

# 2017 Annual Groundwater Monitoring Report

Univar USA, Inc.  
8201 South 212<sup>th</sup> Street  
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Prepared for  
Univar USA Inc.  
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## List of Acronyms

AECOM	AECOM Technical Services
AO	Agreed Order No. DE5988
bgs	below ground surface
bvcA	BAV1 VC reductase
cis-1,2-DCE	cis-1,2-dichloroethene
CMP	compliance monitoring plan
CUL(s)	cleanup level(s)
DCA	dichloroethane
DCE	dichloroethene
DO	dissolved oxygen
Ecology	Washington State Department of Ecology
EDR	engineering design report
Dhb	<i>dehalobacter</i>
Dhc	<i>dehalococcoides</i>
IHS	indicator hazardous substances
mg/L	milligrams per liter
MDL	method detection limit
MRL	method reporting limit
ORM-2	<i>Deltaproteobacterium ORM-2</i>
ORP	oxidation-reduction potential
PCE	tetrachloroethene
PCR	polymerase chain reaction
PES	PES Environmental, Inc.
TCE	trichloroethene
tceA	TCE reductase
TOC	total organic carbon
VC	vinyl chloride
VCP	voluntary cleanup program
vcrA	vinyl chloride reductase
VOC(s)	volatile organic compound(s)
1,1-DCA	1,1-dichloroethane
1,1-DCE	1,1-dichloroethene
µg/L	micrograms per liter



# 1 INTRODUCTION

This 2017 annual groundwater monitoring report has been prepared by AECOM on behalf of Univar USA Inc. (Univar) pursuant to the requirements of Agreed Order No. DE 5988 (AO) between Univar and the Washington State Department of Ecology (Ecology), effective November 20, 2008 (Ecology 2008).

This report presents data collected and activities performed at the Univar Kent 212<sup>th</sup> Site (Site) located at 8201 South 212<sup>th</sup> Street, Kent, Washington (Figure 1), during the period January 1 through December 31, 2017. The 2017 groundwater monitoring at the Site was conducted consistent with the *Compliance Monitoring Plan (CMP)*, which was submitted to Ecology as an appendix to the Engineering Design Report (EDR; PES, 2010). Per Task 4 of the AO Scope of Work, this report provides an overview of groundwater monitoring at the Site, including: tabulated groundwater data; historical groundwater elevation data (Appendix A); historical groundwater field parameter and analytical data (Appendix B); groundwater elevation contour maps; isoconcentration contour maps; analytical data plots (Appendix C); field forms, laboratory analytical data (Appendix D); and a discussion of data validation, water quality data, and data trends.

In 2017, a benzene bioremediation evaluation was initiated for downgradient wells in the deep zone of the aquifer. A Benzene Bioremediation Evaluation Report summarizing the results of this evaluation, including the results of Bio-Trap sampling will be submitted in March/April 2018.

## 2 BACKGROUND

### 2.1 SITE DESCRIPTION AND HISTORY

Univar has operated at the Site since 1974. The Univar facility stores, packages, and distributes various chemicals. A one-story concrete warehouse is located at the center of the property, with an attached office on the northwest corner (Figure 2). The warehouse is bounded by a covered loading dock on north side, a rail line on the south side, a large covered storage area on the east side, and a parking lot with a driveway for truck traffic on the west side. A second loading dock is on the east side of the covered storage area, with a covered work area and two uncovered aboveground storage tank (AST) areas south of that. Additional AST areas are located south of the rail line. The Site also includes a rail car unloading area and drum/tote storage is located on the eastern part of the Site. An aerial Site plan is provided as Figure 2. The entire Site is paved with asphalt or concrete except for the landscaped areas near the office.

Historically, Van Waters & Rogers operated one 1,500-gallon and one 6,000-gallon AST containing dangerous waste and 37 underground storage tanks (USTs) of raw products at the Site. The former 1,500-gallon AST was located on top of the elevated dock immediately north of the existing barrel wash pit (Figure 2A). The former 6,000-gallon AST was located in Tank Farm #1, 100 feet south of the southeast corner of the main warehouse (Figure 2A). The dangerous waste ASTs were taken out of service in 1982 (1,500-gallon tank) and in 1985 (6,000-gallon tank) [PES 2009a]. There were no known releases from the former dangerous waste ASTs during their operating history. The 37 USTs were also located in the area of the former 1,500-gallon AST (Figure 2A). The USTs were removed in 1985 and 1986 (PES 2005). This area is currently covered by a concrete pad constructed in approximately 1985. The former USTs are suspected to have impacted soil and groundwater at the Site. A brief Site investigation summary and regulatory drivers are provided below.

### 2.2 SITE INVESTIGATION

Site soil and groundwater were investigated from 1994 to 2008 using direct-push and hollow-stem auger drilling techniques, including soil boring advancement, monitoring well installation, soil and groundwater sampling, laboratory chemical analysis, groundwater elevation monitoring, and hydraulic conductivity testing. Subsurface investigations conducted indicated that volatile organic compounds (VOCs) were present in the subsurface above the Model Toxics Control Act (MTCA) applicable cleanup levels (CULs). The following areas were identified as source areas immediately east of the present day warehouse building (Figure 2):

- Contaminated soil and shallow groundwater in an area focused around the vicinity of the barrel wash pit and monitoring wells MW-1/MW-4;
- Contaminated soil and shallow groundwater in an area in the vicinity of monitoring well MW-5; and

- Contaminated deep groundwater in the vicinity of the barrel wash pit and monitoring wells MW-13/MW-21 (MW-13/MW-21 source area).

A number of VOCs present in soil and groundwater near MW-1/MW-4 and MW-13/MW-21 were never managed in the former hazardous waste storage tanks. However, the USTs stored products containing many of the VOCs present in the subsurface. Based on review of historical operations information and the distribution of VOCs, it was determined that the source for the MW-1/MW-4 and MW-13/MW-21 areas was most likely undocumented releases near the 37 USTs (PES 2009a). The source of the VOCs in the vicinity of MW-5 is unknown.

Univar requested assistance from Ecology under the Voluntary Cleanup Program (VCP) in August 1998 and had been conducting the environmental investigations and pilot studies with Ecology's oversight through the VCP. In 2008, Univar and Ecology entered into negotiations for an AO that would cover future remedial action at the Site. The AO was finalized and became effective on November 20, 2008.

## 2.3 CLEANUP ACTION

A draft focused feasibility study (FFS) was developed in 2000 to evaluate cleanup action alternatives (IT Corporation 2000). The FFS evaluated a number of remedial action alternatives to address the soil and shallow groundwater contamination found in the MW-1/MW-4 and MW-5 areas. Based on the FFS recommendations, an *in situ* chemical oxidation pilot study was performed in the MW-5 area during 2001. Pilot test monitoring results indicated that *in situ* chemical oxidation was not likely to be a cost-effective approach to remediating the VOCs found in the MW-5 area. In addition, during the installation of the pilot study injection wells, additional VOC contamination was discovered in groundwater located within a deeper portion of the saturated zone. This finding initiated multiple rounds of additional investigations conducted between 2002 and 2004 to determine the nature and extent of subsurface VOCs to the base of the aquifer (approximately 45 to 49 feet below ground surface). Ecology requested that Univar prepare a comprehensive Site characterization report. A remedial investigation (RI) report summarizing the nature and extent of VOC impacts in groundwater was prepared and submitted to Ecology in 2005 (PES 2005).

A combined revised RI, focused feasibility study (FFS) addendum, and draft cleanup action plan (CAP) were developed in 2009 (PES 2009a). 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 evaluated and recommended cleanup actions. Following Ecology approval of the draft CAP, an EDR and CMP were developed in 2010 for implementation. The cleanup action for the Site consists of natural attenuation in the shallow groundwater plumes in the vicinity of MW-1/MW-4 and MW-5 source areas, and enhanced reductive dechlorination (ERD) for the deeper groundwater in the MW-13/MW-21 source area. For soil contamination, institutional controls and the existing asphalt and concrete pavement overlying the areas of soil exceedances are to be maintained.

Implementation of the final cleanup action included an injection test in April 2010 to evaluate the feasibility of implementing an ERD remedial approach for the Site. The intent of the injection program was to stimulate ERD of the chlorinated VOCs found in the shallow MW-5 source area and the deeper MW-13/MW-21 source area. The locations of the injection wells are shown on Figure 3. The full-scale injection program was conducted in late 2010 through early 2011, including injection of emulsified oil as a

carbon substrate and injection of a microbial consortium containing *Dehalobacter* (Dhb) and *Dehalococcoides* (Dhc) bacteria into both shallow and deep injection wells and direct push injection points. Historical groundwater conditions from before and during the injection program are included in Appendix B.

Following implementation of the cleanup action, groundwater performance monitoring was initiated in March 2011 in accordance with the CMP and EDR (PES 2010) to evaluate substrate injection and groundwater quality. Quarterly performance monitoring was conducted for the first two years after the cleanup action implementation and was completed in March 2013. Substrate injection performance monitoring was performed at selected wells within the injection and monitoring well networks to confirm that the injected substrate produced conditions conducive to reductive dechlorination.

### 3 GROUNDWATER MONITORING ACTIVITIES

Groundwater performance monitoring is currently conducted semi-annually (March and September). The monitoring includes semi-annual monitoring for VOCs in all CMP wells; semi-annual monitoring for injection performance parameters and total organic carbon in selected wells; and periodic monitoring for the presence of microbes in selected wells (Table 1).

Groundwater monitoring is also being conducted to assess how the cleanup action is affecting the groundwater quality in and downgradient of the source treatment areas. Two deep monitoring wells, MW-27 and MW-28, were installed in the north area of the monitoring well network in September 2014 to provide further delineation of the plume downgradient of the source treatment areas. Section 3 further describes the analyses and Section 4 summarizes the results. Performance monitoring will be conducted until groundwater CULs have been achieved for Site IHSs at the point of compliance (defined in the AO as the downgradient property boundary).

In 2017, additional groundwater parameters in select wells were analyzed to assess bioremediation of benzene in downgradient deep wells. The parameters included general chemistry parameters, volatile fatty acids, additional microbial analysis for benzene, and a stable isotope probing study to track the fate of <sup>13</sup>C-labeled benzene. Analytical data for these additional samples are included in the tables in this report (Tables 5 through 9); however, the discussion and evaluation of this data will be provided in a separate document to be submitted in March/April 2018 timeframe.

#### 3.1 MONITORING NETWORK

The groundwater monitoring network at the Site consists of 26 monitoring wells and one piezometer, which are shown on Figure 2. Twenty-one of the monitoring wells are monitored, as specified in the CMP (Table 1).

Monitoring well details for the wells and piezometer installed at the Site are summarized in Table 2 and summarized below:

- Thirteen monitoring wells (MW-1 through MW-12, and MW-23) are installed in the upper portion of the shallow aquifer (between 4 and 20 feet below ground surface [bgs]) and are designated shallow zone monitoring wells.
- Thirteen monitoring wells (MW-13, MW-14, MW-16 through MW-22, MW-24, MW-25, MW-27, and MW-28) and one piezometer (P-1) are installed at the base of the shallow aquifer (between approximately 32 and 49 feet bgs) and are designated deep zone monitoring wells.

All of the monitoring points, with the exception of deep zone monitoring wells MW-20 and MW-27, are located on the Univar property. These monitoring wells monitoring wells are located on the north side of South 212<sup>th</sup> Street. With the exception of benzene, MW-20 and MW-27 are downgradient of deep zone impacts at the Site (Figure 2).

### 3.2 GROUNDWATER ELEVATIONS AND FLOW

Groundwater elevations were measured on March 6, 2017 and September 18, 2017. Table 2 presents the depth to groundwater measurements and calculated groundwater elevations. Historical groundwater elevation data for each monitoring location are provided in Appendix A. Figures 4 and 5 present the shallow zone groundwater elevation contour maps for March and September, respectively. Figures 6 and 7 present the deep zone groundwater elevation contour maps for March and September, respectively. The shallow groundwater elevations and contours are generally consistent with historical data; the gradient ranging from 0.003 foot/foot (ft/ft) to 0.005 ft/ft. The flow direction was generally to the north (i.e., north/northwest to north/northeast) and to the east (east to east/southeast). The deep groundwater elevations and contours were also consistent with historical data. As in previous years, the deep potentiometric surface was relatively flat (with a hydraulic gradient generally less than 0.001 ft/ft), and the inferred groundwater flow direction was toward the north/northwest.

### 3.3 GROUNDWATER SAMPLING

Groundwater monitoring and sampling was conducted consistent with the procedures described in the CMP unless otherwise noted. The two semi-annual events were completed on March 6 through 9, 2017 and September 18 through 21, 2017. As specified in the CMP, samples collected in the September event from MW-5, MW-7, MW-12, MW-13, MW-21, and MW-22 were analyzed for the presence of microbes using the polymerase chain reaction (PCR) test. MW-19 was also sampled for PCR in September, as the sample was already being collected for *Deltaproteobacterium ORM-2* (ORM-2); this location was also sampled a few times since 2014 to provide additional data on the downgradient plume. Microbial analysis for well MW-23 was discontinued in 2016 because the concentrations of microbes were below detection limits for the previous three years.

During the September monitoring event, samples from MW-17, MW-19, and MW-20 were also analyzed for the presence of microbes capable of anaerobic benzene degradation (i.e., ORM-2) and additional general chemistry parameters. Following sampling at these wells, Bio-Traps® baited with 13C-labeled benzene were deployed in the wells to assess the potential for benzene bioremediation. The Bio-Traps® were retrieved and submitted for a stable isotope probing (SIP) study one month later in October 2017.

Field parameters measured during sampling included temperature, pH, specific conductance, DO, and oxidation-reduction potential (ORP). Ferrous iron was also analyzed for select wells. Table 3 includes the field parameters measured in groundwater during 2017. Historical measurements are provided in Appendix B.

### 3.4 LABORATORY ANALYTICAL METHODS

Groundwater samples collected for laboratory analysis were submitted to SGS Laboratories in Orlando, Florida, an Ecology-accredited laboratory, for the following analyses: VOCs, TOC, general chemistry (listed below), and dissolved gases. Microbial testing was performed by SiREM Laboratory of Guelph, Ontario (Canada) and volatile fatty acid analysis was performed by Pace Analytical laboratory in Pittsburgh, Pennsylvania. The SIP study bio-trap samplers were analyzed by Microbial Insights in Knoxville, Tennessee. The analytical testing methods are summarized below:

- VOCs by USEPA Method 8260
- Total Organic Carbon (TOC) by USEPA SM 5310B
- Natural Attenuation Parameters:
  - Dissolved Gases (methane, ethane, and ethene) by RSK 175
  - Chloride and Sulfate by EPA 300.0<sup>a</sup>
  - Total Alkalinity by SM 2320B<sup>a</sup>
  - Nitrate as Nitrogen by EPA 353.2/SM 4500<sup>a</sup>
  - Sulfide by SM 4500S2F<sup>a</sup>
  - Total Iron and Manganese by SW846/EPA 6010<sup>a</sup>
- Volatile Fatty Acids by Pace Analytical Method AM23G<sup>a</sup>
- Microbial Parameters by SiREM Quantitative PCR Method (Gene-Trac<sup>®</sup>):
  - *Dehalococcoides* (Dhc)
  - *Dehalobacter* (Dhb)
  - Vinyl Chloride (VC) Reductase (vcrA)
  - BAV1 VC Reductase (bvcA)
  - TCE Reductase (tceA)
  - *Deltaproteobacterium* ORM-2 (ORM-2)<sup>a</sup>

The analyses of *BAV1 VC Reductase (bvcA)* and *TCE Reductase (tceA)* were included by SiREM as part of Gene-Trac<sup>®</sup> beginning in 2016. These analyses provide further information on whether dechlorinating conditions are present (SiREM 2016). The analysis for ORM-2 was performed in 2017 for select deep groundwater wells to determine whether the species of *Deltaproteobacterium* capable of anaerobic benzene degradation is present in groundwater at the Site.

Following completion of the September monitoring event, SIP Bio-Trap<sup>®</sup> samplers were deployed in three wells (MW-17, MW-19, and MW-20) on September 20, 2017 to determine the biological makeup of groundwater microbes. The samplers were provided by Microbial Insights and baited with a synthesized form of benzene that contained <sup>13</sup>C-labeled carbon that serves as a tracer. The samplers were retrieved one month later on October 23, 2017 and submitted to Microbial Insights for analysis.

<sup>a</sup> These analyses are not required by the CMP (PES, 2010) and were completed in 2017 to obtain additional information about groundwater and microbial conditions.

The samples collected for performance monitoring during the two monitoring events were submitted to the laboratories under the protocols outlined in the CMP. Microbial samples were collected with low-flow sampling techniques using field filters and a protocol provided by SiREM, and Bio-Traps® were deployed and retrieved using samplers and protocol provided by Microbial Insights. Field parameters, sampling times, and observations were recorded on groundwater sampling forms. Copies of the groundwater sampling forms, analytical reports, and data validation reports are provided in Appendix D.



## 4 GROUNDWATER QUALITY

### 4.1 GROUNDWATER ANALYTICAL RESULTS

The analytical results since 2010/2011 through 2017 (including field parameters, VOCs, TOC, dissolved gases, and microbial activity) are presented in Tables 3 through 6. Table 4 provides the laboratory VOC results for the 17 groundwater IHSs established in the revised RI, FFS addendum, and draft CAP (PES 2009a), as well as the CUL established for each IHS.

Figures 8 through 18 present isoconcentration contour maps for selected IHSs present in the shallow and deep groundwater zones for 2017. The isoconcentration contours are based on the highest IHS concentrations detected in each well. IHS isoconcentration contour maps were selected to:

- i. represent the most widely distributed compounds detected in groundwater at the Site
- ii. represent the most prominent compound from each of the three contaminant classes (aromatic, chlorinated ethanes, and chlorinated ethenes) present in groundwater
- iii. illustrate the degradation pathways of source compounds, if possible

Benzene, chloroethane, PCE, TCE, and vinyl chloride were contoured for the shallow groundwater zone. Benzene, toluene, 1,1-DCA, chloroethane, cis-1,2-DCE, and vinyl chloride were contoured for the deep groundwater zone.

Appendix C provides plots showing the concentrations of select VOCs over time (Figures C1-C48). The VOCs presented include 1,1,1-trichloroethane (TCA), tetrachloroethene (PCE), and breakdown products: 1,1-dichloroethane (1,1-DCA), 1,1-dichloroethene (1,1-DCE), chloroethane, trichloroethene (TCE), cis-1,2 dichloroethene (cis-1,2-DCE), and vinyl chloride. Select wells (MW-16, MW-17, MW-19, and MW-20) within or near the deep groundwater benzene plume also include results for benzene (Figures C31, C33, C37, and C39, respectively). Appendix C also provides microbial and vinyl chloride concentration graphs of results from 2011 through 2017 (Figures C49-C51).

#### 4.1.1 Shallow Groundwater Zone

This section discusses the shallow groundwater results for parameters analyzed as outlined in the CMP.

##### ***Field Parameters and Dissolved Gases***

Measured field parameter results (Table 3) and TOC and dissolved gases results (Table 5) were generally within historical ranges (Appendix B).

TOC concentrations in source area wells MW-5, MW-12 and MW-23 have generally stabilized in the past few years but continue to show seasonal fluctuations, with higher concentrations in the fall. Methane concentrations have significantly decreased in wells MW-5 and MW-12 in the past few years. Methane concentrations in shallow wells MW-1 and MW-4 have also decreased in the past few but years but are the highest of the shallow wells with concentrations in the 3,000 to 10,000 µg/L range.

Ethane and ethene concentrations were not consistently detected in the shallow wells above the reporting limit except for in wells MW-1 and MW-4.

### ***Volatile Organic Compounds***

VOCs were not detected above the CULs in wells MW-2, MW-6, MW-9, and MW-10. One or more VOCs were detected above the applicable CULs in eight of the twelve monitored shallow monitoring wells: MW-1, MW-3, MW-4, MW-5, MW-7, MW-8, MW-12, and MW-23 (Table 4) and included benzene, chloroethane, cis-1,2-DCE, PCE, TCE, methylene chloride, and vinyl chloride. VOC concentrations were generally consistent with or lower than historical results.

The VOC plots of concentration over time for the shallow groundwater zone monitoring wells (Figures C1-C24, Appendix C) show that:

- The concentrations of PCE are highest in source area wells MW-5 and MW-12. Lower concentrations of PCE are present in MW-7 and MW-23. Wells MW-5 and MW-12 have exceedances of the reductive dechlorination breakdown products TCE and cis-1,2-DCE, although concentrations have generally varied over time as concentrations of PCE have decreased.
- The concentrations of reductive dechlorination breakdown products chloroethane, cis-1,2-DCE and vinyl chloride have varied in the shallow source area wells, particularly in MW-1 and MW-4, over the project duration (Figures C9 and C21, Appendix C). Increases are typically indicative of a reductive dechlorination environment and are expected to decrease as the dechlorination process progresses through completion.
- VOC concentrations are generally decreasing or stable in wells downgradient of the shallow source areas.
- With the exception of well MW-4, benzene has not been detected above the CUL in any shallow monitoring well since 2011. Reported concentrations of benzene in well MW-4 have ranged from 3.0 to 10 µg/L since 2010 and exhibit relatively stable behavior.

### ***Microbial Results***

The concentrations of Dhc, Dhb, and vcrA have consistently been low in shallow zone source area monitoring wells MW-5 and MW-12 and nearby monitoring well MW-7 (Table 6). In 2017, concentrations for all analyzed microbes or genes, including analytes bvcA and tceA, were at or less than 10<sup>3</sup> cells/liter or gene copies/liter. Concentrations of microbes have remained relatively consistent over the past four years (Table 6).

#### **4.1.2 Deep Groundwater Zone**

This section discusses the deep groundwater results for parameters analyzed as outlined in the CMP. Results of the additional data collected from deep downgradient wells (MW-17, MW-19, and MW-20) for benzene evaluation, including ORM-2 analysis, additional natural attenuation parameters, volatile fatty acids, and stable isotope probing study results are provided in tables in this report, but will be discussed in a separate submittal in March/April 2018.

### ***Field Parameters and Dissolved Gases***

The 2017 field parameter results (Table 3) were generally within historical ranges, with continued low DO and ORP values within and downgradient of the treatment area (MW-13/MW-21). These results indicate continued anaerobic aquifer conditions in the deep aquifer zone.

TOC concentrations (Table 5) have generally decreased since 2012 in deep source area monitoring wells MW-13 and MW-21 and nearby downgradient monitoring well MW-22.

In the deep source area wells monitored for dissolved gases (MW-13, MW-17, MW-18, MW-21 and MW-22), elevated methane concentrations continue to exist and are consistent with the initial post-treatment concentrations (Table 5). Ethane concentrations also continue to be elevated. In source area well MW-21, the ethane concentration has shown an increasing trend in the past 3 years and continues to be higher than the post-injection concentrations. Conversely, ethane concentrations appear to be decreasing in wells MW-17 and MW-22 while ethene concentrations are low to non-detected. The high ratio of methane to ethane/ethene concentrations may be indicative of slow reductive dechlorination in favor of methanogenesis.

### ***Volatile Organic Compounds***

During the 2017 monitoring events, one or more VOCs were detected above the applicable CULs in seven of the eleven deep monitoring wells including: MW-13, MW-16, MW-17, and MW-19 through MW-22 (Table 4). The concentrations of benzene; toluene; 1,1-DCA; chloroethane; cis-1,2-DCE; and vinyl chloride in the deep monitoring well network are shown on Figures 13 through 18. Chloroethane was detected above the CUL most frequently and exceeded the CUL in five of the deep groundwater monitoring wells. Benzene and methylene chloride exceeded the CUL in four wells; vinyl chloride exceeded the CUL in three wells; and 1,2-DCA, ethylbenzene, and xylenes exceeded the CUL in only one well each. The methylene chloride exceedances occurred during the March 2017 sampling event only; methylene chloride concentrations have previously not been detected or detected below the CUL since 2010. The methylene chloride exceedances are likely laboratory contamination as they only were reported in wells from one sampling event, and methylene chloride was also found in one of the blanks. VOC concentrations were not reported above CULs in deep monitoring wells MW-14, MW-18, MW-27, and MW-28.

The dominant VOCs detected in source area deep wells MW-13 and MW-21 included ethylbenzene, total xylenes, cis-1,2-DCE, vinyl chloride, 1,1,1-TCA, and its common breakdown products (1,1-DCA and chloroethane). The concentrations of the breakdown products appear to be declining and/or stabilizing in the source area. As shown in Figures 13 through 18, the highest concentrations of VOCs in the deep groundwater were detected in wells MW-13, MW-21, and MW-22. VOC concentrations in the downgradient monitoring wells generally decreased with the exception of chloroethane (Figure 16).

The plots of VOCs concentrations over time in the deep groundwater zone monitoring wells (Figures C25-C48, Appendix C) indicate that VOC concentration trends are generally decreasing over time in the source area wells (MW-13 and MW-21) and the well immediately downgradient of the source area (MW-22). Concentrations of breakdown products of TCE (cis-1,2-DCE and vinyl chloride) and 1,1,1-TCA (chloroethane) continue to fluctuate. VOCs in off-property downgradient well MW-20 have been generally stable, with the exception of benzene and chloroethane, which continue to be detected at concentrations

greater than the respective CULs (Figures C39-C40, Appendix C). Concentrations of 1,1-DCA, benzene, cis-1,2-DCE, and/or vinyl chloride in downgradient wells MW-27 and/or MW-28 were detected below CULs during the 2017 sampling events.

### **Microbial Results**

As summarized in Table 6, moderate concentrations of Dhc, and vcrA ( $10^5 - 10^6$  cells/liter or gene copies/liter) were detected in source area monitoring wells MW-13 and MW-21, and moderate to non-detectable concentrations were noted in MW-19 and MW-22 ( $10^4 - 10^3$  cells/liter or gene copies/liter). Moderate to non-detectable concentrations of Dhb were reported in MW-13, MW-19, MW-21, and MW-22. In 2017, the analyses for bvcA and tceA indicated a moderate concentration of bvcA ( $10^5$  gene copies/liter) in MW-21, while low concentrations of bvcA were reported in MW-13, MW-19, and MW-22. Low to non-detectable concentrations of tceA (at or less than  $10^3$  gene copies/liter) were reported in MW-13, MW-19, MW-21, and MW-22. The overall moderate concentrations of Dhb, Dhc, vcrA, and bvcA and low to non-detectable concentrations of tceA indicate that conditions for complete dechlorination of PCE and TCE daughter products (i.e., cis-1,2-DCE) are favorable in the MW-13/MW-21 source area (SiREM 2016).

A comparison of microbial concentrations (Dhc, Dhb, and vcrA) to vinyl chloride concentrations from 2011 to 2017 is presented for select deep wells, MW-13, MW-21, and MW-22 (Figures C53-C55, Appendix C). The vinyl chloride concentrations in the source area well MW-13 (Figure C53) have significantly declined since 2011. The vinyl chloride concentration in MW-21 has decreased steadily while the vcrA concentration has fluctuated (Figure C54). The vinyl chloride concentration in MW-22 has fluctuated since injections in 2011, but has shown a decreasing trend in the past three years (Figure C55). The increases in the vinyl chloride concentrations in MW-13 and MW-21 indicate further breakdown of chlorinated daughter products.

## **4.2 ANALYTICAL DATA VALIDATION AND REVIEW**

Laboratory data from each event was validated consistent with the USEPA guidelines for organic and inorganic data review (USEPA, 1999 and 2002). In summary, results for some analytes were qualified as estimated and assigned a 'J' flag by the laboratory because the results were reported at concentrations above the method detection limit (MDL) but below the method reporting limit (MRL). The data qualifiers for these detections were accepted during data validation and are included in the data tables. Other qualifiers assigned during data validation review are included in Appendix D.

The data validation reviews concluded that all data (including the qualified data) were judged to be acceptable for their intended use. The laboratory analytical reports and corresponding data validation memoranda for each sampling event are presented in Appendix D.

## 5 CONCLUSIONS

### 5.1 SHALLOW GROUNDWATER ZONE

Based on the two sampling events performed in 2017, VOC concentrations in the shallow groundwater zone continue to be stable to declining (Appendix C, Figures C1-C24). The concentrations of the breakdown products of PCE, vinyl chloride and chloroethane fluctuated but were generally consistent with the sampling results from recent years (AECOM 2017).

The highest concentrations of VOCs continue to occur in the two shallow zone source areas situated in the vicinity of MW-4 and MW-5/MW-12 (Figures 8 through 12) and no offsite migration of contamination is evident within the shallow groundwater zone. Significant changes in the VOC plume dimensions and geometry were not evident. Based on the concentrations of the PCE breakdown products, active dechlorination of the chlorinated VOCs is still occurring within and downgradient of the groundwater treatment areas.

### 5.2 DEEP GROUNDWATER ZONE

Based on the two sampling events performed in 2017, VOC concentrations in the deep groundwater zone also continued to be stable to declining (Appendix C, Figures C25-C48). Consistent with the shallow groundwater zone, the highest VOC concentrations in the deep groundwater zone in 2017 primarily occur in the deep zone source area near wells MW-13/MW-21 and immediately downgradient in well MW-22. Based on the isoconcentration contours for benzene; toluene; 1,1-DCE; and chloroethane (Figures 13 through 16); no significant changes in the plume geometry or dimension were evident. An overall decrease in toluene concentrations was noted in 2017; however, site-wide toluene concentrations have been below the 1,000 µg/L CUL since 2015. A decrease in cis-1,2-DCE concentrations to below the CUL was noted across the Site in 2017 (Figure 17, Appendix C, Figure C-43, and Table 4). Concentrations of chloroethane above the CUL are still present within the deep zone source area and at downgradient well locations but have generally decreased over the past few years. Off-site well MW-20 continues to have chloroethane concentrations above the CUL. The extent of benzene in the deep groundwater zone did not change appreciably in 2017. The highest concentrations of benzene continue to be present in well MW-17 and off-site in well MW-20 (Figure 13).

The concentrations of TOC and dissolved gases along with the VOC concentrations suggest that biodegradation is occurring in the deep aquifer zone. Microbial results also suggest that deep groundwater quality conditions are favorable for continued biodegradation.

### **5.3 ACTIVITIES IN 2018**

Results of the additional data collected from deep wells for benzene evaluation, including ORM-2 analysis, additional natural attenuation parameters, volatile fatty acids, and stable isotope probing study results will be discussed in a separate submittal in March/April 2018.

Groundwater monitoring is scheduled to be completed in March and September 2018. The 2018 Annual Groundwater Monitoring Report will be submitted on or before March 1, 2019.

## 6 REFERENCES

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## Tables



**Table 1**  
**Monitoring Well Locations and General Monitoring Objectives**  
**Univar USA Inc., Kent, Washington**

Well	Source Area Well	Plume Delineation	Injection Performance	Microbial Analysis	Groundwater Elevation Measurement
<b>Shallow On-Site Monitoring Wells</b>					
MW-1	X	X	X		X
MW-2		X			X
MW-3		X			X
MW-4	X	X	X		X
MW-5	X	X	X	X	X
MW-6		X			X
MW-7		X	X	X	X
MW-8		X			X
MW-9		X			X
MW-10		X			X
MW-11					X
MW-12	X	X	X	X	X
MW-23		X	X		X
<b>Deep On-Site Monitoring Wells and Piezometer</b>					
MW-13	X	X	X	X	X
MW-14		X			X
MW-16		X			X
MW-17		X	X		X
MW-18		X	X		X
MW-19		X	X		X
MW-21	X	X		X	X
MW-22		X	X	X	X
MW-24					X
MW-25					X
P-1					X
<b>Deep Off-Site Monitoring Wells</b>					
MW-20		X	X		X
MW-27		X			X
MW-28		X			X

**Notes:**

1. Injection performance parameters include total organic carbon and/or dissolved gases.
2. Based on the current phase of performance groundwater monitoring.

**Table 2**  
**2017 Groundwater Elevations**  
**Univar USA Inc., Kent, Washington**

Location	Measuring Point Elevation (ft)	Screen Interval Depth (ft)	Screen Interval Elevation (ft)	Date	Time	Depth to Water (ft)	Water Elevation (ft)
<b>Shallow On-Site Monitoring and Pilot Test Wells</b>							
MW-1	33.15	4 to 19	29.15 to 14.15	03/06/17 09/18/17	9:52 12:13	3.64 6.74	29.51 26.41
MW-2	33.79	4 to 19	29.79 to 14.79	03/06/17 09/18/17	9:38 12:02	5.04 7.84	28.75 25.95
MW-3	32.94	4 to 19	28.94 to 13.94	03/06/17 09/18/17	10:59 11:18	5.04 7.24	27.90 25.70
MW-4	32.86	4.5 to 14.5	28.36 to 18.36	03/06/17 09/18/17	8:43 12:30	4.00 6.81	28.86 26.05
MW-5	32.60	4.5 to 14.5	28.10 to 18.10	03/06/17 09/18/17	8:57 11:45	4.44 6.90	28.16 25.70
MW-6	33.05	4.5 to 14.5	28.55 to 18.55	03/06/17 09/18/17	9:28 11:59	4.22 8.04	28.83 25.01
MW-7	32.96	4.5 to 14.5	28.46 to 18.46	03/06/17 09/18/17	10:52 11:27	4.92 7.26	28.04 25.70
MW-8	33.57	4.5 to 14.5	29.07 to 19.07	03/06/17 09/18/17	9:12 11:52	5.45 7.86	28.12 25.71
MW-9	33.77	5 to 15	28.77 to 18.77	03/06/17 09/18/17	9:00 11:55	5.51 8.05	28.26 25.72
MW-10	32.89	5 to 15	27.89 to 17.89	03/06/17 09/18/17	10:43 11:21	4.84 7.12	28.05 25.77
MW-11	32.79	5 to 20	27.79 to 12.79	03/06/17 09/18/17	8:53 12:42	4.66 7.02	28.13 25.77
MW-12	32.81	5 to 20	27.81 to 12.81	03/06/17 09/18/17	8:51 11:47	4.64 7.06	28.17 25.75
MW-23	32.78	5 to 15	27.78 to 17.78	03/06/17 09/18/17	10:47 11:25	4.72 7.04	28.06 25.74
<b>Deep On-Site Monitoring Wells and Piezometer</b>							
MW-13	32.81	39.6 to 44.1	-6.79 to -11.29	03/06/17 09/18/17	13:32 13:52	4.68 7.05	28.13 25.76
MW-14	32.60	32.7 to 42.2	-0.10 to -9.60	03/06/17 09/18/17	11:50 13:45	4.39 6.79	28.21 25.81
MW-15	32.57	33.7 to 43.5	-1.13 to -10.93	Well Abandoned February 16, 2016			
MW-16	36.92	37.2 to 47.2	-0.28 to -10.28	03/06/17 09/18/17	12:07 13:56	8.84 11.12	28.08 25.80
MW-17	32.6	34.3 to 43.8	-1.70 to -11.2	03/06/17 09/18/17	13:25 13:36	4.63 6.86	27.97 25.74
MW-18	32.73	34.0 to 43.5	-1.27 to -10.77	03/06/17 09/18/17	NM NM	NM NM	NM NM
MW-19	33.52	39.4 to 49.4	-5.88 to -15.88	03/06/17 09/18/17	12:23 14:04	5.57 7.74	27.95 25.78
MW-21	32.86	34.1 to 44.1	-1.24 to -11.24	03/06/17 09/18/17	11:55 13:49	4.68 7.06	28.18 25.80
MW-22	33.18	32.2 to 42.2	0.98 to -9.02	03/06/17 09/18/17	12:12 NM	5.11 NM	28.07 NM
MW-24	32.74	21.8 to 41.8	10.94 to -9.06	03/06/17 09/18/17	11:53 13:48	4.52 6.91	28.22 25.83

**Table 2**  
**2017 Groundwater Elevations**  
**Univar USA Inc., Kent, Washington**

Location	Measuring Point Elevation (ft)	Screen Interval Depth (ft)	Screen Interval Elevation (ft)	Date	Time	Depth to Water (ft)	Water Elevation (ft)
MW-25	32.80	21.8 to 41.8	11.00 to -9.00	03/06/17	12:02	4.60	28.20
				09/18/17	13:53	6.98	25.82
P-1	33.62	39.0 to 44.0	-5.38 to -10.38	03/06/17	11:46	5.50	28.12
				09/18/17	13:41	7.83	25.79
<b>Deep Off-Site Monitoring Well</b>							
MW-20	33.15	33.5 to 43.2	-0.35 to -10.05	03/06/17	13:10	5.37	27.78
				09/18/17	14:13	7.47	25.68
MW-27	32.98	38.0 to 48.0	-5.02 to -15.02	03/06/17	13:02	5.18	27.80
				09/18/17	14:12	7.29	25.69
MW-28	34.63	35.0 to 45.0	-0.37 to -10.37	03/06/17	13:18	6.87	27.76
				09/18/17	14:07	8.99	25.64

NOTE: Depth = depth to water relative to the top of PVC  
Elev. = elevation in feet relative to NAVD 88  
NM = not measured

**Table 3**  
**Groundwater Field Parameters**  
**Univar USA Inc., Kent, Washington**

Sample Location	Date Collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Ferrous Iron (mg/L)	Oxidation Reduction Potential (mV)
<b>Shallow On-Site Monitoring and Pilot Test Wells</b>								
MW-1	03/29/10	6.97	842	11.4	--	0.30	--	-8
	09/30/10	7.26	937	17.2	--	0.24	--	-10
	03/03/11	7.49	510	9.2	7.0	0.23	--	-13
	09/23/11	6.61	523	18.0	3.0	0.10	--	-106
	03/08/12	6.99	494	8.2	7.9	0.22	--	-44
	10/01/12	6.56	507	15.5	5.7	0.22	--	349 <sup>a</sup>
	03/06/13	6.84	820	9.6	14.5	0.20	--	-7
	09/24/13	6.78	496	18.5	55.3	0.20	--	-84
	03/26/14	7.21	991	10.5	1.2	0.00	--	-129
	09/23/14	6.49	698	19.7	2.3	0.55	--	-126
	03/17/15	6.05	438	10.5	0.0	0.00	--	-227
	09/16/15	6.37	700	17.6	0.0	0.00	--	-121
	03/16/16	7.86	888	10.1	0.0	0.00	--	-128
	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	
09/21/17	7.00	832	17.3	0.0	0.00	--	52	
MW-2	03/26/10	6.49	390	12.6	--	0.82	--	7
	09/30/10	6.68	556	16.4	--	0.28	--	27
	03/08/11	6.87	441	12.7	85.0	0.17	--	8
	09/21/11	6.30	443	18.0	9.8	0.09	--	-91
	03/06/12	6.56	396	11.2	--	0.67	--	-65
	09/28/12	6.45	382	17.2	--	0.29	--	342 <sup>a</sup>
	03/07/13	6.48	480	12.4	--	0.15	--	20
	09/24/13	6.63	349	16.8	90.7	0.20	--	-50
	03/26/14	6.99	495	13.8	7.2	0.00	--	-106
	09/24/14	6.32	547	17.4	4.3	0.00	--	-119
	03/17/15	6.36	253	15.5	0.0	0.00	--	-153
	09/17/15	6.47	619	16.6	0.0	0.00	--	-70
	03/15/16	7.10	525	12.3	0.0	0.00	--	-67
	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	
09/20/17	6.62	714	14.5	0.0	0.00	--	-19	
MW-3	03/30/10	6.85	601	11.6	--	0.99	--	-5
	09/28/10	6.98	647	15.6	--	0.28	--	8
	03/07/11	7.33	426	12.1	2.0	0.20	--	32
	09/21/11	6.71	556	16.3	1.4	0.03	--	-127
	03/06/12	6.97	497	10.7	--	0.11	--	-1
	10/01/12	6.81	519	16.2	--	0.20	--	308 <sup>a</sup>
	03/07/13	6.87	662	11.7	--	0.19	--	102
	09/24/13	7.03	404	13.6	57.2	0.40	--	-97
	03/27/14	7.29	616	12.4	0.0	0.00	--	-154
	09/25/14	6.82	681	15.1	14.6	0.00	--	-135
	03/19/15	6.06	318	11.6	0.0	0.00	--	-226
	09/16/15	7.13	618	17.4	0.0	0.00	--	-125
	03/14/16	7.67	1,980	10.8	0.0	0.00	--	-142
	09/14/16	6.79	529	16.1	0.7	0.06	--	-98

**Table 3**  
**Groundwater Field Parameters**  
**Univar USA Inc., Kent, Washington**

Sample Location	Date Collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Ferrous Iron (mg/L)	Oxidation Reduction Potential (mV)
MW-3 (continued)	03/08/17	7.06	680	11.6	6.5	0.00	--	-70
	09/21/17	7.26	807	15.0	0.0	14.91 <sup>b</sup>	--	-46
MW-4	03/29/10	6.71	1,094	9.9	--	0.58	--	-8
	10/01/10	6.89	1,054	16.7	--	0.55	--	10
	03/04/11	7.48	906	9.4	7.0	0.17	--	-8
	09/23/11	6.46	1,091	22.1	1.6	0.15	--	-64
	03/08/12	6.67	1,100	9.6	--	0.36	--	-16
	10/01/12	6.56	1,109	16.8	--	0.18	--	355 <sup>a</sup>
	03/06/13	6.73	1,436	9.7	4.3	0.22	--	24
	09/24/13	6.82	823	17.8	63.8	0.00	--	-63
	03/25/14	7.26	1,510	13.9	0.0	0.00	--	-141
	09/23/14	6.49	1,210	19.2	0.5	0.00	--	-107
	03/17/15	6.10	730	10.5	0.0	0.00	--	-225
	09/17/15	6.25	1,150	17.3	0.0	0.00	--	-104
	03/14/16	7.82	1,600	9.6	0.0	0.00	--	-93
	09/14/16	6.57	959	17.9	--	6.60	--	-66
	03/09/17	7.37	1,470	6.9	37.6	0.00	--	-97
09/21/17	6.80	1,090	17.2	1.4	0.00	--	-27	
MW-5	04/01/10	6.39	287	12.5	16.0	0.49	--	27
	04/09/10	--	340	--	3.0	--	--	--
	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	--	1.06	--	26
	03/03/11	6.76	203	11.6	6.0	0.55	--	12
	06/22/11	6.36	200	17.0	14.5	0.11	--	-7
	09/22/11	6.19	226	17.3	5.1	0.38	--	63
	10/21/11	6.11	267	15.8	9.0	0.41	--	34
	12/07/11	6.36	207	14.0	--	0.15	--	73
	03/07/12	6.39	216	12.3	--	0.29	--	53
	06/26/12	6.35	233	17.1	4.2	0.19	--	29
	09/27/12	6.14	266	18.5	0.8	0.25	--	346 <sup>a</sup>
	12/19/12	6.17	362	13.0	23.0	0.34	--	-29
	03/06/13	6.25	360	11.2	4.4	0.18	--	76
	06/06/13	6.63	379	17.9	17.0	0.63	--	23
	09/24/13	6.45	302	14.8	54.6	0.03	--	20
	03/25/14	5.81	404	14.7	0.0	0.00	--	-141
	09/23/14	6.14	380	16.6	2.1	0.00	--	-49
	03/16/15	6.21	199	16.1	0.0	0.00	--	-100
09/15/15	5.95	342	16.3	0.0	0.00	--	-34	
03/15/16	6.60	318	11.7	0.0	0.00	--	105	
09/14/16	6.29	263	17.0	9.7	1.05	--	38	
03/06/17	6.00	199	11.3	9.3	0.00	--	111	
09/20/17	6.54	289	14.6	0.0	13.06 <sup>b</sup>	--	-4	
MW-6	03/30/10	6.53	533	11.5	--	0.61	--	14
	09/30/10	6.55	936	15.9	--	0.35	--	30
	03/04/11	6.84	331	10.6	4.0	0.21	--	11

**Table 3**  
**Groundwater Field Parameters**  
**Univar USA Inc., Kent, Washington**

Sample Location	Date Collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Ferrous Iron (mg/L)	Oxidation Reduction Potential (mV)
MW-6 (continued)	09/21/11	6.23	723	17.9	3.9	0.13	--	-68
	03/06/12	6.53	341	10.5	--	0.25	--	-12
	09/28/12	6.21	717	15.3	--	0.27	--	315 <sup>a</sup>
	03/07/13	6.49	511	11.1	--	0.21	--	76
	09/24/13	6.50	634	14.3	106.0	0.00	--	-52
	03/26/14	6.70	420	13.1	7.3	0.00	--	-60
	09/24/14	6.18	887	15.7	3.2	0.00	--	-94
	03/17/15	5.39	270	11.9	0.0	0.00	--	-155
	09/17/15	6.32	1,040	16.4	1.1	0.00	--	-62
	03/15/16	6.90	628	11.8	36.7	0.05	--	-39
	09/14/16	6.27	760	15.3	2.6	1.95	--	-78
	03/07/17	6.44	549	9.1	7.9	0.00	--	-35
09/20/17	6.47	885	15.2	17.8	0.00	--	-46	
MW-7	04/01/10	6.81	255	12.4	--	1.48	--	6
	09/28/10	6.71	318	17.4	--	0.27	--	17
	03/02/11	6.48	235	11.4	10.0	5.72	--	3
	06/22/11	6.33	193	19.0	38.1	0.33	--	109
	09/22/11	6.33	248	16.6	1.9	0.19	--	158
	10/20/11	6.28	389	16.1	13.0	0.30	--	88
	12/07/11	6.55	273	13.4	--	0.57	--	139
	03/07/12	6.54	200	12.3	--	1.31	--	95
	06/26/12	6.47	196	16.1	5.7	0.18	--	43
	07/12/12	6.54	197	15.8	--	0.23	--	-22
	09/27/12	6.26	245	18.2	1.8	0.30	--	383 <sup>a</sup>
	12/19/12	6.42	641	13.0	7.0	0.46	--	8
	03/05/13	6.32	374	12.6	16.6	0.17	--	19
	06/06/13	6.74	328	16.7	9.3	0.24	--	81
	09/24/13	5.97	427	17.7	0.0	0.00	--	45
	03/26/14	6.48	340	14.2	0.0	0.00	--	132
	09/25/14	6.36	402	17.5	0.0	0.00	--	116
	03/18/15	6.25	162	17.0	0.0	2.87	--	-2
09/14/15	6.68	433	17.8	0.4	0.00	--	76	
03/15/16	7.01	321	12.0	0.0	2.78	--	96	
09/14/16	6.31	351	18.6	0.5	0.40	--	72	
03/08/17	6.59	270	10.3	7.4	0.00	--	-14	
09/19/17	6.50	341	17.9	0.0	0.00	--	86	
MW-8	04/01/10	6.29	949	11.9	--	0.79	--	29
	09/28/10	6.44	1,217	18.1	--	0.28	--	32
	03/04/11	6.81	1,317	11.0	2.0	0.50	--	13
	09/26/11	6.15	1,137	14.4	0.3	0.32	--	270
	03/06/12	6.55	1,106	11.6	--	0.50	--	14
	09/28/12	6.27	1,101	17.1	--	0.32	--	305 <sup>a</sup>
	03/08/13	6.45	1,271	12.3	--	0.23	--	136
	09/24/13	6.43	854	15.9	57.0	0.69	--	57
	03/26/14	6.76	994	13.4	5.0	0.00	--	109
	09/23/14	6.27	1120	16.9	1.5	0.00	--	112
	03/16/15	6.40	486	15.8	0.0	0.00	--	-2

**Table 3**  
**Groundwater Field Parameters**  
**Univar USA Inc., Kent, Washington**

Sample Location	Date Collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Ferrous Iron (mg/L)	Oxidation Reduction Potential (mV)
MW-8 (continued)	09/16/15	6.52	1,190	14.1	0.0	0.00	--	126
	03/15/16	6.89	766	11.4	11.0	0.53	--	98
	09/14/16	6.38	834	16.7	2.4	0.48	--	30
	03/07/17	6.04	582	9.3	2.0	0.00	--	51
	09/21/17	6.59	849	15.3	0.0	0.00	--	-11
MW-9	03/30/10	6.58	559	11.9	--	0.72	--	17
	09/28/10	6.52	651	17.3	--	0.24	--	27
	03/04/11	6.89	505	12.0	4.0	0.24	--	10
	09/26/11	6.41	544	13.4	85.4	0.12	--	-90
	03/06/12	6.37	392	11.3	--	0.30	--	32
	09/28/12	6.57	641	15.3	--	0.16	--	272 <sup>a</sup>
	03/08/13	6.47	557	11.9	--	0.16	--	95
	09/24/13	6.87	365	15.1	128.0	0.00	--	-67
	03/26/14	6.42	388	15.0	0.0	0.00	--	67
	09/24/14	6.45	472	17.1	21.2	0.00	--	-93
	03/17/15	6.09	239	15.7	70.4	0.94	--	-40
	09/16/15	6.54	769	15.9	20.7	0.00	--	-146
	03/15/16	6.69	490	11.5	56.3	0.00	--	49
	09/14/16	6.83	592	16.5	28.2	0.52	--	-112
	03/07/17	5.73	300	10.4	36.8	0.00	--	119
09/21/17	7.19	812	14.4	0.0	0.00	--	-20	
MW-10	03/30/10	6.96	201	11.1	--	1.33	--	-8
	09/28/10	6.98	185	17.7	--	0.20	--	3
	03/04/11	7.24	160	10.7	7.0	0.15	--	-2
	09/26/11	6.61	152	14.9	37.8	0.32	--	-58
	03/07/12	6.86	141	11.2	--	0.24	--	-7
	09/28/12	6.67	136	18.9	--	0.21	--	292 <sup>a</sup>
	03/05/13	6.54	164	11.4	--	0.16	--	2
	09/24/13	7.11	106	17.4	72.5	0.00	--	-72
	03/27/14	7.03	176	13.2	0.0	0.00	--	-88
	09/24/14	6.66	201	17.2	12.9	0.00	--	-94
	03/18/15	6.32	57	14.8	50.2	0.00	--	-56
	09/14/15	6.51	145	17.6	29.1	0.00	--	-110
	03/15/16	7.39	176	11.0	411	0.00	--	-78
	09/15/16	6.64	140	17.2	6.2	0.15	--	-80
	03/08/17	6.54	139	10.5	10.9	0.00	--	-51
09/19/17	7.01	159	16.3	0.0	0.00	--	-70	
MW-11	04/01/10	6.40	286	12.0	13.0	0.46	--	23
	04/09/10	--	330	--	3.0	--	--	--
	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
MW-12	04/01/10	6.56	347	13.0	--	0.87	--	27
	09/28/10	6.52	322	18.6	--	0.35	--	26
	03/03/11	6.75	244	11.1	28.0	0.22	--	12
	06/22/11	6.87	348	16.1	41.2	0.04	--	-188

**Table 3**  
**Groundwater Field Parameters**  
**Univar USA Inc., Kent, Washington**

Sample Location	Date Collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Ferrous Iron (mg/L)	Oxidation Reduction Potential (mV)
MW-12 (continued)	09/22/11	6.51	359	16.4	12.4	0.05	--	-122
	10/21/11	6.41	411	15.0	35.0	0.38	--	11
	12/07/11	6.58	293	12.2	--	0.20	--	-87
	03/07/12	6.38	316	12.9	--	0.30	--	59
	06/27/12	6.44	533	15.5	18.4	0.22	--	32
	07/12/12	6.44	312	15.5	--	0.14	--	16
	10/02/12	6.41	324	16.3	7.9	3.60 <sup>a</sup>	--	275 <sup>a</sup>
	12/19/12	6.29	444	13.1	11.0	0.37	--	15
	03/06/13	6.37	436	12.2	18.1	0.15	--	47
	06/06/13	6.61	431	20.4	33.4	0.25	--	-40
	09/24/13	6.79	417	14.9	54.4	0.00	--	-117
	03/25/14	5.90	413	15.4	0.0	0.00	--	-45
	09/23/14	6.27	424	16.8	3.1	0.70	--	-108
	03/16/15	6.21	196	16.9	2.7	0.00	--	-82
	09/15/15	6.61	423	16.0	0.0	0.00	--	-41
	03/15/16	6.84	436	13.1	0.0	0.00	--	101
	09/14/16	6.38	312	16.8	3.7	0.69	--	9
03/06/17	6.48	399	11.7	10.6	0.00	--	102	
09/20/17	6.78	364	14.7	0.0	0.00	--	-39	
MW-23	04/01/10	6.57	428	13.0	--	0.66	--	16
	09/28/10	6.67	495	19.0	--	0.19	--	19
	03/02/11	6.25	399	11.8	5.0	0.25	--	16
	06/22/11	6.27	320	15.3	26.1	0.19	--	70
	09/23/11	6.35	431	17.8	7.8	0.14	--	82
	10/20/11	6.51	512	16.7	3.0	0.36	--	70
	12/07/11	6.57	356	13.7	--	0.18	--	102
	03/07/12	6.59	386	13.1	5.2	0.18	--	58
	06/26/12	6.54	460	16.9	7.3	0.20	--	46
	07/12/12	6.54	465	15.8	--	0.17	--	-18
	09/27/12	6.52	409	17.1	5.2	0.26	--	340 <sup>a</sup>
	12/19/12	6.51	430	13.5	64.0	0.34	--	65
	03/05/13	6.50	528	12.6	7.1	0.16	--	-15
	06/06/13	6.91	690	16.8	9.2	0.26	--	43
	09/24/13	6.72	364	17.0	52.4	2.17	--	67
	03/26/14	6.80	616	13.5	4.1	0.00	--	147
	09/25/14	6.53	652	17.5	0.7	0.00	--	107
	03/18/15	6.50	326	16.0	1.5	0.00	--	-39
	09/14/15	6.05	650	18.7	0.4	0.00	--	35
	03/15/16	7.47	729	11.0	9.8	0.00	--	1
09/14/16	6.45	584	19.0	2.0	0.17	--	70	
03/08/17	6.23	482	11.3	7.3	0.00	--	15	
09/19/17	6.85	597	18.0	0.0	0.00	--	-28	
MW-26	04/01/10	6.44	269	12.7	34.0	0.74	--	19
	04/09/10	--	290	--	4.0	--	--	--
	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



