



GTE Operations Support Incorporated  
One Verizon Way (VC34W443)  
Basking Ridge, NJ 07920-1097  
908-559-3691

May 25, 2016

Mr. Christopher Magee  
New York State Department of Environmental Conservation  
Division of Environmental Remediation  
625 Broadway, 12th Floor  
Albany, NY 12233-7017

Re: *March 2016 Semi-Annual Groundwater Sampling Event*

Dear Mr. Magee:

Attached are the March 2016 semi-annual groundwater sampling results for the Former Philips Display Components Facility in Seneca Falls, New York. Chlorinated volatile organic compounds, primarily trichloroethene and cis-1,2-dichloroethene, were reported in select groundwater samples at concentrations greater than New York State Department of Environmental Conservation (NYSDEC) Class GA Standards.

The next semi-annual groundwater sampling event is tentatively scheduled for the week of September 12, 2016. Please call me at (908) 559-3691 if you have any questions.

Sincerely,

 *FOR MTW*

Matthew T. Walsh  
Manager – Corporate Workplace Safety &  
Environmental Compliance

ec:

Ms. Denise Radtke (NYSDEC)

Mr. Justin Deming (New York State Department of Health)

Mr. Nidal Azzam (USEPA)

Mr. Ernst Jabouin (USEPA)

Ms. Kelly Kline (Seneca County Industrial Development Agency)

Mr. Stephen Bregande (H.P. Neun)

Mr. J. Christopher Woods (H.P. Neun)

Ms. Anna Kunkel (Environmental Consultant)

Ms. Pam Cox (GTE Operations Support Incorporated)

Mr. Daniel Lang (Arcadis U.S., Inc.)

Mr. Mark Flusche (Arcadis U.S., Inc.)

Ms. Marzi Sharfaei (Arcadis U.S., Inc.)

## March 2016 Semi-Annual Groundwater Sampling

On March 29, 2016, Arcadis U.S., Inc. measured depth to groundwater in 17 monitoring wells and retrieved passive diffusion bags (PDBs) from 8 monitoring wells where PDBs were deployed on September 10, 2015 (Figure 1). Samples were collected for analysis of volatile organic compounds (VOC) from PDBs retrieved from six shallow monitoring wells (MW-22 through MW-26, and MW-29), one weathered bedrock monitoring well (MW-BR-06), and one bedrock monitoring well (MW-BR-05). One trip blank and one duplicate sample were collected. The samples were shipped overnight to TestAmerica Laboratories, Inc., of Buffalo, New York (New York State Department of Health laboratory ID number 10026). The samples were analyzed for VOCs using United States Environmental Protection Agency Method 8260C. Data Validation Services, Inc., of North Creek, New York, performed third-party data validation. Sample results are usable as reported or with minor qualification (Attachment A). Graphs of groundwater VOC analytical results are in Attachment B.

Table 1 provides depth to water measurements and groundwater elevations. Table 2 provides analytical results for the March 2016 groundwater and quality assurance and quality control samples. VOC concentrations in the March 2016 samples were compared to the New York State Department of Environmental Conservation (NYSDEC) Class GA Standards.

- Trichloroethene (TCE) was reported at concentrations greater than the NYSDEC Class GA Standard of 5 micrograms per liter ( $\mu\text{g/l}$ ) in samples from monitoring wells MW-22, MW-23, MW-25, MW-26 and in the duplicate sample from monitoring well MW-25.
- *cis*-1,2-Dichloroethene (*cis*-1,2-DCE) was reported at concentrations greater than the NYSDEC Class GA Standard of 5  $\mu\text{g/l}$  in samples from monitoring wells MW-22 through MW-26, MW-29, and in the duplicate sample from monitoring well MW-25.
- Vinyl chloride was reported in the sample from monitoring well MW-26 at a concentration greater than the NYSDEC Class GA Standard of 2  $\mu\text{g/l}$ .
- 1,1-Dichloroethane (1,1-DCA) was reported at concentrations greater than the NYSDEC Class GA Standard of 5  $\mu\text{g/l}$  in the sample from monitoring well MW-25 and in the duplicate sample from monitoring well MW-25.
- Acetone was reported at estimated concentrations greater than the NYSDEC Class GA Standard of 50  $\mu\text{g/l}$  in samples from monitoring wells MW-22, MW-23, MW-25, MW-26, MW-29, MW-BR-05, and in the duplicate sample from monitoring well MW-25. The acetone concentrations greater than the laboratory method detection limit were qualified by the validator as estimated with a likely high bias because of elevated responses in the laboratory continuing calibration standards. Acetone is not a contaminant of concern and the concentrations are likely a result of a laboratory issue.

On March 29, 2016, after groundwater samples were collected, new PDBs were deployed in the fourteen monitoring wells scheduled for groundwater sampling in September 2016. The PDBs were installed in the middle of the well screen, consistent with previous sampling procedures.

### Figures

Figure 1 – Monitoring Well Locations

### Tables

Table 1 – Depth to Water Measurements

Table 2 – Groundwater Analytical Results (March 2016)

### Attachments

Data Validation Report

Groundwater VOC Concentration Graphs

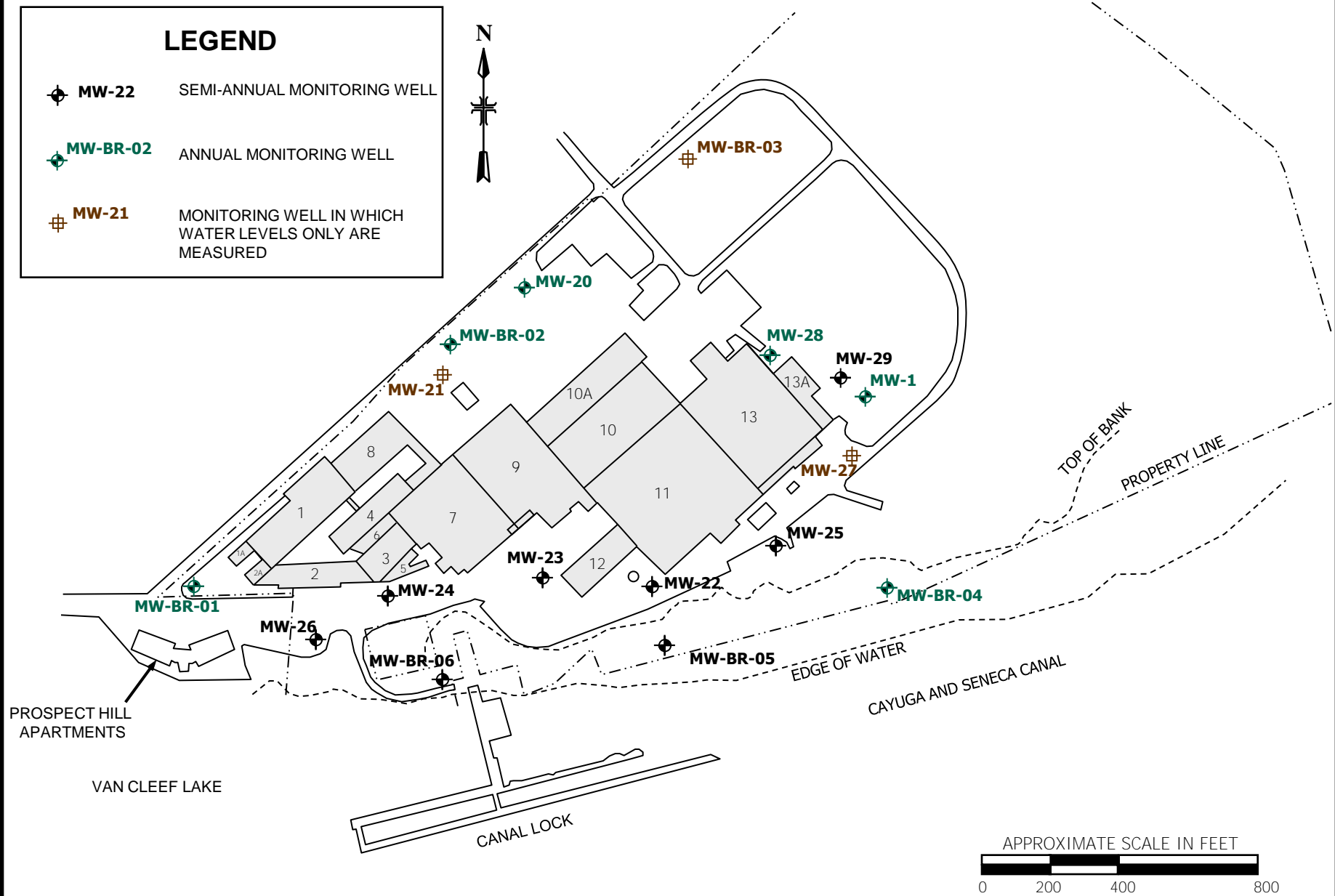
## Figures

# LEGEND

 **MW-22** SEMI-ANNUAL MONITORING WELL

 **MW-BR-02** ANNUAL MONITORING WELL

 **MW-21** MONITORING WELL IN WHICH WATER LEVELS ONLY ARE MEASURED



FORMER PHILIPS DISPLAY COMPONENTS FACILITY  
SENECA FALLS, NEW YORK

## MONITORING WELL LOCATIONS

FIGURE 1

## Tables

Table 1  
Depth to Water Measurements  
Former Philips Display Components Facility  
Seneca Falls, New York

Well Number	Datum Elevation	Depth to Water (feet)	Water Level Elevation (feet AMSL)
MW-1	460.83	8.43	452.40
MW-20	463.42	1.03	462.39
MW-21	467.39	2.25	465.14
MW-22	460.77	6.37	454.40
MW-23	460.59	2.31	458.28
MW-24	462.76	2.90	459.86
MW-25	460.74	3.60	457.14
MW-26	458.80	5.22	453.58
MW-27	460.45	6.58	453.87
MW-28	461.26	7.56	453.70
MW-29	459.89	7.45	452.44
MW-BR-01	462.64	34.28	428.36
MW-BR-02	467.87	29.91	437.96
MW-BR-03	457.06	12.05	445.01
MW-BR-04	396.39	--	Artesian
MW-BR-05	401.34	20.78	380.56
MW-BR-06	436.30	36.94	399.36

Notes:

AMSL - Above mean sea level

NA - Not Applicable

Depth to water measurements were recorded March 29, 2016.

