12:04	4.40	28.75		
09/24/07	10:55	6.40	26.75		
09/24/07	12:47	6.38	26.77		
05/01/08	11:08	4.85	28.30		
09/29/08	NR	5.92	27.23		
03/23/09	10:25	4.65	28.50		
	33.15				

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
MW-1 (continued)	33.15	09/28/09	13:45	6.21	26.94
		03/25/10	8:39	4.75	28.40
		04/05/10	10:28	4.51	28.64
		05/06/10	NR	NM	NM
		07/13/10	14:35	4.81	28.34
		09/27/10	10:10	5.35	27.80
		02/28/11	14:55	4.29	28.86
		03/22/11	14:05	4.00	29.15
		04/25/11	8:22	NM	NM
		05/04/11	8:36	3.99	29.16
		06/22/11	8:25	4.21	28.94
		09/20/11	13:20	6.06	27.09
		12/06/11	11:10	5.02	28.13
		03/05/12	12:39	4.06	29.09
		03/05/12	14:16	3.76	29.39
		03/05/12	14:50	3.79	29.36
		06/26/12	12:50	4.06	29.09
		06/26/12	12:55	3.97	29.18
		06/26/12	14:07	3.94	29.21
		10/03/12	15:55	6.54	26.61
		12/18/12	13:42	4.50	28.65
		12/18/12	15:25	4.28	28.87
		03/04/13	14:32	4.43	28.72
		03/04/13	14:53	4.28	28.87
		03/04/13	15:10	4.23	28.92
		03/04/13	16:07	4.20	28.95
		06/06/13	7:35	4.45	28.70
		09/24/13	12:43	5.89	27.26
		03/25/14	12:50	4.00	29.15
		09/22/14	15:25	6.10	27.05
		03/16/15	11:02	4.41	28.74
		09/13/15	11:25	6.52	26.63
		03/14/16	9:13	4.14	29.01
09/13/16	10:40	6.38	26.77		
03/06/17	9:52	3.64	29.51		
09/18/17	12:13	6.74	26.41		
03/19/18	10:12	4.01	29.14		
09/10/18	13:35	6.58	26.57		
05/30/19	13:18	4.49	28.66		
08/29/19	9:41	5.54	27.61		
33.09	05/12/20	11:40	3.80	29.29	
	09/24/20	11:50	5.80	27.29	
MW-2	34.07	04/17/95	12:09	6.26	27.81
		09/07/95	NR	7.72	26.35
		11/10/95	NR	7.21	26.86
		12/07/95	NR	6.01	28.06
		01/29/96	NR	5.37	28.70
		09/04/96	9:00	7.93	26.14
		10/11/96	10:30	7.71	26.36
		11/06/96	8:50	7.02	27.05
		12/10/96	10:50	5.55	28.52
		01/10/97	NR	5.02	29.05
		02/21/97	12:10	5.31	28.76
		03/04/97	9:50	5.29	28.78
		06/27/97	10:53	6.11	27.96
		09/04/97	11:04	7.07	27.00
		12/22/97	8:44	5.92	28.15
		03/06/98	2:20	5.67	28.40
		06/18/98	9:22	6.54	27.53
		09/29/98	9:28	7.95	26.12
		12/15/98	9:52	5.71	28.36
		01/07/99	8:50	5.51	28.56
		01/13/99	9:25	5.62	28.45
		03/02/99	9:29	4.73	29.34
		06/16/99	10:31	6.40	27.67
09/16/99	10:41	7.39	26.68		
12/08/99	8:40	5.84	28.23		

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
MW-2 (continued)	34.07	03/07/00	8:52	5.36	28.71
		06/21/00	9:54	6.43	27.64
		09/12/00	11:25	7.92	26.15
		12/07/00	8:40	7.11	26.96
		03/15/01	9:40	6.44	27.63
	33.79	07/12/01	13:00	6.83	27.24
		09/24/01	11:33	7.64	26.43
		01/02/02	10:30	5.61	28.18
		03/27/02	10:00	5.49	28.30
		06/11/02	10:45	6.28	27.51
		09/17/02	12:33	7.67	26.12
		12/16/02	11:37	7.07	26.72
		03/17/03	10:55	5.75	28.04
		06/10/03	NR	6.68	27.11
		09/10/03	9:10	8.16	25.63
		12/04/03	9:30	6.24	27.55
		01/12/04	10:55	5.75	28.04
		03/15/04	11:15	5.90	27.89
		06/10/04	8:10	6.50	27.29
		09/23/04	8:10	7.12	26.67
		04/04/05	13:35	6.00	27.79
		09/20/05	9:35	7.74	26.05
		03/14/06	10:20	5.45	28.34
		03/15/06	7:55	5.45	28.34
		09/12/06	12:26	7.99	25.80
		04/03/07	10:25	5.35	28.44
		04/03/07	11:58	5.38	28.41
		09/24/07	10:44	7.76	26.03
		05/01/08	11:30	6.11	27.68
		09/29/08	NR	7.45	26.34
		03/23/09	10:06	5.77	28.02
		09/28/09	13:20	7.53	26.26
		03/25/10	8:47	6.53	27.26
		04/05/10	10:45	7.66	26.13
		05/06/10	8:15	7.02	26.77
		07/13/10	14:37	6.55	27.24
		09/27/10	10:05	6.75	27.04
		02/28/11	16:09	5.32	28.47
		03/17/11	12:43	5.14	28.65
		04/25/11	8:32	5.21	28.58
		05/04/11	8:39	5.43	28.36
		06/22/11	8:32	5.96	27.83
		09/20/11	13:28	7.50	26.29
		12/06/11	11:20	6.58	27.21
		03/05/12	12:47	5.46	28.33
		03/05/12	14:00	5.45	28.34
		06/25/12	12:15	5.92	27.87
		10/03/12	15:30	7.79	26.00
		12/18/12	13:39	5.57	28.22
		12/18/12	15:14	5.58	28.21
03/04/13	14:35	5.80	27.99		
03/04/13	14:45	5.80	27.99		
06/06/13	7:30	6.20	27.59		
09/24/13	12:32	7.21	26.58		
03/25/14	12:38	4.93	28.86		
09/22/14	15:16	7.60	26.19		
03/16/15	11:17	5.47	28.32		
09/13/15	9:35	7.90	25.89		
03/14/16	9:19	4.68	29.11		
09/13/16	10:37	7.77	26.02		
03/06/17	9:38	5.04	28.75		
09/18/17	12:02	7.84	25.95		
03/19/18	10:16	5.73	28.06		
09/10/18	13:45	7.95	25.84		
05/30/19	15:10	6.28	27.51		
08/29/19	10:01	7.35	26.44		
33.76	05/12/20	11:50	5.73	28.03	
	09/24/20	10:30	7.45	26.31	

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
MW-3	32.94	09/07/95	NR	7.34	-7.34
		11/10/95	NR	6.93	-6.93
		12/07/95	NR	6.24	-6.24
		01/29/96	NR	5.73	-5.73
		09/04/96	14:50	7.17	-7.17
		10/11/96	10:20	7.32	-7.32
		11/06/96	9:10	6.85	-6.85
		12/10/96	10:25	5.75	-5.75
		01/10/97	NR	5.30	-5.30
		02/21/97	11:55	5.51	-5.51
		03/04/97	9:27	5.50	-5.50
		06/27/97	10:30	6.24	-6.24
		09/04/97	10:47	6.87	-6.87
		12/22/97	8:10	6.03	-6.03
		03/06/98	9:34	5.90	-5.90
		06/18/98	8:57	6.51	-6.51
		09/29/98	9:05	5.73	-5.73
		12/14/98	9:32	5.92	-5.92
		01/07/99	8:44	5.81	-5.81
		01/13/99	9:12	5.93	-5.93
		03/02/99	9:04	5.21	-5.21
		06/16/99	9:55	6.48	-6.48
		09/16/99	10:23	7.20	-7.20
		12/08/99	8:24	6.08	-6.08
		03/07/00	8:23	5.74	-5.74
		06/21/00	9:15	6.48	-6.48
		09/12/00	10:30	7.40	-7.40
		12/07/00	9:25	6.94	-6.94
		03/15/01	9:57	6.41	-6.41
		07/12/01	15:55	6.77	-6.77
		09/24/01	11:37	7.48	-7.48
		01/02/02	11:12	5.71	27.23
		03/27/02	10:05	5.65	27.29
		06/11/02	10:27	6.28	26.66
		09/17/02	12:00	7.41	25.53
		12/16/02	11:05	6.81	26.13
		03/17/03	10:05	5.84	27.10
		06/10/03	NR	6.60	26.34
		09/11/03	9:50	7.82	25.12
		12/03/03	12:00	6.26	26.68
		01/12/04	11:59	5.80	27.14
		03/15/04	10:00	5.98	26.96
		06/10/04	7:00	6.22	26.72
		09/22/04	10:05	7.87	25.07
		04/04/05	12:10	5.92	27.02
		09/20/05	8:10	7.45	25.49
		01/25/06	15:30	5.24	27.70
		03/14/06	11:40	5.57	27.37
		03/14/06	11:53	5.57	27.37
		09/12/06	11:10	7.70	25.24
04/03/07	9:35	5.52	27.42		
04/03/07	11:10	5.51	27.43		
09/24/07	11:35	7.43	25.51		
05/01/08	9:24	5.96	26.98		
09/29/08	NR	7.08	25.86		
03/23/09	8:58	5.74	27.20		
09/28/09	13:00	7.22	25.72		
03/25/10	9:30	5.75	27.19		
04/05/10	11:30	5.96	26.98		
05/06/10	8:56	6.25	26.69		
07/13/10	14:50	5.90	27.04		

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
MW-3 (continued)	32.94	09/27/10	11:20	6.36	26.58
		02/28/11	NM	NM	-
		03/17/11	13:45	5.15	27.79
		04/25/11	9:38	5.11	27.83
		05/04/11	9:24	5.35	27.59
		06/22/11	7:52	5.74	27.20
		09/20/11	12:58	7.10	25.84
		12/06/11	10:56	6.35	26.59
		03/05/12	13:50	5.35	27.59
		03/05/12	15:10	5.35	27.59
		06/25/12	11:55	5.71	27.23
		06/25/12	11:57	5.70	27.24
		10/03/12	16:30	7.47	25.47
		12/18/12	11:52	5.40	27.54
		12/18/12	12:31	5.40	27.54
		03/04/13	14:05	5.70	27.24
		03/04/13	15:18	5.68	27.26
	06/06/13	8:02	6.03	26.91	
	09/24/13	11:50	6.74	26.20	
	03/25/14	11:46	6.11	26.83	
	09/22/14	16:00	7.20	25.74	
	03/16/15	9:52	5.19	27.75	
	09/13/15	8:36	7.45	25.49	
	03/14/16	8:10	4.75	28.19	
	09/13/16	11:25	7.32	25.62	
	03/06/17	10:59	5.04	27.90	
	09/18/17	11:18	7.24	25.70	
03/19/18	9:13	5.60	27.34		
09/10/18	11:52	7.33	25.61		
05/30/19	12:22	6.04	26.90		
08/29/19	8:10	6.49	26.45		
32.86	05/12/20	8:35	5.66	27.20	
	09/25/20	11:30	6.50	26.36	
	10/11/96	10:40	6.21	-6.21	
MW-4	32.86	11/06/96	9:15	5.75	-5.75
		12/10/96	10:40	4.68	-4.68
		01/10/97	NR	3.95	-3.95
		02/21/97	12:40	4.10	-4.10
		03/04/97	11:35	4.16	-4.16
		06/27/97	10:44	4.59	-4.59
		09/04/97	10:55	5.44	-5.44
		12/22/97	8:39	4.78	-4.78
		03/06/98	9:51	4.28	-4.28
		06/18/98	9:16	5.00	-5.00
		09/29/98	9:20	6.44	-6.44
		12/14/98	9:43	5.16	-5.16
		01/07/99	9:06	4.38	-4.38
		01/13/99	9:17	4.38	-4.38
		03/02/99	9:26	3.73	-3.73
		06/16/99	10:23	4.77	-4.77
		09/16/99	10:45	5.78	-5.78
		12/08/99	8:45	4.81	-4.81
		03/07/00	9:03	4.17	-4.17
		06/21/00	9:41	4.85	-4.85
		09/12/00	9:40	6.22	-6.22
		12/07/00	8:50	6.78	-6.78
		03/15/01	9:35	5.10	-5.10
		07/12/01	10:00	5.14	-5.14
		09/24/01	11:41	6.02	-6.02
		01/02/02	11:05	4.41	28.45
		03/27/02	9:53	4.17	28.69
	06/11/02	10:37	4.69	28.17	
	09/17/02	12:38	6.25	26.61	
	12/16/02	11:45	6.22	26.64	
	03/17/03	11:02	4.74	28.12	
06/10/03	NR	5.17	27.69		
09/10/03	9:20	7.02	25.84		
12/04/03	7:25	5.49	27.37		

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
MW-4 (continued)	32.86	01/12/04	11:20	4.88	27.98
		03/15/04	11:25	4.83	28.03
		06/10/04	8:35	5.33	27.53
		09/22/04	11:30	6.11	26.75
		04/04/05	13:50	5.28	27.58
		09/20/05	9:55	6.65	26.21
		01/25/06	15:25	4.41	28.45
		03/14/06	10:50	4.58	28.28
		03/15/06	12:05	4.64	28.22
		05/19/06	12:25	5.00	27.86
		06/09/06	14:20	4.80	28.06
		09/12/06	12:45	6.96	25.90
		04/03/07	10:45	4.46	28.40
		04/03/07	12:15	4.40	28.46
		09/24/07	11:05	6.67	26.19
		05/01/08	10:30	5.00	27.86
		09/29/08	NR	6.29	26.57
		03/23/09	10:58	4.80	28.06
		09/28/09	14:00	6.53	26.33
		03/25/10	10:28	4.60	28.26
		04/05/10	10:30	4.67	28.19
		05/06/10	8:21	5.32	27.54
		07/13/10	14:42	4.98	27.88
		09/27/10	10:27	5.70	27.16
		02/28/11	14:08	4.40	28.46
		03/17/11	14:13	4.10	28.76
		04/25/11	8:10	4.11	28.75
		05/04/11	8:31	3.90	28.96
		06/22/11	8:20	4.58	28.28
		09/20/11	13:52	6.31	26.55
		12/06/11	11:08	5.51	27.35
		03/05/12	13:03	4.26	28.60
		03/05/12	14:25	4.27	28.59
		06/25/12	13:07	4.50	28.36
		10/03/12	13:12	6.70	26.16
		12/18/12	13:47	4.82	28.04
		12/18/12	15:21	4.80	28.06
		03/04/13	14:28	4.75	28.11
		03/04/13	15:11	4.73	28.13
		06/06/13	7:38	4.82	28.04
		09/24/13	12:51	6.20	26.66
03/25/14	13:02	3.93	28.93		
09/22/14	15:29	6.37	26.49		
03/16/15	10:54	4.61	28.25		
09/13/15	9:07	6.81	26.05		
03/14/16	9:05	3.93	28.93		
09/13/16	11:06	6.65	26.21		
03/06/17	8:43	4.00	28.86		
09/18/17	12:30	6.81	26.05		
03/19/18	9:55	4.38	28.48		
09/10/18	13:11	6.82	26.04		
05/30/19	13:41	4.87	27.99		
08/29/19	9:24	5.93	26.93		
32.82	05/12/20	11:20	4.24	28.58	
	09/24/20	13:30	6.15	26.67	
MW-5	32.77	09/04/96	11:50	6.74	26.03
		10/11/96	10:45	6.82	25.95
		11/06/96	9:05	6.24	26.53
		12/10/96	10:30	5.01	27.76
		01/10/97	NR	4.54	28.23
		02/21/97	12:30	4.79	27.98
		03/04/97	9:40	4.78	27.99
		06/27/97	10:40	5.54	27.23
		09/04/97	10:59	6.29	26.48
		12/22/97	8:32	5.36	27.41
		03/06/98	9:43	5.15	27.62
		06/18/98	9:11	5.89	26.88
		09/29/98	9:39	7.13	25.64
		12/15/98	9:38	5.18	27.59

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
MW-5 (continued)	32.77	01/07/99	9:08	5.04	27.73
		01/13/99	9:00	5.97	26.80
		03/02/99	9:16	4.38	28.39
		06/16/99	10:07	5.81	26.96
		09/16/99	10:36	6.58	26.19
		12/08/99	8:34	5.33	27.44
		03/07/00	8:44	4.92	27.85
		06/21/00	9:24	5.31	27.46
		09/12/00	10:05	6.84	25.93
		12/07/00	8:55	6.42	26.35
		03/15/01	9:55	5.82	26.95
		07/09/01	10:08	6.22	26.55
		08/27/01	10:11	6.67	26.10
		09/24/01	11:43	6.98	25.79
		10/22/01	11:37	6.94	25.83
	11/19/01	13:10	6.31	26.46	
	32.60	01/02/02	10:57	5.14	27.46
		03/27/02	10:36	5.05	27.55
		06/11/02	10:13	5.75	26.85
		09/17/02	12:15	6.98	25.62
		12/16/02	11:22	6.31	26.29
		03/17/03	10:30	5.31	27.29
		06/10/03	NR	6.08	26.52
		09/11/03	9:55	7.39	25.21
		12/03/03	11:40	5.70	26.90
		01/12/04	10:23	5.24	27.36
		03/15/04	10:45	5.39	27.21
		09/22/04	11:00	6.44	26.16
		04/04/05	12:55	5.34	27.26
		09/20/05	9:00	6.99	25.61
		03/14/06	9:30	5.04	27.56
		03/14/06	13:40	5.03	27.57
		09/12/06	11:52	7.25	25.35
		04/03/07	11:35	5.01	27.59
		09/24/07	10:26	7.01	25.59
		05/01/08	10:05	5.50	27.10
		09/29/08	NR	6.71	25.89
		03/23/09	9:35	5.39	27.21
		09/28/09	14:10	6.80	25.80
		03/25/10	10:12	5.52	27.08
		04/05/10	10:34	5.91	26.69
		05/06/10	8:10	6.02	26.58
		07/13/10	14:42	5.79	26.81
		09/27/10	10:19	5.95	26.65
		02/28/11	13:47	4.69	27.91
		03/22/11	13:05	4.63	27.97
		04/25/11	8:53	4.65	27.95
		05/04/11	8:56	4.85	27.75
		06/22/11	8:57	5.30	27.30
		09/20/11	13:45	6.71	25.89
12/06/11		11:34	5.91	26.69	
03/05/12	12:16	4.89	27.71		
03/05/12	14:30	4.90	27.70		
06/25/12	12:40	5.27	27.33		
10/03/12	15:00	7.03	25.57		
12/18/12	13:31	4.92	27.68		
12/18/12	15:28	4.93	27.67		
03/04/13	15:02	5.22	27.38		
03/04/13	16:12	5.22	27.38		
06/06/13	7:50	5.56	27.04		
09/24/13	12:18	6.51	26.09		

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation	
MW-5 (continued)	32.60	03/25/14	12:02	4.52	28.08	
		09/22/14	16:23	6.80	25.80	
		03/16/15	10:25	4.74	27.86	
		09/13/15	9:12	7.11	25.49	
		03/14/16	8:35	4.23	28.37	
		09/13/16	10:23	6.92	25.68	
		03/06/17	8:57	4.44	28.16	
		09/18/17	11:45	6.90	25.70	
		03/19/18	10:38	5.18	27.42	
		09/10/18	12:55	6.98	25.62	
	05/30/19	12:56	5.70	26.90		
	08/29/19	9:12	6.55	26.05		
	32.57	05/12/20	11:15	5.20	27.37	
		09/25/20	9:55	6.60	25.97	
MW-6	33.33	09/04/96	9:50	6.26	27.07	
		10/11/96	10:35	6.55	26.78	
		11/06/96	8:58	5.98	27.35	
		12/10/96	10:45	5.08	28.25	
		01/10/97	NR	4.17	29.16	
		02/21/97	12:15	4.33	29.00	
		03/04/97	9:45	4.42	28.91	
		06/27/97	10:49	5.05	28.28	
		09/04/97	11:01	5.87	27.46	
		12/22/97	8:36	5.11	28.22	
		03/06/98	9:49	4.57	28.76	
		06/18/98	9:26	5.48	27.85	
		09/29/98	9:32	6.87	26.46	
		12/15/98	9:50	5.15	28.18	
		01/07/99	8:55	4.39	28.94	
		01/13/99	9:20	4.44	28.89	
		03/02/99	9:24	3.64	29.69	
		06/16/99	10:19	5.04	28.29	
		09/16/99	10:39	6.03	27.30	
		12/08/99	8:37	4.82	28.51	
		03/07/00	8:48	4.44	28.89	
		06/21/00	9:50	5.08	28.25	
		09/12/00	11:15	6.24	27.09	
		12/07/00	9:05	5.85	27.48	
		03/15/01	9:45	5.25	28.08	
		07/12/01	15:30	5.61	27.72	
		09/24/01	11:46	6.35	26.98	
		33.05	01/02/02	10:37	4.52	28.53
			03/27/02	9:50	4.00	29.05
			06/11/02	10:51	4.87	28.18
			06/11/02	12:30	6.39	26.66
			12/16/02	11:35	6.27	26.78
	03/17/03		10:46	4.67	28.38	
	06/10/03		NR	5.65	27.40	
	09/10/03		8:55	7.90	25.15	
	12/04/03		8:00	5.91	27.14	
	01/12/04		10:45	5.62	27.43	
	03/15/04	11:10	5.33	27.72		
	06/10/04	8:05	6.40	26.65		
	09/22/04	11:10	7.27	25.78		
	04/04/05	13:20	5.74	27.31		
	09/20/05	9:20	7.72	25.33		
01/25/06	15:15	4.93	28.12			
03/14/06	10:00	5.20	27.85			
03/14/06	14:40	5.20	27.85			
05/19/06	12:40	5.88	27.17			
06/09/06	14:00	5.75	27.30			
09/12/06	12:12	8.00	25.05			
04/03/07	10:15	4.89	28.16			
04/03/07	11:50	4.89	28.16			
09/24/07	10:42	7.87	25.18			
05/02/08	10:18	5.75	27.30			
09/29/08	NR	7.64	25.41			

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
MW-6 (continued)	33.05	03/23/09	9:54	5.23	27.82
		09/28/09	13:30	7.93	25.12
		03/25/10	10:15	5.32	27.73
		04/05/10	10:42	5.20	27.85
		05/06/10	8:19	6.02	27.03
		07/13/10	14:39	6.13	26.92
		09/27/10	9:49	6.84	26.21
		02/28/11	16:13	5.11	27.94
		03/17/11	12:57	4.50	28.55
		04/25/11	8:28	4.70	28.35
		05/04/11	8:44	4.58	28.47
		06/22/11	8:43	5.48	27.57
		09/20/11	13:33	7.41	25.64
		12/06/11	11:25	6.23	26.82
		03/05/12	12:50	5.00	28.05
		03/05/12	14:03	4.95	28.10
		06/25/12	12:22	5.58	27.47
		10/03/12	15:30	7.80	25.25
		12/18/12	13:37	5.31	27.74
		12/18/12	15:10	5.31	27.74
		03/04/13	14:30	5.33	27.72
		03/04/13	15:09	5.30	27.75
		06/06/13	7:34	5.79	27.26
		09/24/13	12:26	7.35	25.70
		03/25/14	12:26	4.30	28.75
		09/22/14	15:21	7.80	25.25
		03/16/15	11:15	4.85	28.20
	09/13/15	9:24	8.15	24.90	
	03/14/16	8:45	3.83	29.22	
	09/13/16	10:33	8.04	25.01	
	03/06/17	9:28	4.22	28.83	
	09/18/17	11:59	8.04	25.01	
	03/19/18	10:23	4.40	28.65	
09/10/18	13:32	7.64	25.41		
05/30/19	13:38	5.09	27.96		
08/29/19	9:58	6.64	26.41		
33.01	05/12/20	11:00	4.56	28.45	
	09/25/20	9:20	6.70	26.31	
	33.24	12/22/97	8:26	5.86	27.38
MW-7	33.24	03/06/98	9:41	5.66	27.58
		06/18/98	9:04	6.38	26.86
		09/29/98	9:15	7.62	25.62
		12/14/98	9:36	5.66	27.58
		01/07/99	8:34	5.58	27.66
		01/13/99	9:05	5.68	27.56
		03/02/99	9:09	4.89	28.35
		06/16/99	10:03	6.32	26.92
		09/16/99	10:30	7.09	26.15
		12/08/99	8:28	5.89	27.35
		03/07/00	8:38	5.45	27.79
		06/21/00	10:00	6.47	26.77
		09/12/00	10:25	7.31	25.93
		12/07/00	9:20	6.91	26.33
		03/15/01	10:00	6.32	26.92
		07/12/01	13:45	6.75	26.49
		08/27/01	10:30	7.09	26.15
		09/24/01	11:49	7.33	25.91
		10/22/01	18:37	7.20	26.04
		11/19/01	12:50	6.33	26.91
	32.96	01/02/02	10:23	5.55	27.41
		03/27/02	10:12	5.45	27.51
		06/11/02	10:23	6.16	26.80
		09/17/02	12:41	7.34	25.62
		12/16/02	11:10	6.71	26.25
		03/17/03	10:15	5.70	27.26
		06/10/03	NR	6.48	26.48
09/10/03	8:23	7.80	25.16		

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
MW-7 (continued)	32.96	12/03/03	11:30	6.17	26.79
		01/12/04	10:07	5.64	27.32
		03/15/04	10:23	5.79	27.17
		06/10/04	7:25	6.22	26.74
		09/22/04	10:35	6.84	26.12
		04/04/05	12:30	5.73	27.23
		09/20/05	8:35	7.38	25.58
		01/25/06	14:55	5.06	27.90
		03/14/06	9:00	5.41	27.55
		03/14/06	12:20	5.44	27.52
		05/19/06	13:00	5.99	26.97
		06/09/06	13:36	5.81	27.15
		09/12/06	11:35	7.62	25.34
		04/03/07	9:45	5.31	27.65
		04/03/07	11:20	5.32	27.64
		09/24/07	10:13	7.36	25.60
		05/01/08	9:46	5.86	27.10
		09/29/08	NR	7.07	25.89
		03/23/09	9:25	5.61	27.35
		09/28/09	12:42	7.18	25.78
		03/25/10	8:12	5.86	27.10
		04/05/10	10:51	6.22	26.74
		05/06/10	8:47	6.35	26.61
		07/13/10	14:15	6.13	26.83
		09/27/10	11:30	6.35	26.61
		02/28/11	15:25	5.07	27.89
		03/17/11	13:30	5.00	27.96
		04/25/11	9:13	5.05	27.91
		05/04/11	9:07	5.25	27.71
		06/22/11	8:06	5.64	27.32
		09/20/11	13:10	7.08	25.88
		12/06/11	11:48	6.30	26.66
		03/05/12	13:42	5.27	27.69
		03/05/12	15:01	5.28	27.68
		06/25/12	12:12	5.65	27.31
		06/25/12	12:14	5.64	27.32
		10/03/12	16:30	7.41	25.55
		12/18/12	12:12	5.30	27.66
		12/18/12	12:50	5.30	27.66
		03/04/13	14:20	5.63	27.33
03/04/13	15:14	5.60	27.36		
06/06/13	7:55	5.96	27.00		
09/24/13	12:03	6.73	26.23		
03/25/14	11:58	4.48	28.48		
09/22/14	12:05	7.17	25.79		
03/16/15	9:55	5.11	27.85		
09/13/15	8:46	7.43	25.53		
03/14/16	8:22	4.58	28.38		
09/13/16	10:25	7.31	25.65		
03/06/17	10:52	4.92	28.04		
09/18/17	11:27	7.26	25.70		
03/19/18	9:00	5.55	27.41		
09/10/18	12:15	7.35	25.61		
05/30/19	13:54	6.07	26.89		
08/29/19	8:42	6.95	26.01		
05/12/20	9:00	5.57	27.34		
09/25/20	12:00	6.95	25.96		
MW-8	33.83	12/22/97	8:30	6.39	27.44
		03/06/98	9:46	6.20	27.63
		06/18/98	9:13	6.94	26.89
		09/29/98	9:42	8.22	25.61
		12/14/98	9:55	6.21	27.62
		01/07/99	9:12	6.10	27.73
		01/13/99	8:55	6.22	27.61
		03/02/99	9:21	5.38	28.45
		06/16/99	10:12	6.88	26.95
		09/16/99	10:33	7.65	26.18
		12/08/99	8:33	6.42	27.41

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
MW-8 (continued)	33.83	03/07/00	8:42	5.97	27.86
		06/21/00	10:06	6.77	27.06
		09/12/00	10:20	7.90	25.93
		12/07/00	9:10	7.46	26.37
		03/15/01	9:50	6.95	26.88
		07/12/01	12:00	7.31	26.52
		08/27/01	10:27	7.65	26.18
		09/24/01	11:52	7.98	25.85
		10/22/01	17:50	7.95	25.88
		11/19/01	14:15	6.88	26.95
	33.57	01/02/02	10:48	6.07	27.50
		03/27/02	10:21	5.98	27.59
		06/11/02	10:08	6.71	26.86
		09/17/02	12:26	7.94	25.63
		12/16/02	11:28	7.29	26.28
		03/17/03	10:37	6.58	26.99
		06/10/03	NR	7.05	26.52
		09/10/03	8:44	8.38	25.19
		12/03/03	11:00	6.70	26.87
		01/12/04	10:33	6.19	27.38
		03/15/04	11:00	6.32	27.25
		06/10/04	7:55	6.78	26.79
		09/23/04	8:05	7.40	26.17
		04/04/05	13:10	6.29	27.28
		09/20/05	9:10	7.94	25.63
		03/14/06	9:45	6.03	27.54
		03/15/06	10:55	6.03	27.54
		05/19/06	12:50	6.52	27.05
		06/09/06	13:54	6.37	27.20
		09/12/06	12:04	8.20	25.37
		04/03/07	10:08	5.88	27.69
		04/03/07	11:43	5.89	27.68
		09/24/07	10:34	7.95	25.62
		05/01/08	15:15	6.42	27.15
		09/29/08	NR	7.64	25.93
		03/23/09	9:43	6.15	27.42
		09/28/09	14:15	7.75	25.82
		03/25/10	10:20	6.43	27.14
		04/05/10	10:37	6.85	26.72
		05/06/10	8:10	6.97	26.60
		07/13/10	14:41	6.71	26.86
		09/27/10	9:41	6.93	26.64
		02/28/11	13:01	5.62	27.95
		03/17/11	13:00	5.55	28.02
		04/25/11	8:45	5.60	27.97
		05/04/11	8:50	5.80	27.77
		06/22/11	8:48	6.24	27.33
		09/20/11	13:38	7.65	25.92
		12/06/11	11:30	6.86	26.71
		03/05/12	13:20	5.84	27.73
03/05/12	14:06	5.84	27.73		
06/25/12	12:27	6.21	27.36		
10/03/12	15:35	7.98	25.59		
12/18/12	13:34	5.86	27.71		
12/18/12	15:07	5.86	27.71		
03/04/13	15:05	6.17	27.40		
03/04/13	16:13	6.18	27.39		
06/06/13	7:52	6.51	27.06		
09/24/13	12:14	7.25	26.32		
03/25/14	12:22	5.39	28.18		
09/22/14	16:27	7.72	25.85		
03/16/15	10:28	4.68	28.89		

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
MW-8 (continued)	33.57	09/13/15	9:18	8.04	25.53
		03/14/16	8:40	5.10	28.47
		09/13/16	10:13	7.88	25.69
		03/06/17	9:12	5.45	28.12
		09/18/17	11:52	7.86	25.71
	33.53	03/19/18	10:27	6.12	27.45
		09/10/18	12:48	7.96	25.61
		05/30/19	12:38	6.64	26.93
		08/29/19	8:57	7.56	26.01
		09/25/20	10:50	6.18	27.35
		09/25/20	9:00	7.25	26.28
MW-9	33.77	08/27/01	10:26	7.80	25.97
		10/22/01	16:55	7.95	25.82
		11/19/01	14:23	7.02	26.75
		01/02/02	10:44	6.21	27.56
		03/27/02	10:25	6.06	27.71
		06/11/02	10:05	6.84	26.93
		09/17/02	12:28	8.11	25.66
		12/16/02	11:30	7.51	26.26
		03/17/03	10:41	6.36	27.41
		06/10/03	NR	7.20	26.57
		09/10/03	8:49	8.61	25.16
		12/03/03	11:05	6.90	26.87
		01/12/04	10:40	6.34	27.43
		03/15/04	11:05	6.41	27.36
		06/10/04	8:00	7.00	26.77
		09/22/04	11:05	7.81	25.96
		04/04/05	13:15	6.45	27.32
		09/20/05	9:15	8.15	25.62
		01/25/06	15:10	5.74	28.03
		03/14/06	9:50	6.09	27.68
		03/14/06	14:10	6.09	27.68
		05/19/06	12:45	6.71	27.06
		06/09/06	13:58	6.54	27.23
		09/12/06	12:08	8.42	25.35
		04/03/07	10:10	6.00	27.77
		04/03/07	11:47	6.01	27.76
		09/24/07	10:37	8.15	25.62
		05/01/08	12:12	6.57	27.20
		09/29/08	NR	7.89	25.88
		03/23/09	9:50	6.28	27.49
		09/28/09	14:20	7.98	25.79
		03/25/10	10:24	6.55	27.22
		04/05/10	10:39	6.89	26.88
		05/06/10	8:11	7.10	26.67
		07/13/10	14:40	6.88	26.89
		09/27/10	9:45	7.12	26.65
		02/28/11	16:15	5.77	28.00
		03/17/11	12:59	5.61	28.16
		04/25/11	8:34	5.69	28.08
		05/04/11	8:48	5.89	27.88
		06/22/11	8:46	6.37	27.40
		09/20/11	13:36	7.84	25.93
		12/06/11	11:28	7.01	26.76
03/05/12	13:25	5.96	27.81		
03/05/12	14:05	5.96	27.81		
06/25/12	12:25	6.37	27.40		
10/03/12	15:30	8.15	25.62		
12/18/12	13:35	6.00	27.77		
12/18/12	15:08	6.00	27.77		
03/04/13	15:07	6.30	27.47		
03/04/13	16:14	6.30	27.47		
06/06/13	7:53	6.61	27.16		
09/24/13	12:15	7.50	26.27		
03/25/14	12:14	5.52	28.25		
09/22/14	16:31	7.90	25.87		
03/16/15	10:30	5.76	28.01		
09/13/15	9:20	8.21	25.56		

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
MW-9 (continued)	33.77	03/14/16	8:42	5.14	28.63
		09/13/16	11:14	8.02	25.75
		03/06/17	9:00	5.51	28.26
		09/18/17	11:55	8.05	25.72
		03/19/18	10:27	6.18	27.59
		09/10/18	12:52	7.15	26.62
		05/30/19	12:50	6.70	27.07
		08/29/19	8:59	7.73	26.04
		05/12/20	11:05	6.25	27.47
		09/25/20	9:05	7.70	26.02
MW-10	32.89	01/02/02	10:18	5.48	27.41
		03/27/02	10:08	5.42	27.47
		06/11/02	10:25	6.08	26.81
		09/17/02	12:46	7.25	25.64
		12/16/02	11:07	6.58	26.31
		03/17/03	10:10	5.62	27.27
		06/10/03	NR	6.40	26.49
		09/10/03	8:20	7.72	25.17
		12/03/03	10:30	6.07	26.82
		01/12/04	10:03	5.58	27.31
		03/15/04	10:17	5.73	27.16
		06/10/04	7:15	6.13	26.76
		09/22/04	10:25	6.71	26.18
		04/04/05	12:25	5.66	27.23
		09/20/05	8:30	7.29	25.60
		01/25/06	14:50	5.05	27.84
		03/14/06	11:05	5.35	27.54
		03/15/06	11:25	5.42	27.47
		05/19/06	12:15	5.90	26.99
		06/09/06	13:30	5.74	27.15
		09/12/06	11:28	7.53	25.36
		04/03/07	9:20	5.31	27.58
		04/03/07	11:00	5.27	27.62
		09/24/07	10:08	7.25	25.64
		05/01/08	9:35	5.76	27.13
		09/29/08	NR	6.96	25.93
		03/23/09	8:31	5.54	27.35
		09/28/09	12:51	7.06	25.83
		03/25/10	8:10	5.65	27.24
		04/05/10	10:53	6.00	26.89
		05/06/10	8:46	6.22	26.67
		07/13/10	14:06	6.03	26.86
		09/27/10	11:35	6.21	26.68
		02/28/11	15:31	4.96	27.93
		03/17/11	13:39	4.93	27.96
		04/25/11	9:25	4.94	27.95
		05/04/11	9:09	5.07	27.82
		06/22/11	8:01	5.55	27.34
		09/20/11	13:03	6.96	25.93
		12/06/11	11:50	6.20	26.69
		03/05/12	13:32	5.16	27.73
		03/05/12	15:05	5.17	27.72
		06/25/12	12:05	5.57	27.32
06/25/12	12:15	5.54	27.35		
10/03/12	16:30	7.31	25.58		
12/18/12	12:10	5.30	27.59		
12/18/12	12:45	5.20	27.69		
12/18/12	14:00	5.19	27.70		
03/04/13	14:16	5.52	27.37		
03/04/13	15:15	5.50	27.39		
06/06/13	7:59	5.85	27.04		
09/24/13	11:59	6.60	26.29		
03/25/14	11:42	4.83	28.06		
09/22/14	16:38	7.05	25.84		
03/16/15	9:58	4.79	28.10		
09/13/15	8:44	7.34	25.55		
03/14/16	8:18	4.75	28.14		
09/13/16	10:39	7.18	25.71		

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation		
MW-10 (continued)	32.89	03/06/17	10:43	4.84	28.05		
		09/18/17	11:21	7.12	25.77		
		03/10/18	8:52	5.41	27.48		
		09/19/18	12:05	7.21	25.68		
		05/30/19	13:37	5.95	26.94		
	32.77	08/29/19	8:33	6.83	26.06		
		05/12/20	12:45	5.50	27.27		
		09/25/20	13:15	7.00	25.77		
		MW-11	32.79	08/27/01	10:16	6.88	25.91
				10/15/02	11:50	8.20	24.59
10/22/01	12:20			7.14	25.65		
10/29/01	16:04			6.98	25.81		
11/19/01	12:55			6.27	26.52		
01/02/02	11:00			5.34	27.45		
03/27/02	10:34			5.25	27.54		
06/11/02	10:16			5.95	26.84		
09/17/02	12:14			7.16	25.63		
12/16/02	11:21			6.50	26.29		
03/17/03	10:25			5.48	27.31		
06/10/03	NR			6.28	26.51		
09/10/03	8:36			7.61	25.18		
12/03/03	10:44			5.94	26.85		
01/12/04	10:18			5.43	27.36		
03/15/04	10:40			5.57	27.22		
06/10/04	7:45			6.01	26.78		
09/22/04	10:55			6.62	26.17		
04/04/05	12:50			5.57	27.22		
09/20/05	8:55			7.16	25.63		
03/14/06	9:20			5.21	27.58		
03/14/06	13:15			5.21	27.58		
06/09/06	13:45			5.63	27.16		
09/12/06	11:48			7.42	25.37		
04/03/07	9:59			5.13	27.66		
04/03/07	11:33			5.14	27.65		
09/24/07	10:24			7.16	25.63		
05/01/08	10:02			5.65	27.14		
09/29/08	NR			6.86	25.93		
03/23/09	9:32			5.41	27.38		
09/28/09	14:06			6.99	25.80		
03/25/10	9:00			5.67	27.12		
04/05/10	10:33			6.07	26.72		
05/06/10	8:09			6.17	26.62		
07/13/10	14:39			5.94	26.85		
09/27/10	10:15			6.10	26.69		
02/28/11	13:40			4.84	27.95		
03/17/11	13:07			4.80	27.99		
04/25/11	8:54			4.81	27.98		
05/04/11	8:57			5.01	27.78		
06/22/11	9:00			5.43	27.36		
09/20/11	13:47			6.84	25.95		
12/06/11	11:36			6.07	26.72		
06/25/12	12:40			5.42	27.37		
10/03/12	15:00			7.18	25.61		
03/25/14	12:10			4.65	28.14		
03/16/15	10:52			4.89	27.90		
09/13/15	9:42			7.22	25.57		
03/14/16	8:33			4.37	28.42		
09/13/16	10:21			7.06	25.73		
03/06/17	8:53	4.66	28.13				
09/18/17	12:42	7.02	25.77				
03/19/18	10:37	5.31	27.48				
09/10/18	12:57	7.12	25.67				
05/30/19	12:55	5.82	26.97				
08/29/19	9:13	6.72	26.07				
32.79	05/12/20	12:00	5.36	27.43			
	09/25/20	NM	NM	NM			
MW-12	32.81	08/27/01	10:15	6.89	25.92		
		10/15/01	11:40	8.24	24.57		
		10/22/01	14:05	7.13	25.68		
		10/29/01	14:17	7.12	25.69		
		11/19/01	11:07	6.22	26.59		

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
		01/02/02	11:02	5.36	27.45
		03/27/02	10:31	5.28	27.53
		06/11/02	10:18	5.97	26.84

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
MW-12 (continued)	32.81	09/17/02	12:11	7.16	25.65
		12/16/02	11:19	6.51	26.30
		03/17/03	10:23	5.50	27.31
		06/10/03	NR	6.30	26.51
		09/10/03	8:33	7.64	25.17
		12/03/03	10:42	5.98	26.83
		01/12/04	10:16	5.45	27.36
		03/15/04	10:35	5.60	27.21
		06/10/04	7:40	6.03	26.78
		09/22/04	10:50	6.64	26.17
		04/04/05	12:45	5.55	27.26
		09/20/05	8:50	7.19	25.62
		01/25/06	15:00	4.85	27.96
		03/14/06	9:15	5.20	27.61
		03/14/06	12:50	5.23	27.58
		05/19/06	12:20	5.78	27.03
		06/09/06	13:48	5.61	27.20
		09/12/06	11:46	7.45	25.36
		04/03/07	9:57	5.15	27.66
		04/03/07	11:30	5.14	27.67
		09/24/07	10:22	7.18	25.63
		05/01/08	9:57	5.68	27.13
		09/29/08	NR	6.88	25.93
		03/23/09	9:30	5.44	27.37
		09/28/09	14:03	7.00	25.81
		03/25/10	10:07	5.69	27.12
		04/05/10	10:32	6.08	26.73
		05/06/10	8:00	6.20	26.61
		07/13/10	14:40	5.94	26.87
		09/27/10	10:20	6.12	26.69
		02/28/11	13:20	4.86	27.95
		03/17/11	13:09	4.80	28.01
		04/25/11	8:56	4.85	27.96
		05/04/11	8:58	5.05	27.76
		06/22/11	9:03	5.46	27.35
		09/20/11	13:49	6.87	25.94
		12/06/11	11:38	6.10	26.71
		03/05/12	13:17	5.09	27.72
		03/05/12	14:29	5.07	27.74
		06/25/12	12:42	5.44	27.37
		10/03/12	15:17	7.20	25.61
12/18/12	13:30	5.12	27.69		
12/18/12	15:27	5.10	27.71		
03/04/13	15:03	5.40	27.41		
03/04/13	16:11	5.40	27.41		
06/06/13	7:50	5.75	27.06		
09/24/13	12:19	6.55	26.26		
03/25/14	12:06	4.69	28.12		
09/22/14	16:19	6.98	25.83		
03/16/15	10:53	4.90	27.91		
09/13/15	9:14	7.27	25.54		
03/14/16	8:32	4.35	28.46		
09/13/16	10:27	7.10	25.71		
03/06/17	8:51	4.64	28.17		
09/18/17	11:47	7.06	25.75		
03/19/18	10:40	5.33	27.48		
09/10/18	13:00	7.15	25.66		
05/30/19	12:54	5.87	26.94		
08/29/19	9:17	6.72	26.09		
05/12/20	11:10	5.25	27.49		
09/25/20	10:00	6.70	26.04		
MW-23	32.78	09/12/06	11:30	7.44	25.34
		04/03/07	9:40	5.17	27.61
		04/03/07	11:14	5.16	27.62
		09/24/07	10:11	7.17	25.61
		05/01/08	9:42	5.66	27.12
		09/29/08	NR	6.87	25.91
		03/23/09	9:17	5.43	27.35
09/28/09	12:47	6.98	25.80		

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
MW-23 (continued)	32.78	03/25/10	8:14	5.63	27.15
		04/05/10	10:49	5.98	26.80
		05/06/10	8:48	6.13	26.65
		07/13/10	14:10	5.93	26.85
		09/27/10	11:30	6.13	26.65
		02/28/11	14:19	4.86	27.92
		03/17/11	13:32	4.83	27.95
		04/25/11	9:11	4.85	27.93
		05/04/11	9:06	5.04	27.74
		06/22/11	8:04	5.48	27.30
		09/20/11	13:07	6.88	25.90
		12/06/11	11:45	6.10	26.68
		03/05/12	13:40	5.07	27.71
		03/05/12	15:00	5.08	27.70
		06/25/12	12:10	5.45	27.33
		06/25/12	12:14	5.45	27.33
		10/03/12	16:30	7.21	25.57
		12/18/12	13:55	5.10	27.68
		12/18/12	15:30	5.10	27.68
		03/04/13	15:13	5.41	27.37
		03/04/13	16:13	5.41	27.37
		06/06/13	7:56	5.77	27.01
		09/24/13	12:01	6.53	26.25
		03/25/14	11:54	4.72	28.06
		09/22/14	16:35	6.96	25.82
		03/16/15	9:56	4.91	27.87
		09/13/15	8:45	7.26	25.52
		03/14/16	8:20	4.40	28.38
	09/13/16	10:33	7.09	25.69	
	03/06/17	10:47	4.72	28.06	
09/18/17	11:25	7.04	25.74		
03/19/18	10:40	5.33	27.45		
09/10/18	13:58	7.13	25.65		
05/30/19	13:52	5.85	26.93		
08/29/19	8:39	6.73	26.05		
05/12/20	8:50	5.37	27.33		
09/25/20	12:35	6.40	26.30		
MW-26	32.65	03/25/10	8:56	5.52	27.13
		04/05/10	11:05	5.91	26.74
		05/06/10	8:06	6.00	26.65
		06/09/10	8:57	5.10	27.55
			Well Abandoned 6 July 2010		
Shallow Onsite Injection Wells					
INJ-1	32.77	11/19/01	14:27	6.50	26.27
		03/27/02	10:38	5.23	27.54
		06/11/02	10:11	5.94	26.83
		09/17/02	12:16	7.14	25.63
		12/16/02	11:24	6.48	26.29
		03/17/03	10:32	5.47	27.30
		06/10/03	NR	6.09	26.68
		09/11/03	10:00	7.56	25.21
		01/12/04	10:27	5.44	27.33
		03/15/04	10:50	5.55	27.22
		04/04/05	13:00	5.49	27.28
		09/12/06	11:55	7.41	25.36
		04/03/07	10:03	5.06	27.71
		04/25/11	8:52	4.75	28.02
		05/04/11	8:54	4.83	27.94
INJ-2	32.81	10/15/01	11:35	8.22	24.59
		10/22/01	15:43	7.12	25.69
		10/29/01	13:10	7.02	25.79
		11/19/01	11:05	6.30	26.51
		03/27/02	10:28	5.29	27.52
		06/11/02	10:20	5.99	26.82
		09/17/02	12:10	7.18	25.63
	12/16/02	11:17	6.52	26.29	

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
INJ-2 (continued)	32.81	03/17/03	10:20	5.51	27.30
		06/10/03	NR	6.31	26.50
		09/10/03	8:30	7.65	25.16
		12/03/03	10:40	6.00	26.81
		01/12/04	10:14	5.46	27.35
		03/15/04	10:30	5.62	27.19
		06/10/04	7:35	6.05	26.76
		09/22/04	10:45	6.65	26.16
		04/04/05	12:40	5.58	27.23
		09/20/05	NR	7.20	25.61
		03/14/06	9:10	5.25	27.56
		09/12/06	11:44	7.47	25.34
		04/03/07	9:55	5.12	27.69
		09/24/07	10:20	7.19	25.62
		05/01/08	9:53	5.70	27.11
		03/25/10	10:05	5.69	27.12
		05/06/10	8:05	6.20	26.61
		09/27/10	10:21	6.15	26.66
		02/28/11	13:16	4.87	27.94
		03/17/11	13:06	4.83	27.98
04/25/11	8:58	4.86	27.95		
05/04/11	8:59	5.05	27.76		
09/20/11	13:50	6.89	25.92		
12/06/11	11:39	6.10	26.71		
10/03/12	15:17	7.20	25.61		
INJ-3	33.01	11/19/01	14:40	6.45	26.56
		06/11/02	10:21	6.19	26.82
		09/17/02	12:43	7.38	25.63
		12/16/02	11:15	7.00	26.01
		03/17/03	10:17	5.74	27.27
		06/10/03	NR	6.50	26.51
		09/10/03	8:27	7.73	25.28
		12/03/03	10:50	6.32	26.69
		01/12/03	10:11	5.70	27.31
		03/15/04	10:27	5.81	27.20
		06/10/04	7:30	6.18	26.83
		09/22/04	10:40	6.90	26.11
		04/04/05	12:35	5.58	27.43
		09/20/05	NR	7.32	25.69
		03/14/06	9:05	5.37	27.64
		06/09/06	13:39	5.72	27.29
		09/12/06	11:40	7.65	25.36
		04/03/07	9:50	5.30	27.71
		09/24/07	10:16	7.25	25.76
		05/01/08	9:51	5.78	27.23
09/29/08	NR	7.02	25.99		
03/25/10	10:00	5.84	27.17		
05/06/10	8:04	6.28	26.73		
02/28/11	13:55	5.09	27.92		
03/17/11	13:05	5.01	28.00		
04/25/11	8:59	5.15	27.86		
05/04/11	9:01	5.11	27.90		
09/20/11	13:55	6.83	26.18		
12/06/11	11:44	6.40	26.61		
10/03/12	15:25	7.42	25.59		
IW-201	32.71	03/25/10	8:58	5.59	27.12
		04/05/10	11:03	5.99	26.72
		05/06/10	8:07	6.08	26.63
		09/27/10	10:22	5.96	26.75
		02/28/11	13:29	4.82	27.89
		10/03/12	15:00	7.08	25.63