**Table 3**  
**Groundwater Field Parameters**  
**Univar USA Inc., Kent, Washington**

Sample Location	Date Collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Ferrous Iron (mg/L)	Oxidation Reduction Potential (mV)
<b>Deep On-Site Monitoring Wells and Piezometer</b>								
MW-13	03/29/10	6.53	639	12.4	15.0	0.58	--	18
	04/07/10	--	720	--	2.0	--	--	--
	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	--	0.14	--	17
	03/03/11	6.76	552	12.9	1.0	0.20	--	9
	06/23/11	6.09	365	14.4	9.2	0.16	--	-61
	09/22/11	6.26	680	19.7	13.3	0.02	--	-86
	10/20/11	6.27	882	16.3	17.0	0.35	--	-28
	12/07/11	6.45	566	12.7	--	0.21	--	-89
	03/07/12	6.49	564	12.2	--	0.27	--	-13
	06/27/12	6.44	533	15.5	18.4	0.22	--	32
	07/12/12	6.47	571	18.5	--	0.16	--	-7
	10/02/12	6.39	541	16.9	6.4	0.20	--	221 <sup>a</sup>
	12/19/12	6.33	694	13.1	26.0	0.31	--	-91
	03/07/13	6.43	688	12.9	4.4	0.16	--	11
	06/06/13	6.70	713	19.9	26.7	0.18	--	-95
	09/24/13	7.02	489	15.7	82.5	6.22	--	-92
	03/26/14	6.78	610	14.1	1.7	0.00	--	-99
09/23/14	6.41	803	17.7	29.2	0.00	--	-129	
03/17/15	6.25	65	12.4	0.0	0.00	--	-45	
09/15/15	6.34	485	17.8	0.0	0.00	--	-106	
03/14/16	7.44	260	11.8	0.0	0.00	--	-20	
09/15/16	6.44	456	16.2	9.5	0.32	--	-38	
03/07/17	5.96	610	9.4	5.3	0.00	--	-63	
09/20/17	6.65	777	16.2	0.0	0.00	--	-59	
MW-14	03/30/10	6.58	360	13.2	--	0.73	--	15
	09/30/10	6.72	555	17.4	--	0.34	--	18
	03/04/11	6.96	316	12.0	6.0	0.15	--	9
	09/21/11	6.39	392	16.7	7.6	0.04	--	-72
	03/06/12	6.58	337	12.0	--	0.27	--	0
	09/28/12	6.42	366	16.3	--	0.28	--	294 <sup>a</sup>
	03/07/13	6.50	451	12.4	--	0.18	--	49
	09/24/13	6.57	313	14.0	65.5	0.00	--	-23
	03/26/14	6.74	444	16.3	0.0	0.00	--	-86
	09/24/14	6.39	496	15.7	2.4	0.00	--	-89
	03/17/15	6.41	282	15.4	0.0	7.23	--	-144
	09/16/15	6.71	593	14.6	0.0	0.00	--	-69
	03/16/16	7.06	493	11.4	11.4	0.00	--	-50
	09/15/16	6.50	387	14.1	23.3	0.28	--	-51
03/08/17	6.66	540	12.3	4.3	0.00	--	-54	
09/20/17	6.72	552	15.1	0.0	0.00	--	-61	
MW-15	03/30/10	6.61	409	13.3	--	0.77	--	14
	09/30/10	6.57	506	17.0	--	0.38	--	19
	03/08/11	6.91	449	13.7	4.0	0.17	--	8

**Table 3  
Groundwater Field Parameters  
Univar USA Inc., Kent, Washington**

Sample Location	Date Collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Ferrous Iron (mg/L)	Oxidation Reduction Potential (mV)
MW-15 (continued)	09/21/11	6.42	462	17.2	3.0	0.06	--	-83
	03/06/12	6.57	403	11.3	--	0.30	--	-32
	10/01/12	6.43	414	14.7	--	0.31	--	370 <sup>a</sup>
	03/07/13	6.50	530	12.9	--	0.17	--	30
	09/24/13	6.61	357	14.4	131.0	0.00	--	-48
	03/26/14	6.73	487	16.5	0.0	0.00	--	-94
	09/24/14	6.40	482	16.1	3.5	0.00	--	-94
	03/17/15	5.58	237	13.7	0.0	0.00	--	-174
	09/17/15	5.69	509	15.1	0.0	0.00	--	-46
Well Abandoned February 16, 2016								
MW-16	04/02/10	6.45	691	11.5	--	0.59	--	24
	10/10/10	6.62	801	14.2	--	0.39	--	21
	03/08/11	6.76	639	12.3	6.0	0.19	--	7
	09/26/11	6.29	681	13.5	0.6	0.20	--	-71
	03/08/12	6.42	666	11.8	--	0.26	--	7
	10/01/12	6.28	678	13.7	--	0.29	--	358 <sup>a</sup>
	03/08/13	6.54	607	11.2	--	0.21	--	110
	09/24/13	6.59	428	12.9	62.1	0.00	--	-23
	03/27/14	6.67	889	13.3	25.4	0.00	--	-98
	09/25/14	6.30	901	14.9	98.7	0.00	--	-84
	03/18/15	6.30	480	15.2	3.1	0.00	--	-156
	09/17/15	6.08	999	13.7	4.8	0.00	--	-116
	03/16/16	6.87	908	10.9	16.5	0.00	--	-65
	09/15/16	6.43	616	12.8	7.3	0.38	--	-65
	03/07/17	6.51	924	10.6	8.1	0.00	--	-74
09/21/17	6.59	928	13.7	9.4	0.00	--	-53	
MW-17	03/30/10	6.37	667	10.1	--	1.28	--	12
	10/01/10	6.68	1,111	14.2	--	0.31	--	23
	03/07/11	6.88	564	11.6	5.0	0.15	--	8
	06/23/11	6.27	415	14.6	7.1	0.08	--	-40
	09/23/11	6.37	927	16.2	1.4	0.10	--	-60
	03/08/12	6.57	911	11.9	--	0.23	--	-28
	06/27/12	6.57	936	15.3	14.8	0.12	--	-24
	07/12/12	6.53	1,033	15.9	--	0.23	--	-26
	10/01/12	6.36	918	13.6	77.2	0.23	--	346 <sup>a</sup>
	12/19/12	6.35	1,349	10.9	16.0	0.39	--	-100
	03/07/12	6.47	1,128	11.4	4.4	0.18	--	21
	06/06/13	6.88	1,269	15.0	21.6	0.28	--	-89
	09/24/13	6.07	792	12.4	90.1	0.00	--	-55
	03/26/14	6.67	665	12.7	8.0	0.00	--	4
	09/25/14	6.49	914	14.6	43.1	0.00	--	-68
	03/19/15	6.50	499	12.3	44.3	0.00	--	-101
	09/17/15	6.57	1,100	14.5	5.5	0.00	--	-32
	03/14/16	7.22	3,590	10.9	0.00	0.00	--	-79
	09/14/16	6.36	720	14.8	0.90	0.14	--	-23
03/08/17	6.13	835	9.4	19.9	0.00	--	-22	
09/19/17	6.96	1,150	13.6	0.96	0.00	0.0	-23	

**Table 3**  
**Groundwater Field Parameters**  
**Univar USA Inc., Kent, Washington**

Sample Location	Date Collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Ferrous Iron (mg/L)	Oxidation Reduction Potential (mV)
MW-18	03/30/10	6.62	494	12.0	--	1.57	--	13
	09/28/10	6.68	616	16.6	--	0.24	--	21
	03/04/11	6.95	464	12.3	3.0	0.18	--	7
	06/23/11	6.32	312	15.3	9.6	0.14	--	-7
	09/23/11	6.37	532	16.9	3.8	0.07	--	-70
	03/07/12	6.54	484	13.0	6.0	0.18	--	15
	06/27/12	6.55	554	17.4	4.9	0.20	--	-18
	07/12/12	6.54	567	14.8	--	0.19	--	-41
	10/01/12	6.48	321	17.7	2.8	2.42 <sup>a</sup>	--	353 <sup>a</sup>
	12/19/12	6.44	697	12.3	9.0	0.42	--	-92
	03/05/13	6.40	657	12.7	6.7	0.17	--	9
	06/06/13	6.87	741	16.6	16.1	0.26	--	-84
	09/24/13	6.67	439	15.0	58.9	0.08	--	-60
	03/26/14	7.76	99	13.9	0.0	3.32	--	115
	09/24/14	6.38	579	16.7	7.1	0.00	--	-59
	03/18/15	5.55	378	14.2	0.0	0.00	--	-178
	09/14/15	6.47	617	16.0	0.0	0.00	--	-82
03/15/16	7.11	792	12.8	0.0	0.00	--	-76	
09/15/16	6.32	558	15.0	1.1	0.37	--	-24	
03/09/17	6.09	523	11.6	11.0	0.00	--	1	
09/19/17	6.71	677	14.8	0.0	0.00	--	-54	
MW-19	03/30/10	6.33	528	11.9	--	0.98	--	14
	09/28/10	6.53	722	16.4	--	0.36	--	29
	03/03/11	6.92	413	13.5	4.0	0.15	--	10
	09/21/11	6.38	530	16.6	0.0	0.14	--	-103
	12/07/11	6.53	556	13.3	--	0.26	--	-77
	03/08/12	5.65	596	15.0	--	0.19	--	-29
	06/27/12	6.57	430	16.6	0.8	0.16	--	-22
	07/12/12	6.51	466	15.4	--	0.23	--	21
	09/28/12	6.35	406	17.6	--	0.28	--	322 <sup>a</sup>
	12/19/12	6.42	560	13.7	14.0	0.40	--	-93
	03/05/13	6.39	727	13.3	1.6	0.14	--	-31
	06/06/13	6.84	766	16.3	9.8	0.86	--	-72
	09/24/13	6.72	486	14.0	64.0	0.00	--	-98
	03/27/14	6.83	564	14.7	52.9	0.00	--	-90
	09/25/14	6.47	689	18.5	5.7	0.00	--	-87
	03/19/15	6.56	440	13.4	5.5	0.00	--	-138
	09/15/15	6.37	797	16.4	1.5	0.00	--	-119
03/14/16	7.03	663	13.2	7.7	0.00	--	-93	
09/13/16	6.50	625	18.1	1.3	0.28	--	-83	
03/09/17	6.06	555	11.9	35.8	0.00	--	-19	
09/19/17	6.79	820	17.4	0.0	0.00	0.0	-51	
MW-21	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
	06/09/10	6.21	741	15.0	131.0	0.16	--	38
09/30/10	5.90	965	16.9	--	0.34	--	56	

**Table 3**  
**Groundwater Field Parameters**  
**Univar USA Inc., Kent, Washington**

Sample Location	Date Collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Ferrous Iron (mg/L)	Oxidation Reduction Potential (mV)
MW-21 (continued)	03/02/11	6.13	779	11.4	2.0	0.31	--	24
	06/23/11	5.74	407	13.9	7.2	0.12	--	-46
	09/22/11	5.75	951	17.5	1.5	0.07	--	-21
	09/27/11	5.70	907	15.1	5.2	0.35	--	20
	10/20/11	6.67	1,205	15.0	11.0	0.31	--	-17
	12/07/11	5.88	845	12.6	--	0.21	--	-49
	03/08/12	6.00	880	13.1	--	0.19	--	20
	06/26/12	5.99	846	14.4	74.5	0.22	--	7
	07/12/12	6.03	887	15.6	--	0.15	--	42
	10/02/12	5.94	876	14.5	>1000	1.41 <sup>a</sup>	--	238 <sup>a</sup>
	12/20/12	5.95	1,128	11.4	96.0	0.29	--	-50
	03/06/13	6.16	1,125	11.0	68.0	0.22	--	27
	06/06/13	6.61	1,120	18.8	52.6	0.25	--	-89
	09/24/13	6.28	714	14.6	102.0	0.00	--	-56
	03/26/14	6.50	785	15.1	0.0	0.00	--	-110
	09/24/14	6.25	829	16.1	31.0	0.00	--	-88
	03/17/15	5.35	405	13.5	17.5	0.00	--	-172
	09/15/15	6.50	851	15.4	0.0	0.00	--	-85
	03/16/16	6.93	845	13.7	0.0	0.00	--	-76
	09/15/16	6.40	630	14.2	81.1	0.49	--	-81
03/07/17	5.88	650	9.2	119	0.00	--	-83	
09/20/17	6.60	778	15.1	0.0	0.00	--	-63	
MW-22	03/29/10	6.20	665	12.0	--	0.85	--	22
	09/30/10	6.57	821	17.6	--	0.56	--	13
	03/04/11	6.77	543	12.2	45.0	0.15	--	12
	06/23/11	6.20	366	13.2	2.1	0.13	--	-30
	09/23/11	6.27	684	16.3	206.7	0.00	--	-85
	10/21/11	6.26	827	14.1	4.0	0.34	--	31
	12/07/11	6.27	583	12.5	--	0.24	--	-50
	03/08/12	6.49	502	10.7	20.5	0.23	--	-17
	06/26/12	6.44	549	14.4	8.8	0.16	--	-33
	07/12/12	6.35	570	16.4	--	0.20	--	15
	10/02/12	6.32	617	15.1	2.8	0.20	--	251 <sup>a</sup>
	12/19/12	6.26	800	12.0	17.0	0.31	--	-96
	03/06/13	6.40	823	10.9	5.7	0.22	--	165
	06/06/13	6.79	881	15.9	11.6	0.32	--	-91
	09/25/13	6.53	564	13.7	89.1	0.00	--	-75
	03/26/14	6.59	769	15.0	0.0	0.00	--	-102
	09/24/14	6.22	769	14.9	12.2	0.00	--	-100
	03/17/15	6.16	430	11.9	0.0	0.00	--	-149
	09/15/15	6.64	833	17.4	0.8	0.00	--	-85
	03/16/16	6.82	904	11.6	0.0	0.00	--	-63
09/15/16	6.33	753	13.8	8.7	0.55	--	-58	
03/07/17	6.46	1,010	10.7	7.2	0.00	--	-65	
09/20/17	6.60	1,070	13.9	0.0	0.00	--	-14	
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

**Table 3  
Groundwater Field Parameters  
Univar USA Inc., Kent, Washington**

Sample Location	Date Collected	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Ferrous Iron (mg/L)	Oxidation Reduction Potential (mV)
MW-24 (continued)	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
MW-25	03/29/10	6.56	703	12.2	57.0	0.67	--	12
	04/07/10	--	720	--	2.0	--	--	--
	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
P-1	09/24/04	6.54	401	15.4	--	0.24	--	33
<b>Deep Off-Site Monitoring Well</b>								
MW-20	03/29/10	6.33	922	13.2	--	0.48	--	17
	10/01/10	6.69	1,013	15.8	--	0.40	--	21
	03/02/11	6.35	1,147	12.6	8.0	0.13	--	9
	09/26/11	6.36	930	16.6	33.0	0.29	--	-80
	03/08/12	6.53	946	14.0	--	0.25	--	-5
	10/01/12	6.37	903	16.8	--	0.14	--	321 <sup>a</sup>
	03/08/13	6.45	180	11.4	--	0.19	--	97
	06/06/13	6.67	898	17.0	30.8	0.21	--	-75
	09/24/13	6.64	761	15.6	96.6	0.00	--	-68
	03/27/14	6.85	166	15.8	0.0	0.00	--	-32
	09/25/14	6.42	1,010	17.8	62.3	0.00	--	-84
	03/18/15	6.33	589	14.4	0.0	0.00	--	-154
	09/16/15	6.27	1,090	19.5	2.0	0.00	--	130
	03/15/16	6.97	1,310	11.8	0.2	0.00	--	-98
	09/15/16	6.33	943	17.5	2.4	0.09	--	-97
	03/08/17	6.11	957	12.3	0.1	0.00	--	-81
09/19/17	6.67	1,170	15.8	2.7	0.00	0.05	-78	
MW-27	09/24/14	6.38	566	16.2	64.3	0.00	--	-80
	03/18/15	6.22	339	13.5	17.8	0.00	--	-122
	09/16/15	6.75	631	19.5	2.2	0.00	--	-79
	03/15/16	6.91	699	12.7	0.0	0.00	--	-74
	09/15/16	6.36	522	16.7	1.5	0.12	--	-82
	03/08/17	6.64	700	9.7	300	0.00	--	-49
09/18/17	6.56	620	16.8	0.0	0.00	--	-61	
MW-28	09/25/14	6.56	1,010	14.6	257	0.00	--	-95
	03/19/15	5.72	575	11.4	127	0.00	--	-204
	09/17/15	6.32	985	16.2	11.7	0.00	--	-125
	03/16/16	7.30	1,200	12.2	0.0	0.00	--	-99
	09/15/16	6.41	749	14.6	9.1	0.22	--	-94
	03/09/17	6.70	1,010	11.0	18.6	0.00	--	-44
	09/18/17	7.05	957	15.7	45.2	0.00	--	-43

## Notes:

mS/cm - millisiemens per centimeter

°C - degrees Celsius

NTU - Nephelometric turbidity units

mg/L - milligram per liter

mV - millivolts

-- Not Measured

<sup>a</sup> Likely meter malfunction<sup>b</sup> Anomalous result

**Table 4  
Indicator Hazardous Substances in Groundwater  
Univar 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	
		Solubility in Water:	5.1E+06	3,350,000	LNAPL	8.7E+06		0.8	LNAPL	8.2E+06	4E+06	LNAPL	2.0E+07	200,000	7E+05	1.E+06	1,000	LNAPL	LNAPL
		Final Cleanup Levels	800	7.0	400	0.5	0.64	0.8	15	7.2	70	700	5.0	0.86	200	4.0	1,000	1,600	0.5
<b>Shallow On-Site Monitoring Wells</b>																			
MW-1	03/29/10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	9.6 J	20 U	15	48	0.5 U	0.5 U	63	7.8 J	27	170	4.4	
	09/30/10	339	0.5 U	18.1	0.5 U	0.5 U	0.5 U	46.5	1.0 U	28.3	70.2	1.41 J	0.5 U	173	3.16	144	301	9.51	
	03/03/11	168	4.52	20.5	0.5 U	0.5 U	0.5 U	18.9	1.00	23.6	43.8	0.5 U	2.18	211	5.82	140	416	3.10	
	09/23/11	138	1.96	16.0	0.5 U	0.5 U	0.700	174	1.0 U	13.5	124	1.20	0.830	38.5	3.44	1,620	949	5.74	
	03/08/12	132	2.41	15.8	0.500 U	0.500 U	0.500 U	54.7	1.00 U	20.4	47.0	0.860	1.35	80.7	2.29	248	668	10.1	
	10/01/12 (DUP)	88.0	0.720	23.8	0.500 U	0.500 U	0.500 U	82.0	1.00 U	15.0	19.1	0.760	0.630 J	13.4	2.94	198	461	6.10	
	10/01/12	83.0	0.790	24.7	0.500 U	0.500 U	0.500 U	89.5	1.00 U	14.3	19.2	0.900	0.640 J	13.1	2.80	194	443	5.78	
	03/06/13	252	2.26	22.5	0.5 U	0.5 U	0.540	79.8	1.00 U	25.2	46.6	2.08	1.13	49.4	1.86	186	556	22.3 J	
	09/25/13	132	0.900	28.3	0.500 U	0.500 U	0.750	145	1.00 U	21.5	42.1	1.58	0.780	16.2	3.34	362	629	18.7	
	03/26/14	303	4.02	25.2	0.500 U	0.500 U	0.761	228	1.00 U	45.2	43.2	1.23	1.11	65.2	3.02	183	323	67.1	
	09/23/14	95.0	0.500 U	20.8	0.500 U	0.500 U	0.500 U	225	1.00 U	10.1	25.9	0.893	1.41	7.45	2.75	448	285.1	13.4	
	03/17/15	36.9	2.5 U	24.5	1.3 U	1.3 U	1.3 U	80.3	2.5 U	1.4 J	38.1	13 U	1.3 U	3.7	0.95 J	32.7	129.8	1.1 J	
	09/16/15	51.7	1.0 U	18.1	0.50 U	0.50 U	0.52	212	1.0 U	5.2	16.9	5.0 U	0.76	11.1	2.3	175	214.5	7.0	
03/16/16	33.6	1.0 U	14.6	0.50 U	0.50 U	0.34 J	112	1.0 U	1.2	44.4	5.0 U	0.32 J	7.7	1.2	83.8	201.1	0.66		
09/13/16	26.3	2.5 U	16.9	1.3 U	1.3 U	0.55 J	183	2.5 U	4.1	8.7	13 U	1.3 U	0.81 J	2.1 J	38.6	156	0.98 J		
03/07/17	10.1	2.5 U	8.4	2.5 U	2.5 U	2.5 U	58.5	2.5 U	2.5 U	22.1	10 U	2.5 U	1.5 J	2.5 U	2.6	67.3	2.5 U		
09/21/17	35.7	0.50 U	12.2	0.50 U	0.50 U	0.35 J	98.9	0.50 U	4.4	0.67	1.8 J	0.76	2.0	0.50 U	3.9	39.9	0.91		
MW-2	03/29/10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.7	
	03/29/10 (LAB DUP)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.7	
	09/30/10	0.61	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.07	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 UJ	
	03/07/11	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.690	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 U	
	09/21/11	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.920	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 U	
	03/06/12	0.520	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	0.640	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.290	
	09/28/12	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	0.50 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.2 U	
	03/07/13	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	0.50 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.2 U	
	09/26/13	0.590	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.200 U	
	03/26/14	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	0.786	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.200 U	
	09/24/14	0.517	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	0.528	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.200 U	
	03/17/15	0.36 J	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U	0.72 J	1.0 U	5.0 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	0.50 U	
	09/17/15	0.47 J	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U	0.37 J	1.0 U	5.0 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	0.50 U	
03/15/16	0.26 J	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U	0.47 J	1.0 U	5.0 U	0.33 J	1.0 U	0.36 J	1.0 U	1.0 U	0.22 J		
09/13/16	0.44 J	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U	0.80 J	1.0 U	5.0 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	0.50 U		
03/08/17	0.32 J	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.43 J	0.50 U	2.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U		
09/20/17	0.46 J	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.1	0.50 U	2.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U		
MW-3	03/30/10	16	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3	
	09/28/10	8.47	0.5 U	0.5 U	0.5 U	0.5 U	0.33 J	0.5 U	1.0 U	1.49	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 UJ	
	03/07/11	9.50	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.39	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 U	
	09/21/11	7.07	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.41	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 U	
	03/06/12	5.06	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.14	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.200 U	
	10/01/12	7.24	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.45	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.200 U	
	03/07/13	4.75	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.03	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.200 U	
	09/27/13	3.76	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	0.900	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.200 U	
	03/27/14	2.51	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.200 U	
	09/25/14	5.38	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.21	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.200 U	
	03/19/15	2.2	1.0 U	2.0 U	0.50 U	0.50 U	0.25 J	1.0 U	1.0 U	0.61 J	1.0 U	5.0 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	0.23 J	
	09/16/15	20 U	20 U	40 U	10 U	10 U	10 U	20 U	20 U	20 U	20 U	100 U	10 U	20 U	20 U	20 U	20 U	20 U	
	03/14/16	1.6 J	5.0 U	10 U	2.5 U	2.5 U	2.5 U	5.0 U	5.0 U	5.0 U	5.0 U	25 U	2.5 U	5.0 U	5.0 U	5.0 U	1.5 J	5.0 U	
09/14/16	3.0 J	5.0 U	10 U	2.5 U	2.5 U	2.5 U	5.0 U	5.0 U	5.0 U	1.3 J	5.0 U	25 U	2.5 U	5.0 U	5.0 U	5.0 U	5.0 U		
03/08/17	2.2	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.20 J	0.96	0.50 U	0.71	0.50 U	2.0 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U		
09/21/17	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.35 J	3.8	0.50 U	1.4	0.50 U	2.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.75		
MW-4	03/29/10	5.9	0.5 U	140	0.5 U	0.5 U	10	130	1.0 U	0.5 U	0.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5	0.2	
	10/01/10	5.74	0.5 U	43.4	0.5 U	0.5 U	6.78	78.1	1.0 U	0.5 U	2.17	0.63 J	0.5 U	0.5 U	0.5 U	0.53	3.80	0.19 J	

**Table 4  
Indicator Hazardous Substances in Groundwater  
Univar 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
		5.1E+06	3,350,000	LNAPL	8.7E+06		0.8	LNAPL	8.2E+06	4E+06	LNAPL	2.0E+07	200,000	7E+05	1.E+06	1,000	LNAPL	LNAPL
		Final Cleanup Levels	800	7.0	400	0.5	0.64	0.8	15	7.2	70	700	5.0	0.86	200	4.0	1,000	1,600
MW-4 (continued)	03/04/11	7.81	0.5 U	31.4	0.5 U	0.5 U	5.42	0.5 U	1.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.500	69.5
	09/23/11	4.00	0.5 U	34.1	0.5 U	0.5 U	5.24	50.4	1.0 U	1.30	3.33	0.5 U	0.5 U	0.5 U	0.5 U	2.07	9.66	1.46
	03/08/12	2.97	0.500 U	33.5	0.500 U	0.500 U	7.02	36.4	1.00 U	0.730	9.31	0.500 U	0.500 U	0.500 U	0.500 U	3.06	15.4	2.99
	10/01/12	2.71	0.500 U	21.5	0.500 U	0.500 U	4.72	31.3	1.00 U	0.500 U	4.29	0.500 U	0.500 U	0.500 U	0.500 U	2.23	8.54	2.19
	03/06/13	4.42	0.5 U	7.49	0.5 U	0.5 U	6.43	0.5 U	1.0 U	0.5 U	4.33	1.15	0.5 U	0.5 U	0.5 U	0.670	1.39	<0.2 U
	09/26/13	3.58	0.500 U	2.89	0.500 U	0.500 U	7.77	24.4 J	1.00 U	0.500 U	2.34	0.500 U	0.500 U	0.500 U	0.500 U	1.78	8.00	0.200 U
	03/25/14	5.84	0.500 U	1.66	0.500 U	0.500 U	5.66	165	1.00 U	0.500 U	0.524	0.500 U	0.500 U	0.500 U	0.500 U	0.781	1.11	0.200 U
	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	1.0 U	0.13 J	0.50 U	0.50 U	5.4	58.5	1.0 U	1.0 U	0.25 J	5.0 U	0.50 U	1.0 U	1.0 U	0.44 J	1.01 J	0.50 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	0.21 J
	03/14/16	1.5	1.0 U	2.0 UJ	0.50 U	0.50 U	3.6	41.4 J	1.0 U	0.27 J	0.21 J	5.0 U	0.50 U	1.0 U	1.0 U	0.62 J	1.0 U	0.50 U
	09/14/16	0.46 J	1.0 U	1.0 J	0.50 U	0.50 U	6.9	24.9	1.0 U	1.0 U	0.39 J	5.0 U	0.50 U	1.0 U	1.0 U	0.76 J	2.26	0.39 J
	03/09/17	0.76	0.50 U	0.13 J	0.50 U	0.50 U	3.0	16.1	0.50 U	0.16 J	0.13 J	2.0 U	0.50 U	0.50 U	0.50 U	0.34 J	0.36 J	0.50 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
MW-5	04/01/10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	3.9	0.5 U	0.5 U	340	0.5 U	42	0.5 U	0.5 U	0.2 U
	04/01/10 (DUP)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	3.9	0.5 U	0.5 U	270	0.5 U	44	0.5 U	0.5 U	0.2 U
	04/09/10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	20 U	10 U	10 U	10 U	1,100	10 U	35	10 U	10 U	4.0 U
	04/16/10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	20 U	5.0 J	10 U	10 U	780	10 U	42	10 U	10 U	4.0 U
	05/06/10	10 U	5.0 U	10 U	10 U	10 U	10 U	10 U	20 U	3.2 J	10 U	10 U	640	10 U	36	10 U	10 U	2.0 U
	06/09/10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	3.2	0.5 U	0.5 U	670	0.5 U	33	0.5 U	0.5 U	0.2 U
	07/06/10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	4.6	0.5 U	0.5 U	640	0.5 U	31	0.5 U	0.5 U	0.2 U
	07/06/10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	4.6	0.5 U	0.5 U	640	0.5 U	31	0.5 U	0.5 U	0.2 U
	09/28/10	10 U	5.0 U	10 U	10 U	10 U	10 U	10 U	20 U	5.0 U	10 U	10 U	514	10 U	22.6	10 U	10 U	2.0 UJ
	09/28/10 (DUP)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	2.43	0.5 U	0.5 U	514	0.5 U	21.7	0.5 U	0.5 U	0.2 UJ
	03/03/11	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	2.12	0.5 U	0.5 U	607	0.5 U	30.2	0.5 U	0.550	0.2 U
	06/22/11	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.31	0.5 U	0.5 U	386	0.5 U	16.3	0.5 U	0.5 U	0.2 U
	09/22/11	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	7.28	0.5 U	0.5 U	682 J	0.5 U	30.2	0.5 U	0.5 U	0.590
	12/07/11	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	4.11	0.5 U	0.5 U	831	0.5 U	30.7	0.5 U	0.5 U	0.470
	03/07/12	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	51.6	0.500 U	0.500 U	326	0.500 U	27.0	0.500 U	0.500 U	0.810
	06/26/12	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	50.0	0.500 U	0.500 U	316	0.500 U	37.9	0.500 U	0.500 U	1.40
	09/27/12	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	96.0	0.500 U	0.500 U	479	0.500 U	62.0	0.500 U	0.500 U	1.55
	12/19/12	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	530	0.500 U	0.500 U	18.4	0.500 U	5.22	0.500 U	0.500 U	3.35
	03/06/13	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	286	0.5 U	0.5 U	106	0.5 U	55.4	0.500 U	0.5 U	4.57 J
	03/06/13 (DUP)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	293	0.5 U	0.5 U	105	0.5 U	54.9	0.5 U	0.5 U	3.30 J
	06/06/13	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	291	0.500 U	0.500 U	205	0.500 U	105	0.500 U	0.500 U	3.69
	09/26/13	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	209	0.500 U	0.500 U	297	0.500 U	273	0.500 U	0.500 U	2.67
	09/26/13 (DUP)	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	203	0.500 U	0.500 U	330	0.500 U	251	0.500 U	1.27	2.12
	03/25/14	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	453	0.500 U	0.500 U	86.8	0.500 U	14.9	0.500 U	0.500 U	10.1
	09/23/14	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	392	0.500 U	0.500 U	217	0.500 U	32.5	0.500 U	0.500 U	5.50
	03/16/15	5.0 U	5.0 U	10 U	2.5 U	2.5 U	2.5 U	5.0 U	5.0 U	256	5.0 U	25 U	60.2	5.0 U	35.8	5.0 U	5.0 U	1.9 J
	09/15/15	10 U	10 U	20 U	5.0 U	5.0 U	5.0 U	10 U	10 U	35.4	10 U	50 U	335	10 U	37.0	10 U	10 U	5.0 U
	03/15/16	1.0 U	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U	34.8	1.0 U	5.0 U	196 J	1.0 U	33.4	1.0 U	1.0 U	1.2
09/14/16	1.0 U	0.34 J	2.0 U	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U	88.7	1.0 U	5.0 U	245 J	1.0 U	87.6	1.0 U	1.0 U	2.0	
03/06/17	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	7.4	5.0 U	10.2 J	187	5.0 U	18.8	5.0 U	10 U	5.0 U	
09/20/17	0.50 U	0.36 J	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	109	0.50 U	2.0 U	219	0.50 U	84.5	0.50 U	1.0 U	0.42 J	
MW-6	03/30/10	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	1.0 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	0.2 U
	09/30/10	1.51	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.87	1.0 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	0.2 UJ
	03/04/11	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 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	0.2 UJ
	09/21/11	1.15	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 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	0.2 UJ
	03/06/12	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.200 U
09/28/12	1.74	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.200 U















**Table 4**  
**Indicator Hazardous Substances in Groundwater**  
**Univar 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	
		5.1E+06	3,350,000	LNAPL	8.7E+06		0.8	LNAPL	8.2E+06	4E+06	LNAPL	2.0E+07	200,000	7E+05	1.E+06	1,000	LNAPL	LNAPL	
		Final Cleanup Levels	800	7.0	400	0.5	0.64	0.8	15	7.2	70	700	5.0	0.86	200	4.0	1,000	1,600	0.5
MW-21 (continued)	03/16/16	8.4	5.0 U	157	2.5 U	2.5 U	2.5 U	288	5.0 U	21.9	1,530	25 U	2.5 U	5.0 U	5.0 U	263	8,490	23.5	
	09/15/16	8.8 J	10 U	371	5.0 U	5.0 U	5.0 U	350	10 U	4.1 J	1,450	50 U	5.0 U	10 U	10 U	285	8,620	5.8	
	03/07/17	50 U	50 U	261	50 U	50 U	50 U	270	50 U	50 U	1,010	200 U	50 U	50 U	50 U	238	8,500	50 U	
	09/20/17	6.2	0.50 U	344	0.50 U	0.50 U	0.95	370	0.50 U	3.0	703	2.0 U	0.50 U	0.54	0.50 U	52.2 J	10,300	1.3	
MW-22	03/29/10	24	0.5 U	44	0.5 U	0.5 U	0.5 U	480	1.0 U	0.5 U	650	10 U	25 U	0.5 U	0.5 U	840	1,500	7.4	
	09/30/10	10 U	0.5 U	45.2	10 U	10 U	10 U	611	20 U	2.6 J	296	10.8	5.0 U	10 U	5.0 U	24.4	751	2.0 UJ	
	03/04/11	26.9	0.780	161	0.540	0.5 U	1.20	531	1.0 U	184	531	0.5 U	0.500	0.5 U	16.7	596	2,750	74.1	
	06/23/11	3.98	0.660	45.9	0.5 U	0.5 UJ	0.64	173	1.0 U	2.27	148	0.580	0.5 U	0.5 U	0.5 U	55.4	1,008	1.13	
	09/23/11	7.40	0.5 U	74.2	0.5 U	0.5 U	0.920	0.5 U	1.0 U	2.10	422	1.19	0.5 U	0.5 U	0.5 U	79.0	1,828	9.27	
	12/07/11	13.1	0.5 U	137	0.5 U	0.5 U	0.550	272	1.0 U	10.1	760	0.770	0.5 U	0.5 U	0.5 U	1,390	3,081	32.4	
	03/08/12	13.1	0.500 U	169	0.500 U	0.500 U	0.500 U	286	1.00 U	1.15	815	0.520	0.500 U	0.500 U	0.500 U	1,630	3,388	6.8	
	06/26/12	38.9	0.560	166	0.500 U	0.500 U	0.730	280	1.00 U	1,300	807	0.510	0.500 U	0.500 U	2.06	0.500 U	1,910	3,336	1,750 J
	06/26/12 (DUP)	38.3	0.500 U	178	0.500 U	0.500 U	0.720	282	1.00 U	1,030	743	0.500 U	0.500 U	0.500 U	1.93	0.500 U	1,750	3,002	1,230 J
	10/02/12	30.4	0.500 U	136	0.500 U	0.500 U	0.680	204	1.00 U	623	552	0.500 U	0.500 U	0.500 U	0.500 U	728	2,643	1,520	
	12/19/12	9.76	1.63	172	0.500 U	0.500 U	0.500 U	278	1.00 U	244	732	0.500 U	1.05	0.500 U	64.5	260	3,455	208	
	03/06/13	17.4	6.77	51.5 J	0.500 U	0.500 U	0.560	0.5 U	1.00 U	1,310	376 J	1.06	4.41	1.26	185	156	2,168 J	712	
	06/06/13	21.9	2.60	69.5	0.500 U	0.500 U	0.510	88.0	1.00 U	1,760	199	0.500 U	0.500 U	0.500 U	0.500 U	550	1,004	1,600	
	09/25/13	7.88	0.500 U	168	0.500 U	0.500 U	0.500 U	104	1.00 U	25.0	256	0.500 U	0.500 U	0.500 U	0.500 U	25.0	1,911	45.6	
	03/26/14	9.71	0.789	105	0.500 U	0.500 U	0.500 U	113	1.00 U	426	121	0.500 U	0.500 U	0.500 U	0.500 U	55.1	1,207.4	422	
	09/24/14	3.14	0.500 U	121	0.500 U	0.500 U	0.500 U	45.1	1.00 U	0.500 U	48.3	0.500 U	0.500 U	0.500 U	0.500 U	2.90	1,423.1	0.200 U	
	09/24/14 (DUP)	3.19	0.500 U	142	0.500 U	0.500 U	0.500 U	59.5	1.00 U	0.500 U	43.7	0.500 U	0.500 U	0.500 U	0.500 U	2.56	1,283.5	0.345	
03/17/15	7.5 J	25 U	68.4	13 U	13 U	13 U	22.7 J	25 U	1,100	40.5	130 U	13 U	25 U	25 U	81.3	556.1	535		
09/15/15	1.9 J	2.0 UJ	36.0 J	1.0 UJ	1.0 UJ	1.0 UJ	18.9 J	2.0 UJ	64.1 J	6.6 J	10 UJ	1.0 UJ	2.0 UJ	2.0 UJ	11.4 J	235.6 J	86.1 J		
03/16/16	2.9	0.48 J	143	0.50 U	0.50 U	0.34 J	75.8	1.0 U	270	60.8	5.0 U	0.50 U	1.0 U	1.0 U	32.7	1,060	144		
09/15/16	1.2	1.0 U	79.5	0.50 U	0.50 U	0.60	92.3 J	1.0 U	7.2	11.4	5.0 U	0.50 U	1.0 U	1.0 U	2.4	247.8	10.3		
03/07/17	0.64 J	2.5 U	27.9	2.5 U	2.5 U	2.5 U	91.5	2.5 U	2.5 U	5.0	6.8 J	2.5 U	2.5 U	2.5 U	2.5 U	140	2.5 U		
09/20/17	1.2	0.50 U	80.8	0.24 J	0.50 U	0.75	90.9	0.50 U	0.31 J	7.4	2.0 U	0.50 U	0.50 U	0.50 U	0.80	262	0.43 J		
MW-24	03/26/10	540	17	230	0.5 U	0.5 U	0.9	160	4.5	4,100	1,900	0.5 U	0.5 U	680	160	4,800	3,600	1,200	
	04/16/10	260	10 U	18	10 U	10 U	10 U	1,100	20 U	80	1,300	10 U	10 U	10 U	5.0 U	3,800	3,300	320	
	05/06/10	820	5.0 U	72	10 U	10 U	10 U	900	20 U	930	1,800	10 U	5.0 U	10 U	5.0 U	6,200	4,000	1,900	
	05/06/10 (LAB DUP)	850	5.0 U	71	10 U	10 U	10 U	970	20 U	980	1,800	10 U	5.0 U	10 U	5.0 U	6,800	4,400	2,000	
	06/09/10	1,300	22	130	10 U	10 U	10 U	89	20 U	2,200	1,600	10 U	2.2 J	97	5.2	5,900	3,600	3,400	
	07/06/10	940	14	180	10 U	10 U	10 U	1,200	20 U	2,100	1,200 J	10 U	5.0 U	120	5.0 U	7,300	2,900	4,200	
	07/06/10 (DUP)	1,100	14	140	10 U	10 U	10 U	1,100	20 U	2,400	830 J	10 U	5.0 U	130	5.0 U	6,600	2,300	3,400	
MW-25	03/29/10	25	0.5 U	160	0.9	0.5 U	1.9	410	1.1	2.2	940	0.5 U	0.5 U	0.5 U	0.4	1,200	1,600	2.7	
	04/07/10	48	10 U	180	10 U	10 U	10 U	730	20 U	10 U	1,700	10 U	10 U	10 U	10 U	3,100	2,900	12	
	04/16/10	74	10 U	310	10 U	10 U	10 U	1,900	20 U	10 U	2,200	10 U	10 U	10 U	10 U	4,100	5,100	10	
	04/16/10 (LAB DUP)	70	10 U	290	10 U	10 U	10 U	1,800	20 U	10 U	2,100	10 U	10 U	10 U	10 U	4,000	5,000	9.2	
	05/06/10	32	5.0 U	130	10 U	10 U	10 U	1,100	20 U	5.0 U	1,200	10 U	5.0 U	10 U	5.0 U	2,900	3,200	2.0	
	06/09/10	29	5.0 U	110	10 U	10 U	10 U	820	20 U	5.0 U	680	10 U	21	10 U	5.0 U	1,200	1,700	2.0 U	
	07/06/10	25	0.5 U	79	0.5 U	0.5 U	0.5 U	640	1.0 U	0.5 U	480	0.5 U	2.9	0.5 U	0.5 U	800	980	4.0	
MW-26	04/01/10	0.5 U	1.3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	20	0.5 U	0.5 U	380	0.5 U	37	0.5 U	0.5 U	0.2 U	
	04/09/10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	20 U	10	10 U	10 U	570	10 U	28	10 U	10 U	6.4	
	04/09/10 (LAB DUP)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	20 U	10	10 U	10 U	550	10 U	27	10 U	10 U	6.2	
	04/16/10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	20 U	16	10 U	10 U	320	10 U	32	10 U	10 U	8.8	
	05/06/10	10 U	5.0 U	10 U	10 U	10 U	10 U	10 U	20 U	11	10 U	10 U	300	10 U	28	10 U	10 U	5.2	
	06/09/10	10 U	5.0 U	10 U	10 U	10 U	10 U	10 U	20 U	14	10 U	10 U	350	10 U	31	10 U	10 U	12	
	07/06/10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	12	0.5 U	0.5 U	300	0.5 U	29	0.5 U	0.5 U	9.0	
<b>Deep Off-Site Monitoring Wells</b>																			
MW-20	03/29/10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	18 J	140	1.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0	7.1	0.2	
	10/01/10	0.5 U	0.5 U	1.27	0.5 U	0.5 U	15.2	195	1.0 U	0.5 U	0.5 U	0.73 J	0.5 U	0.5 U	0.5 U	0.94	4.26	0.12 J	

**Table 4  
Indicator Hazardous Substances in Groundwater  
Univar 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	
		Solubility in Water:	5.1E+06	3,350,000	LNAPL	8.7E+06		0.8	LNAPL	8.2E+06	4E+06	LNAPL	2.0E+07	200,000	7E+05	1.E+06	1,000	LNAPL	LNAPL
		Final Cleanup Levels	800	7.0	400	0.5	0.64	0.8	15	7.2	70	700	5.0	0.86	200	4.0	1,000	1,600	0.5
MW-20 (continued)	03/02/11	0.5 U	0.5 U	<b>1.05</b>	0.5 U	0.5 U	<b>12.8</b>	<b>75.5</b>	1.0 U	<b>1.38</b>	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	<b>1.58</b>	<b>17.7</b>	0.2 U	
	09/26/11	0.5 U	0.5 U	<b>0.890</b>	0.5 U	0.5 U	<b>13.9</b>	<b>161</b>	1.0 U	0.5 U	0.5 U	<b>0.620</b>	0.5 U	0.5 U	0.5 U	<b>0.930</b>	<b>4.33</b>	0.2 U	
	03/08/12	0.500 U	0.500 U	<b>0.600</b>	0.500 U	0.500 U	<b>10.9</b>	<b>71.6</b>	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	<b>0.880</b>	<b>4.69</b>	0.200 U	
	10/01/12	0.500 U	0.500 U	<b>1.26</b>	0.500 U	0.500 U	<b>14.8</b>	<b>161</b>	1.00 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	<b>0.950</b>	<b>5.10</b>	0.200 U	
	03/08/13	0.500 U	0.500 U	0.5 U	0.500 U	0.500 U	0.500 U	<b>4.40</b>	1.00 U	0.500 U	<b>0.890</b>	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	<b>0.790</b>	0.200 U
	06/06/13	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	<b>10.3</b>	<b>100</b>	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	<b>0.530</b>	<b>3.28</b>	0.200 U
	09/27/13	0.500 U	0.500 U	<b>1.10</b>	0.500 U	0.500 U	<b>16.0</b>	<b>122</b>	1.00 U	0.500 U	0.500 U	<b>0.670</b>	0.500 U	0.500 U	0.500 U	0.500 U	<b>1.06</b>	<b>5.51</b>	0.200 U
	03/27/14	0.500 U	0.500 U	<b>1.15</b>	0.500 U	0.500 U	<b>11.7</b>	<b>92.0</b>	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	<b>0.830</b>	<b>5.00</b>	0.200 U
	09/25/14	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	<b>11.7</b>	<b>127</b>	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.200 U
	03/18/15	1.0 U	1.0 U	<b>0.41 J</b>	0.50 U	0.50 U	<b>9.5</b>	<b>70.2</b>	1.0 U	1.0 U	1.0 U	5.0 U	0.50 U	1.0 U	1.0 U	1.0 U	<b>0.85 J</b>	<b>2.26</b>	0.50 U
	09/16/15	1.0 U	1.0 U	<b>0.31 J</b>	0.50 U	0.50 U	<b>14.8</b>	<b>171</b>	1.0 U	1.0 U	1.0 U	5.0 U	0.50 U	1.0 U	1.0 U	1.0 U	<b>0.72 J</b>	<b>3.9</b>	0.50 U
	03/15/16	5.0 U	5.0 U	10 U	2.5 U	2.5 U	<b>8.6</b>	<b>90.3</b>	5.0 U	5.0 U	5.0 U	25 U	2.5 U	5.0 U	5.0 U	5.0 U	<b>2.2 J</b>	<b>5.0 U</b>	2.5 U
09/15/16	2.5 U	2.5 U	5.0 U	1.3 U	1.3 U	<b>16.2</b>	<b>217</b>	2.5 U	2.5 U	2.5 U	13 U	1.3 U	2.5 U	2.5 U	2.5 U	<b>0.77 J</b>	<b>3.3 J</b>	1.3 U	
03/08/17	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	<b>9.9 J</b>	<b>142 J</b>	5.0 UJ	5.0 UJ	5.0 UJ	<b>10.7 J</b>	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	10 UJ	5.0 UJ	
09/19/17	0.50 U	0.50 U	<b>0.30 J</b>	0.50 U	0.50 U	<b>21.5</b>	<b>232</b>	0.50 U	<b>0.17 J</b>	0.50 U	2.0 U	0.50 U	0.50 U	0.50 U	0.50 U	<b>0.91</b>	<b>3.9</b>	0.50 U	
MW-27	09/24/14	<b>0.569</b>	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.200 U
	03/18/15	<b>0.33 J</b>	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U	<b>0.43 J</b>	1.0 U	5.0 U	0.50 U	1.0 U	1.0 U	<b>0.45 J</b>	1.0 U	0.50 U	
	09/16/15	<b>0.46 J</b>	1.0 U	2.0 U	0.50 U	0.50 U	0.43 J	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	0.50 U	1.0 U	1.0 U	1.0 U	<b>0.38 J</b>	0.50 U	
	03/15/16	<b>0.35 J</b>	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U	<b>0.38 J</b>	1.0 U	5.0 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	0.50 U	
	09/15/16	<b>0.45 J</b>	1.0 U	2.0 U	0.50 U	0.50 U	<b>0.34 J</b>	1.0 U	1.0 U	<b>0.40 J</b>	1.0 U	5.0 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	0.50 U	
	03/08/17	<b>0.32 J</b>	0.50 U	0.50 U	0.50 U	0.50 U	<b>0.15 J</b>	0.50 U	0.50 U	<b>0.30 J</b>	0.50 U	2.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U
09/18/17	<b>0.52</b>	0.50 U	0.50 U	0.50 U	0.50 U	<b>0.30 J</b>	0.50 U	0.50 U	<b>0.42 J</b>	0.50 U	2.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U	<b>0.21 J</b>	
MW-28	09/25/14	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.200 U
	03/19/15	1.0 U	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	<b>0.60 J</b>	1.0 U	1.0 U	1.0 U	5.0 U	0.50 U	1.0 U	1.0 U	<b>0.56 J</b>	1.0 U	0.50 U	
	09/17/15	5.0 U	5.0 U	10 U	2.5 U	2.5 U	2.5 U	<b>2.6 J</b>	5.0 U	5.0 U	5.0 U	25 U	2.5 U	5.0 U	5.0 U	5.0 U	5.0 U	2.5 U	
	03/16/16	5.0 U	5.0 U	10 U	2.5 U	2.5 U	2.5 U	5.0 U	5.0 U	5.0 U	5.0 U	25 U	2.5 U	5.0 U	5.0 U	5.0 U	5.0 U	2.5 U	
	09/15/16	5.0 U	5.0 U	10 U	2.5 U	2.5 U	2.5 U	5.0 U	5.0 U	5.0 U	5.0 U	25 U	2.5 U	5.0 U	5.0 U	5.0 U	5.0 U	2.5 U	
	03/09/17	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	<b>0.13 J</b>	<b>0.24 J</b>	0.50 UJ	0.50 UJ	0.50 UJ	2.0 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	1.0 UJ	0.50 UJ
09/18/17	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	<b>0.20 J</b>	0.50 U	0.50 U	<b>0.14 J</b>	0.50 U	2.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U	

**Notes:**

All results in µg/L.  
 1995 analyses performed using EPA Method 8240A.  
 Analyses from 1996 to 2014 performed using EPA Method 8260A.  
 Starting in March 2015, the laboratory was switched to Accutest and VOCs were analyzed by EPA Method 8260B.  
 Only indicator hazardous substances shown.  
 Detections shown in **bold**.  
 Shaded results above or equal to their respective cleanup level.  
 Bromodichloromethane detected (0.54 µg/L) below the MRL in MW-15 on 9/24/04; result likely due to instrument noise so not reported in table.  
 Results from June 2000 and from December 2000 to September 2008 are reported relative to the method detection limits (MDLs).  
 B = the analyte was also detected in an associated blank.  
 DUP = duplicate sample collected in the field and blind labeled.  
 E = laboratory estimated concentration.  
 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 or not quantitated  
 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.