Table 2  
Groundwater Analytical Results (March 2016)  
Former Philips Display Components Facility  
Seneca Falls, New York

VOCs	CAS #	NYS Class GA Standard	MW-22	MW-23	MW-24	MW-25	MW-25 DUPLICATE	MW-26	MW-29	MW-BR-05	MW-BR-06	TRIP BLANK
1,1,1-Trichloroethane	71-55-6	5	1 U	20 U	400 U	5 U	1.3	4 U	5 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	79-34-5	5	1 U	20 U	400 U	5 U	1 U	4 U	5 U	1 U	1 U	1 U
1,1,2-Trichloroethane	79-00-5	1	1 U	20 U	400 U	5 U	1 U	4 U	5 U	1 U	1 U	1 U
1,1-Dichloroethane	75-34-3	5	1 U	20 U	400 U	11	12	4 U	5 U	1 U	1 U	1 U
1,1-Dichloroethene	75-35-4	5	1 UJ	20 UJ	400 UJ	5 UJ	1.5 UJ	4 UJ	5 UJ	1 UJ	1 UJ	1 UJ
1,2-Dichloroethane	107-06-2	0.6	1 U	20 U	400 U	5 U	1 U	4 U	5 U	1 U	1 U	1 U
1,2-Dichloropropane	78-87-5	1	1 U	20 U	400 U	5 U	1 U	4 U	5 U	1 U	1 U	1 U
2-Hexanone	591-78-6	50	5 U	100 U	2000 U	25 U	5 U	20 U	25 U	5 U	5 U	5 U
Acetone	67-64-1	50	120 J+	140 J+	4000 U	86 J+	98 J+	150 J+	130 J+	9.1 J+	75 J+	10 U
Benzene	71-43-2	1	1 U	20 U	400 U	5 U	1 U	4 U	5 U	1 U	1 U	1 U
Bromodichloromethane	75-27-4	50	1 U	20 U	400 U	5 U	1 U	4 U	5 U	1 U	1 U	1 U
Bromoform	75-25-2	50	1 U	20 U	400 U	5 U	1 U	4 U	5 U	1 U	1 U	1 U
Bromomethane	74-83-9	5	1 U	20 U	400 U	5 U	1 U	4 U	5 U	1 U	1 U	1 U
Carbon disulfide	75-15-0	60	1 U	20 U	400 U	5 U	1 U	4 U	5 U	1 U	1 U	1 U
Carbon tetrachloride	56-23-5	5	1 U	20 U	400 U	5 U	1 U	4 U	5 U	1 U	1 U	1 U
Chlorobenzene	108-90-7	5	1 U	20 U	400 U	5 U	1 U	4 U	5 U	1 U	1 U	1 U
Chloroethane	75-00-3	5	1 U	20 U	400 U	5 U	1 U	4 U	5 U	1 U	1 U	1 U
Chloroform	67-66-3	7	1 U	20 U	400 U	5 U	1 U	4 U	5 U	1 U	1 U	1 U
Chloromethane	74-87-3	5	1 U	20 U	400 U	5 U	1 U	4 U	5 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	156-59-2	5	13	230	18000 J	150	150	140	150	1 U	3.7	1 U
cis-1,3-Dichloropropene	10061-01-5	0.4	1 U	20 U	400 U	5 U	1 U	4 U	5 U	1 U	1 U	1 U
Dibromochloromethane	124-48-1	50	1 U	20 U	400 U	5 U	1 U	4 U	5 U	1 U	1 U	1 U
Dichlorodifluoromethane	75-71-8	5	1 U	20 U	400 U	5 U	1 U	4 U	5 U	1 U*	1 U	1 U
Ethylbenzene	100-41-4	5	1 U	20 U	400 U	5 U	1 U	4 U	5 U	1 U	1 U	1 U
2-Butanone (MEK)	78-93-3	50	3.7 J	200 U	4000 U	50 U	3.9 J	40 U	50 U	10 U	5.0 J	10 U
4-Methyl-2-pentanone (MIBK)	108-10-1	5	5 U	100 U	2000 U	25 U	5 U	20 U	25 U	5 U	5 U	5 U
Methylene Chloride	75-09-2	5	1 U	20 U	400 U	5 U	1 U	4 U	5 U	1 U	1 U	1 U
Styrene	100-42-5	5	1 U	20 U	400 U	5 U	1 U	4 U	5 U	1 U	1 U	1 U
Tetrachloroethene	127-18-4	5	1 U	20 U	400 U	5 U	0.48 J	4 U	5 U	1 U	1 U	1 U
Toluene	108-88-3	5	1 U	20 U	400 U	5 U	1 U	4 U	5 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	156-60-5	5	1 U	20 U	400 U	5 U	1 U	4 U	5 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	0.4	1 U	20 U	400 U	5 U	1 U	4 U	5 U	1 U	1 U	1 U
Trichloroethene	79-01-6	5	7.5	1100	400 U	7.0	7.6	78	5 U	1 U	3.8	1 U
Trichlorofluoromethane	75-69-4	5	1 U	20 U	400 U	5 U	1 U	4 U	5 U	1 U	1 U	1 U
Vinyl chloride	75-01-4	2	1 U	20 U	400 U	5 U	1 U	7.9	5 U	1 U	1 U	1 U
Xylenes, Total	1330-20-7	5	2 U	40 U	800 U	10 U	2 U	8 U	10 U	2 U	2 U	2 U

NOTES:

Bolded results were greater than the NYSDEC Class GA Standards  
All values are shown in units of micrograms per liter (ug/L).

U - Not detected. Reporting limit shown.  
J - Estimated

J+ - Estimated, Likely High Bias



**Attachment A**  
**Data Validation Report**

# Data Validation Services

120 Cobble Creek Road P.O. Box 208  
North Creek, NY 12853

Phone 518-251-4429  
harry@frontiernet.net

May 5, 2016

Mark Flusche  
ARCADIS Malcolm Pirnie, Inc.  
855 Route 146 Suite 210  
Clifton Park, NY 12065

RE: Validation of GTE-OSI--Seneca Falls, NY Site Data Package-Groundwaters  
TAL-Buffalo SDG No. 480-97262-1

Dear Mr. Flusche:

Review has been completed for the data package generated by TestAmerica Laboratories that pertains to samples collected 03/29/16 at the GTE-OSI--Seneca Falls, NY site. Eight aqueous samples, a field duplicate, and a trip blank were processed for volatile analytes by USEPA SW846 method 8260C.

Data validation was performed with guidance from the USEPA Region II validation SOP HW-6, the USEPA CLP National Functional Guidelines for Organic Data Review, and the specific requirements of the analytical methodologies. The data packages were reviewed for the following items:

- \* Data Completeness
- \* Case Narrative
- \* Custody Documentation
- \* Holding Times
- \* Surrogate Standard Recoveries
- \* Matrix Spike Evaluations
- \* Blind Field Duplicate Correlations
- \* Blank Contamination
- \* Laboratory Control Samples (LCSs)
- \* Calibration Standard Responses
- \* Internal Standard Responses
- \* Method Compliance
- \* Sample Results Verification

Those items showing deficiencies are discussed in the following sections of this report. All others were found to be acceptable as outlined in the above-mentioned validation procedures, and as applicable for the methodology. Unless noted specifically in the following text, reported results of validated sample analytes are substantiated by the raw data, and generated in compliance with project requirements.

**In summary**, samples were generally processed in compliance with stated protocols. Field sample results are usable either as reported or with minor qualification.

Copies of the sample identifications and laboratory case narrative are attached to this text, and should be reviewed in conjunction with this report. Also included are laboratory results forms with recommended qualifications applied in red ink.

#### **VOA Analyses by EPA 8260C**

Matrix spikes (MSs) of MW-24 show recoveries and correlations that are within validation guidelines, with the exception of the recoveries of cis-1,2-dichloroethene (69% and 67%). The result for that compound in the parent sample is qualified as estimated.

The blind field duplicate correlations of MW-25 are acceptable.

Surrogate and internal standard responses are within required range, and holding times were met. Blanks show no contamination.


Acetone produced elevated responses (37%D and 44%D) in the continuing calibration standards, with those standard concentrations running about 60 ug/L higher than the spiked concentration of 125 ug/L. The detected results of that compound in the project samples have therefore been qualified as estimated, with a likely high bias. Other calibration standards show acceptable responses, with the exception of the following, results for which are qualified as estimated in the project samples: 1,1-dichloroethene and cyclohexane (22%D to 38%D).

Results of analytes flagged by the laboratory as "E" have been edited to reflect the corresponding result from the dilution analyses, thus reflecting responses within the established linear ranges of the instrument.

Some of the samples were processed only at initial dilution due to high concentrations of target analytes. Reporting limits for non-detected analytes in those samples are therefore proportionally elevated. Although sample MW-25 was processed at eightfold dilution, its field duplicate was processed undiluted, and provides a characterization of the lower level constituency.

Please do not hesitate to contact me if questions or comments arise during your review of this report.

Very truly yours,

  
Judy Harry

## VALIDATION DATA QUALIFIER DEFINITIONS

<b>U</b>	The analyte was analyzed for, but was not detected above the level of the associated reported quantitation limit.
<b>J</b>	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
<b>J-</b>	The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low.
<b>J+</b>	The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high.
<b>UJ</b>	The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
<b>NJ</b>	The detection is tentative in identification and estimated in value. Although there is presumptive evidence of the analyte, the result should be used with caution as a potential false positive and/or elevated quantitative value.
<b>R</b>	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
<b>EMPC</b>	The results do not meet all criteria for a confirmed identification. The quantitative value represents the Estimated Maximum Possible Concentration of the analyte in the sample.