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
IW-202	32.61	10/03/12	15:24	7.10	25.51
		12/18/12	14:25	5.00	27.61
		12/18/12	16:00	5.00	27.61
IW-203	32.45	10/03/12	15:17	6.94	25.51
IW-204	32.73	10/03/12	15:35	7.20	25.53
IW-205	32.92	10/03/12	15:35	7.39	25.53
		12/18/12	14:27	5.30	27.62
		12/18/12	16:05	5.30	27.62
IW-206	32.68	10/03/12	15:17	7.15	25.53
IW-207	32.53	10/03/12	NR	NM	NM
IW-208	32.73	10/03/12	15:40	7.21	25.52
IW-209	32.95	10/03/12	15:35	7.42	25.53
IW-210	32.87	10/03/12	15:24	7.37	25.50
		12/18/12	14:26	5.28	27.59
		12/18/12	16:02	5.28	27.59
IW-211	32.81	10/03/12	15:24	7.28	25.53
IW-212	32.81	10/03/12	16:50	7.35	25.46
IW-213	33.02	10/03/12	15:40	7.50	25.52
IW-214	33.08	10/03/12	15:40	7.58	25.50
		12/18/12	14:26	5.49	27.59
		12/18/12	16:04	5.49	27.59
IW-215	32.72	10/03/12	NR	NM	NM
IW-216	32.9	10/03/12	NR	NM	NM
IW-217	32.82	10/03/12	16:30	7.37	25.45
IW-218	33.19	10/03/12	NR	NM	NM
Deep Onsite Monitoring Wells and Piezometer					
MW-13	32.81	03/31/03	13:05	5.43	27.38
		06/10/03	NR	6.09	26.72
		09/10/03	9:26	7.65	25.16
		12/03/03	11:20	5.91	26.90
		01/12/04	11:23	5.37	27.44
		03/15/04	11:20	5.55	27.26
		06/10/04	8:30	6.44	26.37
		09/22/04	11:25	6.60	26.21
		04/04/05	13:45	5.50	27.31
		07/28/05	10:35	6.27	26.54
		09/20/05	9:45	7.10	25.71
		03/14/06	10:40	6.20	26.61
		03/15/06	8:55	6.14	26.67
		06/09/06	14:15	5.54	27.27
		09/12/06	12:40	7.44	25.37
		04/03/07	10:43	6.04	26.77
		04/03/07	12:10	4.40	28.41
		09/24/07	11:02	10.60	22.21
		09/24/07	12:42	7.11	25.70
		05/01/08	11:00	5.61	27.20
		09/29/08	NR	7.70	25.11
		09/29/08	NR	6.78	26.03
		03/23/09	10:30	5.43	27.38
03/23/09	12:30	5.34	27.47		
09/28/09	13:50	6.87	25.94		
09/28/09	14:40	6.87	25.94		
03/25/10	8:20	5.82	26.99		
03/25/10	10:40	5.73	27.08		

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
MW-13 (continued)	32.81	03/25/10	16:00	5.74	27.07
		03/29/10	8:05	5.73	27.08
		03/29/10	9:02	5.62	27.19
		04/05/10	11:16	6.21	26.60
		05/06/10	8:27	6.37	26.44
		05/06/10	9:00	6.17	26.64
		06/18/10	11:30	5.48	27.33
		06/18/10	12:33	5.45	27.36
		07/06/10	11:15	5.60	27.21
		07/06/10	13:23	5.76	27.05
		07/13/10	14:21	5.90	26.91
		09/27/10	10:40	6.40	26.41
		09/27/10	12:05	6.07	26.74
		02/28/11	14:12	5.31	27.50
		02/28/11	16:29	4.81	28.00
		03/17/11	14:00	4.74	28.07
		04/25/11	8:14	4.78	28.03
		04/25/11	10:06	4.73	28.08
		05/04/11	8:29	4.98	27.83
		05/04/11	9:44	4.96	27.85
		06/22/11	8:14	5.24	27.57
		06/22/11	9:36	5.35	27.46
		09/20/11	13:16	6.71	26.10
		09/20/11	14:20	6.76	26.05
		12/06/11	11:03	7.71	25.10
		12/06/11	12:05	6.01	26.80
		03/05/12	12:30	6.01	26.80
		03/05/12	14:10	4.99	27.82
		03/05/12	14:50	5.00	27.81
		06/25/12	13:05	5.42	27.39
		06/25/12	14:10	5.38	27.43
		10/03/12	13:12	7.10	25.71
		12/18/12	13:43	7.20	25.61
		12/18/12	13:45	5.60	27.21
		12/18/12	15:20	5.05	27.76
		12/18/12	15:45	5.05	27.76
		03/04/13	14:25	5.20	27.61
		03/04/13	16:09	5.30	27.51
		03/08/13	12:31	5.30	27.51
		06/06/13	7:37	5.66	27.15
		06/06/13	8:40	5.75	27.06
		09/24/13	12:48	6.42	26.39
		03/25/14	13:55	4.62	28.19
		09/22/14	15:03	6.88	25.93
		03/16/15	12:17	4.86	27.95
		09/13/15	11:18	7.16	25.65
		03/14/16	10:17	4.36	28.45
09/13/16	12:08	7.03	25.78		
03/06/17	13:32	4.68	28.13		
09/18/17	13:52	7.05	25.76		
03/19/18	10:02	5.30	27.51		
09/10/18	13:19	7.80	25.01		
05/30/19	13:23	6.28	26.53		
08/29/19	9:29	6.70	26.11		
05/12/20	11:25	6.24	26.45		
09/24/20	15:50	6.80	25.89		
MW-14	32.60	12/03/03	10:03	5.65	26.95
		01/12/04	11:30	5.07	27.53
		03/16/04	13:00	5.21	27.39
		06/10/04	8:20	5.68	26.92
		09/23/04	8:20	6.30	26.30
		04/04/05	13:25	5.25	27.35
		07/28/05	10:20	6.01	26.59
		09/20/05	9:25	6.86	25.74
		03/14/06	10:05	4.90	27.70
		03/14/06	15:30	4.85	27.75
		06/09/06	14:05	5.27	27.33
		09/12/06	12:16	7.13	25.47
		04/03/07	10:17	4.39	28.21

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
MW-14 (continued)	32.60	04/03/07	11:52	4.75	27.85
		09/24/07	10:51	6.85	25.75
		09/24/07	12:51	6.86	25.74
		05/01/08	10:55	5.34	27.26
		09/29/08	NR	6.56	26.04
		09/29/08	NR	6.57	26.03
		03/23/09	13:15	5.08	27.52
		03/23/09	14:25	5.08	27.52
		09/28/09	13:35	6.62	25.98
		09/28/09	14:47	6.61	25.99
		03/25/10	10:30	5.57	27.03
		03/25/10	11:30	5.57	27.03
		03/25/10	16:02	5.59	27.01
		03/29/10	8:15	5.42	27.18
		03/29/10	9:20	5.41	27.19
		04/05/10	11:20	6.15	26.45
		05/06/10	8:17	5.93	26.67
		05/06/10	9:07	5.92	26.68
		06/18/10	11:25	5.25	27.35
		06/18/10	12:30	5.25	27.35
		07/06/10	10:50	5.53	27.07
		07/06/10	12:22	5.53	27.07
		07/13/10	14:41	5.67	26.93
		09/27/10	9:59	5.85	26.75
		09/27/10	12:00	5.84	26.76
		02/28/11	15:00	4.55	28.05
		02/28/11	16:15	NM	NM
		03/17/11	13:52	4.48	28.12
		04/25/11	8:29	NM	NM
		05/04/11	8:42	4.69	27.91
		05/04/11	9:51	4.71	27.89
		06/22/11	8:39	5.15	27.45
		06/22/11	9:50	5.15	27.45
		09/20/11	13:30	6.55	26.05
		09/20/11	14:36	6.56	26.04
		12/06/11	11:23	5.81	26.79
		12/06/11	12:23	5.78	26.82
		03/05/12	12:56	4.72	27.88
		03/05/12	14:20	4.74	27.86
		06/25/12	12:20	5.14	27.46
		06/25/12	14:00	5.14	27.46
		10/03/12	15:30	6.88	25.72
		12/18/12	13:37	4.79	27.81
		12/18/12	15:11	4.80	27.80
		03/04/13	14:48	5.08	27.52
		03/04/13	16:05	5.06	27.54
		03/08/13	12:28	5.05	27.55
06/06/13	7:33	5.42	27.18		
06/06/13	8:47	5.43	27.17		
09/24/13	12:24	6.24	26.36		
03/25/14	13:59	4.33	28.27		
09/22/14	15:10	6.67	25.93		
03/16/15	12:26	4.62	27.98		
09/13/15	11:28	6.94	25.66		
03/14/16	10:23	4.08	28.52		
09/13/16	11:32	6.80	25.80		
03/06/17	11:50	4.39	28.21		
09/18/17	13:45	6.79	25.81		
03/19/18	10:21	5.01	27.59		
09/10/18	13:38	6.87	25.73		
05/30/19	13:36	5.54	27.06		
08/29/19	9:52	6.44	26.16		
05/12/20	10:56	5.04	27.47		
09/25/20	9:30	6.40	26.11		
MW-15	32.57	12/03/03	10:00	5.46	27.11
		01/12/04	11:09	4.86	27.71
		03/16/04	13:35	4.98	27.59

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
MW-15 (continued)	32.57	06/10/04	8:15	5.50	27.07
		09/23/04	8:15	6.23	26.34
		04/04/05	13:30	5.07	27.50
		07/28/05	10:25	5.84	26.73
		09/20/05	9:30	6.69	25.88
		03/14/06	10:10	4.96	27.61
		03/14/06	15:55	4.65	27.92
		06/09/06	14:09	5.07	27.50
		09/12/06	12:20	6.97	25.60
		04/03/07	10:22	4.82	27.75
		04/03/07	11:55	4.55	28.02
		09/24/07	10:48	6.87	25.70
		09/24/07	12:55	6.70	25.87
		05/01/08	11:20	5.20	27.37
		09/29/08	NR	6.51	26.06
		09/29/08	NR	6.38	26.19
		03/23/09	13:20	4.95	27.62
		03/23/09	14:40	4.90	27.67
		09/28/09	13:25	6.50	26.07
		09/28/09	14:50	6.45	26.12
		03/25/10	10:33	5.57	27.00
		03/25/10	11:32	5.58	26.99
		03/25/10	16:05	5.62	26.95
		03/29/10	8:17	5.40	27.17
		03/29/10	9:23	5.39	27.18
		04/05/10	11:22	6.35	26.22
		05/06/10	8:16	5.85	26.72
		05/06/10	9:07	5.82	26.75
		06/18/10	11:22	5.18	27.39
		06/18/10	12:32	5.18	27.39
		07/06/10	11:00	5.42	27.15
		07/06/10	12:20	5.42	27.15
		07/13/10	14:40	5.51	27.06
		09/27/10	10:02	5.71	26.86
		09/27/10	12:25	5.70	26.87
		02/28/11	15:07	4.41	28.16
		02/28/11	16:37	4.41	28.16
		03/17/11	13:50	4.30	28.27
		04/25/11	8:25	4.31	28.26
		04/25/11	10:10	4.32	28.25
		05/04/11	8:37	4.54	28.03
		05/04/11	9:50	4.55	28.02
		06/22/11	8:35	4.96	27.61
		06/22/11	9:42	4.99	27.58
		09/20/11	13:29	6.56	26.01
		09/20/11	14:32	6.51	26.06
		12/06/11	11:18	5.73	26.84
		12/06/11	12:20	5.61	26.96
		03/05/12	12:43	4.55	28.02
		03/05/12	14:22	4.56	28.01
06/25/12	12:18	4.96	27.61		
06/25/12	13:58	4.99	27.58		
10/03/12	NR	NM	NM		
12/18/12	13:38	4.64	27.93		
12/18/12	15:13	4.65	27.92		
03/04/13	14:50	4.91	27.66		
03/04/13	16:06	4.90	27.67		
03/08/13	12:28	4.90	27.67		
06/06/13	7:32	5.27	27.30		
06/06/13	8:50	5.27	27.30		
09/24/13	12:29	6.11	26.46		
03/25/14	14:03	4.15	28.42		

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
MW-15 (continued)	32.57	09/22/14	15:42	6.51	26.06
		03/16/15	12:28	4.52	28.05
		09/13/15	11:29	6.82	25.75
		Well Abandoned 16 February 2016			
MW-16	36.92	12/03/03	10:10	10.11	26.81
		01/12/04	11:40	9.56	27.36
		03/15/04	11:30	9.68	27.24
		06/10/04	8:40	10.12	26.80
		09/22/04	11:35	10.72	26.20
		04/04/05	13:55	9.70	27.22
		07/28/05	10:30	10.48	26.44
		09/20/05	9:50	11.31	25.61
		03/14/06	11:00	9.30	27.62
		03/15/06	12:45	9.30	27.62
		06/09/06	14:30	9.70	27.22
		09/12/06	12:50	11.56	25.36
		04/03/07	10:55	9.25	27.67
		04/03/07	12:25	9.28	27.64
		09/24/07	11:17	11.29	25.63
		05/01/08	11:40	9.80	27.12
		09/29/08	NR	10.95	25.97
		09/29/08	NR	10.90	26.02
		03/23/09	11:05	9.54	27.38
		03/23/09	12:50	9.51	27.41
		09/28/09	13:15	11.03	25.89
		09/28/09	14:35	11.03	25.89
		03/25/10	8:17	9.77	27.15
		03/25/10	10:45	9.74	27.18
		03/25/10	16:09	9.74	27.18
		03/29/10	8:22	9.63	27.29
		03/29/10	9:30	9.59	27.33
		04/05/10	11:40	10.21	26.71
		05/06/10	8:25	10.26	26.66
		05/06/10	9:12	10.27	26.65
		06/18/10	11:45	9.54	27.38
		06/18/10	12:50	9.52	27.40
		07/06/10	11:10	9.91	27.01
		07/06/10	13:20	9.92	27.00
		07/13/10	14:20	10.04	26.88
		09/27/10	10:52	10.25	26.67
		09/27/10	12:15	10.25	26.67
		02/28/11	15:14	8.97	27.95
		02/28/11	16:40	8.99	27.93
		03/17/11	14:30	8.92	28.00
		04/25/11	8:40	8.88	28.04
04/25/11	10:15	8.90	28.02		
05/04/11	9:04	9.12	27.80		
05/04/11	10:06	9.12	27.80		
06/22/11	8:12	9.51	27.41		
06/22/11	9:33	9.54	27.38		
09/20/11	13:14	10.98	25.94		
09/20/11	14:16	10.99	25.93		
12/06/11	11:01	10.17	26.75		
12/06/11	12:04	10.16	26.76		
03/05/12	13:15	9.11	27.81		
03/05/12	14:50	9.12	27.80		
06/25/12	13:12	9.53	27.39		
06/25/12	14:15	9.53	27.39		
10/03/12	16:50	11.33	25.59		
12/18/12	13:46	9.22	27.70		
12/18/12	15:18	9.22	27.70		
03/04/13	14:23	9.58	27.34		
03/04/13	16:09	9.45	27.47		
03/08/13	11:30	9.45	27.47		

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
MW-16 (continued)	36.92	06/06/13	7:45	9.77	27.15
		06/06/13	8:43	9.81	27.11
		09/24/13	12:53	10.63	26.29
		03/25/14	14:07	8.69	28.23
		09/22/14	15:40	11.05	25.87
		03/16/15	12:32	9.02	27.90
		09/13/15	11:20	11.32	25.60
		03/14/16	10:25	8.53	28.39
		09/13/16	12:20	11.19	25.73
		03/06/17	12:07	8.84	28.08
		09/18/17	13:56	11.12	25.80
		03/19/18	10:44	9.42	27.50
		09/10/18	13:25	11.24	25.68
		05/30/19	13:29	9.94	26.98
		08/29/19	9:36	10.85	26.07
		05/12/20	12:13	9.41	27.41
		09/25/20	9:45	10.80	26.02
MW-17	32.60	12/03/03	10:20	5.91	26.69
		01/12/04	12:05	5.43	27.17
		03/15/04	10:05	5.59	27.01
		06/10/04	7:05	5.95	26.65
		09/22/04	10:15	6.50	26.10
		04/04/05	12:15	5.50	27.10
		07/28/05	10:10	6.28	26.32
		09/20/05	8:15	7.18	25.42
		03/14/06	11:30	5.17	27.43
		03/15/06	9:25	5.24	27.36
		06/09/06	14:45	5.53	27.07
		09/12/06	11:15	7.31	25.29
		04/03/07	9:25	5.15	27.45
		04/03/07	11:05	5.13	27.47
		09/24/07	10:03	7.03	25.57
		09/24/07	12:35	7.03	25.57
		05/01/08	9:30	5.57	27.03
		09/29/08	NR	6.72	25.88
		09/29/08	NR	6.71	25.89
		03/23/09	8:38	5.35	27.25
		03/23/09	12:17	5.33	27.27
		09/28/09	12:58	6.86	25.74
		09/28/09	14:21	6.85	25.75
		03/25/10	9:35	5.37	27.23
		03/25/10	10:55	5.38	27.22
		03/25/10	16:25	5.38	27.22
		03/29/10	8:00	5.30	27.30
		03/29/10	8:45	5.30	27.30
		04/05/10	11:27	5.65	26.95
		05/06/10	8:55	5.98	26.62
		05/06/10	9:12	5.98	26.62
		06/18/10	11:15	5.22	27.38
		06/18/10	12:10	5.22	27.38
		07/06/10	10:38	5.66	26.94
		07/06/10	13:55	5.67	26.93
		07/13/10	14:05	5.80	26.80
		09/27/10	11:15	5.99	26.61
		09/27/10	12:25	6.00	26.60
		02/28/11	15:37	4.76	27.84
		02/28/11	16:47	4.78	27.82
03/17/11	13:42	4.75	27.85		
04/25/11	9:31	4.73	27.87		
04/25/11	11:12	4.75	27.85		
05/04/11	9:21	4.99	27.61		
05/04/11	10:22	5.00	27.60		
06/22/11	7:50	5.34	27.26		
06/22/11	9:27	5.35	27.25		
09/20/11	13:01	6.72	25.88		
09/20/11	14:06	6.70	25.90		
12/06/11	10:58	5.70	26.90		

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
MW-17 (continued)	32.6	12/06/11	12:01	5.99	26.61
		03/05/12	13:47	4.96	27.64
		03/05/12	15:10	4.98	27.62
		06/25/12	12:00	5.32	27.28
		06/25/12	13:45	5.34	27.26
		10/03/12	16:30	7.10	25.50
		12/18/12	11:55	4.90	27.70
		12/18/12	12:01	5.02	27.58
		12/18/12	12:06	5.02	27.58
		03/04/13	14:09	5.30	27.30
		03/04/13	16:20	5.30	27.30
		03/08/13	12:24	5.27	27.33
		06/06/13	8:00	5.43	27.17
		06/06/13	9:03	5.66	26.94
		09/24/13	11:54	6.30	26.30
		03/25/14	14:11	4.60	28.00
		09/22/14	13:43	6.82	25.78
		03/16/15	12:37	4.89	27.71
		09/13/15	11:05	7.08	25.52
	03/14/16	10:33	4.35	28.25	
	09/13/16	12:32	6.95	25.65	
	03/06/17	13:25	4.63	27.97	
	09/18/17	13:36	6.86	25.74	
	03/19/18	9:10	5.18	27.42	
09/10/18	11:57	6.98	25.62		
05/30/19	12:26	5.75	26.85		
08/29/19	8:16	6.66	25.94		
09/25/20	11:15	6.50	26.01		
MW-18	32.73	12/03/03	11:50	5.94	26.79
		01/12/04	10:00	5.43	27.30
		03/15/04	10:15	5.60	27.13
		06/10/04	7:10	6.00	26.73
		09/22/04	10:20	6.57	26.16
		04/04/05	12:20	5.53	27.20
		07/28/05	10:05	6.31	26.42
		09/20/05	8:25	7.13	25.60
		03/14/06	11:10	5.23	27.50
		03/15/06	10:25	5.29	27.44
		06/09/06	13:32	5.60	27.13
		09/12/06	11:25	7.40	25.33
		04/03/07	11:03	5.15	27.58
		09/24/07	10:06	7.11	25.62
		09/24/07	12:37	7.11	25.62
		05/01/08	9:07	5.61	27.12
		09/29/08	NR	6.80	25.93
		09/29/08	NR	6.79	25.94
		03/23/09	8:27	5.38	27.35
		03/23/09	12:15	5.37	27.36
		09/28/09	12:56	6.91	25.82
		09/28/09	14:25	6.90	25.83
		03/25/10	8:00	5.53	27.20
		03/25/10	11:00	5.47	27.26
		03/25/10	16:13	5.47	27.26
		03/29/10	7:56	5.40	27.33
		03/29/10	8:50	5.37	27.36
		04/05/10	11:25	5.84	26.89
		05/06/10	8:45	6.02	26.71
		05/06/10	9:25	6.01	26.72
		06/18/10	11:10	5.32	27.41
		06/18/10	12:05	5.34	27.39
07/06/10	10:43	5.72	27.01		
07/06/10	14:00	5.73	27.00		
07/13/10	14:07	5.88	26.85		
09/27/10	11:35	6.06	26.67		
09/27/10	12:30	6.06	26.67		
02/28/11	15:29	4.82	27.91		
02/28/11	16:45	4.82	27.91		

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
MW-18 (continued)	32.73	03/17/11	14:40	4.78	27.95
		04/25/11	9:23	4.85	27.88
		04/25/11	11:07	4.80	27.93
		05/04/11	9:10	5.00	27.73
		05/04/11	10:10	5.00	27.73
		06/22/11	7:59	5.42	27.31
		06/22/11	9:28	5.41	27.32
		09/20/11	13:05	6.81	25.92
		09/20/11	14:09	6.78	25.95
		12/06/11	11:52	6.03	26.70
		12/06/11	12:53	6.05	26.68
		03/05/12	13:30	5.01	27.72
		03/05/12	15:06	5.01	27.72
		06/25/12	NR	NM	NM
		10/03/12	16:30	7.16	25.57
		12/18/12	12:08	5.05	27.68
		12/18/12	12:52	5.05	27.68
		03/04/13	14:15	5.37	27.36
		03/04/13	15:16	5.35	27.38
		03/08/13	12:26	5.30	27.43
		06/06/13	7:59	5.70	27.03
		06/06/13	9:02	5.70	27.03
		09/24/13	11:58	6.44	26.29
		03/25/14	14:16	4.68	28.05
		09/22/14	13:48	6.91	25.82
		03/16/15	12:34	4.89	27.84
		09/13/15	11:02	7.19	25.54
		03/14/16	10:31	4.41	28.32
		09/13/16	11:47	7.05	25.68
	03/06/17	12:23	5.57	27.16	
09/18/17	14:04	7.74	24.99		
03/19/18	8:54	5.30	27.43		
09/10/18	12:03	7.05	25.68		
05/30/19	12:42	5.80	26.93		
08/29/19	8:30	6.71	26.02		
32.61	05/12/20	8:15	5.32	27.29	
	09/25/20	13:10	6.50	26.11	
	33.52	03/16/04	10:10	6.54	26.98
MW-19	33.52	06/10/04	7:20	6.87	26.65
		09/22/04	10:30	7.44	26.08
		04/04/05	12:05	6.37	27.15
		07/28/05	10:15	7.20	26.32
		09/20/05	8:20	7.98	25.54
		03/14/06	11:20	6.15	27.37
		03/15/06	9:55	6.21	27.31
		06/09/06	14:36	6.49	27.03
		09/12/06	11:20	8.25	25.27
		04/03/07	9:30	6.10	27.42
		04/03/07	11:07	6.07	27.45
		09/24/07	10:00	7.94	25.58
		09/24/07	12:30	7.95	25.57
		05/01/08	9:20	6.50	27.02
		09/29/08	NR	7.66	25.86
		09/29/08	NR	7.64	25.88
		03/23/09	9:15	6.29	27.23
		03/23/09	12:20	6.27	27.25
		09/28/09	12:35	7.79	25.73
		09/28/09	14:20	7.79	25.73
		03/25/10	9:25	6.25	27.27
		03/25/10	10:50	6.27	27.25
		03/25/10	16:28	6.29	27.23
		03/29/10	7:40	6.15	27.37
		03/29/10	8:40	6.18	27.34
		04/05/10	11:28	6.46	27.06
		05/06/10	7:30	6.60	26.92
		05/06/10	9:40	6.61	26.91
		06/18/10	11:05	6.11	27.41
		06/18/10	12:00	6.11	27.41

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
MW-19 (continued)	33.52	07/06/10	10:34	6.58	26.94
		07/06/10	13:53	6.59	26.93
		07/13/10	14:00	6.71	26.81
		09/27/10	11:10	6.92	26.60
		09/27/10	12:34	6.90	26.62
		02/28/11	15:45	5.68	27.84
		02/28/11	16:50	5.69	27.83
		03/17/11	14:50	5.70	27.82
		04/25/11	9:28	5.65	27.87
		04/25/11	11:10	5.64	27.88
		05/04/11	9:12	5.89	27.63
		05/04/11	10:13	5.88	27.64
		06/22/11	7:47	6.28	27.24
		06/22/11	9:19	6.28	27.24
		09/20/11	12:55	7.63	25.89
		09/20/11	14:03	7.61	25.91
		12/06/11	10:50	6.89	26.63
		12/06/11	11:59	6.89	26.63
		03/05/12	13:45	5.88	27.64
		03/05/12	15:12	5.90	27.62
		06/25/12	11:50	6.27	27.25
		06/25/12	13:48	6.25	27.27
		10/03/12	16:30	8.02	25.50
		12/18/12	11:50	5.94	27.58
		12/18/12	12:36	5.93	27.59
		12/18/12	13:00	5.93	27.59
		03/04/13	14:00	6.23	27.29
		03/04/13	15:20	6.21	27.31
		03/08/13	12:22	6.16	27.36
		06/06/13	8:05	6.55	26.97
		06/06/13	9:00	6.57	26.95
		09/24/13	11:40	7.26	26.26
	03/25/14	14:24	5.55	27.97	
09/22/14	13:40	7.74	25.78		
03/16/15	12:31	5.68	27.84		
09/13/15	11:04	7.97	25.55		
03/14/16	10:36	5.30	28.22		
09/13/16	14:28	7.86	25.66		
03/19/18	9:06	6.11	27.41		
09/10/18	12:19	7.84	25.68		
05/30/19	11:58	6.65	26.87		
08/29/19	8:23	7.58	25.94		
05/12/20	9:05	6.17	27.21		
09/25/20	11:00	7.20	26.18		
MW-21	32.86	09/12/06	12:35	7.45	25.41
		04/03/07	10:40	5.23	27.63
		04/03/07	12:06	5.06	27.80
		09/24/07	10:58	7.11	25.75
		09/24/07	12:44	7.15	25.71
		05/01/08	11:05	5.62	27.24
		09/29/08	NR	6.84	26.02
		09/29/08	NR	6.82	26.04
		03/23/09	10:15	5.40	27.46
		03/23/09	12:35	5.39	27.47
		09/28/09	13:40	6.98*	25.88*
		09/28/09	14:45	6.22*	26.64*
		09/30/09	14:40	7.07*	25.79*
		03/25/10	8:36	5.82	27.04
		03/25/10	10:38	5.82	27.04
		03/25/10	16:20	5.82	27.04
		03/29/10	8:15	5.68	27.18
		03/29/10	9:15	5.67	27.19
		04/05/10	11:10	6.38	26.48
		05/06/10	8:33	6.28	26.58
		05/06/10	9:06	6.28	26.58
06/18/10	11:20	5.50	27.36		
06/18/10	12:35	5.50	27.36		
07/06/10	11:30	5.70	27.16		

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
MW-21 (continued)	32.86	07/06/10	12:00	5.85	27.01
		07/13/10	14:31	5.98	26.88
		09/27/10	10:12	6.05	26.81
		09/27/10	12:10	6.15	26.71
		02/28/11	14:40	4.93	27.93
		02/28/11	16:33	4.85	28.01
		03/17/11	14:50	4.78	28.08
		04/25/11	8:21	4.84	28.02
		04/25/11	10:08	4.77	28.09
		05/04/11	8:35	5.00	27.86
		05/04/11	9:48	4.99	27.87
		06/22/11	8:27	5.48	27.38
		06/22/11	9:38	5.42	27.44
		09/20/11	13:25	6.89	25.97
		09/20/11	13:28	6.85	26.01
		12/06/11	11:12	8.00	24.86
		12/06/11	12:14	6.06	26.80
		03/05/12	12:35	5.39	27.47
		03/05/12	14:18	5.03	27.83
		03/05/12	14:50	5.05	27.81
		06/25/12	12:57	5.47	27.39
		06/25/12	14:07	5.45	27.41
		10/03/12	15:55	7.17	25.69
		12/18/12	13:42	5.22	27.64
		12/18/12	15:24	5.10	27.76
		12/18/12	15:43	5.10	27.76
		03/04/13	14:33	5.41	27.45
		03/04/13	14:52	5.37	27.49
		03/04/13	16:08	5.35	27.51
		03/08/13	12:30	5.35	27.51
		06/06/13	7:35	5.77	27.09
		06/06/13	8:40	5.74	27.12
		09/24/13	12:40	6.53	26.33
		03/25/14	14:28	4.67	28.19
		09/22/14	15:07	6.96	25.90
		03/16/15	12:18	4.93	27.93
		09/14/15	14:22	7.22	25.64
		03/14/16	10:20	4.38	28.48
		09/13/16	12:33	7.10	25.76
		03/06/17	11:55	4.68	28.18
09/18/17	13:49	7.06	25.80		
03/19/18	10:05	6.09	26.77		
09/10/18	13:36	7.26	25.60		
05/30/19	13:20	5.85	27.01		
08/29/19	9:43	6.71	26.15		
05/12/20	11:45	5.33	27.47		
09/24/20	11:55	6.70	26.10		
MW-22	33.18	09/12/06	12:47	7.85	25.33
		04/03/07	10:50	5.55	27.63
		04/03/07	12:20	5.55	27.63
		09/24/07	11:10	7.58	25.60
		05/01/08	10:24	6.07	27.11
		09/29/08	NR	7.26	25.92
		09/29/08	NR	7.24	25.94
		03/23/09	10:51	5.83	27.35
		03/23/09	12:40	5.81	27.37
		09/28/09	NR	NM	NM
		03/25/10	10:35	6.07	27.11
		03/25/10	11:55	6.08	27.10
		03/25/10	16:11	6.10	27.08
		03/29/10	8:10	5.96	27.22
		03/29/10	9:10	5.96	27.22
		04/05/10	11:35	6.52	26.66
		05/06/10	8:22	6.55	26.63
		05/06/10	9:00	6.55	26.63
		06/18/10	11:31	5.85	27.33
		06/18/10	12:37	5.75	27.43
07/06/10	12:00	6.24	26.94		

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
MW-22 (continued)	33.18	07/06/10	13:35	6.22	26.96
		07/13/10	14:45	6.35	26.83
		09/27/10	10:25	6.54	26.64
		09/27/10	12:07	6.54	26.64
		02/28/11	14:03	5.26	27.92
		02/28/11	16:23	5.28	27.90
		03/17/11	14:10	5.21	27.97
		04/25/11	8:15	NM	NM
		05/04/11	8:32	5.42	27.76
		05/04/11	9:46	5.42	27.76
		06/22/11	NR	NM	NM
		09/20/11	NR	NM	NM
		12/06/11	11:42	6.46	26.72
		12/06/11	12:43	6.49	26.69
		03/05/12	13:00	5.44	27.74
		03/05/12	14:26	5.47	27.71
		03/05/12	14:50	5.48	27.70
		06/25/12	13:15	5.83	27.35
		06/25/12	14:12	5.85	27.33
	10/03/12	13:10	7.59	25.59	
	12/18/12	13:48	5.50	27.68	
	12/18/12	15:22	5.50	27.68	
	03/04/13	NR	NM	NM	
	03/08/13	12:32	5.76	27.42	
	06/06/13	7:41	6.14	27.04	
	06/06/13	8:41	6.17	27.01	
	09/24/13	13:06	6.64	26.54	
	03/26/14	11:05	5.12	28.06	
	09/22/14	14:53	7.35	25.83	
	03/17/15	8:20	5.32	27.86	
	09/13/15	11:14	7.61	25.57	
	03/14/16	10:15	4.82	28.36	
	09/13/16	12:17	7.47	25.71	
03/06/17	12:12	5.11	28.07		
09/18/17	NM	NM	NM		
03/19/18	9:52	5.72	27.46		
09/10/18	NM	NM	NM		
05/30/19	12:58	6.28	26.90		
08/29/19	9:21	7.13	26.05		
05/12/20	12:08	5.76	27.37		
09/25/20	12:10	7.20	25.93		
MW-24	32.74	03/25/10	8:39	5.69	27.05
		03/25/10	10:50	5.64	27.10
		03/25/10	16:41	5.68	27.06
		03/29/10	8:17	5.53	27.21
		03/29/10	9:17	5.50	27.24
		04/05/10	11:13	6.26	26.48
		05/06/10	8:31	6.01	26.73
		05/06/10	9:05	6.01	26.73
		06/09/10	10:15	5.21	27.53
		06/18/10	11:36	5.39	27.35
		06/18/10	12:38	5.38	27.36
		07/06/10	11:35	5.70	27.04
		07/06/10	12:02	5.70	27.04
		07/13/10	14:32	5.80	26.94
		09/27/10	10:12	5.99	26.75
		09/27/10	12:10	5.99	26.75
		02/28/11	14:50	4.70	28.04
		02/28/11	16:32	4.70	28.04
		03/17/11	NR	NM	NM
		04/25/11	8:20	4.75	27.99
		04/25/11	10:07	4.61	28.13
		05/04/11	8:34	4.85	27.89
		05/04/11	9:49	4.85	27.89
		06/22/11	6:29	5.28	27.46
		06/22/11	9:40	5.26	27.48
		09/20/11	13:22	6.71	26.03
		09/20/11	14:29	6.70	26.04

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
MW-24 (continued)	32.74	12/06/11	11:15	5.90	26.84
		12/06/11	12:16	5.89	26.85
		06/25/12	13:00	5.27	27.47
		06/25/12	14:06	5.27	27.47
		10/03/12	15:55	7.01	25.73
		03/25/14	12:42	4.42	28.32
		09/22/14	15:06	6.81	25.93
		03/16/15	12:23	4.78	27.96
		09/13/15	14:23	7.05	25.69
		03/14/16	10:22	4.23	28.51
		09/13/16	12:10	6.90	25.84
		03/06/17	11:53	4.52	28.22
		09/18/17	13:48	6.91	25.83
		03/19/18	10:07	5.18	27.56
		09/10/18	13:26	7.03	25.71
		05/30/19	13:25	4.64	28.10
		08/29/19	9:32	6.55	26.19
32.66	05/12/20	11:40	5.18	27.48	
	09/24/20	12:10	6.60	26.06	
MW-25	32.80	03/25/10	8:30	5.69	27.11
		03/25/10	10:55	5.71	27.09
		03/25/10	16:41	5.72	27.08
		03/29/10	8:06	5.56	27.24
		03/29/10	9:05	5.57	27.23
		04/05/10	11:18	6.21	26.59
		05/06/10	8:28	6.12	26.68
		05/06/10	9:01	6.12	26.68
		06/09/10	11:15	5.28	27.52
		06/18/10	11:35	5.45	27.35
		06/18/10	12:40	5.45	27.35
		07/06/10	11:17	5.76	27.04
		07/06/10	13:25	5.78	27.02
		07/13/10	14:22	5.90	26.90
		09/27/10	10:41	6.08	26.72
		09/27/10	12:05	6.08	26.72
		02/28/11	14:25	4.80	28.00
		02/28/11	16:25	4.82	27.98
		03/17/11	14:06	4.75	28.05
		04/25/11	8:11	4.75	28.05
		04/25/11	10:05	4.75	28.05
		05/04/11	8:30	4.97	27.83
		05/04/11	9:45	4.95	27.85
		06/22/11	8:16	5.43	27.37
		06/22/11	9:37	5.40	27.40
		09/20/11	13:18	6.73	26.07
		09/20/11	14:22	6.81	25.99
		12/06/11	11:05	6.05	26.75
		12/06/11	12:07	6.02	26.78
		06/25/12	13:03	5.60	27.20
		06/25/12	14:09	5.39	27.41
		10/03/12	13:20	7.11	25.69
		03/25/14	12:54	4.57	28.23
09/22/14	15:01	6.86	25.94		
03/16/15	12:19	4.84	27.96		
09/13/15	11:17	7.16	25.64		
03/14/16	10:18	4.36	28.44		
09/13/16	12:13	7.08	25.72		
03/06/17	12:02	4.60	28.20		
09/18/17	13:53	6.98	25.82		
03/19/18	9:58	5.23	27.57		
09/10/18	13:15	7.11	25.69		
05/30/19	13:26	5.66	27.14		
08/29/19	9:31	6.66	26.14		
32.71	05/12/20	11:31	5.30	27.41	
	09/26/20	15:32	6.70	26.01	
D-1	33.85	01/13/99	8:55	6.25	27.60
		03/02/99	9:19	5.42	28.43
		06/16/99	10:15	6.82	27.03
		09/16/99	10:34	7.57	26.28

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
		12/08/99	8:32	6.49	27.36
		03/07/00	8:41	6.15	27.70
		06/21/00	9:33	6.96	26.89
		09/12/00	10:15	7.91	25.94

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
P-1 (continued)	33.62	12/07/00	9:15	7.50	26.12
		03/15/01	9:52	6.10	27.52
		01/02/02	10:55	6.12	27.50
		09/17/02	12:18	7.94	25.68
		12/16/02	11:26	7.28	26.34
		03/17/03	10:35	6.28	27.34
		09/10/03	8:42	8.40	25.22
		12/03/03	10:53	7.03	26.59
		01/12/04	10:35	6.20	27.42
		03/15/04	10:55	6.35	27.27
		06/10/04	7:50	6.81	26.81
		09/23/04	8:00	7.41	26.21
		04/04/05	13:05	6.30	27.32
		09/20/05	9:05	7.95	25.67
		03/14/06	9:40	5.99	27.63
		06/09/06	13:52	6.37	27.25
		09/12/06	12:00	8.21	25.41
		04/03/07	10:06	5.90	27.72
		04/03/07	11:42	5.90	27.72
		09/24/07	10:30	7.95	25.67
		05/01/08	10:10	6.44	27.18
		09/29/08	NR	7.64	25.98
		03/23/09	9:45	6.19	27.43
		09/28/09	14:12	7.75	25.87
		03/25/10	10:18	6.47	27.15
		03/25/10	11:20	6.47	27.15
		03/29/10	8:20	6.35	27.27
		03/29/10	9:28	6.35	27.27
		04/05/10	11:07	6.89	26.73
		05/06/10	8:10	6.97	26.65
		05/06/10	9:10	6.96	26.66
		07/06/10	12:05	6.60	27.02
		07/06/10	12:25	6.60	27.02
		07/13/10	14:42	6.73	26.89
		09/27/10	9:43	6.92	26.70
		09/27/10	12:20	6.93	26.69
		02/28/11	13:09	5.63	27.99
		02/28/11	16:20	5.64	27.98
		03/17/11	14:18	5.57	28.05
		04/25/11	8:36	5.62	28.00
		04/25/11	10:12	5.65	27.97
		05/04/11	8:51	5.81	27.81
		05/04/11	9:54	5.80	27.82
		06/22/11	8:50	6.24	27.38
		09/20/11	13:40	7.65	25.97
		09/20/11	14:45	7.66	25.96
		12/06/11	11:32	6.92	26.70
		12/06/11	12:33	6.87	26.75
		03/05/12	13:18	5.84	27.78
		03/05/12	14:31	5.85	27.77
		06/25/12	12:30	6.23	27.39
		06/25/12	14:03	6.23	27.39
		10/03/12	15:35	7.97	25.65
		12/18/12	13:32	5.90	27.72
		12/18/12	15:05	5.88	27.74
		03/04/13	15:05	6.18	27.44
		03/04/13	16:13	6.18	27.44
03/08/13	12:28	6.13	27.49		
06/06/13	7:52	6.53	27.09		
06/06/13	8:52	6.52	27.10		
09/25/13	7:13	7.32	26.30		
03/25/14	12:18	5.47	28.15		
09/22/14	16:25	7.75	25.87		
03/16/15	12:36	5.69	27.93		

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
P-1 (continued)	33.62	09/13/15	11:31	8.04	25.58
		03/14/16	10:13	5.20	28.42
		09/13/16	11:27	7.88	25.74
		03/06/17	11:46	5.50	28.12
		09/18/17	13:41	7.83	25.79
		03/19/18	10:33	6.17	27.45
		09/10/18	12:45	7.95	25.67
		05/30/19	12:34	6.65	26.97
		08/29/19	9:03	7.56	26.06
		05/12/20	10:45	6.23	27.31
		09/25/20	8:55	7.20	26.34
Deep Offsite Monitoring Wells					
MW-20	33.15	07/28/05	10:00	6.92	26.23
		09/20/05	NR	7.74	25.41
		03/14/06	12:00	5.97	27.18
		03/15/06	13:25	6.03	27.12
		06/09/06	15:00	6.28	26.87
		09/12/06	13:05	7.96	25.19
		04/03/07	9:00	5.98	27.17
		04/03/07	12:35	5.94	27.21
		09/24/07	11:30	7.71	25.44
		05/01/08	11:45	6.23	26.92
		09/29/08	NR	7.36	25.79
		09/29/08	NR	7.36	25.79
		03/23/09	9:10	6.07	27.08
		03/24/09	15:00	6.05	27.10
		09/28/09	13:05	7.52	25.63
		09/28/09	14:30	7.52	25.63
		03/25/10	9:20	5.90	27.25
		03/25/10	16:30	5.92	27.23
		03/29/10	7:12	5.75	27.40
		03/29/10	9:00	5.74	27.41
		04/05/10	12:34	6.05	27.10
		05/06/10	7:30	6.60	26.55
		05/06/10	9:40	6.61	26.54
		06/18/10	10:50	5.77	27.38
		06/18/10	13:00	5.77	27.38
		07/06/10	10:30	6.29	26.86
		07/06/10	13:50	6.30	26.85
		07/13/10	15:05	6.45	26.70
		09/27/10	11:40	6.60	26.55
		09/27/10	12:45	6.60	26.55
		02/28/11	15:50	5.44	27.71
		02/28/11	16:55	5.45	27.70
		03/17/11	14:50	5.48	27.67
		04/25/11	9:50	5.45	27.70
		04/25/11	11:20	5.37	27.78
		05/04/11	9:29	5.56	27.59
		05/04/11	10:30	5.56	27.59
		06/22/11	7:56	6.05	27.10
		06/22/11	9:23	6.03	27.12
		09/20/11	12:40	7.30	25.85
		09/20/11	14:42	7.32	25.83
12/06/11	10:50	6.65	26.50		
12/06/11	12:45	6.61	26.54		
03/05/12	13:26	5.62	27.53		
03/05/12	15:32	5.65	27.50		
06/25/12	13:20	6.06	27.09		
06/25/12	14:50	6.00	27.15		
09/27/12	7:57	7.62	25.53		
10/01/12	NR	7.67	25.48		
10/03/12	17:00	7.49	25.66		
12/18/12	11:00	5.70	27.45		
12/18/12	16:37	5.71	27.44		
03/04/13	13:45	5.99	27.16		
03/04/13	16:45	5.97	27.18		
03/08/13	9:15	5.92	27.23		
06/06/13	9:20	6.30	26.85		

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
MW-20 (continued)	33.15	06/06/13	17:00	6.31	26.84
		09/24/13	11:44	7.00	26.15
		03/25/14	14:24	5.37	27.78
		09/22/14	16:59	7.46	25.69
		03/16/15	12:19	5.50	27.65
		09/13/15	11:42	7.71	25.44
		03/14/16	10:57	5.12	28.03
		09/13/16	14:15	7.49	25.66
		03/06/17	13:10	5.37	27.78
		09/18/17	14:13	7.47	25.68
	03/19/18	9:32	6.53	26.62	
	09/10/18	13:15	7.76	25.39	
	05/30/19	12:05	6.40	26.75	
	08/29/19	7:49	7.30	25.85	
	05/12/20	9:27	6.70	26.34	
09/25/20	8:25	7.00	26.04		
MW-27	32.98	09/22/14	16:56	7.37	25.61
		03/16/15	12:22	5.29	27.69
		09/13/15	11:40	7.60	25.38
		03/14/16	10:55	4.92	28.06
		09/13/16	14:10	7.44	25.54
		03/19/18	9:28	5.73	27.25
		09/10/18	14:11	7.41	25.57
		05/30/19	11:55	6.26	26.72
	08/29/19	7:46	7.15	25.83	
	05/12/20	9:38	5.80	27.16	
09/25/20	8:15	6.00	26.96		
MW-28	34.63	09/22/14	13:29	9.02	25.61
		03/16/15	12:27	7.03	27.60
		09/13/15	11:07	9.25	25.38
		03/14/16	10:38	6.60	28.03
		09/13/16	12:35	9.10	25.53
		03/06/17	13:18	6.87	27.76
		09/18/17	14:07	8.99	25.64
		03/19/18	9:21	6.17	28.46
		09/10/18	12:25	10.75	23.88
		05/30/19	12:18	7.90	26.73
	08/29/19	7:58	8.80	25.83	
	05/12/20	9:15	8.10	26.44	
	09/25/20	8:40	6.80	27.74	
Deep Onsite Injection Wells					
IW-101	32.77	03/25/10	8:38	5.73	27.04
		03/25/10	10:52	5.70	27.07
		03/25/10	16:40	5.70	27.07
		03/29/10	8:16	5.56	27.21
		03/29/10	9:18	5.55	27.22
		04/05/10	11:12	6.29	26.48
		05/06/10	8:30	6.12	26.65
		05/06/10	9:05	6.10	26.67
		06/18/10	11:37	5.55	27.22
		06/18/10	12:40	5.45	27.32
		07/06/10	11:35	5.62	27.15
		07/06/10	12:01	5.70	27.07
		07/13/10	14:30	5.84	26.93
		09/27/10	10:11	6.01	26.76
		09/27/10	12:10	6.01	26.76
02/28/11	14:43	4.81	27.96		
02/28/11	16:34	4.73	28.04		
10/03/12	15:55	7.05	25.72		
IW-102	32.68	03/25/10	8:23	5.55	27.13
		03/25/10	10:57	5.59	27.09
		03/25/10	16:04	5.60	27.08
		03/29/10	8:08	5.45	27.23
		03/29/10	9:07	5.43	27.25
		04/05/10	11:15	6.10	26.58
		05/06/10	8:29	6.00	26.68
		05/06/10	9:02	6.02	26.66
		06/18/10	11:37	5.44	27.24
		06/18/10	12:40	5.33	27.35
07/06/10	11:37	5.62	27.06		

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
		07/06/10	13:27	5.62	27.06
		07/13/10	14:20	5.75	26.93
		09/27/10	10:39	5.90	26.78
		09/27/10	12:06	5.90	26.78
		02/28/11	14:30	4.78	27.90
		02/28/11	16:28	4.68	28.00
		10/03/12	13:20	7.00	25.68