**Table 5**  
**Total Organic Carbon and Dissolved Gases**  
**Univar USA Inc., Kent, Washington**

Sample Location	Date Collected	Total Organic Carbon (mg/L)	Dissolved Gases (µg/L)		
		EPA Method 415.1 or SM 5310 B/C	Method AM20GAX or RSK-175		
			Methane	Ethane	Ethene
<b>Shallow On-Site Monitoring Wells</b>					
<b>MW-1</b>	09/23/11	NA	9,400	12	8.2
	03/08/12	NA	15,000	18	34
	10/01/12	NA	9,900	11	10
	03/06/13	NA	14,000	16	34
	09/25/13	NA	16,000	12	10
	03/26/14	NA	17,000	26	39
	09/23/14	NA	15,000	14	19
	03/17/15	NA	6,540	9.1	7.7
	09/16/15	NA	4,190	14.7	13.0
	03/16/16	NA	7,730	29.7	10 U
	09/13/16	NA	9,800	21.1	10.0 U
03/07/17	NA	4,640	13.4	1.0 U	
09/21/17	NA	4,660	8.6	1.9	
<b>MW-4</b>	09/23/11	19	14,000	360	240
	03/08/12	13.4	18,000	360	500
	10/01/12	NA	14,000	270	310
	03/06/13	NA	16,000	240	89
	09/26/13	NA	15,000	400	14
	03/25/14	NA	9,000	320	0.58
	09/23/14	NA	16,000	380	32
	03/17/15	NA	5,680	103	1.0 U
	09/17/15	NA	3,110	155	2.6
	03/14/16	NA	2,590	171 J	10 U
	09/14/16	NA	9,710	244	10.0 U
03/09/17	NA	3,450	172	1.0 U	
09/21/17	NA	8,760 J	184	11.3	
<b>MW-5</b>	04/01/10	6.3	NA	NA	NA
	04/09/10	5.7	NA	NA	NA
	04/16/10	6.0	NA	NA	NA
	05/06/10	5.9	NA	NA	NA
	06/09/10	5.0	NA	NA	NA
	07/06/10	4.8	NA	NA	NA
	07/06/10	5.6	NA	NA	NA
	03/03/11	4.40	43	0.017 J	0.041
	06/22/11	4.32	550	0.010 J	0.053
	09/22/11	3.87	730	0.10	0.035
	12/07/11	5.65	NA	NA	NA
	03/07/12	5.07	4,100	0.20	0.17
	06/26/12	4.94	NA	NA	NA
	07/12/12	NA	6,600	0.31	0.38
	09/27/12	6.38	6,200	0.33	0.16
	12/19/12	8.92	5,500	0.37 J	0.097 J
	03/06/13	5.08	6,700	0.40	0.13
	03/06/13 (DUP)	5.39	5,700	0.33	0.10
	06/06/13	6.51	NA	NA	NA
	09/26/13	7.11	1,500	0.38	0.24
	09/26/13 (DUP)	7.20	1,700	0.38	0.27
	03/25/14	7.09	1,800	0.57	0.14
	09/23/14	8.75	430	0.38	0.16
03/16/15	6.8	142	1.0 U	1.0 U	
09/15/15	7.9	160	1.0 U	1.0 U	
03/15/16	6.3	477	10 U	10 U	
09/14/16	7.5	459	10.0 U	10.0 U	
03/06/17	4.2	104	0.37 J	1.0 U	
09/20/17	7.7	57.0	1.0 U	1.0 U	



**Table 5**  
**Total Organic Carbon and Dissolved Gases**  
**Univar USA Inc., Kent, Washington**

Sample Location	Date Collected	Total Organic Carbon (mg/L)	Dissolved Gases (µg/L)		
		EPA Method 415.1 or SM 5310 B/C	Method AM20GAX or RSK-175		
			Methane	Ethane	Ethene
MW-7	03/02/11	3.65	0.18	0.025 U	0.026
	06/22/11	5.30	0.59	0.025 U	0.019 J
	09/22/11	7.04	8.2	0.025 U	0.046
	12/07/11	9.44	NA	NA	NA
	03/07/12	5.13	0.24	0.0032 J	0.016 J
	06/26/12	5.52	NA	NA	NA
	07/12/12	NA	0.48	0.025 U	0.014 J
	09/27/12	11.2	28	0.0085 J	0.028
	12/19/12	18.3	1,200	0.028 J	0.034 J
	03/05/13	8.58	200	0.052	0.029
	06/06/13	6.37	NA	NA	NA
	09/24/13	11.1	240	0.055	0.024 J
	03/26/14	2.66	1.2	0.0092 J	0.010 J
	09/25/14	12.3	26	0.021 J	0.012 J
	03/18/15	2.6	0.50 U	1.0 U	1.0 U
	09/14/15	11.0	8.5	1.0 U	1.0 U
	03/15/16	1.9	10 U	10 U	10 U
	09/14/16	6.7	10.0 U	10.0 U	10.0 U
03/08/17	2.3	0.38 J	1.0 U	1.0 U	
09/19/17	6.4	1.6	1.0 U	1.0 U	
MW-11	04/01/10	5.8	NA	NA	NA
	04/09/10	4.9	NA	NA	NA
	04/16/10	5.7	NA	NA	NA
	05/06/10	5.4	NA	NA	NA
	05/06/10 (LAB DUP)	6.4	NA	NA	NA
	06/09/10	5.2	NA	NA	NA
	06/09/10 (LAB DUP)	5.0	NA	NA	NA
	07/06/10	5.6	NA	NA	NA
MW-12	03/03/11	9.80	3.1	0.017 J	0.20
	06/22/11	47.7	9.3	0.080	0.54
	09/22/11	16.1	1,000	0.15	4.3
	09/22/11 (DUP)	20.8	1,600	0.20	4.7
	09/22/11 (LAB DUP)	NA	1,500	0.19	4.4
	12/07/11	16.0	NA	NA	NA
	03/07/12	13.5	4,000	0.88	0.67
	03/07/12 (DUP)	14.7	4,000	0.85	0.63
	06/26/12	17.9	NA	NA	NA
	07/12/12	NA	13,000	1.2	3.1
	10/02/12	20.0	14,000	1.4	4.9
	12/19/12	15.1	7,500	0.78 J	6.8
	03/06/13	12.0	11,000	1.1	7.1
	06/06/13	11.5	NA	NA	NA
	09/25/13	13.9	13,000	2.7	150
	03/25/14	11.7	7,800	1.6	5.3
	03/25/14 (DUP)	11.6	7,900	1.5	5.3
	09/23/14	15.6	12,000	4.7	6.4
	03/16/15	10.4	1,780	0.71 J	0.88 J
	3/16/15 (DUP)	NA	1,360	0.75 J	0.57 J
	09/15/15	12.8	3,140	1.8	1.2
	09/15/15 (DUP)	NA	2,270	2.1	1.3
	03/15/16	9.4	1,020	10 U	10 U
	03/15/16 (DUP)	NA	879	10 U	10 U
09/14/16	15.2	1,550	10.0 U	10.0 U	
9/14/16 (DUP)	NA	1,970	10.0 U	10.0 U	
03/06/17	6.5	73.0	1.0 U	1.0 U	
3/6/17 (DUP)	NA	52.1	1.0 U	1.0 U	
09/20/17	14.4	749	2.5	1.0 U	
9/20/17 (DUP)	NA	762	2.7	1.0 U	

**Table 5**  
**Total Organic Carbon and Dissolved Gases**  
**Univar USA Inc., Kent, Washington**

Sample Location	Date Collected	Total Organic Carbon (mg/L)	Dissolved Gases (µg/L)		
		EPA Method 415.1 or SM 5310 B/C	Method AM20GAX or RSK-175		
			Methane	Ethane	Ethene
MW-23	03/02/11	9.86	8.6	0.039	0.11
	06/22/11	8.94	4.4	0.016 J	0.042
	09/23/11	7.94	5.8	0.091	0.24
	12/07/11	11.0	NA	NA	NA
	03/07/12	11.4	160	0.21	0.05
	06/26/12	10.2	NA	NA	NA
	07/12/12	NA	2,200	1.1	0.028
	09/27/12	16.6	4,800	3.0	0.040
	12/19/12	20.2	670	0.35 J	0.044 J
	03/05/13	16.5	210	0.15	0.039
	06/06/13	9.86	NA	NA	NA
	09/24/13	16.3	97	0.070	0.026
	03/26/14	11.8	110	0.22	0.0200 J
	09/25/14	16.5	360	0.072	0.018 J
	09/25/14 (DUP)	NA	300	0.063	0.025
	03/18/15	9.4	144	1.0 U	1.0 U
	09/14/15	9.4	123	1.0 U	1.0 U
	03/15/16	9.7	519	10 U	10 U
	09/14/16	10.4	765	10.0 U	10.0 U
	03/08/17	7.5	148	1.0 U	1.0 U
09/19/17	10.8	2,100	2.8	1.0 U	
<b>Shallow On-Site Injection Wells</b>					
IW-206-8	10/04/12	401	NA	NA	NA
IW-206-17	10/04/12	275	NA	NA	NA
IW-209-8	10/04/12	29.9	NA	NA	NA
IW-209-17	10/04/12	28.8	NA	NA	NA
IW-212-8	10/05/12	53.3	NA	NA	NA
IW-212-17	10/05/12	42.8	NA	NA	NA
IW-217-8	10/05/12	30.2	NA	NA	NA
IW-217-17	10/05/12	30.2	NA	NA	NA
<b>Deep On-Site Monitoring Wells</b>					
MW-13	03/29/10	29	NA	NA	NA
	04/07/10	30	NA	NA	NA
	04/07/10 (LAB DUP)	30	NA	NA	NA
	04/16/10	30	NA	NA	NA
	05/06/10	32	NA	NA	NA
	06/09/10	34	NA	NA	NA
	07/06/10	32	NA	NA	NA
	03/03/11	47.1	22,000	310	1,000
	03/03/11 (LAB DUP)	48.3	NA	NA	NA
	06/23/11	72.0	17,000	280	510
	09/22/11	63.5	16,000	240	1,000
	12/07/11	47.7	NA	NA	NA
	03/07/12	31.0	29,000	540	440
	06/27/12	31.0	NA	NA	NA
	07/12/12	NA	18,000	450	160
	10/02/12	19.6	22,000	450	29
	12/19/12	20.2	20,000	420	80
	03/07/13	15.8	20,000	570	3.2
	06/06/13	16.1	NA	NA	NA
	09/25/13	11.3	19,000	410	230
	03/26/14	12.5	16,000	440	2.2
	09/23/14	15.2	27,000	690	220
	03/17/15	1.9	1,620	18.9	1.0 U
09/15/15	7.7	14,400	206	37.3	

**Table 5**  
**Total Organic Carbon and Dissolved Gases**  
**Univar USA Inc., Kent, Washington**

Sample Location	Date Collected	Total Organic Carbon (mg/L)	Dissolved Gases (µg/L)		
		EPA Method 415.1 or SM 5310 B/C	Method AM20GAX or RSK-175		
			Methane	Ethane	Ethene
MW-13 (continued)	03/14/16	1.8	8,070	221	10 U
	09/15/16	9.8	22,000	540	10.0 U
	03/07/17	14.0	14,400	10.4	432
	09/20/17	14.8	16,400 J	303 J	3.9 J
MW-17	03/07/11	34.8	21,000	470	21
	03/07/11 (LAB DUP)	34.7	NA	NA	NA
	06/23/11	31.9	18,000	670	8.6
	09/22/11	25.1	19,000	530	12
	03/08/12	41.8	20,000	550	4.2
	06/27/12	37.1	NA	NA	NA
	07/12/12	NA	16,000	580	14
	10/01/12	32.5	18,000	440	13
	12/19/12	42.6	18,000	520	7.6
	03/07/13	30.5	18,000	570	3.6
	06/06/13	32.3	NA	NA	NA
	09/26/13	29.7	20,000	390	3.6
	03/26/14	19.1	14,000	300	3.0
	09/25/14	35.4	21,000	240	1.6
	03/19/15	26.6	9,630	122	0.82
	09/17/15	26.9	8,220	194	1.5
	03/14/16	3.8	6,460	99.2	10 U
09/14/16	28.6	17,800	228	10.0 U	
03/08/17	37.4	8,490	213	3.3	
09/19/17	33.5	11,700 J	127 J	2.9 J	
MW-18	03/04/11	16.1	10,000	260	67
	06/23/11	17.9	9,000	24	0.42
	09/22/11	13.0	8,000	20	0.19
	03/07/12	18.8	9,700	39	36
	06/27/12	20.0	NA	NA	NA
	07/12/12	NA	10,000	100	35
	10/01/12	21.9	750	2.0	0.98
	12/19/12	21.2	12,000	50	6.2
	12/19/12 (DUP)	20.4	NA	NA	NA
	03/05/13	17.8	11,000	22	0.18
	06/06/13	18.4	NA	NA	NA
	09/26/13	< 20.0 E	10,000	220	0.18
	03/26/14	18.1	14,000	44	0.14
	09/24/14	14.4	8,200	26	0.61
	03/18/15	18.8	9,520	24.9	1.0 U
	09/14/15	16.9	3,160	28.8	0.77 J
	03/15/16	18.7	8,790	56.5	10 U
09/15/16	17.7	10,300	37.2	10.0 U	
03/09/17	18.3	4,960	20.8	1.0 U	
09/19/17	18.1	6,520	20.9	1.0 U	
MW-19	06/27/12	16.1	NA	NA	NA
	07/12/12	NA	1,000	140	270
	12/19/12	15.7	18,000	230	520
	03/05/13	NA	12,000	270	840
	06/06/13	16.7	NA	NA	NA
	06/06/13 (DUP)	16.0	NA	NA	NA
	09/25/14	20.5	NA	NA	NA
	03/19/15	16.2	NA	NA	NA
	09/15/15	16.4	NA	NA	NA
	03/14/16	17.1	NA	NA	NA
	09/13/16	13.8	NA	NA	NA
03/09/17	16.0	NA	NA	NA	
09/19/17	15.7	7,480 J	212 J	225 J	

**Table 5**  
**Total Organic Carbon and Dissolved Gases**  
**Univar USA Inc., Kent, Washington**

Sample Location	Date Collected	Total Organic Carbon (mg/L)	Dissolved Gases (µg/L)		
		EPA Method 415.1 or SM 5310 B/C	Method AM20GAX or RSK-175		
			Methane	Ethane	Ethene
MW-21	03/26/10	32	NA	NA	NA
	04/07/10	2,400	NA	NA	NA
	04/16/10	33	NA	NA	NA
	05/06/10	69	NA	NA	NA
	05/06/10 (DUP)	67	NA	NA	NA
	06/09/10	82	NA	NA	NA
	07/06/10	150	NA	NA	NA
	03/02/11	124	17,000	140	1,600
	03/02/11 (DUP)	120	16,000	130	1,400
	03/02/11 (LAB DUP)	122	NA	NA	NA
	06/23/11	136	18,000	100	1,400
	06/23/11 (DUP)	137	20,000	110	1,600
	09/22/11	366	21,000	120	1,500
	12/07/11	386	NA	NA	NA
	03/08/12	455	17,000	150	720
	06/26/12	399	NA	NA	NA
	07/12/12	NA	14,000	94	970
	10/01/12	313	NA	NA	NA
	10/01/12 (DUP)	330	NA	NA	NA
	10/02/12	NA	14,000	84	1,200
	10/02/12	NA	12,000	73	1,100
	12/20/12	33.5	14,000	89	830
	03/06/13	186	18,000	96	1,200
	06/06/13	111	NA	NA	NA
	09/25/13	67.1	20,000	60	1,000
	03/26/14	59.5	25,000	140	830
	09/24/14	62.8	25,000	280	730
	03/17/15	22.4	12,200	185	73.5
09/15/15	26.6	16,400	211	13.3	
03/16/16	29.0	18,500	655	35.9	
09/15/16	21.6	21,700	798	37.1	
03/07/17	20.5	10,800	543	12.5	
09/20/17	20.0	13,200	673	8.1	
MW-22	03/04/11	19.9	16,000	880	940
	06/23/11	21.5	15,000	780	140
	09/23/11	35.1	18,000	1,100	220
	12/07/11	50.9	NA	NA	NA
	03/08/12	39.6	27,000	620	900
	06/26/12	32.6	NA	NA	NA
	06/26/12 (DUP)	32.4	NA	NA	NA
	07/12/12	NA	18,000	470	860
	10/02/12	24.7	22,000	600	810
	12/19/12	18.3	24,000	640	120
	03/06/13	15.1	24,000	520	330
	06/06/13	17.6	NA	NA	NA
	09/25/13	11.7	23,000	430	290
	03/26/14	14.3	25,000	480	170
	09/24/14	18.9	26,000	390	37
	03/17/15	14.8	11,300	104	111
	09/15/15	15.6	9,420	68.3	25.1
	03/16/16	16.2	20,800	299	46.5
	09/15/16	21.2	23,200	235	10.0 U
	03/07/17	21.4	11,100	163	1.0 U
09/20/17	23.9	8,410 J	97.6 J	0.97 J	
MW-24	03/26/10	27	NA	NA	NA
	04/07/10	2,200	NA	NA	NA
	04/16/10	23	NA	NA	NA
	05/06/10	58	NA	NA	NA

**Table 5**  
**Total Organic Carbon and Dissolved Gases**  
**Univar USA Inc., Kent, Washington**

Sample Location	Date Collected	Total Organic Carbon (mg/L)	Dissolved Gases (µg/L)		
		EPA Method 415.1 or SM 5310 B/C	Method AM20GAX or RSK-175		
			Methane	Ethane	Ethene
MW-24 (continued)	06/09/10	68	NA	NA	NA
	07/06/10	74	NA	NA	NA
	7/6/10 (DUP)	72	NA	NA	NA
MW-25	03/29/10	23	NA	NA	NA
	04/07/10	24	NA	NA	NA
	04/16/10	23	NA	NA	NA
	05/06/10	26	NA	NA	NA
	06/09/10	33	NA	NA	NA
	07/06/10	43	NA	NA	NA
MW-26	04/01/10	3.7	NA	NA	NA
	4/1/10 (LAB DUP)	3.7	NA	NA	NA
	04/09/10	4.0	NA	NA	NA
	04/16/10	3.8	NA	NA	NA
	05/06/10	4.2	NA	NA	NA
	06/09/10	4.6	NA	NA	NA
	07/06/10	7.0	NA	NA	NA
	07/06/10 (LAB DUP)	NA	NA	NA	NA
<b>Deep On-Site Injection Wells</b>					
IW-106-37	10/08/12	57.2	NA	NA	NA
IW-106-27	10/08/12	60.0	NA	NA	NA
IW-115-27	10/08/12	61.2	NA	NA	NA
IW-115-37	10/08/12	55.4	NA	NA	NA
IW-130-27	10/05/12	81.4	NA	NA	NA
IW-130-37	10/05/12	86.0	NA	NA	NA
IW-137-28	10/04/12	55.0	NA	NA	NA
IW-137-38	10/04/12	49.0	NA	NA	NA
<b>Deep Off-Site Monitoring Well</b>					
MW-20	06/06/13	25.3	NA	NA	NA
	09/19/17	35.5	8,730 J	487 J	3.1 J

**Notes:**

Analyses prior to 2011 and after 2014 performed using Modified RSK Method 175.

Analyses from 2011 to 2014 performed using Microseeps Method AM20GAX.

Starting in March 2015, the laboratory was changed to SGS/Accutest.

mg/L = milligrams per liter

µg/L = micrograms per liter

< or U = not detected, the associated value is the quantification limit

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

DUP = duplicate sample collected in the field and blind labeled

DUP = duplicate sample collected in the field and blind labeled

LAB DUP = laboratory duplicate sample

NA = not analyzed

**Table 6**  
**Groundwater Microbial Test Results**  
**Univar USA Inc., Kent, Washington**

Sample Location	Date Collected	Dhb		Dhc		bvcA		vcrA		tceA		ORM-2	
		(cells/L)	Percent Dhb	(cells/L)	Percent Dhc	(gene copies/L)	Percent bvcA	(gene copies/L)	Percent vcrA	(gene copies/L)	Percent tceA	(gene copies/L)	Percent ORM-2
<b>MW-5 Area</b>													
MW-5	10/21/11	2 x 10 <sup>3</sup> U	NA	3 x 10 <sup>3</sup>	0.0007 - 0.002	-	-	2 x 10 <sup>3</sup> U	NA	-	-	-	-
	09/27/12	4 x 10 <sup>4</sup>	0.007 - 0.02	1 x 10 <sup>3</sup> U	NA	-	-	-	-	-	-	-	-
	09/26/13	1 x 10 <sup>3</sup>	0.0002 - 0.0006	1 x 10 <sup>4</sup> J	0.003 - 0.008 J	-	-	2 x 10 <sup>4</sup> C	0.003 - 0.01	-	-	-	-
	09/23/14	1 x 10 <sup>3</sup> U	NA	1 x 10 <sup>3</sup> U	NA	-	-	-	-	-	-	-	-
	09/15/15	1 x 10 <sup>3</sup> U	NA	4 x 10 <sup>3</sup>	0.0005 - 0.001	-	-	1 x 10 <sup>4</sup>	0.001 - 0.004	-	-	-	-
	09/14/16	1 x 10 <sup>3</sup> U	NA	6 x 10 <sup>3</sup>	0.002 - 0.007	2 x 10 <sup>3</sup>	0.0007 - 0.002	6 x 10 <sup>3</sup>	0.002 - 0.006	-	-	-	-
	09/20/17	2 x 10 <sup>3</sup> U	NA	2 x 10 <sup>3</sup> U	NA	-	-	-	-	-	-	-	-
MW-7	10/20/11	2 x 10 <sup>3</sup> U	NA	1 x 10 <sup>3</sup> J	0.0004 - 0.001	-	-	2 x 10 <sup>3</sup> U	NA	-	-	-	-
	09/27/12	2 x 10 <sup>3</sup> U	NA	1 x 10 <sup>3</sup> U	NA	-	-	-	-	-	-	-	-
	09/24/13	1 x 10 <sup>3</sup> U	NA	1 x 10 <sup>3</sup> J	0.0005 - 0.002 J	-	-	1 x 10 <sup>3</sup> U	NA	-	-	-	-
	09/25/14	1 x 10 <sup>3</sup> U	NA	1 x 10 <sup>3</sup> U	NA	-	-	-	-	-	-	-	-
	09/14/15	1 x 10 <sup>3</sup> U	NA	1 x 10 <sup>3</sup> U	NA	-	-	-	-	-	-	-	-
	09/14/16	1 x 10 <sup>3</sup> U	NA	1 x 10 <sup>3</sup> U	NA	-	-	-	-	-	-	-	-
	09/19/17	1 x 10 <sup>3</sup> U	0.00005 - 0.0001	1 x 10 <sup>3</sup> U	NA	-	-	-	-	-	-	-	-
MW-12	10/21/11	2 x 10 <sup>5</sup>	0.01 - 0.04	7 x 10 <sup>5</sup>	0.04 - 0.1	-	-	2 x 10 <sup>5</sup>	0.01 - 0.04	-	-	-	-
	10/02/12	4 x 10 <sup>5</sup>	0.02 - 0.05	4 x 10 <sup>6</sup>	0.2 - 0.5	-	-	5 x 10 <sup>6</sup>	0.2 - 0.6	-	-	-	-
	09/25/13	1 X 10 <sup>6</sup>	0.2 - 0.5	4 x 10 <sup>7</sup>	4 - 12	-	-	2 x 10 <sup>7</sup>	2 - 7	-	-	-	-
	09/23/14	1 x 10 <sup>3</sup> J	0.0002-0.0006 J	4 x 10 <sup>3</sup>	0.0006 - 0.002	-	-	9 x 10 <sup>3</sup> J	0.001 - 0.004 J	-	-	-	-
	09/15/15	3 x 10 <sup>3</sup>	0.0002 - 0.0007	6 x 10 <sup>4</sup>	0.005 - 0.02	-	-	2 x 10 <sup>4</sup>	0.002 - 0.006	-	-	-	-
	09/14/16	2 x 10 <sup>3</sup>	0.005 - 0.01	2 x 10 <sup>4</sup>	0.005 - 0.01	7 x 10 <sup>3</sup>	0.002 - 0.005	5 x 10 <sup>3</sup>	0.001 - 0.003	1 x 10 <sup>3</sup> U	NA	-	-
	09/20/17	7 x 10 <sup>3</sup>	0.001 - 0.004	6 x 10 <sup>3</sup>	0.001 - 0.004	2 x 10 <sup>3</sup>	0.0003 - 0.001	1 x 10 <sup>3</sup>	NA	1 x 10 <sup>3</sup> U	NA	-	-
MW-23	10/20/11	2 x 10 <sup>3</sup> U	NA	1 x 10 <sup>3</sup> J	0.0007 - 0.002	-	-	2 x 10 <sup>3</sup> U	NA	-	-	-	-
	09/27/12	2 x 10 <sup>3</sup> U	NA	1 x 10 <sup>3</sup>	0.0002 - 0.0005	-	-	1 x 10 <sup>3</sup> U	NA	-	-	-	-
	09/24/13	1 x 10 <sup>3</sup> U	NA	1 x 10 <sup>3</sup> U	NA	-	-	-	-	-	-	-	-
	09/25/14	1 x 10 <sup>3</sup> U	NA	1 x 10 <sup>3</sup> U	NA	-	-	-	-	-	-	-	-
	09/14/15	1 x 10 <sup>3</sup> U	NA	1 x 10 <sup>3</sup> U	NA	-	-	-	-	-	-	-	-
IW-211	10/21/11	4 x 10 <sup>5</sup>	0.04 - 0.1	3 x 10 <sup>7</sup>	2 - 7	-	-	3 x 10 <sup>7</sup>	2 - 7	-	-	-	-
	10/02/12	3 x 10 <sup>5</sup>	0.0007 - 0.002	2 x 10 <sup>9</sup>	4 - 12	-	-	2 x 10 <sup>9</sup>	5 - 15	-	-	-	-

**Table 6**  
**Groundwater Microbial Test Results**  
**Univar USA Inc., Kent, Washington**

Sample Location	Date Collected	Dhb		Dhc		bvcA		vcrA		tceA		ORM-2	
		(cells/L)	Percent Dhb	(cells/L)	Percent Dhc	(gene copies/L)	Percent bvcA	(gene copies/L)	Percent vcrA	(gene copies/L)	Percent tceA	(gene copies/L)	Percent ORM-2
<b>MW-13/MW-21 Area</b>													
MW-13	10/20/11	2 x 10 <sup>5</sup>	0.01 - 0.04	5 x 10 <sup>7</sup>	3 - 10	-	-	4 x 10 <sup>7</sup>	3 - 9	-	-	-	-
	10/02/12	9 x 10 <sup>4</sup>	0.005 - 0.02	1 x 10 <sup>7</sup>	0.8 - 2	-	-	2 x 10 <sup>7</sup>	1 - 3	-	-	-	-
	09/25/13	4 x 10 <sup>4</sup>	0.004 - 0.01	4 x 10 <sup>6</sup> J	0.4 - 1 J	-	-	3 x 10 <sup>5</sup>	0.3 - 1	-	-	-	-
	09/23/14	1 x 10 <sup>3</sup> U	NA	3 x 10 <sup>5</sup>	0.04 - 0.1	-	-	7 x 10 <sup>5</sup> J	0.09 - 0.3 J	-	-	-	-
	09/15/15	1 x 10 <sup>3</sup> U	NA	2 x 10 <sup>5</sup>	0.01 - 0.04	-	-	1 x 10 <sup>6</sup>	0.1 - 0.4	-	-	-	-
	09/15/16	1 x 10 <sup>3</sup> U	NA	2 x 10 <sup>5</sup>	0.1 - 0.3	2 x 10 <sup>5</sup>	0.08 - 0.2	1 x 10 <sup>6</sup>	0.7 - 2	1 x 10 <sup>3</sup> U	NA	-	-
	09/20/17	1 x 10 <sup>3</sup>	0.0008 - 0.002	3 x 10 <sup>5</sup>	0.2 - 0.7	7 x 10 <sup>4</sup>	0.04 - 0.1	2 x 10 <sup>5</sup>	0.2 - 0.5	1 x 10 <sup>3</sup> U	NA	-	-
MW-21	10/20/11	2 x 10 <sup>6</sup>	0.3 - 0.8	4 x 10 <sup>7</sup>	6 - 16	-	-	4 x 10 <sup>7</sup>	5 - 14	-	-	-	-
	10/02/12	8 x 10 <sup>6</sup>	0.2 - 0.6	5 x 10 <sup>7</sup>	1 - 3	-	-	7 x 10 <sup>7</sup>	2 - 5	-	-	-	-
	09/25/13	3 x 10 <sup>5</sup>	0.01 - 0.04	1 x 10 <sup>8</sup>	5 - 14	-	-	9 x 10 <sup>7</sup>	4 - 11	-	-	-	-
	09/24/14	4 x 10 <sup>4</sup> J	0.003 - 0.01 J	6 x 10 <sup>5</sup>	0.06 - 0.2	-	-	2 x 10 <sup>6</sup> J	0.2 - 0.7 J	-	-	-	-
	09/15/15	3 x 10 <sup>4</sup>	0.002 - 0.005	3 x 10 <sup>6</sup>	0.2 - 0.6	-	-	4 x 10 <sup>6</sup>	0.2 - 0.7	-	-	-	-
	09/15/16	2 x 10 <sup>5</sup>	0.009 - 0.03	3 x 10 <sup>7</sup>	1 - 4	1 x 10 <sup>7</sup>	0.6 - 2	7 x 10 <sup>7</sup>	3 - 8	3 x 10 <sup>3</sup>	0.0001 - 0.0004	-	-
	09/20/17	2 x 10 <sup>5</sup>	0.03 - 0.10	3 x 10 <sup>6</sup>	0.6 - 2	6 x 10 <sup>5</sup>	0.1 - 0.3	1 x 10 <sup>6</sup>	0.2 - 0.6	3 x 10 <sup>3</sup> U	NA	-	-
MW-22	10/21/11	4 x 10 <sup>4</sup>	0.02 - 0.05	1 x 10 <sup>7</sup>	4 - 13	-	-	8 x 10 <sup>6</sup>	3 - 9	-	-	-	-
	10/02/12	3 x 10 <sup>4</sup>	0.003 - 0.008	3 x 10 <sup>7</sup>	3 - 8	-	-	6 x 10 <sup>7</sup>	5 - 14	-	-	-	-
	09/25/13	1 x 10 <sup>5</sup>	0.03 - 0.08	3 x 10 <sup>7</sup>	6 - 16	-	-	2 x 10 <sup>7</sup>	4 - 12	-	-	-	-
	09/24/14	1 x 10 <sup>3</sup> J	0.0002 - 0.0005 J	4 x 10 <sup>5</sup>	0.05 - 0.1	-	-	9 x 10 <sup>5</sup> J	0.1 - 0.3 J	-	-	-	-
	09/15/15	2 x 10 <sup>3</sup> U	0.0002 - 0.0005	3 x 10 <sup>6</sup>	0.3 - 0.9	-	-	3 x 10 <sup>6</sup>	0.4 - 1	-	-	-	-
	09/15/16	3 x 10 <sup>3</sup>	0.03 - 0.1	3 x 10 <sup>6</sup>	30 - 67	9 x 10 <sup>5</sup>	10 - 27	5 x 10 <sup>6</sup>	46 - 89	1 x 10 <sup>3</sup> U	NA	-	-
	09/20/17	1 x 10 <sup>3</sup> U	NA	8 x 10 <sup>4</sup>	0.2 - 0.6	2 x 10 <sup>4</sup>	0.04 - 0.1	4 x 10 <sup>4</sup>	0.08 - 0.2	1 x 10 <sup>3</sup> U	NA	-	-
IW-117	10/20/11	4 x 10 <sup>4</sup>	0.002 - 0.005	5 x 10 <sup>5</sup>	0.02 - 0.06	-	-	5 x 10 <sup>5</sup>	0.02 - 0.06	-	-	-	-
	10/02/12	3 x 10 <sup>5</sup>	0.0005 - 0.002	3 x 10 <sup>5</sup>	0.0005 - 0.002	-	-	2 x 10 <sup>6</sup> C	0.003 - 0.008	-	-	-	-
IW-140	10/21/11	3 x 10 <sup>5</sup>	0.004 - 0.01	5 x 10 <sup>5</sup>	0.007 - 0.02	-	-	5 x 10 <sup>5</sup> C	0.008 - 0.02	-	-	-	-
	10/02/12	7 x 10 <sup>4</sup>	0.0002 - 0.0006	3 x 10 <sup>4</sup>	0.00009 - 0.0003	-	-	6 x 10 <sup>5</sup> C	0.002 - 0.005	-	-	-	-

**Table 6  
Groundwater Microbial Test Results  
Univar USA Inc., Kent, Washington**

Sample Location	Date Collected	Dhb		Dhc		bvcA		vcrA		tceA		ORM-2		
		(cells/L)	Percent Dhb	(cells/L)	Percent Dhc	(gene copies/L)	Percent bvcA	(gene copies/L)	Percent vcrA	(gene copies/L)	Percent tceA	(gene copies/L)	Percent ORM-2	
<b>Downgradient Deep Monitoring Wells</b>														
MW-17	09/19/17	–	–	–	–	–	–	–	–	–	–	–	3 x 10 <sup>4</sup>	0.03 - 0.1
MW-19	09/25/14	1 x 10 <sup>3</sup> U	NA	2 x 10 <sup>5</sup>	0.03 - 0.09	–	–	4 x 10 <sup>5</sup> J	0.06 - 0.2 J	–	–	–	–	–
	09/15/15	1 x 10 <sup>3</sup> U	NA	2 x 10 <sup>4</sup>	0.003 - 0.010	–	–	4 x 10 <sup>4</sup>	0.006 - 0.02	–	–	–	–	–
	09/19/17	1 x 10 <sup>3</sup> U	NA	3 x 10 <sup>5</sup>	3 - 8	1 x 10 <sup>3</sup>	0.009 - 0.03	1 x 10 <sup>5</sup>	1 - 4	1 x 10 <sup>3</sup> U	NA	3 x 10 <sup>3</sup>	0.03 - 0.08	
<b>Deep Off-Site Monitoring Well</b>														
MW-20	09/19/17	–	–	–	–	–	–	–	–	–	–	–	4 x 10 <sup>4</sup>	0.05 - 0.1

**Notes:**

Samples analyzed by SiREM using SiREM's Gene-Tra<sup>®</sup> qPCR method.

Dhc = *Dehalococcoides*; based on quantification of Dhc 16S ribosomal ribonucleic acid (rRNA) gene copies. Dhc are generally reported to contain one 16S rRNA gene copy per cell; therefore, this number is often interpreted to represent the number of Dhc cells present in the sample.

vcrA = vinyl chloride reductase gene

bvcA = BAV1 vinyl chloride reductase gene

tceA = TCE reductase gene

Dhb = *Dehalobacter*; based on quantification of Dhb 16S rRNA gene copies.

Percent Dhc, Dhb, and vcrA = percent Dhc or Dhb in the microbial population and the percent of the microbial population harboring the vcrA gene.

U = not detected, the associated value is the quantification limit.

J = estimated value

C = correction factor applied to correct for non-PCR amplification products.

– = not analyzed.

NA = not applicable as either not detected or quantifiable DNA not extracted from the sample.

Values of Dhc at or below 10<sup>4</sup> gene copies/L are low, indicating that the conditions are suboptimal for high rates of dechlorination.

Values of 10<sup>5</sup>- 10<sup>6</sup> Dhc gene copies/L are moderate and may or may not be associated with observable dechlorination activity.

Values at or above 10<sup>7</sup> Dhc gene copies/L are high and are often associated with high rates of dechlorination.

Values of 10<sup>9</sup> Dhc gene copies/L are generally the highest observed for groundwater samples with rare exceptions.



**Table 7  
General Chemistry Parameters in Groundwater  
Univar USA Inc., Kent, Washington**

Sample Location	Date Collected	Anions			Nitrate-Nitrite	Sulfide	Ferrous Iron	Total Alkalinity	Total Metals	
		EPA Method 300.0							SW846 6010C	
		Chloride	Nitrate	Sulfate	EPA Method 353.2	SM400-S2-F	Hach Method 8146	SM2320B	Manganese	Iron
<b>Deep On-Site Monitoring Wells</b>										
MW-17	09/19/17	34.6	0.10 U	1.2 U	0.63	0.22 U	0.00	419	2.51	61.5
MW-19	09/19/17	19.9	0.050 U	0.60 U	0.42	0.22 U	0.00	258	1.85	48.4
<b>Deep Off-Site Monitoring Wells</b>										
MW-20	09/19/17	63.8	0.25 U	3.0 U	1.1	0.23 U	0.05	373	3.84	114

**Notes:**

Refer to Appendix B for historical general chemistry parameters. MW-17, MW-19, and MW-20 analyzed in 2017 to provide supplemental groundwater evaluation.  
 All results in mg/L.  
 Samples analyzed by SGS/Accutest.  
 U = less than the method reporting limit shown.

**Table 8**  
**Volatile Fatty Acids in Groundwater**  
**Univar USA Inc., Kent, Washington**

Location	Date	Lactic Acid	Acetic Acid	Propionic Acid	Formic Acid	Butyric Acid	Pyruvic Acid	i-Pentanoic Acid	Pentanoic Acid	i-Hexanoic Acid	Hexanoic Acid
MW-12	10/02/12	0.10 U	0.070 U	0.050 U	NA	<b>0.055</b>	0.15 U	0.15 U	0.070 U	0.050 U	0.10 U
MW-13	10/02/12	0.10 U	<b>0.25</b>	0.050 U	NA	0.050 U	0.15 U	0.15 U	0.070 U	0.050 U	0.10 U
MW-21	10/02/12	1.0 U	<b>380</b>	<b>56</b>	NA	<b>30</b>	<b>8.1</b>	<b>0.74 J</b>	<b>5.6</b>	<b>0.54</b>	<b>2.5</b>
	10/02/12 (DUP)	1.0 U	<b>380</b>	<b>56</b>	NA	<b>30</b>	<b>8.8</b>	<b>0.76 J</b>	<b>5.6</b>	<b>0.60</b>	<b>2.5</b>
MW-17	09/19/17	0.20 U	0.10 U	0.10 U	0.20 U	0.10 U	0.10 U	0.10 U	0.10 U	0.20 U	0.20 U
MW-19	09/19/17	0.20 U	0.10 U	0.10 U	0.20 U	0.10 U	0.10 U	0.10 U	0.10 U	0.20 U	0.20 U
MW-20	09/19/17	0.20 U	0.10 U	0.10 U	0.20 U	0.10 U	0.10 U	0.10 U	0.10 U	0.20 U	0.20 U

**Notes:**

All results in mg/L; detections are shown in bold.

DUP - duplicate sample.

J - result is an estimate based on laboratory quality control results or data quality review.

NA - not analyzed or not available

U - not detected at or above the method reporting limit.

Analysis performed by Microseeps, Inc., in Pittsburgh, PA, using Method AM23G.

**Table 9**  
**Stable Isotope Probing Bio-Trap® Study Results**  
**Univar USA Inc., Kent, Washington**

<b>Sample Location</b>	<b>MW-17</b>	<b>MW-19</b>	<b>MW-20</b>
Bio-Trap® Deployment Date	09/19/17	09/19/17	09/19/17
Bio-Trap® Sample Retrieval Date	10/23/17	10/23/17	10/23/17
Actual Incubation Period	34	34	34
<b><sup>13</sup>C Contaminant Loss</b>			
<sup>13</sup> C Benzene Pre-deployment (µg/bead)	187 ± 8	187 ± 8	187 ± 8
<sup>13</sup> C Benzene Post-deployment (µg/bead)	148 ± 5	129 ± 2	157 ± 8
<b>Biomass &amp; <sup>13</sup>C Incorporation</b>			
Total Biomass (Cells/bead)	3.17E+05	3.76E+05	2.03E+05
<sup>13</sup> C Enriched Biomass (Cells/bead)	2.16E+03	1.12E+03	1.30E+03
Average PLFA Delta (‰)	63	5	69
Maximum PLFA Delta (‰)	159	5	140
<b><sup>13</sup>C Mineralization</b>			
DIC Delta (‰)	463	5,216	3
‰ <sup>13</sup> C	1.61	6.50	1.11
<b>Community Structure (% total PLFA)</b>			
Firmicutes (TerBrSats)	6.89	6.59	10.21
Proteobacteria (Monos)	62.07	61.60	61.08
Anaerobic metal reducers (BrMonos)	1.96	3.56	2.99
Actinomycetes (MidBrSats)	0.79	1.43	0.49
General (Nsats)	27.19	24.67	23.40
Eukaryotes (Polyenoics)	1.11	2.14	1.83
<b>Physiological Status (Proteobacteria only)<sup>a</sup></b>			
Slowed Growth	0.23	0.10	0.12
Decreased Permeability	0.06	0.04	0.12

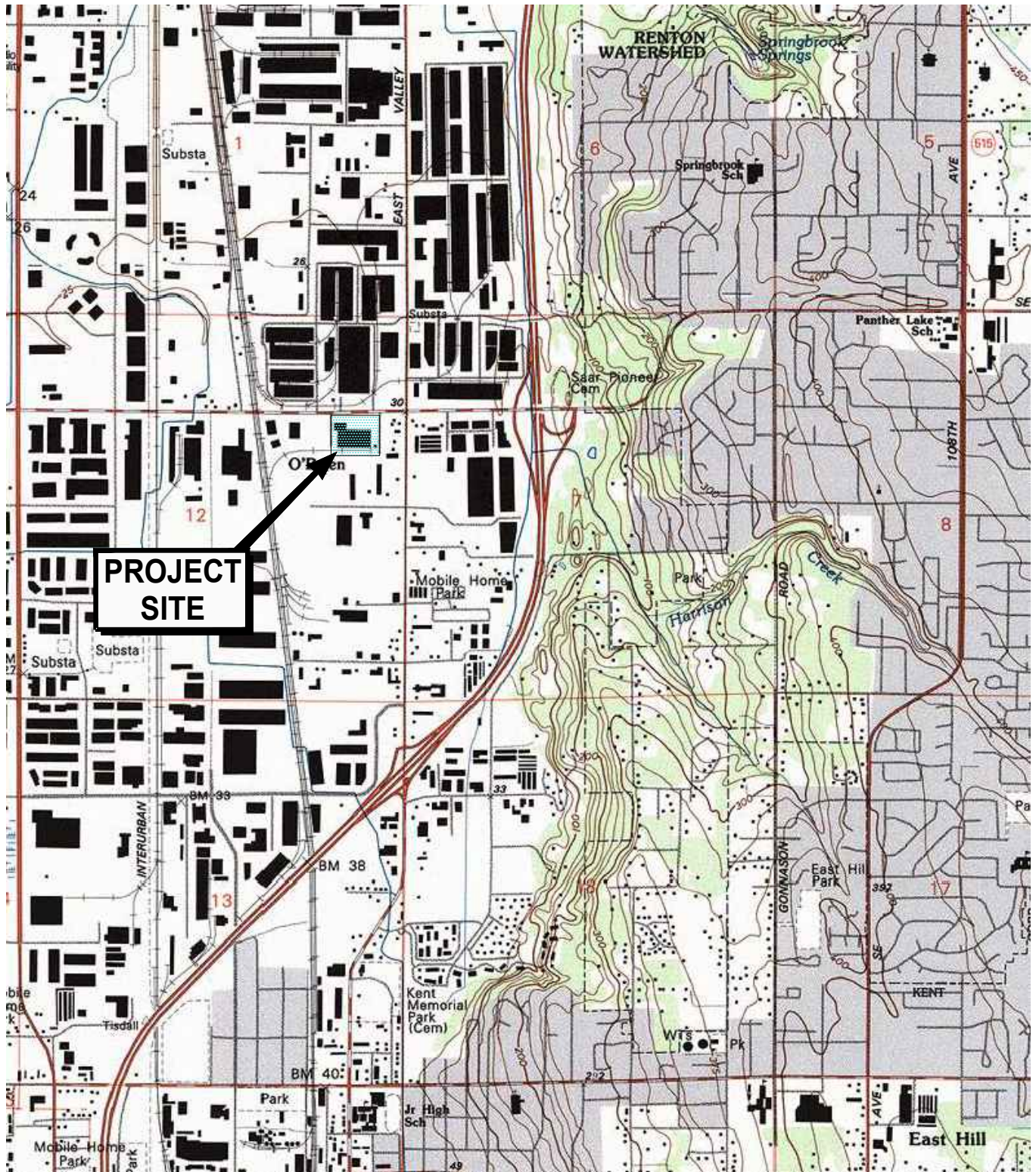
<sup>a</sup> Physiological Status is presented in terms of ratio of product to substrate fatty acid, providing an index of proteobacteria's health and metabolic activity, as some proteobacteria modify PLFA as a strategy to adapt to stressful conditions. In general ratios greater than 0.25 indicate a response to unfavorable environmental conditions.

DIC - dissolve organic carbon  
 PLFA - phospholipid fatty acids  
 µg - micrograms  
 ‰ - parts per thousand

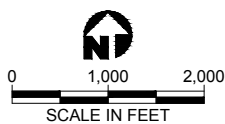
Notes:

1. Quantification of <sup>13</sup>C-enriched PLFA demonstrated that benzene was metabolized under existing site conditions in samples MW-20, MW-17, and MW-19. The average PLFA Delta <sup>13</sup>C values in all three locations, although low, indicate <sup>13</sup>C from the labeled benzene had been incorporated into microbial biomass.
2. The average DIC Delta <sup>13</sup>C value in MW-19 was 5216, indicating that a substantial amount of benzene was mineralized during the deployment period. The DIC Delta <sup>13</sup>C value in MW-17 fell within the moderate range and within the low range for MW-20.
3. The total PLFA biomass concentrations in these samples were on the order of 10<sup>5</sup> cells/bead, which was within the moderate range.
4. The PLFA community structures, similar in all three samples, were primarily composed of proteobacteria followed by normal saturates. Indicators of firmicutes, eukaryotes, actinomycetes, and anaerobic metal reducers were also detected.

## Figures

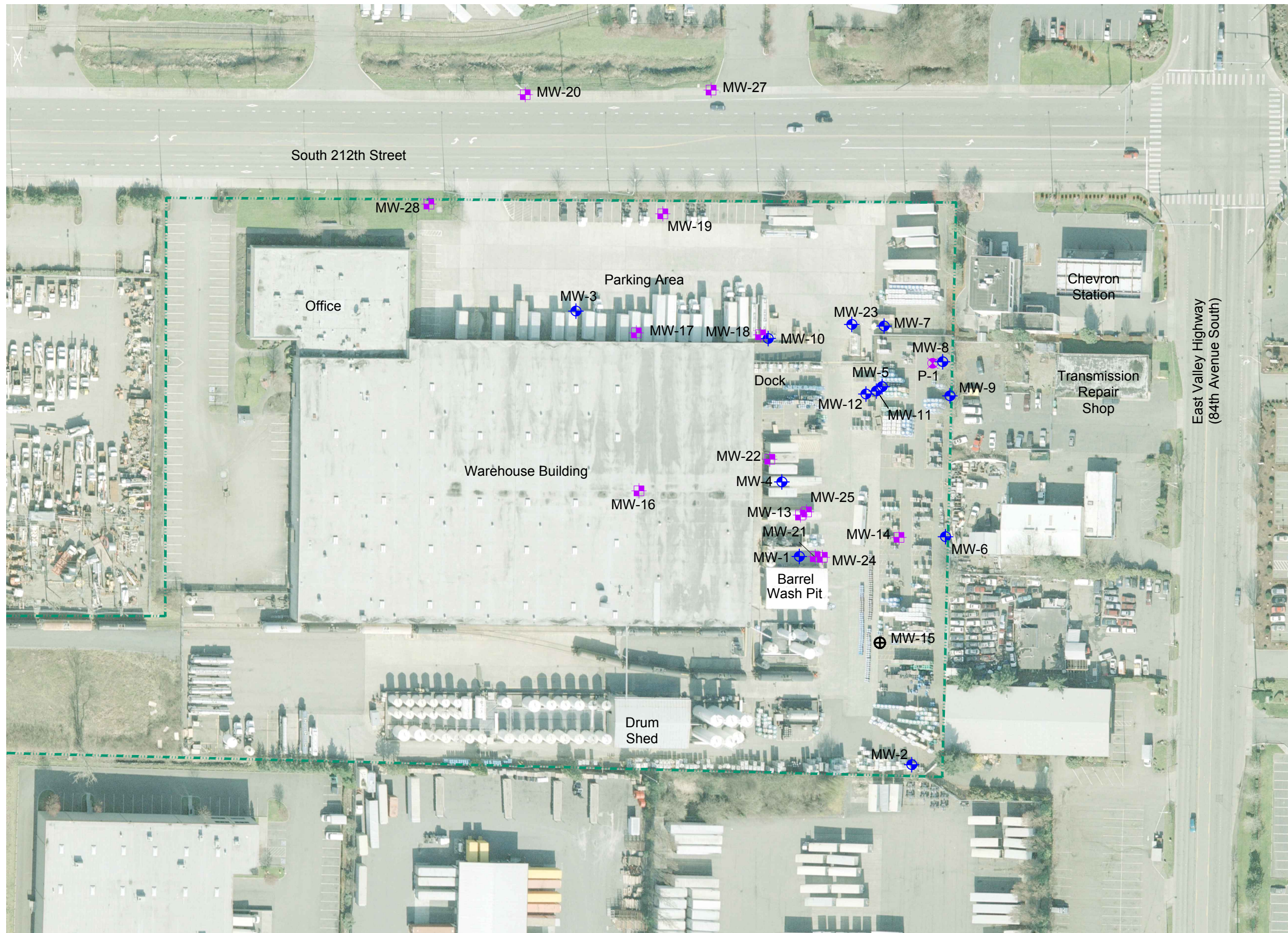


U.S.G.S. Topo Map - Renton, Washington 7.5-minute quadrangle.1994

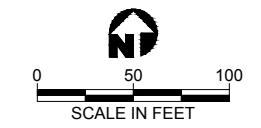


**Figure 1**  
**Site Location Map**





- LEGEND:**
- MW-1 ◆ Shallow Groundwater Monitoring Well Location
  - MW-16 ■ Deep Groundwater Monitoring Well Location
  - P-1 ■ Piezometer Location
  - MW-15 ⊕ Abandoned Monitoring Well
  - Approximate Property Boundary

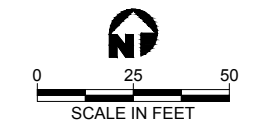


**Figure 2**  
**Groundwater Monitoring Network**



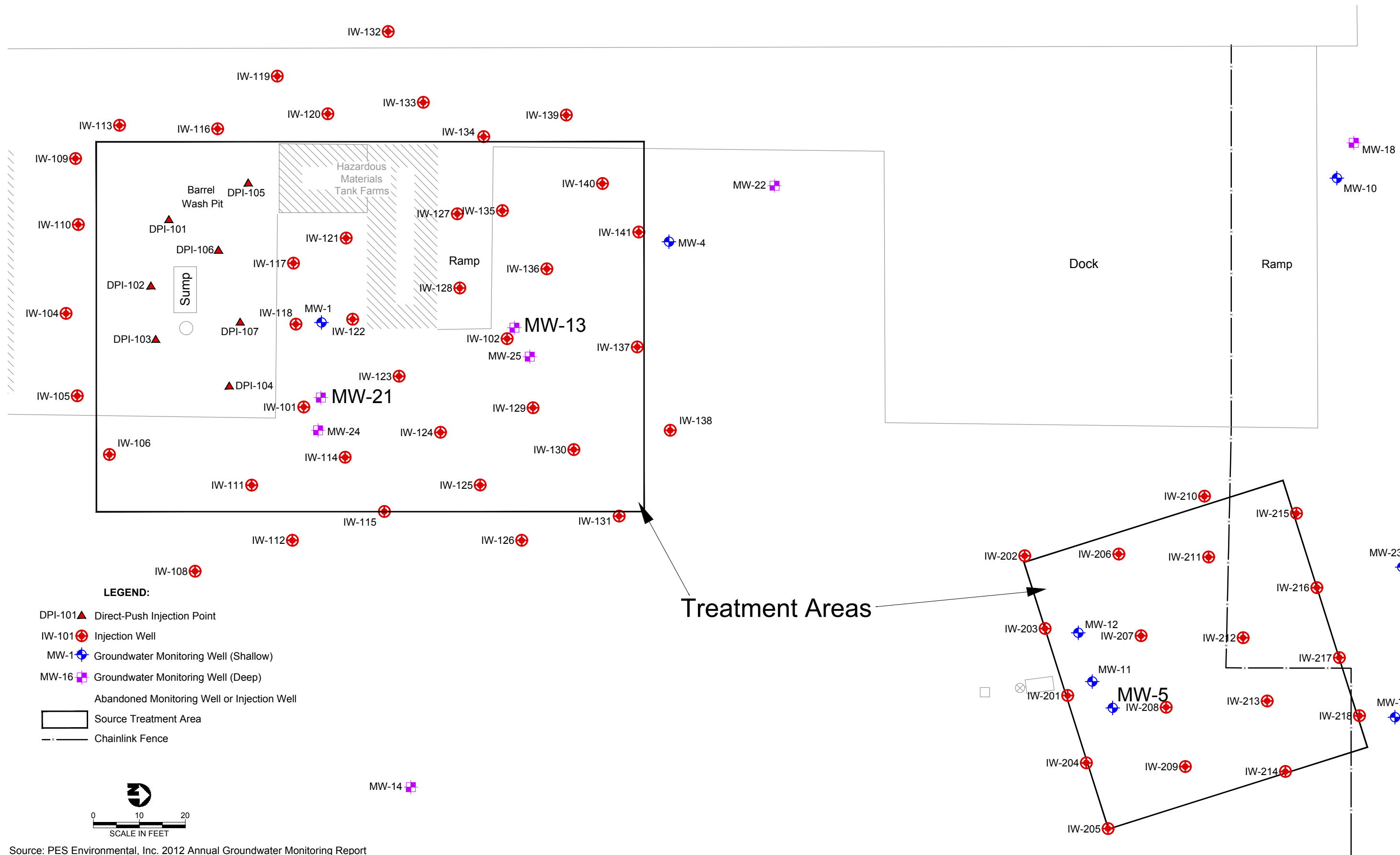


- LEGEND:**
- MW-1 Shallow Groundwater Monitoring Well Location
  - MW-16 Deep Groundwater Monitoring Well Location
  - P-1 Piezometer Location
  - MW-15 Abandoned Monitoring Well
  - Approximate Property Boundary
  - Former UST Location (37 total)



**Figure 2A**  
**Historical Site Features**



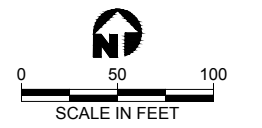


**Figure 3**  
**Groundwater Treatment Area Monitoring Well and Injection Well Locations**





- LEGEND:**
- MW-1 Shallow Groundwater Monitoring Well Location
  - Approximate Property Boundary
  - Groundwater Contours (feet above mean sea level)
  - Inferred Groundwater Flow

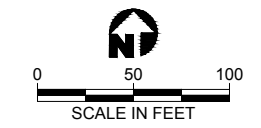


**Figure 4**  
**Groundwater Contour Map**  
**Shallow Zone - March 6, 2017**



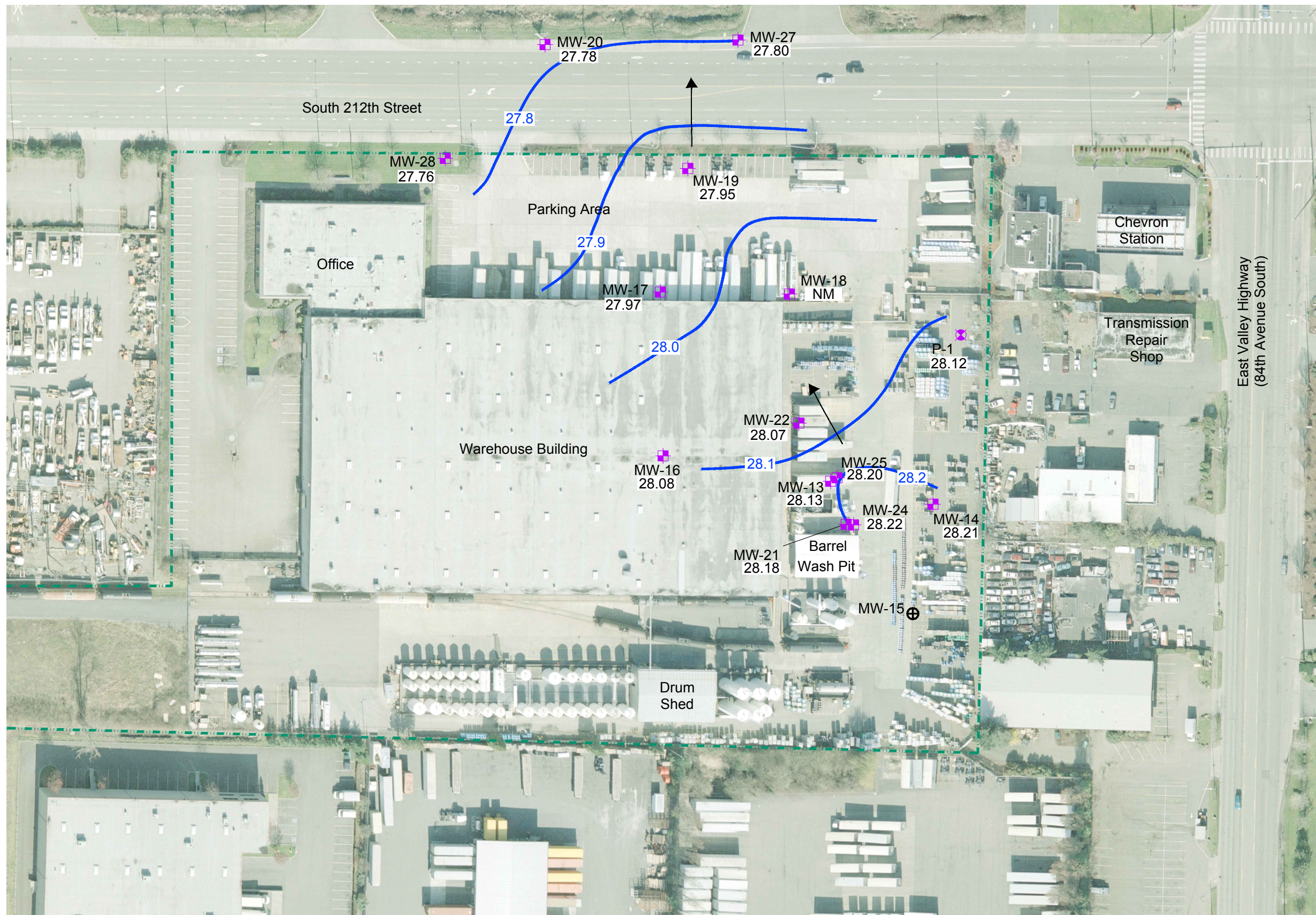


- LEGEND:**
- MW-1 Shallow Groundwater Monitoring Well Location
  - Approximate Property Boundary
  - Groundwater Contours (feet above mean sea level)
  - Inferred Groundwater Flow

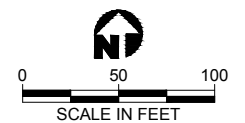


**Figure 5**  
**Groundwater Contour Map**  
**Shallow Zone - September 18, 2017**





- LEGEND:**
- MW-16 Deep Groundwater Monitoring Well Location
  - P-1 Piezometer Location
  - MW-15 Abandoned Monitoring Well
  - NM Not Measured
  - Approximate Property Boundary
  - Groundwater Contours (feet above mean sea level)
  - Inferred Groundwater Flow

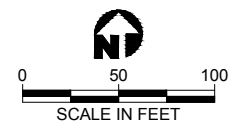


**Figure 6**  
**Groundwater Contour Map**  
**Deep Zone - March 6, 2017**



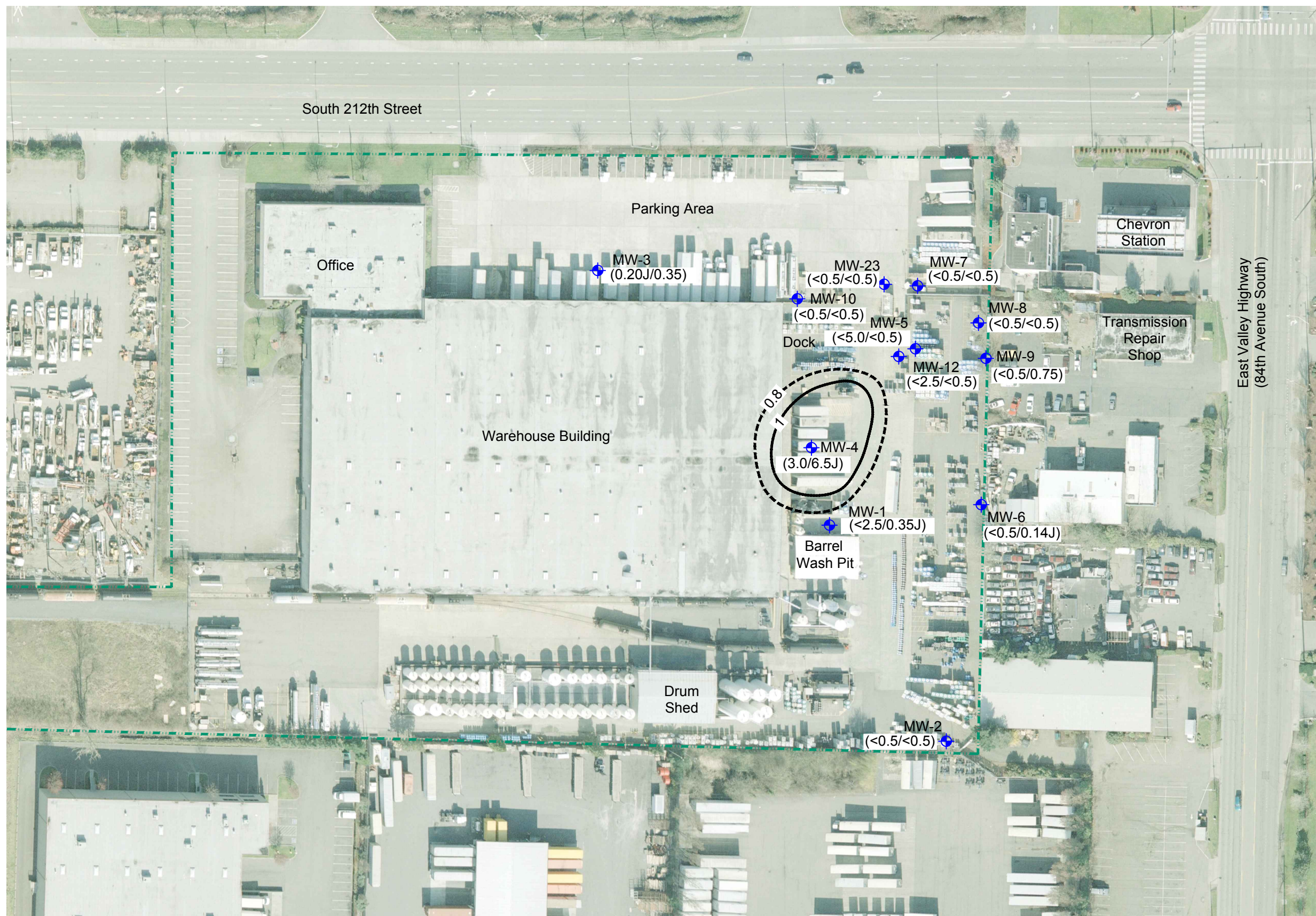


- LEGEND:**
- MW-16 Deep Groundwater Monitoring Well Location
  - P-1 Piezometer Location
  - MW-15 Abandoned Monitoring Well
  - NM Not Measured
  - Approximate Property Boundary
  - Groundwater Contours (feet above mean sea level)
  - Inferred Groundwater Flow



**Figure 7**  
**Groundwater Contour Map**  
**Deep Zone - September 18, 2017**

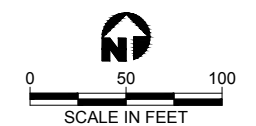




**LEGEND:**

- MW-1 Shallow Groundwater Monitoring Well
- Approximate Property Boundary
- Isoconcentration Contour Based on Highest Detected Concentration (ug/L)
- Benzene Groundwater Cleanup Level Contour (0.8 ug/L)
- (<0.5/<0.5) Concentration of Benzene in Groundwater (March/Sept 2017)
- < Less than the Concentration Shown
- J Estimated Concentration

NOTES: All Concentrations in ug/L.