**CLIENT and LABORATORY SAMPLE IDs  
and CASE NARRATIVE**

## SAMPLE SUMMARY

Client: ARCADIS U.S. Inc

Job Number: 480-97262-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
480-97262-1	MW-22	Water	03/29/2016 1120	03/30/2016 0245
480-97262-2	MW-23	Water	03/29/2016 0845	03/30/2016 0245
480-97262-3	MW-24	Water	03/29/2016 0900	03/30/2016 0245
480-97262-3MS	MW-24	Water	03/29/2016 0900	03/30/2016 0245
480-97262-3MSD	MW-24	Water	03/29/2016 0900	03/30/2016 0245
480-97262-4	MW-25	Water	03/29/2016 1110	03/30/2016 0245
480-97262-5	MW-26	Water	03/29/2016 0930	03/30/2016 0245
480-97262-6	MW-29	Water	03/29/2016 1050	03/30/2016 0245
480-97262-7	MW-BR-05	Water	03/29/2016 1240	03/30/2016 0245
480-97262-8	MW-BR-06	Water	03/29/2016 0920	03/30/2016 0245
480-97262-9	DUP-032916-01	Water	03/29/2016 0000	03/30/2016 0245
480-97262-10	TRIP BLANK	Water	03/29/2016 0000	03/30/2016 0245

**Job Narrative  
480-97262-1**

**Receipt**

The samples were received on 3/30/2016 2:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.3° C.

**GC/MS VOA**

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-294161 recovered above the upper control limit for 2-Butanone, Chloromethane, Dichlorodifluoromethane and Trichlorofluoromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-22 (480-97262-1), MW-23 (480-97262-2), MW-24 (480-97262-3), MW-26 (480-97262-5), MW-29 (480-97262-6), MW-BR-05 (480-97262-7), MW-BR-06 (480-97262-8), DUP-032916-01 (480-97262-9) and TRIP BLANK (480-97262-10).

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-294161 recovered outside acceptance criteria, low biased, for 1,1-Dichloroethene and Cyclohexane. A reporting limit (RL) standard was analyzed, and the target analytes were detected. Since the associated samples were non-detects for these analytes, the data have been reported. The following samples are impacted: MW-22 (480-97262-1), MW-23 (480-97262-2), MW-24 (480-97262-3), MW-26 (480-97262-5), MW-29 (480-97262-6), MW-BR-05 (480-97262-7), MW-BR-06 (480-97262-8) and TRIP BLANK (480-97262-10).

Method(s) 8260C: The continuing calibration verification (CCV) analyzed in batch 480-294161 was outside the method criteria for the following analyte: 1,1-Dichloroethene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte is considered estimated. The following sample is impacted: DUP-032916-01 (480-97262-9).

Method(s) 8260C: The laboratory control sample (LCS) for batch analytical batch 480-294161 recovered outside control limits for the following analyte: Dichlorodifluoromethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported. The following samples are impacted: MW-22 (480-97262-1), MW-23 (480-97262-2), MW-24 (480-97262-3), MW-26 (480-97262-5), MW-29 (480-97262-6), MW-BR-05 (480-97262-7), MW-BR-06 (480-97262-8), DUP-032916-01 (480-97262-9) and TRIP BLANK (480-97262-10).

Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-23 (480-97262-2), MW-24 (480-97262-3), MW-26 (480-97262-5) and MW-29 (480-97262-6). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-294161 recovered outside acceptance criteria, low biased, for Cyclohexane. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported. DUP-032916-01 (480-97262-9)

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-294261 recovered above the upper control limit for 2-Butanone (MEK), Dichlorodifluoromethane and Trichlorofluoromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-25 (480-97262-4) and DUP-032916-01 (480-97262-9).

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-294261 recovered outside acceptance criteria, low biased, for 1,1-Dichloroethene, Carbon disulfide, Cyclohexane and 1,1,2-Trichloro-1,2,2-trifluoroethane. A reporting limit (RL) standard was analyzed, and the target analytes were detected. Since the associated samples were non-detect for these analytes, the data have been reported. The following samples are impacted: MW-25 (480-97262-4) and DUP-032916-01 (480-97262-9).

Method(s) 8260C: The laboratory control sample (LCS) for batch analytical batch 480-294261 recovered outside control limits for the following analyte: Dichlorodifluoromethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported. The following samples are impacted: MW-25 (480-97262-4) and DUP-032916-01 (480-97262-9).

Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-24 (480-97262-3[MS]), MW-24 (480-97262-3[MSD]), MW-25 (480-97262-4) and DUP-032916-01 (480-97262-9). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

## **REPORT OF ANALYSIS RESULTS FORMS**



# Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 480-97262-1

Client Sample ID: MW-22

Lab Sample ID: 480-97262-1

Date Sampled: 03/29/2016 1120

Client Matrix: Water

Date Received: 03/30/2016 0245

## 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-294161	Instrument ID:	HP5973N
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N1509.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/06/2016 0121			Final Weight/Volume:	5 mL
Prep Date:	04/06/2016 0121				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND	U	0.29	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloropropane	ND		0.72	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
2-Butanone (MEK)	3.7	J	1.3	10
2-Hexanone	ND		1.2	5.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	120	J	3.0	10
Benzene	ND		0.41	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	13		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND	U	0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Ethylbenzene	ND		0.74	1.0
Isopropylbenzene	ND		0.79	1.0
Methyl acetate	ND		1.3	2.5
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
Styrene	ND		0.73	1.0
Tetrachloroethene	ND		0.36	1.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
Trichloroethene	7.5		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0

## Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 480-97262-1

Client Sample ID: MW-22

Lab Sample ID: 480-97262-1

Client Matrix: Water

Date Sampled: 03/29/2016 1120

Date Received: 03/30/2016 0245

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-294161	Instrument ID:	HP5973N
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N1509.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/06/2016 0121			Final Weight/Volume:	5 mL
Prep Date:	04/06/2016 0121				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.90	1.0
Xylenes, Total	ND		0.66	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	110		66 - 137
4-Bromofluorobenzene (Surr)	101		73 - 120
Dibromofluoromethane (Surr)	106		60 - 140
Toluene-d8 (Surr)	104		71 - 126

# Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 480-97262-1

Client Sample ID: MW-23

Lab Sample ID: 480-97262-2

Date Sampled: 03/29/2016 0845

Client Matrix: Water

Date Received: 03/30/2016 0245

## 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-294161	Instrument ID:	HP5973N
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N1491.D
Dilution:	20			Initial Weight/Volume:	5 mL
Analysis Date:	04/06/2016 0148			Final Weight/Volume:	5 mL
Prep Date:	04/06/2016 0148				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	ND		16	20
1,1,2,2-Tetrachloroethane	ND		4.2	20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		6.2	20
1,1,2-Trichloroethane	ND		4.6	20
1,1-Dichloroethane	ND		7.6	20
1,1-Dichloroethene	ND	U	5.8	20
1,2,4-Trichlorobenzene	ND		8.2	20
1,2-Dibromo-3-Chloropropane	ND		7.8	20
1,2-Dibromoethane	ND		15	20
1,2-Dichlorobenzene	ND		16	20
1,2-Dichloroethane	ND		4.2	20
1,2-Dichloropropane	ND		14	20
1,3-Dichlorobenzene	ND		16	20
1,4-Dichlorobenzene	ND		17	20
2-Butanone (MEK)	ND		26	200
2-Hexanone	ND		25	100
4-Methyl-2-pentanone (MIBK)	ND		42	100
Acetone	140	J H	60	200
Benzene	ND		8.2	20
Bromodichloromethane	ND		7.8	20
Bromoform	ND		5.2	20
Bromomethane	ND		14	20
Carbon disulfide	ND		3.8	20
Carbon tetrachloride	ND		5.4	20
Chlorobenzene	ND		15	20
Chloroethane	ND		6.4	20
Chloroform	ND		6.8	20
Chloromethane	ND		7.0	20
cis-1,2-Dichloroethene	230		16	20
cis-1,3-Dichloropropene	ND		7.2	20
Cyclohexane	ND	U	3.6	20
Dibromochloromethane	ND		6.4	20
Dichlorodifluoromethane	ND		14	20
Ethylbenzene	ND		15	20
Isopropylbenzene	ND		16	20
Methyl acetate	ND		26	50
Methyl tert-butyl ether	ND		3.2	20
Methylcyclohexane	ND		3.2	20
Methylene Chloride	ND		8.8	20
Styrene	ND		15	20
Tetrachloroethene	ND		7.2	20
Toluene	ND		10	20
trans-1,2-Dichloroethene	ND		18	20
trans-1,3-Dichloropropene	ND		7.4	20
Trichloroethene	1100		9.2	20
Trichlorofluoromethane	ND		18	20

## Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 480-97262-1

Client Sample ID: MW-23

Lab Sample ID: 480-97262-2

Date Sampled: 03/29/2016 0845

Client Matrix: Water

Date Received: 03/30/2016 0245

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-294161	Instrument ID:	HP5973N
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N1491.D
Dilution:	20			Initial Weight/Volume:	5 mL
Analysis Date:	04/06/2016 0148			Final Weight/Volume:	5 mL
Prep Date:	04/06/2016 0148				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		18	20
Xylenes, Total	ND		13	40

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	107		66 - 137
4-Bromofluorobenzene (Surr)	102		73 - 120
Dibromofluoromethane (Surr)	105		60 - 140
Toluene-d8 (Surr)	102		71 - 126



# Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 480-97262-1

Client Sample ID: MW-24

Lab Sample ID: 480-97262-3

Date Sampled: 03/29/2016 0900

Client Matrix: Water

Date Received: 03/30/2016 0245

## 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-294161	Instrument ID:	HP5973N
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N1492.D
Dilution:	400			Initial Weight/Volume:	5 mL
Analysis Date:	04/06/2016 0215			Final Weight/Volume:	5 mL
Prep Date:	04/06/2016 0215				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	ND		330	400
1,1,2,2-Tetrachloroethane	ND		84	400
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	F2	120	400
1,1,2-Trichloroethane	ND		92	400
1,1-Dichloroethane	ND		150	400
1,1-Dichloroethene	ND	UJ	120	400
1,2,4-Trichlorobenzene	ND		160	400
1,2-Dibromo-3-Chloropropane	ND		160	400
1,2-Dibromoethane	ND		290	400
1,2-Dichlorobenzene	ND		320	400
1,2-Dichloroethane	ND		84	400
1,2-Dichloropropane	ND		290	400
1,3-Dichlorobenzene	ND		310	400
1,4-Dichlorobenzene	ND		340	400
2-Butanone (MEK)	ND		530	4000
2-Hexanone	ND		500	2000
4-Methyl-2-pentanone (MIBK)	ND		840	2000
Acetone	ND		1200	4000
Benzene	ND		160	400
Bromodichloromethane	ND		160	400
Bromoform	ND		100	400
Bromomethane	ND		280	400
Carbon disulfide	ND		76	400
Carbon tetrachloride	ND		110	400
Chlorobenzene	ND		300	400
Chloroethane	ND		130	400
Chloroform	ND		140	400
Chloromethane	ND		140	400
cis-1,2-Dichloroethene	18000	F4 J	320	400
cis-1,3-Dichloropropene	ND		140	400
Cyclohexane	ND	UJ	72	400
Dibromochloromethane	ND		130	400
Dichlorodifluoromethane	ND	F4	270	400
Ethylbenzene	ND		300	400
Isopropylbenzene	ND		320	400
Methyl acetate	ND		520	1000
Methyl tert-butyl ether	ND		64	400
Methylcyclohexane	ND		64	400
Methylene Chloride	ND		180	400
Styrene	ND		290	400
Tetrachloroethene	ND		140	400
Toluene	ND		200	400
trans-1,2-Dichloroethene	ND		360	400
trans-1,3-Dichloropropene	ND		150	400
Trichloroethene	ND		180	400
Trichlorofluoromethane	ND		350	400

## Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 480-97262-1

Client Sample ID: MW-24

Lab Sample ID: 480-97262-3

Date Sampled: 03/29/2016 0900

Client Matrix: Water

Date Received: 03/30/2016 0245

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-294161	Instrument ID:	HP5973N
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N1492.D
Dilution:	400			Initial Weight/Volume:	5 mL
Analysis Date:	04/06/2016 0215			Final Weight/Volume:	5 mL
Prep Date:	04/06/2016 0215				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		360	400
Xylenes, Total	ND		260	800

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	107		66 - 137
4-Bromofluorobenzene (Surr)	102		73 - 120
Dibromofluoromethane (Surr)	107		60 - 140
Toluene-d8 (Surr)	101		71 - 126

# Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 480-97262-1

Client Sample ID: MW-25

Lab Sample ID: 480-97262-4

Date Sampled: 03/29/2016 1110

Client Matrix: Water

Date Received: 03/30/2016 0245

## 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-294261	Instrument ID:	HP5973N
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N1518.D
Dilution:	5.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/06/2016 1329			Final Weight/Volume:	5 mL
Prep Date:	04/06/2016 1329				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	ND		4.1	5.0
1,1,2,2-Tetrachloroethane	ND		1.1	5.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.6	5.0
1,1,2-Trichloroethane	ND		1.2	5.0
1,1-Dichloroethane	11		1.9	5.0
1,1-Dichloroethene	ND	UJ	1.5	5.0
1,2,4-Trichlorobenzene	ND		2.1	5.0
1,2-Dibromo-3-Chloropropane	ND		2.0	5.0
1,2-Dibromoethane	ND		3.7	5.0
1,2-Dichlorobenzene	ND		4.0	5.0
1,2-Dichloroethane	ND		1.1	5.0
1,2-Dichloropropane	ND		3.6	5.0
1,3-Dichlorobenzene	ND		3.9	5.0
1,4-Dichlorobenzene	ND		4.2	5.0
2-Butanone (MEK)	ND		6.6	50
2-Hexanone	ND		6.2	25
4-Methyl-2-pentanone (MIBK)	ND		11	25
Acetone	86	J=	15	50
Benzene	ND		2.1	5.0
Bromodichloromethane	ND		2.0	5.0
Bromoform	ND		1.3	5.0
Bromomethane	ND		3.5	5.0
Carbon disulfide	ND		0.95	5.0
Carbon tetrachloride	ND		1.4	5.0
Chlorobenzene	ND		3.8	5.0
Chloroethane	ND		1.6	5.0
Chloroform	ND		1.7	5.0
Chloromethane	ND		1.8	5.0
cis-1,2-Dichloroethene	150		4.1	5.0
cis-1,3-Dichloropropene	ND		1.8	5.0
Cyclohexane	ND	UJ	0.90	5.0
Dibromochloromethane	ND		1.6	5.0
Dichlorodifluoromethane	ND	→	3.4	5.0
Ethylbenzene	ND		3.7	5.0
Isopropylbenzene	ND		4.0	5.0
Methyl acetate	ND		6.5	13
Methyl tert-butyl ether	ND		0.80	5.0
Methylcyclohexane	ND		0.80	5.0
Methylene Chloride	ND		2.2	5.0
Styrene	ND		3.7	5.0
Tetrachloroethene	ND		1.8	5.0
Toluene	ND		2.6	5.0
trans-1,2-Dichloroethene	ND		4.5	5.0
trans-1,3-Dichloropropene	ND		1.9	5.0
Trichloroethene	7.0		2.3	5.0
Trichlorofluoromethane	ND		4.4	5.0

## Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 480-97262-1

Client Sample ID: MW-25

Lab Sample ID: 480-97262-4

Client Matrix: Water

Date Sampled: 03/29/2016 1110

Date Received: 03/30/2016 0245

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-294261	Instrument ID:	HP5973N
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N1518.D
Dilution:	5.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/06/2016 1329			Final Weight/Volume:	5 mL
Prep Date:	04/06/2016 1329				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		4.5	5.0
Xylenes, Total	ND		3.3	10

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	107		66 - 137
4-Bromofluorobenzene (Surr)	99		73 - 120
Dibromofluoromethane (Surr)	102		60 - 140
Toluene-d8 (Surr)	101		71 - 126



# Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 480-97262-1

Client Sample ID: MW-26

Lab Sample ID: 480-97262-5

Date Sampled: 03/29/2016 0930

Client Matrix: Water

Date Received: 03/30/2016 0245

## 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-294161	Instrument ID:	HP5973N
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N1494.D
Dilution:	4.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/06/2016 0308			Final Weight/Volume:	5 mL
Prep Date:	04/06/2016 0308				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	ND		3.3	4.0
1,1,2,2-Tetrachloroethane	ND		0.84	4.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.2	4.0
1,1,2-Trichloroethane	ND		0.92	4.0
1,1-Dichloroethane	ND		1.5	4.0
1,1-Dichloroethene	ND	U	1.2	4.0
1,2,4-Trichlorobenzene	ND		1.6	4.0
1,2-Dibromo-3-Chloropropane	ND		1.6	4.0
1,2-Dibromoethane	ND		2.9	4.0
1,2-Dichlorobenzene	ND		3.2	4.0
1,2-Dichloroethane	ND		0.84	4.0
1,2-Dichloropropane	ND		2.9	4.0
1,3-Dichlorobenzene	ND		3.1	4.0
1,4-Dichlorobenzene	ND		3.4	4.0
2-Butanone (MEK)	ND		5.3	40
2-Hexanone	ND		5.0	20
4-Methyl-2-pentanone (MIBK)	ND		8.4	20
Acetone	150	J+	12	40
Benzene	ND		1.6	4.0
Bromodichloromethane	ND		1.6	4.0
Bromoform	ND		1.0	4.0
Bromomethane	ND		2.8	4.0
Carbon disulfide	ND		0.76	4.0
Carbon tetrachloride	ND		1.1	4.0
Chlorobenzene	ND		3.0	4.0
Chloroethane	ND		1.3	4.0
Chloroform	ND		1.4	4.0
Chloromethane	ND		1.4	4.0
cis-1,2-Dichloroethene	140		3.2	4.0
cis-1,3-Dichloropropene	ND		1.4	4.0
Cyclohexane	ND	U	0.72	4.0
Dibromochloromethane	ND		1.3	4.0
Dichlorodifluoromethane	ND		2.7	4.0
Ethylbenzene	ND		3.0	4.0
Isopropylbenzene	ND		3.2	4.0
Methyl acetate	ND		5.2	10
Methyl tert-butyl ether	ND		0.64	4.0
Methylcyclohexane	ND		0.64	4.0
Methylene Chloride	ND		1.8	4.0
Styrene	ND		2.9	4.0
Tetrachloroethene	ND		1.4	4.0
Toluene	ND		2.0	4.0
trans-1,2-Dichloroethene	ND		3.6	4.0
trans-1,3-Dichloropropene	ND		1.5	4.0
Trichloroethene	78		1.8	4.0
Trichlorofluoromethane	ND		3.5	4.0

## Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 480-97262-1

Client Sample ID: MW-26

Lab Sample ID: 480-97262-5

Date Sampled: 03/29/2016 0930

Client Matrix: Water

Date Received: 03/30/2016 0245

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-294161	Instrument ID:	HP5973N
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N1494.D
Dilution:	4.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/06/2016 0308			Final Weight/Volume:	5 mL
Prep Date:	04/06/2016 0308				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	7.9		3.6	4.0
Xylenes, Total	ND		2.6	8.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	112		66 - 137
4-Bromofluorobenzene (Surr)	102		73 - 120
Dibromofluoromethane (Surr)	111		60 - 140
Toluene-d8 (Surr)	99		71 - 126

# Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 480-97262-1

Client Sample ID: MW-29

Lab Sample ID: 480-97262-6

Date Sampled: 03/29/2016 1050

Client Matrix: Water

Date Received: 03/30/2016 0245

## 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-294161	Instrument ID:	HP5973N
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N1495.D
Dilution:	5.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/06/2016 0335			Final Weight/Volume:	5 mL
Prep Date:	04/06/2016 0335				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	ND		4.1	5.0
1,1,2,2-Tetrachloroethane	ND		1.1	5.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.6	5.0
1,1,2-Trichloroethane	ND		1.2	5.0
1,1-Dichloroethane	ND		1.9	5.0
1,1-Dichloroethene	ND	UJ	1.5	5.0
1,2,4-Trichlorobenzene	ND		2.1	5.0
1,2-Dibromo-3-Chloropropane	ND		2.0	5.0
1,2-Dibromoethane	ND		3.7	5.0
1,2-Dichlorobenzene	ND		4.0	5.0
1,2-Dichloroethane	ND		1.1	5.0
1,2-Dichloropropane	ND		3.6	5.0
1,3-Dichlorobenzene	ND		3.9	5.0
1,4-Dichlorobenzene	ND		4.2	5.0
2-Butanone (MEK)	ND		6.6	50
2-Hexanone	ND		6.2	25
4-Methyl-2-pentanone (MIBK)	ND		11	25
Acetone	130	J+	15	50
Benzene	ND		2.1	5.0
Bromodichloromethane	ND		2.0	5.0
Bromoform	ND		1.3	5.0
Bromomethane	ND		3.5	5.0
Carbon disulfide	ND		0.95	5.0
Carbon tetrachloride	ND		1.4	5.0
Chlorobenzene	ND		3.8	5.0
Chloroethane	ND		1.6	5.0
Chloroform	ND		1.7	5.0
Chloromethane	ND		1.8	5.0
cis-1,2-Dichloroethene	150		4.1	5.0
cis-1,3-Dichloropropene	ND		1.8	5.0
Cyclohexane	ND	UJ	0.90	5.0
Dibromochloromethane	ND		1.6	5.0
Dichlorodifluoromethane	ND	+	3.4	5.0
Ethylbenzene	ND		3.7	5.0
Isopropylbenzene	ND		4.0	5.0
Methyl acetate	ND		6.5	13
Methyl tert-butyl ether	ND		0.80	5.0
Methylcyclohexane	ND		0.80	5.0
Methylene Chloride	ND		2.2	5.0
Styrene	ND		3.7	5.0
Tetrachloroethene	ND		1.8	5.0
Toluene	ND		2.6	5.0
trans-1,2-Dichloroethene	ND		4.5	5.0
trans-1,3-Dichloropropene	ND		1.9	5.0
Trichloroethene	ND		2.3	5.0
Trichlorofluoromethane	ND		4.4	5.0

## Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 480-97262-1

Client Sample ID: MW-29

Lab Sample ID: 480-97262-6

Client Matrix: Water

Date Sampled: 03/29/2016 1050

Date Received: 03/30/2016 0245

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-294161	Instrument ID:	HP5973N
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N1495.D
Dilution:	5.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/06/2016 0335			Final Weight/Volume:	5 mL
Prep Date:	04/06/2016 0335				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		4.5	5.0
Xylenes, Total	ND		3.3	10

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	103		66 - 137
4-Bromofluorobenzene (Surr)	98		73 - 120
Dibromofluoromethane (Surr)	103		60 - 140
Toluene-d8 (Surr)	102		71 - 126



# Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 480-97262-1

Client Sample ID: MW-BR-05

Lab Sample ID: 480-97262-7

Date Sampled: 03/29/2016 1240

Client Matrix: Water

Date Received: 03/30/2016 0245

## 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-294161	Instrument ID:	HP5973N
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N1496.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/06/2016 0401			Final Weight/Volume:	5 mL
Prep Date:	04/06/2016 0401				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND	UJ	0.29	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloropropane	ND		0.72	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
2-Butanone (MEK)	ND		1.3	10
2-Hexanone	ND		1.2	5.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	9.1	J J+	3.0	10
Benzene	ND		0.41	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND	UJ	0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Ethylbenzene	ND		0.74	1.0
Isopropylbenzene	ND		0.79	1.0
Methyl acetate	ND		1.3	2.5
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
Styrene	ND		0.73	1.0
Tetrachloroethene	ND		0.36	1.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0

## Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 480-97262-1

Client Sample ID: MW-BR-05

Lab Sample ID: 480-97262-7

Client Matrix: Water

Date Sampled: 03/29/2016 1240

Date Received: 03/30/2016 0245

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-294161	Instrument ID:	HP5973N
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N1496.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/06/2016 0401			Final Weight/Volume:	5 mL
Prep Date:	04/06/2016 0401				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.90	1.0
Xylenes, Total	ND		0.66	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	110		66 - 137
4-Bromofluorobenzene (Surr)	102		73 - 120
Dibromofluoromethane (Surr)	107		60 - 140
Toluene-d8 (Surr)	100		71 - 126

# Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 480-97262-1

Client Sample ID: MW-BR-06

Lab Sample ID: 480-97262-8

Client Matrix: Water

Date Sampled: 03/29/2016 0920

Date Received: 03/30/2016 0245

## 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-294161	Instrument ID:	HP5973N
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N1497.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/06/2016 0428			Final Weight/Volume:	5 mL
Prep Date:	04/06/2016 0428				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND	(U)	0.29	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloropropane	ND		0.72	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
2-Butanone (MEK)	5.0	J	1.3	10
2-Hexanone	ND		1.2	5.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	75	J+	3.0	10
Benzene	ND		0.41	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	3.7		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND	(U)	0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dichlorodifluoromethane	ND	-	0.68	1.0
Ethylbenzene	ND		0.74	1.0
Isopropylbenzene	ND		0.79	1.0
Methyl acetate	ND		1.3	2.5
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
Styrene	ND		0.73	1.0
Tetrachloroethene	ND		0.36	1.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
Trichloroethene	3.8		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0

## Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 480-97262-1

Client Sample ID: MW-BR-06

Lab Sample ID: 480-97262-8

Client Matrix: Water

Date Sampled: 03/29/2016 0920

Date Received: 03/30/2016 0245

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-294161	Instrument ID:	HP5973N
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N1497.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/06/2016 0428			Final Weight/Volume:	5 mL
Prep Date:	04/06/2016 0428				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.90	1.0
Xylenes, Total	ND		0.66	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	105		66 - 137
4-Bromofluorobenzene (Surr)	98		73 - 120
Dibromofluoromethane (Surr)	103		60 - 140
Toluene-d8 (Surr)	101		71 - 126



# Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 480-97262-1

Client Sample ID: DUP-032916-01

Lab Sample ID: 480-97262-9

Date Sampled: 03/29/2016 0000

Client Matrix: Water

Date Received: 03/30/2016 0245

## 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-294161	Instrument ID:	HP5973N
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N1498.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/06/2016 0455			Final Weight/Volume:	5 mL
Prep Date:	04/06/2016 0455				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.3		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	12		0.38	1.0
1,1-Dichloroethene	1.5	UJ	0.29	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloropropane	ND		0.72	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
2-Butanone (MEK)	3.9	J	1.3	10
2-Hexanone	ND		1.2	5.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	98	J+	3.0	10
Benzene	ND		0.41	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	150	E	0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND	UJ	0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dichlorodifluoromethane	ND	+	0.68	1.0
Ethylbenzene	ND		0.74	1.0
Isopropylbenzene	ND		0.79	1.0
Methyl acetate	ND		1.3	2.5
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
Styrene	ND		0.73	1.0
Tetrachloroethene	0.48	J	0.36	1.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
Trichloroethene	7.6		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0

## Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 480-97262-1

Client Sample ID: DUP-032916-01

Lab Sample ID: 480-97262-9

Date Sampled: 03/29/2016 0000

Client Matrix: Water

Date Received: 03/30/2016 0245

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-294161	Instrument ID:	HP5973N
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N1498.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/06/2016 0455			Final Weight/Volume:	5 mL
Prep Date:	04/06/2016 0455				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.90	1.0
Xylenes, Total	ND		0.66	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	107		66 - 137
4-Bromofluorobenzene (Surr)	96		73 - 120
Dibromofluoromethane (Surr)	106		60 - 140
Toluene-d8 (Surr)	103		71 - 126

**Analytical Data**

Client: ARCADIS U.S. Inc

Job Number: 480-97262-1

**Client Sample ID: TRIP BLANK**

Lab Sample ID: 480-97262-10

Date Sampled: 03/29/2016 0000

Client Matrix: Water

Date Received: 03/30/2016 0245

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-294161	Instrument ID:	HP5973N
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N1499.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/06/2016 0522			Final Weight/Volume:	5 mL
Prep Date:	04/06/2016 0522				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND	UJ	0.29	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloropropane	ND		0.72	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
2-Butanone (MEK)	ND		1.3	10
2-Hexanone	ND		1.2	5.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Benzene	ND		0.41	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND	UJ	0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Ethylbenzene	ND		0.74	1.0
Isopropylbenzene	ND		0.79	1.0
Methyl acetate	ND		1.3	2.5
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
Styrene	ND		0.73	1.0
Tetrachloroethene	ND		0.36	1.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0

## Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 480-97262-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-97262-10