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
IW-103	32.45	10/03/12	15:40	6.73	25.72
		12/18/12	14:30	4.70	27.75
		12/18/12	16:20	4.74	27.71
IW-104	36.32	10/03/12	13:32	10.69	25.63
IW-105	35.96	12/18/12	14:32	8.25	27.71
		12/18/12	16:20	8.27	27.69
IW-106	32.51	10/03/12	15:40	6.82	25.69
IW-107	32.36	10/03/12	NR	NM	NM
IW-108	32.34	10/03/12	16:10	6.60	25.74
IW-109	36.30	10/03/12	13:40	10.65	25.65
		12/18/12	14:34	8.59	27.71
		12/18/12	16:18	8.60	27.70
IW-110	35.98	10/03/12	13:32	10.42	25.56
IW-111	32.47	10/03/12	15:55	6.84	25.63
IW-112	32.64	10/03/12	15:40	7.04	25.60
		12/18/12	14:41	4.97	27.67
		12/18/12	16:27	4.98	27.66
IW-113	36.72	10/03/12	13:40	11.09	25.63
IW-114	32.83	10/03/12	16:10	7.22	25.61
IW-115	32.65	10/03/12	16:10	7.07	25.58
IW-116	36.93	10/03/12	13:50	11.32	25.61
IW-117	32.91	10/03/12	16:10	7.31	25.60
IW-118	33.03	10/03/12	16:10	7.40	25.63
IW-119	36.77	10/03/12	13:50	11.05	25.72
IW-120	36.69	10/03/12	14:05	11.16	25.53
		12/18/12	14:36	9.05	27.64
		12/18/12	16:16	9.07	27.62
IW-121	33.43	10/03/12	16:10	7.87	25.56
		12/18/12	14:40	5.80	27.63
		12/18/12	16:25	5.78	27.65
IW-122	33.03	10/03/12	16:10	7.42	25.61
IW-123	32.77	10/03/12	NR	NM	NM
IW-124	32.62	10/03/12	NR	NM	NM
IW-125	32.52	10/03/12	NR	NM	NM
IW-126	32.72	10/03/12	16:30	7.18	25.54
IW-127	35.46	10/03/12	15:55	9.95	25.51
IW-128	33.93	10/03/12	15:55	8.38	25.55
IW-129	32.69	10/03/12	16:30	7.07	25.62
		12/18/12	14:39	5.01	27.68
		12/18/12	16:11	5.01	27.68
IW-130	32.61	10/03/12	16:30	7.27	25.34
IW-131	32.49	10/03/12	16:30	6.94	25.55
IW-132	36.74	10/03/12	14:05	11.20	25.54
IW-133	36.89	10/03/12	14:05	11.35	25.54
IW-134	37.04	10/03/12	13:20	11.50	25.54
IW-135	33.02	10/03/12	15:55	7.46	25.56
		12/18/12	14:38	5.40	27.62
		12/18/12	16:12	5.38	27.64
IW-136	32.90	10/03/12	15:55	7.15	25.75
IW-137	32.79	10/03/12	NR	NM	NM
IW-138	32.58	10/03/12	16:30	7.09	25.49
		12/18/12	14:40	5.00	27.58
		12/18/12	16:10	5.00	27.58

Table C1
Historical Groundwater Elevation Data
Univar Solutions USA, Inc.
Kent, Washington

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
IW-139	36.79	10/03/12	13:29	11.27	25.52
		12/18/12	14:38	9.21	27.58
		12/18/12	16:15	9.21	27.58
IW-140	33.00	10/03/12	13:12	7.44	25.56
IW-141	33.04	10/03/12	16:30	7.47	25.57
Barrel Wash Sump					
Sump Wash	34.17	09/04/96	NR	6.50	27.67
		10/11/96	10:55	6.11	28.06
		11/06/96	NR	6.57	27.60
		12/10/96	11:00	5.54	28.63
		01/10/97	NR	5.84	28.33
		02/21/97	12:50	4.48	29.69
		03/04/97	NR	6.36	27.81
		06/27/97	11:00	5.42	28.75
		09/04/97	11:07	4.46	29.71
		12/22/97	NR	4.00	30.17
		03/06/98	10:06	5.17	29.00
		06/16/99	10:35	4.98	29.19
		12/08/99	8:40	3.66	30.51
		03/07/00	8:55	5.17	29.00
		06/21/00	10:09	5.03	29.14
		09/12/00	10:00	5.60	28.57
12/07/00	8:48	dry	dry		
03/15/01	9:20	5.20	28.97		
MW-29D	30.42	08/30/19	12:00	6.36	24.06
		05/12/20	9:55	4.80	25.62
		09/28/20	8:00	6.20	24.22

Notes:

Depth = depth to water relative to the top of PVC

Elev. = elevation relative to NAVD 88

** = anomalous field reading; measurement not used for contouring*

NR = not recorded

NM = not measured

Table C2
Historical Groundwater Field Parameters
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW-1	04/17/95	6.37	2,310	11.0	NM	NM	NM
	09/04/96	6.49	1,620	18.5	227.0	1.20	NM
	12/10/96	6.37	1,653	9.8	427.0	1.18	NM
	03/04/97	6.65	1,359	11.0	37.1	1.70	NM
	06/27/97	6.62	1,195	15.0	> 1,000	1.00	NM
	09/04/97	6.78	837	18.0	40.0	1.71	NM
	12/04/97	6.23	1,076	12.0	16.2	8.85	NM
	03/06/98	6.83	1,284	10.0	16.0	2.15	NM
	06/18/98	6.85	1,045	15.5	60.7	2.60	NM
	09/29/98	6.58	851	18.5	45.8	1.27	NM
	12/14/98	6.50	973	13.1	16.4	1.14	-147
	03/03/99	6.70	849	10.0	55.0	3.02	-148
	06/17/99	6.51	790	14.0	6.7	1.30	-176
	09/16/99	6.60	905	17.0	14.1	0.10	-189
	12/08/99	7.12	408	12.9	9.8	0.30	-158
	03/07/00	7.51	599	10.0	5.9	0.20	-126
	06/21/00	7.10	505	16.0	4.6	1.20	7
	09/12/00	6.80	790	14.5	NM	2.60	-69
	12/07/00	7.04	830	12.0	6.9	1.10	-60
	03/15/01	7.06	999	10.0	4.9	2.00	-48
	07/12/01	7.03	925	15.6	7.8	2.65	-141
	09/24/01	6.54	NM	20.2	4.3	1.08	NM
	01/02/02	7.19	1,150	11.8	NM	NM	NM
	03/28/02	7.26	351	10.2	NM	0.20	NM
	06/11/02	7.34	613	15.2	NM	0.22	NM
	09/18/02	6.93	771	18.6	NM	0.04	-200
	12/17/02	7.01	601	12.6	3.5	0.19	NM
	03/20/03	7.19	517	10.9	5.8	0.13	-111
	05/14/03	7.00	493	12.9	NM	0.74	-75
	06/11/03	7.02	405	15.0	8.0	0.23	NM
	09/11/03	7.03	474	18.7	4.0	0.21	NM
	12/04/03	7.00	451	13.7	4.2	0.23	-51
	03/16/04	6.71	391	11.0	4.6	0.32	-63
	09/22/04	6.49	500	16.0	NM	0.21	4
	04/05/05	6.75	465	12.3	NM	1.10	5
	09/21/05	7.26	624	17.8	NM	0.26	5
	03/15/06	6.88	550	11.0	18.8	< 0.01	NM
	09/14/06	6.82	630	16.8	NM	0.22	56
	04/04/07	7.16	737	11.6	5.7	< 0.01	-64
	09/25/07	6.80	687	15.7	6.2	0.18	-240
	05/02/08	6.87	883	12.3	NM	0.19	-66
09/30/08	6.93	843	16.2	NM	7.57 ^a	-101	
03/25/09	7.11	843	9.4	NM	0.30	-45	
09/30/09	6.96	346	18.1	NM	0.08	3	
03/29/10	6.97	842	11.4	NM	0.30	-8	
09/30/10	7.26	937	17.2	NM	0.24	-10	
03/03/11	7.49	510	9.2	7.0	0.23	-13.0	
09/23/11	6.61	523	18.0	3.0	0.10	-106.0	

Table C2
Historical Groundwater Field Parameters
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW-1 (continued)	03/08/12	6.99	494	8.2	7.9	0.22	-43.6
	10/01/12	6.56	507	15.5	5.7	0.22	349 ^a
	03/06/13	6.84	820	9.6	14.5	0.20	-7.0
	09/24/13	6.78	496	18.5	55.3	0.20	-84.0
	03/26/14	7.21	991	10.5	1.2	0.00	-129.0
	09/23/14	6.49	698	19.7	2.3	0.55	-126.0
	03/17/15	6.05	438	10.5	0.0	0.00	-227.0
	09/16/15	6.37	700	17.6	0.0	0.00	-121.0
	03/16/16	7.86	888	10.1	0.0	0.00	-128.0
	09/13/16	6.74	530	17.5	1.5	0.70	-96.4
	03/07/17	7.04	955	8.7	7.2	0.00	-94.0
	09/21/17	7.00	832	17.3	0.0	0.00	52.0
	03/20/18	6.76	701	10.8	2.6	0.42	-2.6
	09/13/18	6.77	768	18.5	0.7	1.50	-84.9
	05/31/19	6.78	1,211	16.6	3.7	0.06	-46.8
08/27/19	6.35	1,144	24.7	2.1	0.37	-121.9	
05/13/20	7.01	820	14.0	1.3	0.11	-143.4	
09/25/20	6.81	696	19.5	2.0	1.00	-115.6	
MW-2	04/17/95	6.30	1,000	13.0	NM	NM	NM
	09/04/96	6.11	964	14.8	8.5	1.00	NM
	12/10/96	6.27	704	13.1	1000.0	0.92	NM
	03/04/97	6.20	754	13.0	9.4	1.77	NM
	06/27/97	6.54	667	14.0	322.0	3.00	NM
	09/04/97	6.41	638	15.0	332.0	1.17	NM
	12/04/97	5.25	612	14.0	74.4	1.80	NM
	03/06/98	6.48	826	12.0	66.9	1.12	NM
	06/18/98	6.60	899	14.0	334.0	3.50	NM
	09/29/98	6.35	705	17.0	16.6	16.6 ^a	NM
	12/14/98	6.20	632	15.1	NM	1.14	-84
	03/02/99	6.29	560	12.0	59.4	1.30	-91.9
	06/16/99	6.02	663	13.0	NM	0.90	-76
	09/16/99	6.39	734	13.0	11.5	< 0.1	-475
	12/08/99	6.74	421	14.8	15.5	1.30	-121
	03/07/00	6.40	491	12.0	18.9	0.40	-70
	06/21/00	6.55	320	15.0	6.1	1.51	8
	09/12/00	6.10	667	13.0	10.9	3.90	-57
	12/07/00	6.21	574	13.0	6.1	1.90	-18
	03/15/01	6.60	556	12.0	39.0	0.60	-49
	07/12/01	6.53	652	15.1	76.7	2.54	-116
	09/24/01	6.69	NM	19.5	5.0	1.10	NM
	01/03/02	5.81	531	13.7	12.3	0.00	NM
	03/28/02	6.28	229	12.6	6.2	0.63	NM
	06/11/02	6.72	526	14.2	7.1	0.43	NM
	09/18/02	6.63	597	17.9	NM	0.08	-11
	12/16/02	6.04	480	15.2	5.1	0.34	NM
03/20/03	6.63	413	12.5	28.9	0.12	-57	
06/11/03	6.59	306	13.9	10.2	0.31	NM	
09/10/03	6.33	416	15.9	4.2	0.34	NM	

Table C2
Historical Groundwater Field Parameters
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW-2 (continued)	12/05/03	6.58	293	14.3	5.3	0.31	-20
	03/16/04	6.54	306	12.8	25.4	0.30	-23
	09/24/04	6.46	376	17.0	NM	0.37	30
	04/05/05	6.39	438	12.5	NM	1.04	24
	09/21/05	6.71	512	17.1	NM	0.26	-3
	03/15/06	6.57	403	12.4	52.8	< 0.01	NM
	09/13/06	6.33	472	15.5	NM	0.15	68
	04/03/07	6.64	421	13.9	64.8	0.11	116
	09/26/07	6.44	608	15.8	42.3	0.21	-178
	05/02/08	6.29	567	12.2	NM	0.25	-23
	09/29/08	6.43	607	19.6	NM	0.20	-121
	03/26/09	5.99	543	9.6	NM	0.31	-9
	09/29/09	6.44	55 ^a	15.6	NM	8.1 ^a	32
	03/26/10	6.49	390	12.6	NM	0.82	7
	09/30/10	6.68	556	16.4	NM	0.28	27
	03/08/11	6.87	441	12.7	85.0	0.17	8.0
	09/21/11	6.30	443	18.0	9.8	0.09	-91.0
	03/06/12	6.56	396	11.2	--	0.67	-65.0
	09/28/12	6.45	382	17.2	--	0.29	342 ^a
	03/07/13	6.48	480	12.4	--	0.15	20.0
	09/24/13	6.63	349	16.8	90.7	0.20	-50.0
	03/26/14	6.99	495	13.8	7.2	0.00	-106.0
	09/24/14	6.32	547	17.4	4.3	0.00	-119.0
	03/17/15	6.36	253	15.5	0.0	0.00	-153.0
	09/17/15	6.47	619	16.6	0.0	0.00	-70.0
	03/15/16	7.10	525	12.3	0.0	0.00	-67.0
	09/13/16	6.48	481	17.4	5.1	0.50	-88.9
	03/08/17	6.13	394	9.4	7.0	0.00	-70.0
	09/20/17	6.62	714	14.5	0.0	0.00	-19.0
	03/21/18	6.35	762	14.4	0.0	0.00	-3.6
09/13/18	6.61	453	14.8	2.9	1.67	-57.0	
06/03/19	6.28	446	15.1	2.4	0.13	-48.1	
08/29/19	6.11	573	20.2	3.1	0.40	-67.8	
05/13/20	6.45	416.8	13.6	4.0	0.30	-69.7	
09/25/20	6.32	470	17.3	7.2	0.98	-90.5	
MW-3	04/17/95	6.40	1,580	12.0	NM	NM	NM
	09/04/96	6.33	1,357	14.9	5.1	1.60	NM
	12/11/96	6.48	979	12.4	14.7	1.00	NM
	03/04/97	6.44	1,152	13.0	9.4	1.69	NM
	06/27/97	6.64	937	13.0	423.0	1.00	NM
	09/04/97	6.47	765	15.0	132.0	1.81	NM
	12/04/97	6.20	844	13.5	7.5	1.29	NM
	03/06/98	6.53	1,255	12.0	3.4	1.90	NM
	06/18/98	6.55	1,225	13.0	5.3	0.90	NM
	09/29/98	6.41	947	14.0	7.9	1.22	NM
	12/14/98	6.25	1,054	13.5	0.9	1.14	-79
	03/03/99	6.45	765	12.0	4.7	NM	-105
	06/16/99	6.31	837	12.0	NM	1.00	-120

Table C2
Historical Groundwater Field Parameters
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW-3 (continued)	09/17/99	6.48	964	14.0	4.2	0.10	-129
	12/08/99	6.80	137	13.5	6.7	1.50	-63
	03/07/00	6.62	766	12.0	8.0	0.80	-75
	06/21/00	6.92	452	14.0	7.5	1.25	-81
	09/12/00	6.70	836	10.7	NM	1.40	-36
	12/07/00	6.09	732	12.0	2.7	1.80	-62
	03/15/01	6.80	809	11.0	7.5	0.90	NM
	07/12/01	6.63	746	13.1	8.2	1.36	-42
	09/24/01	6.49	NM	16.9	11.8	0.16	NM
	01/03/02	6.52	955	13.1	2.0	0.00	NM
	03/28/02	6.74	330	12.3	5.8	0.19	NM
	06/11/02	6.89	786	12.8	14.3	0.38	NM
	09/17/02	6.80	773	15.2	NM	0.10	-135
	12/17/02	6.44	821	13.0	7.5	0.40	NM
	03/20/03	6.85	521	12.1	3.3	0.12	-73
	06/11/03	7.17	411	13.8	3.6	0.24	NM
	09/11/03	6.72	395	16.1	2.5	0.24	NM
	12/04/03	6.69	388	13.2	2.2	0.68	94
	03/15/04	6.61	425	12.3	2.1	0.32	-81
	09/24/04	6.56	448	15.6	NM	NM	2
	04/05/05	6.95	726	13.0	NM	0.33	-4
	09/21/05	7.11	560	15.6	NM	0.42	-6
	03/14/06	7.14	519	11.9	1.0	< 0.01	NM
	09/12/06	6.50	606	15.8	NM	0.19	-21
	04/04/07	6.40	515	12.1	13.3	0.06	-1
	09/25/07	6.43	540	14.2	6.8	0.40	-183
	05/01/08	6.63	688	11.9	NM	0.17	-74
	10/01/08	6.77	662	17.2	NM	0.04	-118
	03/24/09	6.64	727	11.3	NM	0.26	-81
	09/29/09	6.82	220	17.0	NM	0.37	10
	03/30/10	6.85	601	11.6	NM	0.99	-5
	09/28/10	6.98	647	15.6	NM	0.28	8
	03/07/11	7.33	426	12.1	2.0	0.20	32.0
	09/21/11	6.71	556	16.3	1.4	0.03	-127.0
	03/06/12	6.97	497	10.7	--	0.11	-0.8
	10/01/12	6.81	519	16.2	--	0.20	308 ^a
	03/07/13	6.87	662	11.7	--	0.19	102.0
	09/24/13	7.03	404	13.6	57.2	0.40	-97.0
	03/27/14	7.29	616	12.4	0.0	0.00	-154.0
	09/25/14	6.82	681	15.1	14.6	0.00	-135.0
	03/19/15	6.06	318	11.6	0.0	0.00	-226.0
	09/16/15	7.13	618	17.4	0.0	0.00	-125.0
03/14/16	7.67	1,980	10.8	0.0	0.00	-142.0	
09/14/16	6.79	529	16.1	0.7	0.06	-97.9	
03/08/17	7.06	680	11.6	6.5	0.00	-70.0	
09/21/17	7.26	807	15.0	0.0	14.91 ^b	-46.0	
03/19/18	7.02	466	12.6	1.5	0.96	-78.9	
09/13/18	6.98	504	13.1	3.4	0.97	-110.9	
05/31/19	6.76	563	14.0	1.6	0.16	-48.6	
08/26/19	6.32	612	18.4	2.6	0.29	-122.3	
05/13/20	6.76	591	13.1	0.5	0.11	-156.1	
09/24/20	6.77	570	16.3	0.7	1.00	-137.5	

Table C2
Historical Groundwater Field Parameters
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW-4	09/04/96	6.29	1,452	17.9	98.5	1.50	NM
	12/10/96	6.29	1,690	11.9	427.0	0.83	NM
	03/04/97	6.75	1,868	10.0	2.6	2.82	NM
	06/27/97	6.78	1,431	11.0	55.0	1.00	NM
	09/04/97	6.82	1,120	19.0	51.0	1.40	NM
	12/04/97	6.33	1,578	13.0	6.5	1.80	NM
	03/06/98	6.88	1,847	10.0	3.6	1.92	NM
	06/18/98	6.79	1,862	15.0	4.5	2.20	NM
	09/29/98	6.63	1,288	18.0	10.8	1.26	NM
	12/14/98	6.18	1,560	13.9	2.6	1.16	-150
	03/03/99	6.69	1,288	9.0	9.6	NM	155
	06/17/99	6.69	NM	13.0	1.9	0.10	-186
	09/17/99	6.57	1,623	17.0	2.5	1.90	-178
	12/08/99	6.94	394	13.6	4.3	0.50	-109
	03/07/00	6.92	1,344	12.0	5.8	1.10	-68
	06/21/00	6.90	992	15.0	2.4	1.29	-67
	09/12/00	6.58	1,450	14.0	1.6	2.20	-86
	12/07/00	6.60	1,210	13.0	3.6	2.40	15
	03/15/01	6.60	1,361	10.0	5.2	1.50	-24
	07/12/01	6.70	1,594	15.2	6.2	2.73	-108
	09/25/01	6.17	NM	17.7	47.9	1.04	NM
	01/02/02	6.73	1,840	11.9	74.0	NM	NM
	03/28/02	6.95	655	10.5	24.7	0.39	NM
	06/11/02	6.97	817	13.3	NM	0.17	NM
	09/18/02	6.81	1,452	18.1	NM	0.04	-106
	12/17/02	6.54	1,011	12.4	2.7	0.34	NM
	03/20/03	6.74	877	10.8	3.6	0.07	-78
	05/14/03	6.70	864	12.2	NM	0.74	-45
	06/11/03	6.89	776	13.9	4.0	0.21	NM
	09/11/03	6.60	756	17.1	3.7	0.25	NM
	12/04/03	6.68	437	13.1	4.2	0.22	-52
	03/15/04	6.60	518	10.6	1.9	0.46	-58
	09/24/04	6.45	596	15.4	NM	0.62	36
	04/04/05	6.71	945	11.6	NM	1.20	58
	09/21/05	6.56	881	17.5	NM	0.71	-1
	03/15/06	6.82	907	10.1	8.3	0.01	NM
	09/14/06	6.49	907	15.5	NM	0.33	98
	04/04/07	6.85	891	11.2	5.9	< 0.01	-68
	09/26/07	6.51	992	16.7	4.2	< 0.01	-210
	05/02/08	6.46	1,076	11.1	NM	0.19	-39
10/01/08	6.48	1,073	15.8	NM	0.26	-68	
03/25/09	6.81	1,256	9.5	NM	0.30	-45	
09/30/09	6.59	369	17.9	NM	0.11	24	
03/29/10	6.71	1,094	9.9	NM	0.58	-8	

Table C2
Historical Groundwater Field Parameters
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW-4 (continued)	10/01/10	6.89	1,054	16.7	NM	0.55	10
	03/04/11	7.48	906	9.4	7.0	0.17	-8.0
	09/23/11	6.46	1,091	22.1	1.6	0.15	-64.0
	03/08/12	6.67	1,100	9.6	--	0.36	-16.3
	10/01/12	6.56	1,109	16.8	--	0.18	355 ^a
	03/06/13	6.73	1,436	9.7	4.3	0.22	24.0
	09/24/13	6.82	823	17.8	63.8	0.00	-63.0
	03/25/14	7.26	1,510	13.9	0.0	0.00	-141.0
	09/23/14	6.49	1,210	19.2	0.5	0.00	-107.0
	03/17/15	6.10	730	10.5	0.0	0.00	-225.0
	09/17/15	6.25	1,150	17.3	0.0	0.00	-104.0
	03/14/16	7.82	1,600	9.6	0.0	0.00	-93.0
	09/14/16	6.57	959	17.9	--	6.60	-66.3
	03/09/17	7.37	1,470	6.9	37.6	0.00	-97.0
	09/21/17	6.80	1,090	17.2	1.4	0.00	-27.0
	03/21/18	7.05	890	10.4	2.3	0.88	38.6
	09/13/18	6.72	836	15.3	4.9	2.61	-46.3
	05/31/19	6.80	958	15.8	--	0.11	-47.5
08/27/19	6.28	1,078	21.0	--	0.41	-79.4	
05/14/20	7.05	1000	13.5	2.8	0.12	-101.8	
09/25/20	6.51	882	18.0	2.8	1.09	-51.6	
MW-5	09/04/96	6.23	422	15.9	21.7	2.10	NM
	12/10/96	6.15	463	12.7	984.0	1.53	NM
	03/04/97	6.22	506	13.0	8.9	2.48	NM
	06/27/97	6.46	329	15.0	245.0	2.00	NM
	09/04/97	6.79	285	16.0	51.0	1.39	NM
	12/04/97	5.90	367	13.0	3.6	1.35	NM
	03/06/98	6.38	425	12.0	4.9	1.97	NM
	06/18/98	6.36	439	14.0	8.5	2.20	NM
	09/29/98	6.29	326	17.0	8.7	1.54	NM
	12/15/98	5.94	394	14.8	3.6	1.72	111
	03/02/99	5.87	301	12.0	8.9	1.47	237
	06/16/99	5.99	375	12.0	< 10	0.20	161
	09/16/99	6.19	449	14.0	2.9	0.40	-159
	12/08/99	6.59	238	14.9	5.1	0.20	72
	03/07/00	6.34	278	12.0	7.9	1.10	67
	06/21/00	6.45	185	14.0	1.6	1.68	-8
	09/12/00	7.24	349	12.4	1.9	1.20	-18
	12/07/00	6.15	314	13.0	14.4	2.30	-45
	03/15/01	6.55	371	11.0	9.1	3.50	-61
	07/09/01	6.32	352	14.2	4.6	1.01	111
	09/24/01	6.16	256	18.1	63.7	6.17	NM
	01/02/02	6.09	468	15.3	NM	NM	NM
	03/27/02	6.51	5,000	9.7	5.1	3.84	NM
06/11/02	6.29	439	13.9	2.4	1.05	NM	
09/18/02	6.28	429	15.6	NM	0.25	-4	
12/16/02	6.18	341	14.2	2.7	0.48	NM	
03/17/03	6.29	350	13.4	3.4	0.36	79	

Table C2
Historical Groundwater Field Parameters
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW-5 (continued)	05/14/03	6.42	286	12.3	NM	0.69	34
	06/10/03	6.35	218	13.8	11.6	0.30	NM
	09/11/03	6.32	267	16.5	1.4	0.37	NM
	12/05/03	6.40	219	13.8	7.1	0.34	281
	03/16/04	6.40	219	12.7	7.1	0.77	73
	09/22/04	6.27	337	13.9	NM	0.66	60
	04/04/05	6.41	290	13.1	NM	1.55	100
	09/20/05	6.59	324	18.5	NM	0.36	11
	03/14/06	6.45	312	12.4	12.1	0.61	NM
	09/13/06	6.34	296	15.7	NM	0.32	124
	04/05/07	6.47	327	12.2	7.7	0.73	128
	09/26/07	6.22	351	15.1	6.2	0.58	92
	05/01/08	6.10	436	12.9	NM	0.84	74
	09/30/08	6.17	397	15.7	NM	0.33	116
	03/25/09	6.29	463	10.6	NM	0.57	106
	09/29/09	6.36	127	16.5	NM	1.73	37
	04/01/10	6.39	287	12.5	16.0	0.49	27
	04/09/10	NM	340	NM	3.0	NM	NM
	04/16/10	6.38	342	13.4	8.0	0.70	26
	05/06/10	6.52	297	12.7	6.0	2.35	23
	06/09/10	6.44	283	14.1	14.0	1.61	24
	09/28/10	6.55	262	18.4	NM	1.06	26
	03/03/11	6.76	203	11.6	6.0	0.55	12.0
	06/22/11	6.36	200	17.0	14.5	0.11	-7.0
	09/22/11	6.19	226	17.3	5.1	0.38	63.0
	10/21/11	6.11	267	15.8	9.0	0.41	34.0
	12/07/11	6.36	207	14.0	--	0.15	72.7
	03/07/12	6.39	216	12.3	--	0.29	52.7
	06/26/12	6.35	233	17.1	4.2	0.19	29.0
	09/27/12	6.14	266	18.5	0.8	0.25	346 ^a
	12/19/12	6.17	362	13.0	23.0	0.34	-29.0
	03/06/13	6.25	360	11.2	4.4	0.18	76.0
	06/06/13	6.63	379	17.9	17.0	0.63	23.0
	09/24/13	6.45	302	14.8	54.6	0.03	20.0
	03/25/14	5.81	404	14.7	0.0	0.00	-141.0
	09/23/14	6.14	380	16.6	2.1	0.00	-49.0
	03/16/15	6.21	199	16.1	0.0	0.00	-100.0
	09/15/15	5.95	342	16.3	0.0	0.00	-34.0
	03/15/16	6.60	318	11.7	0.0	0.00	105.0
	09/14/16	6.29	263	17.0	9.7	1.05	37.8
03/06/17	6.00	199	11.3	9.3	0.00	111.0	
09/20/17	6.54	289	14.6	0.0	13.06 ^b	-4.0	
03/20/18	6.03	162	12.0	4.3	0.62	45.1	
09/11/18	6.37	200	15.0	9.3	0.54	-55.6	
05/30/19	6.12	200	17.0	3.9	0.13	-41.3	
08/27/19	6.69	223	17.9	2.7	0.41	130.1	
05/13/20	6.43	222.2	12.9	2.9	0.51	45.3	
09/25/20	6.21	200	17.2	8.4	2.40	62.0	

Table C2
Historical Groundwater Field Parameters
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW-6	09/04/96	6.30	1,930	14.5	23.0	4.80	NM
	12/10/96	6.17	1,909	12.0	> 1,000	1.02	NM
	03/04/97	6.32	1,683	11.0	6.1	3.44	NM
	06/27/97	6.41	1,469	14.0	73.0	1.00	NM
	09/04/97	6.30	1,157	15.0	98.0	1.15	NM
	12/04/97	5.92	1,286	14.0	5.7	1.05	NM
	03/06/98	6.33	1,620	11.0	5.7	1.10	NM
	06/18/98	6.33	1,804	14.0	7.0	1.80	NM
	09/29/98	6.25	1,440	17.5	7.9	1.91	NM
	12/15/98	5.93	1,390	14.4	NM	1.26	-89
	03/02/99	6.03	1,107	11.0	7.7	1.38	-85
	06/16/99	6.15	1,441	12.0	< 10	< 0.1	-117
	09/16/99	6.27	1,621	13.0	9.1	0.60	-476
	12/08/99	6.63	315	13.7	3.7	0.70	-91
	03/07/00	6.36	1,147	11.0	5.5	0.60	-54
	06/21/00	6.66	810	14.0	1.0	1.75	-37
	09/12/00	6.50	1,378	12.0	NM	2.30	-43
	12/07/00	5.79	1,270	14.0	3.6	1.60	-15
	03/15/01	6.35	1,079	11.0	16.1	0.40	-31
	07/12/01	6.39	1,210	14.1	7.6	1.07	-44
	09/25/01	6.63	NM	16.4	18.9	1.02	NM
	01/03/02	6.19	1,120	12.9	1.5	0.00	NM
	03/27/02	6.32	NM	9.0	NM	0.45	NM
	06/11/02	6.78	891	13.5	NM	0.34	NM
	09/18/02	6.49	1,312	16.7	NM	0.16	-157
	12/16/02	6.25	1,179	14.2	8.8	0.24	NM
	03/20/03	6.53	721	12.1	5.3	0.17	-70
	06/11/03	6.74	387	14.1	21.3	0.33	NM
	09/10/03	6.44	601	16.9	4.2	0.31	NM
	12/04/03	6.60	393	14.3	6.2	0.26	-12
	03/16/04	6.75	286	12.9	6.9	0.25	-37
	09/23/04	6.36	635	16.3	NM	0.55	13
	04/05/05	6.61	541	13.3	NM	0.61	-17
	09/21/05	6.47	1,045	15.4	NM	0.66	40
	03/14/06	6.70	445	12.7	12.6	< 0.01	NM
	09/13/06	6.39	868	15.4	NM	0.25	64
	04/05/07	6.50	377	12.6	19.0	0.07	23
	09/26/07	6.39	1,010	15.0	12.2	0.06	-190
	05/02/08	6.39	578	11.9	NM	0.19	-26
	09/30/08	6.26	1,011	14.9	NM	0.14	-85
03/26/09	6.84	573	11.9	NM	0.41	6	
09/29/09	6.30	99 ^a	14.3	NM	6.9 ^a	39	
03/30/10	6.53	533	11.5	NM	0.61	14	
09/30/10	6.55	936	15.9	NM	0.35	30	
03/04/11	6.84	331	10.6	4.0	0.21	11.0	
09/21/11	6.23	723	17.9	3.9	0.13	-68.0	
03/06/12	6.53	341	10.5	--	0.25	-11.7	
09/28/12	6.21	717	15.3	--	0.27	315 ^a	

Table C2
Historical Groundwater Field Parameters
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW-6 (continued)	03/07/13	6.49	511	11.1	--	0.21	76.0
	09/24/13	6.50	634	14.3	106.0	0.00	-52.0
	03/26/14	6.70	420	13.1	7.3	0.00	-60.0
	09/24/14	6.18	887	15.7	3.2	0.00	-94.0
	03/17/15	5.39	270	11.9	0.0	0.00	-155.0
	09/17/15	6.32	1,040	16.4	1.1	0.00	-62.0
	03/15/16	6.90	628	11.8	36.7	0.05	-39.0
	09/14/16	6.27	760	15.3	2.6	1.95	-77.5
	03/07/17	6.44	549	9.1	7.9	0.00	-35.0
	09/20/17	6.47	885	15.2	17.8	0.00	-46.0
	03/20/18	6.30	862	12.8	0.0	0.00	-16.1
	09/13/18	6.30	563	17.4	1.5	0.70	-81.2
	06/03/19	6.27	542	15.4	6.1	0.23	-47.5
	08/29/19	6.09	741	22.1	5.6	0.42	-67.1
	05/13/20	6.32	493	13.4	3.1	0.13	-77.2
09/25/20	6.22	606	15.3	3.0	1.02	-68.7	
MW-7	12/22/97	6.56	550	11.0	139.0	2.15	NM
	03/06/98	6.63	536	12.0	13.4	1.53	NM
	06/18/98	6.36	543	14.0	13.0	2.40	NM
	09/29/98	6.38	438	17.0	20.5	1.41	NM
	12/14/98	5.98	409	15.2	3.2	1.23	68
	03/03/99	7.07	288	12.0	5.5	NM	-8.4
	06/17/99	6.07	462	13.0	NM	0.80	1
	09/17/99	6.13	506	16.0	11.4	< 0.1	-72
	12/08/99	6.71	342	15.3	7.6	1.30	-2
	03/07/00	6.44	362	12.0	6.7	0.80	-11
	06/21/00	6.57	241	14.0	0.7	2.04	24
	09/12/00	6.00	493	13.0	12.6	1.40	5
	12/07/00	6.46	505	14.0	31.0	2.60	-39
	03/15/01	6.58	425	12.0	20.2	1.50	NM
	07/12/01	6.45	493	14.1	10.5	1.87	54
	09/25/01	6.48	NM	15.6	2.8	1.12	NM
	01/03/02	6.17	628	13.9	4.1	0.00	NM
	03/28/02	6.37	184	12.3	4.7	2.61	NM
	06/11/02	6.66	383	13.2	5.7	0.70	NM
	09/17/02	6.56	427	16.0	NM	0.15	4
	12/17/02	6.46	351	13.2	2.4	0.32	NM
	03/17/03	6.49	436	13.3	19.7	0.13	27
	06/10/03	6.88	282	13.8	52.1	0.18	NM
	09/10/03	6.27	257	16.0	3.0	0.49	NM
	12/04/03	6.68	239	13.4	4.7	0.29	159
	03/16/04	6.62	268	13.9	7.3	0.84	34
	09/22/04	7.00	469	16.0	NM	0.21	103
	04/04/05	6.71	388	13.0	NM	0.86	40
09/20/05	6.75	404	18.3	NM	0.68	-11	
03/14/06	7.11	312	12.5	3.7	2.78	NM	
09/13/06	6.33	345	16.0	NM	0.26	115	
04/03/07	6.56	220	12.6	15.2	5.06	222	

Table C2
Historical Groundwater Field Parameters
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW-7 (continued)	09/25/07	6.43	313	17.1	8.7	0.59	44
	05/01/08	6.30	337	13.4	NM	1.40	41
	10/01/08	6.41	389	17.3	NM	0.13	30
	03/24/09	6.12	450	11.3	NM	0.97	94
	09/29/09	6.51	141	15.9	NM	1.83	28
	04/01/10	6.81	255	12.4	NM	1.48	6
	09/28/10	6.71	318	17.4	NM	0.27	17
	03/02/11	6.48	235	11.4	10.0	5.72	3.0
	06/22/11	6.33	193	19.0	38.1	0.33	109.0
	09/22/11	6.33	248	16.6	1.9	0.19	158.0
	10/20/11	6.28	389	16.1	13.0	0.30	88.0
	12/07/11	6.55	273	13.4	--	0.57	139.0
	03/07/12	6.54	200	12.3	--	1.31	94.7
	06/26/12	6.47	196	16.1	5.7	0.18	43.0
	07/12/12	6.54	197	15.8	--	0.23	-22.0
	09/27/12	6.26	245	18.2	1.8	0.30	383 ^a
	12/19/12	6.42	641	13.0	7.0	0.46	7.9
	03/05/13	6.32	374	12.6	16.6	0.17	19.0
	06/06/13	6.74	328	16.7	9.3	0.24	81.0
	09/24/13	5.97	427	17.7	0.0	0.00	45.0
	03/26/14	6.48	340	14.2	0.0	0.00	132.0
	09/25/14	6.36	402	17.5	0.0	0.00	116.0
	03/18/15	6.25	162	17.0	0.0	2.87	-2.0
	09/14/15	6.68	433	17.8	0.4	0.00	76.0
	03/15/16	7.01	321	12.0	0.0	2.78	96.0
	09/14/16	6.31	351	18.6	0.5	0.40	72.3
	03/08/17	6.59	270	10.3	7.4	0.00	-14.0
	09/19/17	6.50	341	17.9	0.0	0.00	86.0
	03/21/18	6.43	184	12.3	2.5	3.19	40.8
	09/11/18	6.31	288	17.5	3.0	1.38	101.5
05/31/19	6.29	238	14.3	1.3	0.14	-45.2	
08/26/19	5.91	318	21.8	3.2	0.43	129.5	
05/13/20	6.50	314.2	13.9	0.8	0.41	106.1	
09/24/20	6.38	329	17.7	1.1	1.00	106.7	
MW-8	12/22/97	6.37	495	12.0	66.5	4.06	NM
	03/06/98	6.49	758	12.0	70.1	2.72	NM
	06/18/98	6.66	662	13.0	243.0	2.80	NM
	09/29/98	6.33	428	14.5	48.3	1.70	NM
	12/14/98	6.11	413	13.9	13.8	1.83	72
	03/02/99	6.10	442	12.0	90.5	2.11	117
	06/16/99	5.95	534	11.0	< 10	0.10	132
	09/16/99	6.22	588	13.0	10.5	1.80	-205
	12/08/99	6.50	140	13.9	133.0	2.40	55
	03/07/00	6.90	455	12.0	25.3	1.50	38
	06/21/00	6.30	313	14.0	1.2	1.73	37
	09/12/00	6.52	447	11.6	2.6	3.50	52
	12/07/00	6.99	387	14.0	6.5	1.80	-10
	03/15/01	6.45	433	11.0	8.3	2.70	-50

Table C2
Historical Groundwater Field Parameters
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW-8 (continued)	07/12/01	6.30	427	13.8	5.0	2.03	53
	09/25/01	6.48	NM	14.4	22.0	1.02	NM
	01/03/02	5.64	468	13.4	2.8	0.00	NM
	03/27/02	6.31	NM	8.9	5.1	1.95	NM
	06/11/02	6.41	576	12.9	6.4	0.40	NM
	09/18/02	6.32	415	15.0	NM	0.15	-88
	12/16/02	6.23	294	13.6	11.6	0.35	NM
	03/17/03	6.31	279	12.4	2.4	0.28	87
	05/14/03	6.36	338	13.6	NM	0.83	35
	06/11/03	6.54	249	13.4	3.5	0.54	NM
	09/10/03	6.12	249	15.5	1.3	0.70	NM
	12/04/03	6.62	165	13.5	4.7	0.17	153
	03/16/04	6.48	292	12.6	6.1	0.72	47
	09/24/04	6.60	309	16.0	NM	0.18	66
	04/05/05	6.48	385	12.9	NM	1.31	-1
	09/20/05	6.52	349	18.1	NM	0.53	31
	03/15/06	6.60	433	12.0	26.5	0.42	NM
	09/13/06	6.41	411	14.9	NM	0.25	52
	04/05/07	6.32	690	12.4	6.7	0.44	176
	09/26/07	6.30	506	14.7	10.3	0.50	-1
	05/01/08	6.07	812	12.8	NM	1.14	94
	09/30/08	6.25	584	15.2	NM	0.18	60
	03/26/09	6.70	906	12.3	NM	0.96	90
	09/29/09	6.27	135	15.3	NM	7.6 ^a	40
	04/01/10	6.29	949	11.9	NM	0.79	29
	09/28/10	6.44	1,217	18.1	NM	0.28	32
	03/04/11	6.81	1,317	11.0	2.0	0.50	13.0
	09/26/11	6.15	1,137	14.4	0.3	0.32	270.0
	03/06/12	6.55	1,106	11.6	--	0.50	14.3
	09/28/12	6.27	1,101	17.1	--	0.32	305 ^a
	03/08/13	6.45	1,271	12.3	--	0.23	136.0
	09/24/13	6.43	854	15.9	57.0	0.69	57.0
	03/26/14	6.76	994	13.4	5.0	0.00	109.0
	09/23/14	6.27	1120	16.9	1.5	0.00	112.0
	03/16/15	6.40	486	15.8	0.0	0.00	-2.0
	09/16/15	6.52	1,190	14.1	0.0	0.00	126.0
	03/15/16	6.89	766	11.4	11.0	0.53	98.0
	09/14/16	6.38	834	16.7	2.4	0.48	29.9
	03/07/17	6.04	582	9.3	2.0	0.00	51.0
	09/21/17	6.59	849	15.3	0.0	0.00	-11.0
03/20/18	6.20	542	11.6	0.7	1.00	59.1	
09/13/18	6.34	635	16.4	0.8	1.16	-35.1	
05/30/19	6.10	411	15.8	2.1	0.51	-42.3	
08/27/19	5.52	443	16.3	2.5	0.48	143.0	
05/14/20	6.34	522.3	12.6	0.8	0.20	84.4	
09/25/20	6.14	449	15.5	6.0	2.92	25.9	
11/06/20	6.64	494.1	14.3	4.0	1.25	76.1	

Table C2
Historical Groundwater Field Parameters
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW-9	07/09/01	6.24	812	13.9	8.2	2.28	-63
	09/25/01	6.33	NM	14.7	52.2	1.06	NM
	01/03/02	6.13	763	13.4	1.4	0.00	NM
	03/27/02	6.37	NM	8.2	NM	0.59	NM
	06/11/02	6.61	700	12.8	NM	0.61	NM
	09/17/02	6.41	728	14.7	NM	0.13	-131
	12/16/02	6.24	614	13.7	27.7	0.26	NM
	03/17/03	6.52	460	12.7	18.8	0.08	-47
	06/11/03	6.28	395	13.3	64.7	0.41	NM
	09/10/03	6.12	494	15.1	21.6	0.33	NM
	12/04/03	6.49	351	14.5	16.0	0.18	21
	03/16/04	6.46	269	12.4	5.1	0.44	46
	09/23/04	6.48	488	15.5	NM	0.17	55
	04/05/05	6.53	710	13.2	NM	1.15	-5
	09/20/05	6.25	550	16.7	NM	0.21	24
	03/14/06	6.51	416	12.7	347.0	< 0.01	NM
	09/13/06	6.43	548	14.7	NM	0.18	59
	04/05/07	6.26	438	12.5	110.0	0.01	50
	09/26/07	6.18	596	14.2	89.1	0.35	-166
	05/01/08	6.28	753	13.1	NM	0.24	78
	09/30/08	6.29	707	14.7	NM	0.15	-79
	03/26/09	6.69	649	11.8	NM	0.29	66
	09/29/09	6.38	111	14.9	NM	7.7 ^a	35
	03/30/10	6.58	559	11.9	NM	0.72	17
	09/28/10	6.52	651	17.3	NM	0.24	27
	03/04/11	6.89	505	12.0	4.0	0.24	10.0
	09/26/11	6.41	544	13.4	85.4	0.12	-90.0
	03/06/12	6.37	392	11.3	--	0.30	31.9
	09/28/12	6.57	641	15.3	--	0.16	272 ^a
	03/08/13	6.47	557	11.9	--	0.16	95.0
	09/24/13	6.87	365	15.1	128.0	0.00	-67.0
	03/26/14	6.42	388	15.0	0.0	0.00	67.0
	09/24/14	6.45	472	17.1	21.2	0.00	-93.0
	03/17/15	6.09	239	15.7	70.4	0.94	-40.0
09/16/15	6.54	769	15.9	20.7	0.00	-146.0	
03/15/16	6.69	490	11.5	56.3	0.00	49.0	
09/14/16	6.83	592	16.5	28.2	0.52	-111.5	
03/07/17	5.73	300	10.4	36.8	0.00	119.0	
09/21/17	7.19	812	14.4	0.0	0.00	-20.0	
03/20/18	6.00	255	13.7	7.4	0.68	37.2	
09/13/18	6.66	495	16.9	11.2	0.93	-113.1	
05/31/19	6.79	357	15.7	24.7	0.04	-46.0	
08/27/19	5.82	559	17.9	7.7	0.37	-80.5	
05/13/20	6.35	314	13.4	11.7	0.41	24.0	
09/25/20	6.26	521	16.5	6.0	1.58	-31.5	

Table C2
Historical Groundwater Field Parameters
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW-10	07/09/01	6.47	463	14.2	14.2	2.11	72
	09/25/01	6.53	NM	15.6	184.0	0.98	NM
	01/03/02	6.33	460	13.6	3.2	0.00	NM
	03/28/02	6.57	159	12.0	NM	0.32	NM
	06/11/02	6.90	397	13.1	NM	0.22	NM
	09/17/02	6.76	390	15.1	NM	0.10	-97
	12/17/02	6.65	300	13.5	20.2	0.21	NM
	03/20/02	6.82	336	12.9	3.2	0.10	-62
	06/10/03	6.97	222	14.1	15.9	0.18	NM
	09/10/03	6.09	267	16.3	9.0	0.49	NM
	12/04/03	6.61	179	13.4	7.6	0.37	44
	03/16/04	6.51	245	11.7	3.4	0.56	-24
	09/22/04	6.80	282	17.0	NM	0.61	10
	04/05/05	7.68	315	12.1	NM	0.89	-10
	09/20/05	6.62	284	18.1	NM	0.67	1
	03/15/06	6.71	268	11.2	6.7	0.16	NM
	09/12/06	6.59	281	20.3	NM	0.30	-67
	04/03/07	6.95	215	13.7	11.7	< 0.01	46
	09/24/07	6.61	238	16.9	7.7	0.45	-138
	05/01/08	6.56	268	11.8	NM	0.12	-54
	10/01/08	6.72	237	15.3	NM	0.11	-62
	03/24/09	6.53	266	11.2	NM	0.27	-36
	09/30/09	6.73	96 ^a	15.7	NM	0.23	13
	03/30/10	6.96	201	11.1	NM	1.33	-8
	09/28/10	6.98	185	17.7	NM	0.20	3
	03/04/11	7.24	160	10.7	7.0	0.15	-2.0
	09/26/11	6.61	152	14.9	37.8	0.32	-58.0
	03/07/12	6.86	141	11.2	--	0.24	-6.7
	09/28/12	6.67	136	18.9	--	0.21	292 ^a
	03/05/13	6.54	164	11.4	--	0.16	2.1
	09/24/13	7.11	106	17.4	72.5	0.00	-72.0
	03/27/14	7.03	176	13.2	0.0	0.00	-88.0
	09/24/14	6.66	201	17.2	12.9	0.00	-94.0
	03/18/15	6.32	57	14.8	50.2	0.00	-56.0
09/14/15	6.51	145	17.6	29.1	0.00	-110.0	
03/15/16	7.39	176	11.0	411.0	0.00	-78.0	
09/15/16	6.64	140	17.2	6.2	0.15	-79.8	
03/08/17	6.54	139	10.5	10.9	0.00	-51.0	
09/19/17	7.01	159	16.3	0.0	0.00	-70.0	
03/21/18	6.74	130	11.2	17.9	0.78	29.0	
09/12/18	6.64	152	17.7	4.6	0.65	-65.4	
05/30/19	6.65	175	17.8	13.0	1.12	-43.3	
08/26/19	6.21	214	19.9	7.7	0.27	-78.4	
05/12/20	6.91	195.4	13.4	22.8	0.37	-98.3	
09/24/20	6.63	145	15.9	17.8	0.92	-91.5	

Table C2
Historical Groundwater Field Parameters
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW-11	07/09/01	6.69	406	12.8	134.0	0.89	22
	09/24/01	6.28	418	17.5	112.0	6.13	NM
	01/02/02	6.24	431	14.8	NM	NM	NM
	03/27/02	6.58	5,000	9.1	12.0	4.42	NM
	06/11/02	6.35	444	14.2	6.4	2.74	NM
	09/17/02	6.22	530	16.3	NM	0.14	83
	12/16/02	6.00	593	14.0	1.8	0.30	NM
	03/17/03	6.15	539	13.4	4.6	0.16	26
	06/10/03	6.20	321	13.7	8.7	0.35	NM
	09/10/03	6.08	411	15.4	5.0	0.31	NM
	12/05/03	6.25	337	13.5	5.1	0.29	260
	03/16/04	6.36	269	12.7	1.7	0.50	73
	09/22/04	6.44	285	16.6	NM	0.38	85
	04/04/05	6.51	320	13.2	NM	1.84	94
	09/20/05	6.33	352	18.6	NM	0.51	-8
	03/14/06	6.80	345	13.0	41.5	< 0.01	NM
	09/13/06	6.22	397	15.2	NM	0.19	138
	04/04/07	5.85	315	12.1	23.5	0.28	208
	09/26/07	6.27	312	14.9	18.3	0.39	85
	05/01/08	6.11	486	13.5	NM	0.46	69
09/30/08	6.13	703	16.2	NM	0.19	107	
04/01/10	6.40	286	12.0	13.0	0.46	23	
04/09/10	NM	330	NM	3.0	NM	NM	
04/16/10	6.41	326	13.6	21.0	0.12	26	
05/06/10	6.55	285	13.0	13.0	0.30	24	
06/09/10	6.43	278	14.3	13.0	0.65	25	
05/13/20	6.67	227.1	13.2	3.2	0.31	-23.9	
MW-12	07/09/01	6.67	590	14.5	95.2	1.40	37
	09/24/01	6.41	NM	19.2	78.9	1.17	NM
	01/03/02	5.37	1,480	16.2	7.9	NM	NM
	03/27/02	5.59	NM	12.3	15.8	0.43	NM
	06/11/02	6.33	865	14.6	5.4	0.31	NM
	09/17/02	6.29	737	16.8	NM	0.18	-147
	12/16/02	6.14	475	14.7	2.1	0.12	NM
	03/17/03	6.13	620	14.1	47.3	0.21	1
	05/14/03	6.21	383	13.7	NM	0.66	31
	06/10/03	6.30	367	13.8	66.7	0.45	NM
	09/10/03	6.06	419	15.9	27.8	0.35	NM
	12/05/03	6.18	410	13.4	9.2	0.33	40
	03/16/04	6.40	317	12.5	3.4	0.30	60
	09/22/04	6.58	408	16.5	NM	2.00	59
	04/04/05	6.93	416	13.0	NM	1.39	88
	09/20/05	6.70	460	18.4	NM	0.37	-12
	03/14/06	6.91	410	12.8	36.4	0.38	NM
09/13/06	6.31	390	15.6	NM	0.19	132	
04/04/07	5.82	420	12.5	34.1	0.10	196	
09/26/07	6.42	383	15.3	28.7	0.20	62	
05/01/08	6.07	592	14.0	NM	0.35	71	