**Figure 8**  
**Benzene Concentrations in Shallow Groundwater**

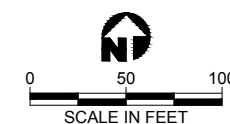




**LEGEND:**

- MW-1 Shallow Groundwater Monitoring Well
- Approximate Property Boundary
- Isoconcentration Contour Based on Highest Detected Concentration (ug/L)
- Chloroethane Groundwater Cleanup Level Contour (15 ug/L)
- (<0.5/<0.5) Concentration of Chloroethane in Groundwater (March/Sept 2017)
- < Less than the Concentration Shown
- J Estimated Concentration

NOTE: All Concentrations in ug/L



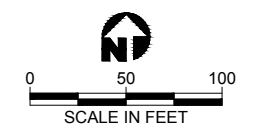
**Figure 9**  
**Chloroethane Concentrations in Shallow Groundwater**





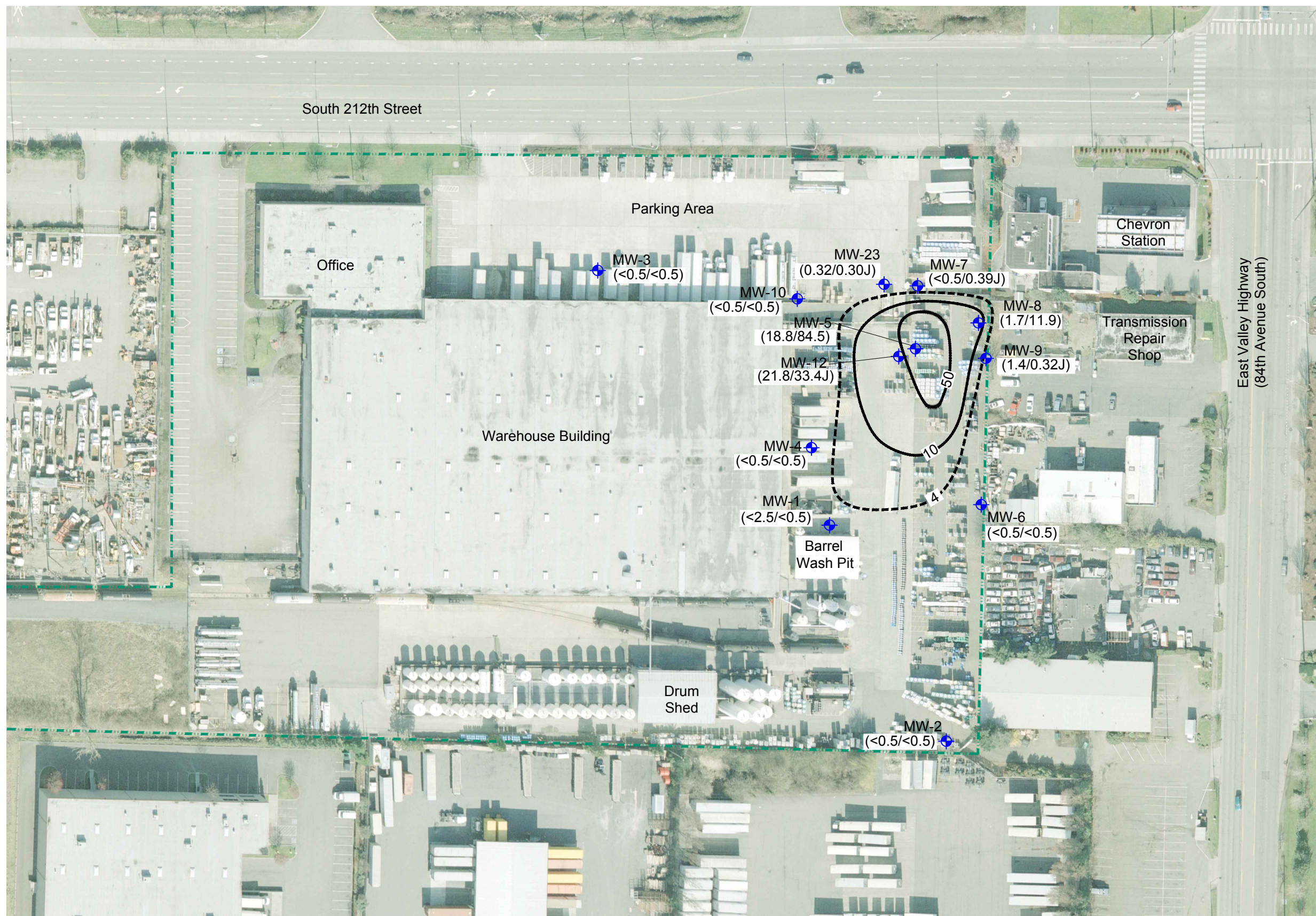
- LEGEND:**
- MW-1 Shallow Groundwater Monitoring Well
  - Approximate Property Boundary
  - Isoconcentration Contour Based on Highest Detected Concentration (ug/L)
  - Tetrachloroethene Groundwater Cleanup Level Contour (0.86 ug/L)
  - (<0.5/<0.5) Concentration of Tetrachloroethene in Groundwater (March/Sept 2017)
  - < Less than the Concentration Shown
  - J Estimated Concentration

- NOTES:**
1. All Concentrations in ug/L.
  2. Tetrachloroethene has historically not been detected at MW-3.



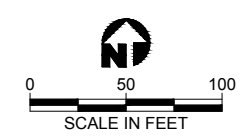
**Figure 10**  
**Tetrachloroethene Concentrations in Shallow Groundwater**





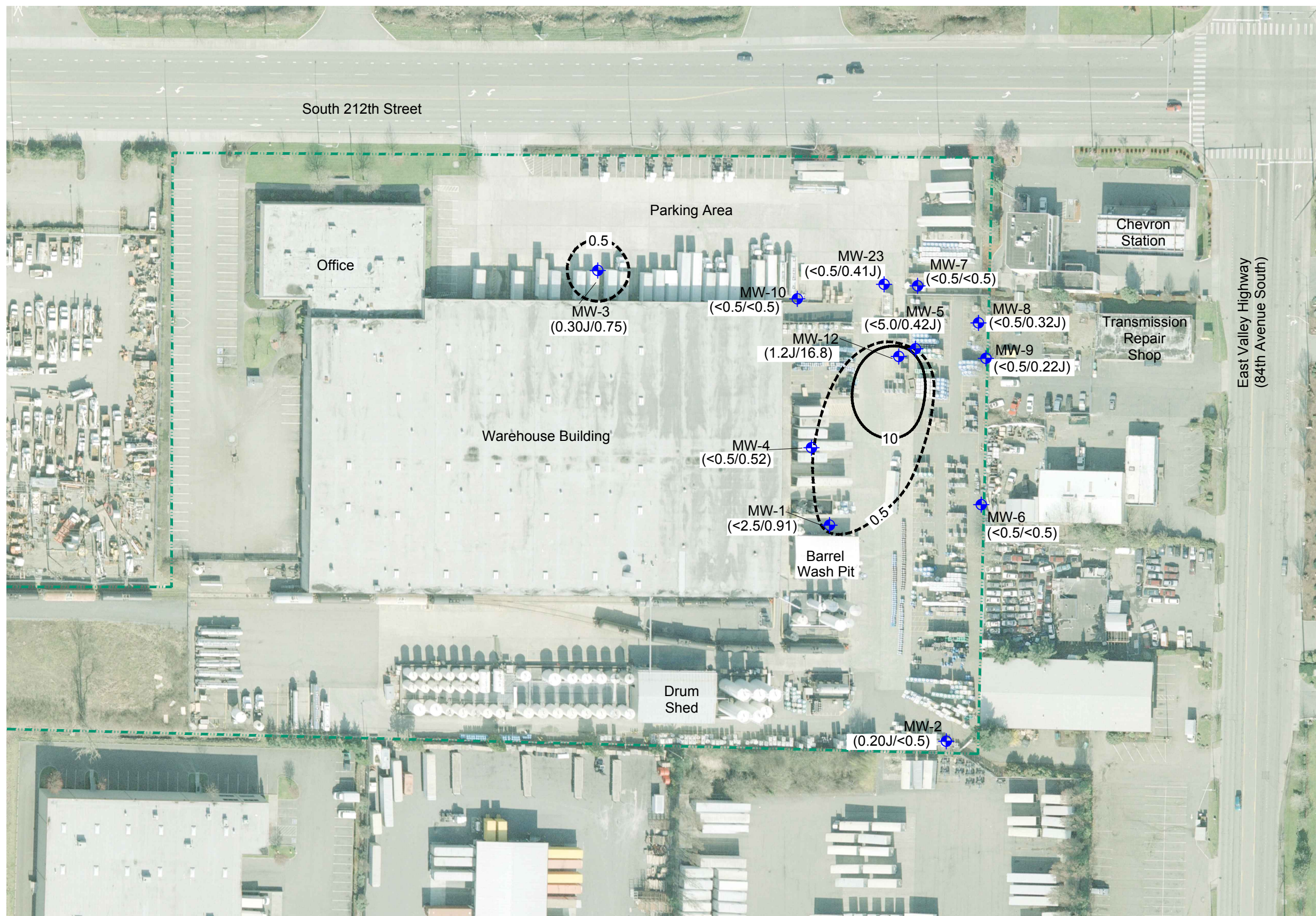
- LEGEND:**
- MW-1 Shallow Groundwater Monitoring Well
  - Approximate Property Boundary
  - Isoconcentration Contour Based on Highest Detected Concentration (ug/L)
  - Trichloroethene Groundwater Cleanup Level Contour (4 ug/L)
  - (<0.5/<0.5) Concentration of Trichloroethene in Groundwater (March/Sept 2017)
  - < Less than the Concentration Shown
  - J Estimated Concentration

- NOTES:**
1. All Concentrations in ug/L.
  2. Trichloroethene has historically not been detected at MW-3.



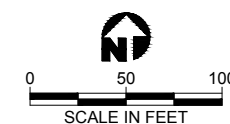
**Figure 11**  
**Trichloroethene Concentrations in Shallow Groundwater**





- LEGEND:**
- MW-1 Shallow Groundwater Monitoring Well
  - Approximate Property Boundary
  - Isoconcentration Contour Based on Highest Detected Concentration (ug/L)
  - Vinyl Chloride Groundwater Cleanup Level Contour (0.5 ug/L)
  - (<0.5/<0.5) Concentration of Vinyl Chloride in Groundwater (March/Sept 2017)
  - < Less than the Concentration Shown
  - J Estimated Concentration

- NOTES:**
1. All Concentrations in ug/L.
  2. Vinyl Chloride was last detected above the cleanup level at MW-3 in 2009.



**Figure 12**  
**Vinyl Chloride Concentrations in Shallow Groundwater**





**LEGEND:**

MW-16 Deep Groundwater Monitoring Well

MW-15 Abandoned Monitoring Well

Approximate Property Boundary

Isoconcentration Contour Based on Highest Detected Concentration (ug/L)

Benzene Groundwater Cleanup Level Contour (0.8 ug/L)

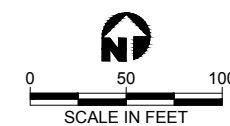
(<0.5/<0.5) Concentration of Benzene in Groundwater (March/Sept 2017)

< Less than the Concentration Shown

J Estimated Concentration

**NOTES:**

1. All Concentrations in ug/L.
2. Benzene has historically not been detected at MW-16 and MW-28.



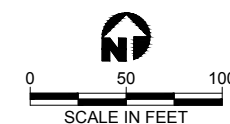
**Figure 13**  
**Benzene Concentrations in Deep Groundwater**





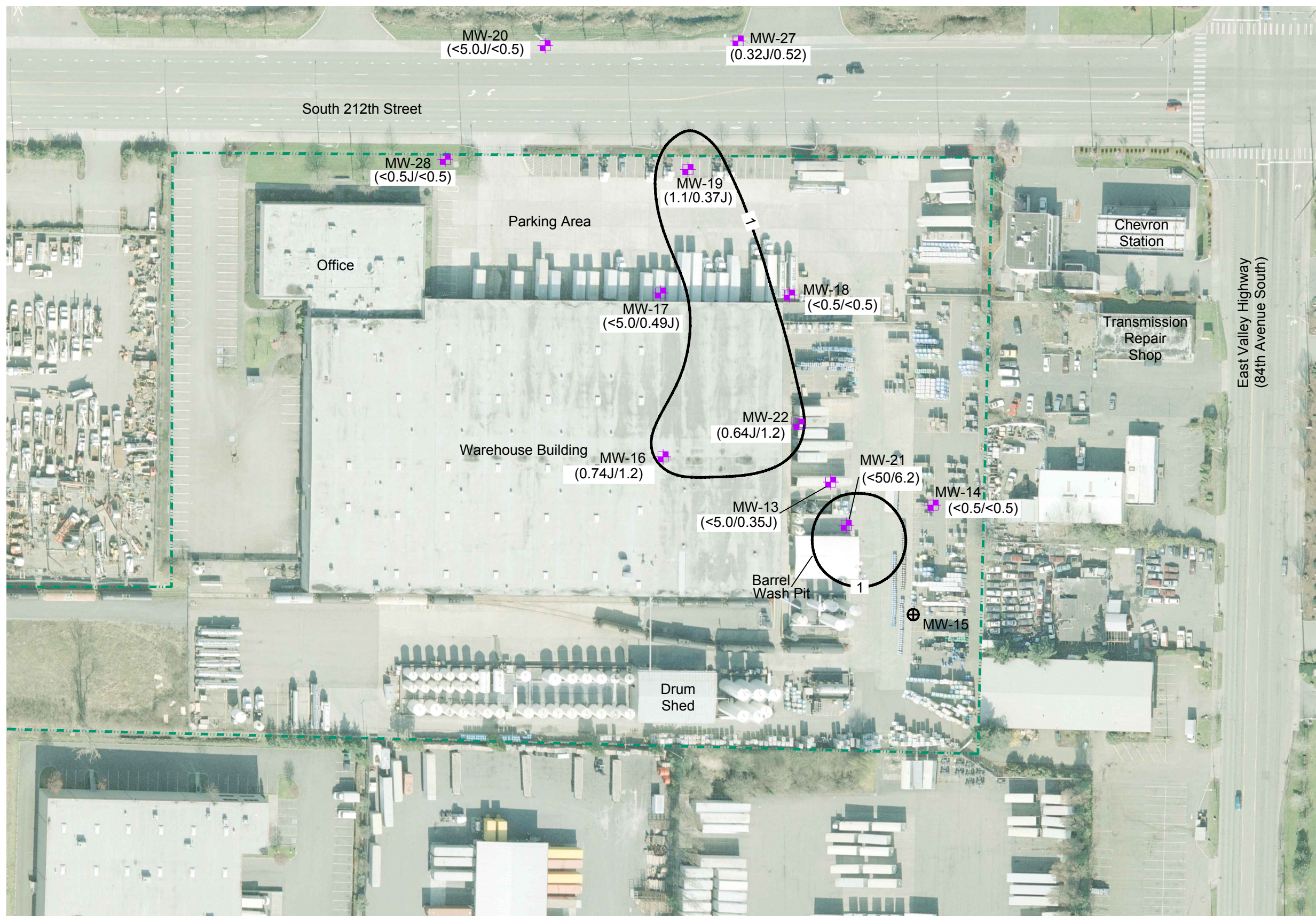
- LEGEND:**
- MW-16 Deep Groundwater Monitoring Well
  - MW-15 Abandoned Monitoring Well
  - Approximate Property Boundary
  - Isoconcentration Contour Based on Highest Detected Concentration (ug/L)
  - (<0.5/<0.5) Concentration of Toluene in Groundwater (March/Sept 2017)
  - < Less than the Concentration Shown
  - J Estimated Concentration

- NOTES:**
1. All Concentrations in ug/L.
  2. Sitewide concentrations of Toluene have been below the cleanup level of 1,000 ug/L since 2015.



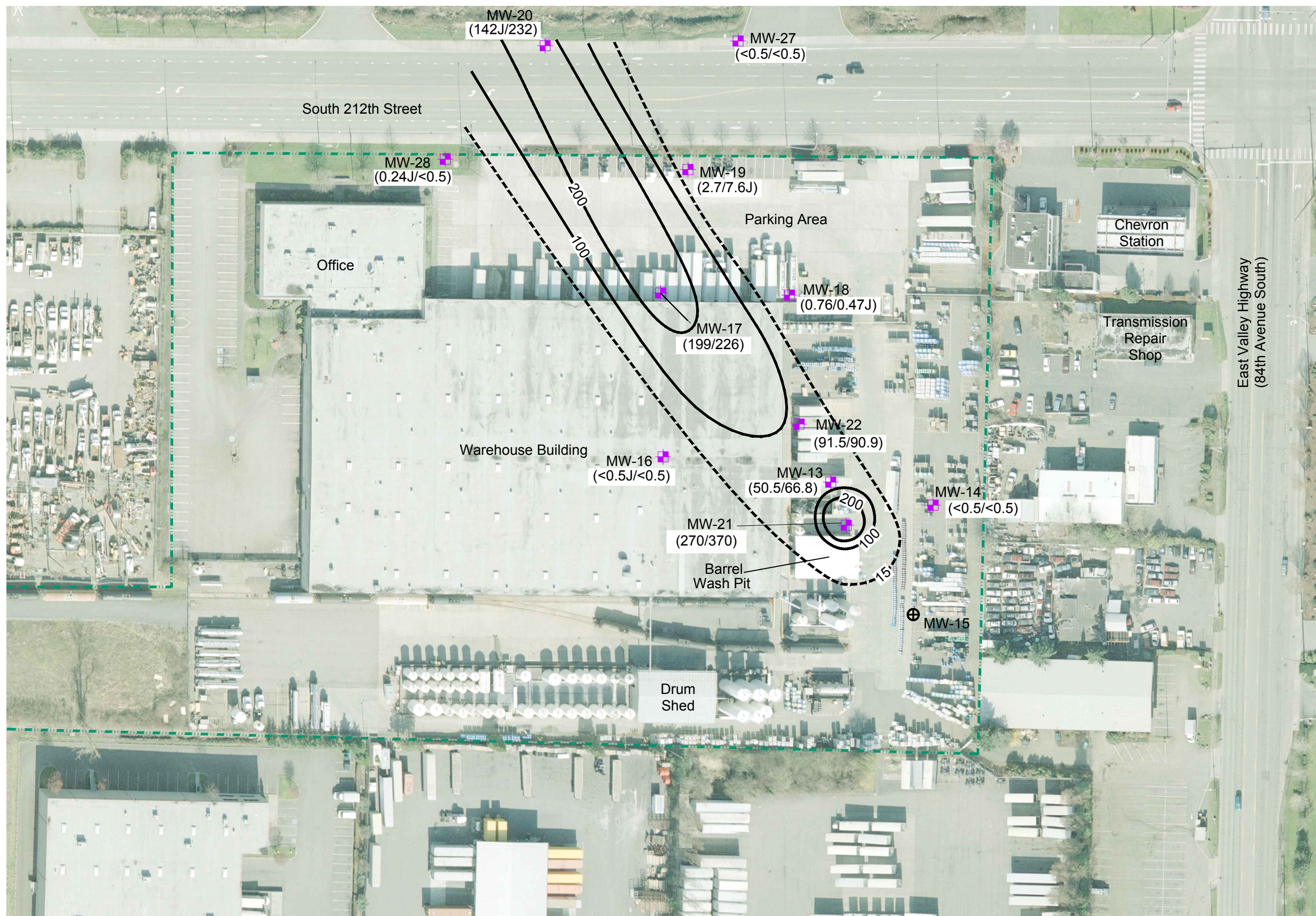
**Figure 14**  
**Toluene Concentrations in Deep Groundwater**





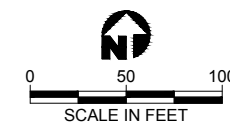
**Figure 15**  
**1,1-Dichloroethane Concentrations in Deep Groundwater**





- LEGEND:**
- MW-16 ■ Deep Groundwater Monitoring Well
  - MW-15 ⊕ Abandoned Monitoring Well
  - Approximate Property Boundary
  - Isoconcentration Contour Based on Highest Detected Concentration (ug/L)
  - Chloroethane Groundwater Cleanup Level Contour (15 ug/L)
  - (<0.5/<0.5) Concentration of Chloroethane in Groundwater (March/Sept 2017)
  - < Less than the Concentration Shown
  - J Estimated Concentration

NOTE: All Concentrations in ug/L.



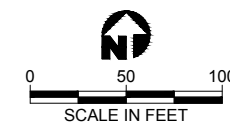
**Figure 16**  
**Chloroethane Concentrations in Deep Groundwater**





- LEGEND:**
- MW-16 Deep Groundwater Monitoring Well
  - MW-15 Abandoned Monitoring Well
  - Approximate Property Boundary
  - Isoconcentration Contour Based on Highest Detected Concentration (ug/L)
  - cis-1,2-Dichloroethene Groundwater Cleanup Level Contour (70 ug/L)
  - (<0.5/<0.5) Concentration of cis-1,2-Dichloroethene in Groundwater (March/Sept 2017)
  - < Less than the Concentration Shown
  - J Estimated Concentration

- NOTE:**
1. All Concentrations in ug/L.
  2. cis-1,2-Dichloroethene concentrations were below the cleanup level for all deep wells in 2017.



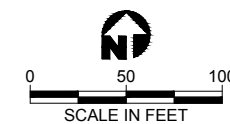
**Figure 17**  
**cis-1,2-Dichloroethene Concentrations in Deep Groundwater**





- LEGEND:**
- MW-16 Deep Groundwater Monitoring Well
  - MW-15 Abandoned Monitoring Well
  - Approximate Property Boundary
  - Isoconcentration Contour Based on Highest Detected Concentration (ug/L)
  - Vinyl Chloride Groundwater Cleanup Level Contour (0.5 ug/L)
  - (<0.5/<0.5) Concentration of Vinyl Chloride in Groundwater (March/Sept 2017)
  - < Less than the Concentration Shown
  - J Estimated Concentration

- NOTES:**
1. All Concentrations in ug/L.
  2. Vinyl Chloride has historically not been detected at MW-20 and MW-28.



**Figure 18**  
**Vinyl Chloride Concentrations in Deep Groundwater**



Appendix A  
Historical Groundwater Elevation Data



**Table A-1  
Historical Groundwater Elevation Data  
Univar USA Inc., Kent, Washington**

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
<b>Shallow On-Site Monitoring and Pilot Test Wells</b>					
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 A-1  
Historical Groundwater Elevation Data  
Univar USA Inc., Kent, Washington**

<b>Location</b>	<b>Measuring Point Elevation</b>	<b>Date</b>	<b>Time</b>	<b>Depth to Water</b>	<b>Water Elevation</b>
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		
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 A-1  
Historical Groundwater Elevation Data  
Univar USA Inc., Kent, Washington**

<b>Location</b>	<b>Measuring Point Elevation</b>	<b>Date</b>	<b>Time</b>	<b>Depth to Water</b>	<b>Water Elevation</b>
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		

**Table A-1  
Historical Groundwater Elevation Data  
Univar USA Inc., Kent, Washington**

Location	Measuring Point Elevation	Date	Time	Depth to Water	Water Elevation
MW-3	33.21	04/17/95	12:01	6.54	26.67
		09/07/95	NR	7.34	25.87
		11/10/95	NR	6.93	26.28
		12/07/95	NR	6.24	26.97
		01/29/96	NR	5.73	27.48
		09/04/96	14:50	7.17	26.04
		10/11/96	10:20	7.32	25.89
		11/06/96	9:10	6.85	26.36
		12/10/96	10:25	5.75	27.46
		01/10/97	NR	5.30	27.91
		02/21/97	11:55	5.51	27.70
		03/04/97	9:27	5.50	27.71
		06/27/97	10:30	6.24	26.97
		09/04/97	10:47	6.87	26.34
		12/22/97	8:10	6.03	27.18
		03/06/98	9:34	5.90	27.31
		06/18/98	8:57	6.51	26.70
		09/29/98	9:05	5.73	27.48
		12/14/98	9:32	5.92	27.29
		01/07/99	8:44	5.81	27.40
		01/13/99	9:12	5.93	27.28
		03/02/99	9:04	5.21	28.00
		06/16/99	9:55	6.48	26.73
		09/16/99	10:23	7.20	26.01
		12/08/99	8:24	6.08	27.13
	03/07/00	8:23	5.74	27.47	
	06/21/00	9:15	6.48	26.73	
	09/12/00	10:30	7.40	25.81	
	12/07/00	9:25	6.94	26.27	
	03/15/01	9:57	6.41	26.80	
	07/12/01	15:55	6.77	26.44	
	09/24/01	11:37	7.48	25.73	
	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		
	32.94				

**Table A-1  
Historical Groundwater Elevation Data  
Univar 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		
MW-4	33.20	09/04/96	13:00	5.89	27.31
		10/11/96	10:40	6.21	26.99
		11/06/96	9:15	5.75	27.45
		12/10/96	10:40	4.68	28.52
		01/10/97	NR	3.95	29.25
		02/21/97	12:40	4.10	29.10
		03/04/97	11:35	4.16	29.04
		06/27/97	10:44	4.59	28.61
		09/04/97	10:55	5.44	27.76
		12/22/97	8:39	4.78	28.42
		03/06/98	9:51	4.28	28.92
		06/18/98	9:16	5.00	28.20
		09/29/98	9:20	6.44	26.76
		12/14/98	9:43	5.16	28.04
		01/07/99	9:06	4.38	28.82
		01/13/99	9:17	4.38	28.82
		03/02/99	9:26	3.73	29.47
		06/16/99	10:23	4.77	28.43
		09/16/99	10:45	5.78	27.42
		12/08/99	8:45	4.81	28.39
		03/07/00	9:03	4.17	29.03
		06/21/00	9:41	4.85	28.35
		09/12/00	9:40	6.22	26.98
		12/07/00	8:50	6.78	26.42
		03/15/01	9:35	5.10	28.10
		07/12/01	10:00	5.14	28.06
		09/24/01	11:41	6.02	27.18
		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		
	32.86				

**Table A-1  
Historical Groundwater Elevation Data  
Univar USA Inc., Kent, Washington**

<b>Location</b>	<b>Measuring Point Elevation</b>	<b>Date</b>	<b>Time</b>	<b>Depth to Water</b>	<b>Water Elevation</b>
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		
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 A-1  
Historical Groundwater Elevation Data  
Univar 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 A-1  
Historical Groundwater Elevation Data  
Univar 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
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	
	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		
	33.05				



**Table A-1  
Historical Groundwater Elevation Data  
Univar USA Inc., Kent, Washington**

<b>Location</b>	<b>Measuring Point Elevation</b>	<b>Date</b>	<b>Time</b>	<b>Depth to Water</b>	<b>Water Elevation</b>
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		
MW-7	33.24	12/22/97	8:26	5.86	27.38
		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	
	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		
	32.96				

**Table A-1  
Historical Groundwater Elevation Data  
Univar USA Inc., Kent, Washington**

<b>Location</b>	<b>Measuring Point Elevation</b>	<b>Date</b>	<b>Time</b>	<b>Depth to Water</b>	<b>Water Elevation</b>
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		
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 A-1  
Historical Groundwater Elevation Data  
Univar 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
		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 A-1  
Historical Groundwater Elevation Data  
Univar USA Inc., Kent, Washington**

<b>Location</b>	<b>Measuring Point Elevation</b>	<b>Date</b>	<b>Time</b>	<b>Depth to Water</b>	<b>Water Elevation</b>
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
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 A-1  
Historical Groundwater Elevation Data  
Univar USA Inc., Kent, Washington**

<b>Location</b>	<b>Measuring Point Elevation</b>	<b>Date</b>	<b>Time</b>	<b>Depth to Water</b>	<b>Water Elevation</b>
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
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 A-1  
Historical Groundwater Elevation Data  
Univar USA Inc., Kent, Washington**

<b>Location</b>	<b>Measuring Point Elevation</b>	<b>Date</b>	<b>Time</b>	<b>Depth to Water</b>	<b>Water Elevation</b>
MW-10 (continued)	32.89	03/06/17	10:43	4.84	28.05
		09/18/17	11:21	7.12	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
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
		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 A-1  
Historical Groundwater Elevation Data  
Univar USA Inc., Kent, Washington**

<b>Location</b>	<b>Measuring Point Elevation</b>	<b>Date</b>	<b>Time</b>	<b>Depth to Water</b>	<b>Water Elevation</b>
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		
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 A-1  
Historical Groundwater Elevation Data  
Univar 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		
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 July 6, 2010					
<b>Shallow On-Site Injection Wells</b>					
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		
09/20/11	13:43	7.15	25.62		
12/06/11	11:35	6.09	26.68		
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 A-1  
Historical Groundwater Elevation Data  
Univar USA Inc., Kent, Washington**

<b>Location</b>	<b>Measuring Point Elevation</b>	<b>Date</b>	<b>Time</b>	<b>Depth to Water</b>	<b>Water Elevation</b>
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 A-1  
Historical Groundwater Elevation Data  
Univar 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
<b>Deep On-Site Monitoring Wells and Piezometer</b>					
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 A-1  
Historical Groundwater Elevation Data  
Univar USA Inc., Kent, Washington**

<b>Location</b>	<b>Measuring Point Elevation</b>	<b>Date</b>	<b>Time</b>	<b>Depth to Water</b>	<b>Water Elevation</b>
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		
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 A-1  
Historical Groundwater Elevation Data  
Univar USA Inc., Kent, Washington**

<b>Location</b>	<b>Measuring Point Elevation</b>	<b>Date</b>	<b>Time</b>	<b>Depth to Water</b>	<b>Water Elevation</b>
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		
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 A-1  
Historical Groundwater Elevation Data  
Univar USA Inc., Kent, Washington**

<b>Location</b>	<b>Measuring Point Elevation</b>	<b>Date</b>	<b>Time</b>	<b>Depth to Water</b>	<b>Water Elevation</b>
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 A-1  
Historical Groundwater Elevation Data  
Univar 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 February 16, 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 A-1  
Historical Groundwater Elevation Data  
Univar USA Inc., Kent, Washington**

<b>Location</b>	<b>Measuring Point Elevation</b>	<b>Date</b>	<b>Time</b>	<b>Depth to Water</b>	<b>Water Elevation</b>
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
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 A-1  
Historical Groundwater Elevation Data  
Univar USA Inc., Kent, Washington**

<b>Location</b>	<b>Measuring Point Elevation</b>	<b>Date</b>	<b>Time</b>	<b>Depth to Water</b>	<b>Water Elevation</b>
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		
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 A-1  
Historical Groundwater Elevation Data  
Univar USA Inc., Kent, Washington**

<b>Location</b>	<b>Measuring Point Elevation</b>	<b>Date</b>	<b>Time</b>	<b>Depth to Water</b>	<b>Water Elevation</b>
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		
MW-19	33.52	03/16/04	10:10	6.54	26.98
		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 A-1  
Historical Groundwater Elevation Data  
Univar USA Inc., Kent, Washington**

<b>Location</b>	<b>Measuring Point Elevation</b>	<b>Date</b>	<b>Time</b>	<b>Depth to Water</b>	<b>Water Elevation</b>
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		
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 A-1  
Historical Groundwater Elevation Data  
Univar 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		
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 A-1  
Historical Groundwater Elevation Data  
Univar USA Inc., Kent, Washington**

<b>Location</b>	<b>Measuring Point Elevation</b>	<b>Date</b>	<b>Time</b>	<b>Depth to Water</b>	<b>Water Elevation</b>
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		
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 A-1  
Historical Groundwater Elevation Data  
Univar USA Inc., Kent, Washington**

<b>Location</b>	<b>Measuring Point Elevation</b>	<b>Date</b>	<b>Time</b>	<b>Depth to Water</b>	<b>Water Elevation</b>
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
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		
P-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
		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 A-1  
Historical Groundwater Elevation Data  
Univar USA Inc., Kent, Washington**

<b>Location</b>	<b>Measuring Point Elevation</b>	<b>Date</b>	<b>Time</b>	<b>Depth to Water</b>	<b>Water Elevation</b>
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 A-1  
Historical Groundwater Elevation Data  
Univar USA Inc., Kent, Washington**

<b>Location</b>	<b>Measuring Point Elevation</b>	<b>Date</b>	<b>Time</b>	<b>Depth to Water</b>	<b>Water Elevation</b>
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
<b>Deep Off-Site Monitoring Well</b>					
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 A-1  
Historical Groundwater Elevation Data  
Univar USA Inc., Kent, Washington**

<b>Location</b>	<b>Measuring Point Elevation</b>	<b>Date</b>	<b>Time</b>	<b>Depth to Water</b>	<b>Water Elevation</b>
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		
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
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		
<b>Deep On-Site Injection Wells</b>					
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
		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		
IW-103	32.45	10/03/12	15:40	6.73	25.72



**Table A-1  
Historical Groundwater Elevation Data  
Univar USA Inc., Kent, Washington**

<b>Location</b>	<b>Measuring Point Elevation</b>	<b>Date</b>	<b>Time</b>	<b>Depth to Water</b>	<b>Water Elevation</b>
IW-103 (continued)		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

**Table A-1  
Historical Groundwater Elevation Data  
Univar USA Inc., Kent, Washington**

<b>Location</b>	<b>Measuring Point Elevation</b>	<b>Date</b>	<b>Time</b>	<b>Depth to Water</b>	<b>Water Elevation</b>
IW-138 (continued)	32.58	12/18/12	14:40	5.00	27.58
		12/18/12	16:10	5.00	27.58
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
<b>Barrel Wash Sump</b>					
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		

NOTE: 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.

Appendix B  
Historical Field Parameters and Groundwater Analytical Data  
(Indicator Hazardous Substances, General Chemistry, and Dissolved  
Gases)

**Table B-1  
Historical Groundwater Field Parameters  
Univar 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 <sup>a</sup>	-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	
MW-2	04/17/95	6.30	1,000	13.0	NM	NM	NM

**Table B-1  
Historical Groundwater Field Parameters  
Univar 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)	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 <sup>a</sup>	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
	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 <sup>a</sup>	15.6	NM	8.1 <sup>a</sup>	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	
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

**Table B-1  
Historical Groundwater Field Parameters  
Univar 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)	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
	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	
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

**Table B-1  
Historical Groundwater Field Parameters  
Univar 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)	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	
10/01/10	6.89	1,054	16.7	NM	0.55	10	
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

**Table B-1  
Historical Groundwater Field Parameters  
Univar 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)	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
	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	
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



**Table B-1  
Historical Groundwater Field Parameters  
Univar 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)	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 <sup>a</sup>	14.3	NM	6.9 <sup>a</sup>	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	
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

**Table B-1  
Historical Groundwater Field Parameters  
Univar 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)	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
	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	
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
	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

**Table B-1  
Historical Groundwater Field Parameters  
Univar 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)	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 <sup>a</sup>	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	
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 <sup>a</sup>	35	

**Table B-1  
Historical Groundwater Field Parameters  
Univar 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 (continued)	03/30/10	6.58	559	11.9	NM	0.72	17
	09/28/10	6.52	651	17.3	NM	0.24	27
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 <sup>a</sup>	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	
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	

**Table B-1  
Historical Groundwater Field Parameters  
Univar 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 (continued)	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
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	
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	
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

**Table B-1  
Historical Groundwater Field Parameters  
Univar 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)	09/30/08	6.36	687	17.1	NM	0.07	-84
	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	
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
09/29/09	6.58	60 <sup>a</sup>	14.2	NM	6.6 <sup>a</sup>	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	
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 <sup>a</sup>	15.3	NM	7.7 <sup>a</sup>	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	
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	

**Table B-1  
Historical Groundwater Field Parameters  
Univar 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 (continued)	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
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	
	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
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
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

**Table B-1  
Historical Groundwater Field Parameters  
Univar 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)	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 <sup>a</sup>	15.3	NM	7.5 <sup>a</sup>	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
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 <sup>a</sup>	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
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
	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
	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
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
	09/30/10	6.57	821	17.6	NM	0.56	13
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



**Table B-1  
Historical Groundwater Field Parameters  
Univar 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-23 (continued)	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
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
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
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
P-1	09/24/04	6.54	401	15.4	NM	0.24	33
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
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  
<sup>a</sup> Likely meter malfunction  
<sup>b</sup> Anomalous result

























**Table B-2  
Indicator Hazardous Substances in Groundwater  
Univar USA Inc., Kent, Washington**

Sample Location	Date Collected	Intake Depth (ft bgs)	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		
			5,100,000	3,350,000	LNAPL	8,690,000		0.8	LNAPL	8,200,000	7.2	3,500,000	LNAPL	20,000,000	200,000	720,000	1,100,000	1,000	1,000	LNAPL	LNAPL
			Final Cleanup Levels	800	7.0	400	0.5	0.64	0.8	15	7.2	70	700	5.0	0.86	200	4.0	1,000	1,000	1,600	0.5
MW-25 (continued)	04/07/10		48	10 U	180	10 U	10 U	10 U	730	20 U	10 U	1,700	10 U	10 U	10 U	10 U	3,100	2,900	12		
	04/16/10		74	10 U	310	10 U	10 U	10 U	1,900	20 U	10 U	2,200	10 U	10 U	10 U	10 U	4,100	5,100	10		
	4/16/10 (LAB DUP)		70	10 U	290	10 U	10 U	10 U	1,800	20 U	10 U	2,100	10 U	10 U	10 U	10 U	4,000	5,000	9.2		
	05/06/10		32	5.0 U	130	10 U	10 U	10 U	1,100	20 U	5.0 U	1,200	10 U	5.0 U	10 U	5.0 U	2,900	3,200	2.0		
	06/09/10		29	5.0 U	110	10 U	10 U	10 U	820	20 U	5.0 U	680	10 U	21	10 U	5.0 U	1,200	1,700	2.0 U		
	07/06/10		25	0.5 U	79	0.5 U	0.5 U	0.5 U	640	1.0 U	0.5 U	480	0.5 U	2.9	0.5 U	0.5 U	800	980	4.0		
MW-26	04/01/10		0.5 U	1.3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	20	0.5 U	0.5 U	380	0.5 U	37	0.5 U	0.5 U	0.2 U		
	04/09/10		10 U	10 U	10 U	10 U	10 U	10 U	10 U	20 U	10	10 U	10 U	570	10 U	28	10 U	10 U	6.4		
	4/9/10 (LAB DUP)		10 U	10 U	10 U	10 U	10 U	10 U	10 U	20 U	10	10 U	10 U	550	10 U	27	10 U	10 U	6.2		
	04/16/10		10 U	10 U	10 U	10 U	10 U	10 U	10 U	20 U	16	10 U	10 U	320	10 U	32	10 U	10 U	8.8		
	05/06/10		10 U	5.0 U	10 U	10 U	10 U	10 U	10 U	20 U	11	10 U	10 U	300	10 U	28	10 U	10 U	5.2		
	06/09/10		10 U	5.0 U	10 U	10 U	10 U	10 U	10 U	20 U	14	10 U	10 U	350	10 U	31	10 U	10 U	12		
07/06/10		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	12	0.5 U	0.5 U	300	0.5 U	29	0.5 U	0.5 U	9.0			
P-1	09/24/04		0.28 J	0.12 U	0.15 U	0.12 U	0.13 U	NA	0.23 U	0.096 U	1.2	0.13 U	0.2 U	0.11 U	0.12 U	0.12 U	0.098 U	0.22 U	0.22 U		
<b>Deep Off-Site Monitoring Well</b>																					
MW-20	07/28/05		1.6	0.5 U	2 U	0.5 U	0.5 U	18	140	0.5 U	0.5	4.3	2 U	0.5 U	0.5 U	0.5 U	1.7	124	0.5 U		
	09/20/05		0.39 J	0.13 U	1.1 J	0.12 U	0.14 U	16	130	0.14 U	0.14 U	1.4	0.57 J	0.13 U	0.12 U	0.14 U	1.5	92	0.14 J		
	9/20/05 (DUP)		0.35 J	0.13 U	1.0 J	0.12 U	0.14 U	16	130	0.14 U	0.15 J	1.5	0.57 J	0.13 U	0.12 U	0.14 U	1.4	91.9	0.16 J		
	03/15/06		1.7 J	0.13 U	0.87 J	0.12 U	0.14 U	16	140	0.14 U	0.12 J	3.0	0.86 J	0.13 U	0.12 U	0.14 U	1.5	144	0.23 J		
	09/12/06		0.12 J	0.13 U	0.44 J	0.12 U	0.14 U	15	140	0.14 U	0.15 J	0.17 J	0.56 J	0.13 U	0.12 U	0.14 U	0.86	35	0.22 J		
	04/05/07		0.93 J	0.13 U	1.2 J	0.12 U	0.14 U	15	88	0.14 U	0.15 J	0.57	0.74 J	0.13 U	0.12 U	0.14 U	1.6	114	0.21 J		
	09/26/07		0.11 U	0.13 U	0.96 J	0.12 U	0.14 U	13	85	0.14 U	0.12 J	0.22 J	0.46 J	0.13 U	0.12 U	0.14 U	1.2	22.7	0.13 J		
	05/02/08		0.19 J	0.1 U	0.81 J	0.34 U	0.042 U	11	76	0.042 U	0.16 J	0.26 J	0.46 J	0.077 U	0.05 U	0.07 J	0.93	71	0.14 J		
	5/2/08 (DUP)		0.18 J	0.1 U	0.85 J	0.34 U	0.042 U	12	72	0.042 U	0.11 J	0.29 J	0.46 J	0.077 U	0.05 U	0.061 U	1.0	75.2	0.15 J		
	09/29/08		0.04 U	0.1 U	0.47	0.073 U	0.042 U	15	110	0.042 U	0.13 J	0.17 J	0.53 J	0.077 U	0.05 U	0.061 U	1.2	8.9	0.13 J		
	03/23/09		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	13	89	1.0 U	0.5 U	65	0.5 U	0.5 U	0.5 U	0.5 U	1.3	86	1.0		
	09/30/09		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	14	190	1.0 U	0.5 U	1.3	0.5 U	0.5 U	0.5 U	0.5 U	0.7	4.0	0.31 J		
03/29/10		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	18 J	140	1.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0	7.1	0.2			
10/01/10		0.5 U	0.5 U	1.27	0.5 U	0.5 U	15.2	195	1.0 U	0.5 U	0.5 U	0.73 J	0.5 U	0.5 U	0.5 U	0.94	4.26	0.12 J			

**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-DCA = 1,2-dichloroethane.  
 1,1-DCE = 1,1-dichloroethene.  
 cis-1,2-DCE = cis-1,2-dichloroethene.  
 TCA = 1,1,1-trichloroethane.  
 TCE = trichloroethene.  
 PCE = tetrachloroethene.

**Table B-3  
General Chemistry Parameters in Groundwater  
Univar USA Inc. Facility, 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
<b>Shallow On-Site Monitoring Wells</b>														
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 B-3  
General Chemistry Parameters in Groundwater  
Univar USA Inc. Facility, 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-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
<b>Deep On-Site Monitoring Wells and Piezometer</b>														
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
	06/09/10	NA	0.64	NA	NA	NA	NA	NA	34	NA	NA	NA	NA	NA
07/06/10	NA	0.66	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
	09/13/06	NA	NA	< 0.1	< 0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-16	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

**Table B-3  
General Chemistry Parameters in Groundwater  
Univar USA Inc. Facility, 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-17 (continued)	09/12/06	NA	NA	< 0.1	0.3	NA	NA	NA	NA	NA	NA	NA	NA	
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	
	04/05/05	8.9	NA	< 0.1	< 0.2	< 0.01	295	NA	17.7	1.62	50.2	NA	2.4	
	04/05/05 (DUP)	8.8	NA	< 0.1	< 0.2	NA	NA	NA	17.2	1.61	50.0	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	
	04/05/05	18.9	NA	< 0.100	3.7	< 0.01	250	NA	19.9	1.31	65.8	NA	2.6	
MW-20	09/20/05	50.7	NA	< 0.1	1.4	< 0.01	355	NA	29.1	3.60	88	NA	2.2	
MW-21	09/14/06	NA	NA	< 0.1	4.0	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	
	03/26/10	NA	< 0.1	NA	NA	NA	NA	NA	32	NA	NA	NA	NA	
	04/07/10	NA	20	NA	NA	NA	NA	NA	2,400	NA	NA	NA	NA	
	04/16/10	NA	0.59	NA	NA	NA	NA	NA	33	NA	NA	NA	NA	
	05/06/10	NA	2.7	NA	NA	NA	NA	NA	69	NA	NA	NA	NA	
	05/06/10 (DUP)	NA	2.6	NA	NA	NA	NA	NA	67	NA	NA	NA	NA	
	06/09/10	NA	8.5	NA	NA	NA	NA	NA	82	NA	NA	NA	NA	
07/06/10	NA	8.4	NA	NA	NA	NA	NA	150	NA	NA	NA	NA		
MW-24	03/26/10	NA	< 0.1	NA	NA	NA	NA	NA	27	NA	NA	NA	NA	
	04/07/10	NA	50	NA	NA	NA	NA	NA	2,200	NA	NA	NA	NA	
	04/16/10	NA	0.46	NA	NA	NA	NA	NA	23	NA	NA	NA	NA	
	05/06/10	NA	< 2.0	NA	NA	NA	NA	NA	58	NA	NA	NA	NA	
	06/09/10	NA	6.3	NA	NA	NA	NA	NA	68	NA	NA	NA	NA	
	07/06/10	NA	8.6	NA	NA	NA	NA	NA	74	NA	NA	NA	NA	
	07/06/10 (DUP)	NA	8.9	NA	NA	NA	NA	NA	72	NA	NA	NA	NA	
MW-25	03/29/10	NA	0.45	NA	NA	NA	NA	NA	23	NA	NA	NA	NA	
	04/07/10	NA	0.43	NA	NA	NA	NA	NA	24	NA	NA	NA	NA	
	04/16/10	NA	0.37	NA	NA	NA	NA	NA	23	NA	NA	NA	NA	
	05/06/10	NA	< 2.0	NA	NA	NA	NA	NA	26	NA	NA	NA	NA	
	06/09/10	NA	1.2	NA	NA	NA	NA	NA	33	NA	NA	NA	NA	
	07/06/10	NA	2.5	NA	NA	NA	NA	NA	43	NA	NA	NA	NA	
MW-26	04/01/10	NA	< 0.1	NA	NA	NA	NA	NA	3.7	NA	NA	NA	NA	
	04/01/10 (LAB DUP)	NA	NA	NA	NA	NA	NA	NA	3.7	NA	NA	NA	NA	
	04/09/10	NA	< 0.1	NA	NA	NA	NA	NA	4.0	NA	NA	NA	NA	
	04/16/10	NA	0.43	NA	NA	NA	NA	NA	3.8	NA	NA	NA	NA	
	05/06/10	NA	< 2.0	NA	NA	NA	NA	NA	4.2	NA	NA	NA	NA	
	06/09/10	NA	< 0.1	NA	NA	NA	NA	NA	4.6	NA	NA	NA	NA	
	07/06/10	NA	< 0.1	NA	NA	NA	NA	NA	7.0	NA	NA	NA	NA	
	07/06/10 (LAB DUP)	NA	< 0.1	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	
<b>Deep Off-Site Monitoring Well</b>														
MW-22	09/14/06	NA	NA	0.4	49.9	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 B-4**  
**Dissolved Gases in Groundwater**  
**Univar USA Inc. Facility, Kent, Washington**

Sample Location	Date Collected	Modified RSK Method 175 (µg/L)		
		Methane	Ethane	Ethene
<b>Shallow On-Site Monitoring Wells</b>				
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
<b>Deep On-Site Monitoring Wells and Piezometer</b>				
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

**Table B-4**  
**Dissolved Gases in Groundwater**  
**Univar USA Inc. Facility, Kent, Washington**

Sample Location	Date Collected	Modified RSK Method 175 (µg/L)		
		Methane	Ethane	Ethene
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
<b>Deep Off-Site Monitoring Well</b>				
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

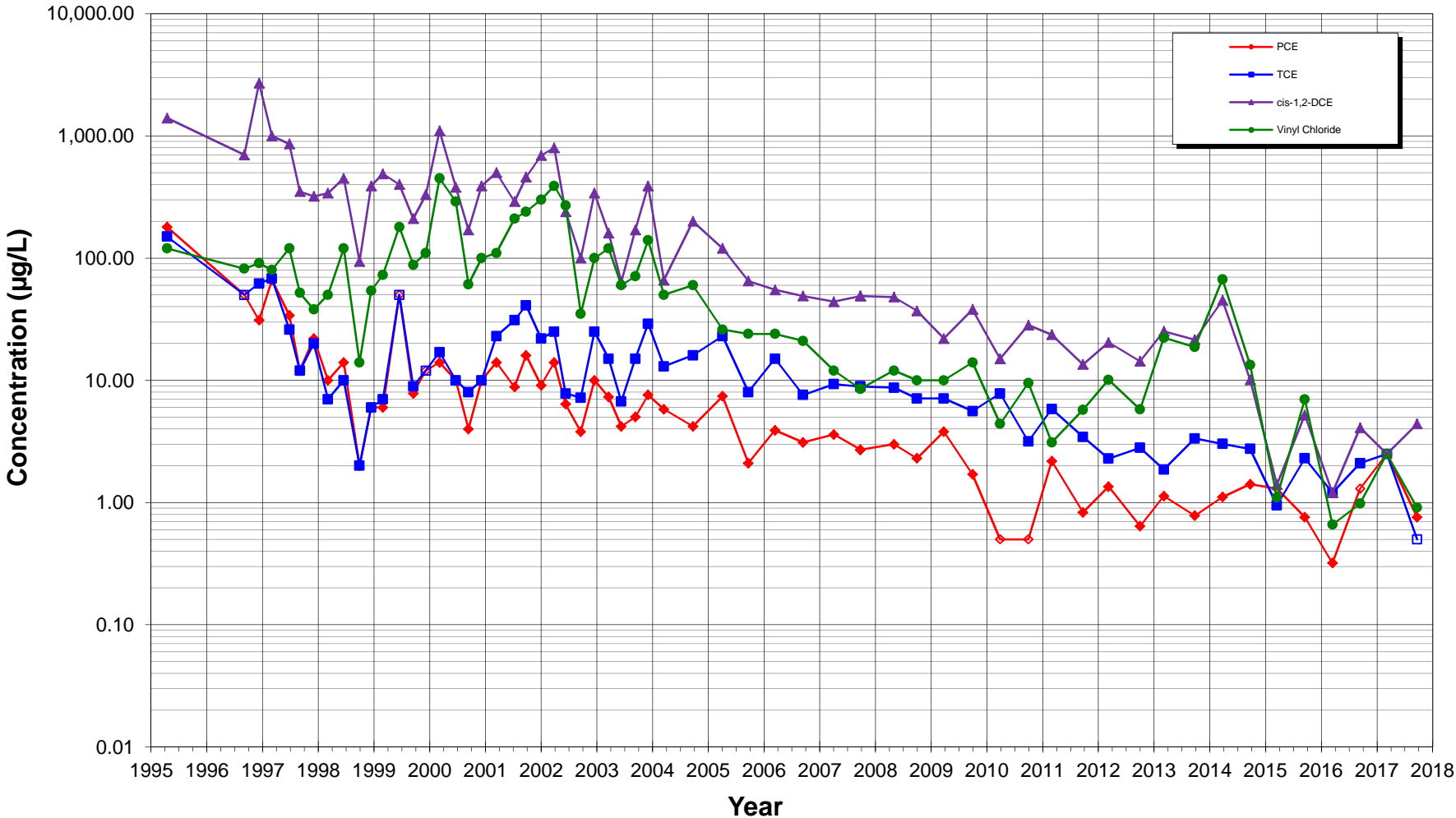
U = not detected, the associated value is the quantification limit.

J = estimated concentration between the method detection and reporting limits.

(DUP) = duplicate sample collected in the field and blind labeled.