Client Matrix: Water

Date Sampled: 03/29/2016 0000

Date Received: 03/30/2016 0245

### 8260C Volatile Organic Compounds by GC/MS

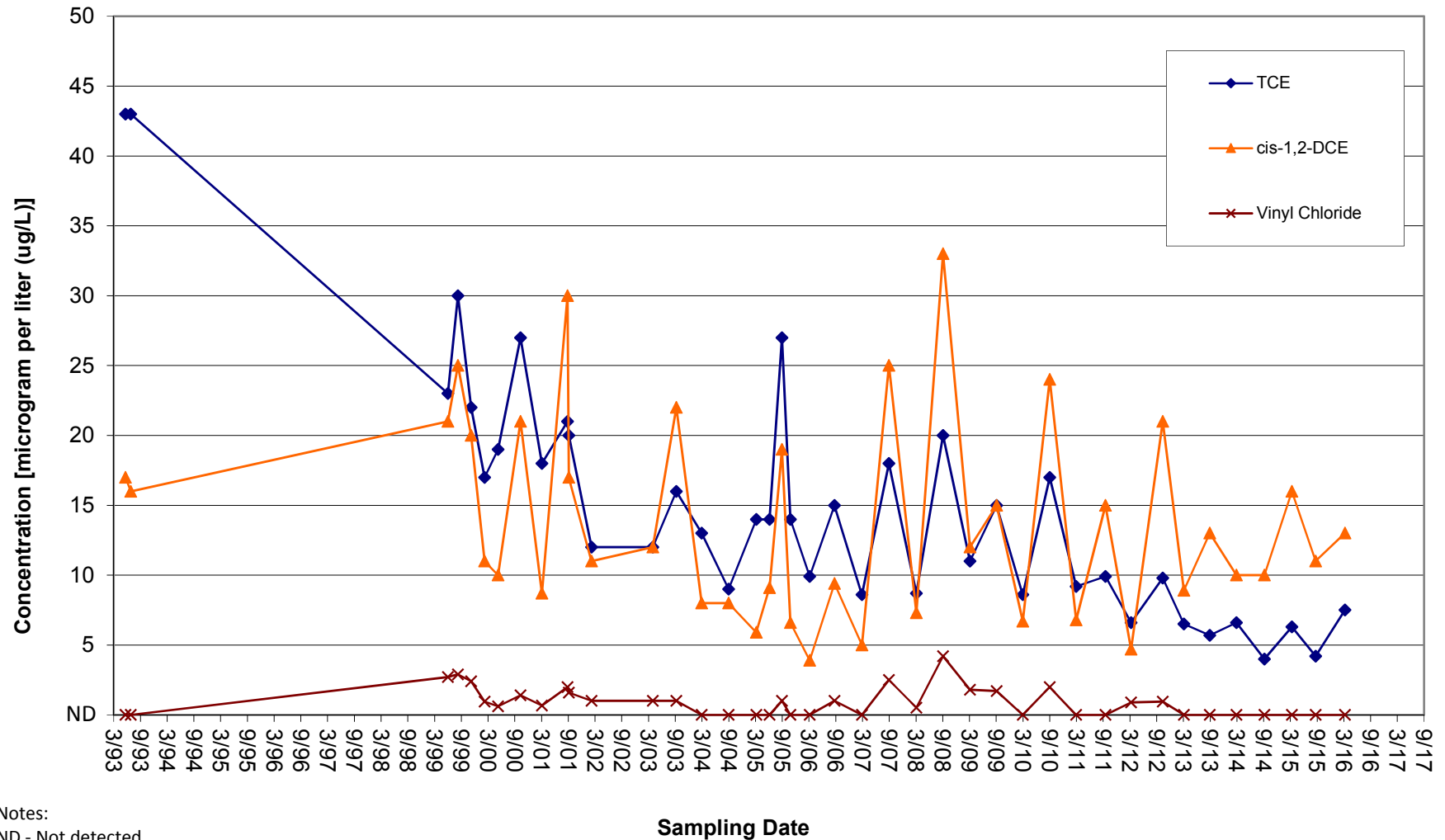
Analysis Method:	8260C	Analysis Batch:	480-294161	Instrument ID:	HP5973N
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N1499.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/06/2016 0522			Final Weight/Volume:	5 mL
Prep Date:	04/06/2016 0522				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.90	1.0
Xylenes, Total	ND		0.66	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	104		66 - 137
4-Bromofluorobenzene (Surr)	103		73 - 120
Dibromofluoromethane (Surr)	103		60 - 140
Toluene-d8 (Surr)	102		71 - 126

**Attachment B**  
**Groundwater VOC Concentration Graphs**

# MW-22



Notes:

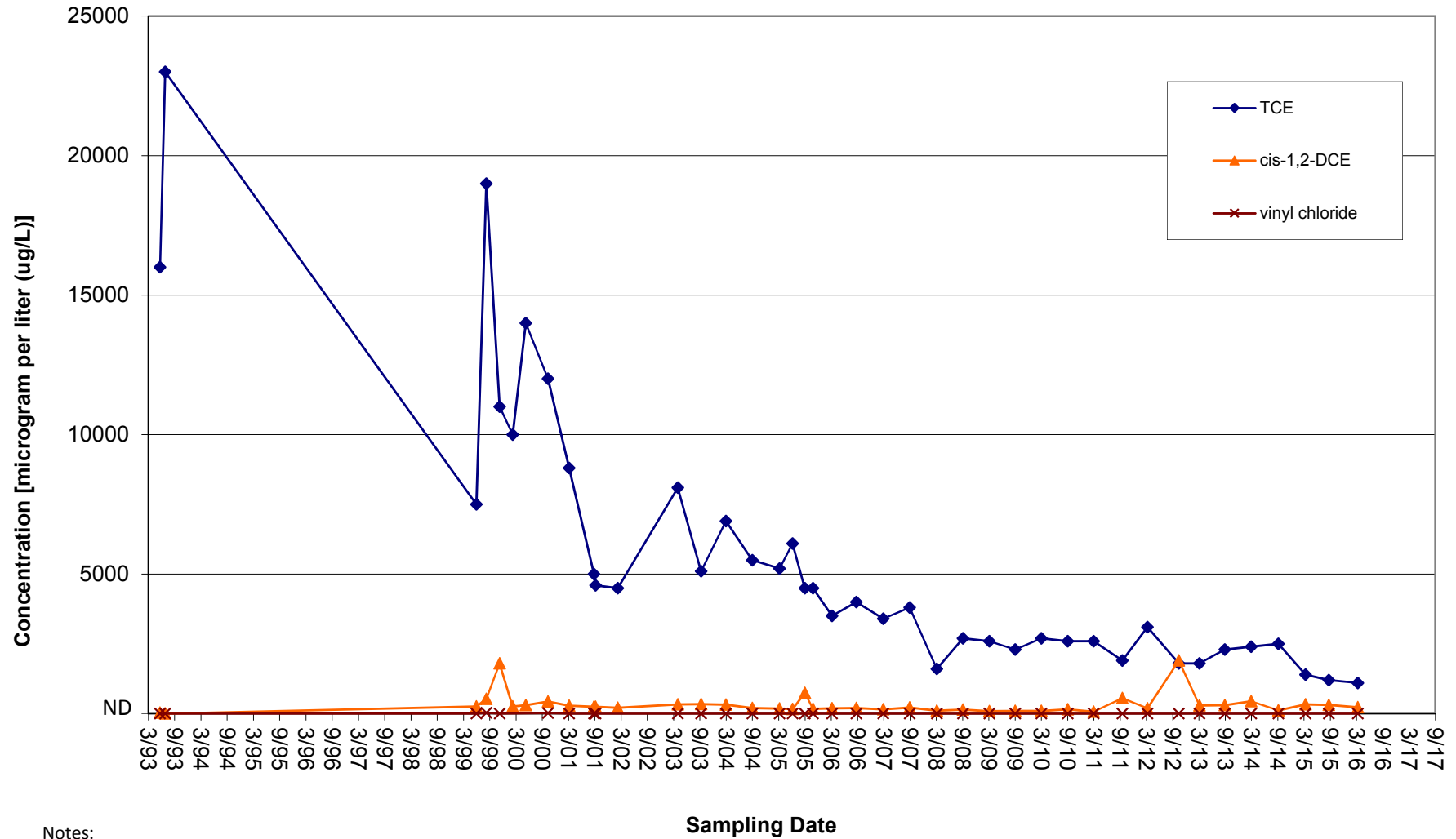
ND - Not detected.

Reporting limit is 5 ug/L.

Results less than the reporting limit are estimated.

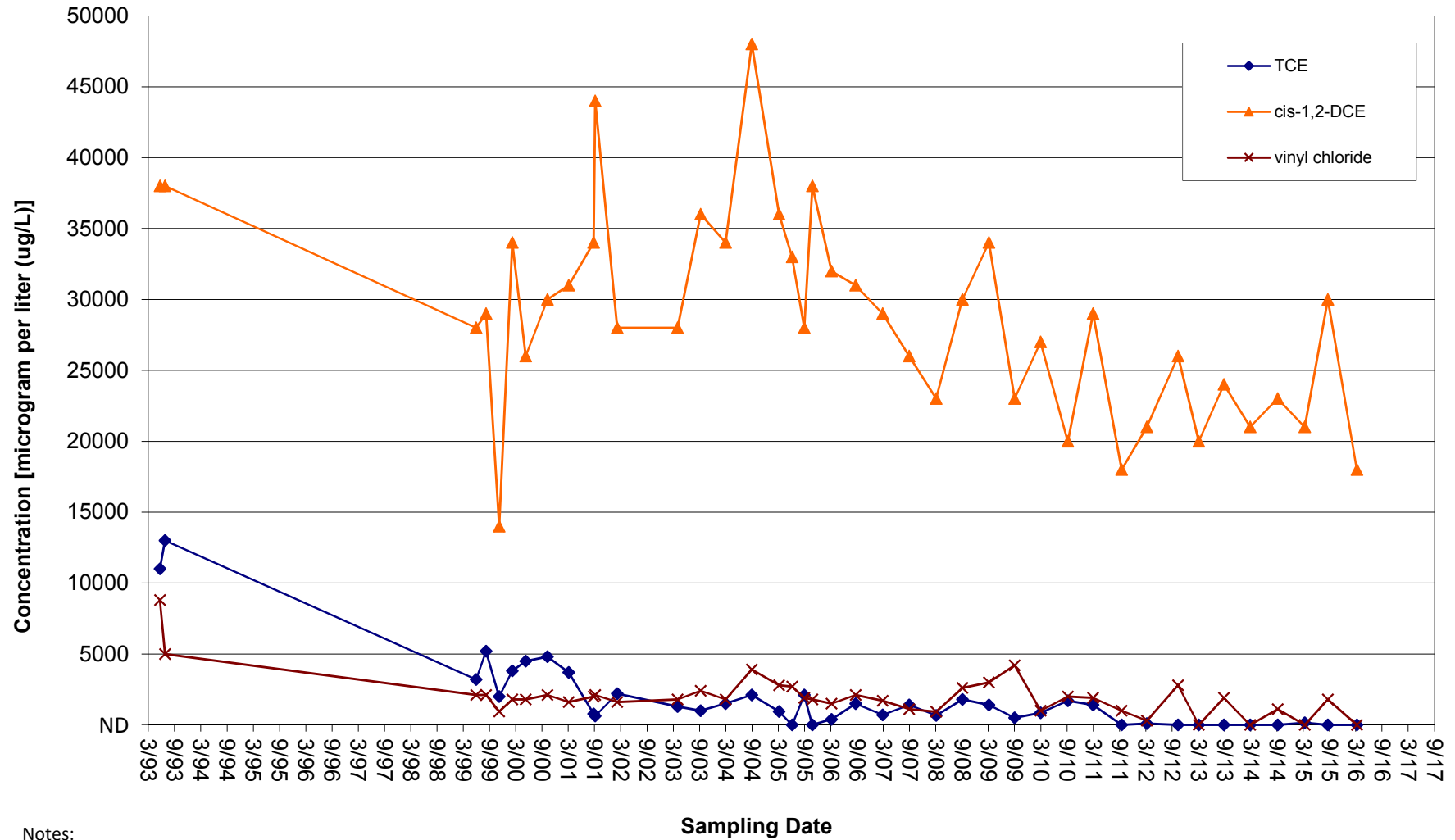
Volatile organic compounds not shown were analyzed but not reported by the laboratory.