Table C2
Historical Groundwater Field Parameters
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW-12 (continued)	09/30/08	6.25	511	16.6	NM	0.19	97
	03/26/09	6.32	672	13.3	NM	0.34	9
	09/29/09	6.40	196	16.7	NM	1.55	33
	04/01/10	6.56	347	13.0	NM	0.87	27
	09/28/10	6.52	322	18.6	NM	0.35	26
	03/03/11	6.75	244	11.1	28.0	0.22	12.0
	06/22/11	6.87	348	16.1	41.2	0.04	-188.0
	09/22/11	6.51	359	16.4	12.4	0.05	-122.0
	10/21/11	6.41	411	15.0	35.0	0.38	11.0
	12/07/11	6.58	293	12.2	--	0.20	-87.4
	03/07/12	6.38	316	12.9	--	0.30	59.3
	06/27/12	6.44	533	15.5	18.4	0.22	32.0
	07/12/12	6.44	312	15.5	--	0.14	16.0
	10/02/12	6.41	324	16.3	7.9	3.60 ^a	275 ^a
	12/19/12	6.29	444	13.1	11.0	0.37	14.9
	03/06/13	6.37	436	12.2	18.1	0.15	47.0
	06/06/13	6.61	431	20.4	33.4	0.25	-40.0
	09/24/13	6.79	417	14.9	54.4	0.00	-117.0
	03/25/14	5.90	413	15.4	0.0	0.00	-45.0
	09/23/14	6.27	424	16.8	3.1	0.70	-108.0
	03/16/15	6.21	196	16.9	2.7	0.00	-82.0
	09/15/15	6.61	423	16.0	0.0	0.00	-41.0
	03/15/16	6.84	436	13.1	0.0	0.00	101.0
	09/14/16	6.38	312	16.8	3.7	0.69	9.2
	03/06/17	6.48	399	11.7	10.6	0.00	102.0
	09/20/17	6.78	364	14.7	0.0	0.00	-39.0
	03/20/18	6.28	396	11.8	3.5	0.00	118.5
09/11/18	6.58	239	15.5	5.0	0.75	33.2	
06/03/19	6.24	269	15.1	4.5	0.23	-44.0	
08/27/19	5.84	278	18.0	4.3	0.36	135.5	
05/13/20	6.75	157.9	13.3	7.8	0.49	-52.4	
09/25/20	6.55	227	15.4	2.8	1.05	-21.0	
MW-13	03/31/03	6.41	506	14.3	76.0	0.22	-37
	05/14/03	6.29	491	13.8	NM	0.84	-53
	06/11/03	6.63	425	14.7	15.5	0.25	NM
	09/11/03	6.60	470	16.8	23.1	0.58	NM
	12/04/03	6.86	379	13.1	5.7	0.28	-11
	03/15/04	6.58	458	12.8	9.7	0.31	-44
	06/10/04	6.55	383	14.4	NM	0.62	-21
	09/23/04	6.38	427	15.6	NM	0.17	18
	04/05/05	7.02	242	12.9	NM	1.43	9
	09/21/05	6.92	367	16.9	NM	0.22	-15
	03/15/06	7.07	301	13.2	4.0	< 0.01	NM
	09/14/06	6.58	490	16.0	NM	0.20	59
	04/04/07	6.76	557	13.6	5.0	0.03	-39
	09/25/07	6.50	617	15.6	4.8	-0.11	-210
	05/02/08	6.29	758	14.0	NM	0.24	-20
09/30/08	6.36	687	17.1	NM	0.07	-84	

Table C2
Historical Groundwater Field Parameters
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW-13 (continued)	03/25/09	6.33	763	11.7	NM	0.31	-7
	09/30/09	6.47	273	17.0	NM	0.13	30
	03/29/10	6.53	639	12.4	15.0	0.58	18
	04/07/10	NM	720	NM	2.0	NM	NM
	04/16/10	6.67	682	14.2	9.0	0.49	24
	05/06/10	6.56	722	13.9	6.0	0.31	25
	06/09/10	6.52	753	15.7	4.0	0.20	22
	09/30/10	6.58	695	17.2	NM	0.14	17
	03/03/11	6.76	552	12.9	1.0	0.20	9.0
	06/23/11	6.09	365	14.4	9.2	0.16	-61.0
	09/22/11	6.26	680	19.7	13.3	0.02	-86.0
	10/20/11	6.27	882	16.3	17.0	0.35	-28.0
	12/07/11	6.45	566	12.7	--	0.21	-88.6
	03/07/12	6.49	564	12.2	--	0.27	-12.5
	06/27/12	6.44	533	15.5	18.4	0.22	32.0
	07/12/12	6.47	571	18.5	--	0.16	-7.0
	10/02/12	6.39	541	16.9	6.4	0.20	221 ^a
	12/19/12	6.33	694	13.1	26.0	0.31	-91.0
	03/07/13	6.43	688	12.9	4.4	0.16	11.0
	06/06/13	6.70	713	19.9	26.7	0.18	-95.0
	09/24/13	7.02	489	15.7	82.5	6.22	-92.0
	03/26/14	6.78	610	14.1	1.7	0.00	-99.0
	09/23/14	6.41	803	17.7	29.2	0.00	-129.0
	03/17/15	6.25	65	12.4	0.0	0.00	-45.0
	09/15/15	6.34	485	17.8	0.0	0.00	-106.0
	03/14/16	7.44	260	11.8	0.0	0.00	-20.0
	09/15/16	6.44	456	16.2	9.5	0.32	-38.0
	03/07/17	5.96	610	9.4	5.3	0.00	-63.0
	09/20/17	6.65	777	16.2	0.0	0.00	-59.0
	03/21/18	6.47	669	15.2	4.9	0.32	8.6
09/11/18	6.30	522	18.0	4.4	0.71	-54.7	
05/31/19	6.27	736	16.9	9.1	0.54	-46.9	
08/28/19	6.04	809	25.6	6.5	0.43	-87.2	
05/14/20	6.43	710	14.4	1.1	0.11	-91.9	
09/25/20	6.35	652	17.5	7.6	0.93	-70.1	
MW-14	12/04/03	6.80	207	13.5	8.2	0.22	44
	03/16/04	6.52	294	13.6	1.6	0.57	-9
	06/10/04	6.68	274	14.4	NM	0.55	-3
	09/24/04	6.97	343	14.5	NM	0.21	155
	04/05/05	6.84	369	13.8	NM	0.85	21
	09/21/05	6.71	495	15.1	NM	0.56	11
	03/14/06	6.92	341	13.5	4.9	0.05	NM
	09/13/06	6.81	396	15.7	NM	0.23	33
	04/04/07	6.64	393	14.5	0.8	0.21	-32
	09/26/07	6.56	358	14.8	2.2	0.26	-184
	05/02/08	6.28	412	12.7	NM	0.50	-27
	09/30/08	6.41	425	13.9	NM	0.35	-75
	03/23/09	6.23	498	11.4	NM	0.27	-28

Table C2
Historical Groundwater Field Parameters
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW-14 (continued)	09/29/09	6.58	60 ^a	14.2	NM	6.6 ^a	24
	03/30/10	6.58	360	13.2	NM	0.73	15
	09/30/10	6.72	555	17.4	NM	0.34	18
	03/04/11	6.96	316	12.0	6.0	0.15	9.0
	09/21/11	6.39	392	16.7	7.6	0.04	-72.0
	03/06/12	6.58	337	12.0	--	0.27	0.0
	09/28/12	6.42	366	16.3	--	0.28	294 ^a
	03/07/13	6.50	451	12.4	--	0.18	49.0
	09/24/13	6.57	313	14.0	65.5	0.00	-23.0
	03/26/14	6.74	444	16.3	0.0	0.00	-86.0
	09/24/14	6.39	496	15.7	2.4	0.00	-89.0
	03/17/15	6.41	282	15.4	0.0	7.23	-144.0
	09/16/15	6.71	593	14.6	0.0	0.00	-69.0
	03/16/16	7.06	493	11.4	11.4	0.00	-50.0
	09/15/16	6.50	387	14.1	23.3	0.28	-51.0
	03/08/17	6.66	540	12.3	4.3	0.00	-54.0
	09/20/17	6.72	552	15.1	0.0	0.00	-61.0
	03/20/18	6.42	541	13.5	0.0	0.00	-17.3
	09/13/18	6.64	470	14.0	2.0	1.19	-64.6
	06/03/19	6.35	573	15.2	--	0.15	-47.6
08/28/19	5.84	664	18.4	0.8	0.40	-57.2	
05/13/20	6.34	455	14.9	1.9	0.25	-67.2	
09/25/20	6.22	338	15.4	4.3	0.95	-12.1	
MW-15	12/04/03	7.00	259	13.2	9.1	0.18	48
	03/16/04	6.92	290	13.4	2.8	0.39	-25
	06/10/04	6.66	297	14.1	NM	0.56	-17
	09/24/04	6.68	311	14.9	NM	0.21	74
	04/05/05	6.79	370	13.8	NM	0.70	15
	09/21/05	6.91	682	16.4	NM	0.56	-9
	03/14/06	6.80	334	13.7	NM	< 0.01	NM
	09/13/06	6.77	367	15.3	NM	0.50	55
	04/04/07	6.71	396	14.2	1.2	0.06	-39
	09/26/07	6.51	390	15.4	NM	0.01	-205
	05/02/08	6.30	491	13.7	NM	0.21	-24
	09/29/08	6.47	499	18.5	NM	2.86	-97
	03/26/09	6.66	519	12.0	NM	0.23	-13
	09/29/09	6.52	59 ^a	15.3	NM	7.7 ^a	25
	03/30/10	6.61	409	13.3	NM	0.77	14
	09/30/10	6.57	506	17.0	NM	0.38	19
	03/08/11	6.91	449	13.7	4.0	0.17	8.0
	09/21/11	6.42	462	17.2	3.0	0.06	-83.0
	03/06/12	6.57	403	11.3	--	0.30	-32.2
	10/01/12	6.43	414	14.7	--	0.31	370 ^a
03/07/13	6.50	530	12.9	--	0.17	30.0	
09/24/13	6.61	357	14.4	131.0	0.00	-48.0	
03/26/14	6.73	487	16.5	0.0	0.00	-94.0	
09/24/14	6.40	482	16.1	3.5	0.00	-94.0	
03/17/15	5.58	237	13.7	0.0	0.00	-174.0	
09/17/15	5.69	509	15.1	0.0	0.00	-46.0	

Well Abandoned 16 February 2016

Table C2
Historical Groundwater Field Parameters
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW-16	12/05/03	6.35	385	12.7	6.1	0.59	19
	03/16/04	6.42	370	12.7	7.2	0.39	-14
	06/10/04	6.36	366	14.4	NM	0.54	-5
	09/23/04	6.50	488	14.0	NM	0.24	27
	04/05/05	6.56	645	13.0	NM	1.09	38
	09/21/05	6.48	555	14.6	NM	0.47	21
	03/15/06	6.91	569	12.4	2.1	< 0.01	NM
	09/13/06	6.58	459	14.0	NM	0.19	68
	04/05/07	6.46	659	12.7	1.0	< 0.01	-62
	09/26/07	6.52	621	15.8	1.6	0.43	-202
	05/02/08	6.13	790	12.8	NM	0.18	0
	10/01/08	6.35	820	14.6	NM	0.17	-57
	03/25/09	6.09	892	11.5	NM	0.32	-36
	09/30/09	6.41	254	13.7	NM	0.16	32
	04/02/10	6.45	691	11.5	NM	0.59	24
	10/10/10	6.62	801	14.2	NM	0.39	21
	03/08/11	6.76	639	12.3	6.0	0.19	7.0
	09/26/11	6.29	681	13.5	0.6	0.20	-71.0
	03/08/12	6.42	666	11.8	--	0.26	6.7
	10/01/12	6.28	678	13.7	--	0.29	358 ^a
	03/08/13	6.54	607	11.2	--	0.21	110.0
	09/24/13	6.59	428	12.9	62.1	0.00	-23.0
	03/27/14	6.67	889	13.3	25.4	0.00	-98.0
	09/25/14	6.30	901	14.9	98.7	0.00	-84.0
	03/18/15	6.30	480	15.2	3.1	0.00	-156.0
	09/17/15	6.08	999	13.7	4.8	0.00	-116.0
	03/16/16	6.87	908	10.9	16.5	0.00	-65.0
	09/15/16	6.43	616	12.8	7.3	0.38	-64.9
	03/07/17	6.51	924	10.6	8.1	0.00	-74.0
	09/21/17	6.59	928	13.7	9.4	0.00	-53.0
03/21/18	6.34	615	12.5	40.9	0.89	19.8	
09/13/18	6.50	647	12.5	6.9	0.40	-63.5	
06/03/19	6.21	817	13.8	6.0	0.18	-48.6	
08/29/19	5.84	920	15.1	5.1	0.47	-64.5	
05/14/20	6.38	830	12.9	2.8	0.16	-91.3	
09/25/20	6.31	737	13.3	9.2	1.20	-58.3	
MW-17	12/04/03	6.59	384	12.0	5.7	0.51	93
	03/15/04	6.32	619	12.3	7.1	0.78	-24
	06/10/04	6.41	489	13.1	NM	0.68	-12
	09/23/04	6.42	521	13.4	NM	0.01	10
	04/05/05	6.60	920	12.6	NM	0.97	30
	09/21/05	6.52	882	13.6	NM	0.31	16
	03/15/06	6.92	804	11.4	2.7	0.73	NM
	09/12/06	6.27	908	16.7	NM	0.14	-1
	04/03/07	6.24	766	11.7	1.9	0.65	96
	09/24/07	6.45	922	13.9	2.1	0.40	-175
	05/01/08	6.27	1,286	12.3	NM	0.24	105
	09/29/08	6.46	967	14.9	NM	4.61	-98
	03/24/09	6.12	1,282	11.9	NM	0.42	-22
09/30/09	6.52	152	12.9	NM	0.31	27	

Table C2
Historical Groundwater Field Parameters
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW-17 (continued)	03/30/10	6.37	667	10.1	NM	1.28	12
	10/01/10	6.68	1,111	14.2	NM	0.31	23
	03/07/11	6.88	564	11.6	5.0	0.15	8.0
	06/23/11	6.27	415	14.6	7.1	0.08	-40.0
	09/23/11	6.37	927	16.2	1.4	0.10	-60.0
	03/08/12	6.57	911	11.9	--	0.23	-28.4
	06/27/12	6.57	936	15.3	14.8	0.12	-24.0
	07/12/12	6.53	1,033	15.9	--	0.23	-26.0
	10/01/12	6.36	918	13.6	77.2	0.23	346 ^a
	12/19/12	6.35	1,349	10.9	16.0	0.39	-100.0
	03/07/12	6.47	1,128	11.4	4.4	0.18	21.0
	06/06/13	6.88	1,269	15.0	21.6	0.28	-89.0
	09/24/13	6.07	792	12.4	90.1	0.00	-55.0
	03/26/14	6.67	665	12.7	8.0	0.00	4.0
	09/25/14	6.49	914	14.6	43.1	0.00	-68.0
	03/19/15	6.50	499	12.3	44.3	0.00	-101.0
	09/17/15	6.57	1,100	14.5	5.5	0.00	-32.0
	03/14/16	7.22	3,590	10.9	0.0	0.00	-79.0
	09/14/16	6.36	720	14.8	0.9	0.14	-22.6
	03/08/17	6.13	835	9.4	19.9	0.00	-22.0
09/19/17	6.96	1,150	13.6	1.0	0.00	-23.0	
03/19/18	6.57	826	11.4	NM	7.57	-50.2	
09/12/18	6.63	803	12.2	9.1	1.21	-79.8	
05/31/19	6.38	1,009	13.3	4.2	0.07	-48.0	
08/28/19	6.11	1,123	23.1	10.1	0.40	-86.1	
05/13/20	6.54	1105	13.2	0.4	0.19	-88.6	
09/24/20	6.43	779	14.7	12.0	0.97	-70.3	
MW-18	12/04/03	6.54	308	13.0	8.1	0.33	21
	03/16/04	6.46	363	12.4	19.4	0.36	-14
	06/10/04	6.41	415	13.8	NM	0.66	-3
	09/23/04	6.31	373	15.3	NM	0.01	7
	04/05/05	6.94	463	12.9	NM	0.83	18
	09/20/05	6.84	183	17.3	NM	0.72	21
	03/15/06	6.68	430	12.3	2.5	0.22	NM
	09/12/06	6.07	519	17.0	NM	0.42	NM
	04/03/07	6.50	464	14.5	2.7	< 0.01	48
	09/24/07	6.57	566	15.5	2.1	0.41	-152
	05/01/08	6.32	637	12.6	NM	0.38	-43
	10/01/08	6.46	599	15.6	NM	0.12	-53
	03/24/09	6.20	626	12.3	NM	0.42	-29
	09/30/09	6.53	190	15.0	NM	0.38	26
	03/30/10	6.62	494	12.0	NM	1.57	13
	09/28/10	6.68	616	16.6	NM	0.24	21
	03/04/11	6.95	464	12.3	3.0	0.18	7.0
	06/23/11	6.32	312	15.3	9.6	0.14	-7.0
	09/23/11	6.37	532	16.9	3.8	0.07	-70.0
	03/07/12	6.54	484	13.0	6.0	0.18	15.3
06/27/12	6.55	554	17.4	4.9	0.20	-18.0	
07/12/12	6.54	567	14.8	--	0.19	-41.0	
10/01/12	6.48	321	17.7	2.8	2.42 ^a	353 ^a	

Table C2
Historical Groundwater Field Parameters
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW-18 (continued)	12/19/12	6.44	697	12.3	9.0	0.42	-92.0
	03/05/13	6.40	657	12.7	6.7	0.17	9.2
	06/06/13	6.87	741	16.6	16.1	0.26	-84.0
	09/24/13	6.67	439	15.0	58.9	0.08	-60.0
	03/26/14	7.76	99	13.9	0.0	3.32	115.0
	09/24/14	6.38	579	16.7	7.1	0.00	-59.0
	03/18/15	5.55	378	14.2	0.0	0.00	-178.0
	09/14/15	6.47	617	16.0	0.0	0.00	-82.0
	03/15/16	7.11	792	12.8	0.0	0.00	-76.0
	09/15/16	6.32	558	15.0	1.1	0.37	-24.1
	03/09/17	6.09	523	11.6	11.0	0.00	1.0
	09/19/17	6.71	677	14.8	0.0	0.00	-54.0
	03/21/18	6.39	632	12.1	0.0	0.00	-15.6
	09/12/18	6.50	582	15.7	0.9	0.90	-27.2
	05/30/19	6.45	712	18.0	7.1	4.94	-182.1
08/28/19	6.04	781	20.6	5.0	0.34	-76.7	
05/12/20	6.57	668	14.9	0.2	0.44	-86.6	
09/24/20	6.28	596	14.9	1.0	1.02	-68.2	
MW-19	03/16/04	6.49	403	13.2	12.0	0.38	-23
	06/10/04	6.31	379	14.5	NM	0.89	-15
	09/23/04	6.66	368	15.4	NM	0.26	5
	04/05/05	6.87	571	14.2	NM	0.39	-21
	09/21/05	6.80	636	15.7	NM	0.44	31
	03/15/06	6.78	510	12.6	3.7	0.14	NM
	09/12/06	6.40	563	18.1	NM	0.18	-22
	04/03/07	6.05	505	13.9	3.9	0.21	40
	09/24/07	6.31	317	15.6	3.4	0.41	-218
	05/02/08	6.32	698	13.5	NM	0.23	-32
	10/01/08	6.48	573	18.0	NM	0.10	-83
	03/23/09	6.23	610	12.6	NM	0.34	-71
	09/29/09	6.54	29 ^a	15.3	NM	7.5 ^a	29
	03/30/10	6.33	528	11.9	NM	0.98	14
	09/28/10	6.53	722	16.4	NM	0.36	29
	03/03/11	6.92	413	13.5	4.0	0.15	10.0
	09/21/11	6.38	530	16.6	0.0	0.14	-103.0
	12/07/11	6.53	556	13.3	--	0.26	-77.1
	03/08/12	5.65	596	15.0	--	0.19	-29.2
	06/27/12	6.57	430	16.6	0.8	0.16	-22.0
	07/12/12	6.51	466	15.4	--	0.23	21.0
	09/28/12	6.35	406	17.6	--	0.28	322 ^a
	12/19/12	6.42	560	13.7	14.0	0.40	-93.0
	03/05/13	6.39	727	13.3	1.6	0.14	-31.0
	06/06/13	6.84	766	16.3	9.8	0.86	-72.0
	09/24/13	6.72	486	14.0	64.0	0.00	-98.0
	03/27/14	6.83	564	14.7	52.9	0.00	-90.0
09/25/14	6.47	689	18.5	5.7	0.00	-87.0	
03/19/15	6.56	440	13.4	5.5	0.00	-138.0	
09/15/15	6.37	797	16.4	1.5	0.00	-119.0	
03/14/16	7.03	663	13.2	7.7	0.00	-93.0	
09/13/16	6.50	625	18.1	1.3	0.28	-83.4	
03/09/17	6.06	555	11.9	35.8	0.00	-19.0	

Table C2
Historical Groundwater Field Parameters
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW-19 (continued)	09/19/17	6.79	820	17.4	0.0	0.00	-51.0
	03/19/18	6.36	514	15.8	1.9	0.53	39.9
	09/12/18	6.65	553	15.3	5.2	4.56	-72.9
	05/30/19	6.50	717	16.5	13.1	4.92	-154.1
	08/26/19	5.75	665	20.0	14.1	0.39	-62.0
	05/13/20	6.48	578	15.2	0.9	0.13	-107.1
	09/24/20	6.46	555	16.6	2.4	0.91	-101.4
MW-20	07/28/05	7.01	1,053	14.7	10.8	NM	NM
	09/20/05	6.71	957	15.1	NM	0.42	45
	03/15/06	6.82	861	12.7	3.2	< 0.01	NM
	09/12/06	6.32	958	17.1	NM	0.39	-64
	04/05/07	6.54	972	14.1	5.0	< 0.01	-70
	09/26/07	6.34	961	15.1	NM	0.20	-169
	05/02/08	6.27	1,037	13.1	NM	0.21	-42
	09/29/08	6.41	1,130	18.9	NM	2.48	-125
	03/23/09	6.18	1,235	12.8	NM	0.37	-39
	09/30/09	6.58	119 ^a	14.4	NM	0.22	27
	03/29/10	6.33	922	13.2	NM	0.48	17
	10/01/10	6.69	1,013	15.8	NM	0.40	21
	03/02/11	6.35	1,147	12.6	8.0	0.13	9.0
	09/26/11	6.36	930	16.6	33.0	0.29	-80.0
	03/08/12	6.53	946	14.0	--	0.25	-4.9
	10/01/12	6.37	903	16.8	--	0.14	321 ^a
	03/08/13	6.45	180	11.4	--	0.19	97.0
	06/06/13	6.67	898	17.0	30.8	0.21	-75.0
	09/24/13	6.64	761	15.6	96.6	0.00	-68.0
	03/27/14	6.85	166	15.8	0.0	0.00	-32.0
	09/25/14	6.42	1,010	17.8	62.3	0.00	-84.0
	03/18/15	6.33	589	14.4	0.0	0.00	-154.0
	09/16/15	6.27	1,090	19.5	2.0	0.00	130.0
	03/15/16	6.97	1,310	11.8	0.2	0.00	-98.0
	09/15/16	6.33	943	17.5	2.4	0.09	-96.7
03/08/17	6.11	957	12.3	0.1	0.00	-81.0	
09/19/17	6.67	1,170	15.8	2.7	0.00	-78.0	
03/20/18	6.26	952	14.4	9.1	0.14	-1.8	
09/12/18	6.56	892	14.5	5.8	0.48	-101.2	
06/03/19	6.31	1,070	15.6	8.7	0.03	-46.9	
08/28/19	5.61	1,144	17.5	5.4	0.43	-77.2	
05/14/20	6.40	1,100	14.8	15.7	0.21	-109.3	
09/24/20	6.32	968	15.8	12.1	0.90	-95.4	
MW-21	09/14/06	6.65	624	14.9	NM	0.34	85
	04/04/07	6.68	657	13.3	14.9	< 0.01	-47
	09/25/07	6.58	636	14.7	12.2	0.06	-231
	05/02/08	6.28	746	13.8	NM	0.25	-29
	09/30/08	6.35	788	15.6	NM	0.12	-79
	03/25/09	6.46	687	11.6	NM	0.32	6
	09/30/09	6.46	310	14.6	NM	0.08	30
	03/26/10	6.31	664	13.2	10.0	0.68	19
	04/16/10	6.54	702	13.6	19.0	0.90	22
	05/06/10	6.50	716	13.9	30.0	0.20	29

Table C2
Historical Groundwater Field Parameters
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW-21 (continued)	06/09/10	6.21	741	15.0	131.0	0.16	38
	09/30/10	5.90	965	16.9	NM	0.34	56
	03/02/11	6.13	779	11.4	2.0	0.31	24.0
	06/23/11	5.74	407	13.9	7.2	0.12	-46.0
	09/22/11	5.75	951	17.5	1.5	0.07	-21.0
	09/27/11	5.70	907	15.1	5.2	0.35	20.0
	10/20/11	6.67	1,205	15.0	11.0	0.31	-17.0
	12/07/11	5.88	845	12.6	--	0.21	-48.7
	03/08/12	6.00	880	13.1	--	0.19	20.2
	06/26/12	5.99	846	14.4	74.5	0.22	6.6
	07/12/12	6.03	887	15.6	--	0.15	42.0
	10/02/12	5.94	876	14.5	>1000	1.41 ^a	238 ^a
	12/20/12	5.95	1,128	11.4	96.0	0.29	-50.0
	03/06/13	6.16	1,125	11.0	68.0	0.22	27.0
	06/06/13	6.61	1,120	18.8	52.6	0.25	-89.0
	09/24/13	6.28	714	14.6	102.0	0.00	-56.0
	03/26/14	6.50	785	15.1	0.0	0.00	-110.0
	09/24/14	6.25	829	16.1	31.0	0.00	-88.0
	03/17/15	5.35	405	13.5	17.5	0.00	-172.0
	09/15/15	6.50	851	15.4	0.0	0.00	-85.0
	03/16/16	6.93	845	13.7	0.0	0.00	-76.0
	09/15/16	6.40	630	14.2	81.1	0.49	-80.6
	03/07/17	5.88	650	9.2	119.0	0.00	-83.0
	09/20/17	6.60	778	15.1	0.0	0.00	-63.0
	03/20/18	6.29	712	13.6	0.0	0.00	15.9
	09/11/18	6.26	598	16.4	6.9	0.71	-75.5
05/31/19	6.27	628	15.5	3.9	0.14	-47.4	
08/29/19	6.04	676	18.1	5.3	0.47	-71.5	
05/13/20	6.40	598	14.7	2.1	0.08	-101.2	
09/25/20	6.33	546	15.3	4.5	1.01	-78.3	
MW-22	09/14/06	6.40	581	14.0	NM	0.62	121
	04/04/07	5.92	525	12.4	8.2	0.04	-40
	09/26/07	6.40	621	15.0	9.2	0.07	-178
	05/02/08	6.11	774	12.7	NM	0.19	-7.4
	10/01/08	6.32	815	13.9	NM	0.19	-74
	03/25/09	6.25	824	11.3	NM	0.26	-26
	09/30/09	6.39	287	14.9	NM	0.09	34
	03/29/10	6.20	665	12.0	NM	0.85	22
	09/30/10	6.57	821	17.6	NM	0.56	13
	03/04/11	6.77	543	12.2	45.0	0.15	12.0
	06/23/11	6.20	366	13.2	2.1	0.13	-30.0
	09/23/11	6.27	684	16.3	206.7	0.00	-85.0
	10/21/11	6.26	827	14.1	4.0	0.34	31.0
	12/07/11	6.27	583	12.5	--	0.24	-49.9
	03/08/12	6.49	502	10.7	20.5	0.23	-17.3
	06/26/12	6.44	549	14.4	8.8	0.16	-33.0
	07/12/12	6.35	570	16.4	--	0.20	15.0
	10/02/12	6.32	617	15.1	2.8	0.20	251 ^a
12/19/12	6.26	800	12.0	17.0	0.31	-96.0	
03/06/13	6.40	823	10.9	5.7	0.22	165.0	

Table C2
Historical Groundwater Field Parameters
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW-22 (continued)	06/06/13	6.79	881	15.9	11.6	0.32	-91.0
	09/25/13	6.53	564	13.7	89.1	0.00	-75.0
	03/26/14	6.59	769	15.0	0.0	0.00	-102.0
	09/24/14	6.22	769	14.9	12.2	0.00	-100.0
	03/17/15	6.16	430	11.9	0.0	0.00	-149.0
	09/15/15	6.64	833	17.4	0.8	0.00	-85.0
	03/16/16	6.82	904	11.6	0.0	0.00	-63.0
	09/15/16	6.33	753	13.8	8.7	0.55	-57.5
	03/07/17	6.46	1,010	10.7	7.2	0.00	-65.0
	09/20/17	6.60	1,070	13.9	0.0	0.00	-14.0
	03/21/18	6.19	132	11.6	0.0	0.00	0.5
	09/11/18	6.24	739	15.8	3.5	0.95	-58.7
	05/31/19	6.20	840	14.8	0.9	0.06	-47.9
	08/28/19	5.94	846	18.1	3.9	0.40	-47.7
05/14/20	6.42	857	13.8	0.3	0.11	-66.0	
09/25/20	6.17	729	14.8	2.5	1.12	-48.3	
MW-23	09/13/06	6.07	433	16.2	NM	0.52	122
	04/04/07	6.04	414	12.6	63.9	0.65	185
	09/25/07	6.47	432	15.9	31.2	0.49	1.1
	05/01/08	6.24	552	13.8	NM	0.29	38
	10/01/08	6.40	458	17.7	NM	0.13	46
	03/24/09	6.08	487	11.8	NM	0.41	90
	09/29/09	6.48	170	16.8	NM	0.75	29
	04/01/10	6.57	428	13.0	NM	0.66	16
	09/28/10	6.67	495	19.0	NM	0.19	19
	03/02/11	6.25	399	11.8	5.0	0.25	16.0
	06/22/11	6.27	320	15.3	26.1	0.19	70.0
	09/23/11	6.35	431	17.8	7.8	0.14	82.0
	10/20/11	6.51	512	16.7	3.0	0.36	70.0
	12/07/11	6.57	356	13.7	--	0.18	102.1
	03/07/12	6.59	386	13.1	5.2	0.18	57.9
	06/26/12	6.54	460	16.9	7.3	0.20	46.0
	07/12/12	6.54	465	15.8	--	0.17	-18.0
	09/27/12	6.52	409	17.1	5.2	0.26	340 ^a
	12/19/12	6.51	430	13.5	64.0	0.34	65.0
	03/05/13	6.50	528	12.6	7.1	0.16	-15.0
	06/06/13	6.91	690	16.8	9.2	0.26	43.0
	09/24/13	6.72	364	17.0	52.4	2.17	67.0
	03/26/14	6.80	616	13.5	4.1	0.00	147.0
	09/25/14	6.53	652	17.5	0.7	0.00	107.0
	03/18/15	6.50	326	16.0	1.5	0.00	-39.0
	09/14/15	6.05	650	18.7	0.4	0.00	35.0
	03/15/16	7.47	729	11.0	9.8	0.00	1.0
	09/14/16	6.45	584	19.0	2.0	0.17	69.6
	03/08/17	6.23	482	11.3	7.3	0.00	15.0
	09/19/17	6.85	597	18.0	0.0	0.00	-28.0
	03/21/18	6.50	642	11.6	6.4	0.00	-4.0
09/12/18	6.50	553	18.0	2.7	0.62	-53.6	
05/31/19	6.37	600	14.7	7.8	0.13	-45.8	
08/26/19	6.05	39	20.9	5.6	0.43	80.6	
05/13/20	6.49	573	14.6	3.6	0.36	49.7	
09/24/20	6.47	501	18.4	5.6	0.96	20.9	

Table C2
Historical Groundwater Field Parameters
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW-24	03/26/10	6.39	651	13.4	153.0	0.31	17
	04/16/10	6.59	671	14.0	13.0	0.36	21
	05/06/10	6.47	670	15.1	2.0	0.20	28
	06/09/10	6.52	799	15.9	10.0	0.19	24
	05/13/20	6.42	602	15.0	10.3	0.08	-97.4
MW-25	03/29/10	6.56	703	12.2	57.0	0.67	12
	04/07/10	NM	720	NM	2.0	NM	NM
	04/16/10	6.51	687	14.2	2.0	0.22	24
	05/06/10	6.62	744	14.0	2.0	0.31	26
	06/09/10	6.52	896	15.8	7.0	0.27	25
	05/14/20	6.32	740	14.6	1.9	0.07	-94.9
MW-26	04/01/10	6.44	269	12.7	34.0	0.74	19
	04/09/10	NM	290	NM	4.0	NM	NM
	04/16/10	6.49	270	13.6	21.0	0.19	23
	05/06/10	6.67	218	12.6	18.0	0.31	28
	06/09/10	6.47	207	14.9	41.7	0.76	28
MW-27	09/24/14	6.38	566	16.2	64.3	0.00	-80.0
	03/18/15	6.22	339	13.5	17.8	0.00	-122.0
	09/16/15	6.75	631	19.5	2.2	0.00	-79.0
	03/15/16	6.91	699	12.7	0.0	0.00	-74.0
	09/15/16	6.36	522	16.7	1.5	0.12	-81.9
	03/08/17	6.64	700	9.7	300.0	0.00	-49.0
	09/18/17	6.56	620	16.8	0.0	0.00	-61.0
	03/20/18	6.37	657	15.3	0.0	0.00	0.4
	09/12/18	6.36	520	17.2	1.5	0.60	-60.2
	06/03/19	6.31	560	18.6	9.0	0.12	-44.5
	08/28/19	5.87	648	17.3	2.3	0.41	-67.2
	05/14/20	6.56	566.2	14.6	0.4	0.11	-56.0
09/24/20	6.29	412	15.8	5.0	0.91	-52.2	
MW-28	09/25/14	6.56	1,010	14.6	257.0	0.00	-95.0
	03/19/15	5.72	575	11.4	127.0	0.00	-204.0
	09/17/15	6.32	985	16.2	11.7	0.00	-125.0
	03/16/16	7.30	1,200	12.2	0.0	0.00	-99.0
	09/15/16	6.41	749	14.6	9.1	0.22	-94.4
	03/09/17	6.70	1,010	11.0	18.6	0.00	-44.0
	09/18/17	7.05	957	15.7	45.2	0.00	-43.0
	03/19/18	6.40	687	13.2	4.7	0.36	12.6
	09/12/18	6.70	679	13.2	7.0	0.40	-99.0
	06/03/19	6.45	846	15.4	23.0	0.07	-48.4
	08/28/19	5.98	899	16.0	--	0.46	-94.9
05/14/20	6.53	920	13.8	2.0	0.07	-124.1	
09/24/20	6.45	841	14.6	4.7	0.95	-112.6	
MW-29D	08/30/19	6.41	414	19.7	11.8	0.32	-64.0
	05/14/20	6.83	405.5	14.2	0.8	0.10	-101.0
	09/24/20	6.66	377	15.1	16.0	1.11	-107.5
P-1	09/24/04	6.54	401	15.4	NM	0.24	33
	05/14/20	6.33	145	13.9	0.4	2.70	138.0
INJ-1	07/09/01	6.39	703	14.2	47.8	1.55	-18
INJ-2	07/09/01	6.45	384	15.1	61.9	1.20	17
	06/11/02	6.49	950	15.6	13.8	0.23	NM
	06/10/03	6.38	381	14.5	10.4	0.25	NM

Table C2
Historical Groundwater Field Parameters
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
INJ-3	07/09/01	6.37	407	14.2	30.1	1.51	17
	06/11/02	6.59	1,971	15.1	13.8	0.11	NM
	12/17/02	6.27	417	13.4	12.3	0.11	NM
	06/10/03	6.50	634	14.2	23.8	0.21	NM

Notes:

mS/cm = millisiemens per centimeter

°C = degrees Celsius

NTU = nephelometric turbidity units

mg/L = milligram per liter

mV = millivolts

NM = not measured

^a Likely meter malfunction

^b Anomalous result

Table C3
 Indicator Hazardous Substances in Groundwater
 Univar Solutions USA, Inc.
 Kent, Washington

Sample Location	Date Collected	1,1-DCA	1,1-DCE	1,2,4-TMB	1,2-DCA	1,2-Dichloro-propane	Benzene	Chloro-ethane	Chloro-form	cis-1,2-DCE	Ethyl-benzene	Methylene Chloride	PCE	1,1,1-TCA	TCE	Toluene	Total Xylenes	Vinyl Chloride
	2020 Revised Cleanup Levels:	7.7	7.0	80	0.48	1.2	0.80	-	1.4	16	700	5.0	5.0	200	0.54	640	1,600	0.50
	04/17/95	230	5 U	NA U	5.0 U	5.0 U	5.0 U	30	5.0 U	42	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U
	09/04/96	330	5 U	20 U	5.0 U	5.0 U	5.0 U	9	5.0 U	56	5.0 U	10 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U
	9/4/96 (DUP)	460	5 U	20 U	5.0 U	5.0 U	5.0 U	13	5.0 U	7.2	5.0 U	10 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5
	12/11/96	120	0.5 U	2 U	0.5 U	0.5 U	0.5 U	4	0.5 U	9.7	0.5 U	2 B	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.7
	03/04/97	73	0.5 U	2 U	0.5 U	0.5 U	0.5 U	4.5	0.5 U	5.8	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.8
	06/27/97	140	J	0.5 U	2 U	0.5 U	0.5 U	18	0.5 U	17	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2
	09/04/97	190	0.5 U	2 U	0.5 U	0.5 U	0.5 U	1.8	0.5 U	25	0.6	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5
	12/04/97	48	0.5 U	2 U	0.5 U	0.5 U	0.5 U	1.8	0.5 U	2.1	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	03/06/98	100	0.5 U	2 U	0.5 U	0.5 U	0.5 U	3.6	0.5 U	8.6	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.9
	06/18/98	38	0.5 U	2 U	0.5 U	0.5 U	0.5 U	B	3.1	1.8	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.6
	09/29/98	160	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.7	0.5 U	14	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.1
	9/29/98 (DUP)	200	0.5 U	2 U	0.5 U	0.5 U	1 U	1.6	0.5 U	18	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.5
	12/14/98	37	0.5 U	2 U	0.5 U	0.5 U	0.5 U	5.8	0.5 U	1.5	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.5
	03/03/99	47	0.5 U	2 U	0.5 U	0.5 U	0.5 U	11	0.5 U	4.1	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1
	06/17/99	66	1.0 U	4 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0	1.0 U	10 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U
	09/17/99	97	J	0.2 U	0.2 U	0.2 U	0.2 U	E	0.8	0.2 U	6.5	0.3 U	0.2 U	0.3 U	0.3 U	0.2 U	0.4 U	0.6
	12/08/99	26	0.5 U	2 U	0.5 U	0.5 U	0.5 U	7.9	0.5 U	1.1	0.5 U	1 U	0.6 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
	03/07/00	33	0.5 U	2 U	0.5 U	0.5 U	0.5 U	17	0.5 U	1.7	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.6
	06/21/00	24	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	J	0.2 U	0.1 U	1.3	0.1 U	0.2 U	0.2 U	0.2 U	0.1 U	0.2 U	0.4 J
	09/12/00	54	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2	1.0 U	3.0	1.0 U	5 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1 U
	9/12/00 (DUP)	61	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2	1.0 U	3.0	1.0 U	5 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1 U
	12/07/00	26	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	J	0.2 U	0.1 U	1.7	0.1 U	0.2 U	0.2 U	0.2 U	0.1 U	0.2 U	0.3 J
	03/15/01	46	J	0.2 U	0.2 U	0.2 U	0.2 U	J	0.2 U	0.1 U	2.3	0.1 U	0.2 J	0.2 U	0.2 U	0.1 J	0.2 U	0.6
	07/12/01	27	0.1 U	0.15 U	0.12 U	0.13 U	0.43 J	J	0.2 U	0.1 U	1.9	0.098 U	0.2 U	0.11 U	0.12 U	0.12 U	0.31 J	0.19 U
	09/24/01	37	0.5 U	NA U	0.50 U	0.50 U	0.51 U	0.5 U	0.5 U	3.0	0.5 U	1 U	0.5 U	0.50 U	0.50 U	0.5 U	0.59 U	0.5 U
	01/03/02	16	0.12 U	0.15 U	0.12 U	0.13 U	0.11 U	0.47 J	J	0.10 U	1.0	0.098 U	0.2 U	0.11 U	0.12 U	0.12 U	0.46 JB	0.19 U
	03/28/02	22	0.12 U	0.15 U	0.12 U	0.13 U	0.41 J	J	0.23 U	0.10 U	1.4	0.13 U	0.2 U	0.11 U	0.12 U	0.12 U	0.16 J	0.22 U
	06/14/02	19	0.12 U	0.15 U	0.12 U	0.13 U	0.35 J	J	0.23 U	0.10 U	1.3	0.13 U	0.2 U	0.11 U	0.12 U	0.12 U	0.098 U	0.22 U
	09/17/02	27	0.12 U	0.15 U	0.12 U	0.13 U	0.43 J	J	0.23 U	0.10 U	2.1	0.13 U	0.2 U	0.11 U	0.12 U	0.12 U	0.098 U	0.22 U
	12/17/02	38	0.5 U	2 U	0.5 U	0.5 U	0.5 U	18	0.5 U	0.9	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.58
	03/20/03	12	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.8	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	06/11/03	9.5	0.12 U	0.15 U	0.12 U	0.13 U	0.41 J	J	0.23 U	0.096 U	0.9	0.13 U	0.2 U	0.11 U	0.12 U	0.12 U	0.47 JB	0.22 U
	09/11/03	9.9	0.12 U	0.15 U	0.12 U	0.13 U	0.41 JB	J	0.23 U	0.096 U	0.9	0.13 U	0.2 U	0.11 U	0.12 U	0.12 U	0.32 JB	0.22 U
	12/04/03	19	0.12 U	0.15 U	0.12 U	0.13 U	0.35 J	J	0.23 U	0.096 U	1.0	0.13 U	0.27 J	0.11 U	0.12 U	0.12 U	0.098 U	0.22 U
	03/15/04	16	0.12 U	0.15 U	0.12 U	0.13 U	0.48 J	J	0.23 U	0.096 U	1.5	0.29 J	0.20 U	0.11 U	0.12 U	0.12 U	0.17 J	2.4
	09/24/04	9.9	0.12 U	0.15 U	0.12 U	0.13 U	0.43 J	J	0.23 U	0.096 U	1.5	0.13 U	0.20 U	0.11 U	0.12 U	0.12 U	0.15 J	0.22 U
	04/05/05	9.1	0.13 U	0.15 U	0.12 U	0.14 U	0.33 J	J	0.23 U	0.14 U	0.9	0.13 U	0.20 U	0.13 U	0.12 U	0.14 U	0.82 U	0.22 U
	09/21/05	10	0.13 U	0.15 U	0.12 U	0.14 U	0.44 J	J	0.23 U	0.14 U	1.6	0.13 U	0.20 U	0.13 U	0.12 U	0.14 U	0.34 J	0.22 U
	03/14/06	12	0.13 U	0.15 U	0.12 U	0.14 U	0.36 J	J	0.23 U	0.14 U	1.2	0.13 U	0.20 U	0.13 U	0.12 U	0.14 U	0.15 J	0.22 U
	09/12/06	27	0.13 U	0.15 U	0.12 U	0.14 U	0.39 J	J	0.23 U	0.14 U	2.7	0.13 U	0.20 U	0.13 U	0.12 U	0.14 U	0.11 U	0.22 U
	04/03/07	7.7	0.13 U	0.15 U	0.12 U	0.14 U	0.31 J	J	0.23 U	0.14 U	1.0	0.13 U	0.20 U	0.13 U	0.12 U	0.14 U	0.11 U	0.22 U
	09/25/07	18	0.13 U	0.15 U	0.12 U	0.14 U	0.37 J	J	0.23 U	0.14 U	2.1	0.13 U	0.20 U	0.13 U	0.12 U	0.14 U	0.11 U	0.22 U

Table C3
 Indicator Hazardous Substances in Groundwater
 Univar Solutions USA, Inc.
 Kent, Washington

Sample Location	Date Collected	1,1-DCA	1,1-DCE	1,2,4-TMB	1,2-DCA	1,2-Dichloro-propane	Benzene	Chloro-ethane	Chloro-form	cis-1,2-DCE	Ethyl-benzene	Methylene Chloride	PCE	1,1,1-TCA	TCE	Toluene	Total Xylenes	Vinyl Chloride	
	2020 Revised Cleanup Levels:	7.7	7.0	80	0.48	1.2	0.80	-	1.4	16	700	5.0	5.0	200	0.54	640	1,600	0.50	
	09/23/14	1.72	0.500 U	3.56	0.500 U	0.500 U	6.35	45.5	1.00 U	0.519	1.75	0.500 U	0.500 U	0.500 U	0.500 U	4.06	6.80	0.200 U	
	03/17/15	0.64 J	1 U	0.13 J	0.5 U	0.5 U	5.4	58.5	1 U	1 U	0.25 J	5 U	0.5 U	1 U	1 U	0.44 J	1.01 J	0.5 U	
	09/17/15	1.0 U	1.0 U	0.99 J	0.50 U	0.50 U	6.2	45.5	1.0 U	1.0 U	0.38 J	5.0 U	0.50 U	1.0 U	1.0 U	0.74 J	5.2 J	0.21 J	
	03/14/16	1.5	1 U	2 UJ	0.5 U	0.5 U	3.6	41.4 J	1 U	0.27 J	0.21 J	5 U	0.5 U	1 U	1 U	0.62 J	1 U	0.5 U	
	09/14/16	0.46 J	1 U	1 J	0.5 U	0.5 U	6.9	24.9	1 U	1 U	0.39 J	5 U	0.5 U	1 U	1 U	0.76 J	2.26 J	0.39 J	
	03/09/17	0.76	0.5 U	0.13 J	0.5 U	0.5 U	3	16.1	0.5 U	0.16 J	0.13 J	2 U	0.5 U	0.5 U	0.5 U	0.34 J	0.36 J	0.5 U	
	09/21/17	0.59 J	0.50 U	0.45 J	0.50 U	0.50 U	6.5 J	13.0 J	0.50 U	0.22 J	0.27 J	2.0 U	0.50 U	0.50 U	0.50 U	0.66	0.83	0.52	
	03/21/18	0.3 J	0.5 UJ	0.2 J	0.5 UJ	0.5 UJ	2.9 J	6.7 J	0.5 UJ	0.5 UJ	0.5 UJ	2 UJ	0.5 UJ	0.5 UJ	0.5 UJ				
	09/13/18	0.36 J	0.5 U	0.17 J	0.5 U	0.5 U	3.9	13.5	0.5 U	0.5 U	0.23 J	2 U	0.5 U	0.5 U	0.5 U	0.45 J	0.87 J	0.49 J	
	05/31/19	0.2 J	0.5 U	0.2 J	0.5 U	0.5 U	2.3	21.8	0.5 U	0.5 U	0.24 J	2 U	0.5 U	0.5 U	0.5 U	0.17 J	0.14	0.26 J	
	08/27/19	0.29 J	0.5 U	0.47 J	0.5 U	0.5 U	2.4	30 J	0.5 U	0.5 U	0.25 J	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.37	0.5 U	
	05/14/20	0.25 J	0.5 U	0.5 U	0.5 U	0.5 U	1.5	6	0.5 U	0.5 U	0.15 J	2 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	
	09/25/20	0.15 J	0.5 U	0.31 J	0.5 U	0.5 U	1.7	9.5 J+	0.5 U	0.5 U	0.52	2 U	0.5 U	0.5 U	0.5 U	0.46 J	1.37 J	0.26 J	
MW-5	09/04/96	25 U	25 U	100 U	25 U	25 U	25 U	25 U	25 U	34	25 U	50 U	2,600	25 U	180	25 U	25 U	25 U	
	12/10/96	0.7	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.9	28	1.0	1 U	3,400	3.4	130	1.3 B	1.6 B	0.5 U	
	12/10/96 (DUP)	0.8	0.6	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.9	34	0.5 U	1 U	3,300	3.4	130	0.5 U	0.5 U	0.5 U	
	03/04/97	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.7	21	0.5 U	1 U	3,100	3.1	100	0.5 U	0.5 U	0.5 U	
	06/27/97	5 UJ	5 UJ	20 UJ	5 UJ	5 UJ	5 UJ	5.0 UJ	5 UJ	32	5 UJ	10 UJ	4,700 J	5 UJ	140 J	5 UJ	5 UJ	5.0 UJ	
	09/04/97	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	30	0.9	1 U	4,800	3.2	150	0.5 U	0.9	0.5 U	
	12/04/97	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.6	18	1 U	1 U	4,400	3	120	0.5 U	0.5 U	0.5 U	
	03/06/98	5 U	5 U	20 U	5 U	5 U	5 U	5.0 U	5 U	30	5 U	10 U	4,000	5 U	140	5 U	5 U	5.0 U	
	06/18/98	12 U	12 U	50 U	12 U	12 U	12 U	12 U	12 U	28	12 U	25 U	4,100	12 U	130	12 U	12 U	12 U	
	09/29/98	10 U	10 U	40 U	10 U	10 U	10 U	10 U	10 U	25	10 U	20 U	3,800	10 U	130	10 U	10 U	10 U	
	12/15/98	5 U	5 U	20 U	5 U	5 U	5 U	5.0 U	5 U	34	5 U	10 U	3,300	5 U	120	5 U	5 U	7	
	03/02/99	12 U	12 U	50 U	12 U	12 U	12 U	12 U	12 U	14	12 U	25 U	4,400	12 U	96	12 U	24 U	12 U	
	06/16/99	10 U	10 U	40 U	10 U	10 U	10 U	10 U	10 U	12	10 U	100 U	3,400	10 U	110	10 U	10 U	10 U	
	09/16/99	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.3 U	0.2 U	0.3 U	3,000	0.3 U	120	0.2 U	0.4 U	0.3 U	
	09/16/99 (DUP)	0.2 U	0.3 E	0.2 U	0.3 E	0.2 U	0.2 U	0.2 U	0.2 U	0.4 E	0.15	0.2 U	0.3 U	2,500	1.6	94	0.2 U	0.4 U	0.3 U
	12/08/99	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	23	0.5 U	1 U	2,600 J	1.2	120 J	0.5 U	0.5 U	0.5 U