Appendix C  
Analytical Data Plots of Constituents and Microbial Populations

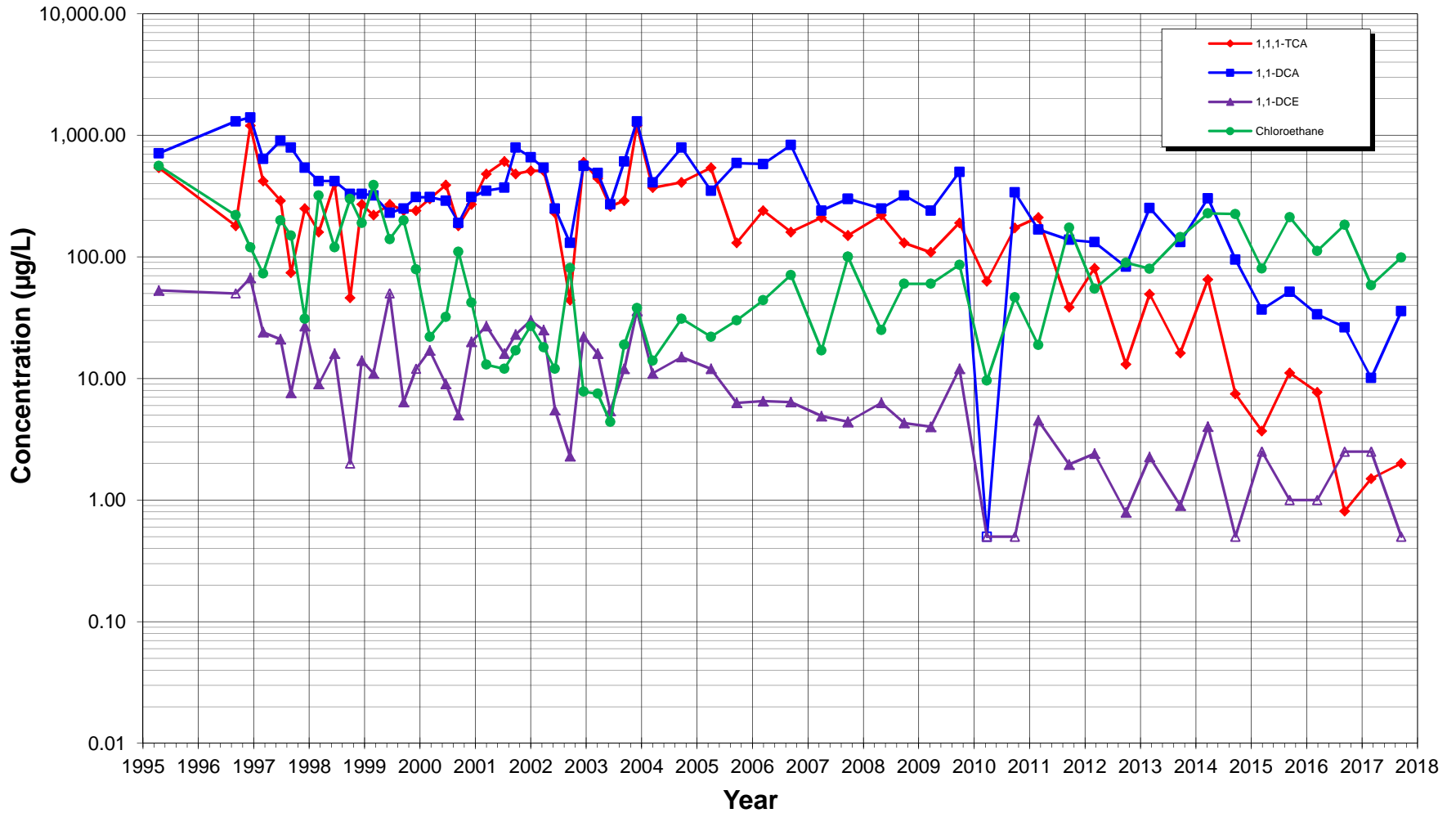
Figure C1. Constituent vs Time  
Monitoring Well MW-1  
Univar USA Inc., Kent, Washington



Notes:

- 1) Shallow and deep injection conducted March - May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: PCE = 0.86 µg/L, TCE = 4.0 µg/L, cis-1,2-DCE = 70 µg/L and Vinyl Chloride = 0.5 µg/L.

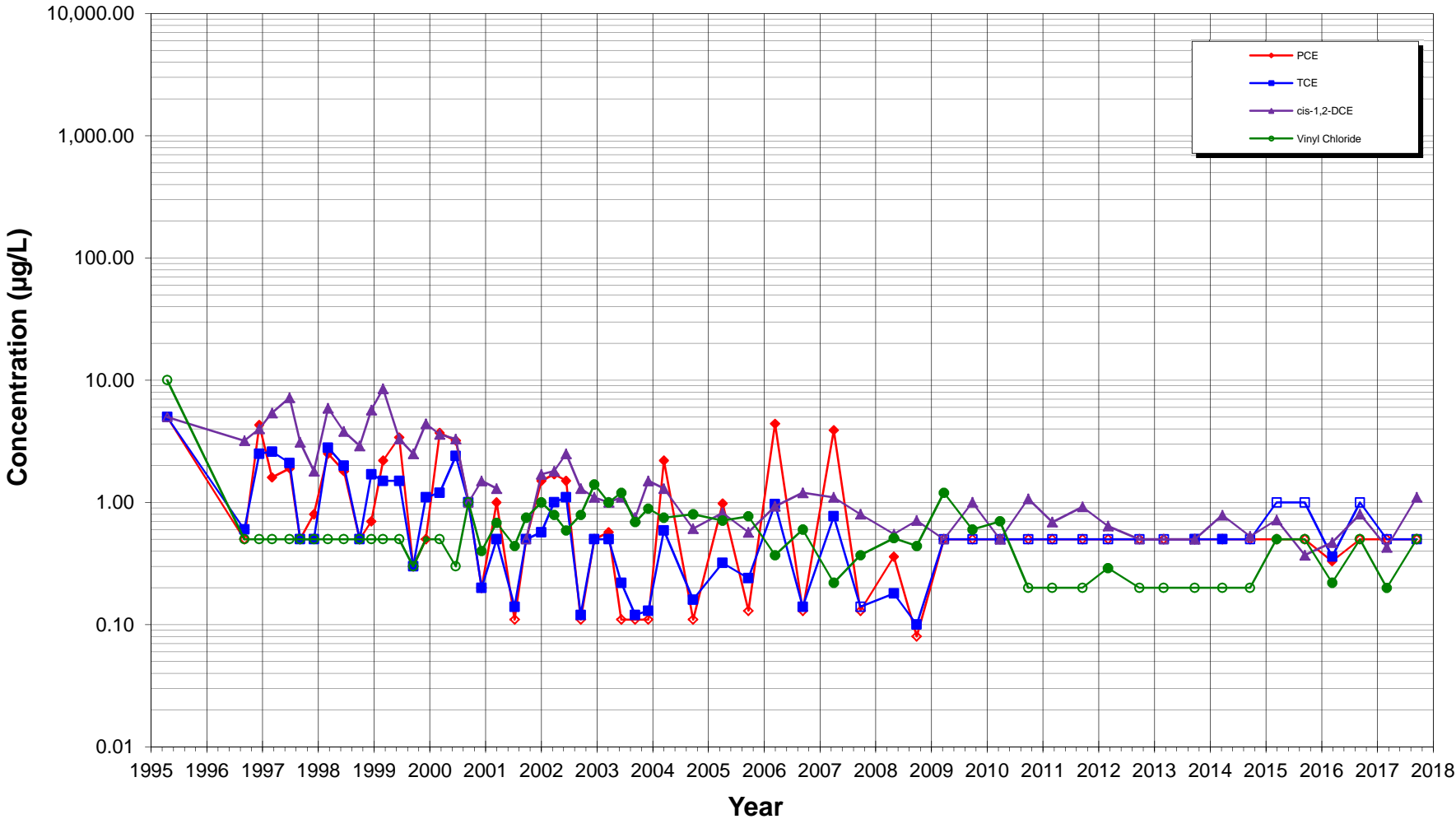
**Figure C2. Constituent vs Time  
Monitoring Well MW-1  
Univar USA Inc., Kent, Washington**



**Notes:**

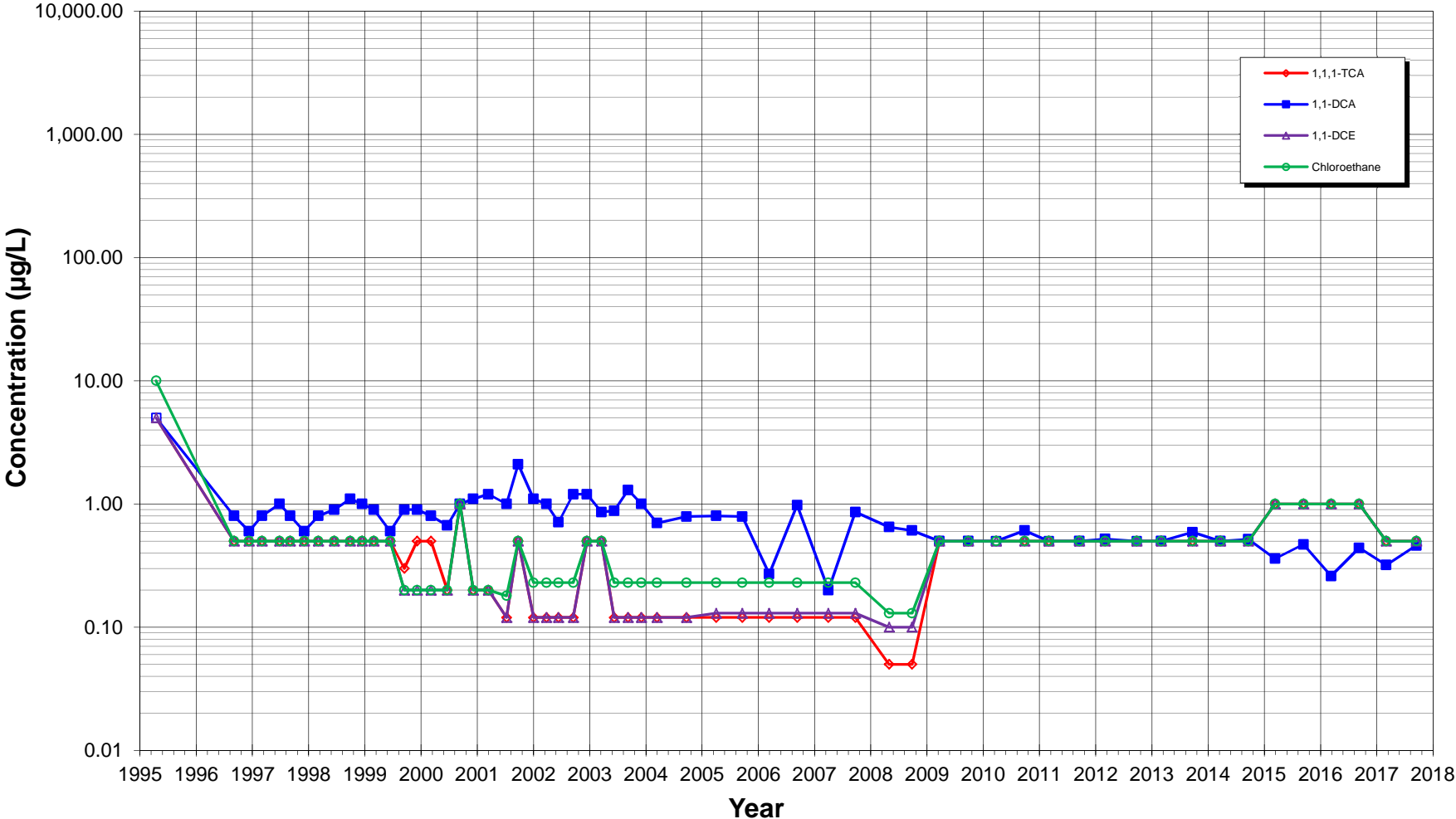
- 1) Shallow and deep injection conducted March - May 2011
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: 1,1,1-TCA = 200 µg/L, 1,1-DCA = 800 µg/L, 1,1-DCE = 7 µg/L, and Chloroethane = 15 µg/L.

Figure C3. Constituent vs Time  
Monitoring Well MW-2  
Univar USA Inc., Kent, Washington



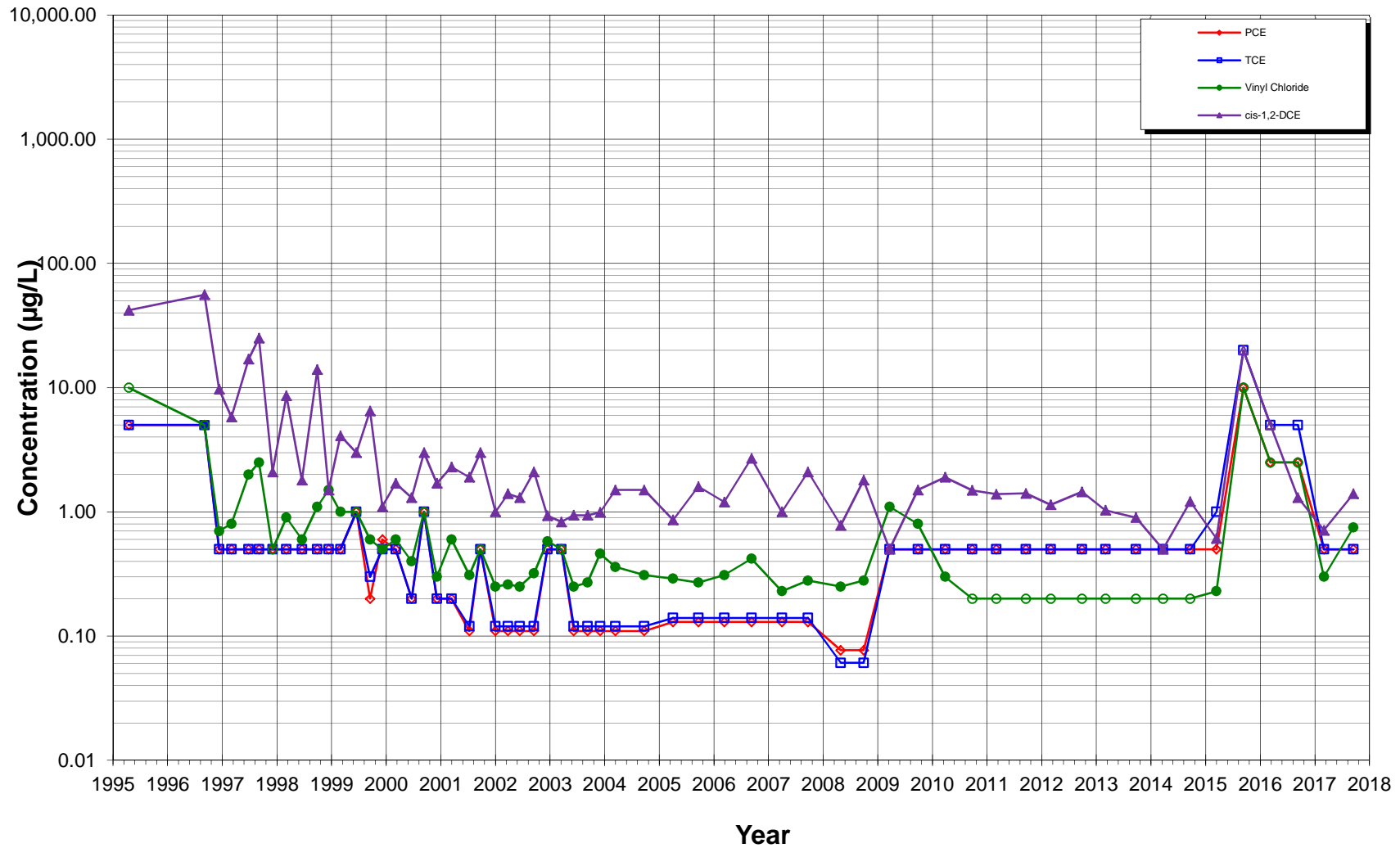
- Notes:
- 1) Shallow and deep injection conducted March - May 2011.
  - 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
  - 3) Final Site Cleanup Levels: PCE = 0.86 µg/L, TCE = 4.0 µg/L, cis-1,2-DCE = 70 µg/L and Vinyl Chloride = 0.5 µg/L.

Figure C4. Constituent vs Time  
Monitoring Well MW-2  
Univar USA Inc., Kent, Washington



- Notes:
- 1) Shallow and deep injection conducted March - May 2011
  - 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
  - 3) Final Site Cleanup Levels: 1,1,1-TCA = 200 µg/L, 1,1-DCA = 800 µg/L, 1,1-DCE = 7 µg/L, and Chloroethane = 15 µg/L.

**Figure C5. Constituent vs Time  
Monitoring Well MW-3  
Univar USA Inc., Kent, Washington**

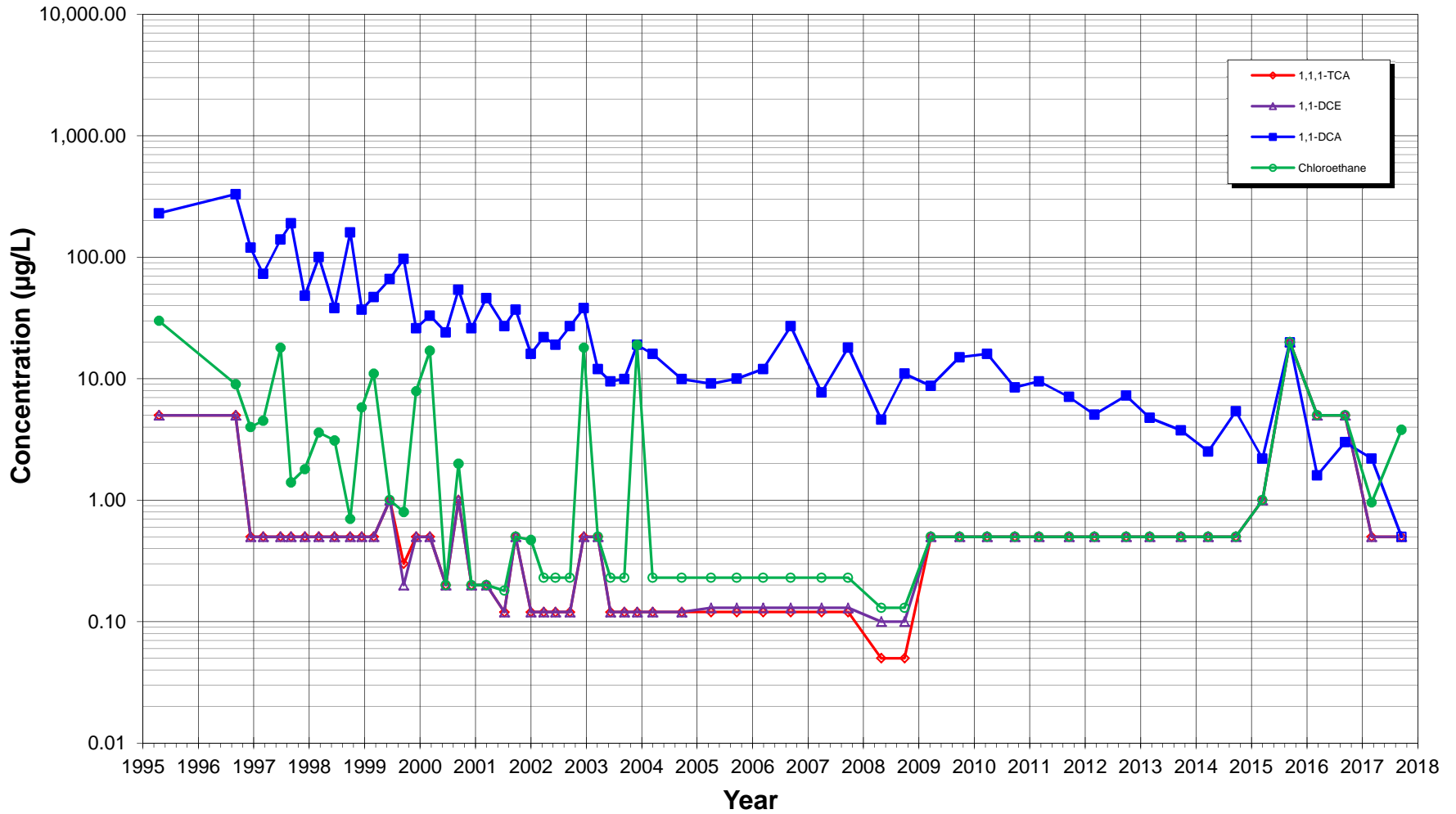


**Notes:**

- 1) Shallow and deep injection conducted March - May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: PCE = 0.86 µg/L, TCE = 4.0 µg/L, cis-1,2-DCE = 70 µg/L and Vinyl Chloride = 0.5 µg/L.



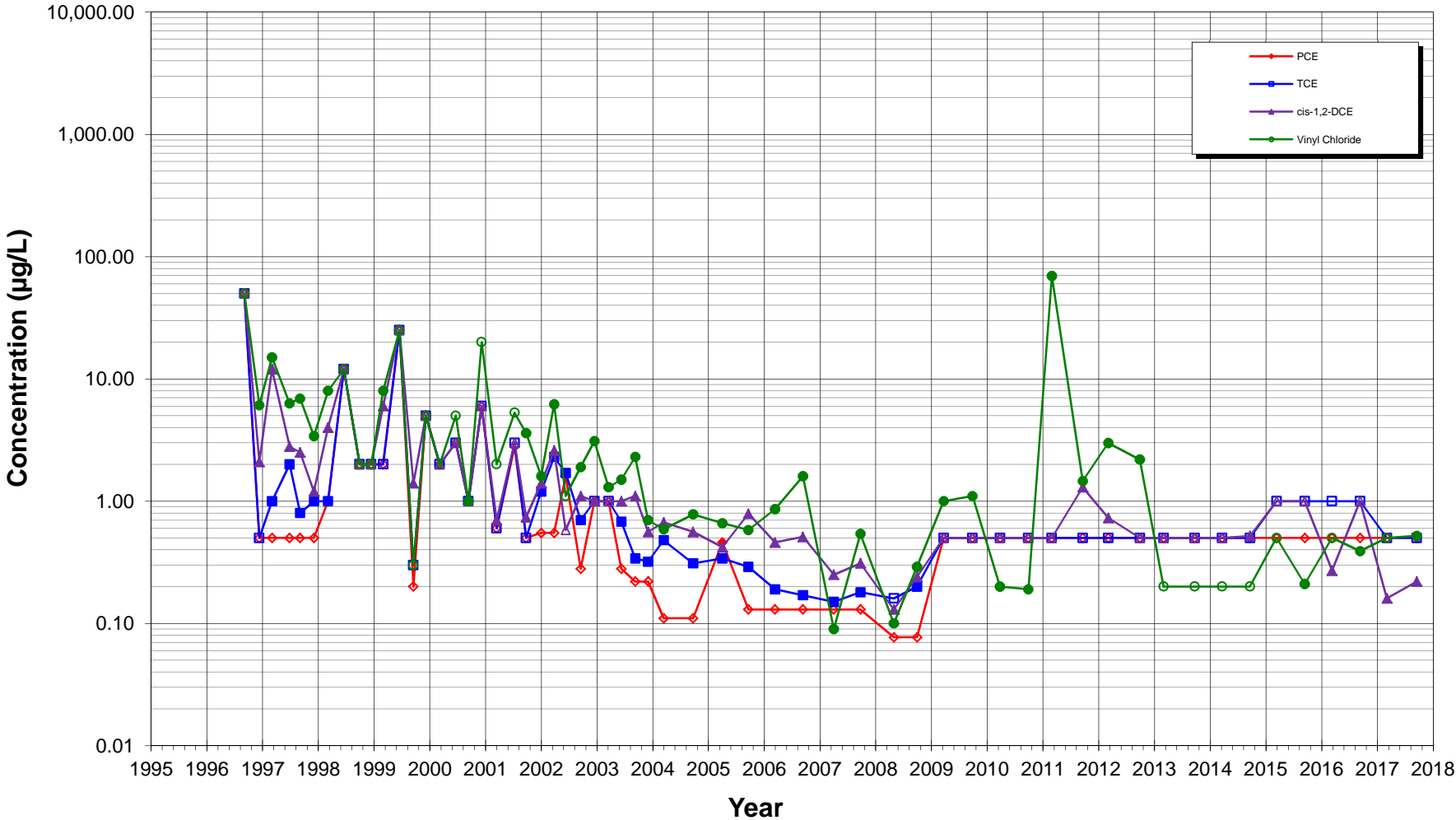
**Figure C6. Constituent vs Time  
Monitoring Well MW-3  
Univar USA Inc., Kent, Washington**



**Notes:**

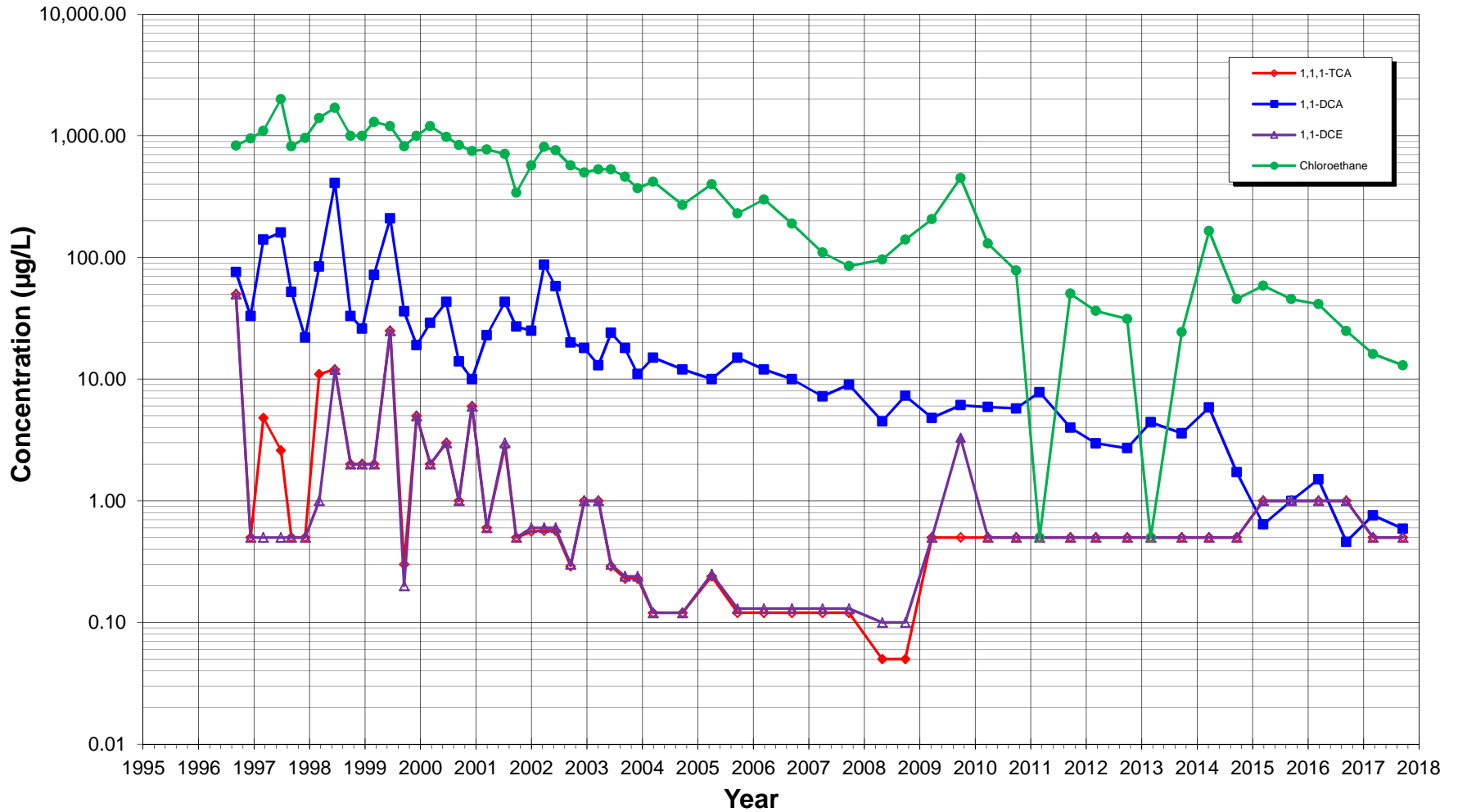
- 1) Shallow and deep injection conducted March - May 2011
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: 1,1,1-TCA = 200 µg/L, 1,1-DCA = 800 µg/L, 1,1-DCE = 7 µg/L, and Chloroethane = 15 µg/L.

Figure C7. Constituent vs Time  
Monitoring Well MW-4  
Univar USA Inc., Kent, Washington



- Notes:
- 1) Shallow and deep injection conducted March - May 2011.
  - 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
  - 3) Final Site Cleanup Levels: PCE = 0.86 µg/L, TCE = 4.0 µg/L, cis-1,2-DCE = 70 µg/L and Vinyl Chloride = 0.5 µg/L.

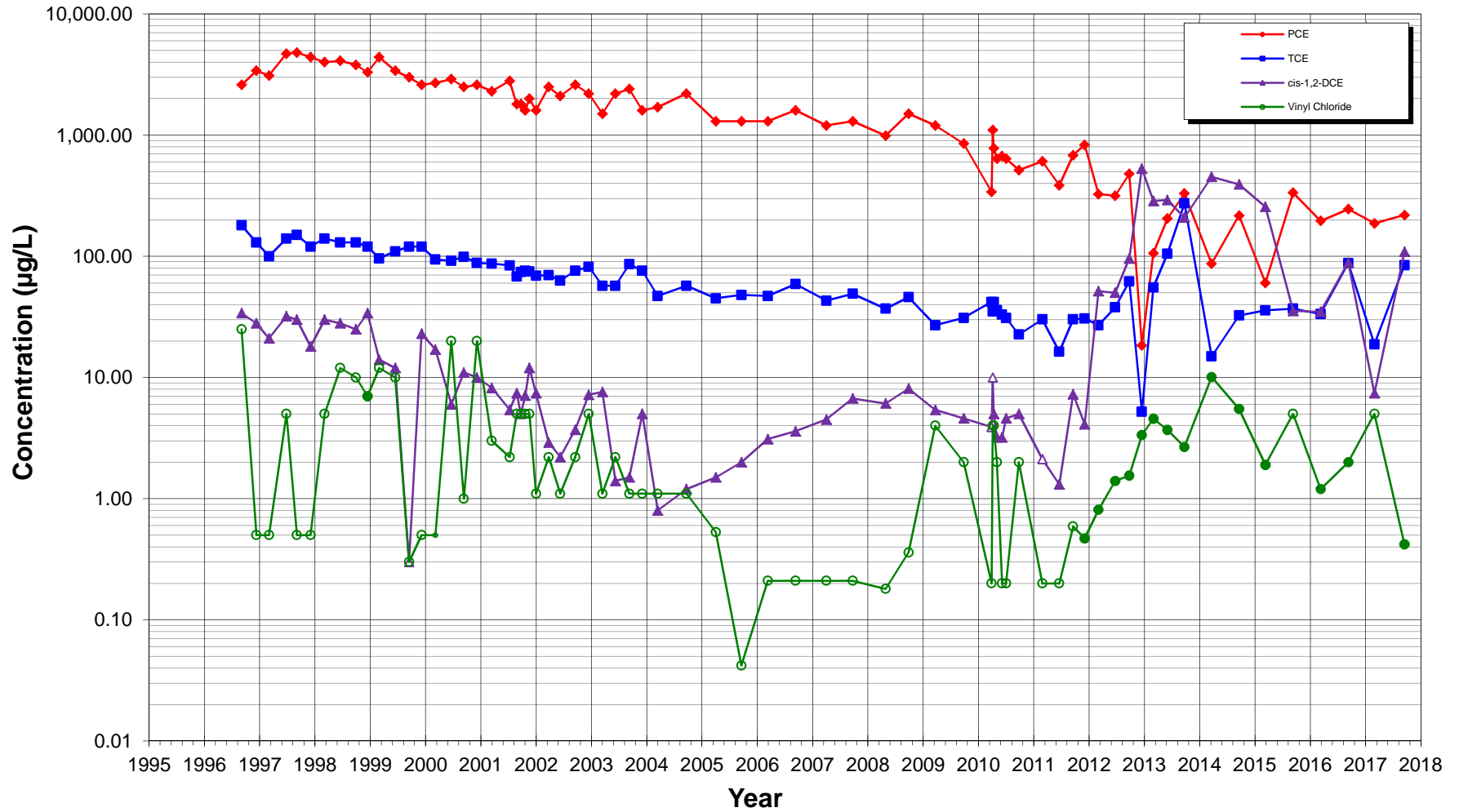
**Figure C8. Constituent vs Time  
Monitoring Well MW-4  
Univar USA Inc., Kent, Washington**



**Notes:**

- 1) Shallow and deep injection conducted March - May 2011
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: 1,1,1-TCA = 200 µg/L, 1,1-DCA = 800 µg/L, 1,1-DCE = 7 µg/L, and Chloroethane = 15 µg/L.

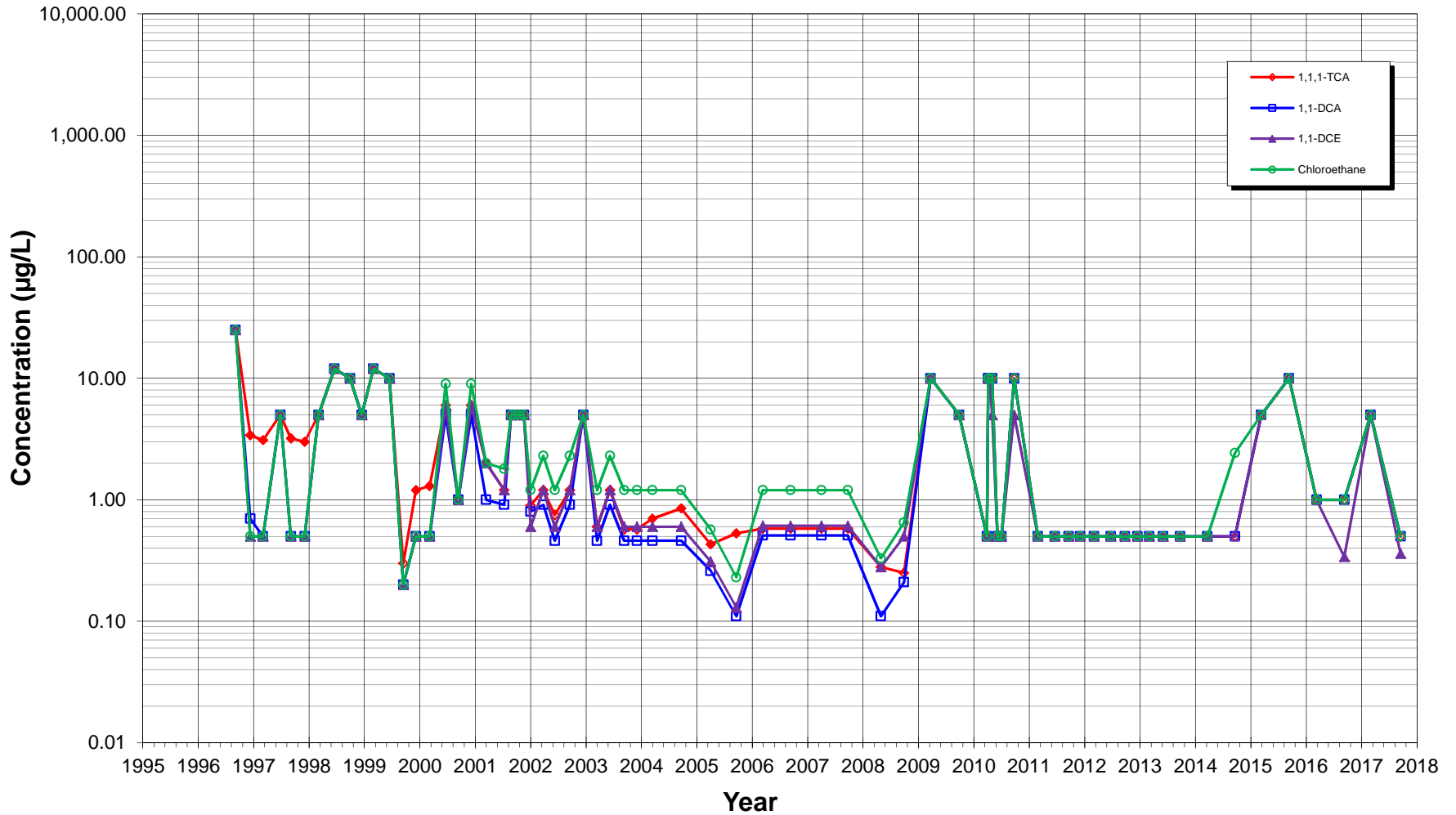
**Figure C9. Constituent vs Time  
Monitoring Well MW-5  
Univar USA Inc., Kent, Washington**



**Notes:**

- 1) Shallow injection conducted in March and May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: PCE = 0.86 µg/L, TCE = 4.0 µg/L, cis-1,2-DCE = 70 µg/L and Vinyl Chloride = 0.5 µg/L.

**Figure C10. Constituent vs Time  
Monitoring Well MW-5  
Univar USA Inc., Kent, Washington**

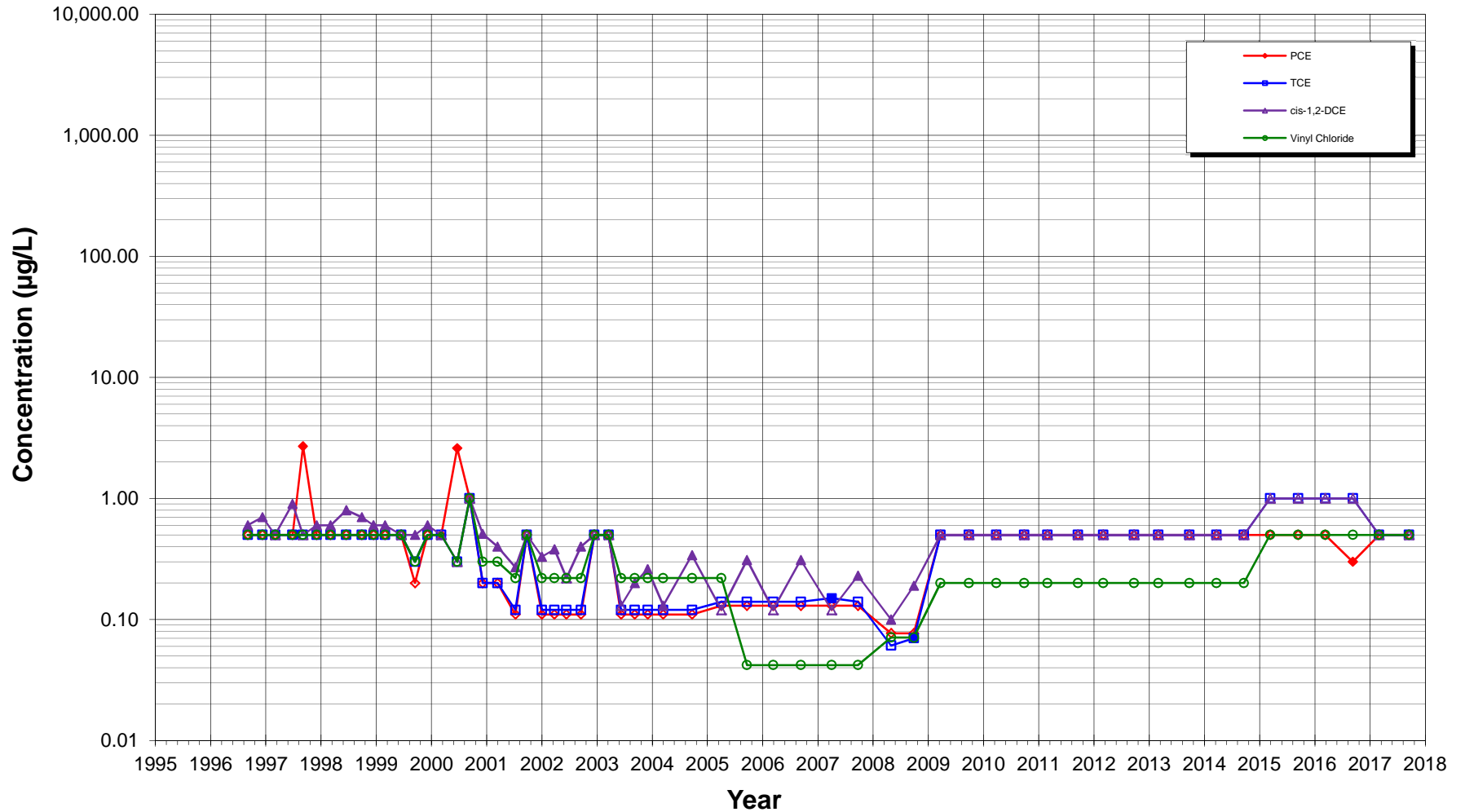


**Notes:**

- 1) Shallow injection conducted in March and May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: 1,1,1-TCA = 200 µg/L, 1,1-DCA = 800 µg/L, 1,1-DCE = 7 µg/L, and Chloroethane = 15 µg/L.



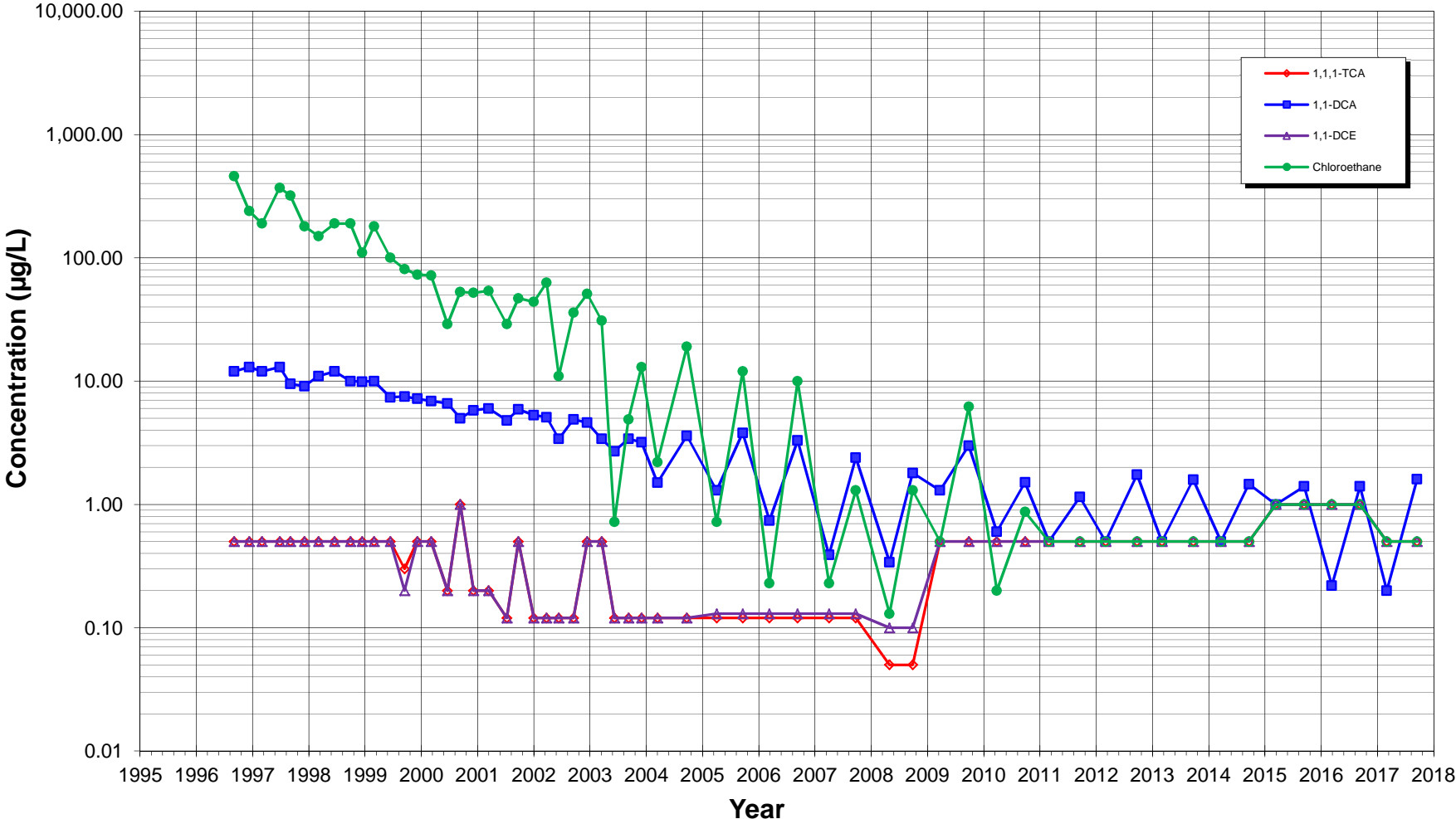
**Figure C11. Constituent vs Time  
Monitoring Well MW-6  
Univar USA Inc., Kent, Washington**



**Notes:**

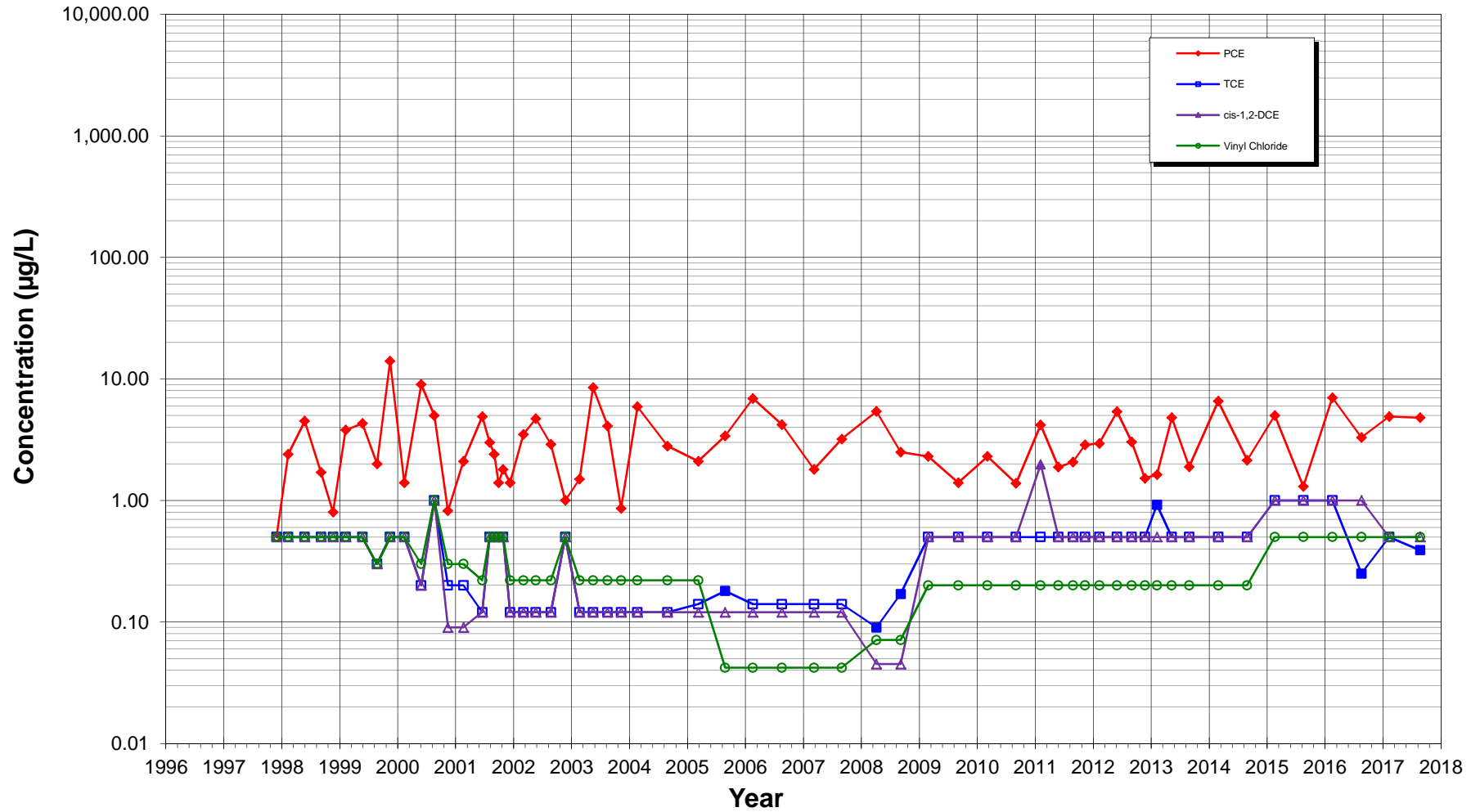
- 1) Shallow injection conducted in March and May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: PCE = 0.86 µg/L, TCE = 4.0 µg/L, cis-1,2-DCE = 70 µg/L and Vinyl Chloride = 0.5 µg/L.

Figure C12. Constituent vs Time  
Monitoring Well MW-6  
Univar USA Inc., Kent, Washington



- Notes:
- 1) Shallow injection conducted in March and May 2011.
  - 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
  - 3) Final Site Cleanup Levels: 1,1,1-TCA = 200 µg/L, 1,1-DCA = 800 µg/L, 1,1-DCE = 7 µg/L, and Chloroethane = 15 µg/L.

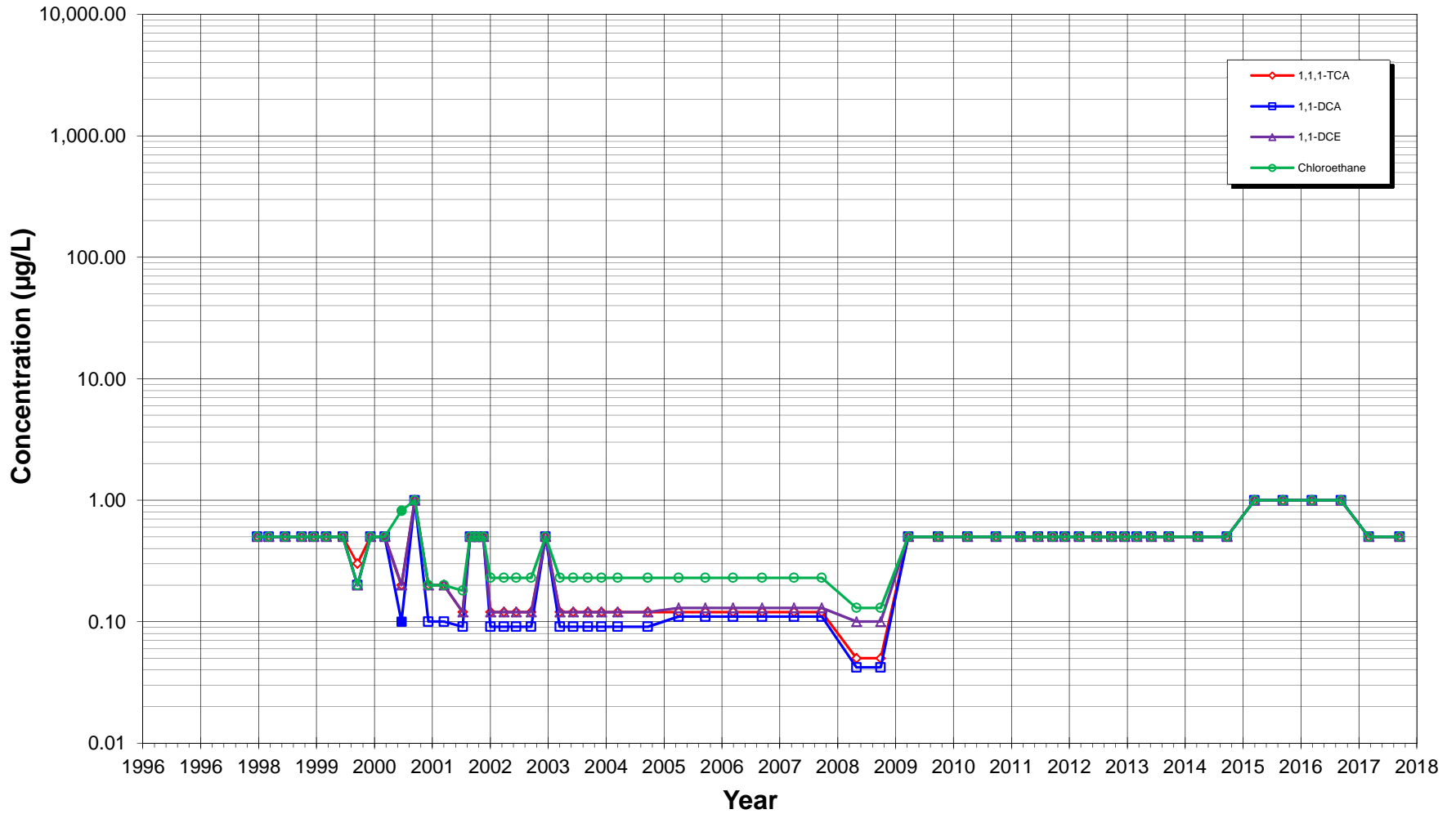
**Figure C13. Constituent vs Time  
Monitoring Well MW-7  
Univar USA Inc., Kent, Washington**



**Notes:**

- 1) Shallow injection conducted in March and May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: PCE = 0.86 µg/L, TCE = 4.0 µg/L, cis-1,2-DCE = 70 µg/L and Vinyl Chloride = 0.5 µg/L.

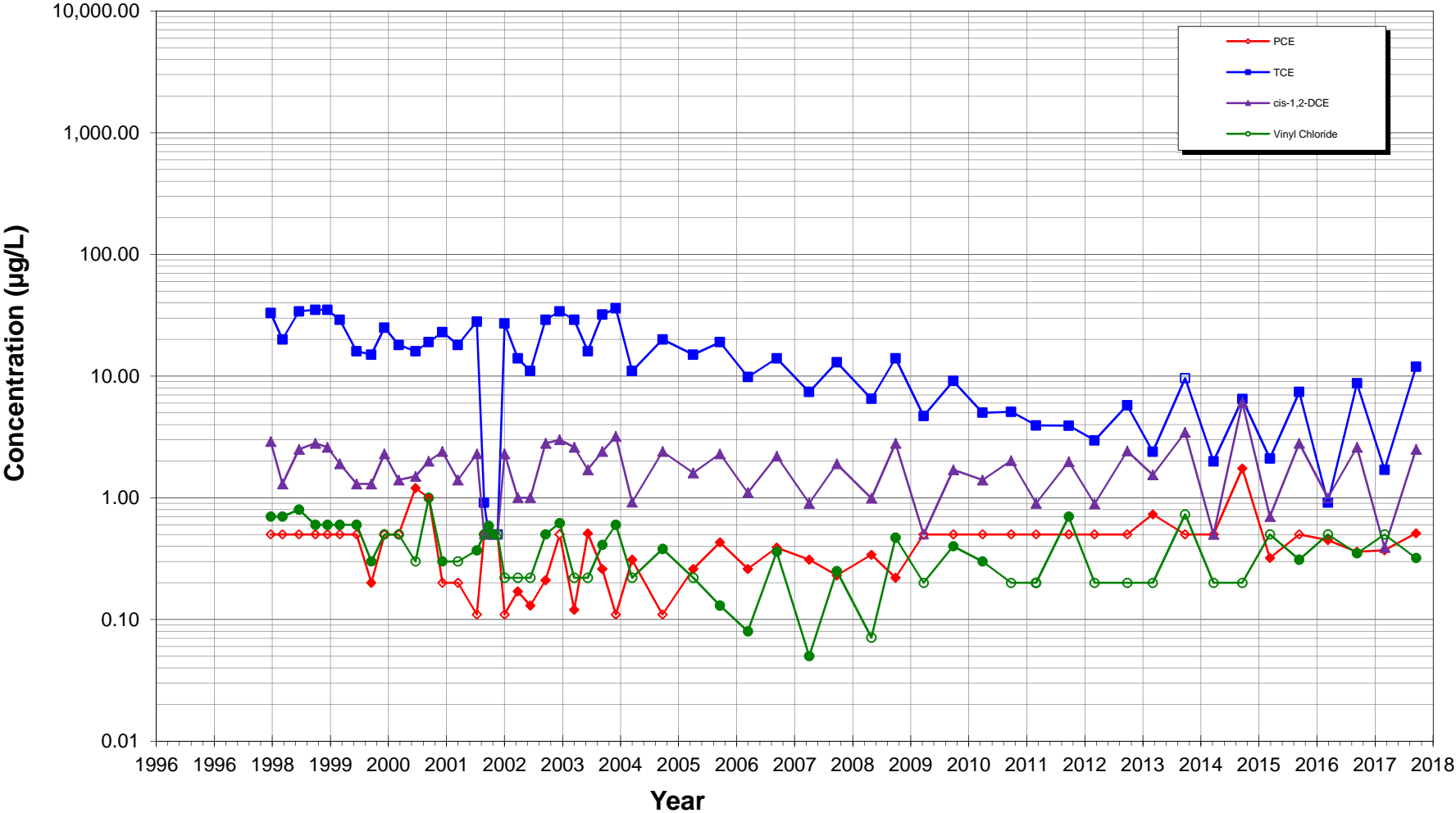
**Figure C14. Constituent vs Time  
Monitoring Well MW-7  
Univar USA Inc., Kent, Washington**



**Notes:**

- 1) Shallow injection conducted in March and May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: 1,1,1-TCA = 200 µg/L, 1,1-DCA = 800 µg/L, 1,1-DCE = 7 µg/L, and Chloroethane = 15 µg/L.