# MW-23



Notes:  
 ND - Not detected.  
 Reporting limit is variable.  
 Volatile organic comopunds not shown were analyzed but not reported by the laboratory.

# MW-24



Notes:

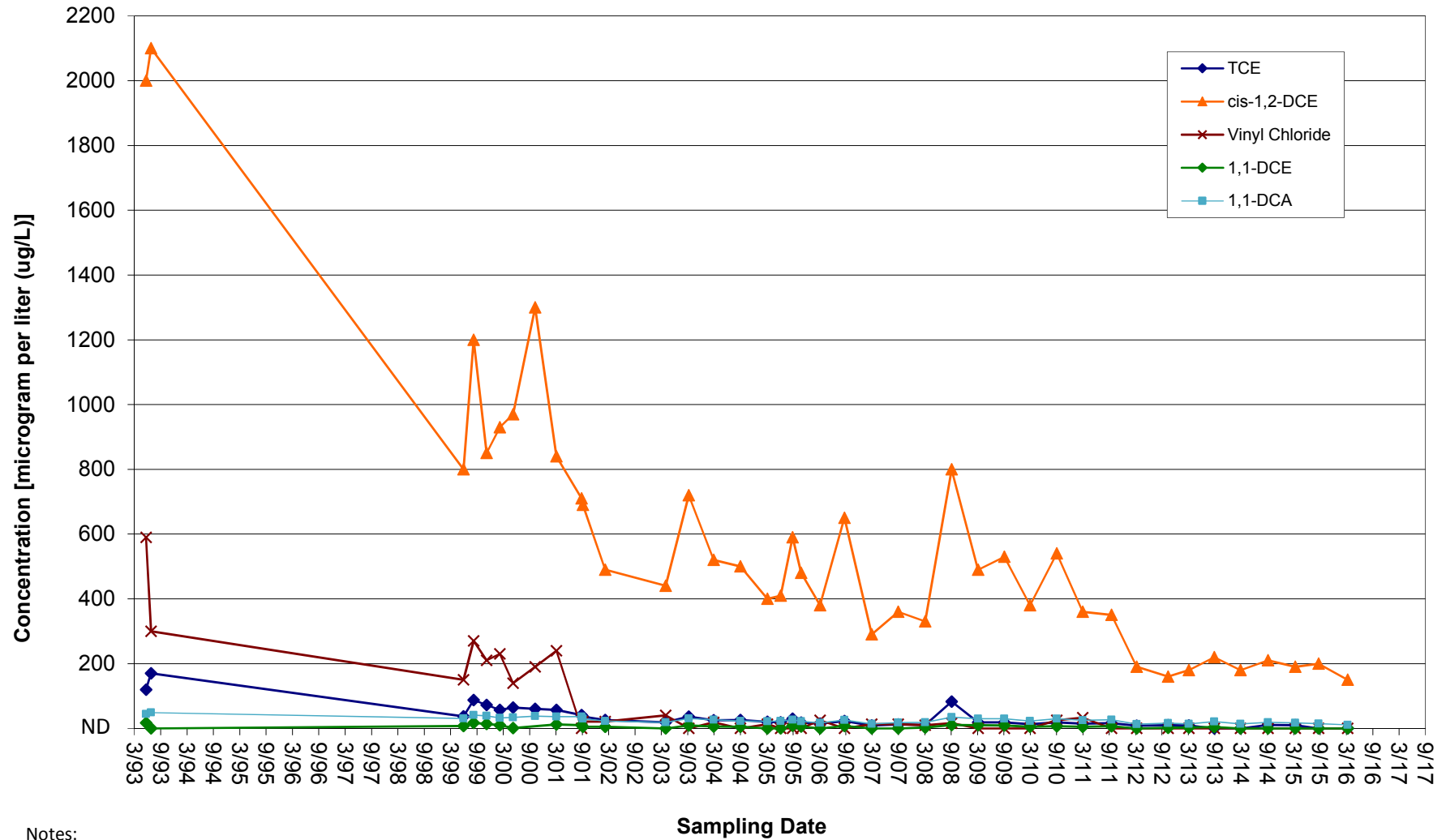
ND - Not detected.

Reporting limit is variable.

Volatile organic compounds not shown were analyzed but not reported by the laboratory.



## MW-25



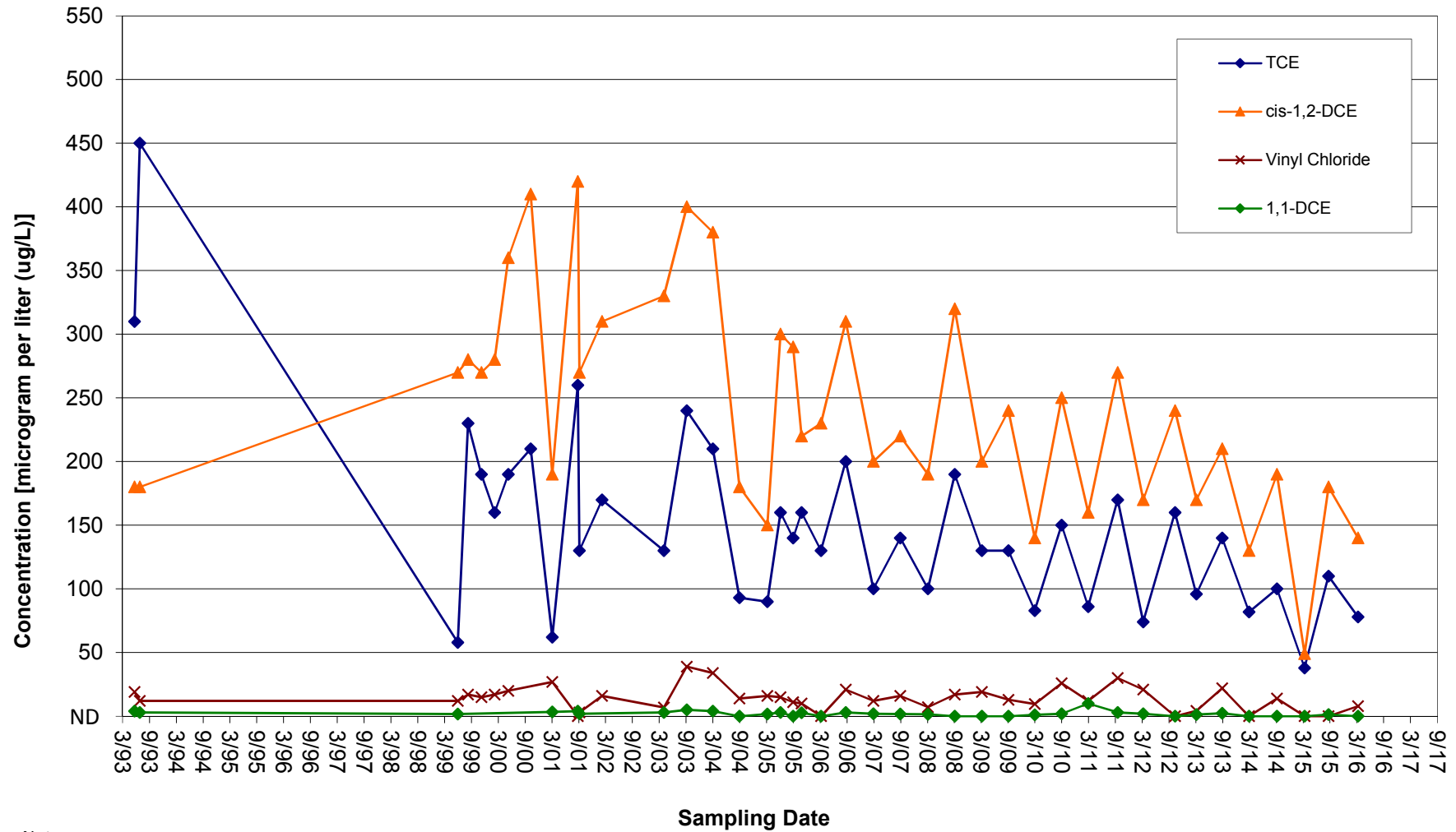
Notes:

ND - Not detected.

Reporting limit is variable.

Volatile organic compounds not shown were analyzed but not reported by the laboratory.

## MW-26



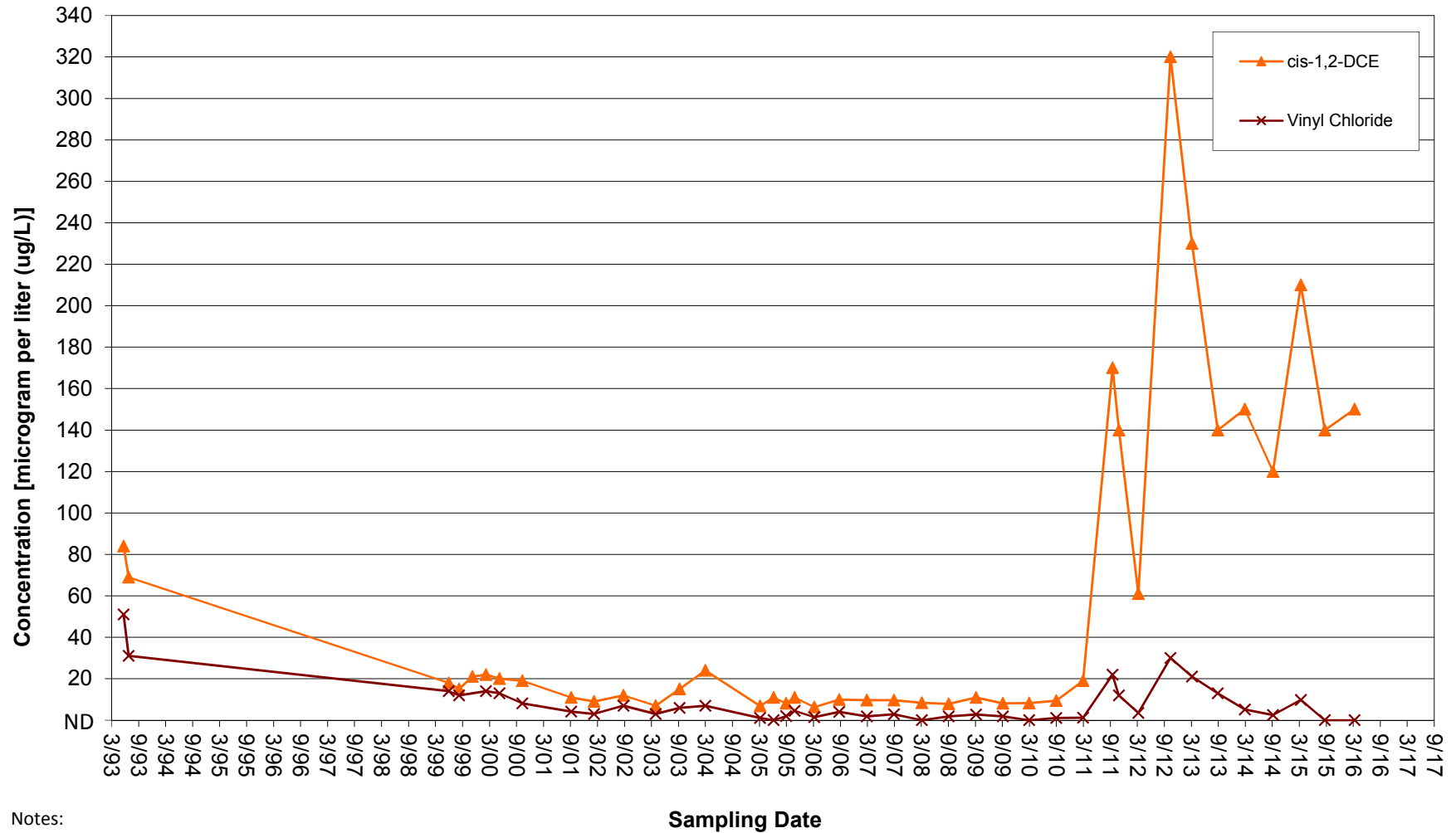
Notes:

ND - Not detected.

Reporting limit is variable.

Volatile organic compounds not shown were analyzed but not reported by the laboratory.

## MW-29



Notes:

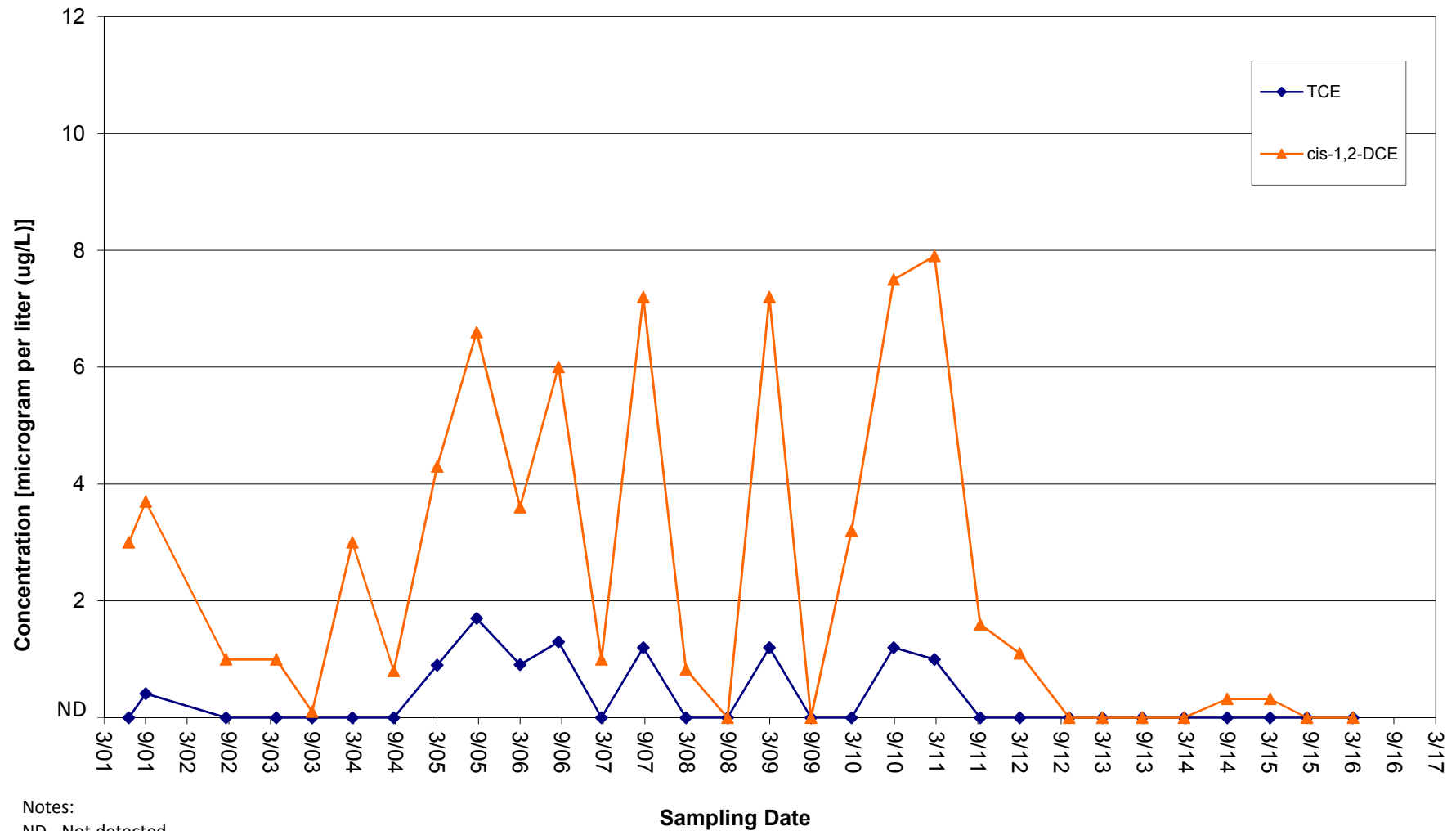
ND - Not detected.

Reporting limit is 5 ug/L.

Results less than the reporting limit are estimated.

Volatile organic compounds not shown were analyzed but not reported by the laboratory.

## MW-BR-05



### Notes:

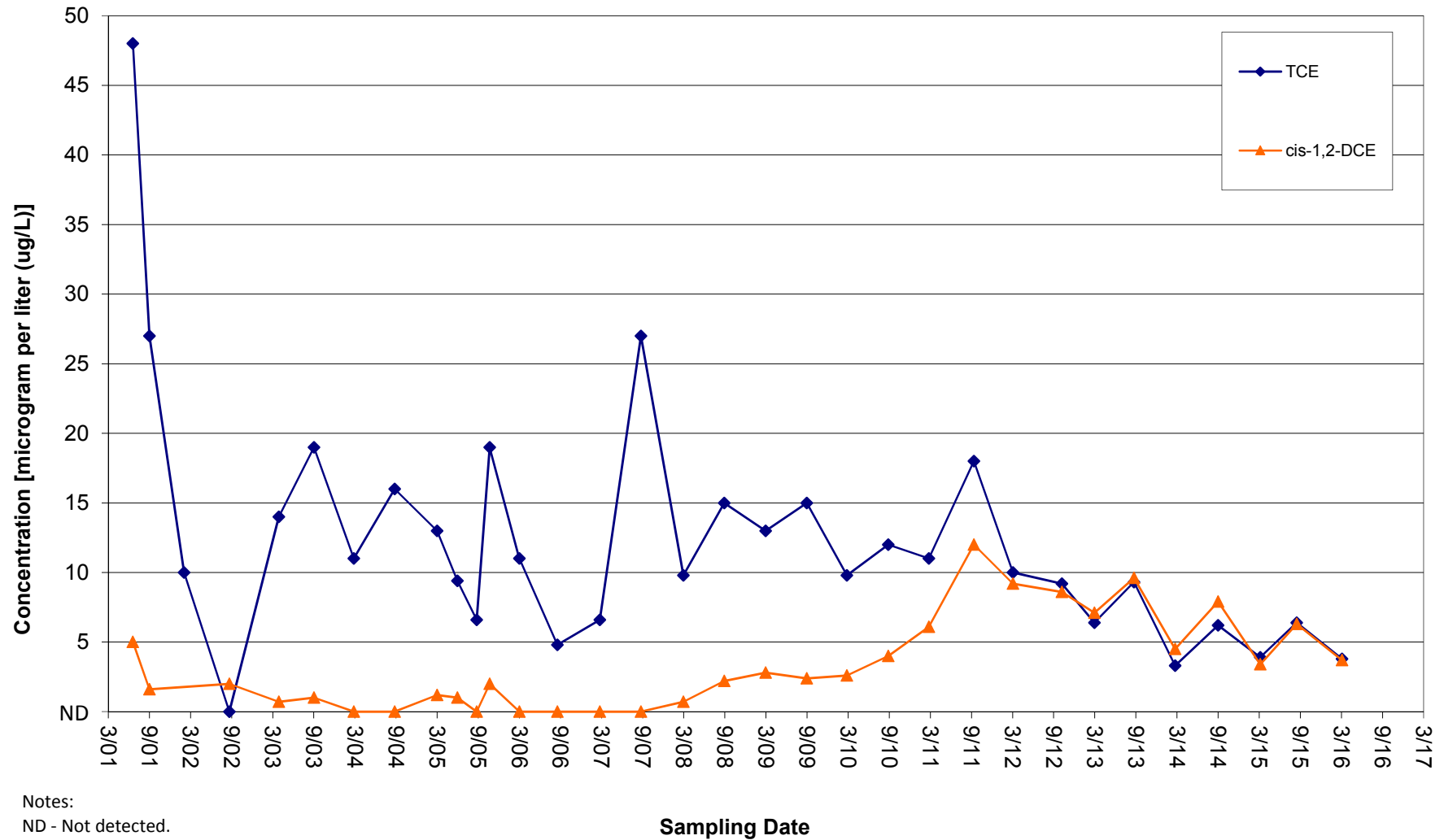
ND - Not detected.

Reporting limit is 5 ug/L.

Results less than the reporting limit are estimated.

Volatile organic compounds not shown were analyzed but not reported by the laboratory.

## MW-BR-06



### Notes:

ND - Not detected.

Reporting limit is 5 ug/L.

Results less than the reporting limit are estimated.

Volatile organic compounds not shown were analyzed but not reported by the laboratory.