Table C3
 Indicator Hazardous Substances in Groundwater
 Univar Solutions USA, Inc.
 Kent, Washington

Sample Location	Date Collected	1,1-DCA	1,1-DCE	1,2,4-TMB	1,2-DCA	1,2-Dichloro-propane	Benzene	Chloro-ethane	Chloro-form	cis-1,2-DCE	Ethyl-benzene	Methylene Chloride	PCE	1,1,1-TCA	TCE	Toluene	Total Xylenes	Vinyl Chloride
	2020 Revised Cleanup Levels:	7.7	7.0	80	0.48	1.2	0.80	-	1.4	16	700	5.0	5.0	200	0.54	640	1,600	0.50
	05/30/19	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	08/26/19	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	05/12/20	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	09/24/20	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U
MW-11	07/12/01	0.91 U	1.2 U	NA	1.2 U	1.3 U	NA	1.8 U	0.96 U	19	NA	2 U	2,000	1.2 U	78	NA	NA	2.5 J
	08/27/01	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	19	5 U	10 U	1,600	5 U	69	5 U	5 U	5 U
	09/24/01	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	22	5 U	10 U	1,900	5 U	84	5 U	5 U	5 U
	10/15/01	1.4	0.53	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	28	0.5 U	1 U	1,600	0.5 U	83	0.5 U	0.5 U	1.2
	10/15/01	1.4	0.54	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	29	0.5 U	1 U	1,700	0.5 U	86	0.5 U	0.5 U	1.2
	10/22/01	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	25	5 U	10 U	2,000	5 U	92	5 U	5 U	5 U
	10/22/01	2.5 U	2.5 U	NA	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	25	2.5 U	5 U	2,000	2.5 U	92	2.5 U	2.5 U	2.5 U
	10/29/01	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	25	5 U	10 U	1,700	5 U	91	5 U	5 U	5 U
	10/29/01	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	25	5 U	10 U	1,800	5 U	92	5 U	5 U	5 U
	11/19/01	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	20	5 U	10 U	1,900	5 U	78	5 U	5 U	5 U
	01/02/02	0.46 U	0.6 U	0.71 U	0.57 U	0.62 U	0.53 U	1.2 U	0.48 U	18	0.49 U	0.97 U	1,900	0.56 U	78	0.49 U	0.93 U	1.1 U
	03/27/02	0.91 U	1.2 U	1.5 U	1.2 U	1.3 U	1.1 U	2.3 U	0.96 U	19	1.3 U	4 J	1,800	1.2 U	67	0.98 U	2.2 U	2.2 U
	06/11/02	0.46 U	0.6 U	0.71 U	0.57 U	0.62 U	0.53 U	1.2 U	0.48 U	19	0.49 U	0.97 U	1,500	0.57 U	64	0.49 U	1.5 U	1.1 U
	09/17/02	0.91 U	1.2 U	1.5 U	1.2 U	1.3 U	1.1 U	2.3 U	0.96 U	16	1.3 U	2 U	2,000	1.2 U	67	0.98 U	2.2 U	2.2 U
	12/16/02	2.2	1 U	4.0 U	1.0 U	1.0 U	1.1 U	1 U	1.0 U	7.9	1.0 U	4 U	680	1.0 U	40	1.0 U	1.0 U	1.7 U
	03/17/03	1.0 J	0.6 U	0.71 U	0.57 U	0.62 U	0.53 U	1.2 U	0.48 U	7.5	0.65 U	1.3 J	1,100	0.57 U	46	0.49 U	1.1 U	1.10 U
	03/17/03	1.0 J	0.6 U	0.71 U	0.57 U	0.62 U	0.53 U	1.2 U	0.48 U	7.5	0.65 U	1.3 J	1,100	0.57 U	45	0.49 U	1.1 U	1.10 U
	06/10/03	0.9 J	0.6 U	0.71 U	0.57 U	0.62 U	0.53 U	1.2 U	0.5 J	7.4	0.65 U	0.97 U	1,500	0.57 U	53	0.85 JB	1.1 U	1.5 J
	09/10/03	0.46 U	0.6 U	0.71 U	0.57 U	0.62 U	0.53 U	1.2 U	0.5 J	6.0	0.65 U	0.97 U	1,700	0.75 J	62	0.49 U	1.1 U	1.6 J
	12/05/03	2.9	0.4 J	0.29 U	0.23 U	0.25 U	0.86 J	0.46 U	0.2 J	8.8	0.26 U	0.39 U	1,100	0.3 J	58	0.2 U	0.44 U	2.1
	03/16/04	0.55 J	0.6 U	0.71 U	0.57 U	0.62 U	0.53 U	1.2 U	0.55 J	5.2	0.65 U	0.97 U	1,500	0.65 J	47	0.49 U	1.5 U	1.1 U
	09/22/04	0.7 J	0.3 U	0.36 U	0.29 U	0.31 U	0.27 U	0.57 U	0.43 J	6.3	0.33 U	0.49 U	1,300	0.58 J	47	0.25 U	0.55 U	0.78 J
	04/04/05	0.68 J	0.31 U	0.36 U	0.29 U	0.35 U	0.34 U	0.57 U	0.34 U	13	0.33 U	0.49 U	1,300	0.50 J	48	0.58 J	0.55 U	0.53 U
	09/20/05	0.45 J	0.19 J	0.15 U	0.12 U	0.14 U	0.14 U	0.23 U	0.21 J	29	0.13 U	0.2 U	1,400	0.61	52	0.17 J	0.22 U	0.35 J
	03/14/06	0.65 J	0.61 U	0.71 U	0.57 U	0.7 U	0.68 U	1.2 U	0.68 U	51	0.65 U	0.97 U	1,000	0.60 J	50	0.54 U	1.1 U	0.8 J
	09/13/06	0.51 U	0.61 U	0.71 U	0.57 U	0.7 U	0.68 U	1.2 U	0.68 U	28	0.65 U	0.97 U	1,100	0.58 U	50	0.54 U	1.1 U	0.7 J
04/04/07	0.51 U	0.61 U	0.71 U	0.57 U	0.7 U	0.68 U	1.2 U	0.68 U	50	0.65 U	0.97 U	1,200	0.58 U	38	0.54 U	1.1 U	2.1 U	

Table C3
 Indicator Hazardous Substances in Groundwater
 Univar Solutions USA, Inc.
 Kent, Washington

Sample Location	Date Collected	1,1-DCA	1,1-DCE	1,2,4-TMB	1,2-DCA	1,2-Dichloro-propane	Benzene	Chloro-ethane	Chloro-form	cis-1,2-DCE	Ethyl-benzene	Methylene Chloride	PCE	1,1,1-TCA	TCE	Toluene	Total Xylenes	Vinyl Chloride															
	2020 Revised Cleanup Levels:	7.7	7.0	80	0.48	1.2	0.80	-	1.4	16	700	5.0	5.0	200	0.54	640	1,600	0.50															
	09/13/16	1.4	1	U	9.7	0.5	U	0.5	U	0.93	8.9	1	U	18.1	11.1	5	U	0.5	U	1	U	1	U	8.8	14.5	74.8							
	09/13/16 (DUP)	1.4	1	U	10.2	0.5	U	0.5	U	0.96	9.2	1	U	18.7	11.5	5	U	0.5	U	1	U	1	U	9.2	15.1	89.2							
	03/09/17	0.98	0.5	U	13.1	0.14	J	0.5	U	1.1	2.2	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	3.4	16.2	0.27							
	03/09/17 (DUP)	1.1	0.5	U	13.2	0.14	J	0.5	U	1.2	2.7	0.5	U	0.15	J	20.6	2	U	0.5	U	0.5	U	0.5	U	3.5	17.1	0.32						
	09/19/17	0.37	J	0.50	U	11.1	0.50	U	0.50	U	0.82	3.8	J	0.50	U	0.34	J	13.6	J	2.0	U	0.50	U	0.50	U	0.50	U	4.2	J	12.9	J	0.73	
	9/19/17 (DUP)	0.42	J	0.50	U	18.1	0.50	U	0.50	U	1.5	7.6	J	0.50	U	0.42	J	24.2	J	2.0	U	0.50	U	0.50	U	0.50	U	7.6	J	22.8	J	1.1	
	03/19/18	0.28	J-	0.5	UJ	20.5	J-	0.5	UJ	0.5	UJ	1.1	J-	0.5	UJ	22.5	J-	2	UJ	0.5	UJ	0.5	UJ	0.5	UJ	2.2	J-	19.1	J-	0.21	J-		
	03/19/18 (DUP)	0.25	J-	0.5	UJ	17.3	J-	0.5	UJ	0.5	UJ	0.92	J-	0.5	UJ	19.7	J-	2	UJ	0.5	UJ	0.5	UJ	0.5	UJ	1.9	J-	16.3	J-	0.21	J-		
	09/12/18	0.16	J	0.5	U	7.6	0.5	U	0.5	U	0.78	2.5	0.5	U	0.15	J	12.3	2	U	0.5	U	0.5	U	0.5	U	0.76	4.6	0.27	J				
	09/12/18 (DUP)	0.18	J	0.5	U	7	0.5	U	0.5	U	0.76	2.5	0.5	U	0.15	J	11.5	2	U	0.5	U	0.5	U	0.5	U	0.72	4.2	0.28	J				
	05/30/19	0.16	J	0.5	U	39.8	0.5	U	0.5	U	1.9	4.5	0.17	J	0.3	J	39.9	2	U	0.5	U	0.5	U	0.5	U	1.3	6.2	0.6					
	08/26/19	0.19	J	0.5	U	4.3	0.5	U	0.5	U	0.38	1	0.5	U	0.5	U	5.3	2	U	0.5	U	0.5	U	0.5	U	0.5	U	0.70	0.18	J			
	05/13/20	0.22	J	0.5	U	0.46	0.5	U	0.5	U	0.15	0.5	U	0.5	U	0.66	0.24	J	2	U	0.5	U	0.5	U	0.5	U	0.5	U	0.28	0.54	J		
	09/24/20	0.2	J	0.5	U	1.8	0.5	U	0.5	U	0.17	0.5	U	0.5	U	0.36	0.48	J	2	U	0.5	U	0.5	U	0.5	U	0.14	0.18	J	0.5	U		
	09/14/06	1,700	71		210	5.7	U	7	U	6.8	U	210	6.8	U	8,400	1,700	15	J	160	1,200	190	9,300	8,100	1,500									
	09/14/06 (DUP)	1,600	63		200	5.7	U	7	U	6.8	U	210	6.8	U	8,500	1,600	15	J	140	1,000	160	9,300	7,400	1,400									
	04/04/07	2,200	57		260	0.5	J	0.35	U	1.3	J	140	0.8	J	8,400	1,900	12	2.5	470	16	11,000	7,600	1,500										
	09/25/07	2,400	42		220	2.9	U	3.5	U	3.4	U	230	3.4	U	5,900	1,500	15	J	3	U	100	3.4	U	7,400	6,300	3,100							
	05/02/08	2,200	32		190	1.5	U	0.84	U	1.6	J	440	0.84	U	4,000	1,400	9	J	2	U	59	1.3	U	7,000	6,100	3,800							
	09/30/08	780	15		220	1.9	U	1.1	U	1.2	U	1,000	1.1	U	2,500	1,700	10	J	2	U	9	1.6	U	6,100	7,200	2,600							
	03/25/09	700	9.5		240	25	U	25	U	12	U	1,600	50	U	1,200	1,800	25	U	8.5	J	7.5	5,800	7,500	1,900									
	09/30/09	10	U	25	280	10	U	10	U	10	U	2,600	20	U	4,100	2,100	10	U	10	U	37	10	U	6,200	8,100	8,200							
	03/28/10	10	U	10	U	58	0.5	U	0.5	U	18	400	1.0	U	280	740	0.5	U	0.5	U	8.8	J	0.5	U	2,400	1,800	350						
	04/18/10	810	19		190	10	U	10	U	10	U	1,400	20	U	3,800	1,600	10	U	10	U	70	10	U	4,700	3,800	2,100							
	05/06/10	220	5.0	U	190	10	U	10	U	10	U	1,200	20	U	370	1,900	10	U	5.0	U	34	5.0	U	5,400	4,600	490							
	05/06/10 (DUP)	210	5.0	U	180	10	U	10	U	10	U	1,200	20	U	380	1,800	10	U	5.0	U	34	5.0	U	5,400	4,600	520							
	06/09/10	110	5.0	U	49	10	U	10	U	10	U	1,600	20	U	67	540	10	U	5.0	U	16	5.0	U	3,200	1,400	150							
	07/08/10	90	5.0	U	98	10	U	10	U	10	U	1,600	20	U	42	640	10	U	5.0	U	13	5.0	U	5,500	1,600	210							
	07/06/10 (LAB DUP)	80	5.0	U	76	10	U	10	U	10	U	1,500	20	U	34	670	10	U	5.0	U	11	5.0	U	5,000	1,500	170							
	09/30/10	90.6	5.0	U	142	10	U	10	U	10	U	1,120	20	U	131	1,120	11.0	5.0	U	10	U	5.0	U	4,890	2,880	243							
	03/02/11	288	9.28		174	0.5	U	0.5	U	0.750	1,130	1.0	U	3,330	1,045	4.61	1.92	34.7	2.11	4,630	J	4,250	1,030										
	03/02/11 (DUP)	295	9.09		175	0.5	U	0.5	U	0.820	921	1.0	U	2,820	899	4.93	1.81	35.5	1.95	3,830		3,640	875										
	03/02/11 (LAB DUP)	286	9.12		177	0.5	U	0.5	U	0.780	869	1.0	U	2,760	873	4.73	1.85	34.3	1.97	3,760		3,560	912										

Table C3
Indicator Hazardous Substances in Groundwater
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date Collected	1,1-DCA	1,1-DCE	1,2,4-TMB	1,2-DCA	1,2-Dichloro-propane	Benzene	Chloro-ethane	Chloro-form	cis-1,2-DCE	Ethyl-benzene	Methylene Chloride	PCE	1,1,1-TCA	TCE	Toluene	Total Xylenes	Vinyl Chloride
	2020 Revised Cleanup Levels:	7.7	7.0	80	0.48	1.2	0.80	-	1.4	16	700	5.0	5.0	200	0.54	640	1,600	0.50
	09/12/18	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.15 j	0.2 j	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	06/03/19	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.14 j	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.62	1 U	0.5 U
	08/28/19	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	05/14/20	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.13 j	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	09/24/20	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.14 j	0.25 j	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U
MW-29D	08/30/19	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	1.8	1 U	0.5 U
	05/14/20	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	09/24/20	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U

Notes:

All results in ug/L.

1995 analyses performed using EPA Method 8240A.

Analyses since 1996 performed using EPA Method 8260A.

Only indicator hazardous substances shown.

Detections shown in bold.

Shaded results above their respective cleanup level.

U = not detected above associated method reporting limit.

NA = not analyzed or not quantitated

DUP = duplicate sample collected in the field and blind labeled.

LAB DUP = laboratory duplicate sample

B = the analyte was also detected in an associated blank.

J = the associated numerical value is an estimated quantity based on data review or laboratory estimate above the MDL but below the MRL.

E = laboratory estimated concentration

Results from June 2000 and from December 2000 to September 2008 are

reported relative to the method detection limits (MDLs).

1,2,4-TMB = 1,2,4-trimethylbenzene

1,1-DCA = 1,1-dichloroethane

1,2-DCE = 1,2-dichloroethane

1,1-DCE = 1,1-dichloroethane

cis-1,2-DCE = cis-1,2-dichloroethane

TCA = 1,1,1-trichloroethane

TCE = trichloroethane

PCE = tetrachloroethane

Table C3
General Chemistry Parameters in Groundwater
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date Collected	Anions (EPA Method 300.0)				Sulfide	Total Alkalinity		Total Organic Carbon	Total Manganese	Total Iron		Ferrous Iron	TDS
		Chloride	Bromide	Nitrate as Nitrogen	Sulfate	Hach Method 8131 or SM 4500-S2-F	Hach Method AL AP MG-L	SM 2320B	EPA Method 415.1 or SM 5310B	EPA Method 6010A/6010B	EPA Method 6010A/6010B	Hach Method 8008	Hach Method 8146	EPA Method 160.1
Shallow On-Site Monitoring Wells														
MW-1	09/04/96	130	NA	NA	88.0	NA	NA	NA	NA	2.1	29.6	NA	NA	990
	12/15/98	68.5	NA	< 0.2	4.3	0.070	500	NA	47.0	NA	NA	23.4	24.6	NA
	03/02/99	64.5	NA	0.2	5.8	0.266	540	NA	37.0	NA	NA	29.4	18.2	NA
	06/17/99	49	NA	0.3	6.7	0.110	460	NA	40.5	NA	NA	24.0	20.8	NA
	09/16/99	59.8	NA	< 0.2	7.2	0.249	400	NA	42.1	NA	NA	11.0	18.8	NA
	09/18/02	NA	NA	NA	NA	NA	NA	NA	37	NA	NA	NA	NA	NA
MW-2	09/04/96	18.0	NA	NA	0.3	NA	NA	NA	NA	3.21	112	NA	NA	576
	12/15/98	13.6	NA	0.3	5.3	0.017	260	NA	26.4	NA	NA	23.9	30.4	NA
	03/02/99	14.3	NA	0.9	13.1	0.037	360	NA	22.8	NA	NA	46.4	23.0	NA
	06/16/99	13	NA	1.0	7.5	0.054	420	NA	24.2	NA	NA	86.5	66.7	NA
	06/16/99 (DUP)	12.2	NA	1.3	12.8	NA	NA	NA	25.1	NA	NA	NA	NA	NA
	09/16/99	14.6	NA	< 0.2	< 0.2	0.037	400	NA	27.2	NA	NA	94.6	61.9	NA
	09/18/02	NA	NA	NA	NA	NA	NA	NA	33	NA	NA	NA	NA	NA
MW-3	09/04/96	26.0	NA	NA	0.9	NA	NA	NA	NA	3.17	36.3	NA	NA	952
	09/04/96 (DUP)	26.0	NA	NA	1.1	NA	NA	NA	NA	3.13	38.5	NA	NA	976
	12/14/98	29.8	NA	< 0.2	< 0.2	< 0.001	660	NA	44.5	NA	NA	34.4	34.2	NA
	03/03/99	25.6	NA	< 0.2	0.3	0.013	640	NA	52.8	NA	NA	33.0	31.7	NA
	06/17/99	17.1	NA	< 0.2	< 0.2	0.013	640	NA	57.9	NA	NA	59.7	38.0	NA
	09/17/99	14.5	NA	< 0.2	< 0.2	0.047	520	NA	62.4	NA	NA	100.1	47.7	NA
MW-4	09/04/96	110	NA	NA	37.0	NA	NA	NA	NA	9.89	83.9	NA	NA	796
	12/14/98	89.7	NA	< 0.2	15.6	0.026	840	NA	23.4	NA	NA	59.8	59.1	NA
	03/03/99	45.0	NA	< 0.2	183	0.880	900	NA	12.8	NA	NA	12.9	7.5	NA
	06/17/99	60.9	NA	0.3	61.7	0.159	840	NA	18.2	NA	NA	6.99	4.75	NA
	09/17/99	77.3	NA	< 0.2	2.0	0.071	870	NA	18.4	NA	NA	24.3	13.4	NA
	09/18/02	NA	NA	NA	NA	NA	NA	NA	19	NA	NA	NA	NA	NA
MW-5	09/04/96	17.0	NA	NA	32	NA	NA	NA	NA	0.34	0.107	NA	NA	332
	12/15/98	17.5	NA	< 0.2	17.3	0	200	NA	7.8	NA	NA	0.090	0.024	NA
	03/02/99	6.9	NA	2.4	22.0	0.002	145	NA	4.8	NA	NA	0.137	0.060	NA
	06/16/99	6.2	NA	2.5	20.5	0.002	180	NA	6.0	NA	NA	0.125	0.042	NA
	09/16/99	6.8	NA	1.5	20.7	0.001	160	NA	5.9	NA	NA	0.052	0.008	NA
	09/16/99 (DUP)	6.2	NA	1.5	20.4	NA	NA	NA	5.9	NA	NA	NA	NA	NA
	09/18/02	NA	NA	NA	NA	NA	NA	NA	7.2	NA	NA	NA	NA	NA
	09/13/06	NA	NA	0.6	34.1	NA	NA	NA	NA	NA	NA	NA	NA	NA
	04/01/10	NA	< 0.1	NA	NA	NA	NA	NA	6.3	NA	NA	NA	NA	NA
	04/09/10	NA	< 0.1	NA	NA	NA	NA	NA	5.7	NA	NA	NA	NA	NA
	04/16/10	NA	< 0.1	NA	NA	NA	NA	NA	6.0	NA	NA	NA	NA	NA
	04/16/10 (LAB DUP)	NA	< 0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/06/10	NA	< 2.0	NA	NA	NA	NA	NA	5.9	NA	NA	NA	NA	NA
06/09/10	NA	< 0.1	NA	NA	NA	NA	NA	5.0	NA	NA	NA	NA	NA	
07/06/10	NA	< 0.1	NA	NA	NA	NA	NA	4.8	NA	NA	NA	NA	NA	
07/06/10	NA	NA	NA	NA	NA	NA	NA	5.6	NA	NA	NA	NA	NA	
MW-6	09/04/96	340	NA	NA	0.6	NA	NA	NA	NA	9.28	222	NA	NA	1,260
	12/15/98	199	NA	< 0.2	11.7	0.014	460	NA	22.6	NA	NA	114	125	NA
	03/02/99	213	NA	0.6	19.8	0.015	500	NA	15.8	NA	NA	170	63	NA
	03/02/99 (DUP)	208	NA	0.6	46.6	NA	NA	NA	15.9	NA	NA	NA	NA	NA

Table C3
General Chemistry Parameters in Groundwater
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date Collected	Anions (EPA Method 300.0)				Sulfide		Total Alkalinity		Total Organic Carbon		Total Manganese		Total Iron		Ferrous Iron	TDS
		Chloride	Bromide	Nitrate as Nitrogen	Sulfate	Hach Method 8131 or SM 4500-S2-F	Hach Method AL AP MG-L	SM 2320B	EPA Method 415.1 or SM 5310B	EPA Method 6010A/6010B	EPA Method 6010A/6010B	Hach Method 8008	Hach Method 8146	Method 160.1			
MW-6 (continued)	06/16/99	232	NA	0.3	11.6	0.009	520	NA	21	NA	NA	192	120	NA			
	09/16/99	130	NA	< 0.5	27.3	0.047	480	NA	18.5	NA	NA	169	95	NA			
	09/18/02	NA	NA	NA	NA	NA	NA	NA	20	NA	NA	NA	NA	NA			
MW-7	12/14/98	5.4	NA	< 0.2	1.6	0.003	260	NA	9.4	NA	NA	3.36	3.17	NA			
	03/03/99	5.7	NA	1.3	12.7	0.010	180	NA	6.5	NA	NA	1.79	1.72	NA			
	06/17/99	6.8	NA	2.3	25.1	0.005	200	NA	9.2	NA	NA	2.21	1.86	NA			
	09/17/99	8.1	NA	0.3	21.4	0.004	240	NA	10.6	NA	NA	3.58	2.98	NA			
MW-8	12/14/98	9.2	NA	< 0.2	20.4	NA	260	NA	10.0	NA	NA	1.13	0.98	NA			
	12/14/98 (DUP)	9.3	NA	< 0.2	20.4	NA	NA	NA	10.1	NA	NA	NA	NA	NA			
	03/02/99	12.7	NA	0.3	29.7	0.023	260	NA	8.9	NA	NA	2.03	0.77	NA			
	06/16/99	12.8	NA	< 0.2	29.1	0.009	240	NA	9.6	NA	NA	0.70	0.50	NA			
	09/16/99	10.5	NA	< 0.2	21.1	0.007	260	NA	10.5	NA	NA	1.02	0.45	NA			
	09/18/02	NA	NA	NA	NA	NA	NA	NA	11.4	NA	NA	NA	NA	NA			
MW-11	04/01/10	NA	< 0.1	NA	NA	NA	NA	NA	5.8	NA	NA	NA	NA	NA			
	04/09/10	NA	0.35	NA	NA	NA	NA	NA	4.9	NA	NA	NA	NA	NA			
	04/16/10	NA	0.35	NA	NA	NA	NA	NA	5.7	NA	NA	NA	NA	NA			
	05/06/10	NA	2.6	NA	NA	NA	NA	NA	5.4	NA	NA	NA	NA	NA			
	05/06/10 (LAB DUP)	NA	2.6	NA	NA	NA	NA	NA	6.4	NA	NA	NA	NA	NA			
	06/09/10	NA	3.9	NA	NA	NA	NA	NA	5.2	NA	NA	NA	NA	NA			
	06/09/10 (LAB DUP)	NA	3.9	NA	NA	NA	NA	NA	5.0	NA	NA	NA	NA	NA			
	07/06/10	NA	8.1	NA	NA	NA	NA	NA	5.6	NA	NA	NA	NA	NA			
MW-23	09/13/06	NA	NA	< 0.1	29.0	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Deep On-Site Monitoring Wells and Piezometer																	
MW-13	09/24/04	56.1	NA	< 0.2	0.6	0.05	260	NA	40.3	1.40	37.1	NA	1.5	NA			
	04/05/05	4.3	NA	< 0.1	6.1	< 0.01	50	NA	5.8	0.145	3.3	NA	2.4	NA			
	09/14/06	NA	NA	< 0.1	< 0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA			
	03/29/10	NA	0.45	NA	NA	NA	NA	NA	29	NA	NA	NA	NA	NA			
	03/29/10 (LAB DUP)	NA	0.48	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
	04/07/10	NA	0.44	NA	NA	NA	NA	NA	30	NA	NA	NA	NA	NA			
	04/07/10 (LAB DUP)	NA	0.46	NA	NA	NA	NA	NA	30	NA	NA	NA	NA	NA			
	04/16/10	NA	0.47	NA	NA	NA	NA	NA	30	NA	NA	NA	NA	NA			
	05/06/10	NA	< 2.0	NA	NA	NA	NA	NA	32	NA	NA	NA	NA	NA			
MW-14	09/24/04	6.2	NA	< 0.2	< 0.2	< 0.01	240	NA	11.8	1.12	32.7	NA	2.0	NA			
	04/05/05	6.3	NA	< 0.1	< 0.2	< 0.01	215	NA	12.8	1.24	35.7	NA	1.8	NA			
MW-15	09/24/04	6.6	NA	< 0.2	< 0.2	< 0.01	240	NA	7.9	1.33	34.8	NA	1.6	NA			
	04/05/05	7.5	NA	< 0.1	< 0.2	< 0.01	190	NA	8.0	1.41	35.9	NA	2.0	NA			
MW-16	09/13/06	NA	NA	< 0.1	< 0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA			
	09/23/04	33.5	NA	< 0.2	8.1	< 0.01	420	NA	24.1	3.71	108	NA	2.0	NA			
	04/05/05	36.2	NA	< 0.1	1.1	< 0.01	295	NA	23.6	3.92	114	NA	2.2	NA			
MW-17	09/23/04	49.7	NA	< 0.2	< 0.2	< 0.01	1,320	NA	32.9	1.77	55.7	NA	2.4	NA			
	09/23/04 (DUP)	46.9	NA	< 0.2	< 0.2	NA	NA	NA	32.8	1.75	54.9	NA	NA	NA			
	04/05/05	50.0	NA	< 0.1	< 0.2	< 0.01	230	NA	32.7	0.92	40.1	NA	2.5	NA			
MW-17	09/12/06	NA	NA	< 0.1	0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA			

Table C3
General Chemistry Parameters in Groundwater
Univar Solutions USA, Inc.
Kent, Washington

Sample Location	Date Collected	Anions (EPA Method 300.0)				Sulfide	Total Alkalinity		Total Organic Carbon	Total Manganese	Total Iron		Ferrous Iron	TDS
		Chloride	Bromide	Nitrate as Nitrogen	Sulfate	Hach Method 8131 or SM 4500-S2-F	Hach Method AL AP MG-L	SM 2320B	EPA Method 415.1 or SM 5310B	EPA Method 6010A/6010B	EPA Method 6010A/6010B	Hach Method 8008	Hach Method 8146	EPA Method 160.1
MW-18	09/23/04	8.7	NA	< 0.2	< 0.2	< 0.01	380	NA	17.1	1.64	54.4	NA	2.3	NA
	04/05/05	8.9	NA	< 0.1	< 0.2	< 0.01	295	NA	17.7	1.62	50.2	NA	2.4	NA
	04/05/05 (DUP)	8.8	NA	< 0.1	< 0.2	NA	NA	NA	17.2	1.61	50.0	NA	NA	NA
MW-19	09/23/04	23.0	NA	< 0.2	0.3	< 0.01	340	NA	19.2	1.44	64.0	NA	1.8	NA
	04/05/05	18.9	NA	< 0.100	3.7	< 0.01	250	NA	19.9	1.31	65.8	NA	2.6	NA
MW-20	09/20/05	50.7	NA	< 0.1	1.4	< 0.01	355	NA	29.1	3.60	88	NA	2.2	NA
MW-21	09/14/06	NA	NA	< 0.1	4.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/14/06 (DUP)	NA	NA	< 0.1	3.9	NA	NA	NA	NA	NA	NA	NA	NA	NA
	03/26/10	NA	< 0.1	NA	NA	NA	NA	NA	32	NA	NA	NA	NA	NA
	04/07/10	NA	20	NA	NA	NA	NA	NA	2,400	NA	NA	NA	NA	NA
	04/16/10	NA	0.59	NA	NA	NA	NA	NA	33	NA	NA	NA	NA	NA
	05/06/10	NA	2.7	NA	NA	NA	NA	NA	69	NA	NA	NA	NA	NA
	05/06/10 (DUP)	NA	2.6	NA	NA	NA	NA	NA	67	NA	NA	NA	NA	NA
	06/09/10	NA	8.5	NA	NA	NA	NA	NA	82	NA	NA	NA	NA	NA
	07/06/10	NA	8.4	NA	NA	NA	NA	NA	150	NA	NA	NA	NA	NA
MW-24	03/26/10	NA	< 0.1	NA	NA	NA	NA	NA	27	NA	NA	NA	NA	NA
	04/07/10	NA	50	NA	NA	NA	NA	NA	2,200	NA	NA	NA	NA	NA
	04/16/10	NA	0.46	NA	NA	NA	NA	NA	23	NA	NA	NA	NA	NA
	05/06/10	NA	< 2.0	NA	NA	NA	NA	NA	58	NA	NA	NA	NA	NA
	06/09/10	NA	6.3	NA	NA	NA	NA	NA	68	NA	NA	NA	NA	NA
	07/06/10	NA	8.6	NA	NA	NA	NA	NA	74	NA	NA	NA	NA	NA
	07/06/10 (DUP)	NA	8.9	NA	NA	NA	NA	NA	72	NA	NA	NA	NA	NA
MW-25	03/29/10	NA	0.45	NA	NA	NA	NA	NA	23	NA	NA	NA	NA	NA
	04/07/10	NA	0.43	NA	NA	NA	NA	NA	24	NA	NA	NA	NA	NA
	04/16/10	NA	0.37	NA	NA	NA	NA	NA	23	NA	NA	NA	NA	NA
	05/06/10	NA	< 2.0	NA	NA	NA	NA	NA	26	NA	NA	NA	NA	NA
	06/09/10	NA	1.2	NA	NA	NA	NA	NA	33	NA	NA	NA	NA	NA
	07/06/10	NA	2.5	NA	NA	NA	NA	NA	43	NA	NA	NA	NA	NA
		07/06/10 (DUP)	NA	< 0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-26	04/01/10	NA	< 0.1	NA	NA	NA	NA	NA	3.7	NA	NA	NA	NA	NA
	04/01/10 (LAB DUP)	NA	NA	NA	NA	NA	NA	NA	3.7	NA	NA	NA	NA	NA
	04/09/10	NA	< 0.1	NA	NA	NA	NA	NA	4.0	NA	NA	NA	NA	NA
	04/16/10	NA	0.43	NA	NA	NA	NA	NA	3.8	NA	NA	NA	NA	NA
	05/06/10	NA	< 2.0	NA	NA	NA	NA	NA	4.2	NA	NA	NA	NA	NA
	06/09/10	NA	< 0.1	NA	NA	NA	NA	NA	4.6	NA	NA	NA	NA	NA
	07/06/10	NA	< 0.1	NA	NA	NA	NA	NA	7.0	NA	NA	NA	NA	NA
	07/06/10 (LAB DUP)	NA	< 0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-1	09/24/04	8.8	NA	< 0.2	< 0.2	< 0.01	220	NA	20.7	1.10	38.1	NA	2.0	NA
Deep Off-Site Monitoring Well														
MW-22	09/14/06	NA	NA	0.4	49.9	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
All results in mg/L.
< = less than the method reporting limit shown.
DUP = duplicate sample collected in the field and blind labeled.

E = The result exceeded calibration curve.
J = the associated numerical value is an estimated quantity based on data review or laboratory estimate above the MDL but below the MRL.

LAB DUP = laboratory duplicate sample.
NA = not analyzed.
TDS = Total Dissolved Solids

Table C4
Dissolved Gases in Groundwater
Univar Solutions USA, Inc.
Kent, Washington

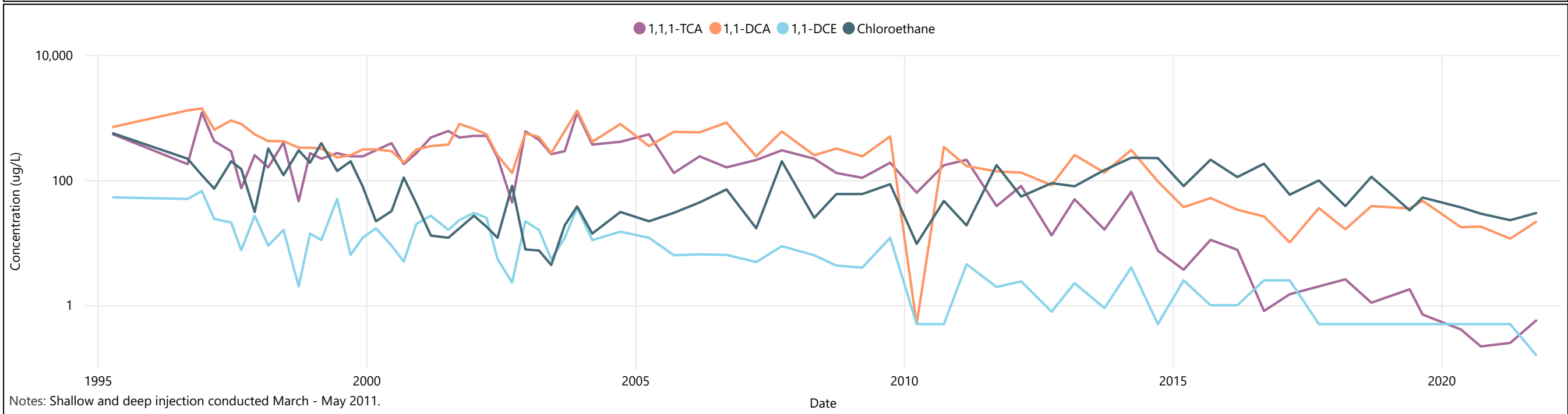
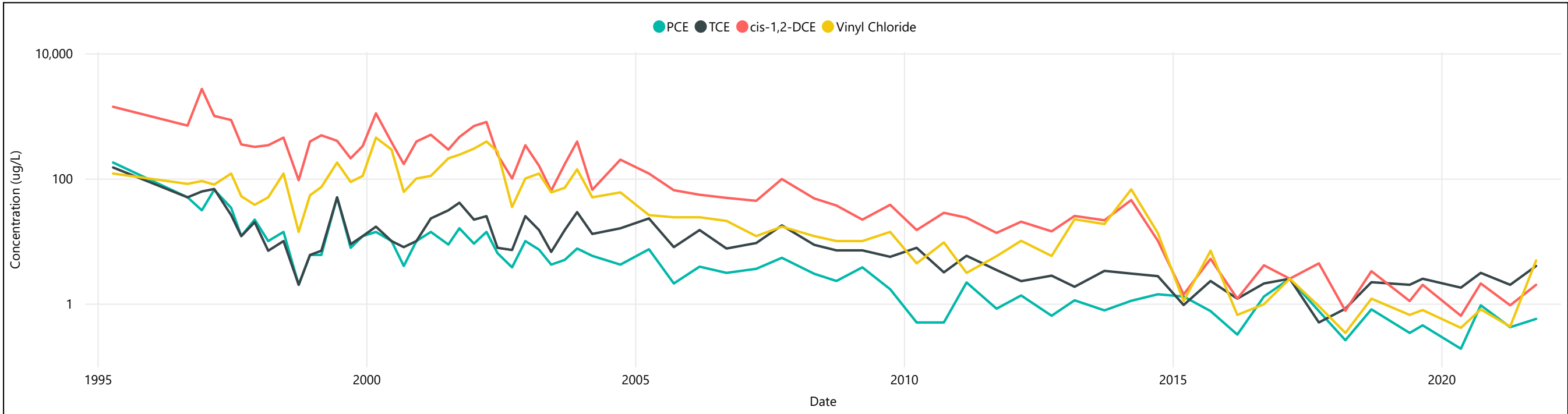
Sample Location	Date Collected	Modified RSK Method 175 (µg/L)		
		Methane	Ethane	Ethene
Shallow On-Site Monitoring Wells				
MW-1	12/15/98	18,000	110	310
	03/02/99	15,000	75	270
	06/17/99	8,400	44	170
	09/17/99	14,000	83	230
MW-2	12/15/98	13,000	1.1	0.5 U
	03/02/99	8,600	0.88	0.5 U
	06/16/99	13,000	1.0	0.5 U
	06/16/99 (DUP)	13,000	0.97	0.5 U
	09/16/99	17,000	1.2	0.5 U
MW-3	12/14/98	10,000	6.9	0.95
	03/03/99	5,700	9.3	1.2
	06/17/99	3,800	3.2	0.93
	09/17/99	4,300	6.8	0.88
MW-4	12/14/98	16,000	130	1,500
	03/03/99	10,000	110	730
	06/17/99	12,000	110	1,300
	09/17/99	14,000	150	1,000
MW-5	12/15/98	0.5 U	0.5 U	0.5 U
	03/02/99	66	0.5 U	0.5 U
	06/16/99	7.8	0.5 U	0.5 U
	09/16/99	28	0.5 U	0.5 U
	09/16/99 (DUP)	26	0.5 U	0.5 U
MW-6	12/15/98	14,000	130	31
	03/02/99	9,800	94	15
	03/02/99 (DUP)	12,000	120	16
	06/16/99	11,000	100	10
	09/16/99	13,000	98	8.2
MW-7	12/14/98	1.9	0.5 U	0.5 U
	03/03/99	34	0.5 U	0.5 U
	06/17/99	7.9	0.5 U	0.5 U
	09/17/99	15	0.5 U	0.5 U
MW-8	12/14/98	23	0.5 U	0.5 U
	12/14/98 (DUP)	25	0.5 U	0.5 U
	03/02/99	12	0.5 U	0.5 U
	06/16/99	5.2	0.5 U	0.5 U
	09/16/99	18	0.5 U	0.5 U
Deep On-Site Monitoring Wells and Piezometer				
MW-13	09/24/04	13,000	15	680
	04/05/05	520	1.9	27
MW-14	09/24/04	5,800	2.2	1.2
	04/05/05	5,900	0.41	0.55 U
MW-15	09/24/04	7,700	1.7	0.8 U
	04/05/05	6,500	1.5	0.55 U
MW-16	09/23/04	16,000	3.2	1.3
	04/05/05	17,000	3.7	2.0
MW-17	09/23/04	13,000	290	61
	09/23/04 (DUP)	13,000	290	60
	04/05/05	13,000	290	70
MW-18	09/23/04	4,500	25	3.2
	04/05/05	4,800	16	1.5
	04/05/05 (DUP)	5,700	19	1.8
MW-19	09/23/04	5,600	32	870
	04/05/05	5,400	40	97
P-1	09/24/04	5,100	3.0	0.8 U
Deep Off-Site Monitoring Well				
MW-20	09/20/05	13,000	240	10

Notes:

Analyses prior to 2011 performed using Modified RSK Method 175.
µg/L = micrograms per liter
U = not detected, the associated value is the quantification limit.
J = estimated concentration between the method detection and reporting limits.
(DUP) = duplicate sample collected in the field and blind labeled.

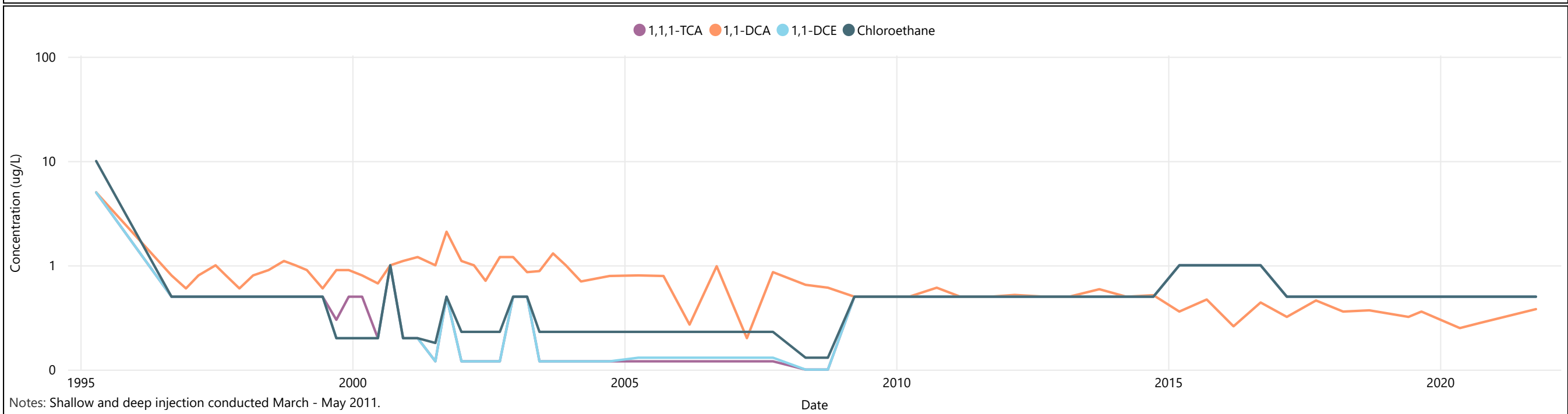
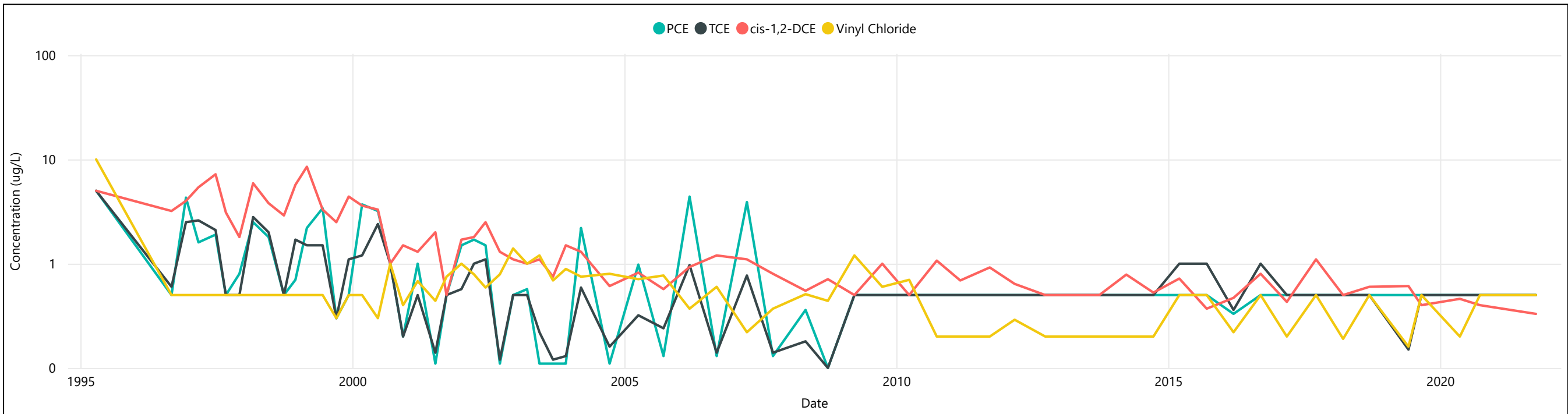
APPENDIX D TREND CHARTS

Figure D1. On-site VOC Trend Charts (MW-1)



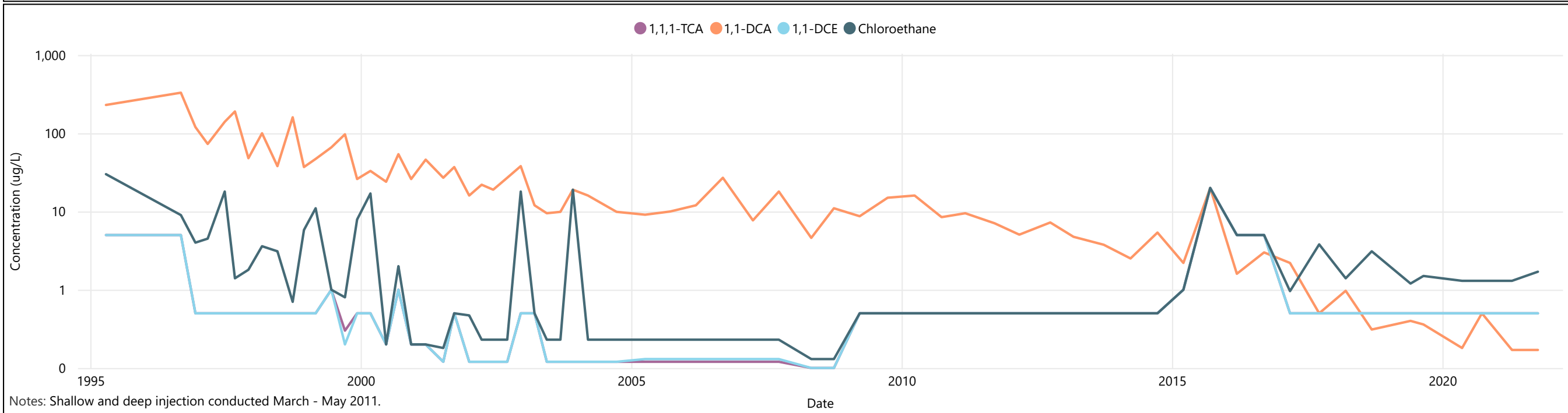
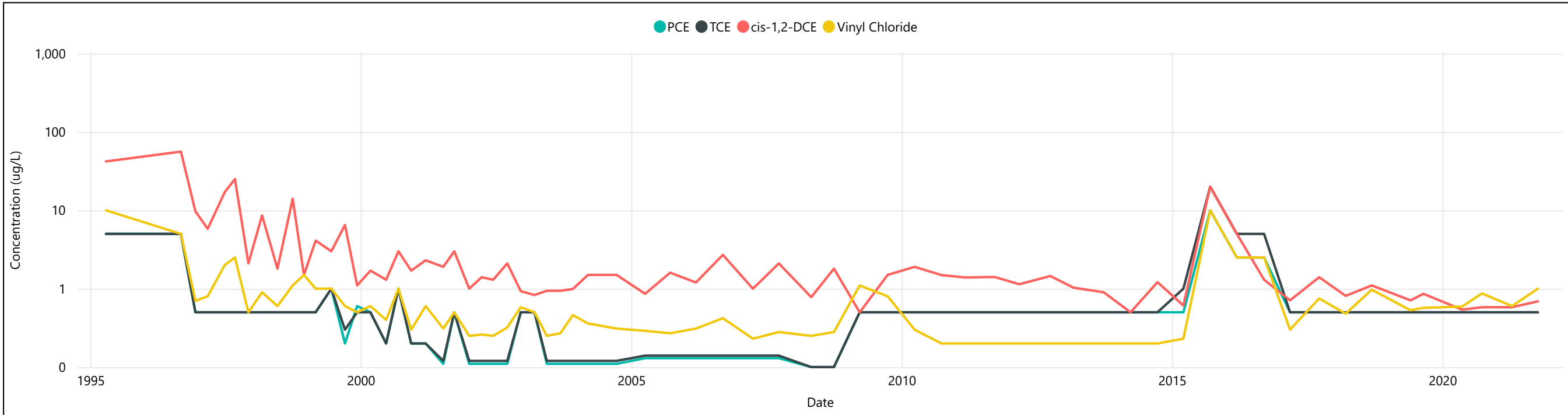
Notes: Shallow and deep injection conducted March - May 2011.