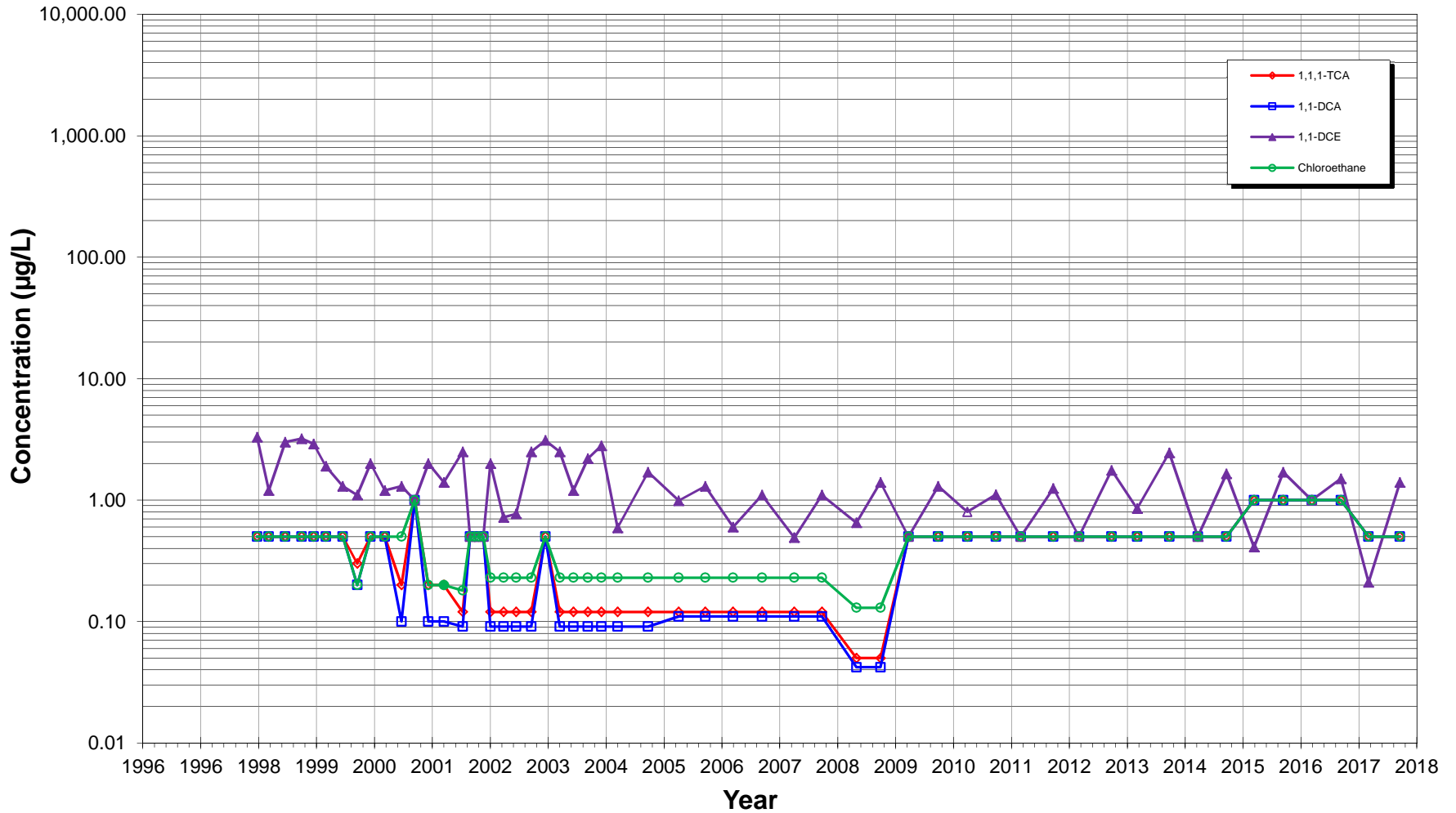
Figure C15. Constituent vs Time  
Monitoring Well MW-8  
Univar USA Inc., Kent, Washington



- Notes:
- 1) Shallow injection conducted in March and May 2011.
  - 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
  - 3) Final Site Cleanup Levels: PCE = 0.86 µg/L, TCE = 4.0 µg/L, cis-1,2-DCE = 70 µg/L and Vinyl Chloride = 0.5 µg/L.



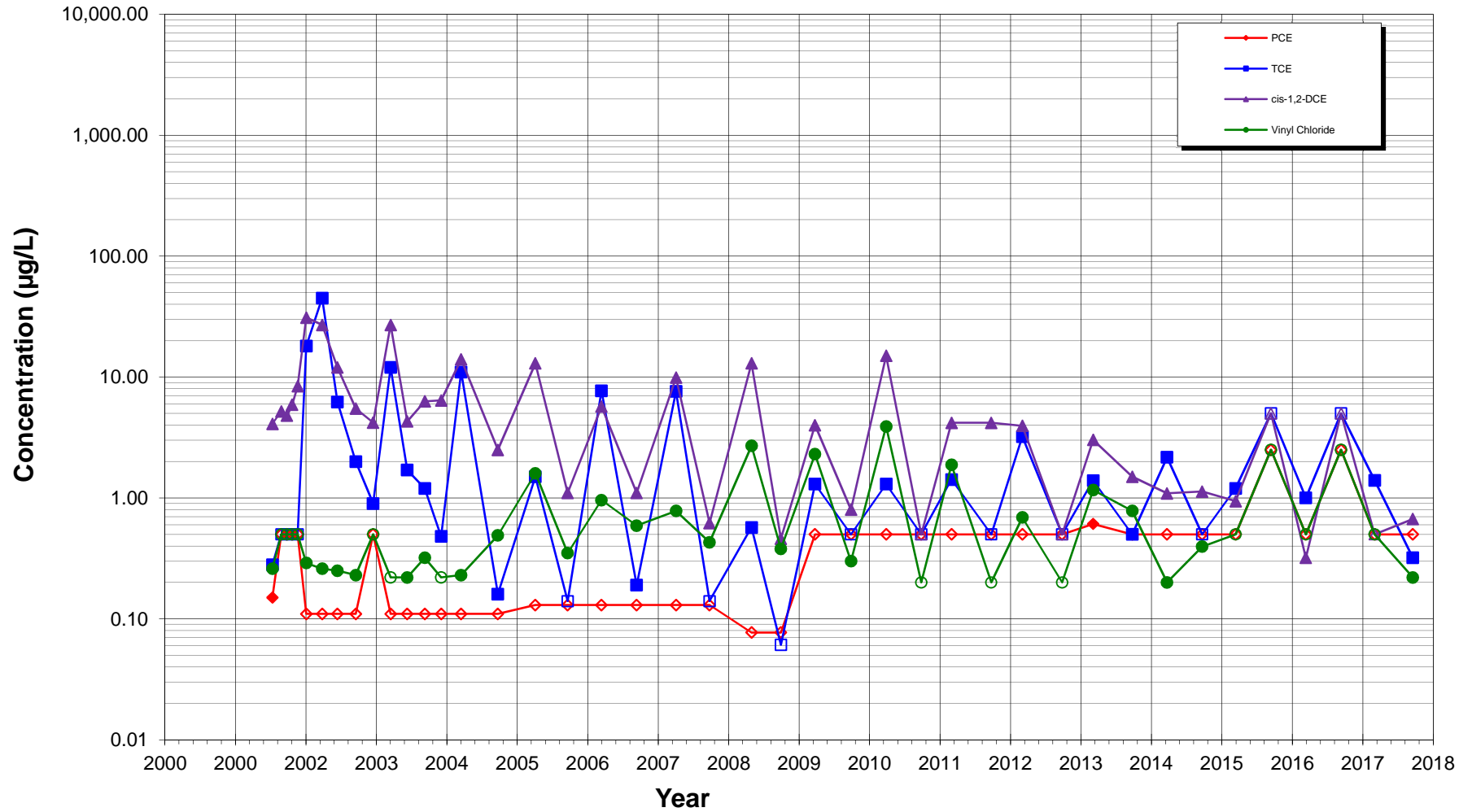
**Figure C16. Constituent vs Time  
Monitoring Well MW-8  
Univar USA Inc., Kent, Washington**



**Notes:**

- 1) Shallow injection conducted in March and May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: 1,1,1-TCA = 200 µg/L, 1,1-DCA = 800 µg/L, 1,1-DCE = 7 µg/L, and Chloroethane = 15 µg/L.

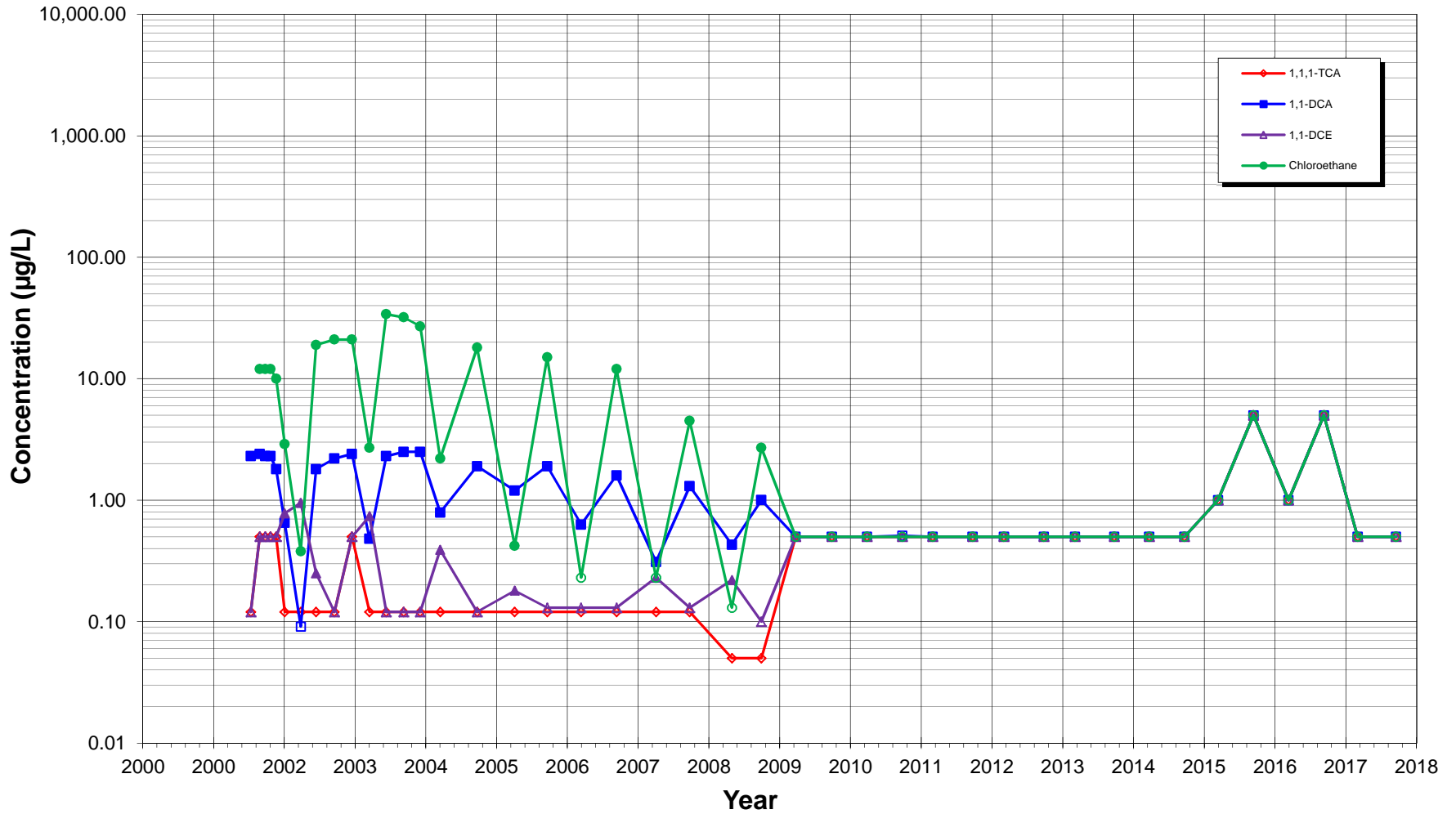
**Figure C17. Constituent vs Time  
Monitoring Well MW-9  
Univar USA Inc., Kent, Washington**



**Notes:**

- 1) Shallow injection conducted in March and May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: PCE = 0.86 µg/L, TCE = 4.0 µg/L, cis-1,2-DCE = 70 µg/L and Vinyl Chloride = 0.5 µg/L.

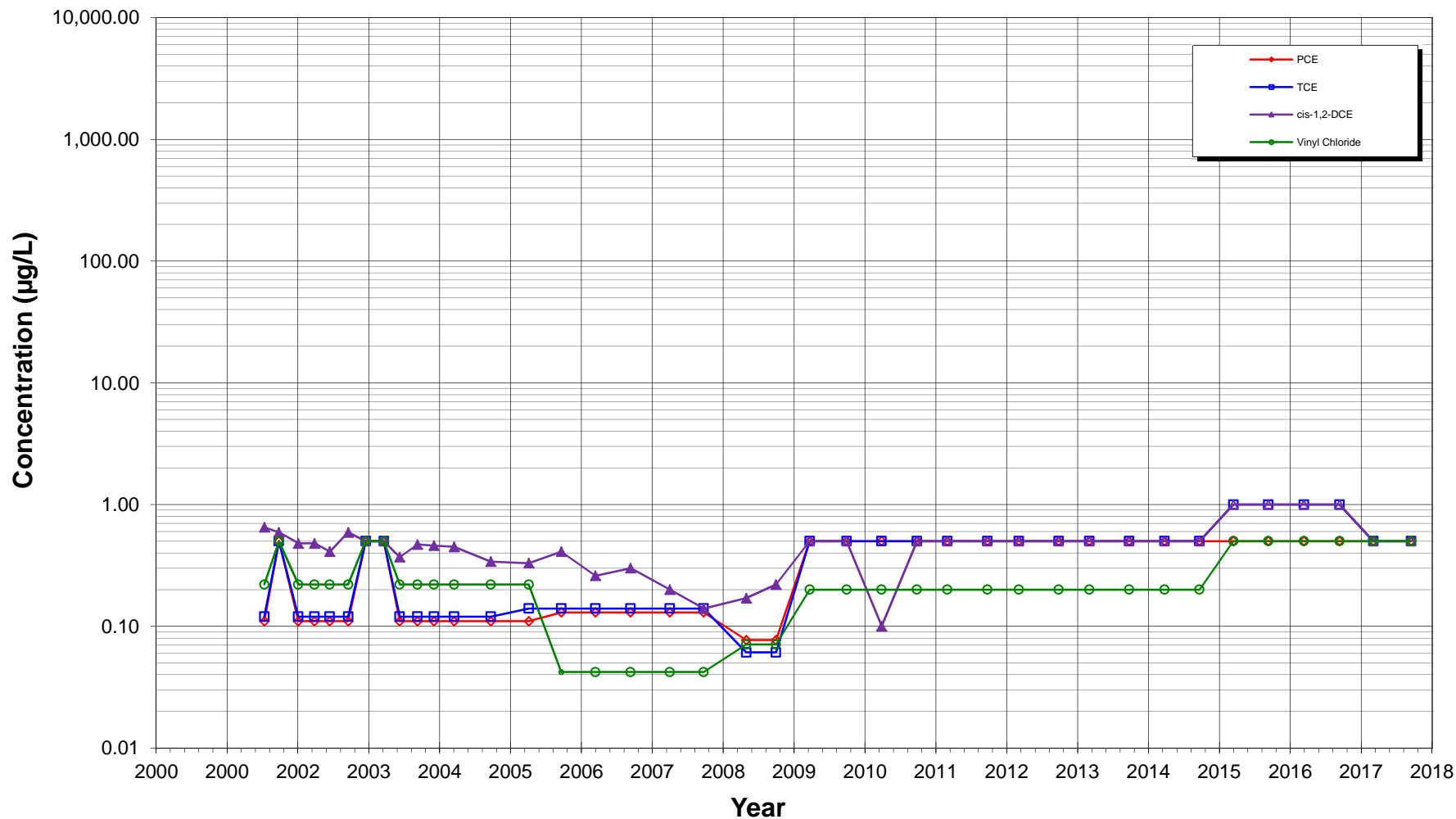
Figure C18. Constituent vs Time  
Monitoring Well MW-9  
Univar USA Inc., Kent, Washington



Notes:

- 1) Shallow injection conducted in March and May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: 1,1,1-TCA = 200 µg/L, 1,1-DCA = 800 µg/L, 1,1-DCE = 7 µg/L, and Chloroethane = 15 µg/L.

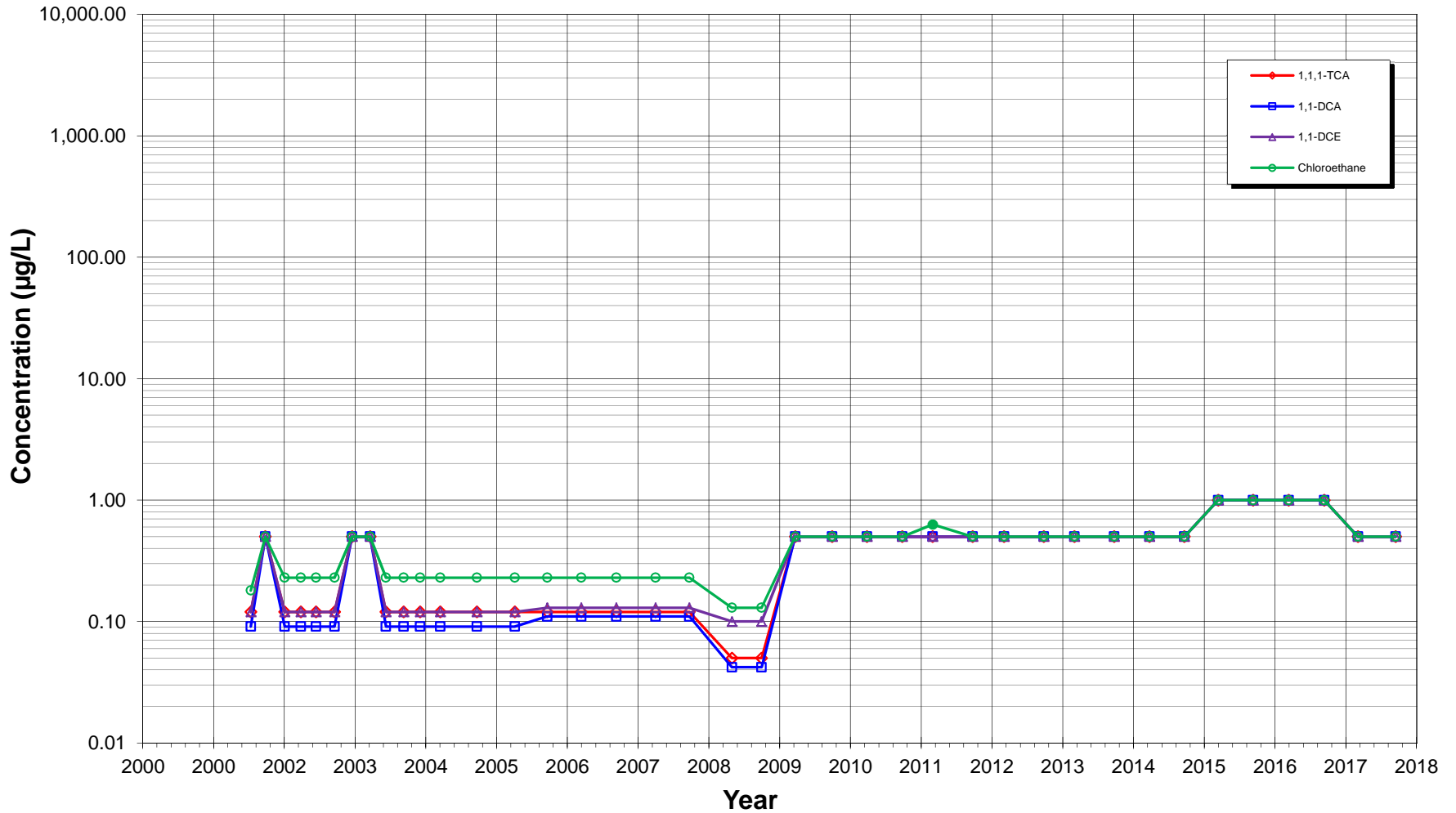
**Figure C19. Constituent vs Time  
Monitoring Well MW-10  
Univar USA Inc., Kent, Washington**



**Notes:**

- 1) Shallow injection conducted in March and May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: PCE = 0.86 µg/L, TCE = 4.0 µg/L, cis-1,2-DCE = 70 µg/L and Vinyl Chloride = 0.5 µg/L.

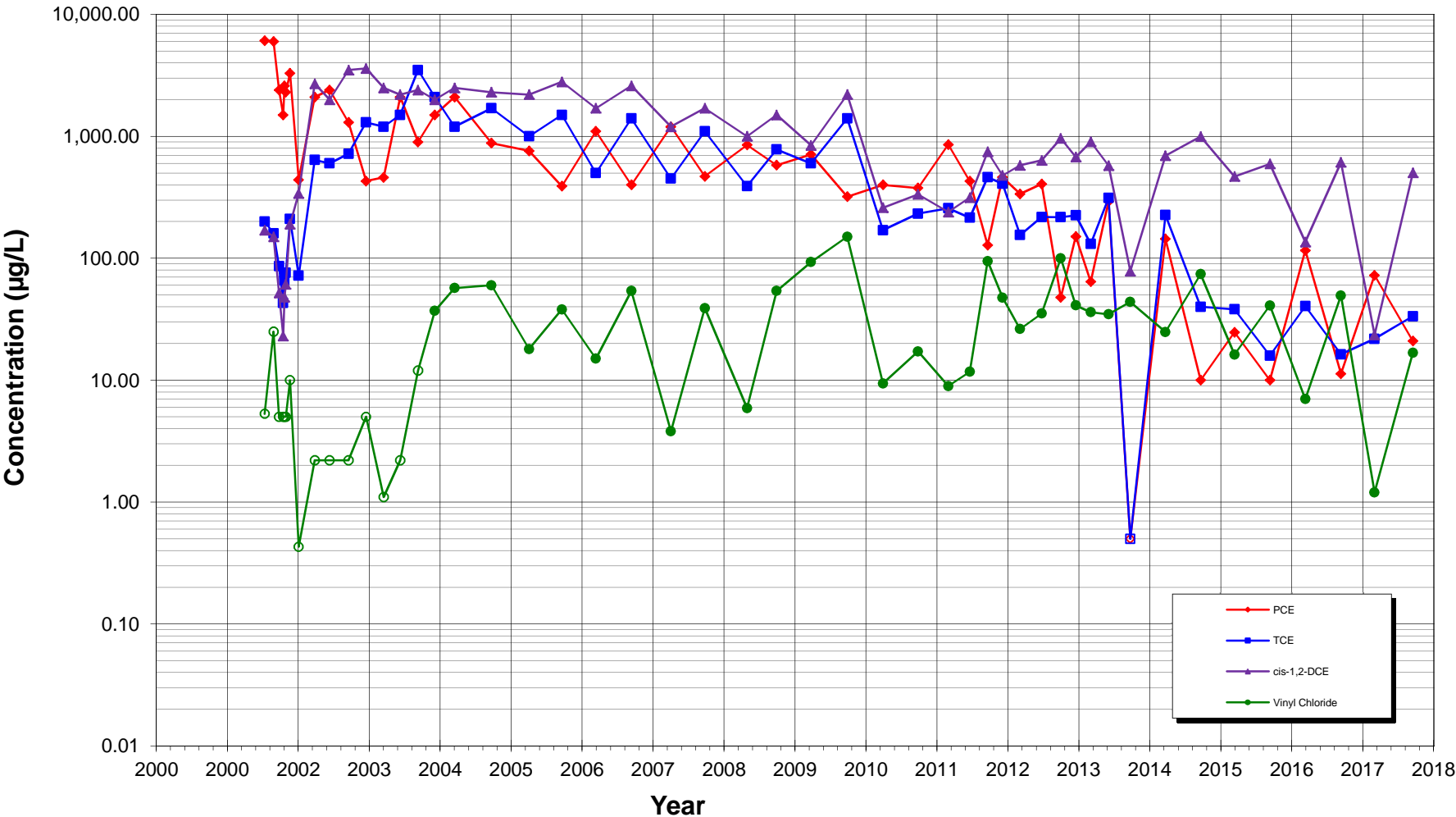
Figure C20. Constituent vs Time  
Monitoring Well MW-10  
Univar USA Inc., Kent, Washington



Notes:

- 1) Shallow injection conducted in March and May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: 1,1,1-TCA = 200 µg/L, 1,1-DCA = 800 µg/L, 1,1-DCE = 7 µg/L, and Chloroethane = 15 µg/L.

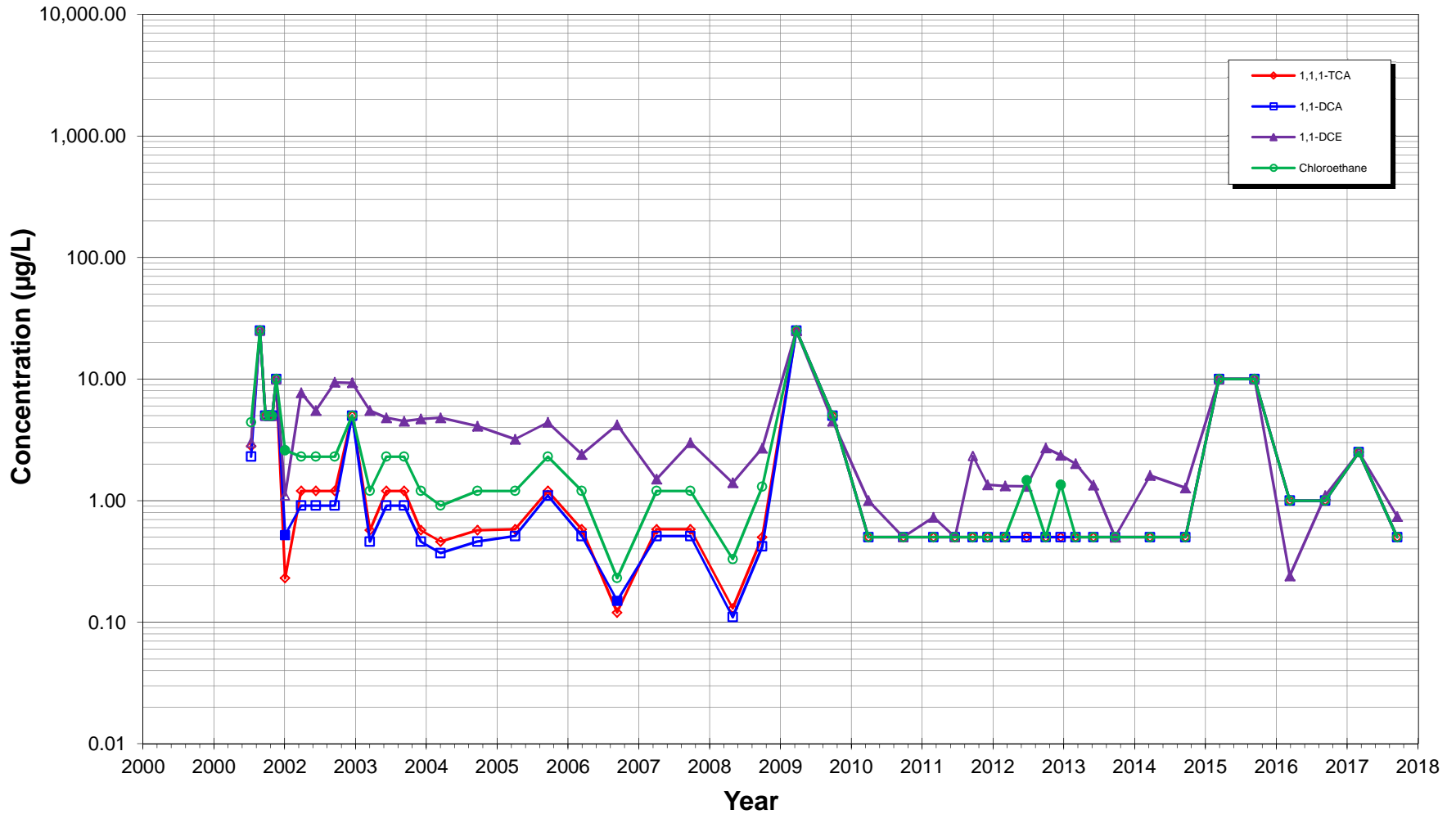
Figure C21. Constituent vs Time  
Monitoring Well MW-12  
Univar USA Inc., Kent, Washington



- Notes:
- 1) Shallow injection conducted in March and May 2011.
  - 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
  - 3) Final Site Cleanup Levels: PCE = 0.86 µg/L, TCE = 4.0 µg/L, cis-1,2-DCE = 70 µg/L and Vinyl Chloride = 0.5 µg/L.



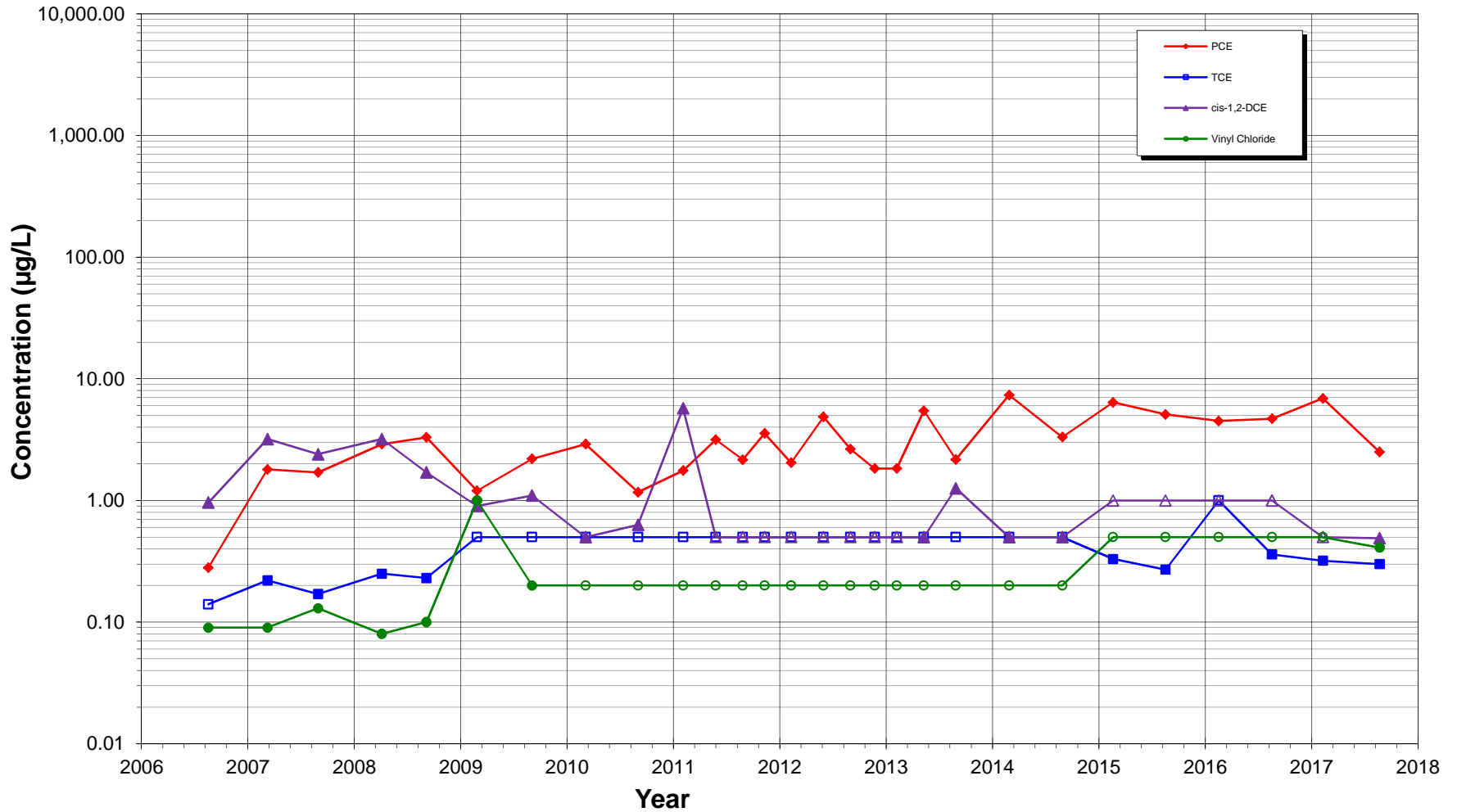
**Figure C22. Constituent vs Time  
Monitoring Well MW-12  
Univar USA Inc., Kent, Washington**



**Notes:**

- 1) Shallow injection conducted in March and May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: 1,1,1-TCA = 200 µg/L, 1,1-DCA = 800 µg/L, 1,1-DCE = 7 µg/L, and Chloroethane = 15 µg/L.

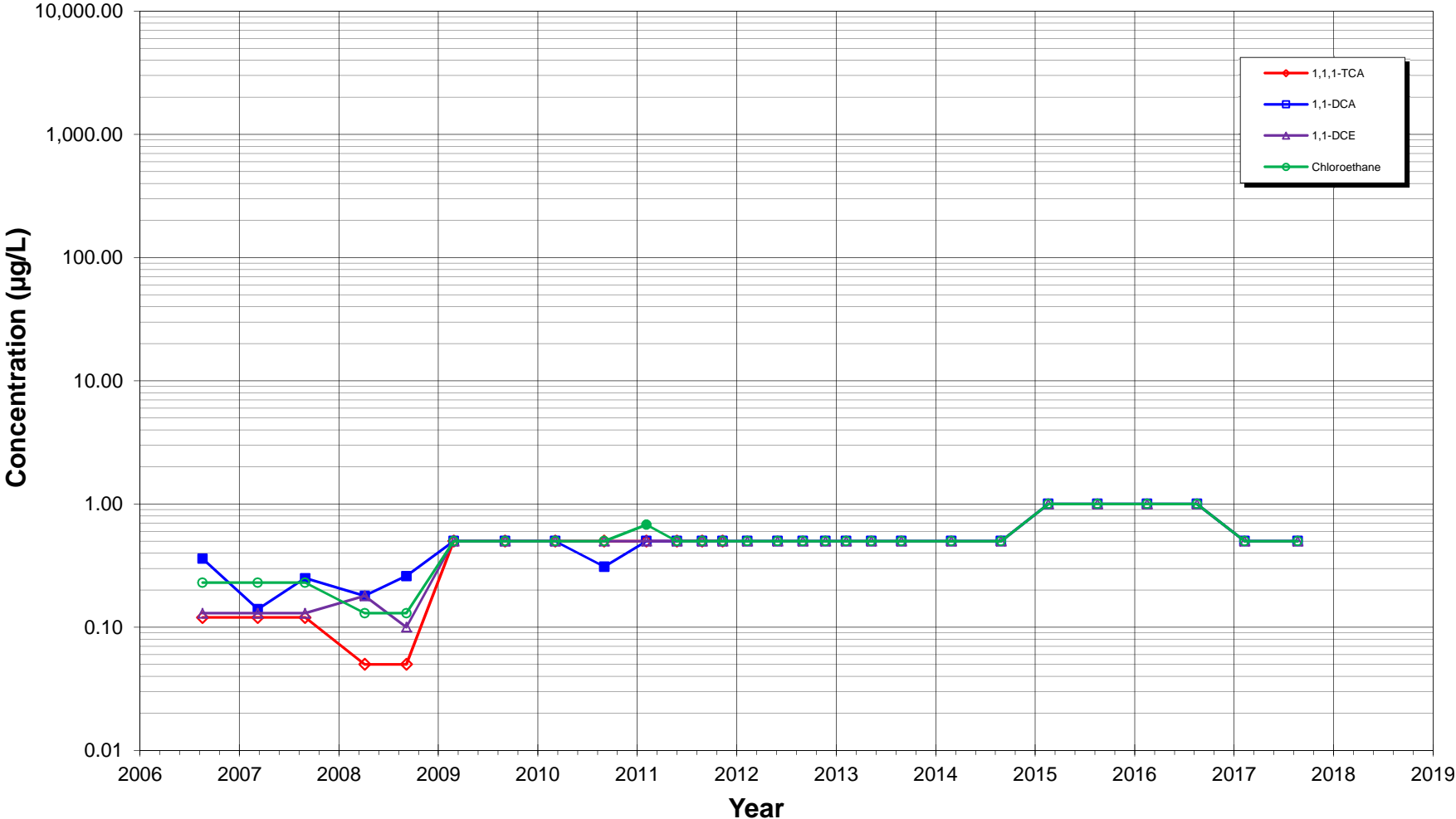
**Figure C23. Constituent vs Time  
Monitoring Well MW-23  
Univar USA Inc., Kent, Washington**



**Notes:**

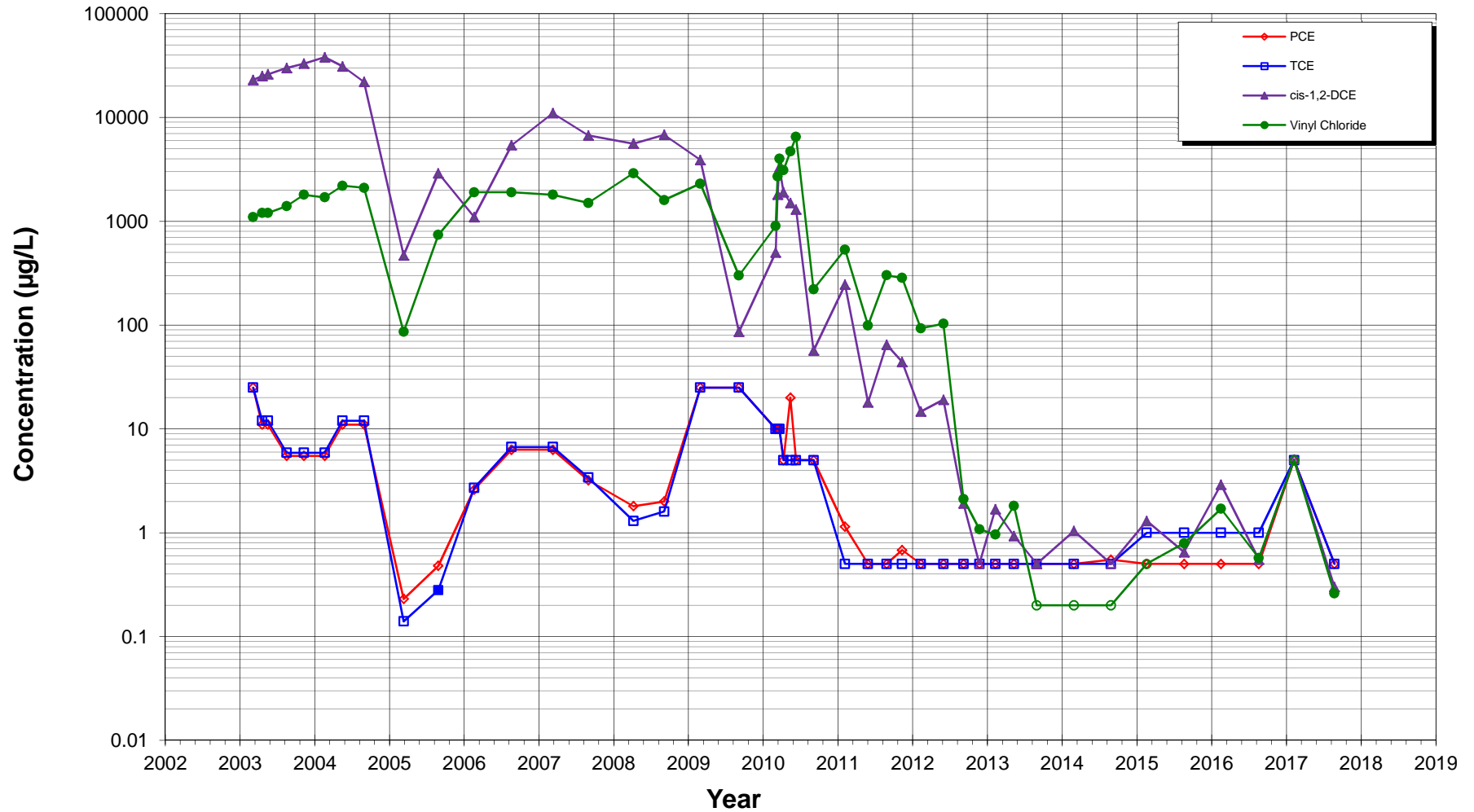
- 1) Shallow injection conducted in March and May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: PCE = 0.86 µg/L, TCE = 4.0 µg/L, cis-1,2-DCE = 70 µg/L and Vinyl Chloride = 0.5 µg/L.

Figure C24. Constituent vs Time  
Monitoring Well MW-23  
Univar USA Inc., Kent, Washington



- Notes:
- 1) Shallow injection conducted in March and May 2011.
  - 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
  - 3) Final Site Cleanup Levels: 1,1,1-TCA = 200 µg/L, 1,1-DCA = 800 µg/L, 1,1-DCE = 7 µg/L, and Chloroethane = 15 µg/L.

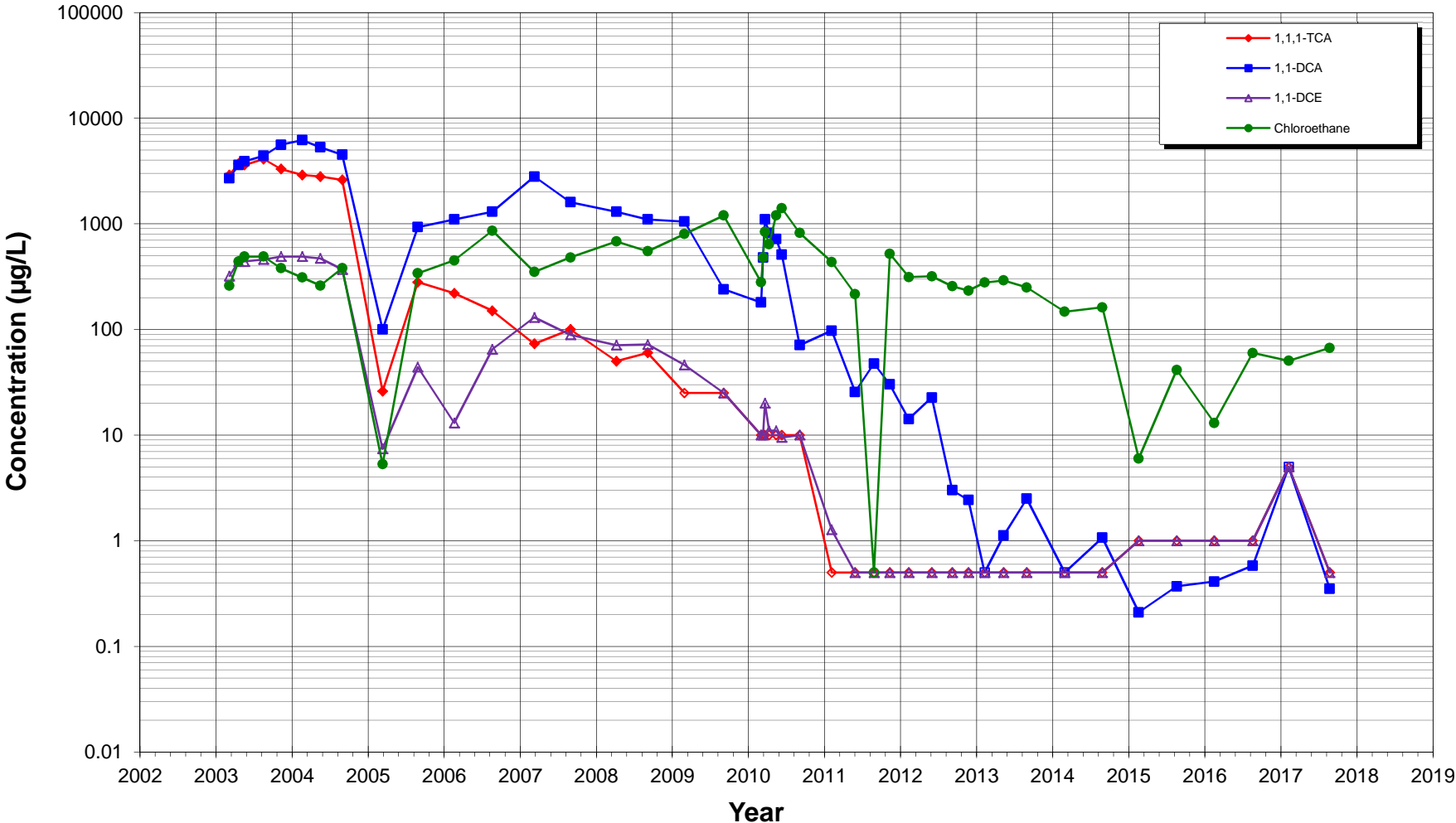
**Figure C25. Constituent vs Time  
Monitoring Well MW-13  
Univar USA Inc., Kent, Washington**



**Notes:**

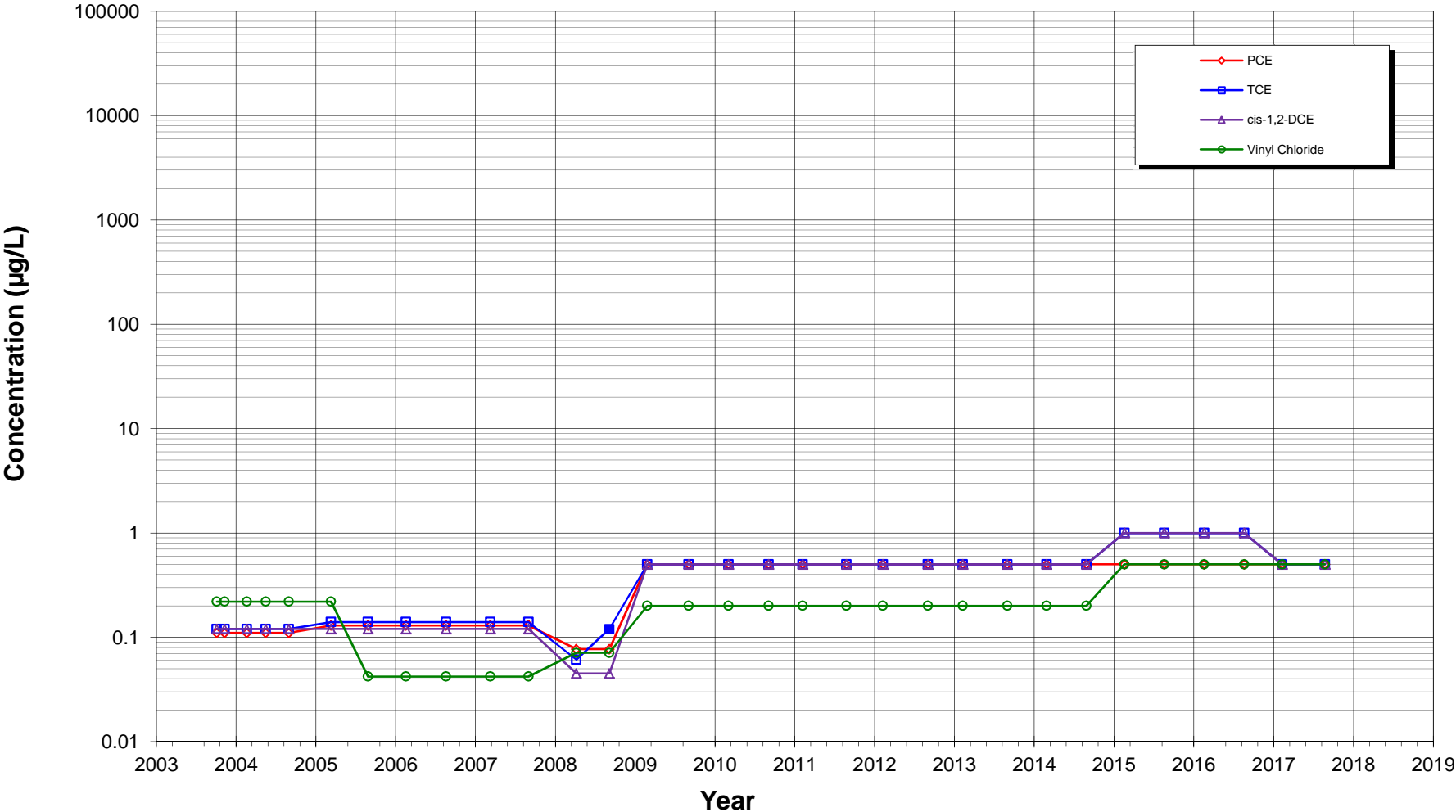
- 1) Deep injection conducted in April and May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: PCE = 0.86 µg/L, TCE = 4.0 µg/L, cis-1,2-DCE = 70 µg/L, and Vinyl Chloride = 0.5 µg/L.

Figure C26. Constituent vs Time  
Monitoring Well MW-13  
Univar USA Inc., Kent, Washington



- Notes:
- 1) Deep injection conducted in April and May 2011.
  - 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
  - 3) Final Site Cleanup Levels: 1,1,1-TCA = 200 µg/L, 1,1-DCA = 800 µg/L, 1,1-DCE = 7 µg/L, and Chloroethane = 15 µg/L.

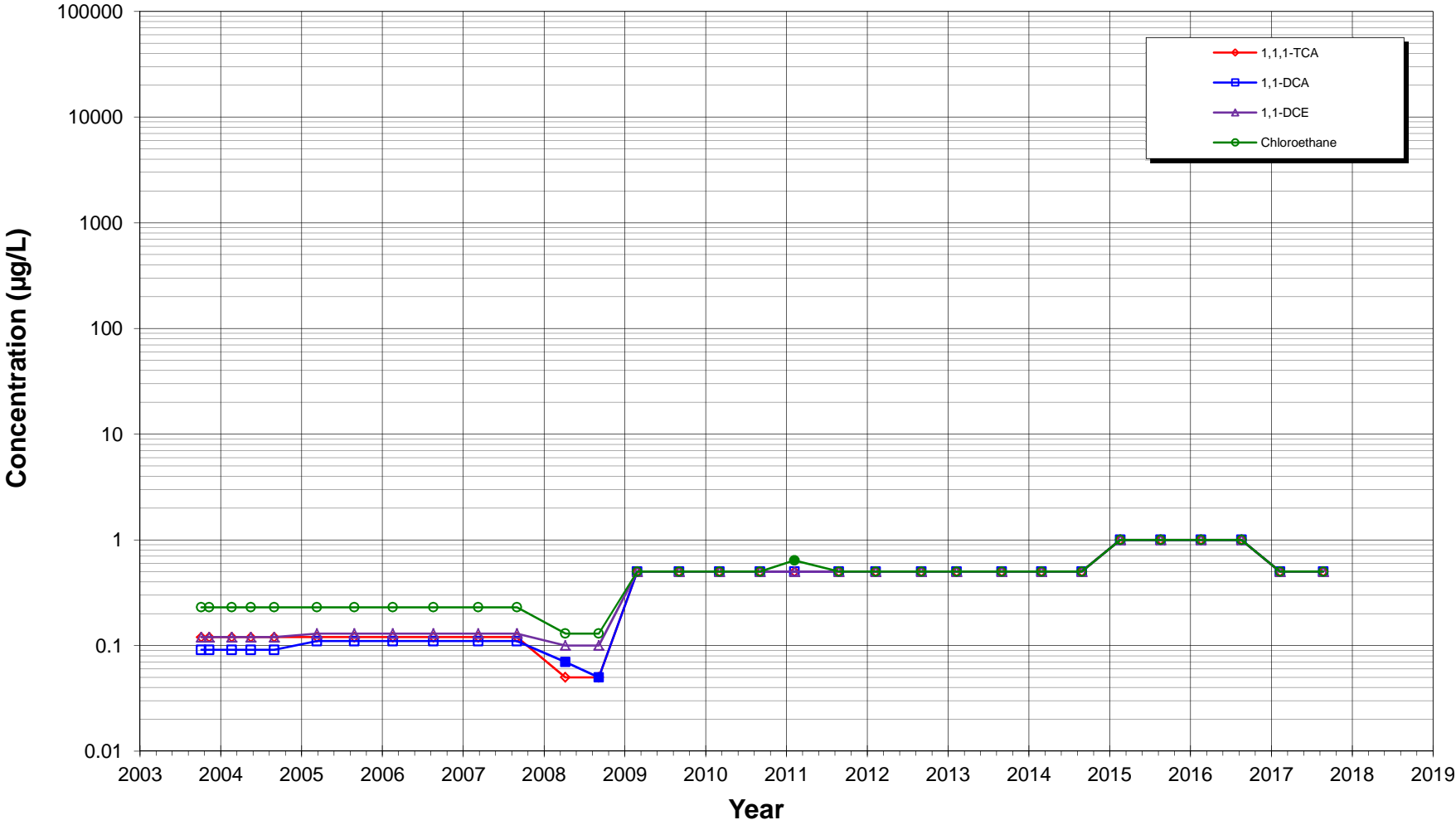
Figure C27. Constituent vs Time  
Monitoring Well MW-14  
Univar USA Inc., Kent, Washington



- Notes:
- 1) Deep injection conducted in April and May 2011.
  - 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
  - 3) Final Site Cleanup Levels: PCE = 0.86 µg/L, TCE = 4.0 µg/L, cis-1,2-DCE = 70 µg/L, and Vinyl Chloride = 0.5 µg/L.

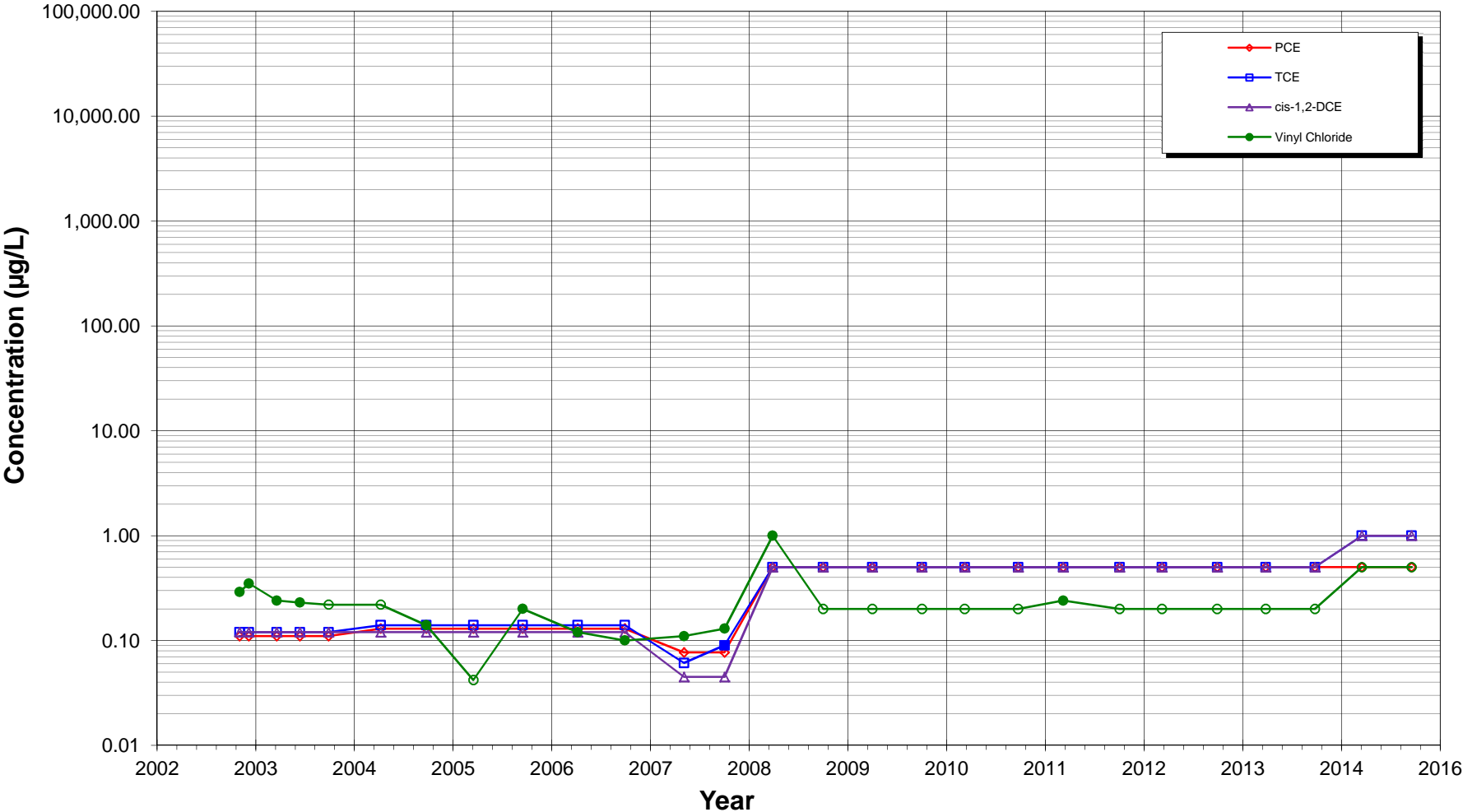


Figure C28. Constituent vs Time  
Monitoring Well MW-14  
Univar USA Inc., Kent, Washington



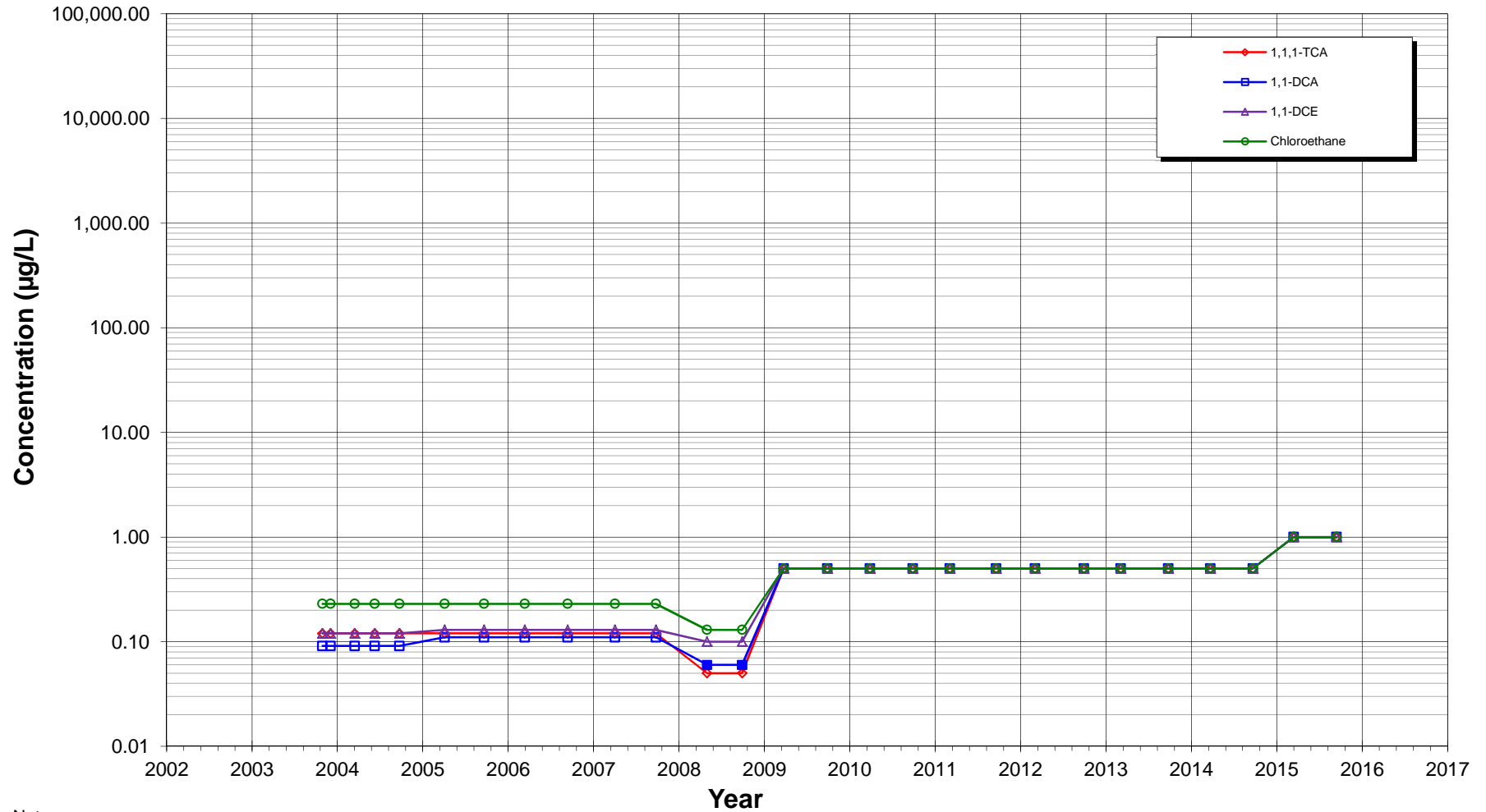
- Notes:
- 1) Deep injection conducted in April and May 2011.
  - 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
  - 3) Final Site Cleanup Levels: 1,1,1-TCA = 200 µg/L, 1,1-DCA = 800 µg/L, 1,1-DCE = 7 µg/L, and Chloroethane = 15 µg/L.

Figure C29. Constituent vs Time  
Monitoring Well MW-15  
Univar USA Inc., Kent, Washington



- Notes:
- 1) Deep injection conducted in April and May 2011.
  - 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
  - 3) Final Site Cleanup Levels: PCE = 0.86 µg/L, TCE = 4.0 µg/L, cis-1,2-DCE = 70 µg/L, and Vinyl Chloride = 0.5 µg/L.

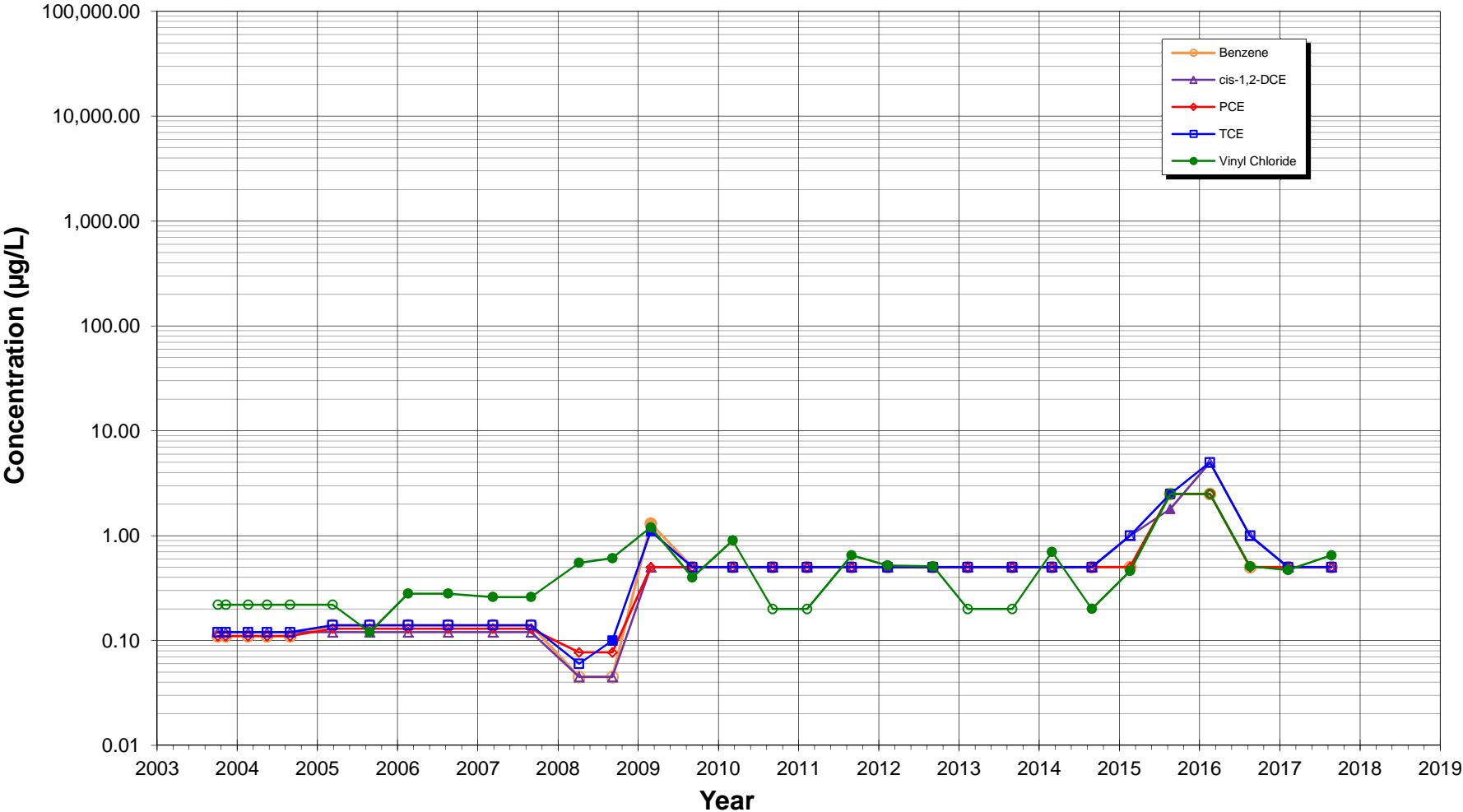
**Figure C30. Constituent vs Time  
Monitoring Well MW-15  
Univar USA Inc., Kent, Washington**



**Notes:**

- 1) Deep injection conducted in April and May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: 1,1,1-TCA = 200 µg/L, 1,1-DCA = 800 µg/L, 1,1-DCE = 7 µg/L, and Chloroethane = 15 µg/L.
- 4) Monitoring well decommissioned in February 2016.

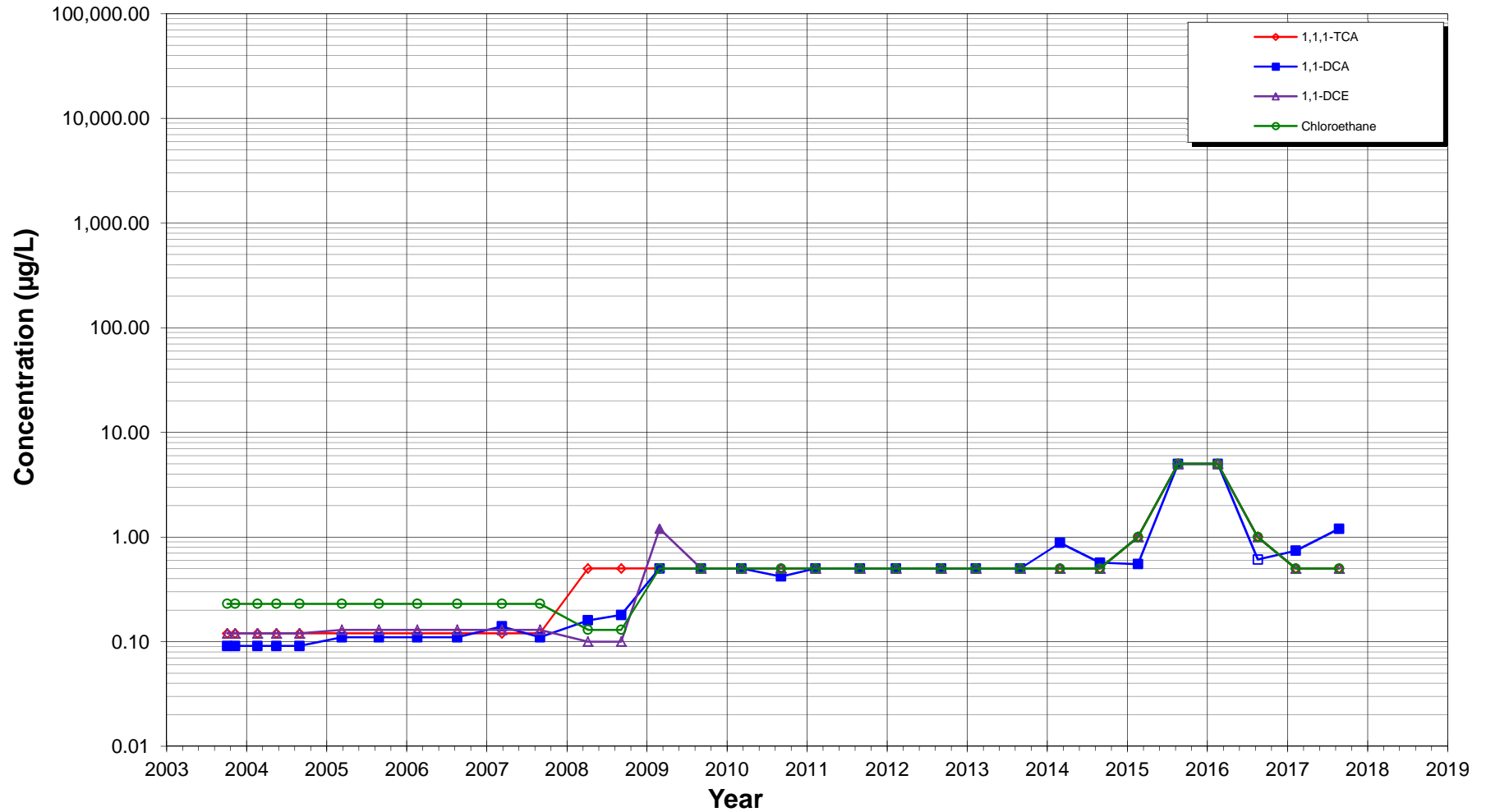
Figure C31. Constituent vs Time  
Monitoring Well MW-16  
Univar USA Inc., Kent, Washington



Notes:

- 1) Deep injection conducted in April and May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: PCE = 0.86 µg/L, TCE = 4.0 µg/L, cis-1,2-DCE = 70 µg/L, Vinyl Chloride = 0.5 µg/L, and Benzene = 0.8 µg/L.

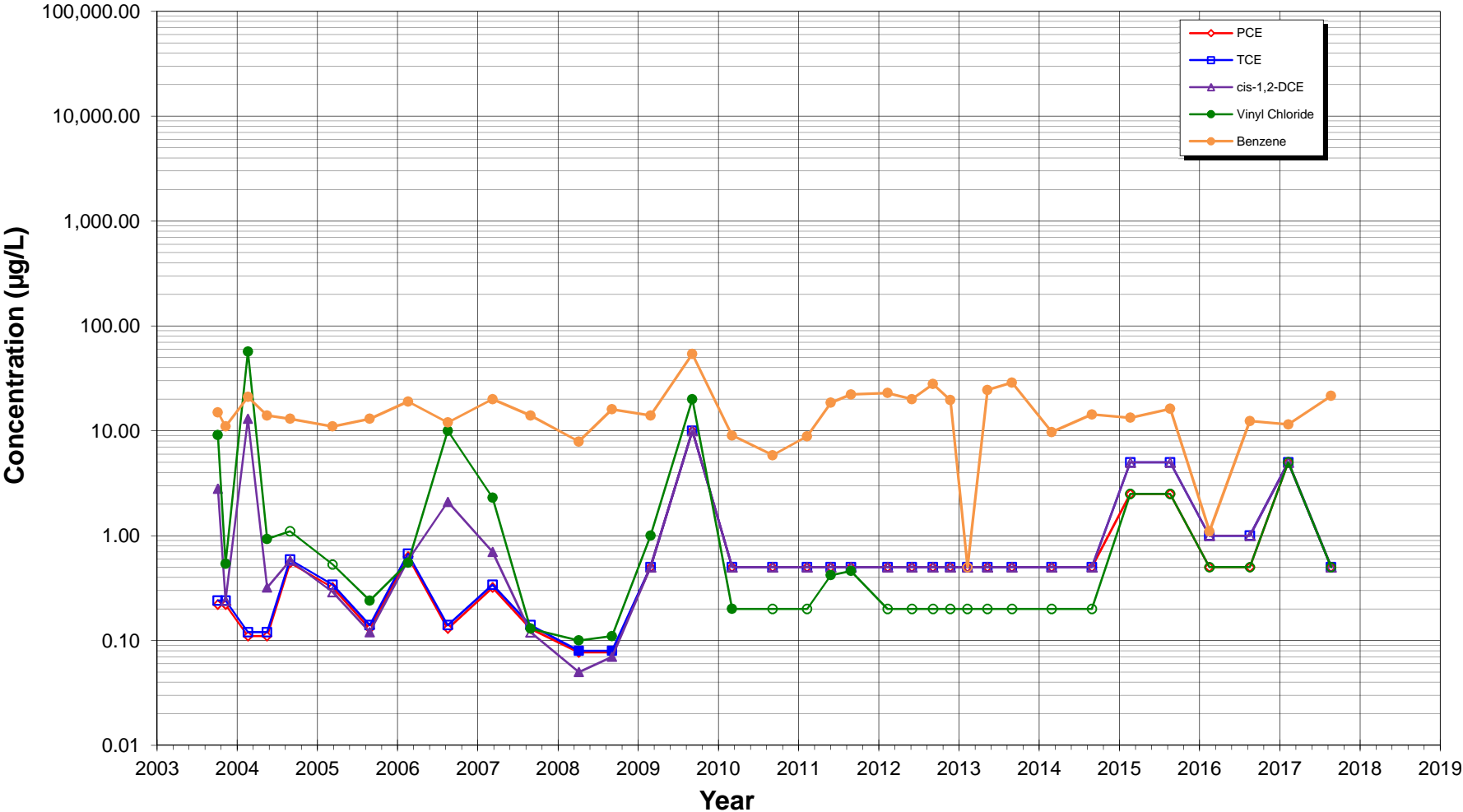
**Figure C32. Constituent vs Time  
Monitoring Well MW-16  
Univar USA Inc., Kent, Washington**



**Notes:**

- 1) Deep injection conducted in April and May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: 1,1,1-TCA = 200 µg/L, 1,1-DCA = 800 µg/L, 1,1-DCE = 7 µg/L, and Chloroethane = 15 µg/L.

Figure C33. Constituent vs Time  
Monitoring Well MW-17  
Univar USA Inc., Kent, Washington

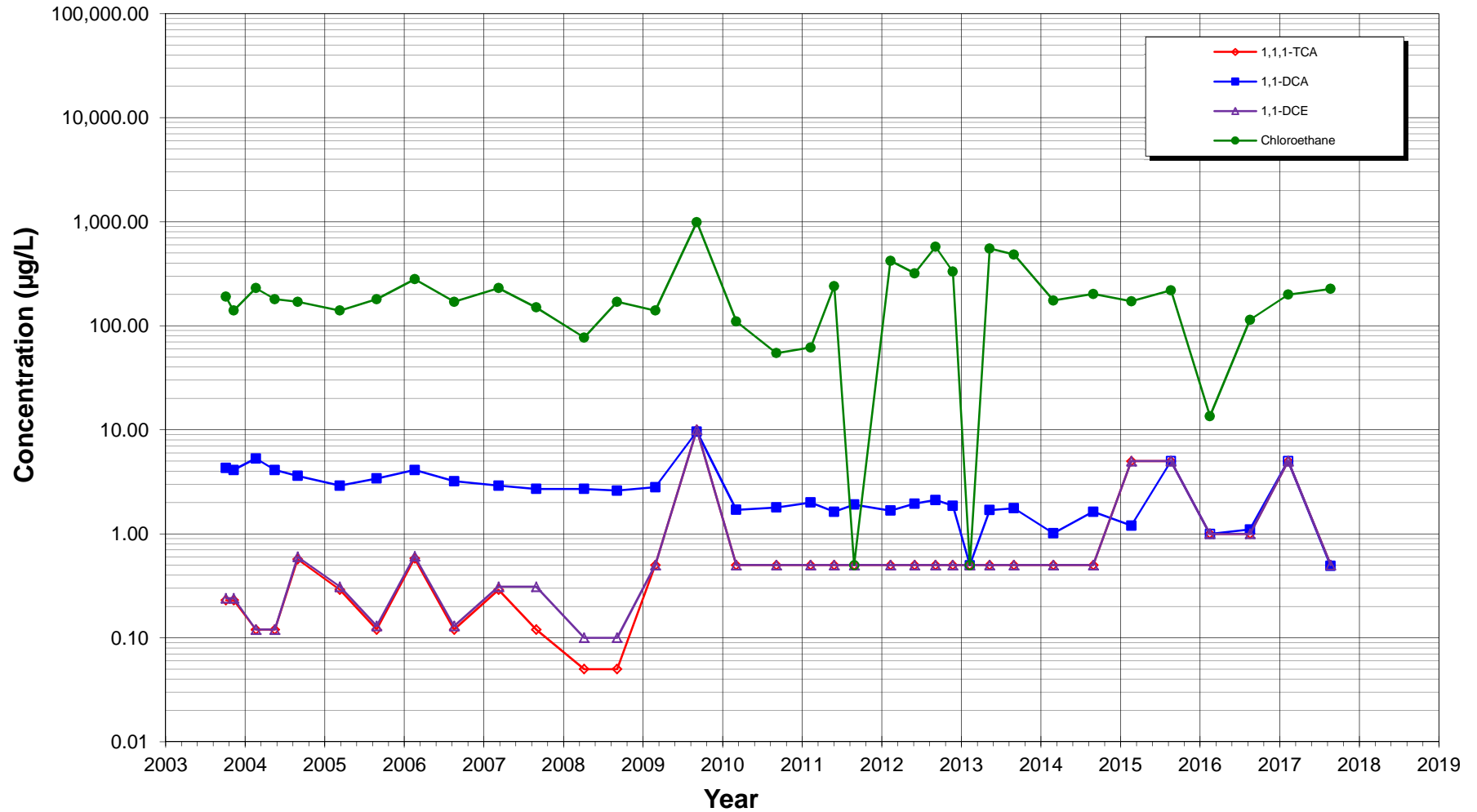


Notes:

- 1) Deep injection conducted in April and May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: PCE = 0.86 µg/L, TCE = 4.0 µg/L, cis-1,2-DCE = 70 µg/L, Vinyl Chloride = 0.5 µg/L, and Benzene = 0.8 µg/L.



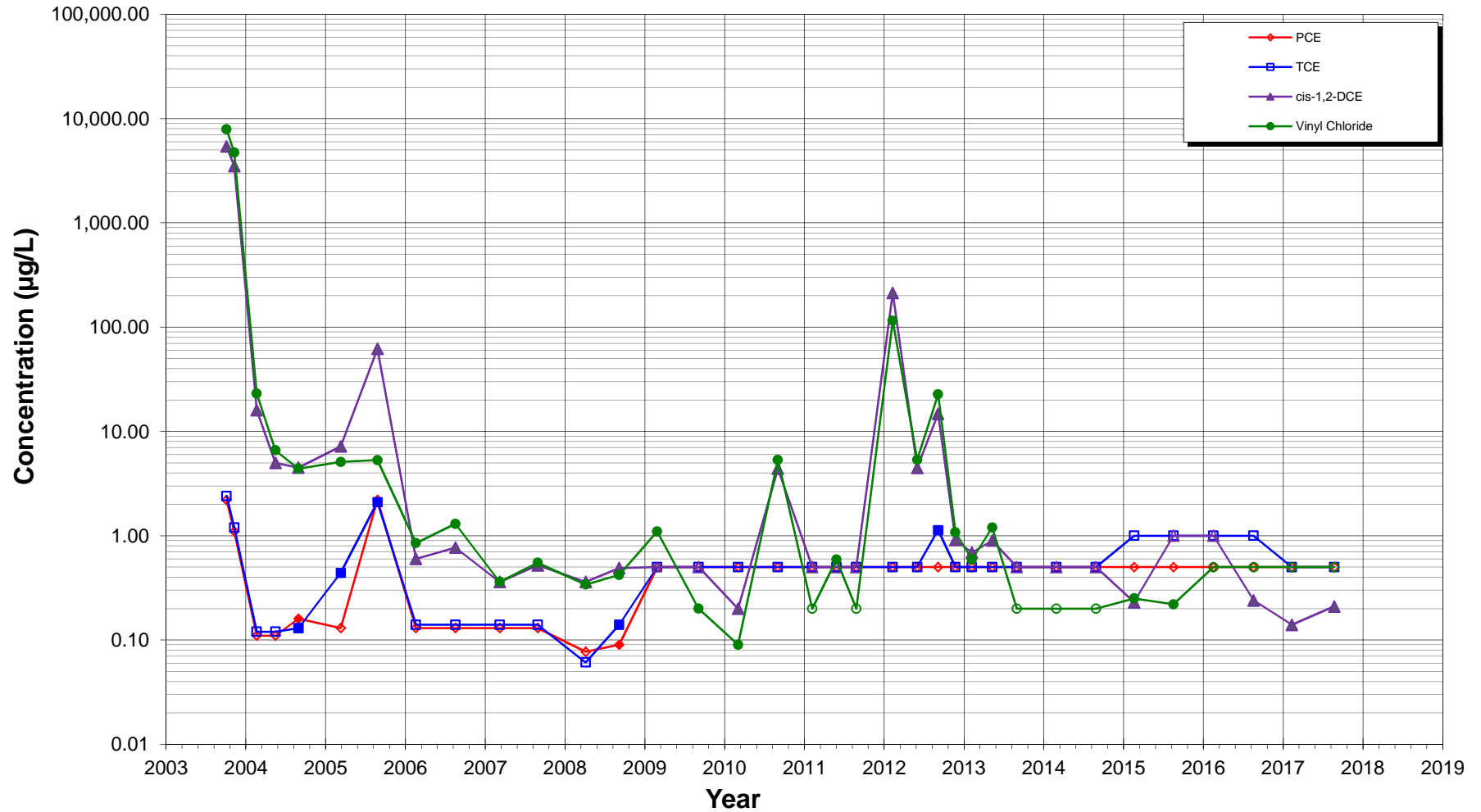
**Figure C34. Constituent vs Time  
Monitoring Well MW-17  
Univar USA Inc., Kent, Washington**



**Notes:**

- 1) Deep injection conducted in April and May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: 1,1,1-TCA = 200 µg/L, 1,1-DCA = 800 µg/L, 1,1-DCE = 7 µg/L, and Chloroethane = 15 µg/L.

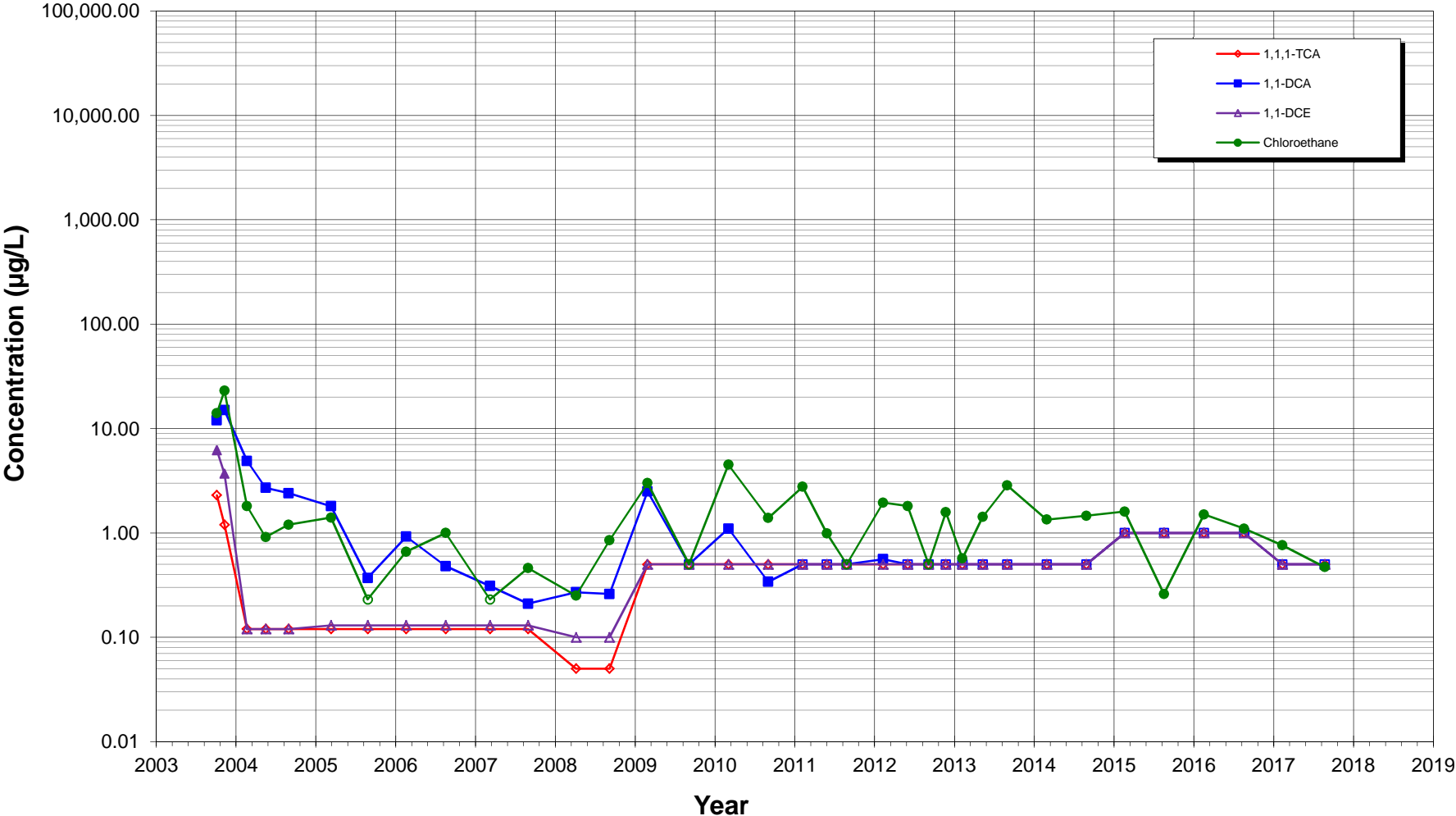
**Figure C35. Constituent vs Time  
Monitoring Well MW-18  
Univar USA Inc., Kent, Washington**



**Notes:**

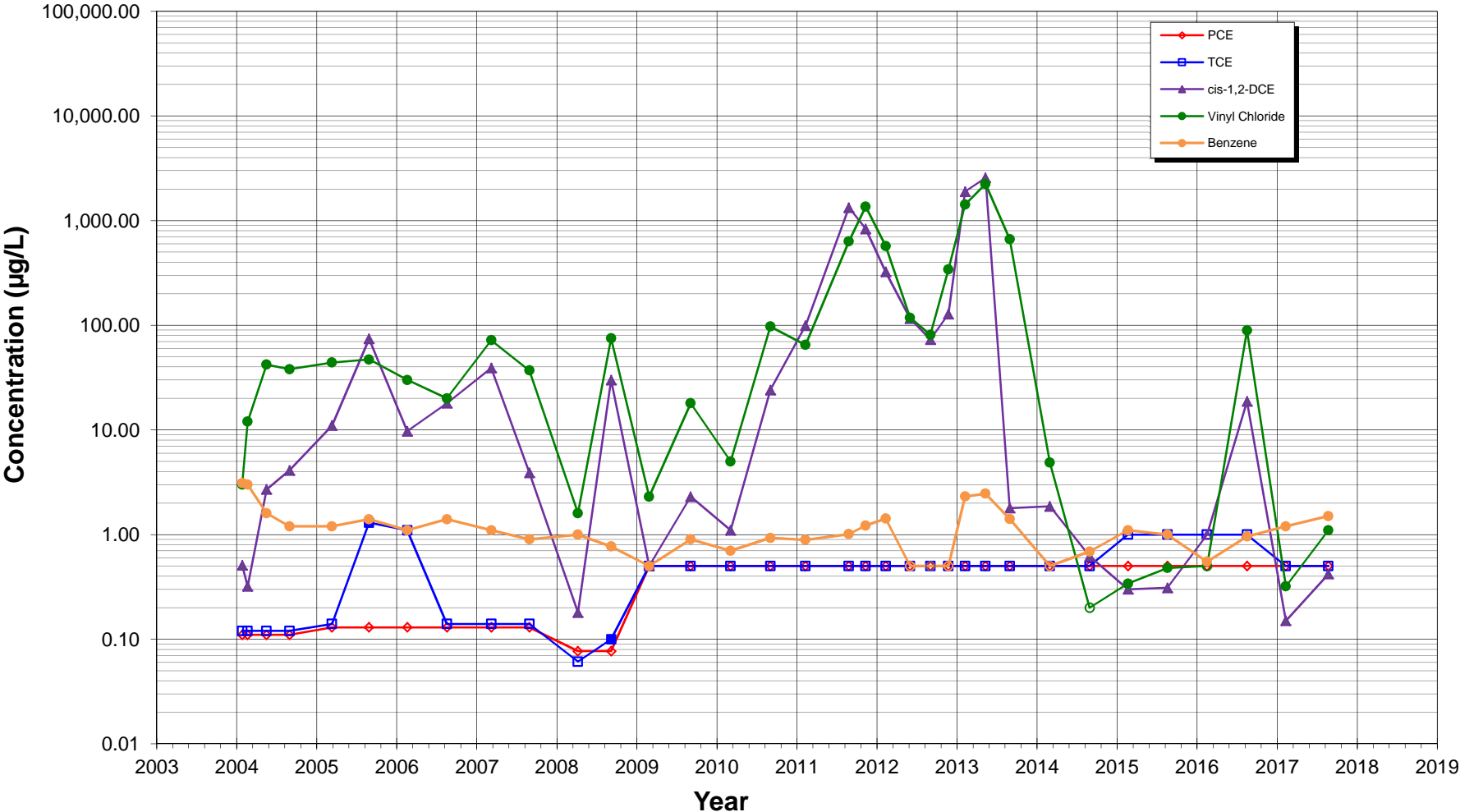
- 1) Deep injection conducted in April and May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: PCE = 0.86 µg/L, TCE = 4.0 µg/L, cis-1,2-DCE = 70 µg/L, and Vinyl Chloride = 0.5 µg/L.

Figure C36. Constituent vs Time  
Monitoring Well MW-18  
Univar USA Inc., Kent, Washington



Notes:  
1) Deep injection conducted in April and May 2011.  
2) All results that were not detected at the lowest reported limit are shown as hollow data points.  
3) Final Site Cleanup Levels: 1,1,1-TCA = 200 µg/L, 1,1-DCA = 800 µg/L, 1,1-DCE = 7 µg/L, and Chloroethane = 15 µg/L.

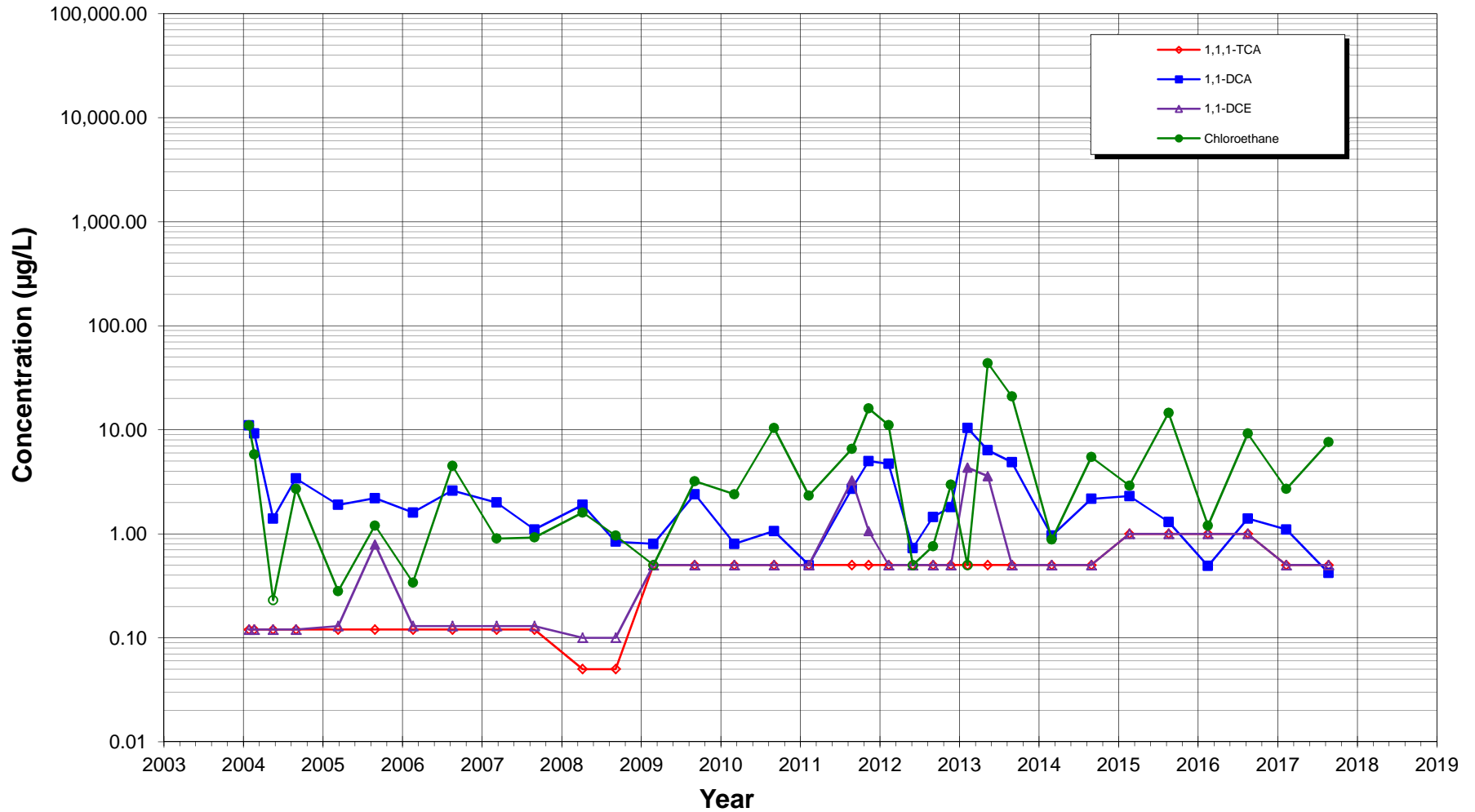
Figure C37. Constituent vs Time  
Monitoring Well MW-19  
Univar USA Inc., Kent, Washington



Notes:

- 1) Deep injection conducted in April and May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: PCE = 0.86 µg/L, TCE = 4.0 µg/L, cis-1,2-DCE = 70 µg/L, Vinyl Chloride = 0.5 µg/L, and Benzene = 0.8 µg/L.

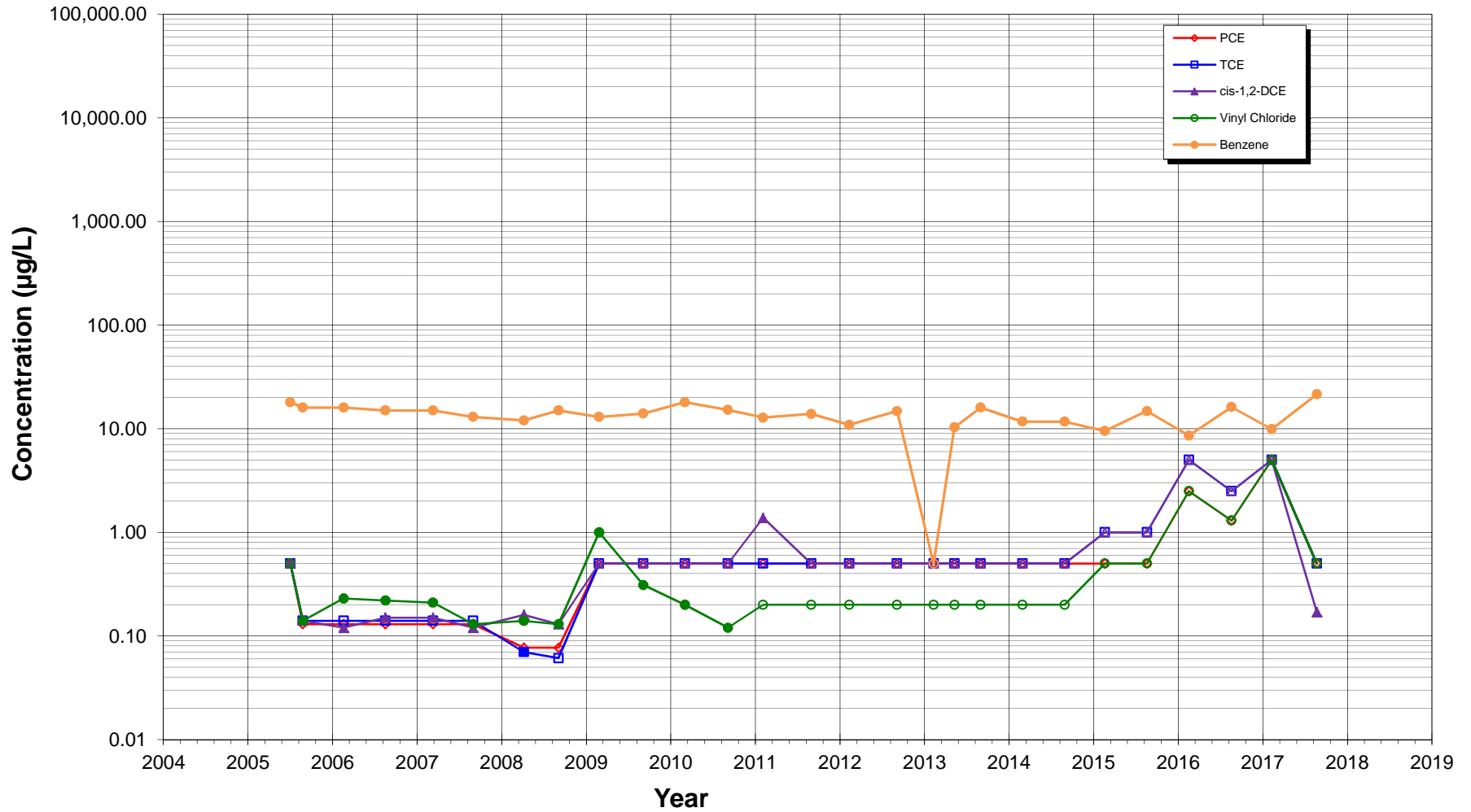
**Figure C38. Constituent vs Time  
Monitoring Well MW-19  
Univar USA Inc., Kent, Washington**



**Notes:**

- 1) Deep injection conducted in April and May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: 1,1,1-TCA = 200 µg/L, 1,1-DCA = 800 µg/L, 1,1-DCE = 7 µg/L, and Chloroethane = 15 µg/L.

**Figure C39. Constituent vs Time  
Monitoring Well MW-20  
Univar USA Inc., Kent, Washington**

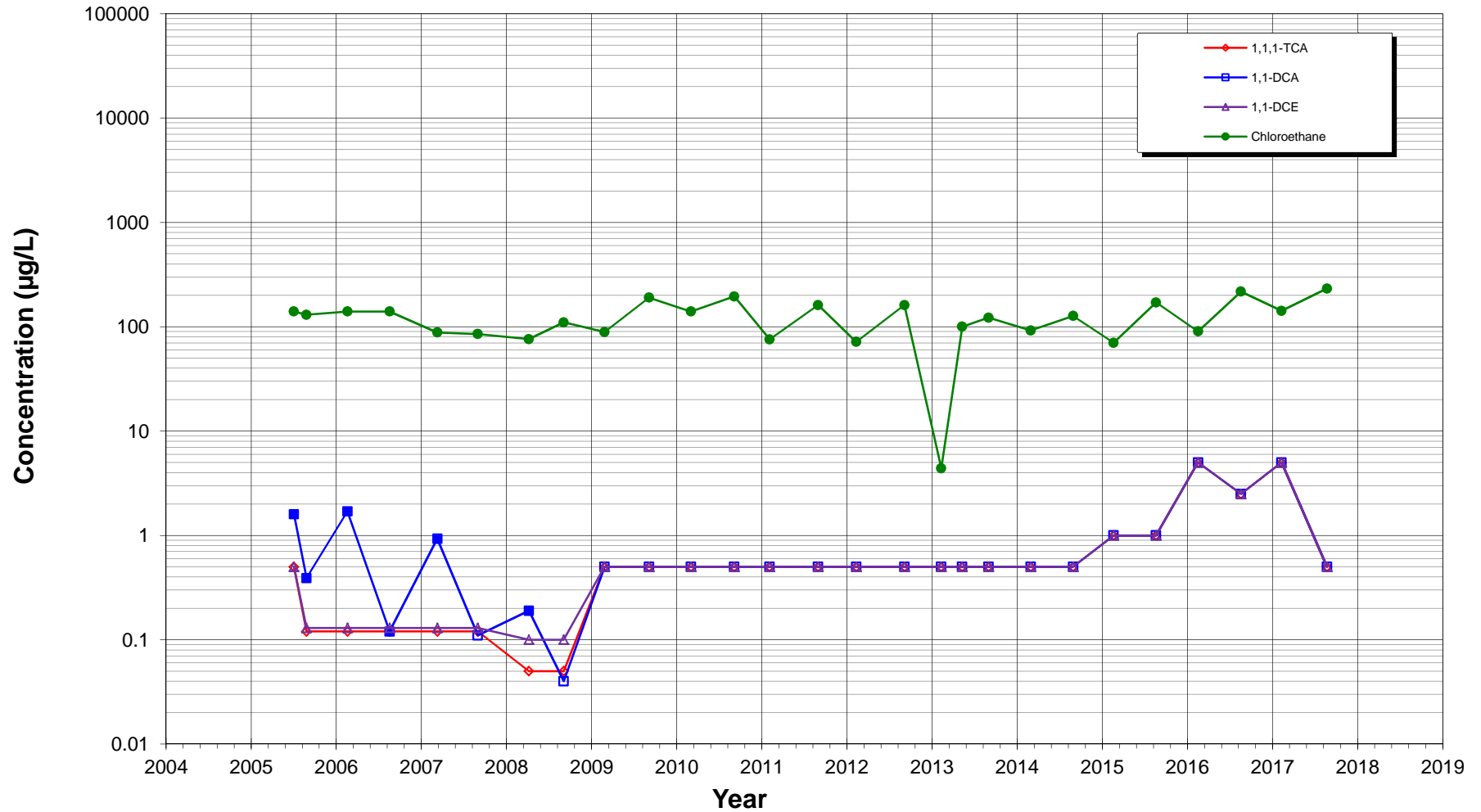


**Notes:**

- 1) Deep injection conducted in April and May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: PCE = 0.86 µg/L, TCE = 4.0 µg/L, cis-1,2-DCE = 70 µg/L, Vinyl Chloride = 0.5 µg/L, and Benzene = 0.8 µg/L.



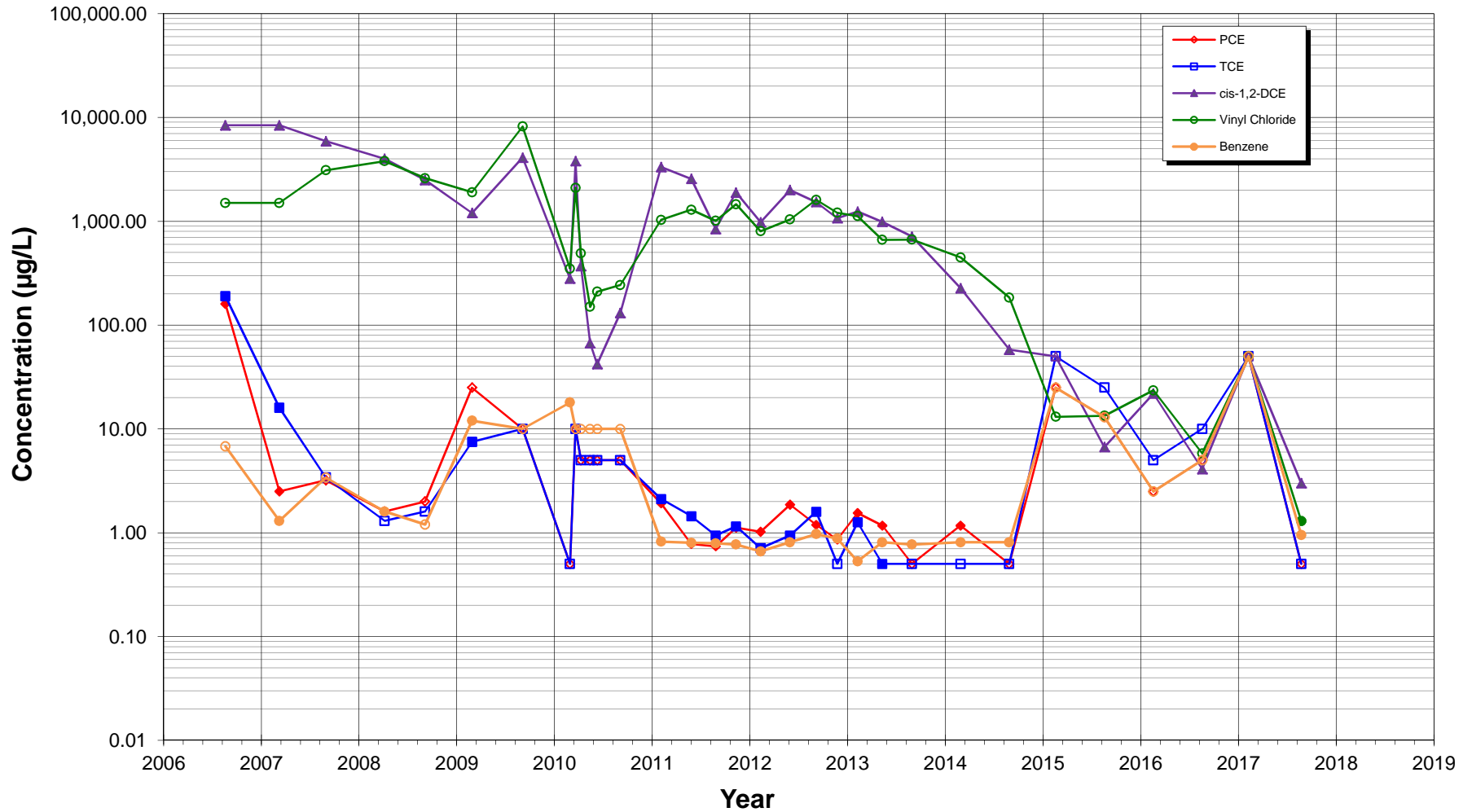
**Figure C40. Constituent vs Time  
Monitoring Well MW-20  
Univar USA Inc., Kent, Washington**



**Notes:**

- 1) Deep injection conducted in April and May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: 1,1,1-TCA = 200 µg/L, 1,1-DCA = 800 µg/L, 1,1-DCE = 7 µg/L, and Chloroethane = 15 µg/L.