Figure D2. Boundary VOC Trend Charts (MW-2)



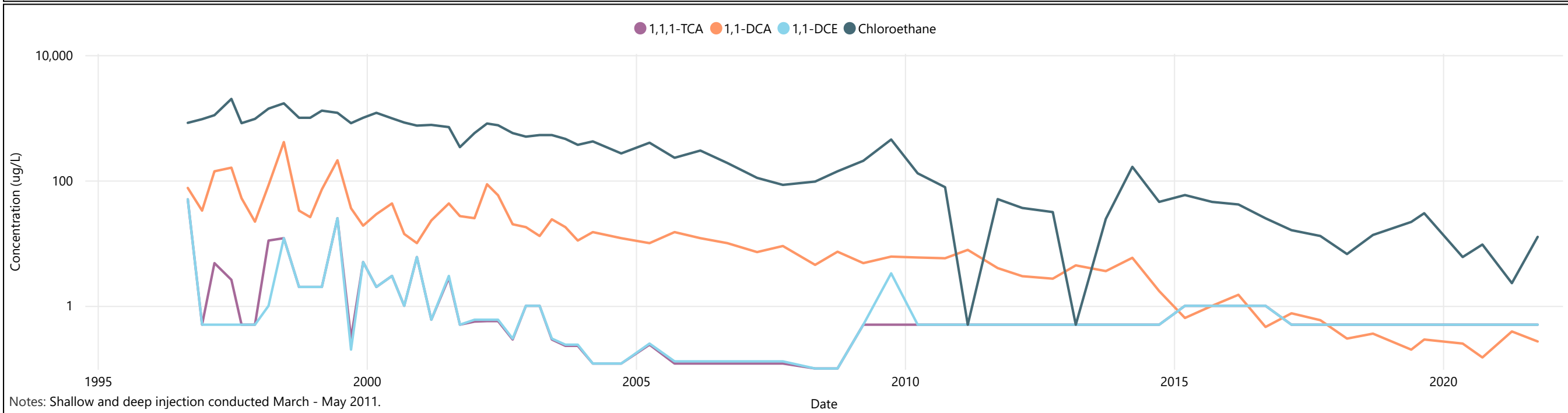
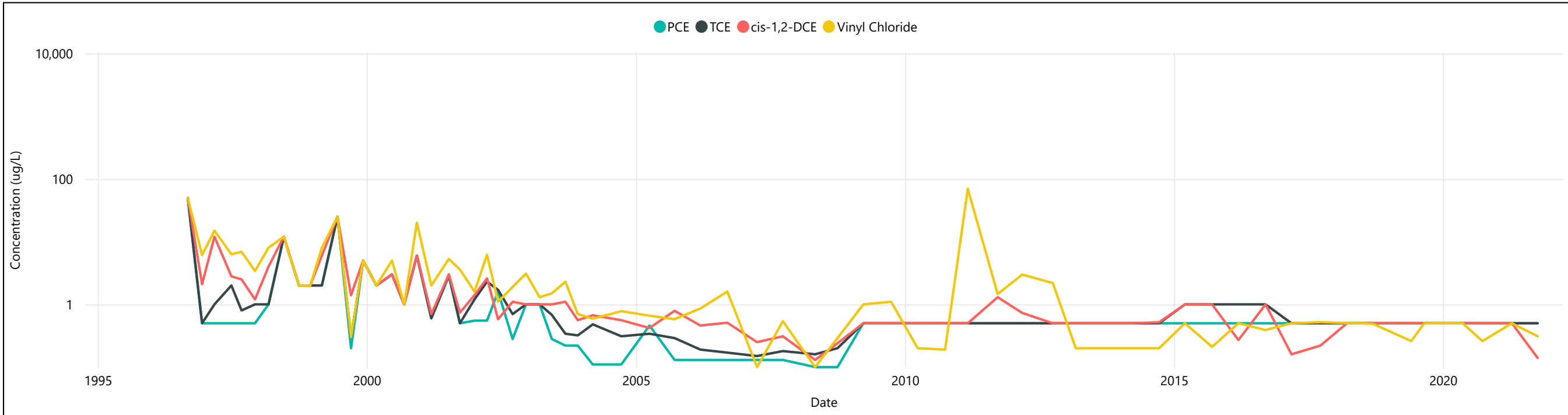
Notes: Shallow and deep injection conducted March - May 2011.

Figure D3. On-site VOC Trend Charts (MW-3)



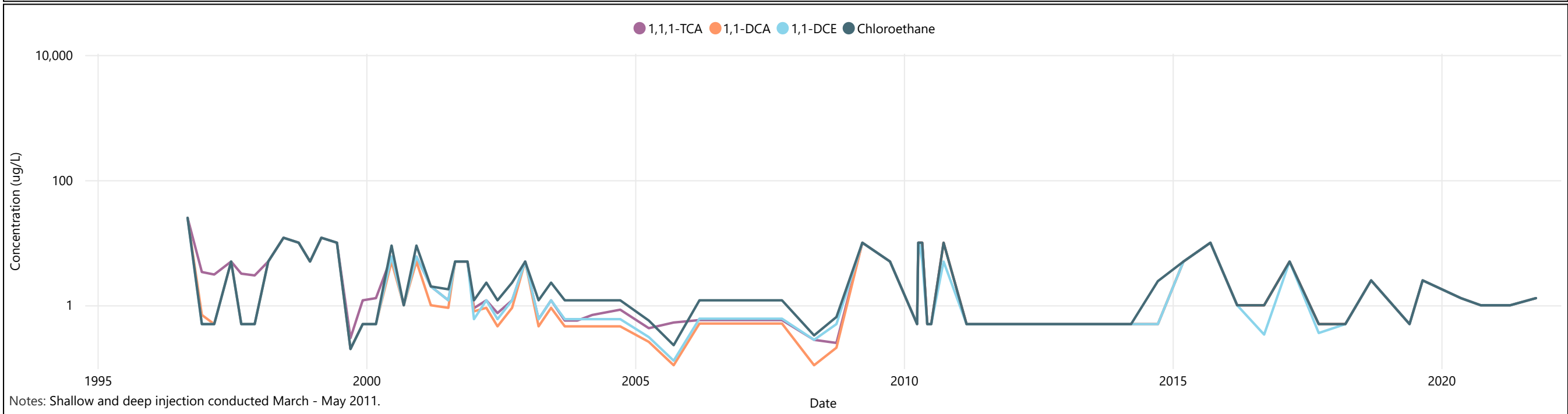
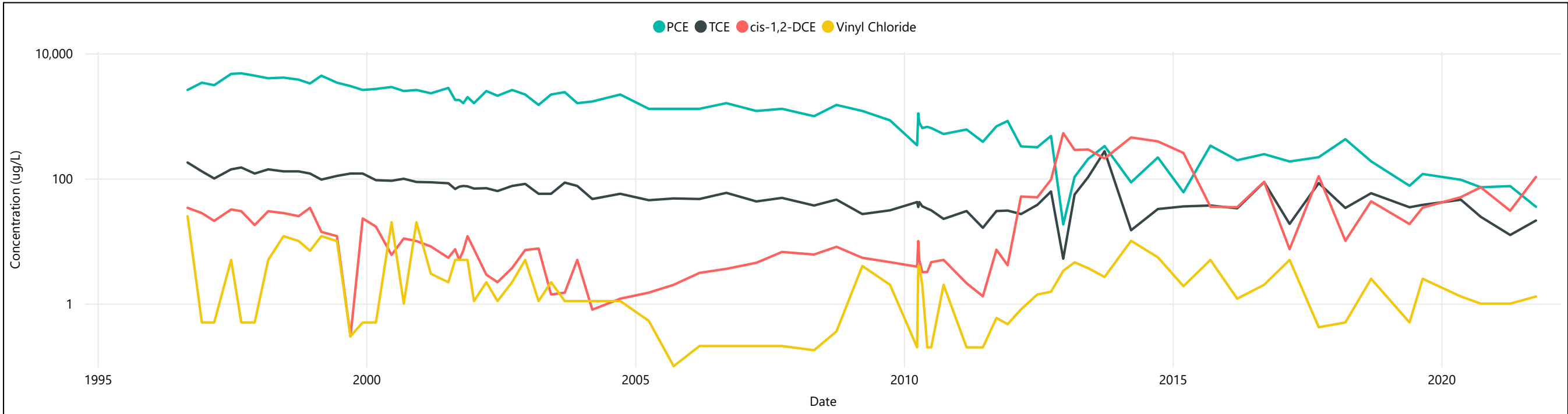
Notes: Shallow and deep injection conducted March - May 2011.

Figure D4. On-site VOC Trend Charts (MW-4)



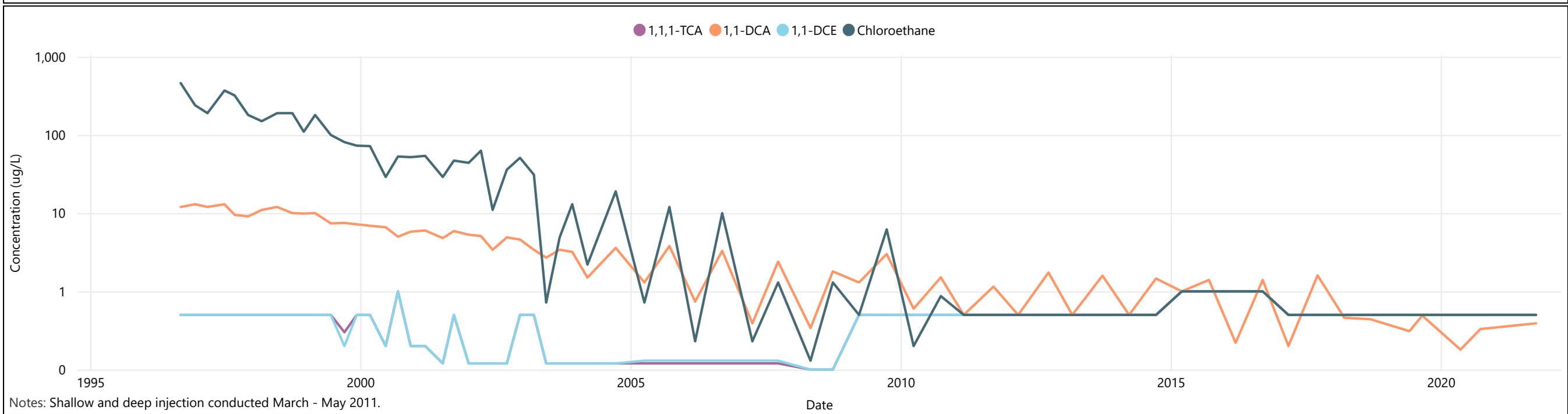
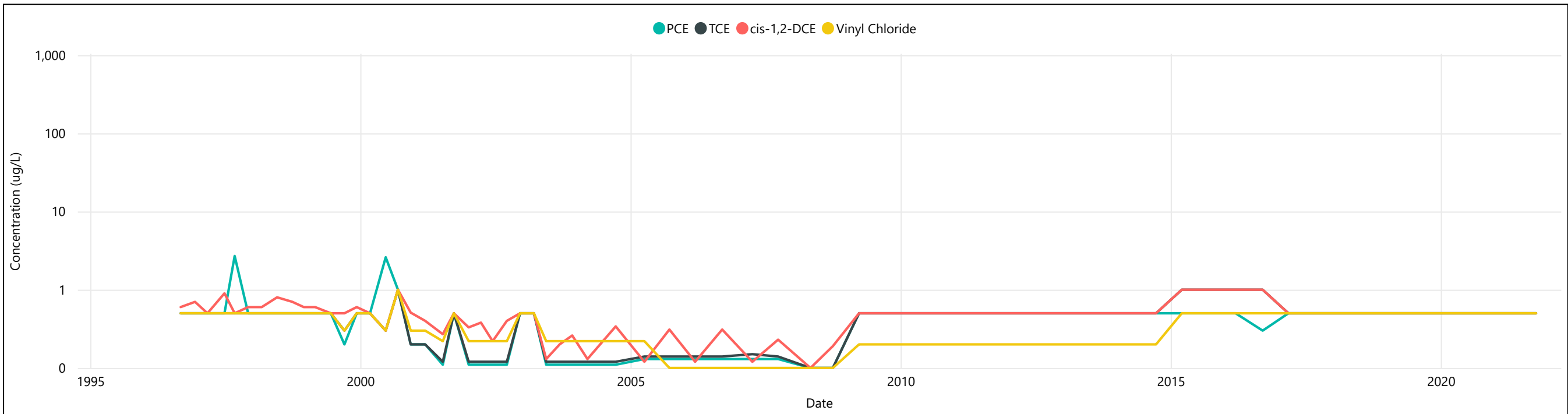
Notes: Shallow and deep injection conducted March - May 2011.

Figure D5. On-site VOC Trend Charts (MW-5)



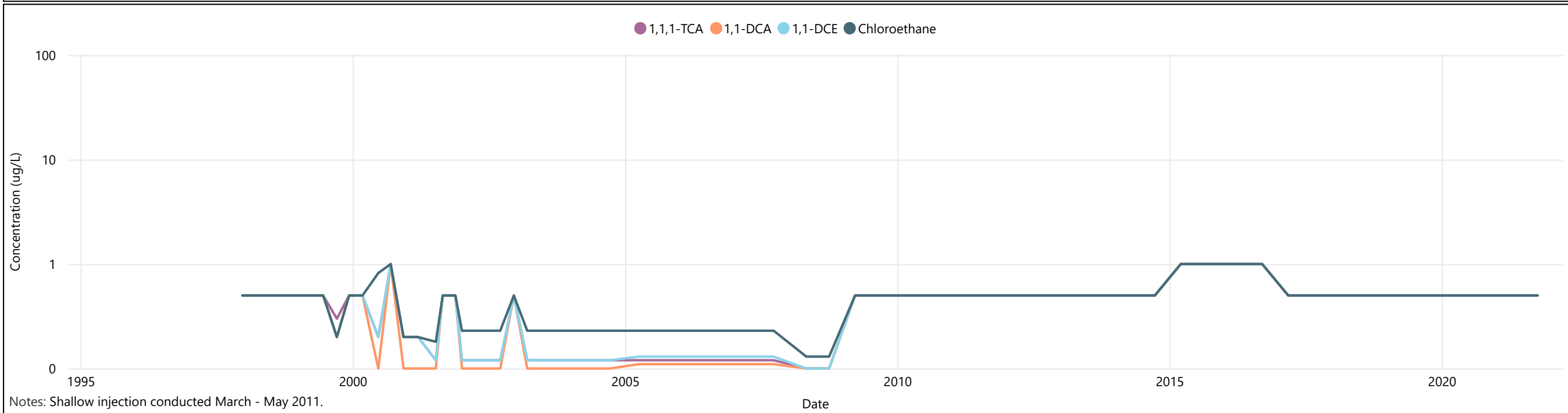
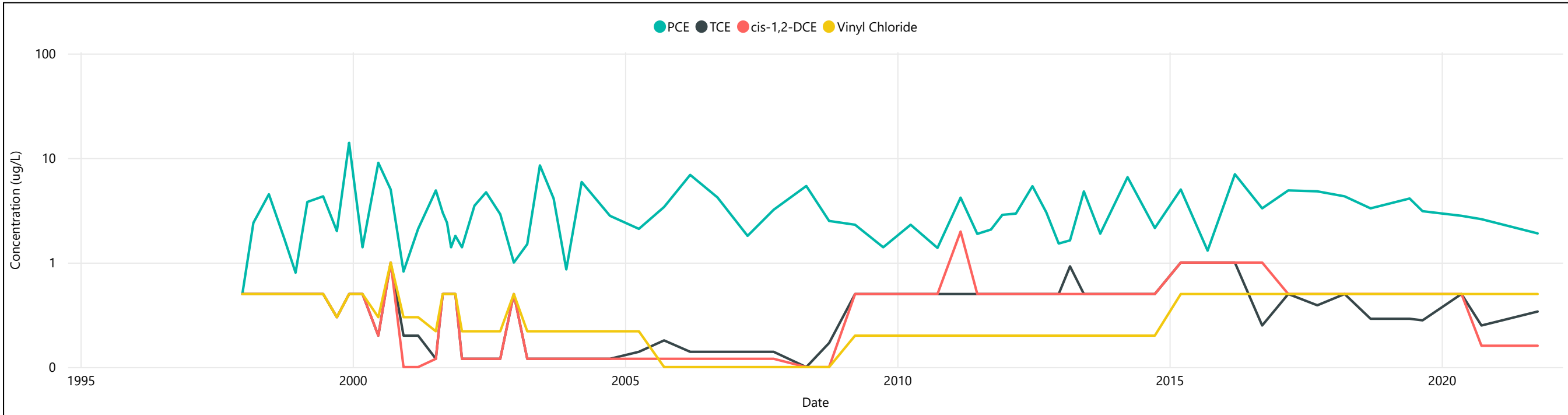
Notes: Shallow and deep injection conducted March - May 2011.

Figure D6. Boundary VOC Trend Charts (MW-6)



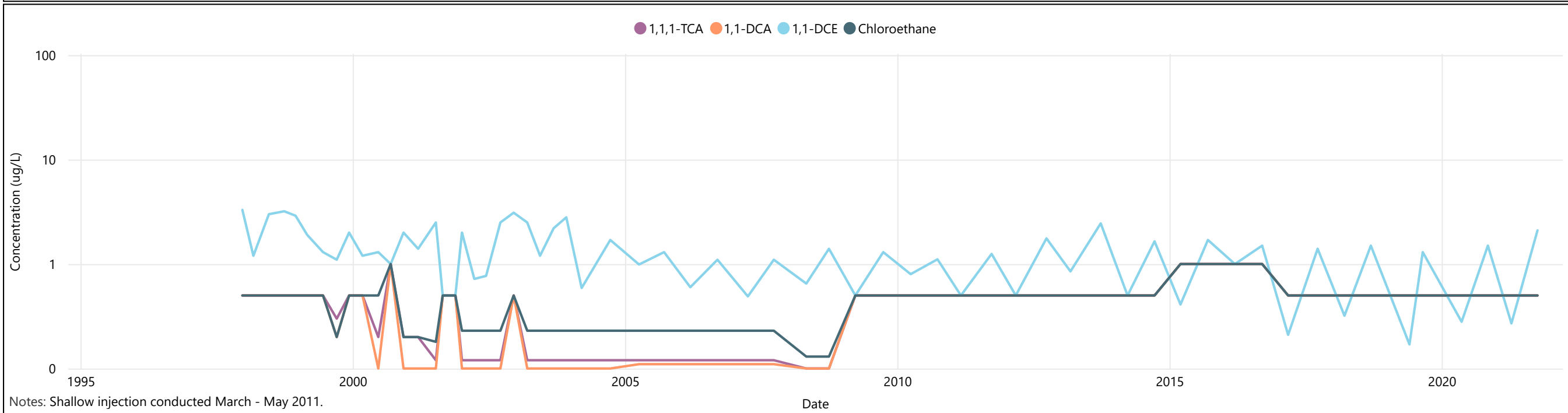
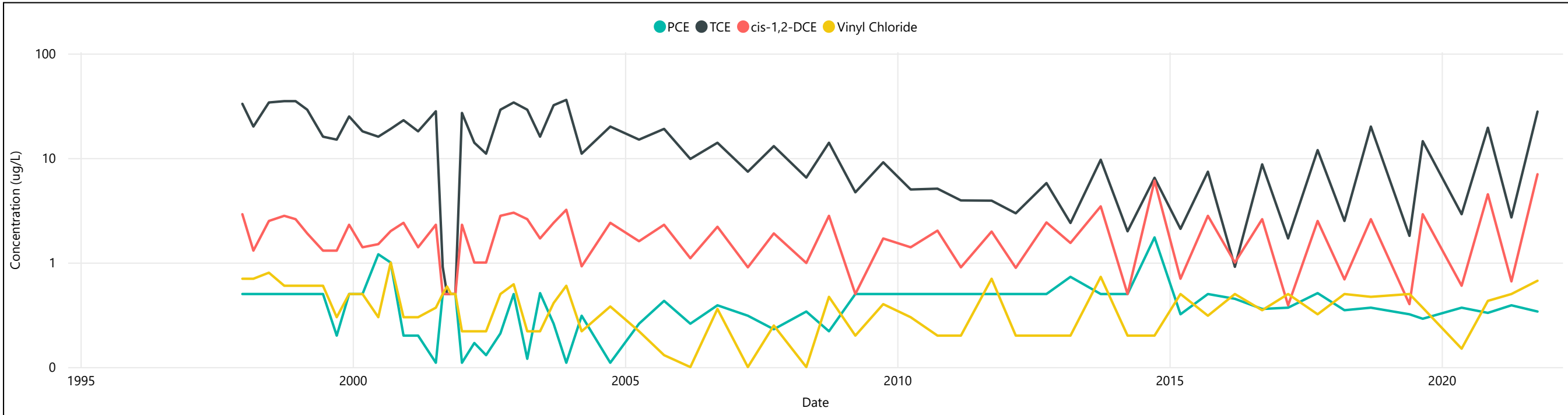
Notes: Shallow and deep injection conducted March - May 2011.

Figure D7. On-site VOC Trend Charts (MW-7)



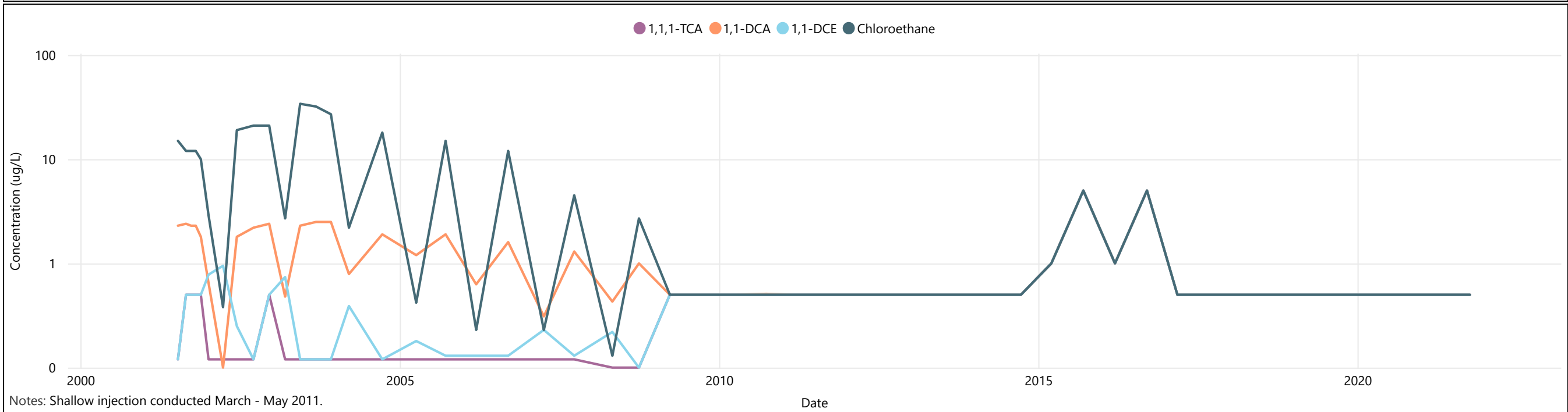
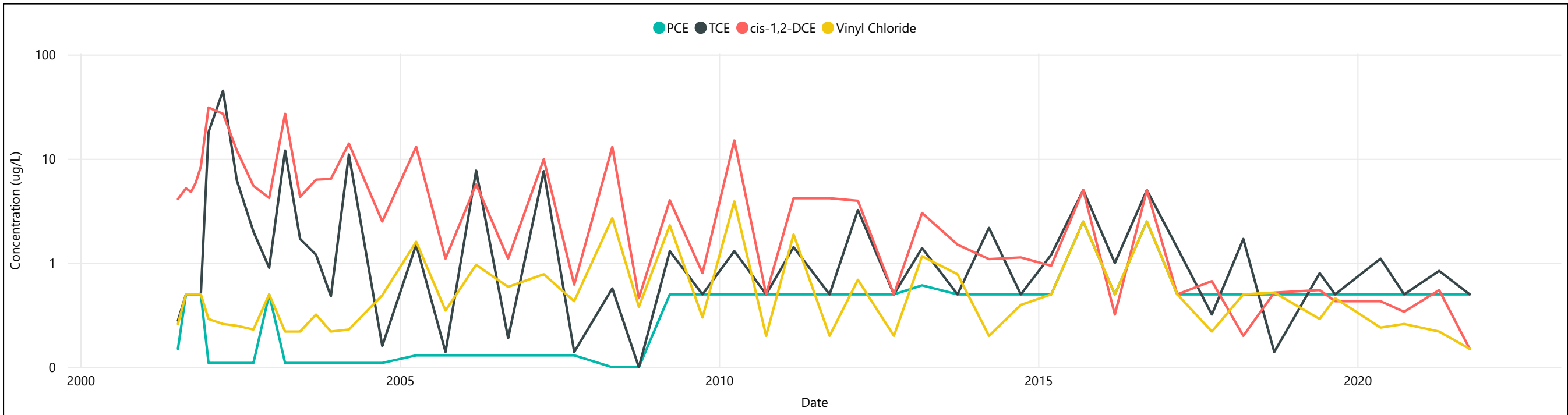
Notes: Shallow injection conducted March - May 2011.

Figure D8. Boundary VOC Trend Charts (MW-8)



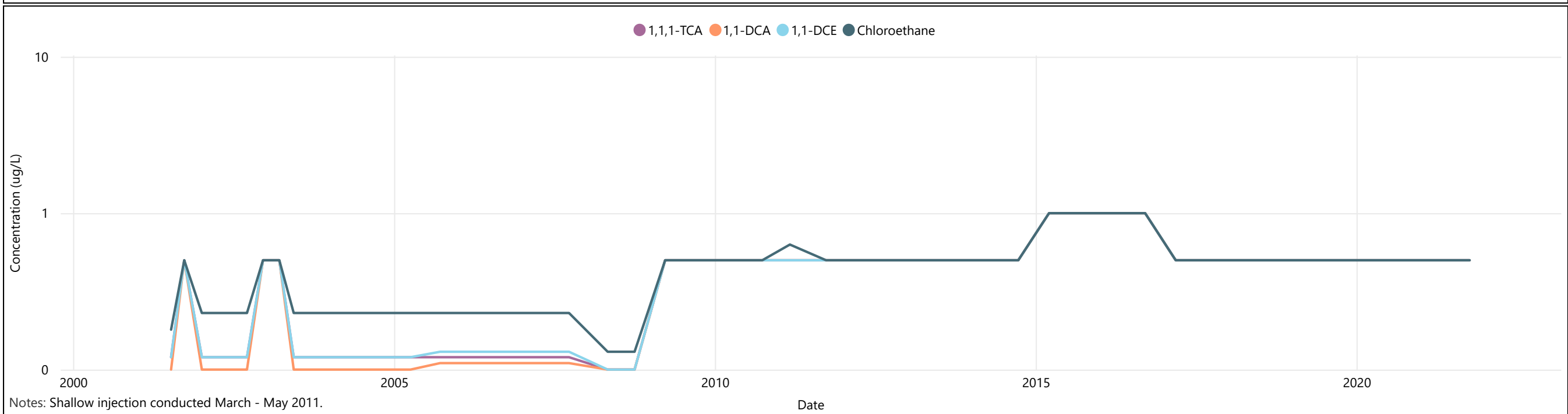
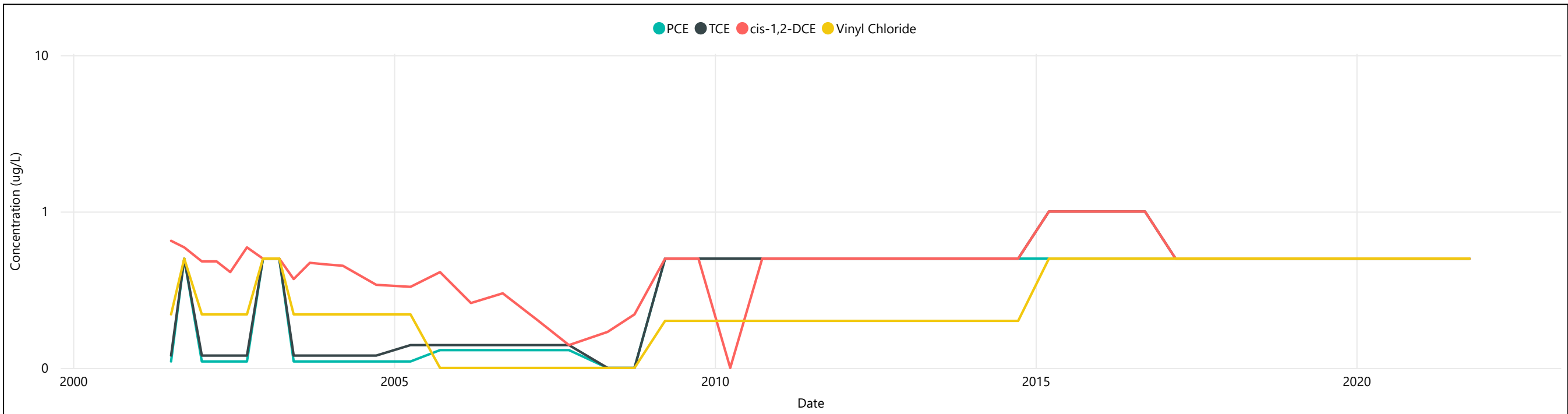
Notes: Shallow injection conducted March - May 2011.

Figure D9. Boundary VOC Trend Charts (MW-9)



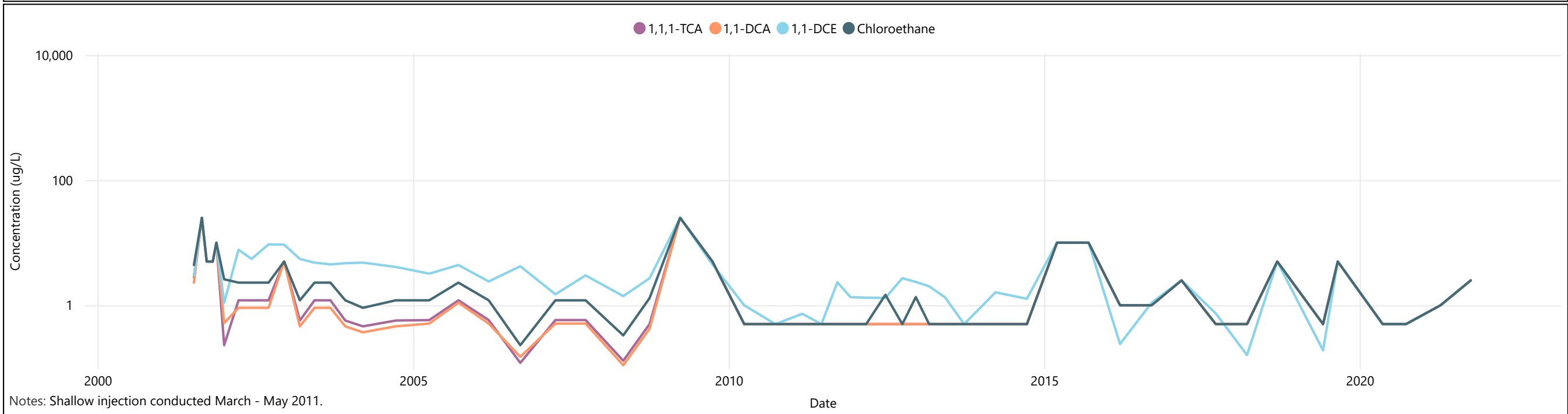
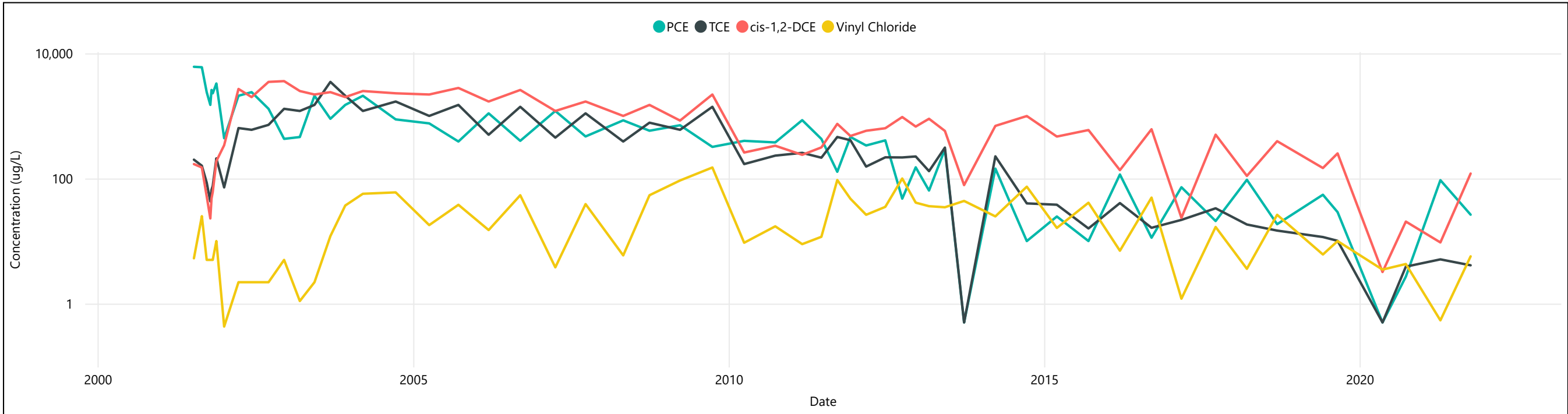
Notes: Shallow injection conducted March - May 2011.

Figure D10. On-site VOC Trend Charts (MW-10)



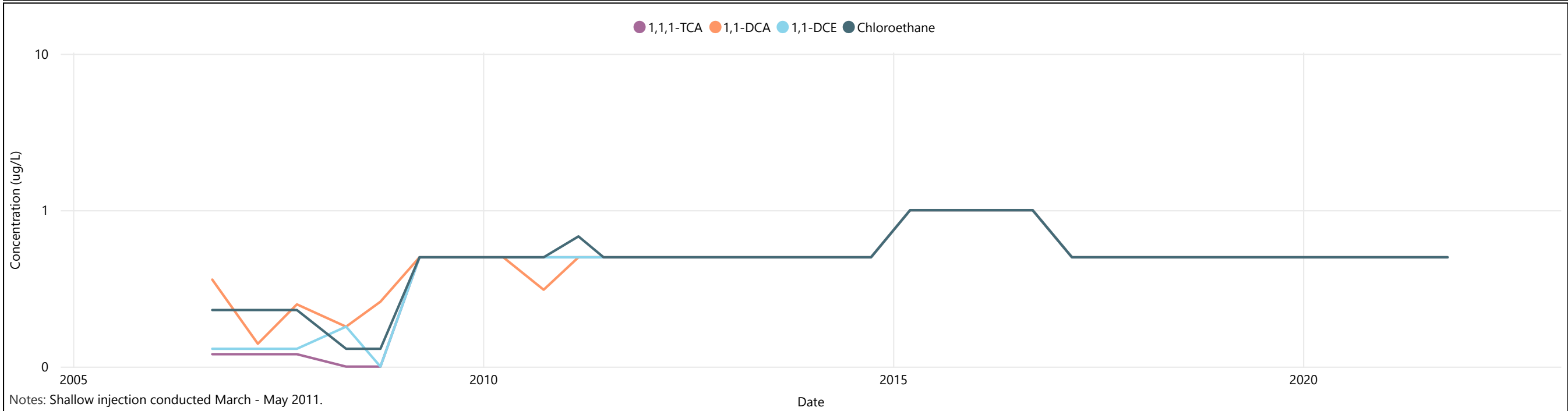
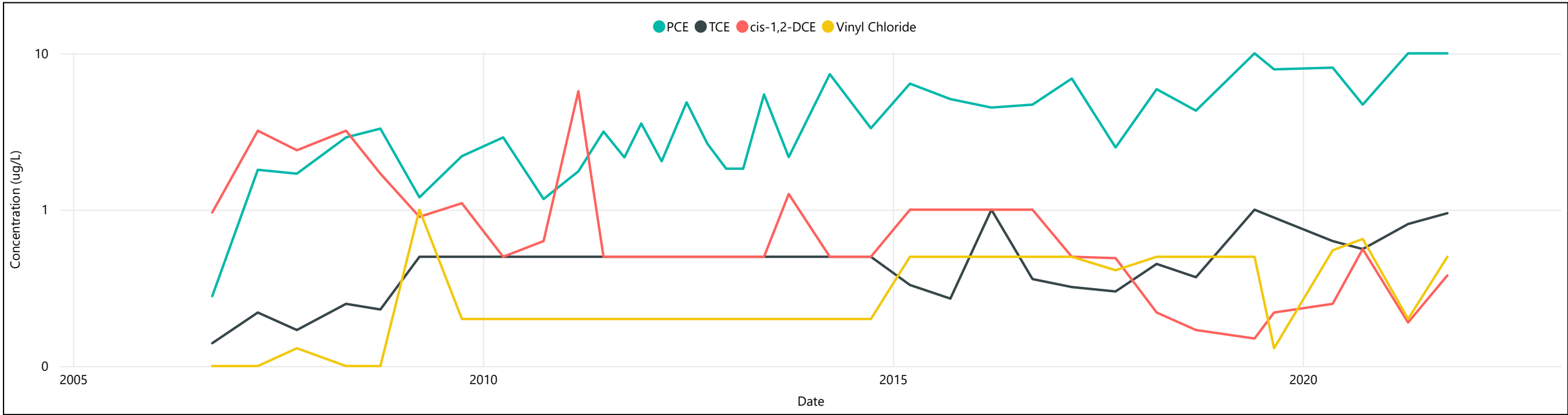
Notes: Shallow injection conducted March - May 2011.

Figure D11. On-site VOC Trend Charts (MW-12)



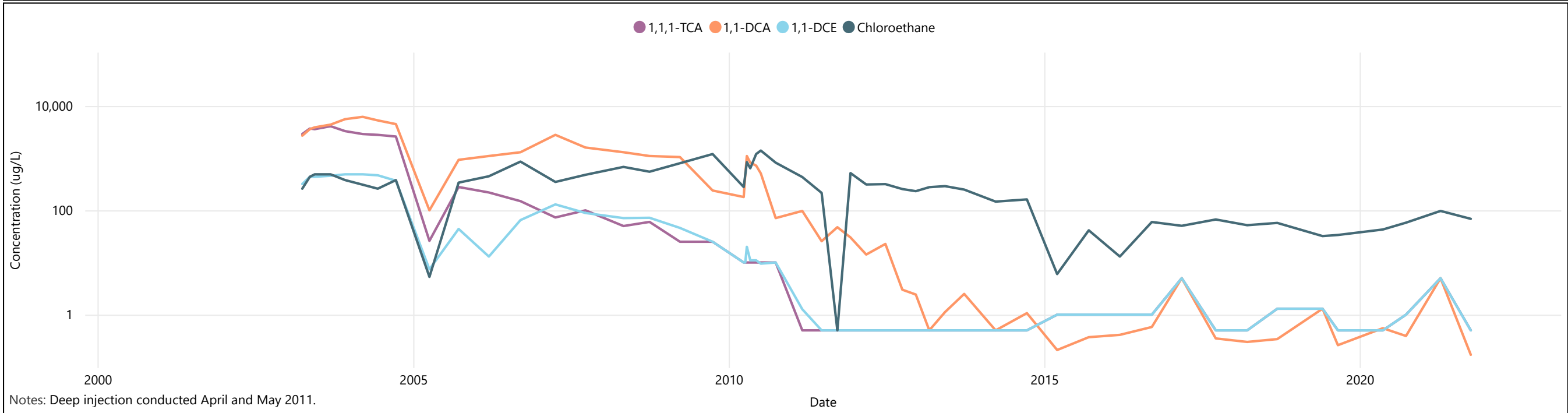
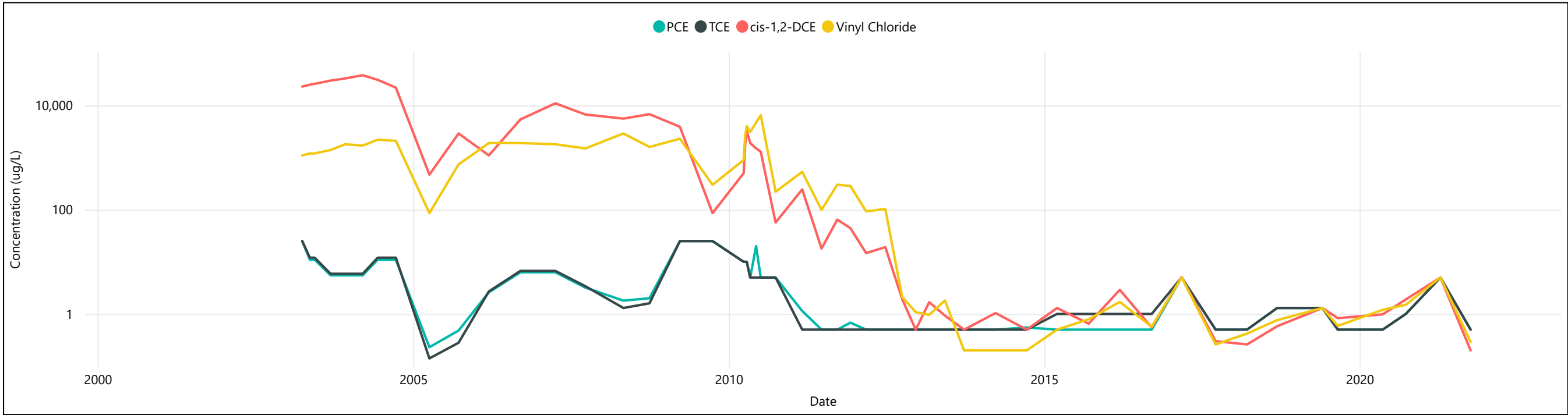
Notes: Shallow injection conducted March - May 2011.

Figure D12. On-site VOC Trend Charts (MW-23)



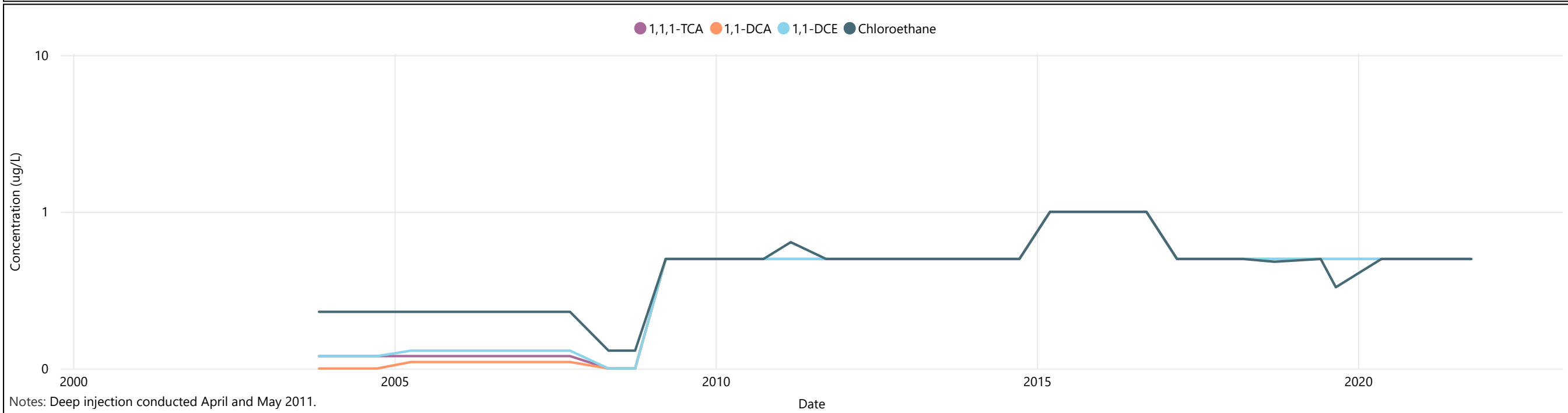
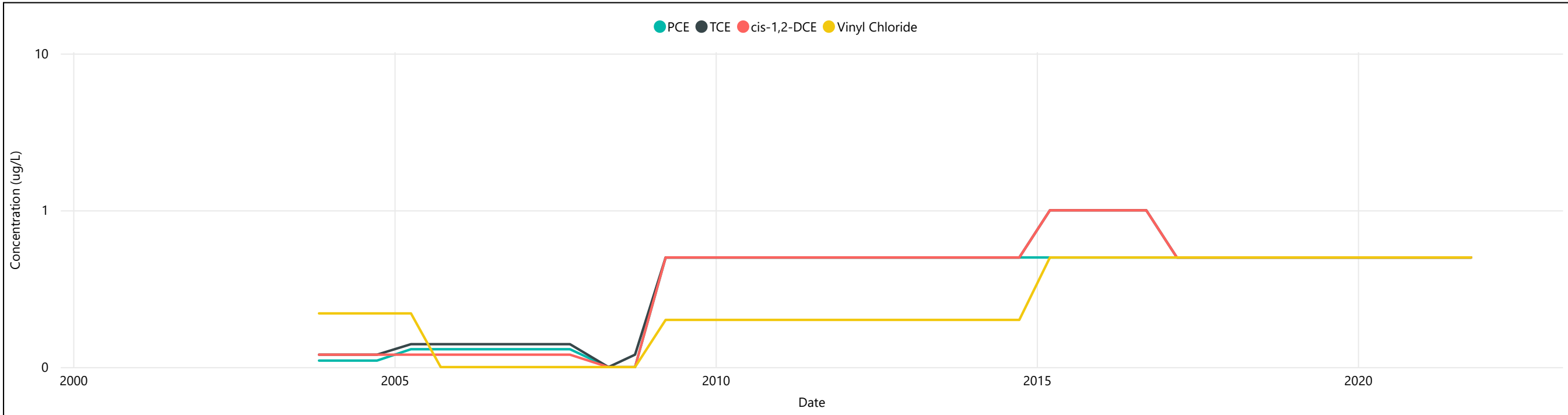
Notes: Shallow injection conducted March - May 2011.

Figure D13. On-site VOC Trend Charts (MW-13)



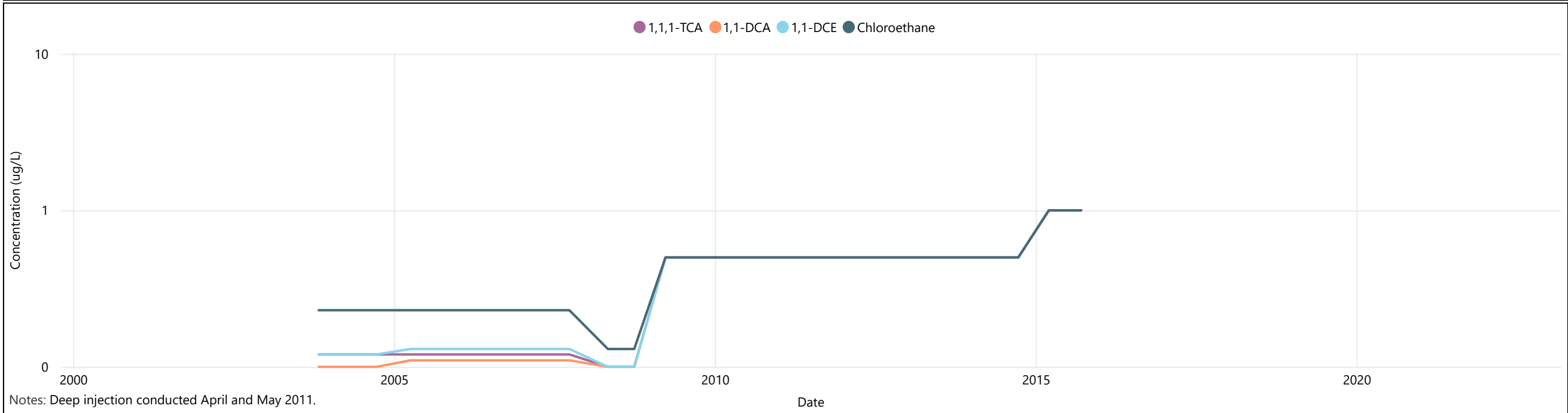
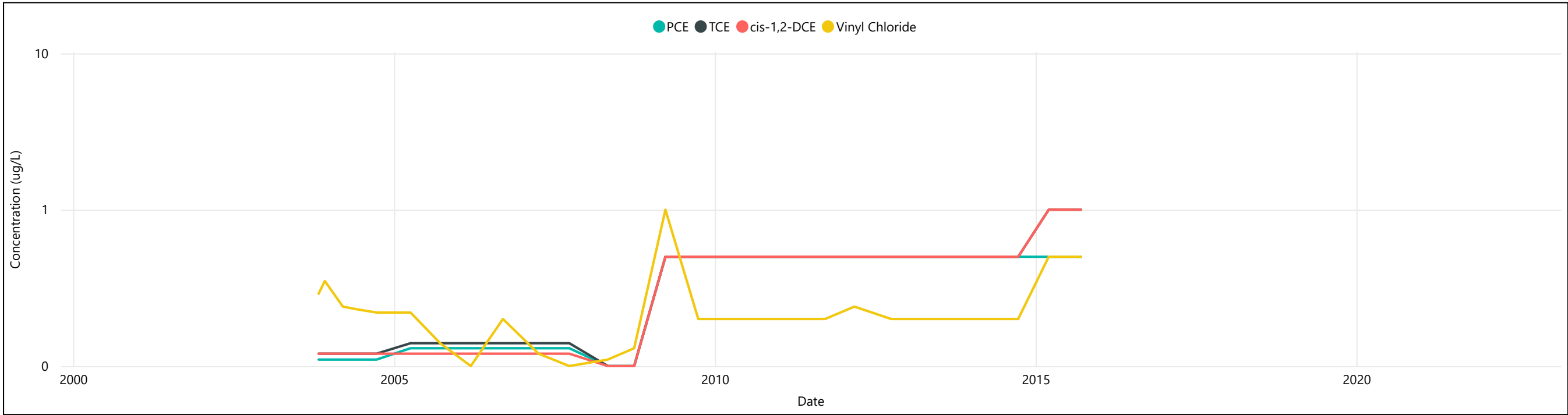
Notes: Deep injection conducted April and May 2011.