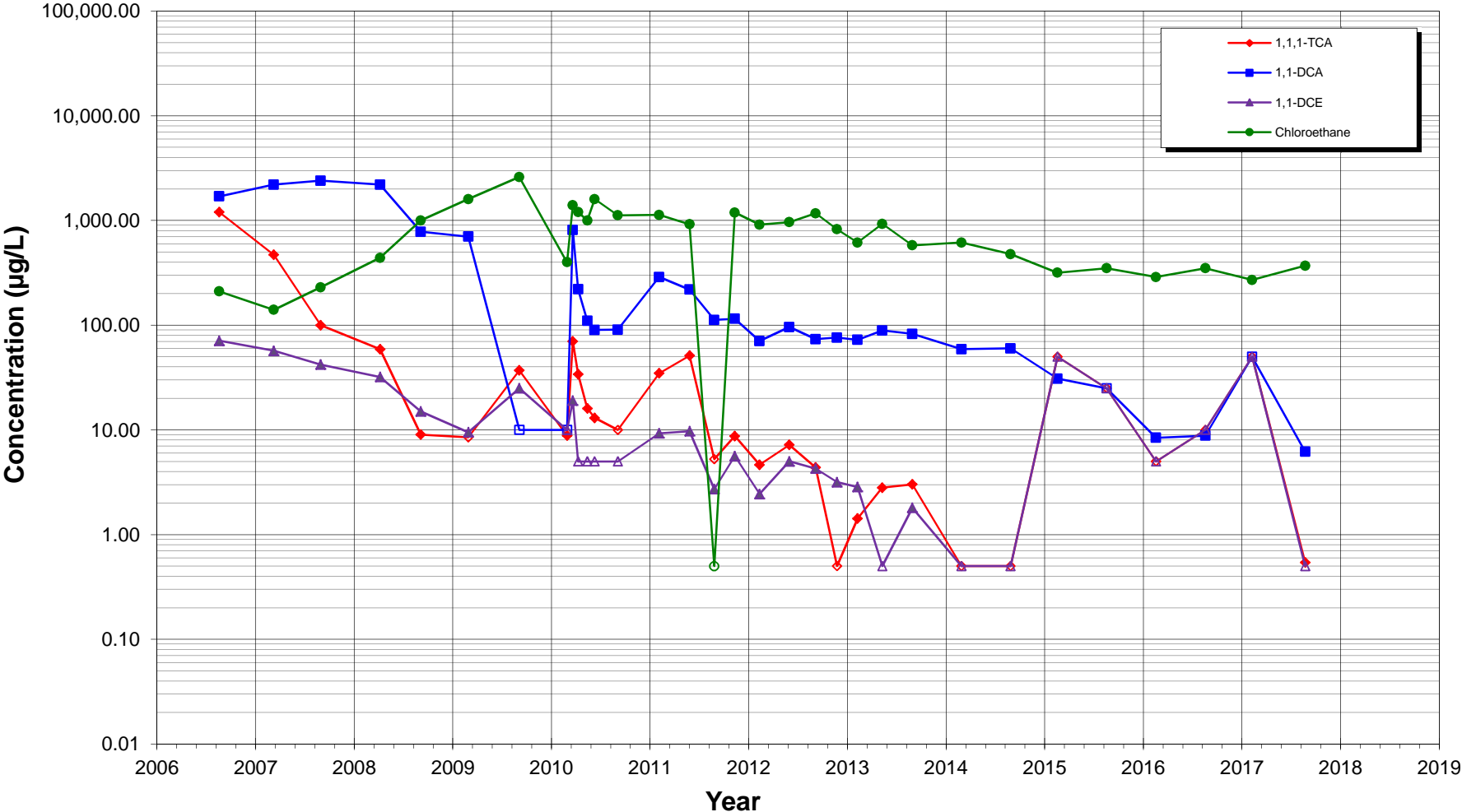
**Figure C41. Constituent vs Time  
Monitoring Well MW-21  
Univar USA Inc., Kent, Washington**



**Notes:**

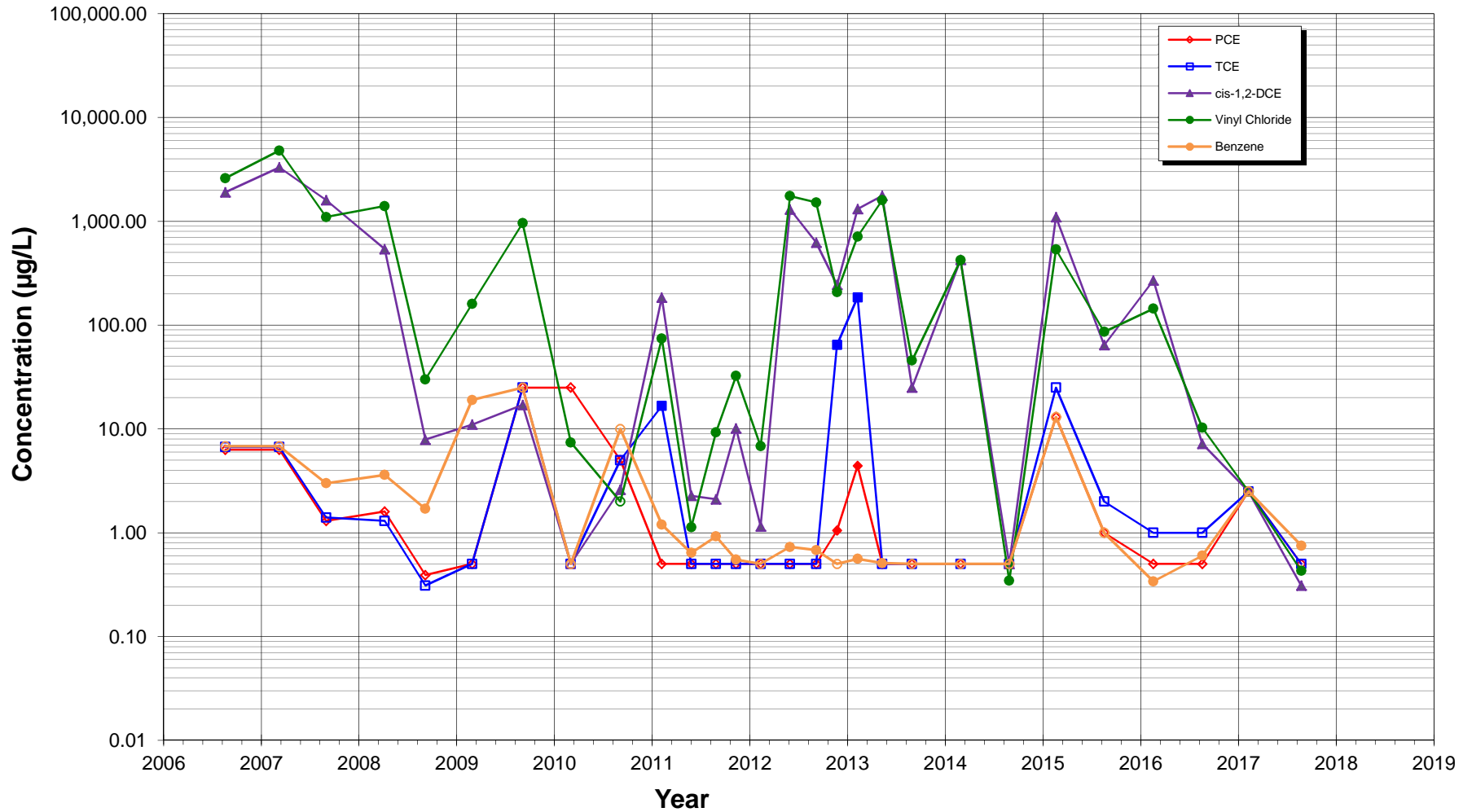
- 1) Deep injection conducted in April and May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: PCE = 0.86 µg/L, TCE = 4.0 µg/L, cis-1,2-DCE = 70 µg/L, Vinyl Chloride = 0.5 µg/L, and Benzene = 0.8 µg/L.

Figure C42. Constituent vs Time  
Monitoring Well MW-21  
Univar USA Inc., Kent, Washington



- Notes:
- 1) Deep injection conducted in April and May 2011.
  - 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
  - 3) Final Site Cleanup Levels: 1,1,1-TCA = 200 µg/L, 1,1-DCA = 800 µg/L, 1,1-DCE = 7 µg/L, and Chloroethane = 15 µg/L.

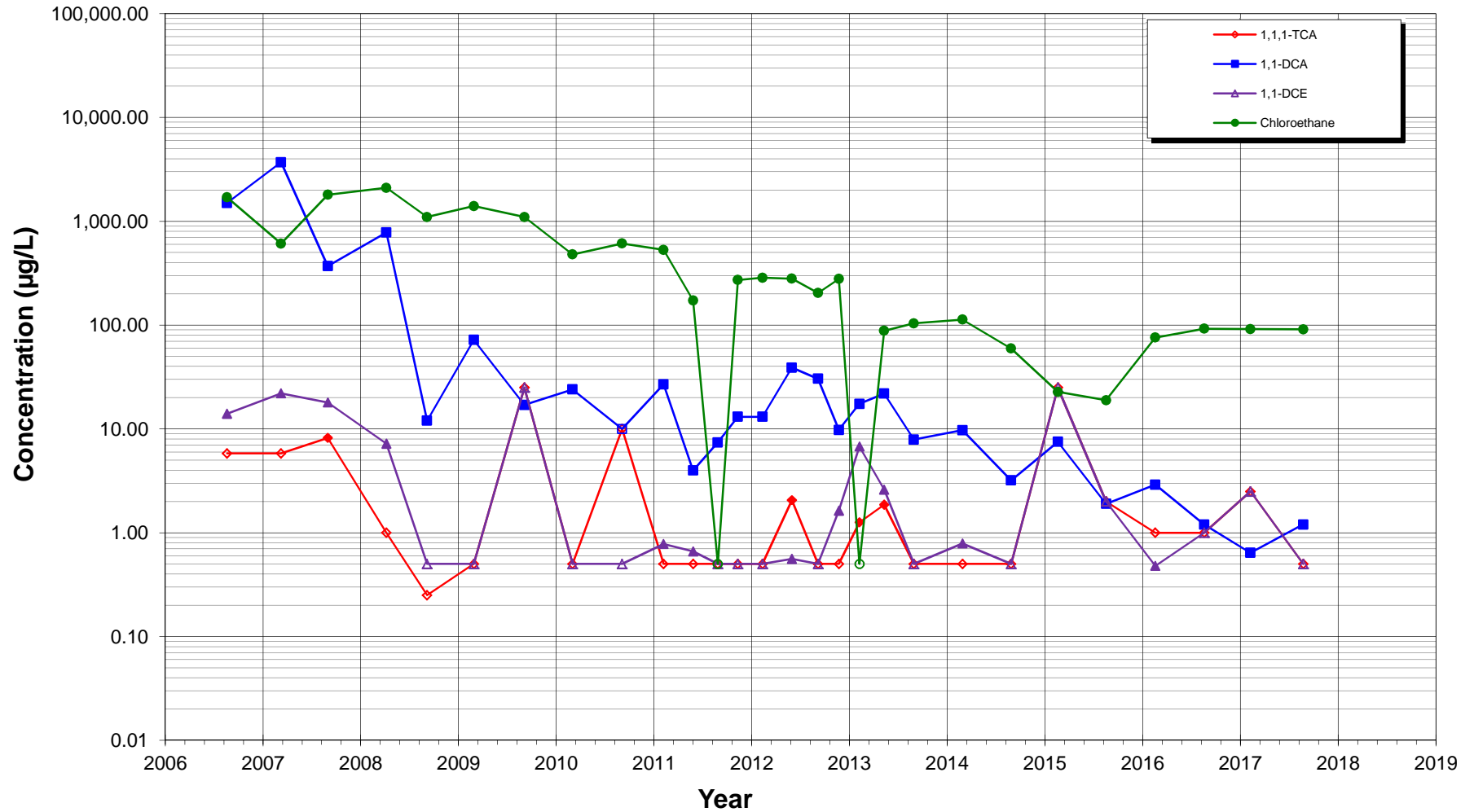
**Figure C43. Constituent vs Time  
Monitoring Well MW-22  
Univar USA Inc., Kent, Washington**



**Notes:**

- 1) Deep injection conducted in April and May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: PCE = 0.86 µg/L, TCE = 4.0 µg/L, cis-1,2-DCE = 70 µg/L, Vinyl Chloride = 0.5 µg/L, and Benzene = 0.8 µg/L.

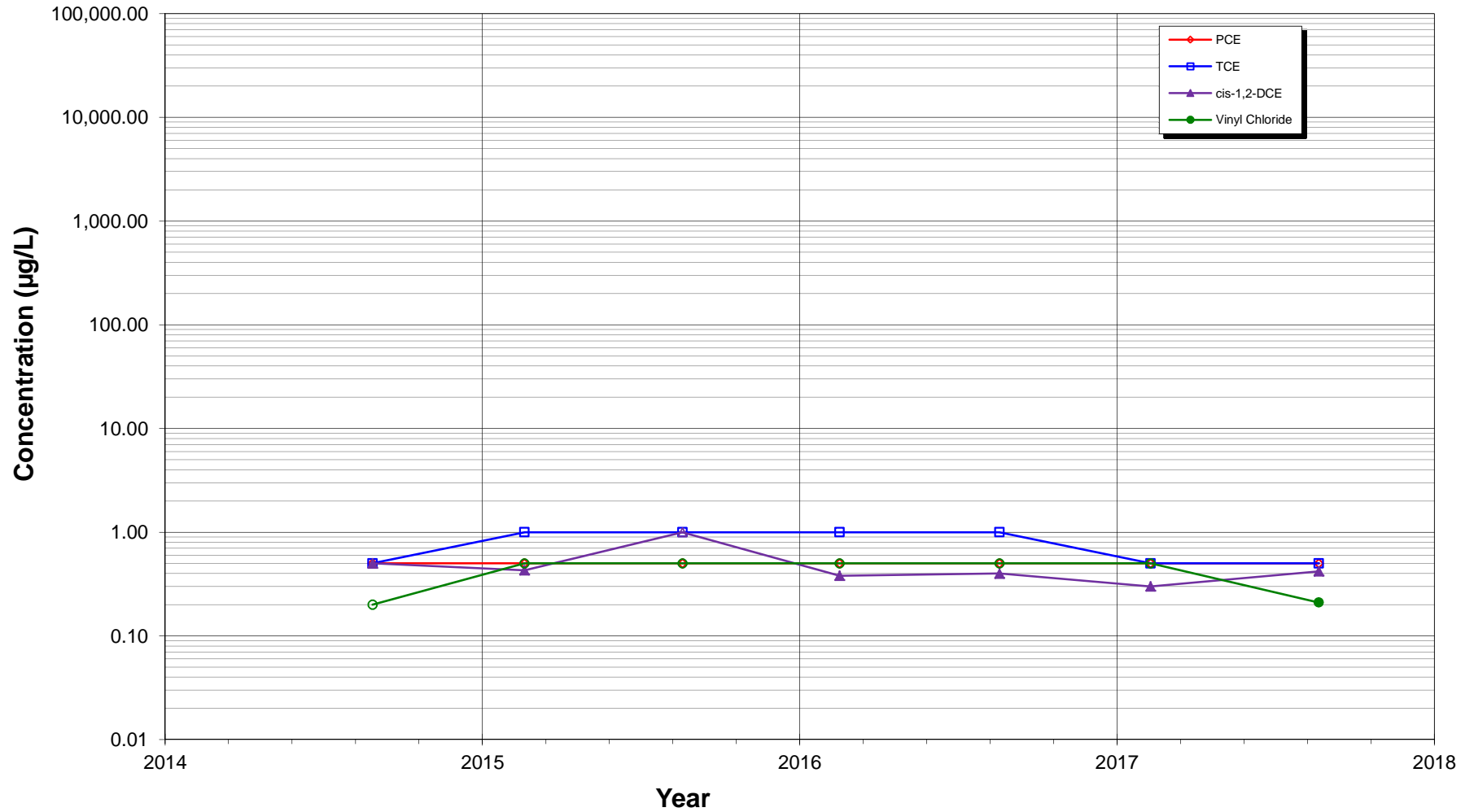
**Figure C44. Constituent vs Time  
Monitoring Well MW-22  
Univar USA Inc., Kent, Washington**



**Notes:**

- 1) Deep injection conducted in April and May 2011.
- 2) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 3) Final Site Cleanup Levels: 1,1,1-TCA = 200 µg/L, 1,1-DCA = 800 µg/L, 1,1-DCE = 7 µg/L, and Chloroethane = 15 µg/L.

Figure C45. Constituent vs Time  
Monitoring Well MW-27  
Univar USA Inc., Kent, Washington

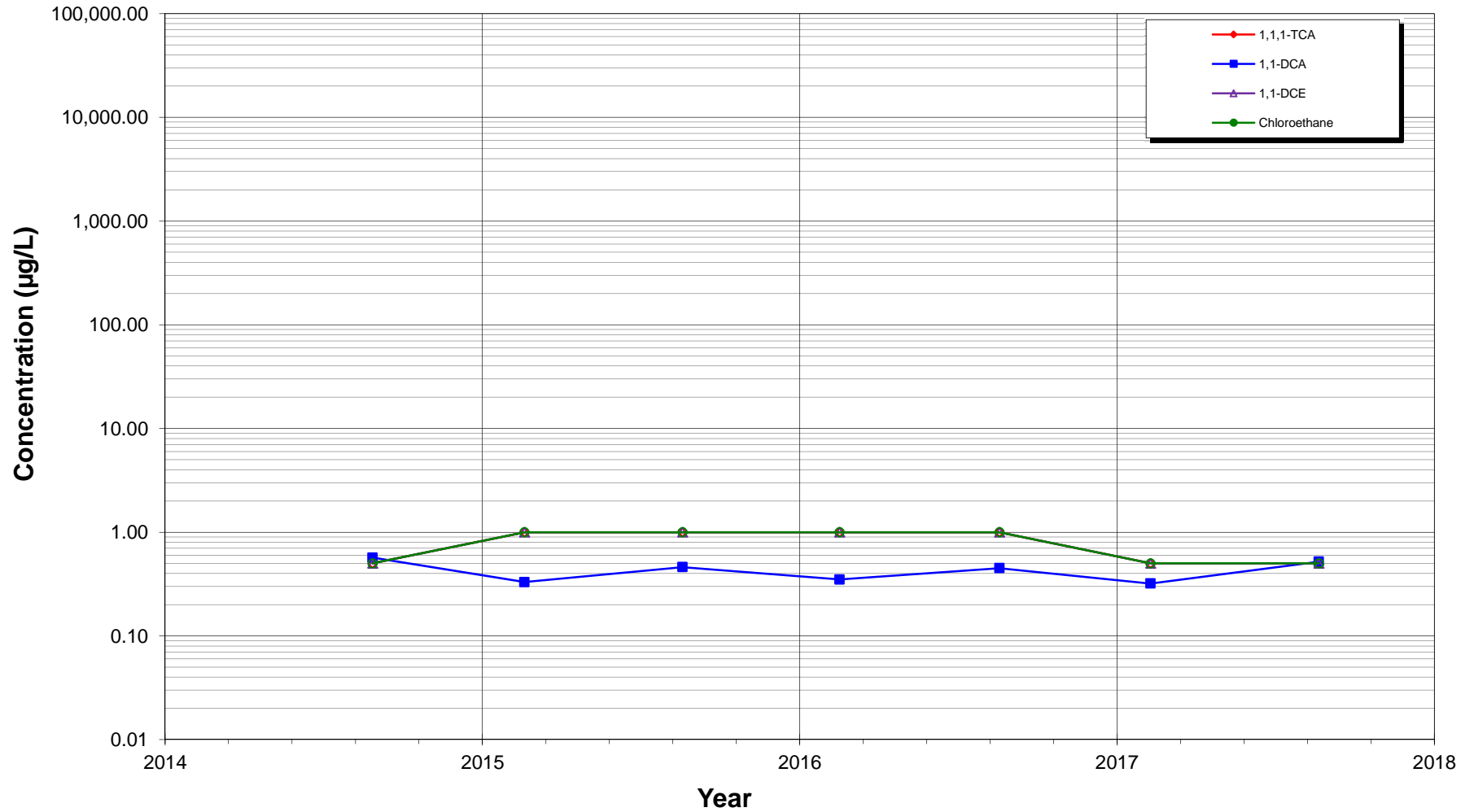


Notes:

- 1) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 2) Final Site Cleanup Levels: PCE = 0.86 µg/L, TCE = 4.0 µg/L, cis-1,2-DCE = 70 µg/L, and Vinyl Chloride = 0.5 µg/L.



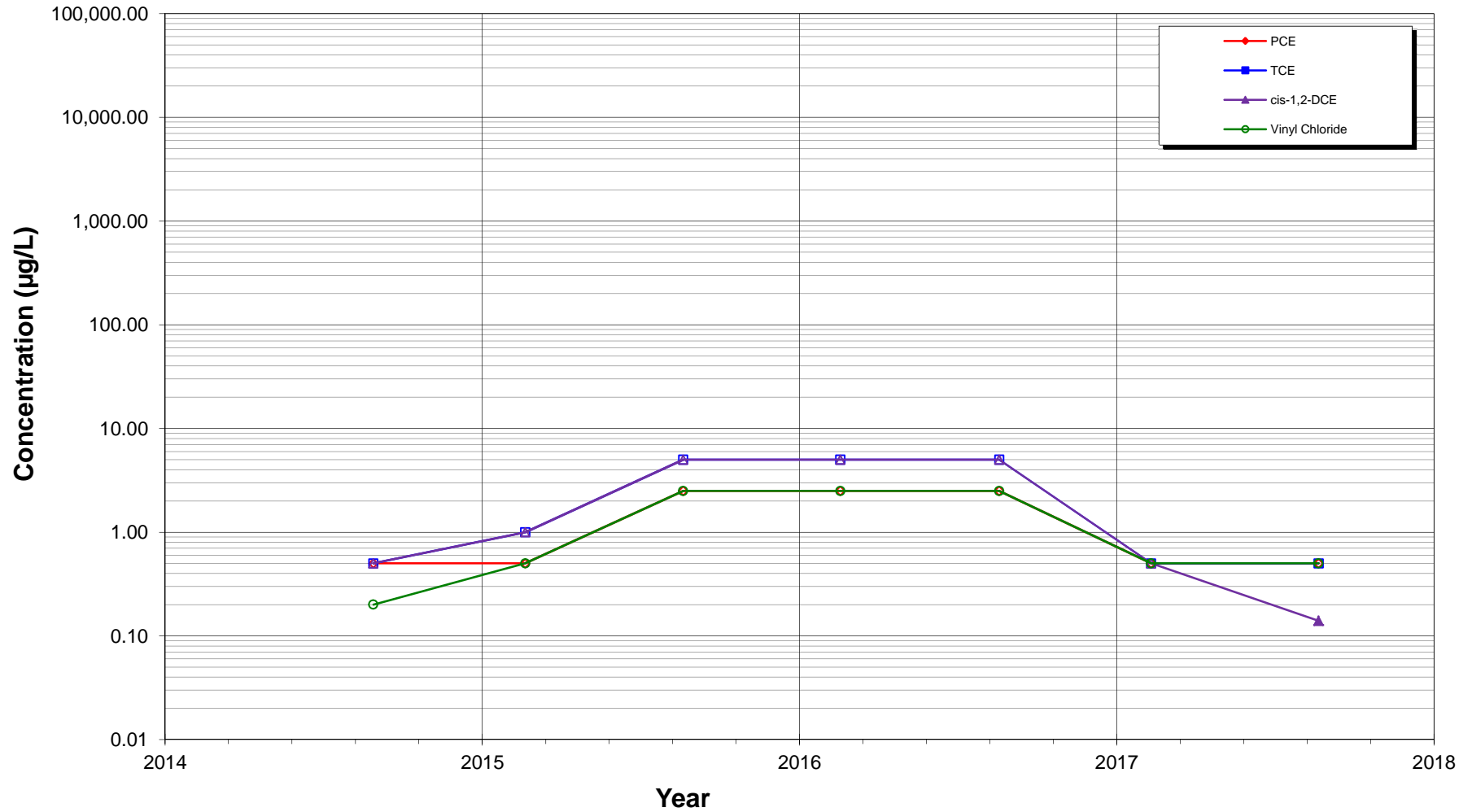
Figure C46. Constituent vs Time  
Monitoring Well MW-27  
Univar USA Inc., Kent, Washington



Notes:

- 1) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 2) Final Site Cleanup Levels: 1,1,1-TCA = 200 µg/L, 1,1-DCA = 800 µg/L, 1,1-DCE = 7 µg/L, and Chloroethane = 15 µg/L.

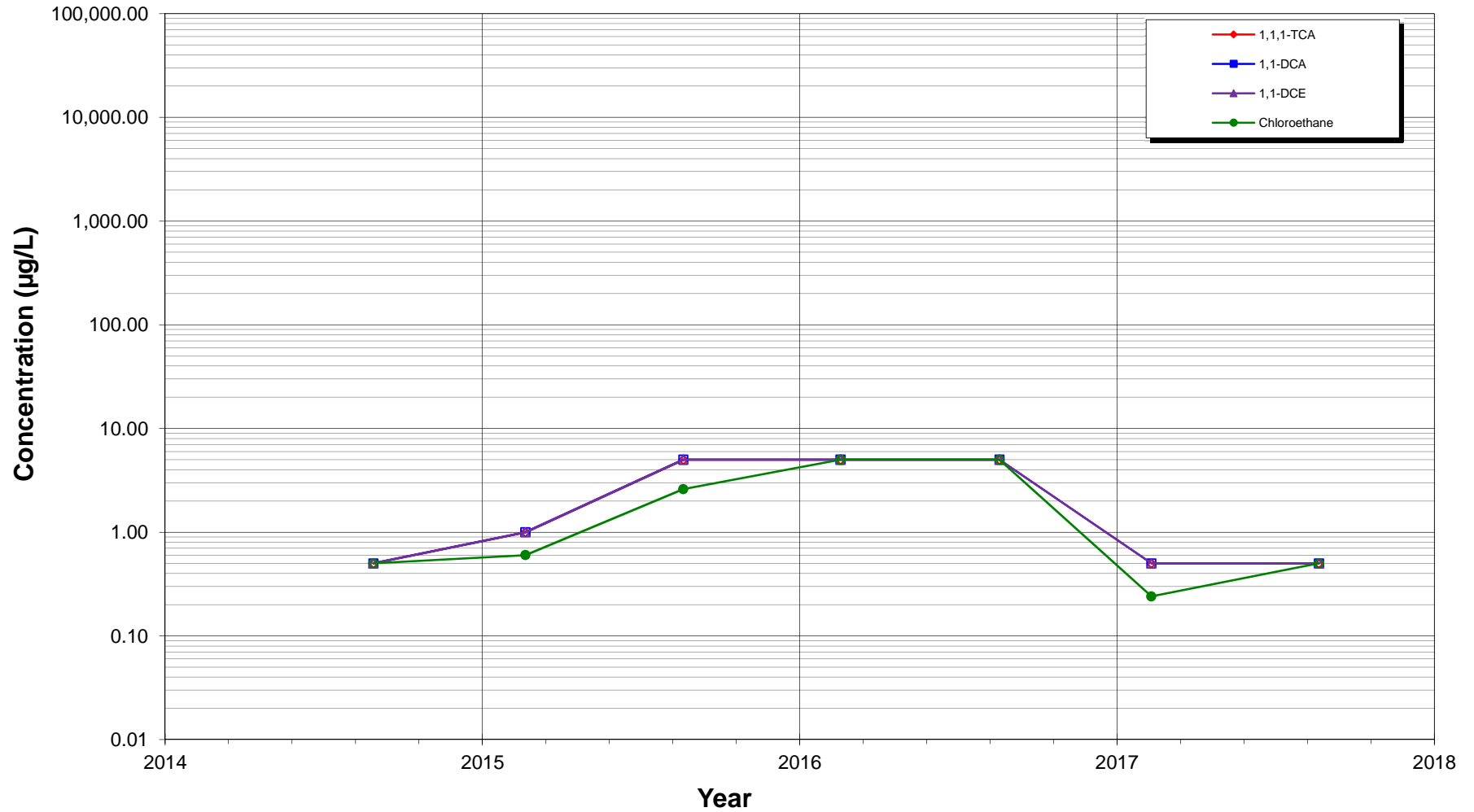
**Figure C47. Constituent vs Time  
Monitoring Well MW-28  
Univar USA Inc., Kent, Washington**



Notes:

- 1) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 2) Final Site Cleanup Levels: PCE = 0.86 µg/L, TCE = 4.0 µg/L, cis-1,2-DCE = 70 µg/L, and Vinyl Chloride = 0.5 µg/L.

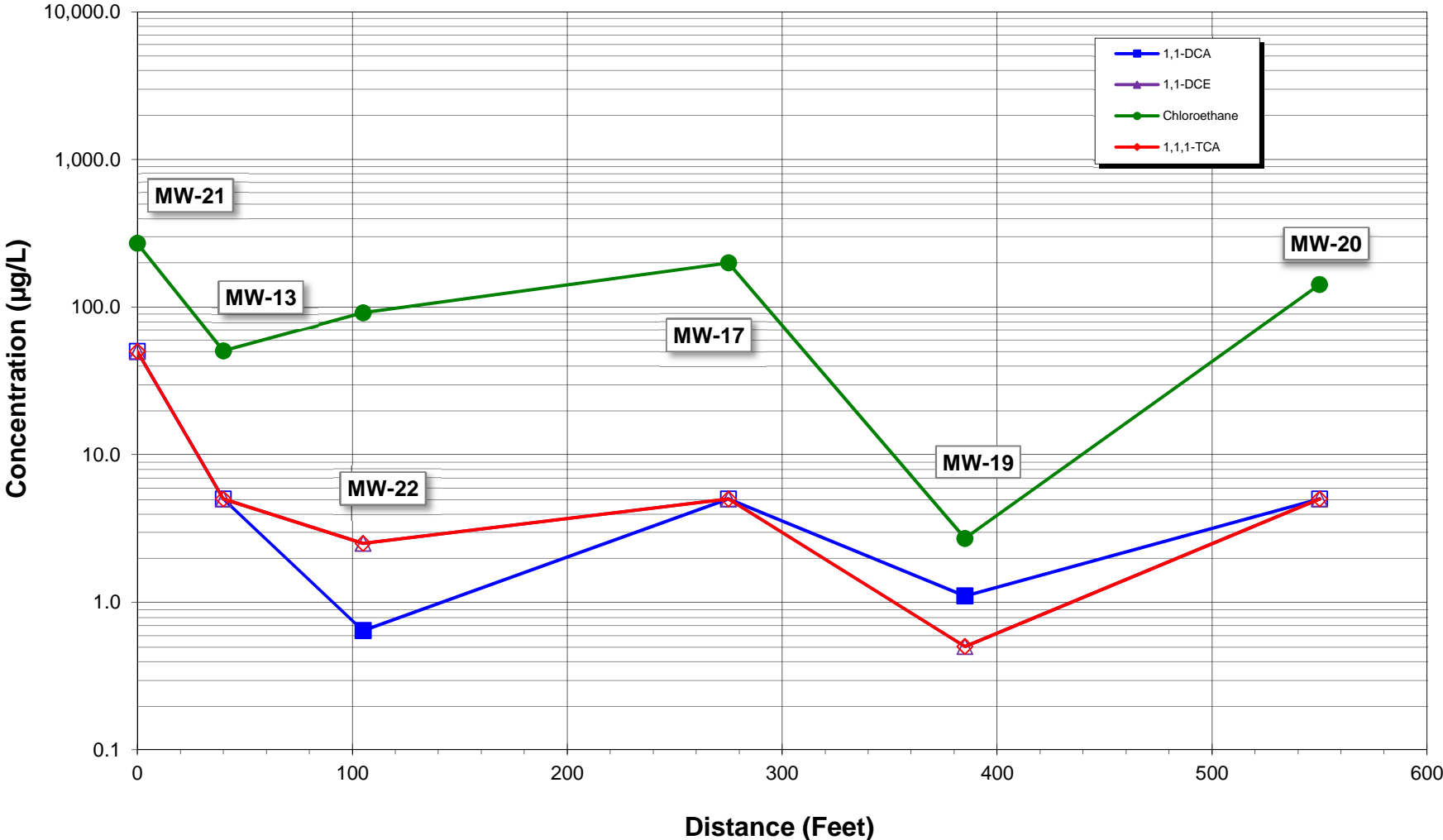
Figure C48. Constituent vs Time  
Monitoring Well MW-28  
Univar USA Inc., Kent, Washington



Notes:

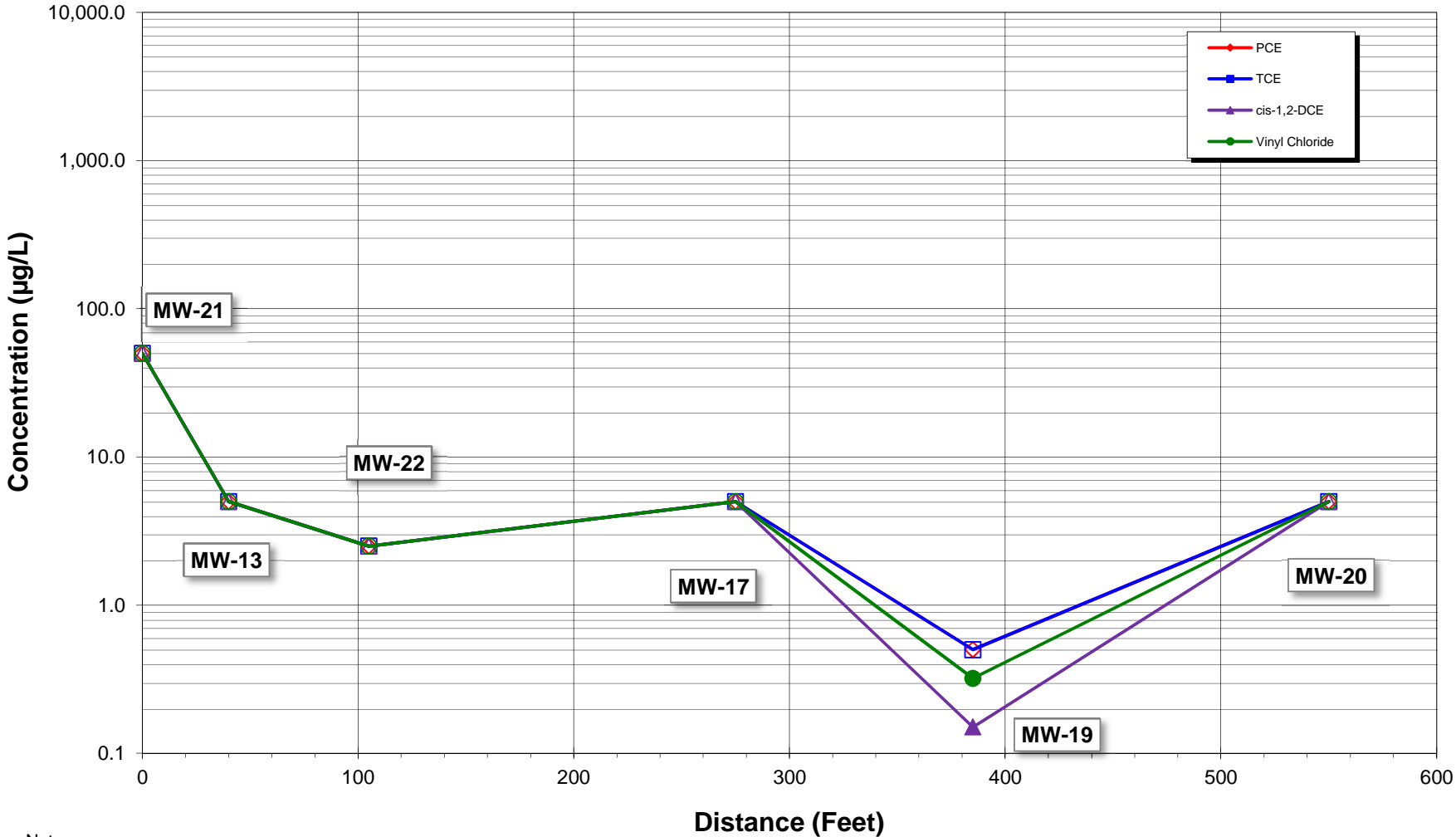
- 1) All results that were not detected at the lowest reported limit (MDL or MRL) are shown as hollow data points.
- 2) Final Site Cleanup Levels: 1,1,1-TCA = 200 µg/L, 1,1-DCA = 800 µg/L, 1,1-DCE = 7 µg/L, and Chloroethane = 15 µg/L.

Figure C49. Concentrations of Chloroethanes vs Distance from Deep Treatment Area  
March 2017  
Univar USA Inc., Kent, Washington



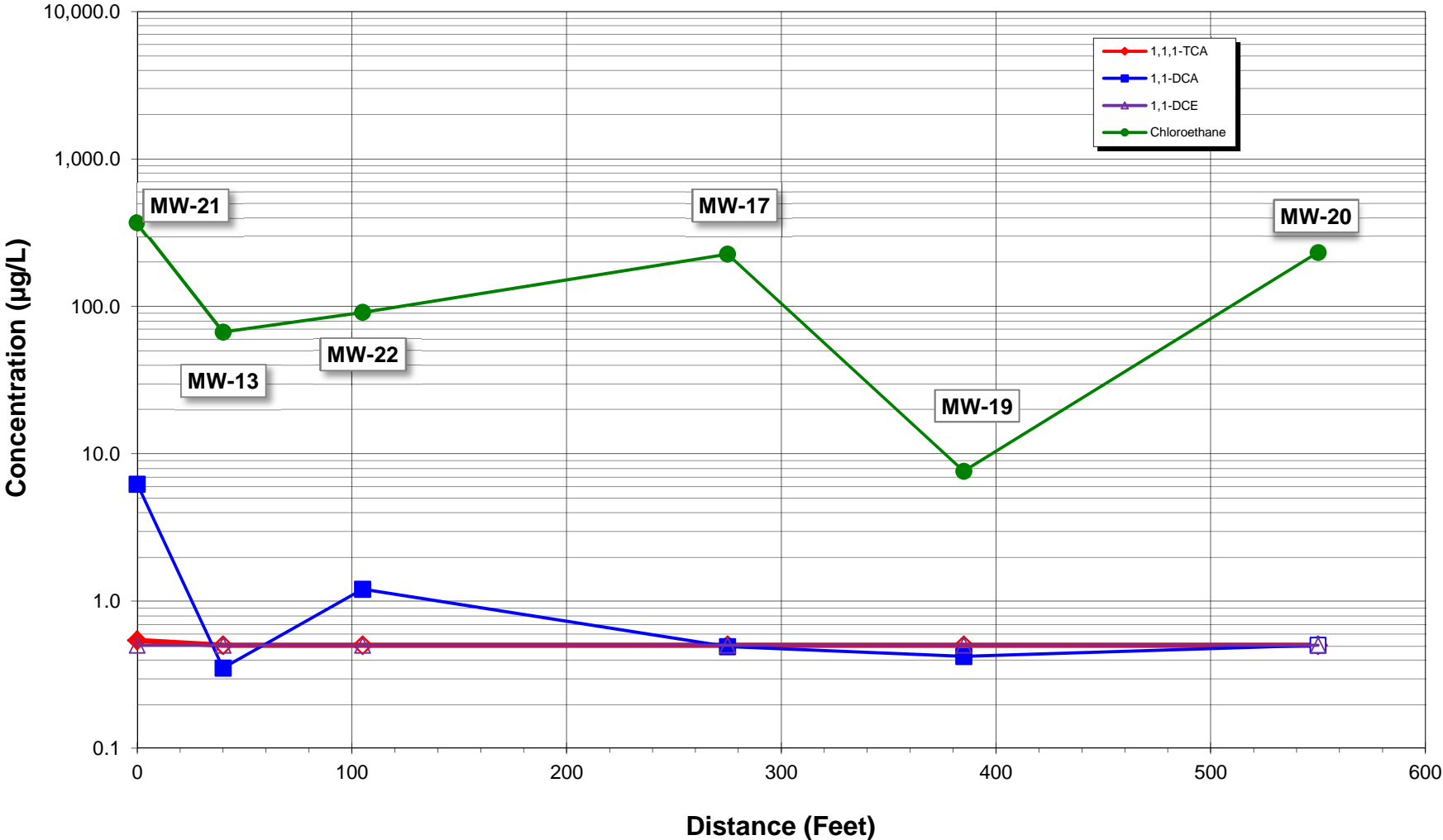
Notes:  
1) Non-detect results below the MRLs are shown as hollow data points.

**Figure C50. Concentrations of Chlorinated Ethenes vs Distance from Deep Treatment Area  
March 2017  
Univar USA Inc., Kent, Washington**



Notes:  
1) Non-detect results below the MRLs are shown as hollow data points.

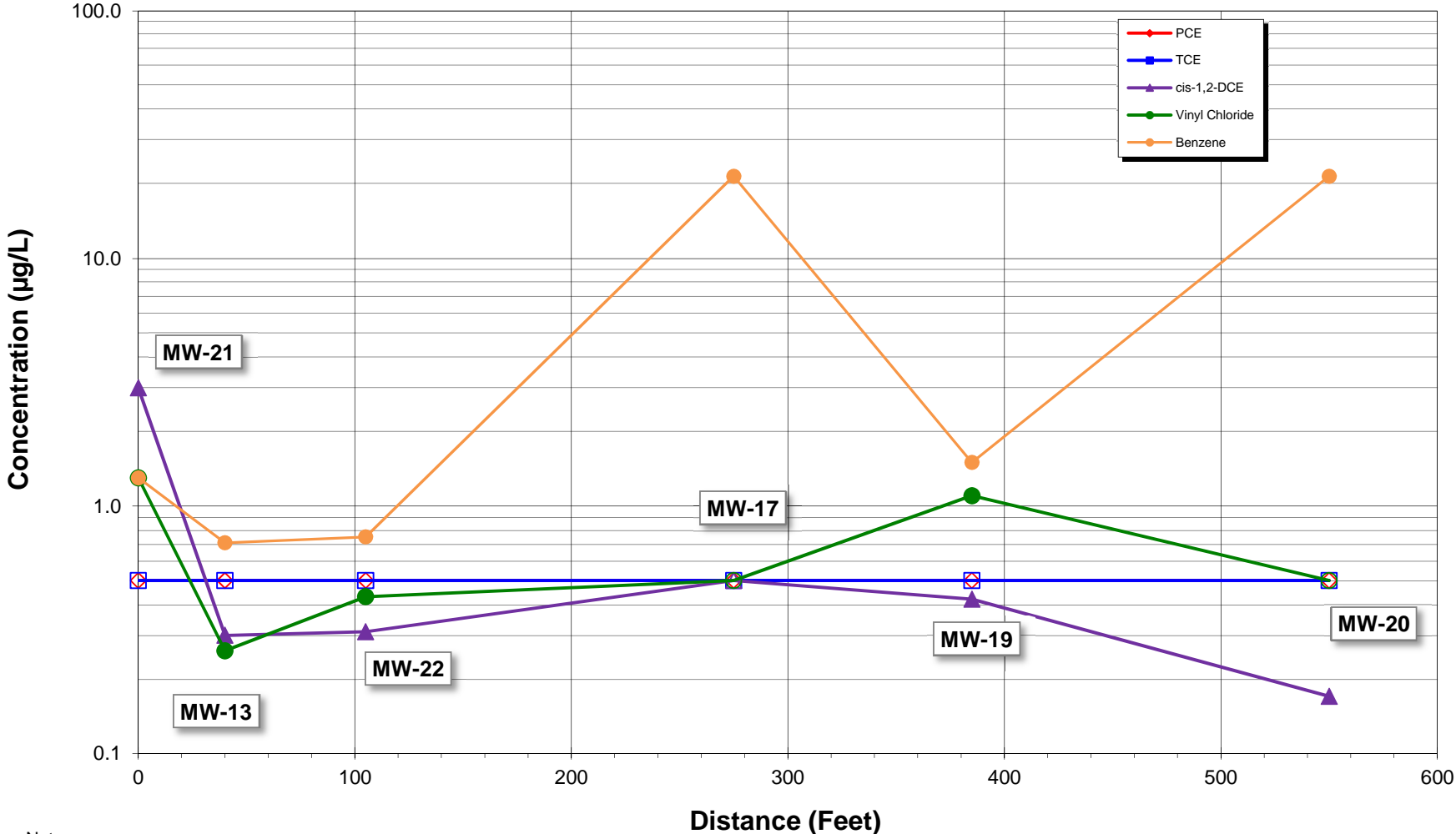
Figure C51. Concentrations of Chloroethanes vs Distance from Deep Treatment Area  
September 2017  
Univar USA Inc., Kent, Washington



Notes:  
1) Non-detect results below the MRLs are shown as hollow data points.

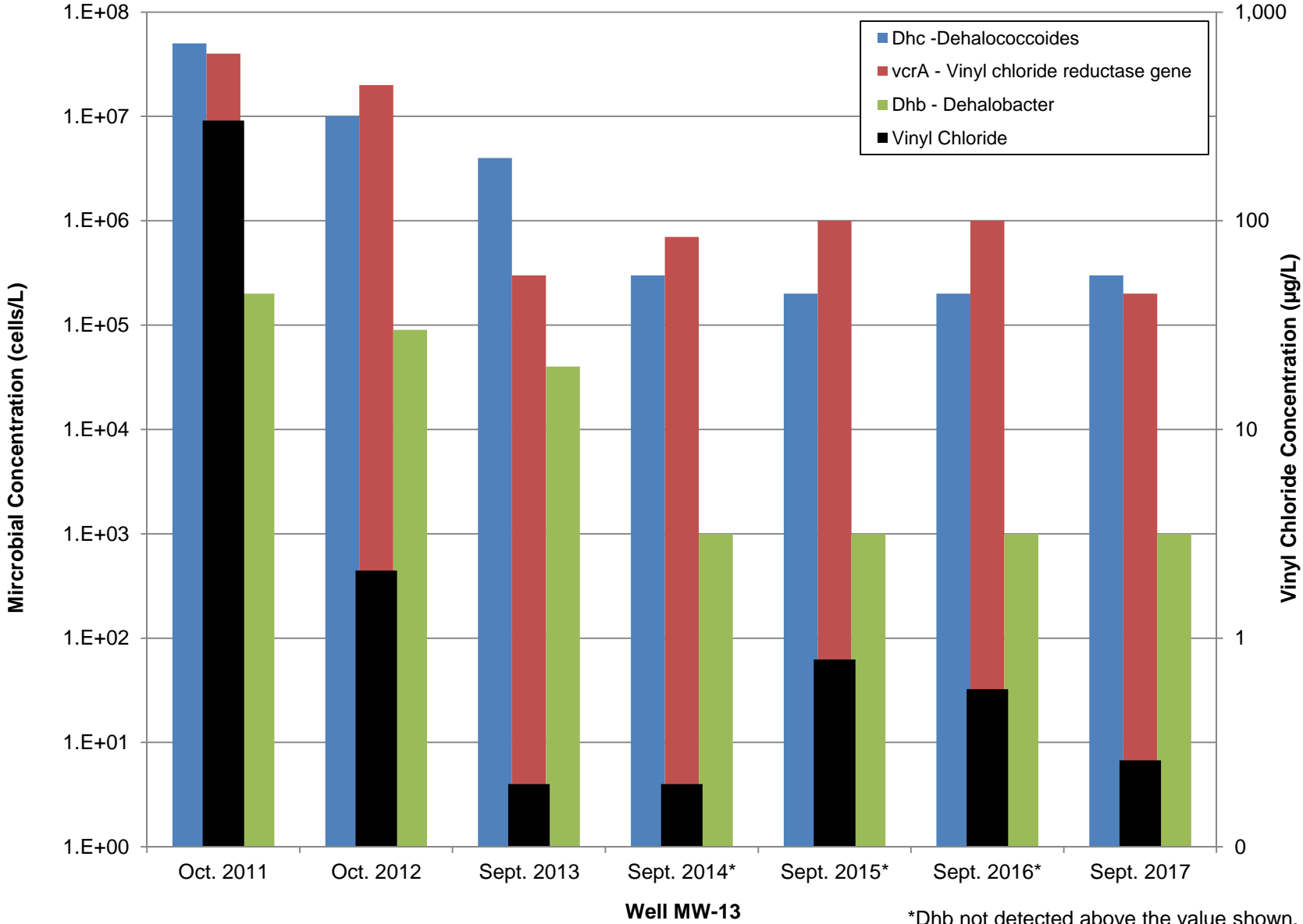


Figure C52. Concentrations of Chlorinated Ethenes and Benzene vs Distance from Deep Treatment Area  
September 2017  
Univar USA Inc., Kent, Washington



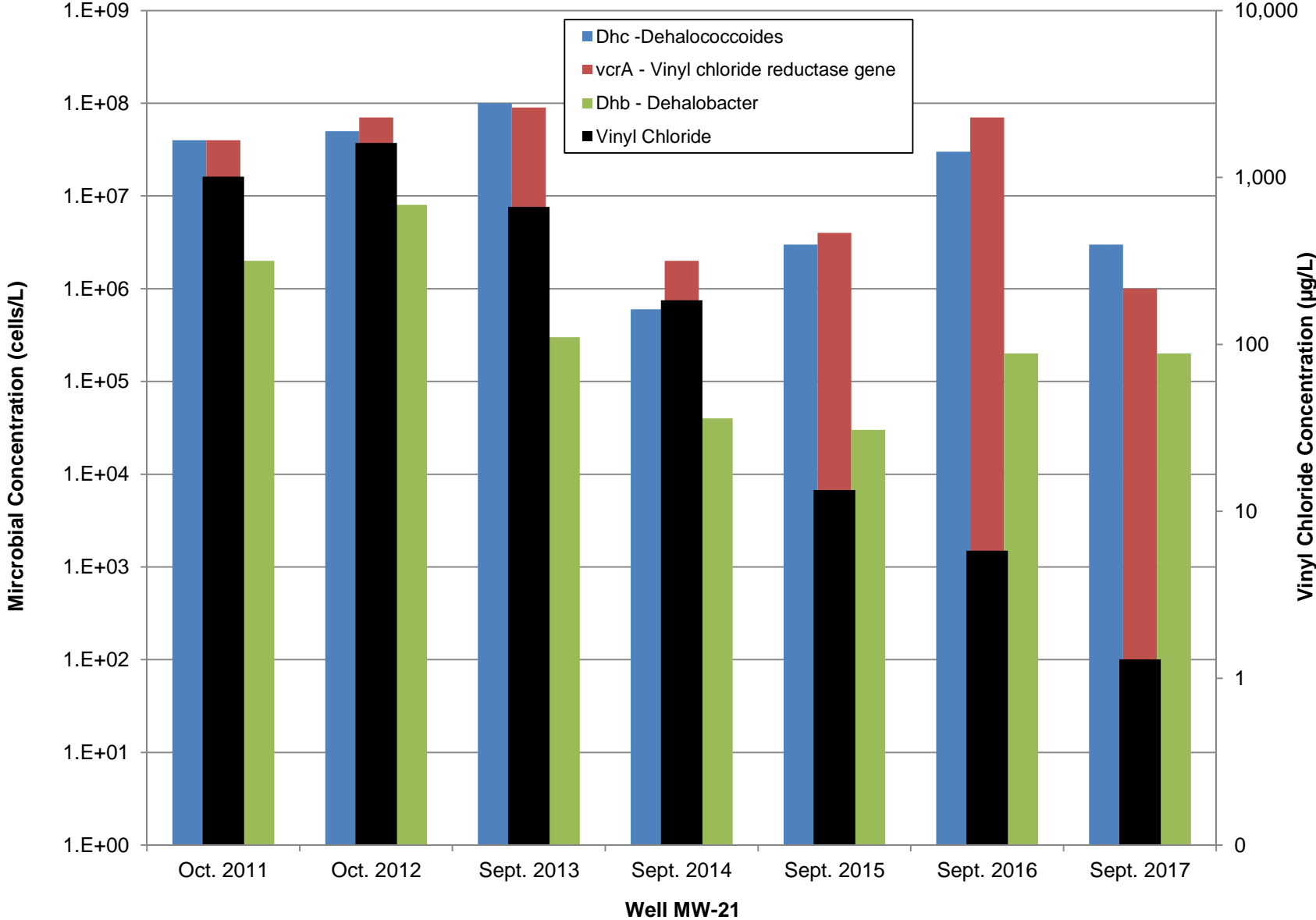
Notes:  
1) Non-detect results below the MRLs are shown as hollow data points.

### Figure C53. Microbial and Vinyl Chloride Concentrations Well MW-13

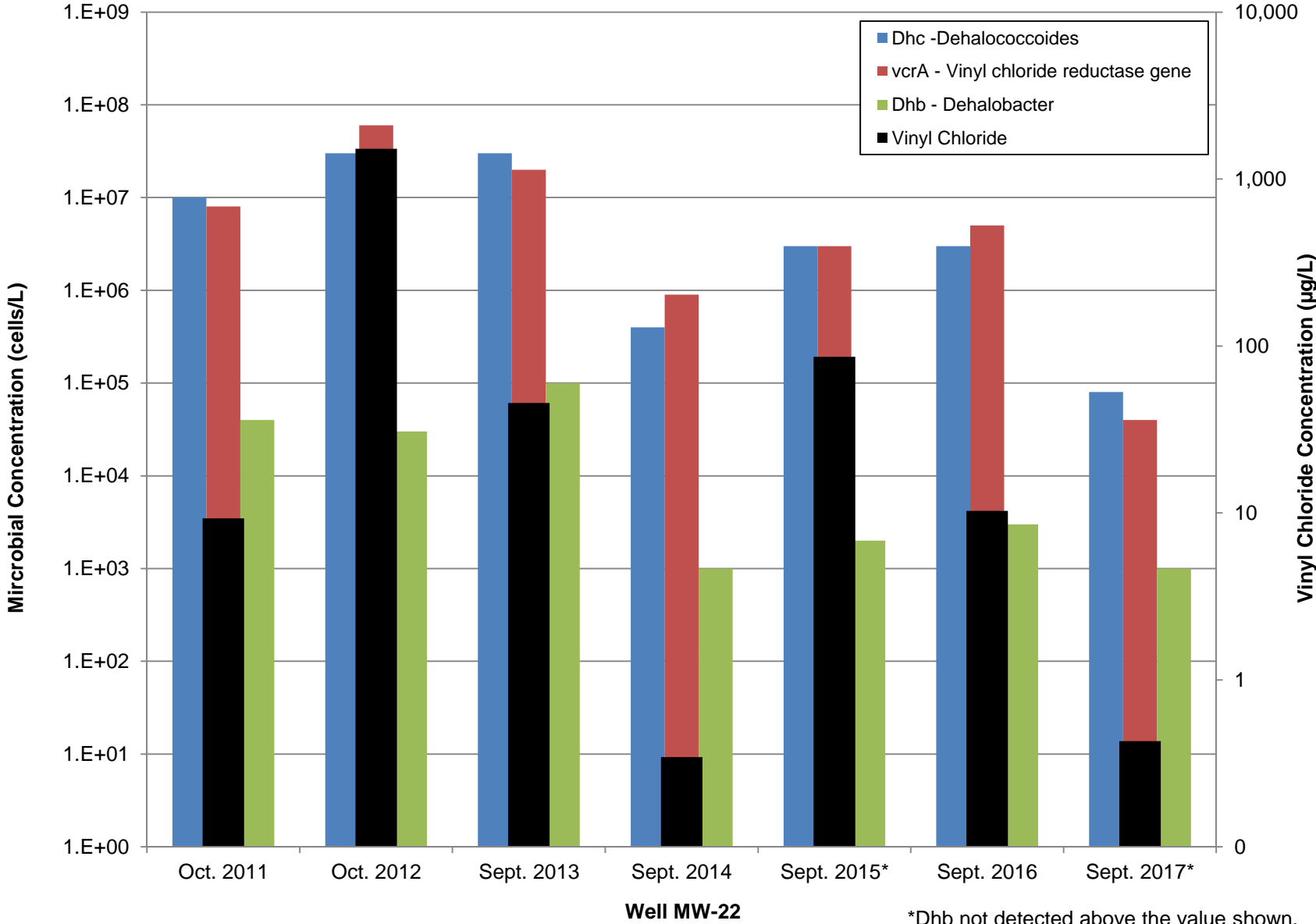


\*Dhb not detected above the value shown.

### Figure C54. Microbial and Vinyl Chloride Concentrations Well MW-21



### Figure C55. Microbial and Vinyl Chloride Concentrations Well MW-22



\*Dhb not detected above the value shown.

Appendix D  
Groundwater Sampling Field Forms, Data Validation Reports, and  
Analytical Lab Reports