Figure D14. On-site VOC Trend Charts (MW-14)



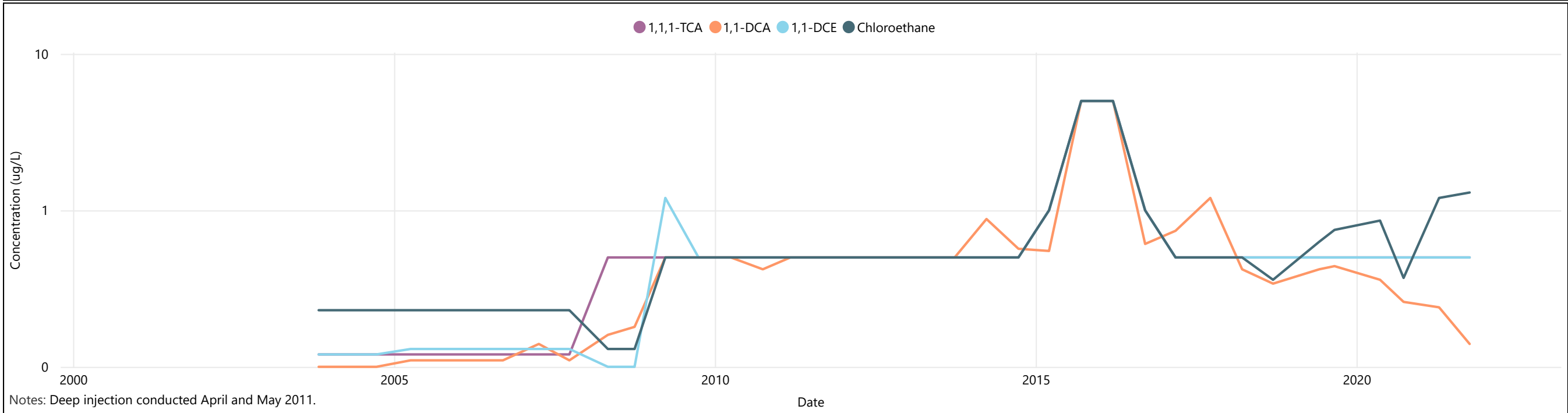
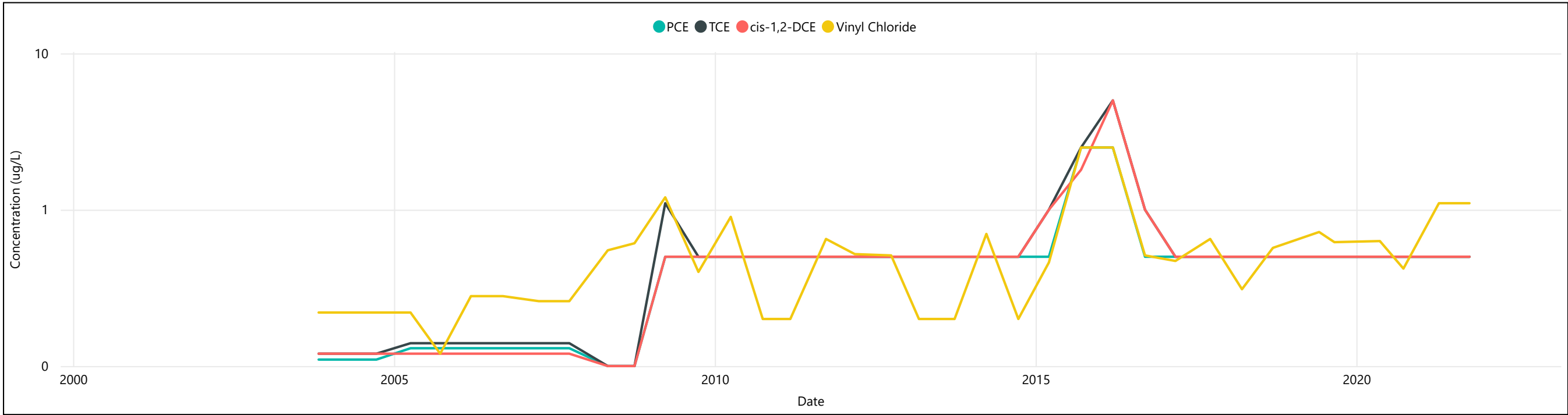
Notes: Deep injection conducted April and May 2011.

Figure D15. On-site VOC Trend Charts (MW-15)



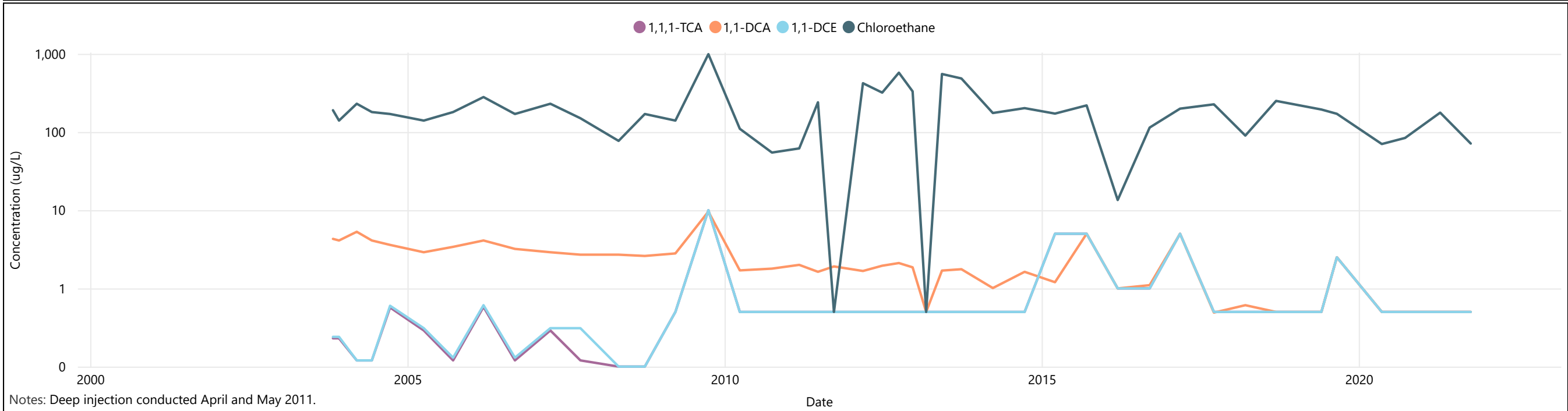
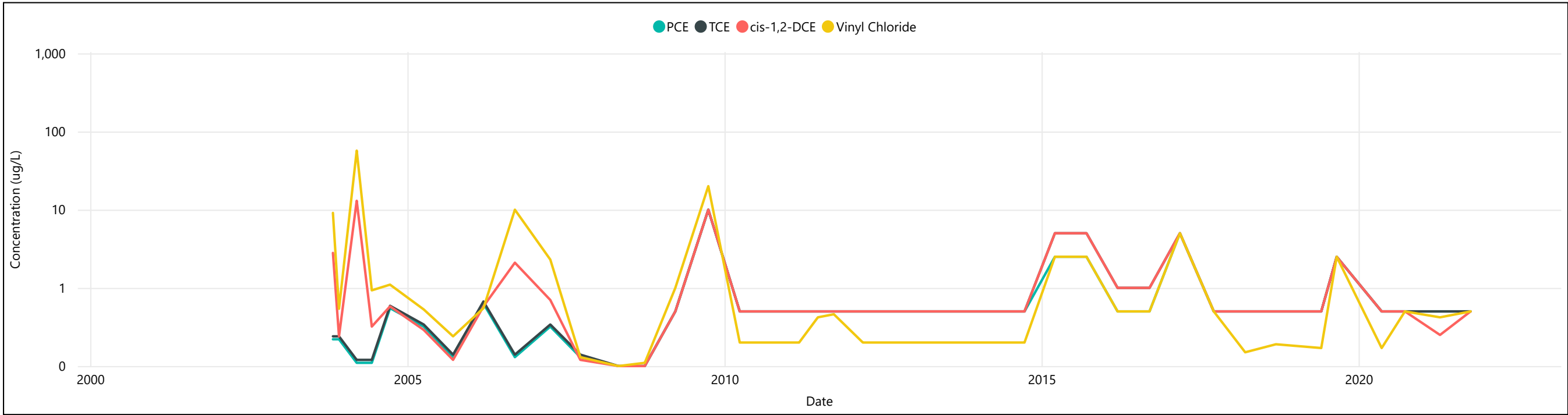
Notes: Deep injection conducted April and May 2011.

Figure D16. On-site VOC Trend Charts (MW-16)



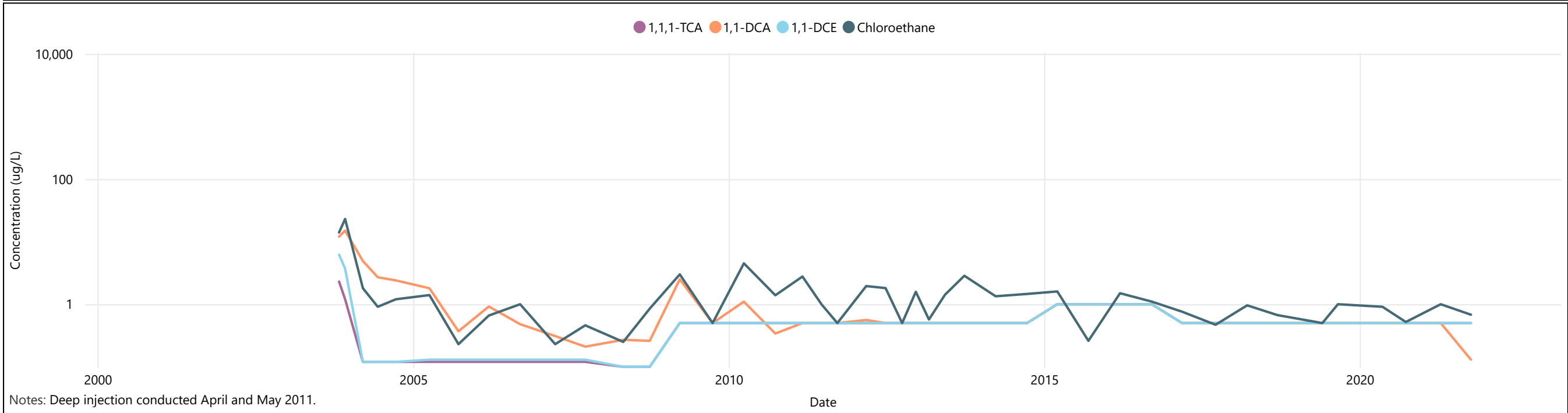
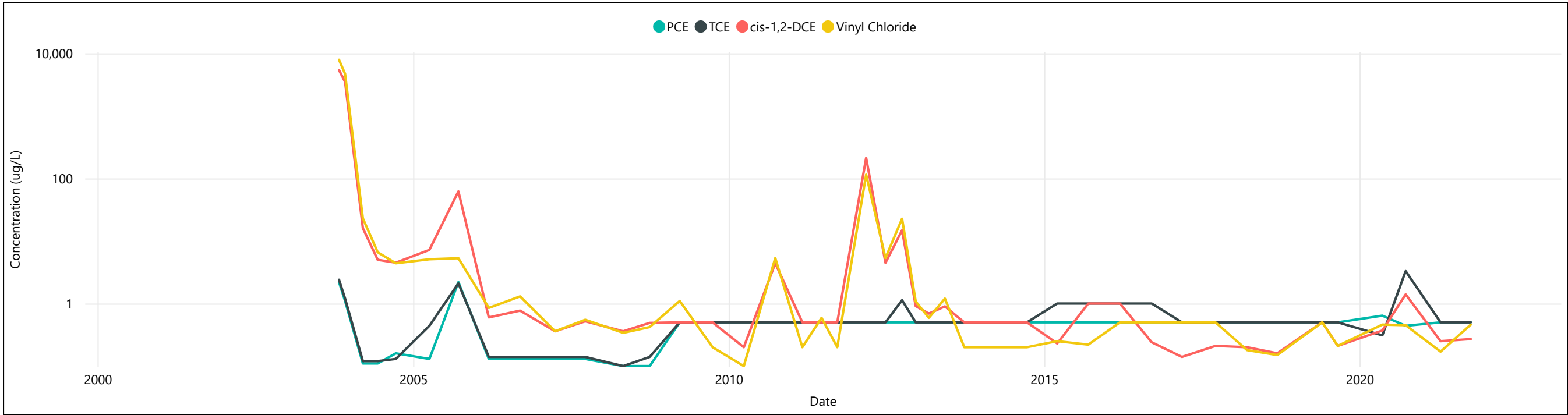
Notes: Deep injection conducted April and May 2011.

Figure D17. On-site VOC Trend Charts (MW-17)



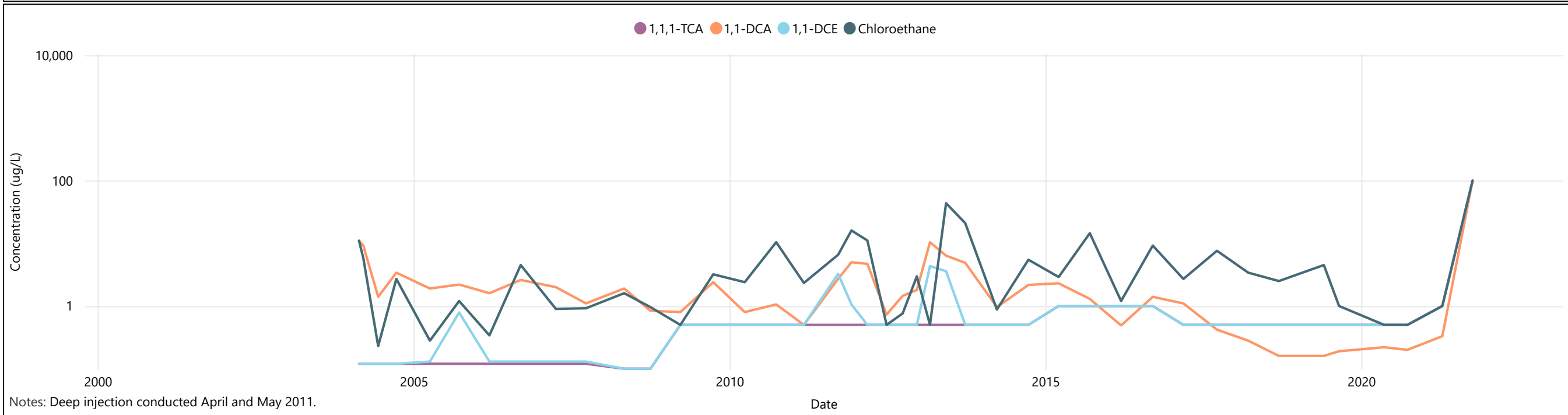
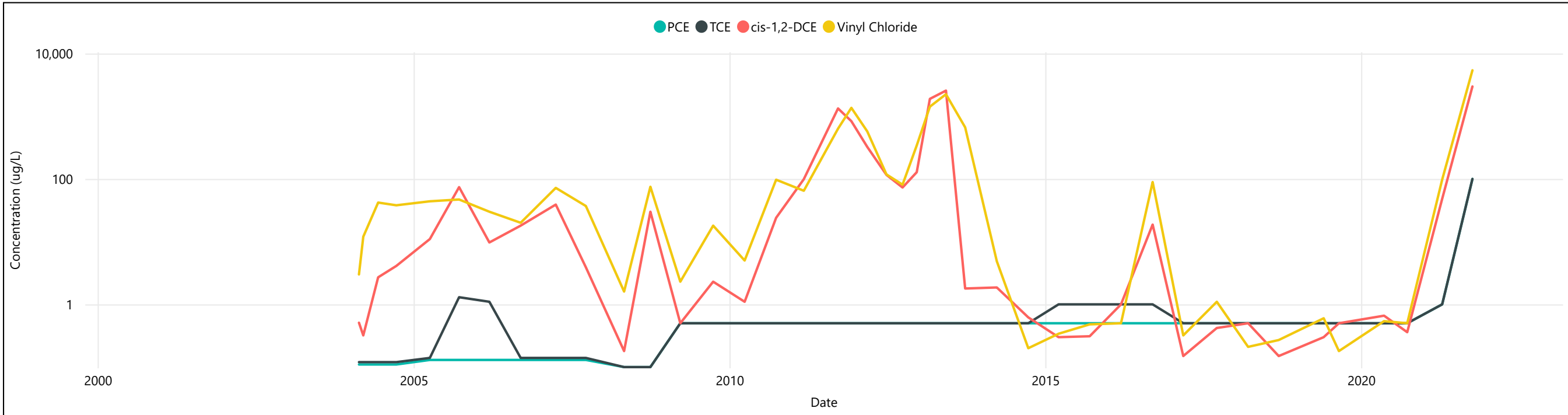
Notes: Deep injection conducted April and May 2011.

Figure D18. On-site VOC Trend Charts (MW-18)



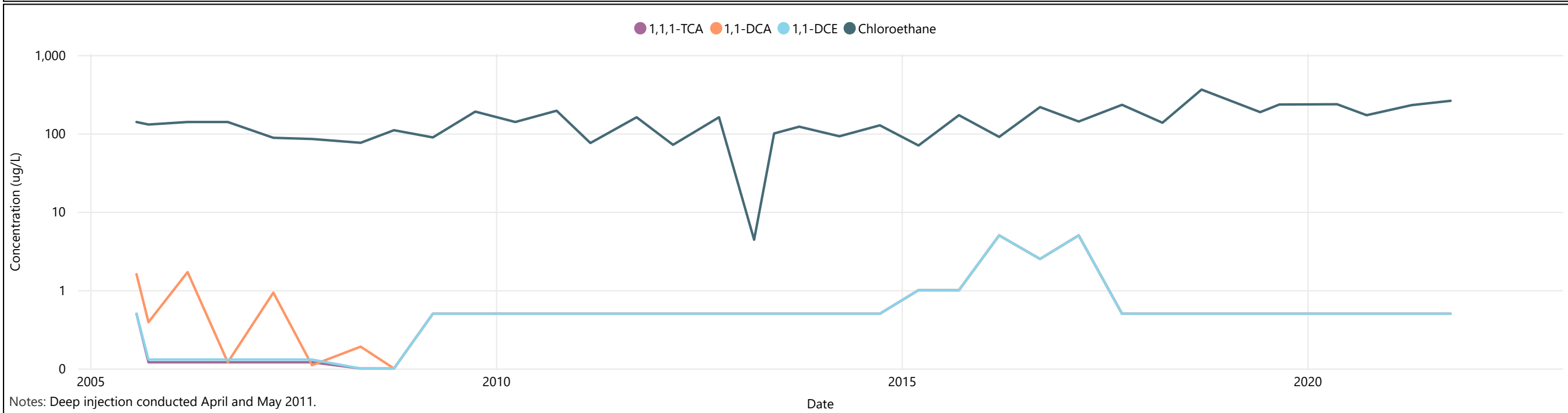
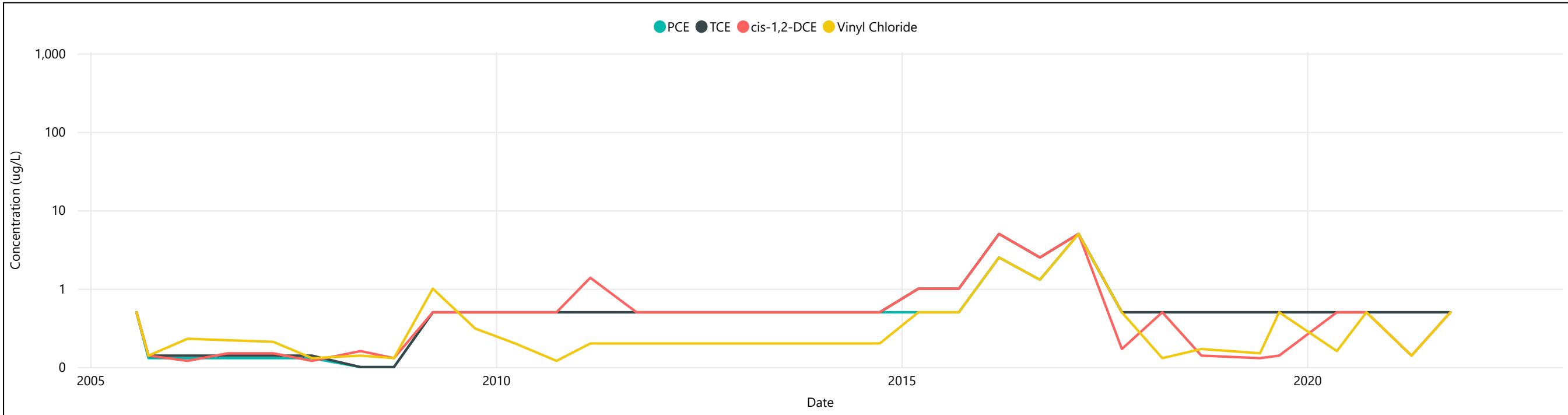
Notes: Deep injection conducted April and May 2011.

Figure D19. Boundary VOC Trend Charts (MW-19)



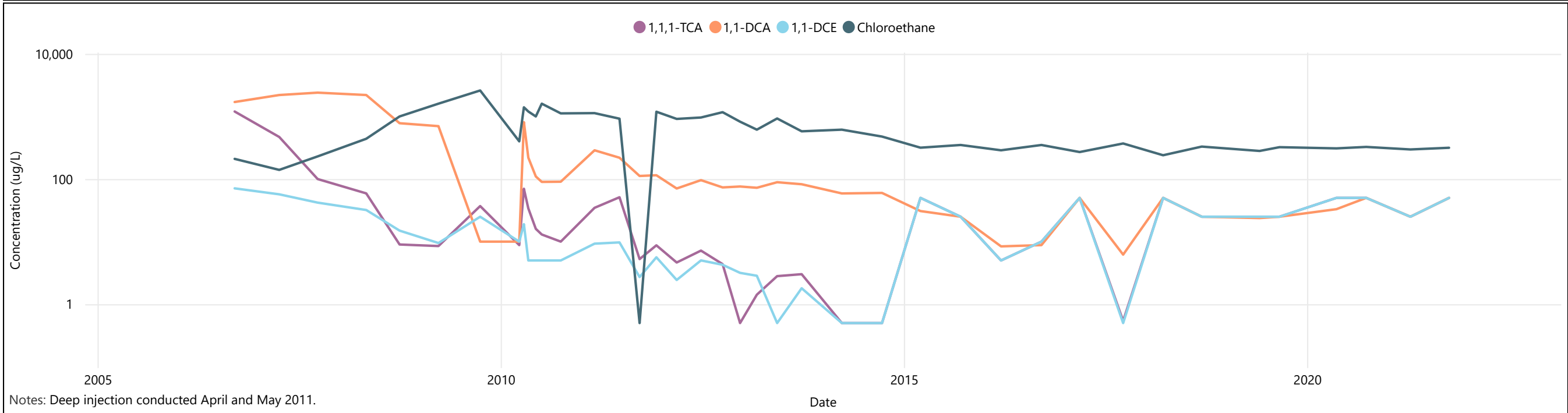
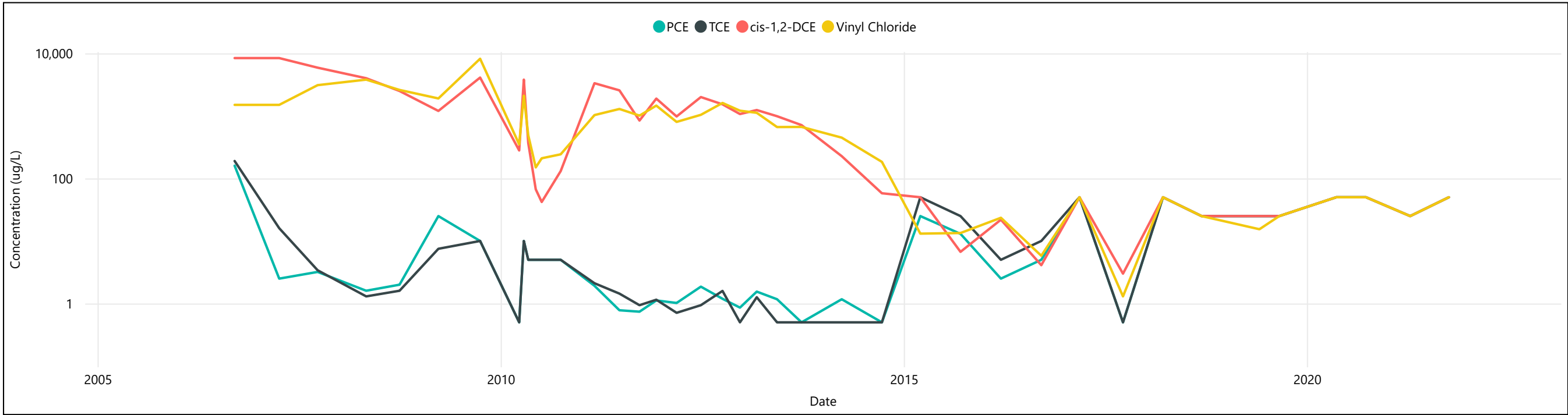
Notes: Deep injection conducted April and May 2011.

Figure D20. Off-site VOC Trend Charts (MW-20)



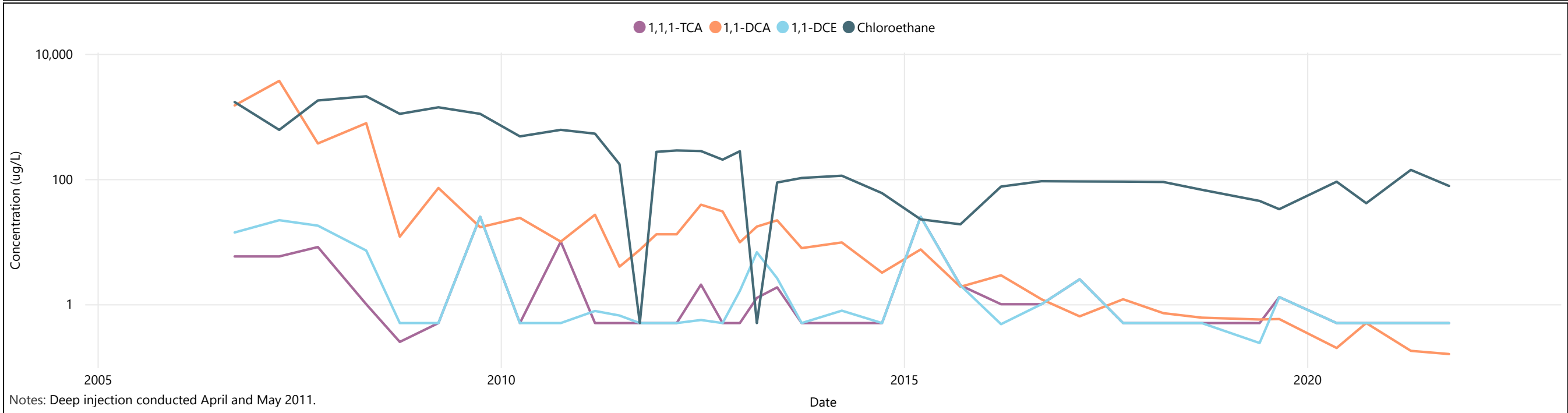
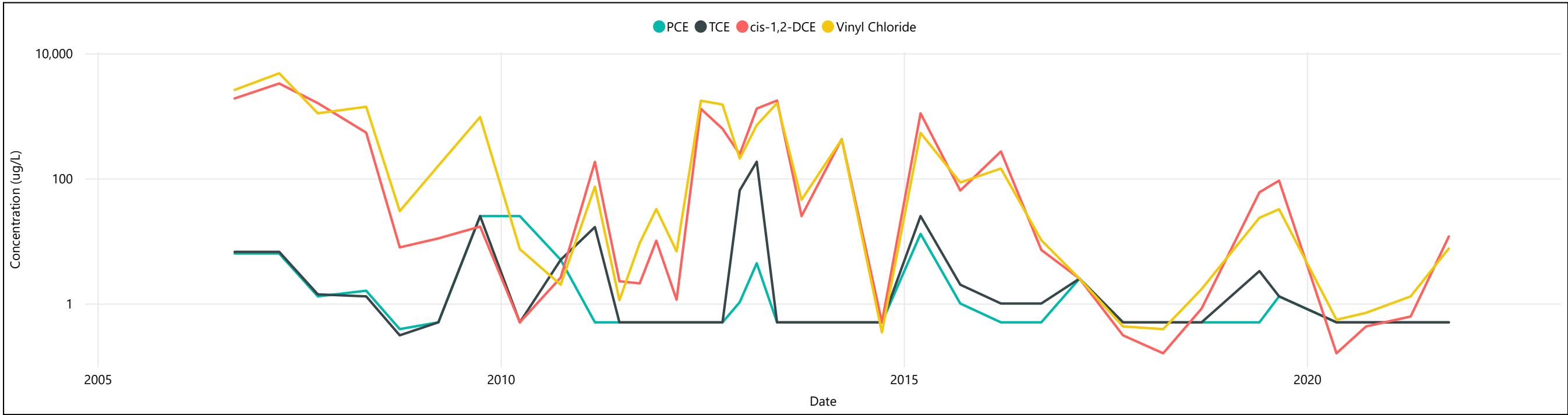
Notes: Deep injection conducted April and May 2011.

Figure D21. On-site VOC Trend Charts (MW-21)



Notes: Deep injection conducted April and May 2011.

Figure D22. On-site VOC Trend Charts (MW-22)



Notes: Deep injection conducted April and May 2011.

Figure D23. Off-site VOC Trend Charts (MW-27)

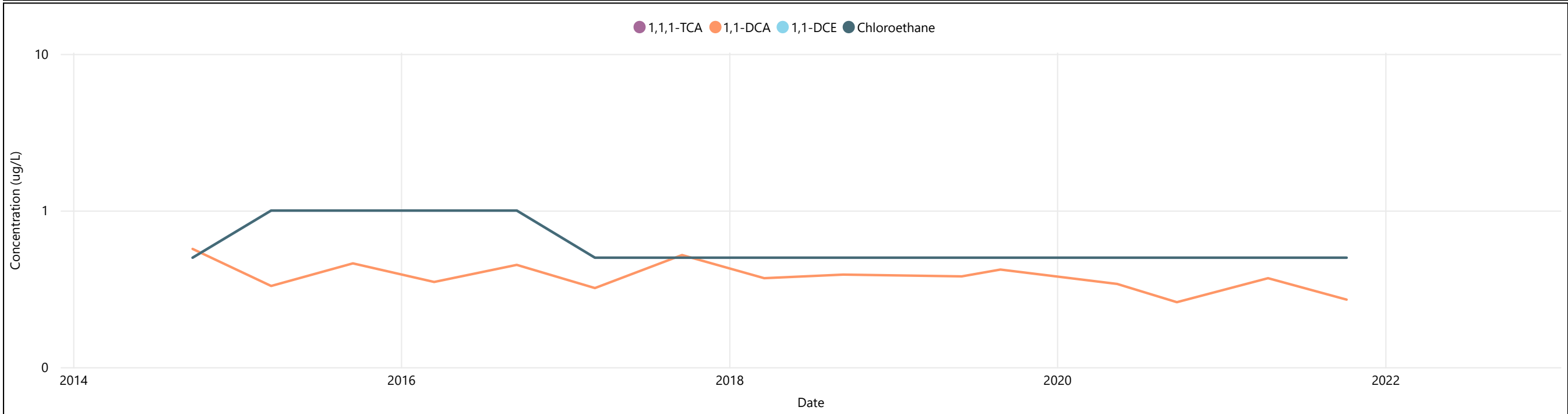
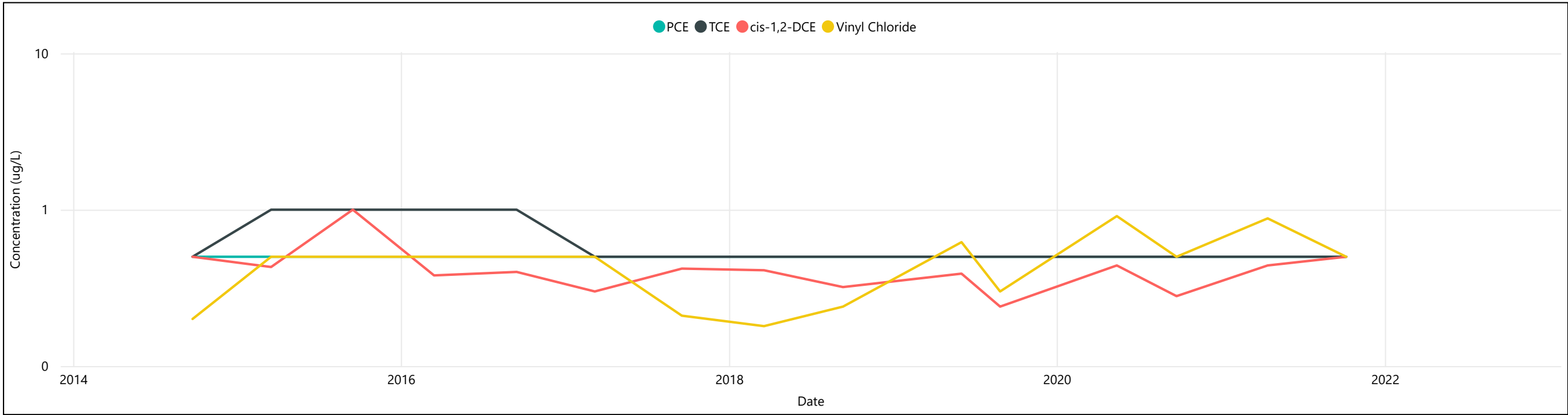


Figure D24. Boundary VOC Trend Charts (MW-28)

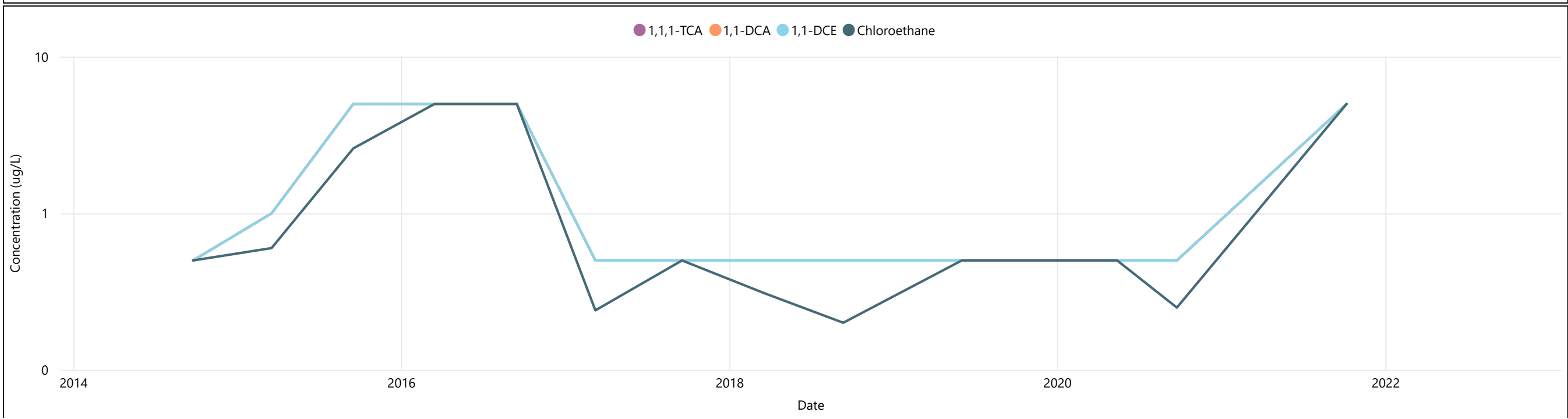
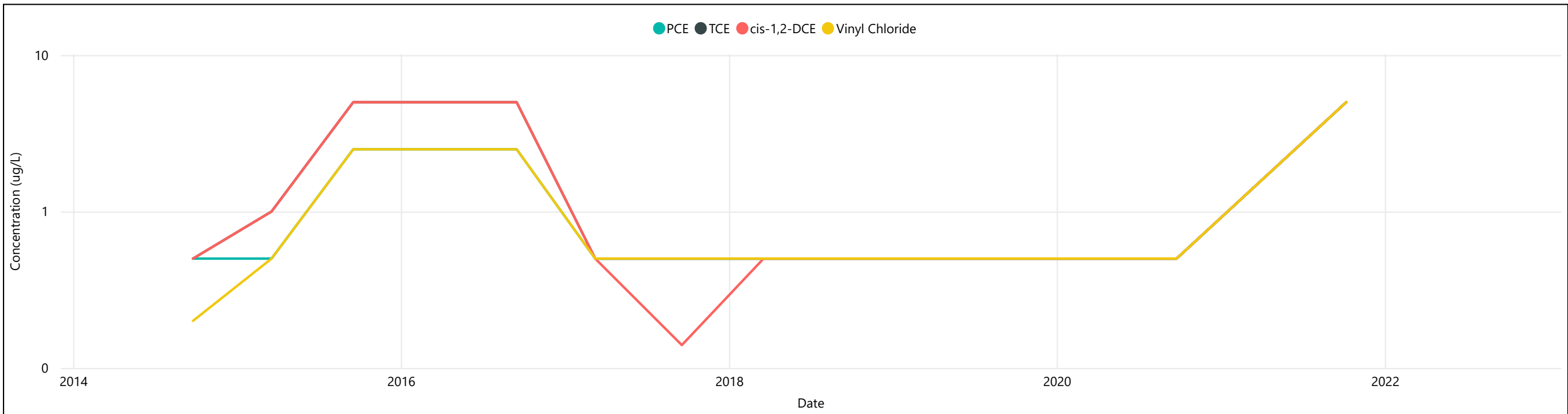


Figure D25. Off-site VOC Trend Charts (MW-29)

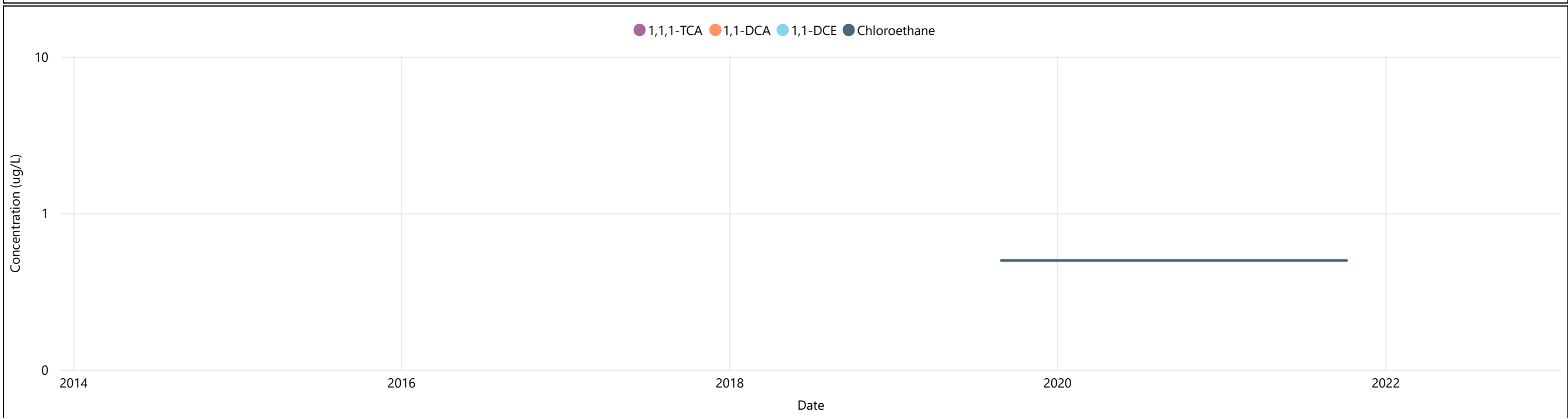
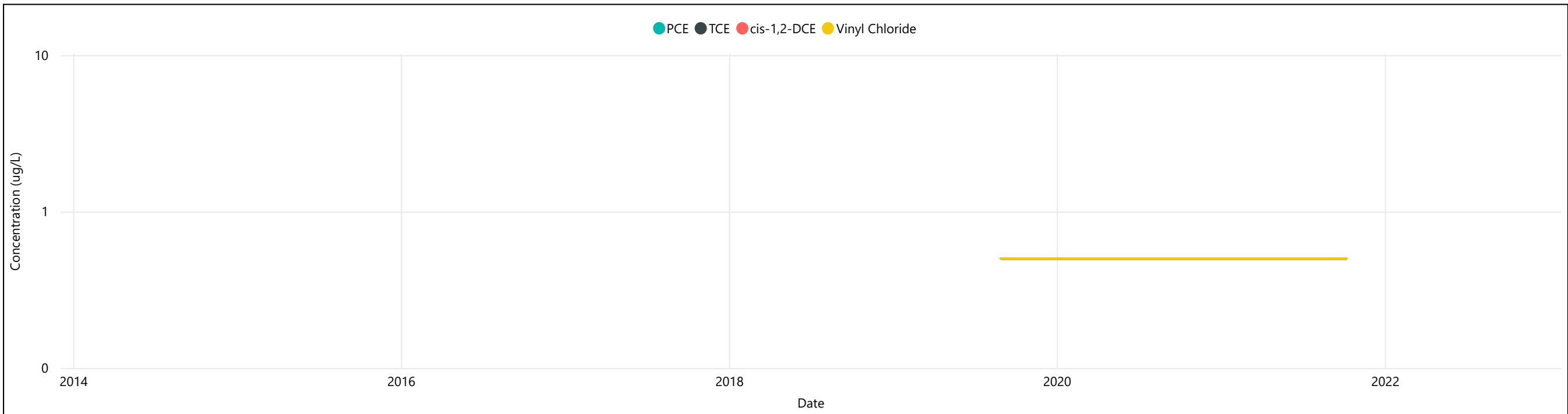


Figure D26. Benzene Deep Zone Trend Chart

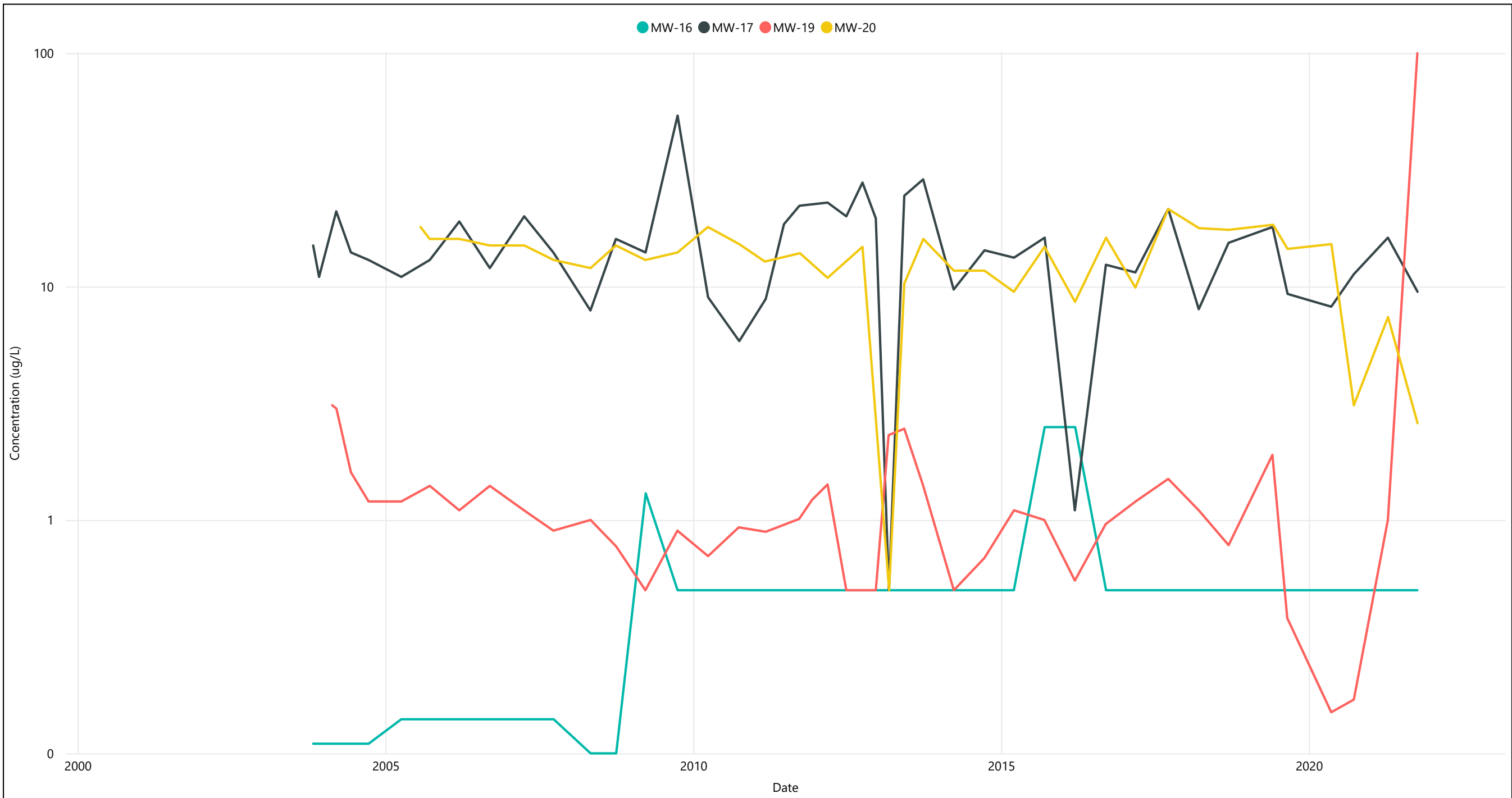
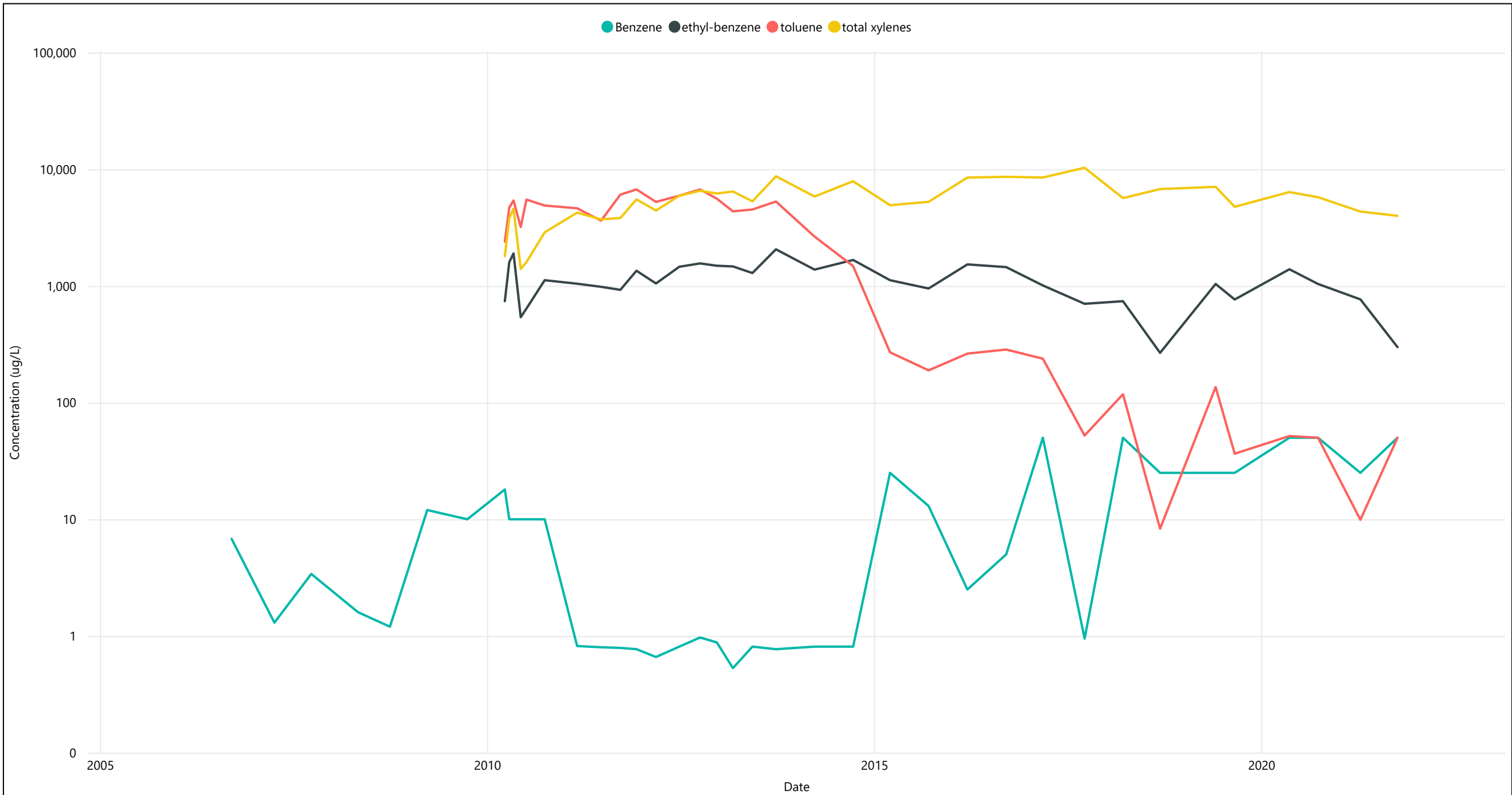


Figure D27. On-site Trend Chart (MW-21)



APPENDIX E MANN-KENDALL ANALYSIS

Table E-1
Mann Kendall Test for Trends
2021 Annual Report
Univar Solutions USA, Inc.
Kent, Washington

sys_loc_code	chemical_name	N	Num Detects	Percent Detects	Meet Data Reqs	p-value	tau2	tau	Trend
MW-08	trichloroethene	14	14	100.00%	Yes	0.0617	0.148	0.385	Stable
MW-09	trichloroethene	14	9	64.29%	Yes	0.4	0.0305	-0.175	Stable
MW-17	benzene	14	14	100.00%	Yes	0.742	0.0044	-0.0663	Stable
MW-19	benzene	14	11	78.57%	Yes	0.0232	0.217	-0.466	Decreasing
MW-19	vinyl chloride	14	12	85.71%	Yes	0.475	0.0209	0.144	Stable
MW-19	cis-1,2-dichloroethene	14	10	71.43%	Yes	0.0754	0.134	0.366	Stable
MW-19	methylene chloride	14	2	14.29%	No	-	-	-	-
MW-20	benzene	14	14	100.00%	Yes	0.388	0.0349	-0.187	Stable
MW-23	tetrachloroethene	14	14	100.00%	Yes	0.0794	0.125	0.354	Stable
MW-23	trichloroethene	14	13	92.86%	Yes	0.00196	0.365	0.604	Increasing
MW-27	vinyl chloride	14	7	50.00%	Yes	0.0255	0.227	0.476	Increasing
MW-28	methylene chloride	12	0	0.00%	No	-	-	-	-

Notes:

Data File Input= ARII-2015-2021-MK-output_2022-01-13.xlsx

Data Date Range= 2015-03-16 to 2021-10-07

Non-detects were substituted with a value of zero for trend analysis.

N= Number of Data Points

Meet Data Reqs= Trend tests were performed only if the dataset had ≥ 5 detected values and ≥ 50 percent detects.

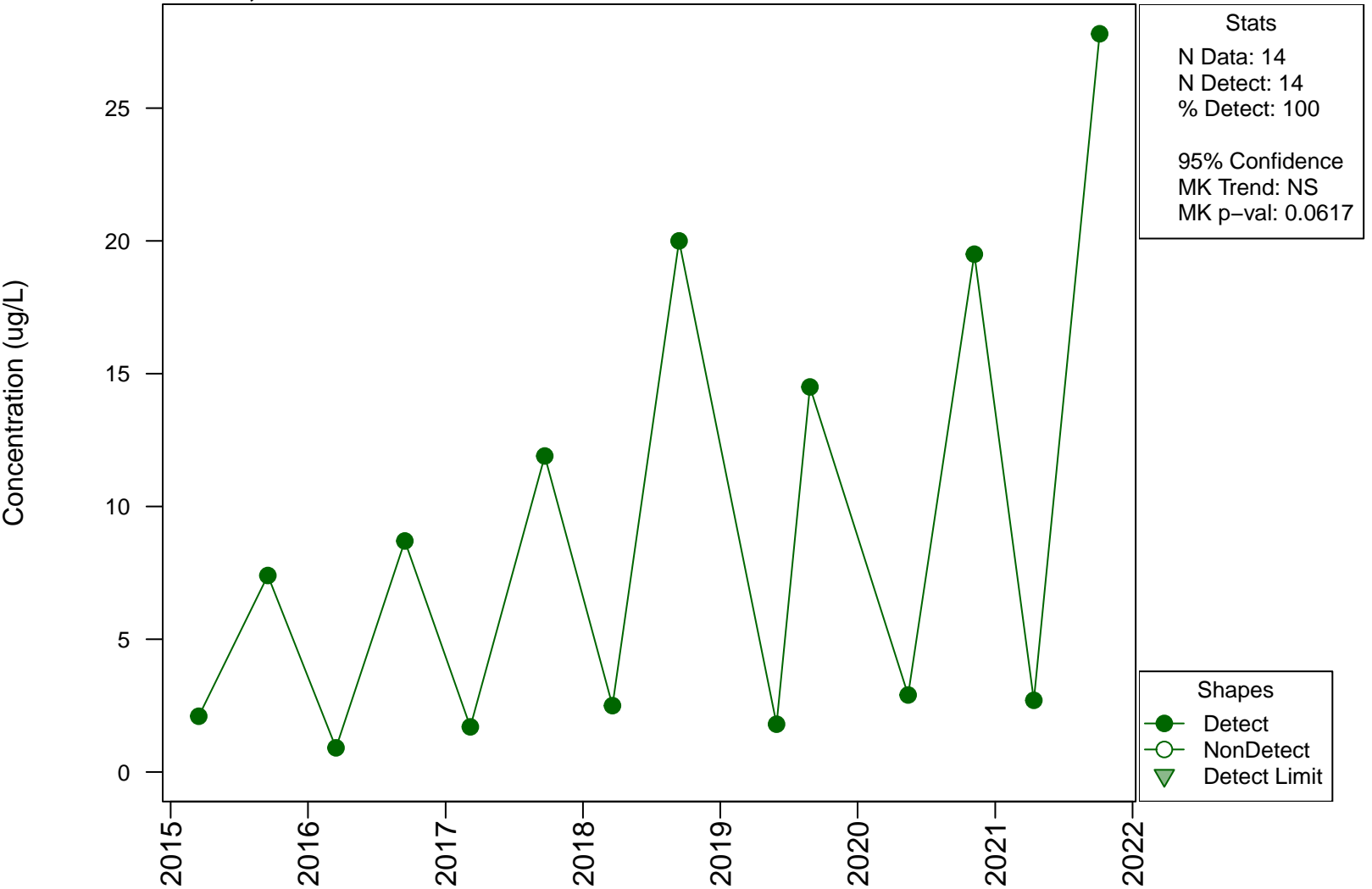
tau2= tau², measure of linear model fit

tau= Kendall's tau Statistic

p-value= A two-sided p-value describing the probability of the H0 being true ($\alpha=0.05$).

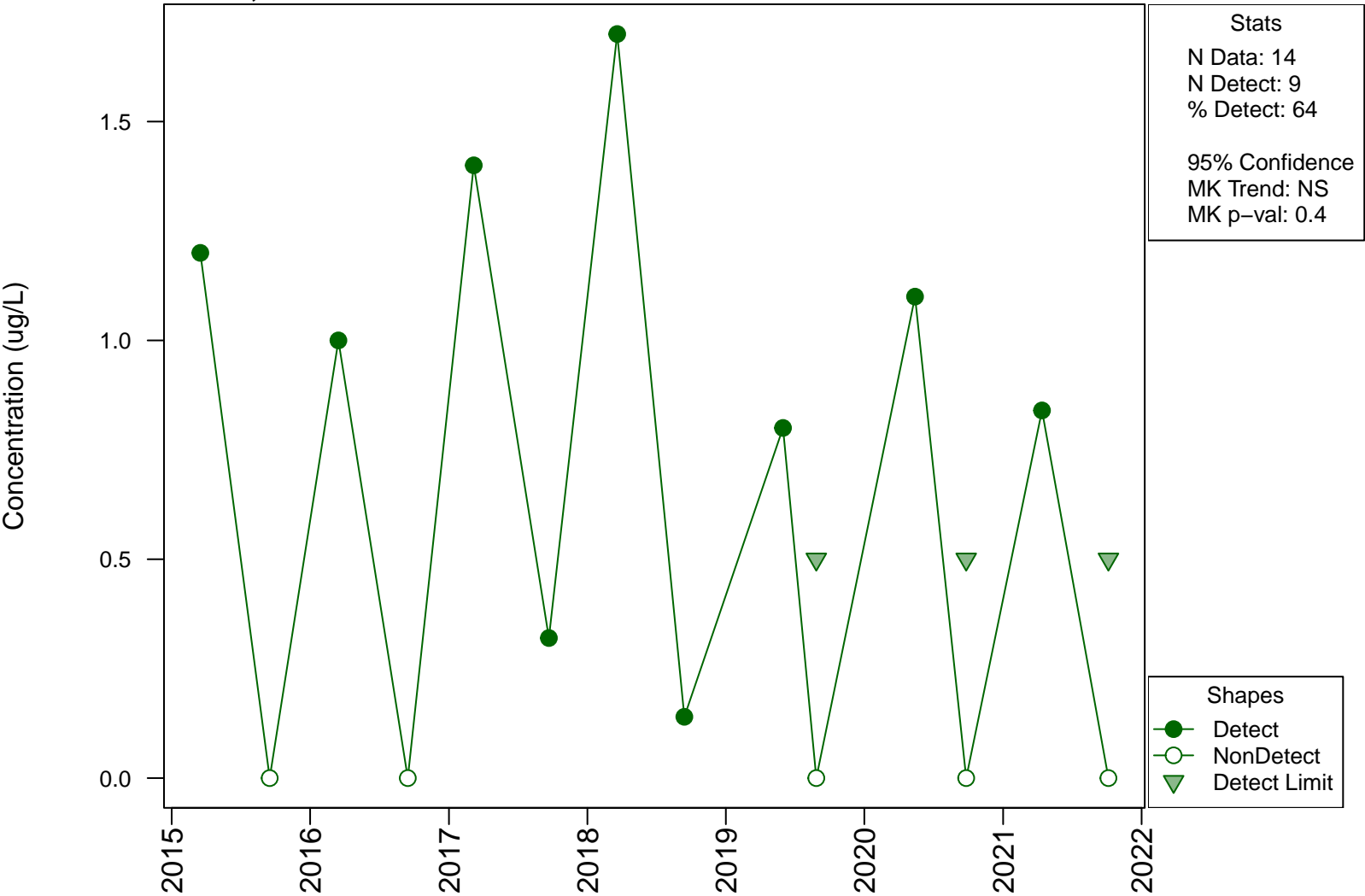
Scatterplots and Trend Analysis

MW-08, Trichloroethene

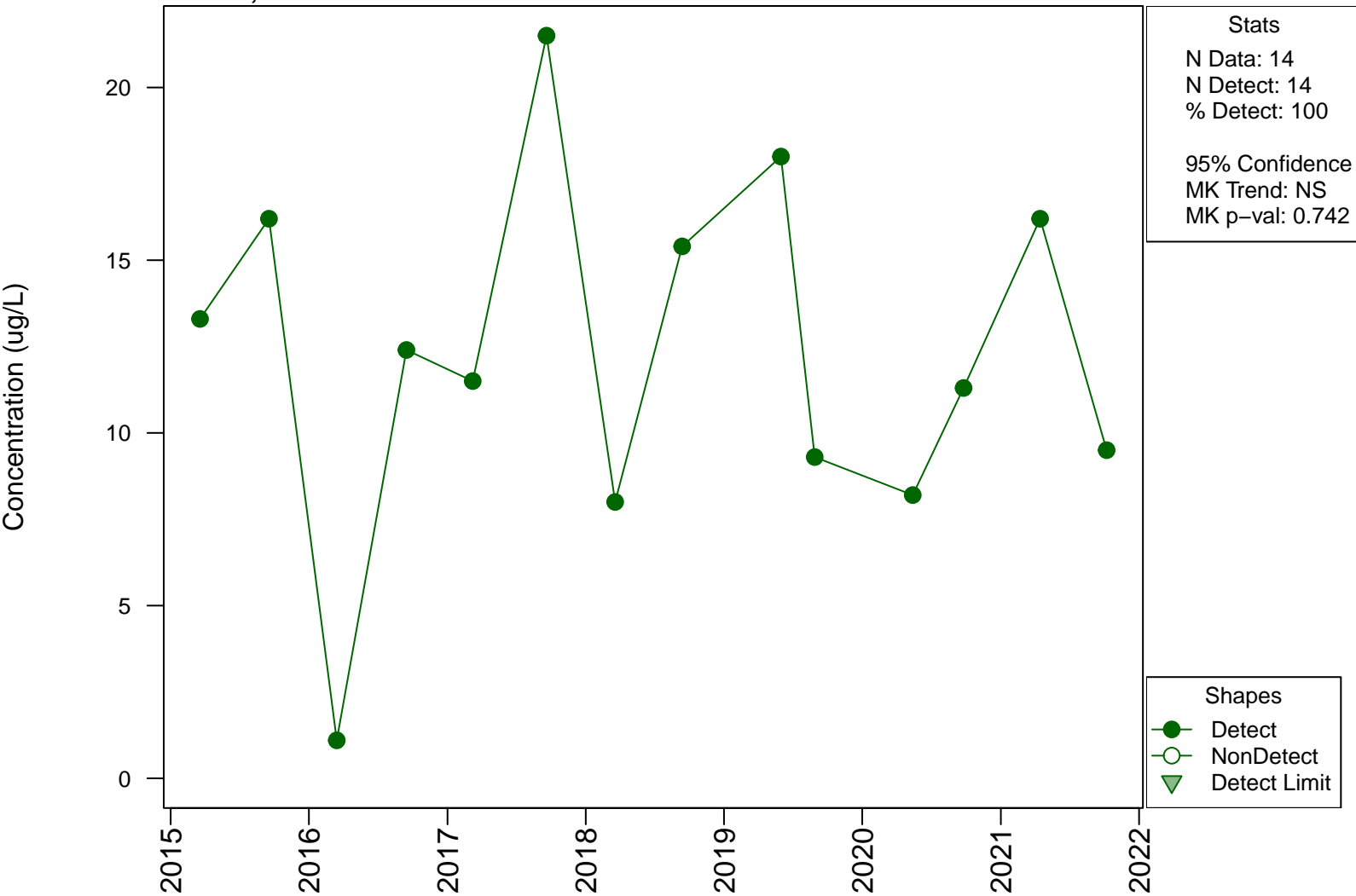


Scatterplots and Trend Analysis

MW-09, Trichloroethene

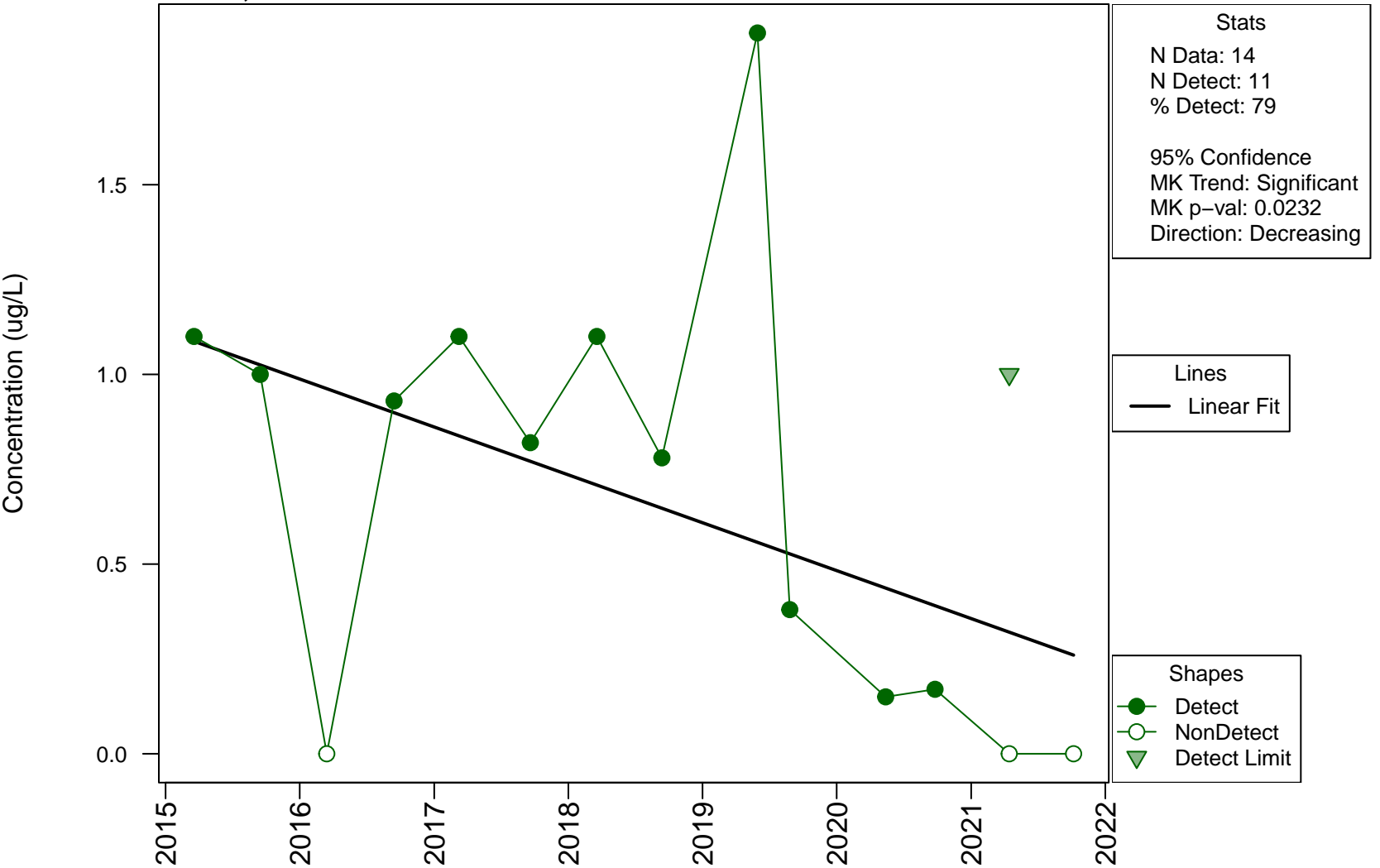


Scatterplots and Trend Analysis MW-17, Benzene



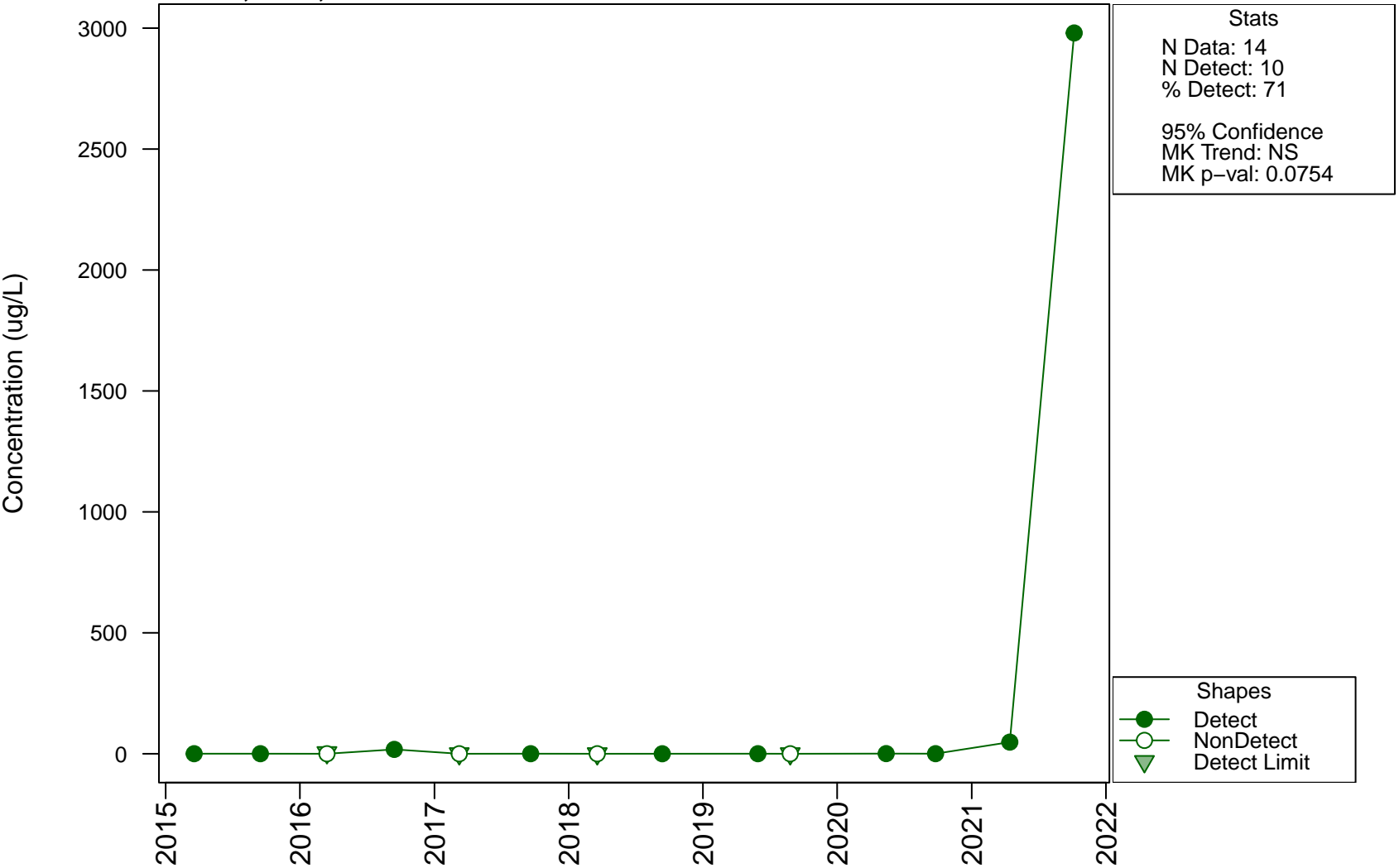
Scatterplots and Trend Analysis

MW-19, Benzene



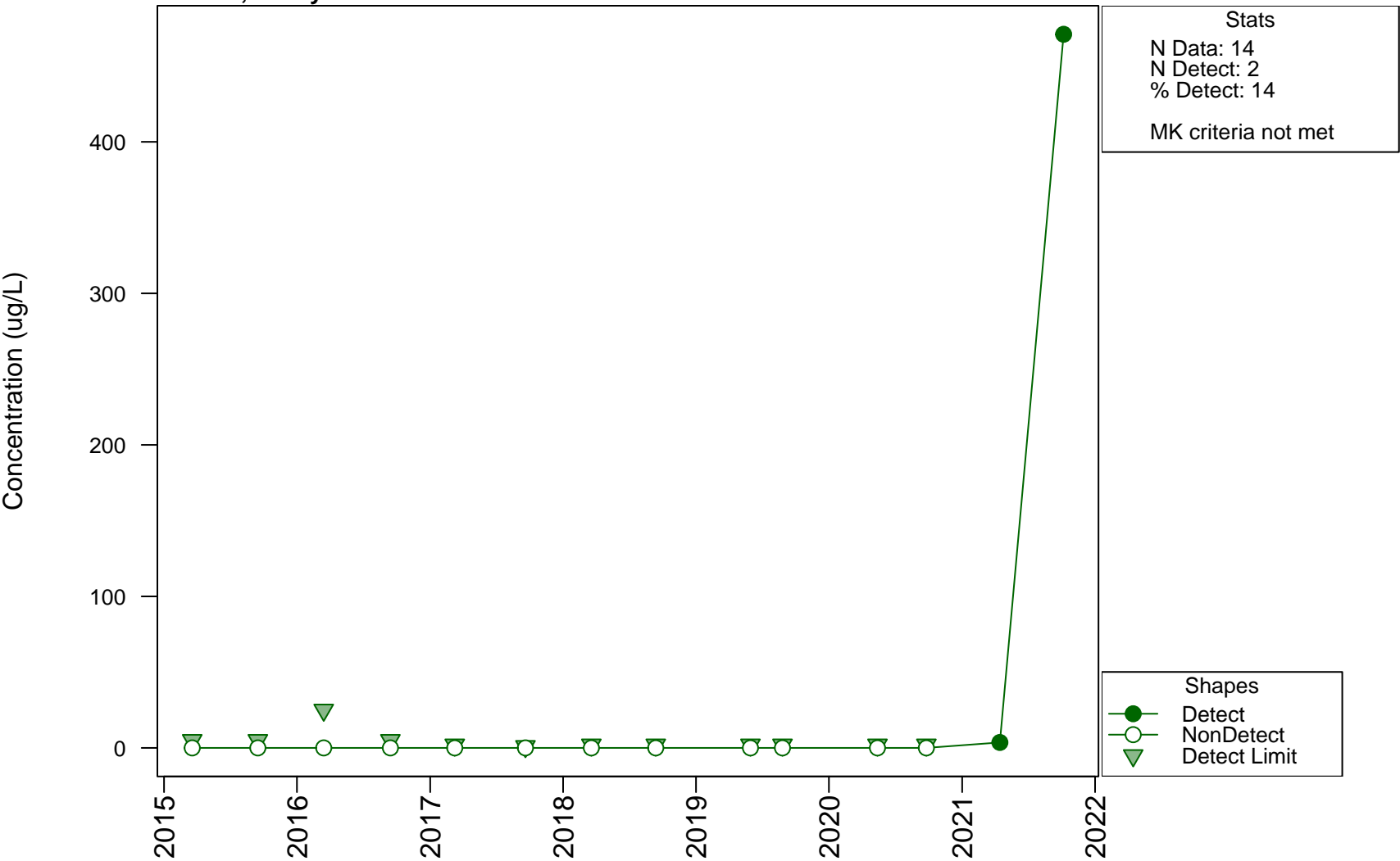
Scatterplots and Trend Analysis

MW-19, cis-1,2-Dichloroethene



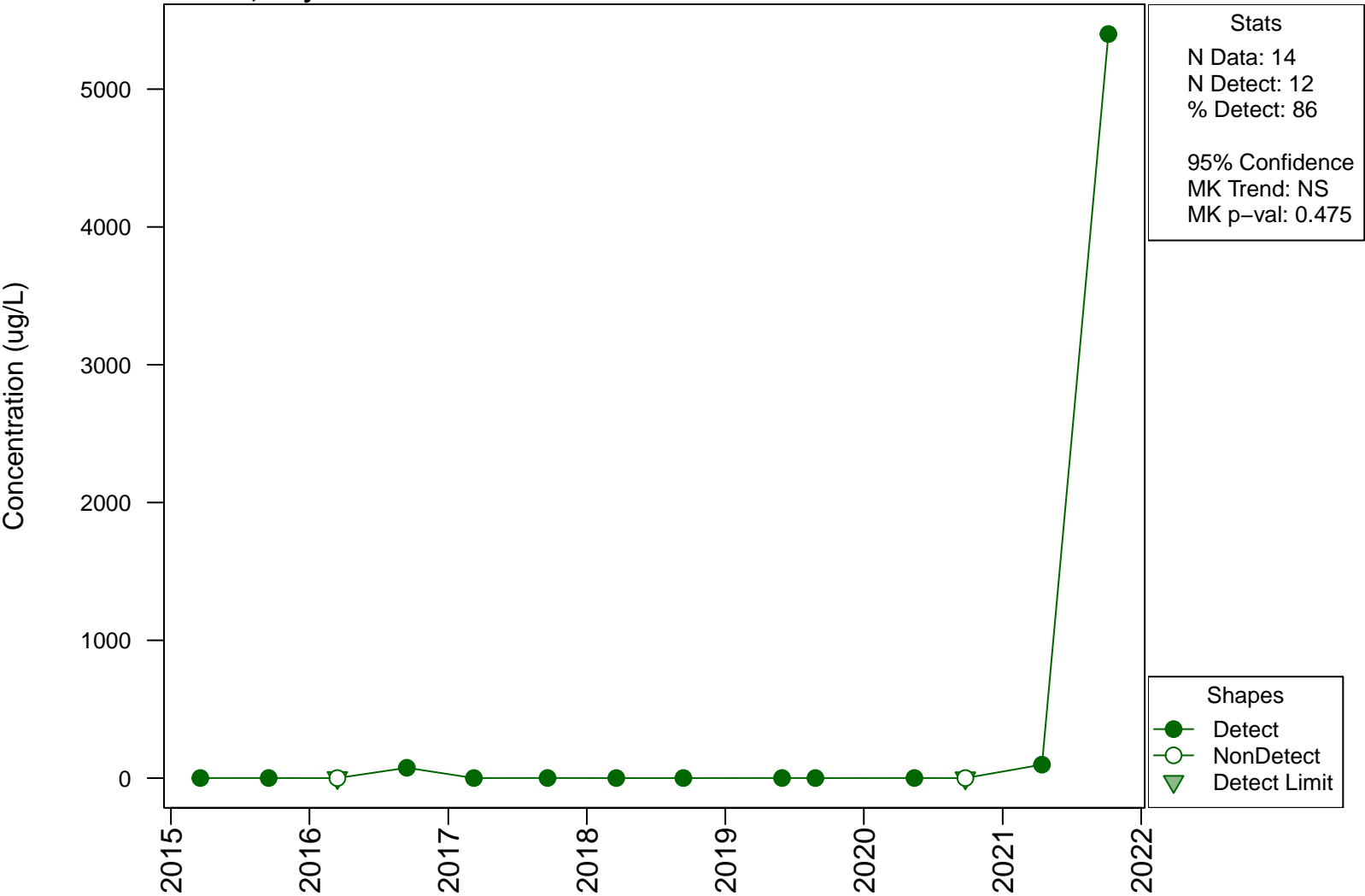
Scatterplots and Trend Analysis

MW-19, Methylene chloride



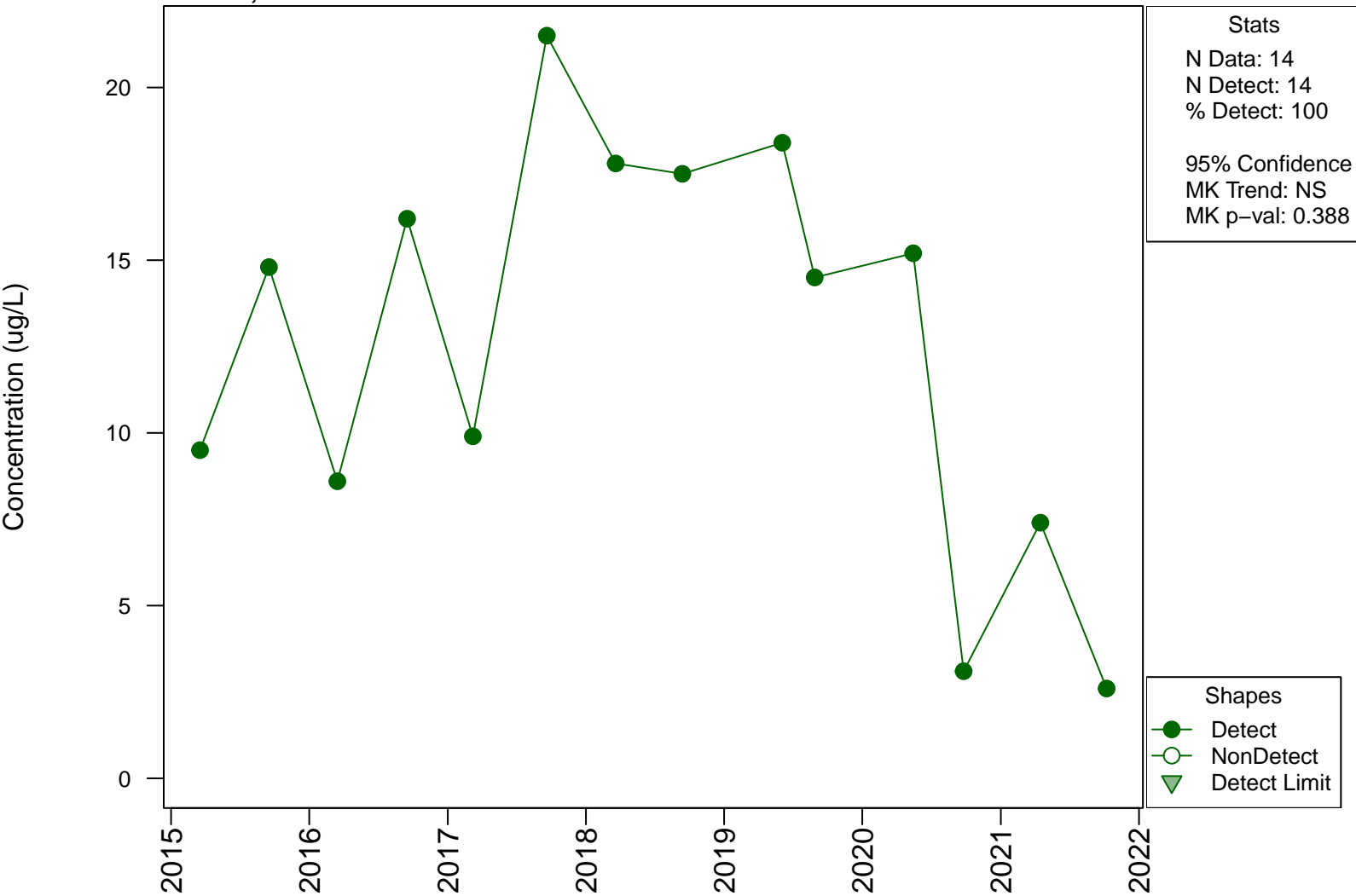
Scatterplots and Trend Analysis

MW-19, Vinyl chloride



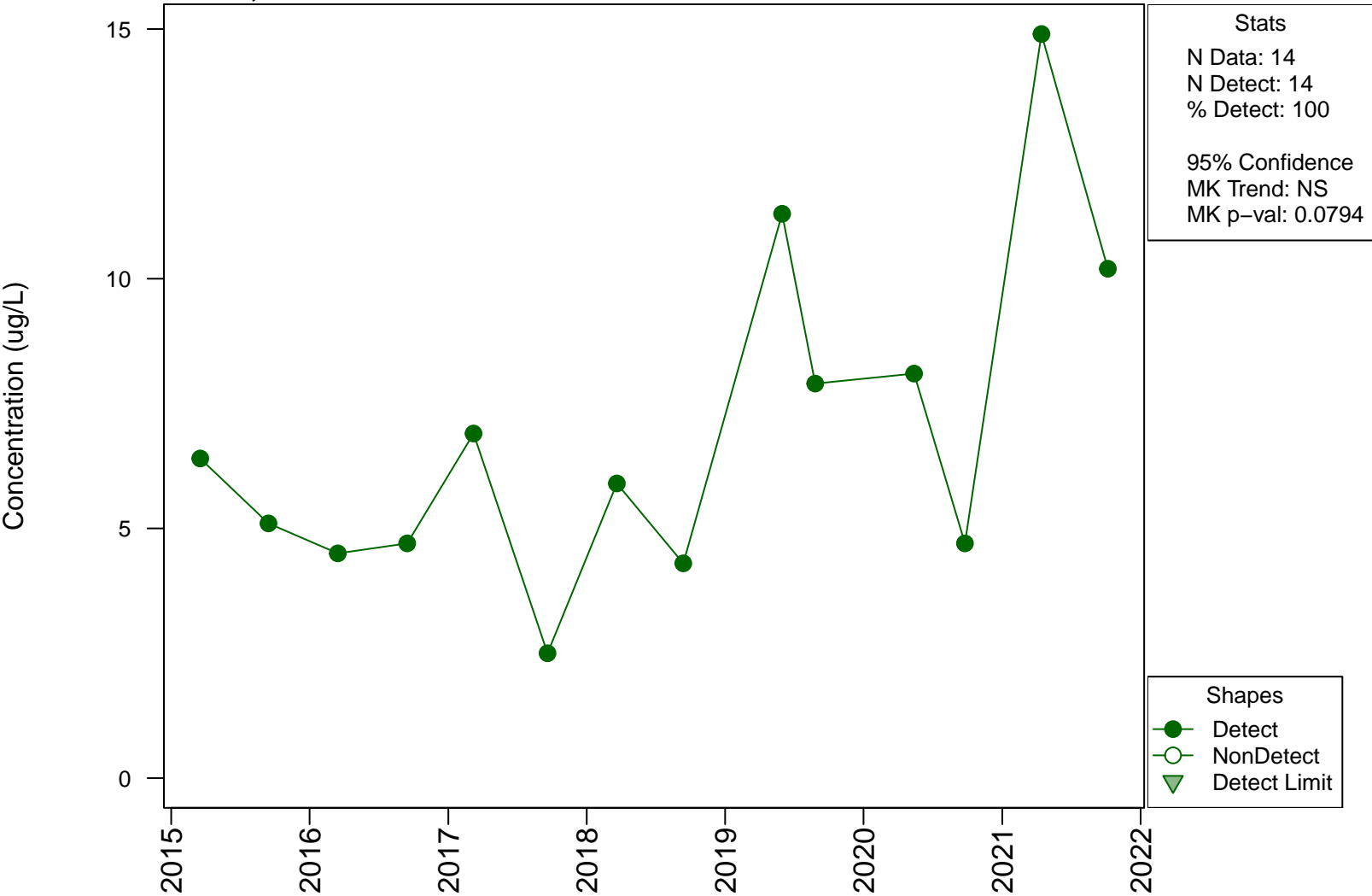
Scatterplots and Trend Analysis

MW-20, Benzene



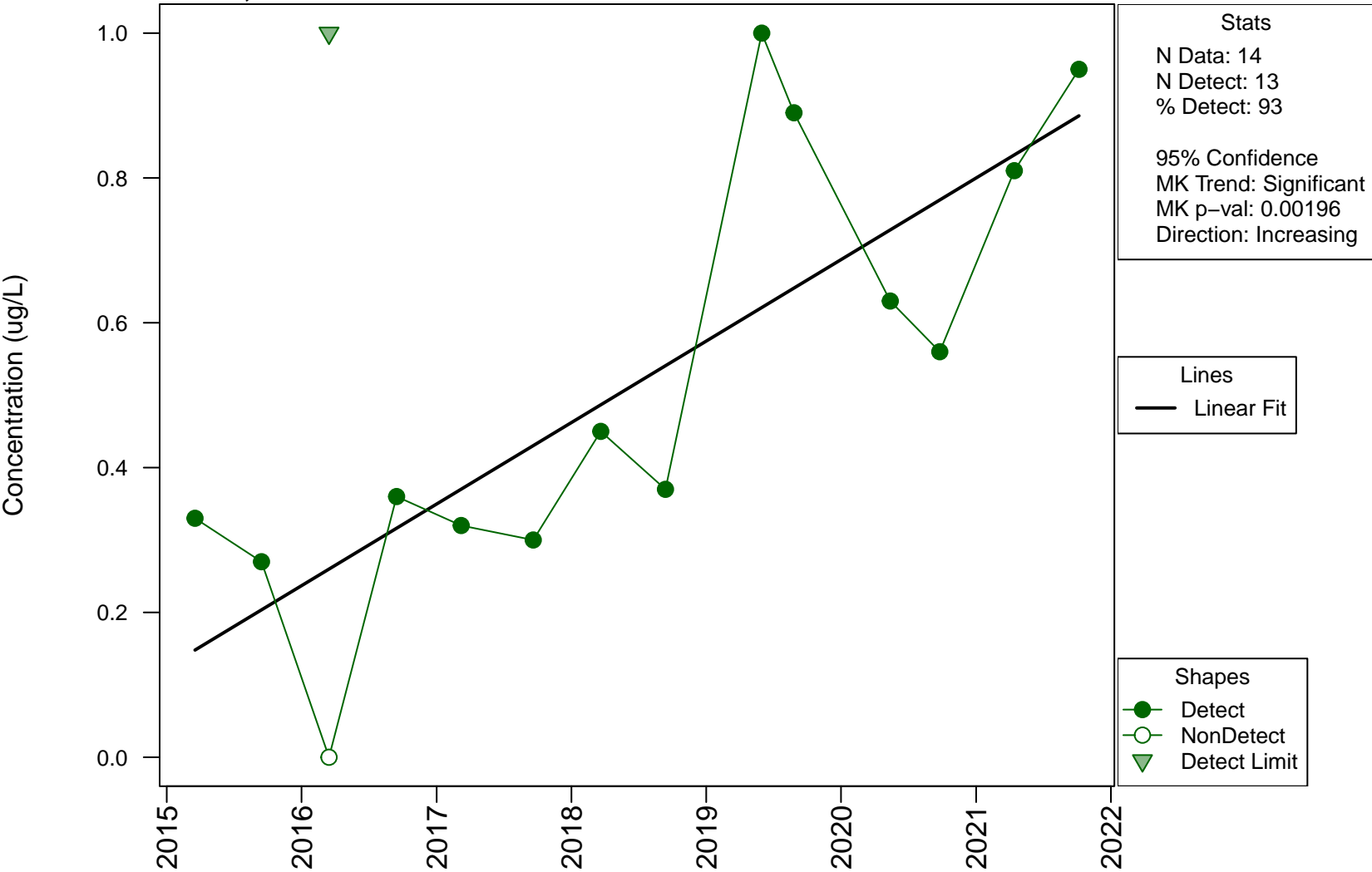
Scatterplots and Trend Analysis

MW-23, Tetrachloroethene



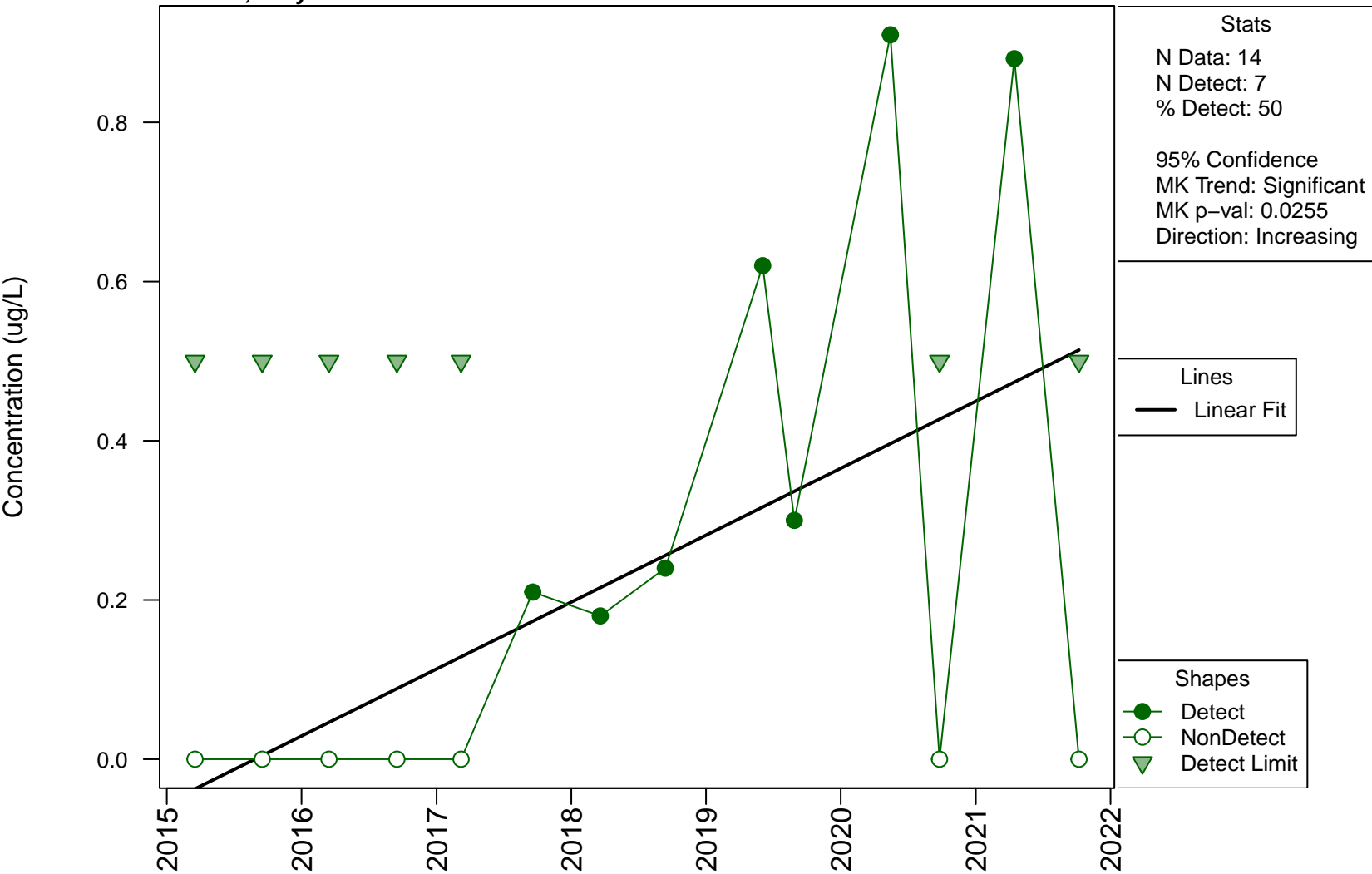
Scatterplots and Trend Analysis

MW-23, Trichloroethene

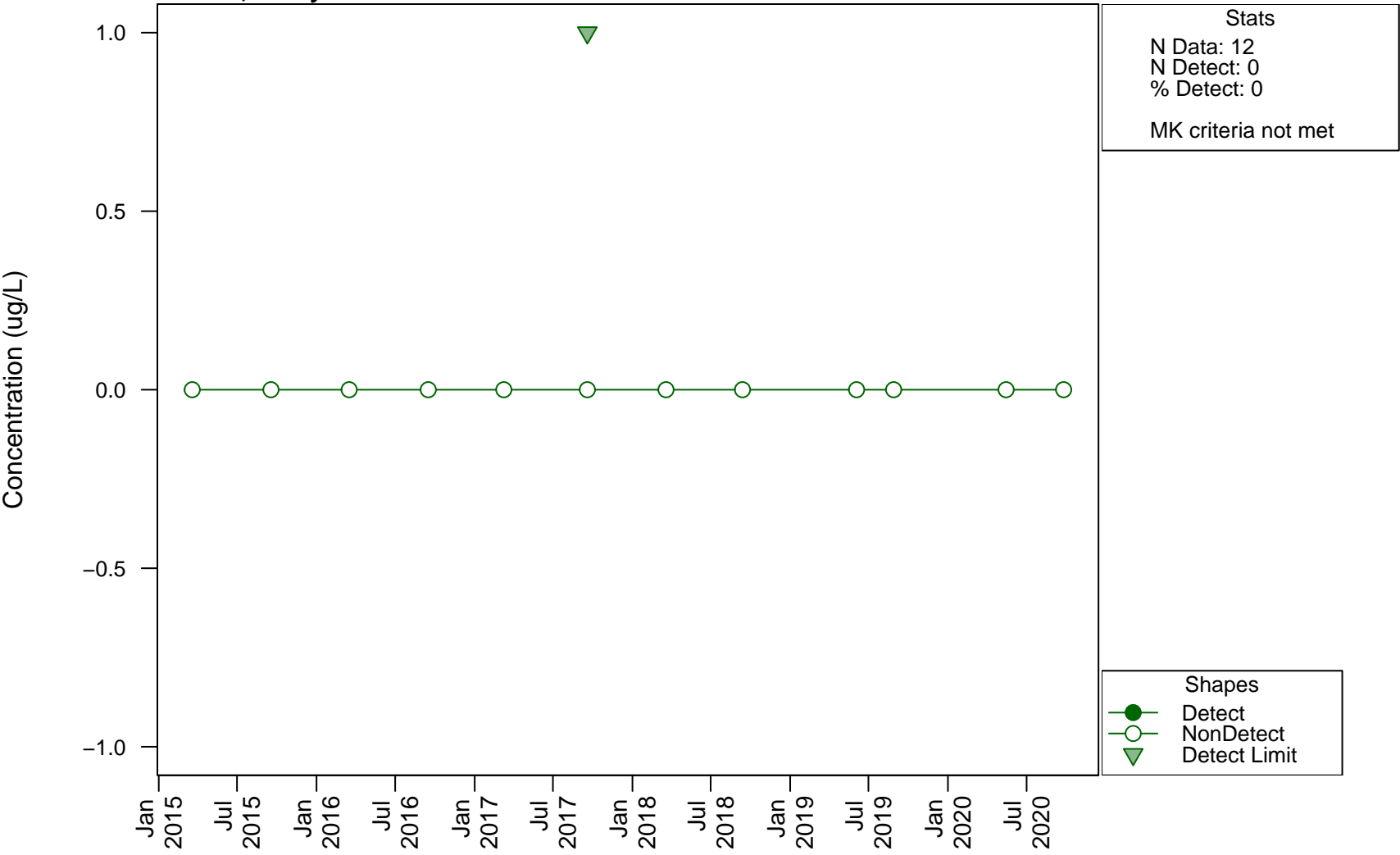


Scatterplots and Trend Analysis

MW-27, Vinyl chloride



Scatterplots and Trend Analysis MW-28, Methylene chloride



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