August 9, 2019

Kiera Thompson
Engineering Geologist
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 11th Floor
Albany, NY 12233-7014

RE: NYSDEC BCP No. C360115 - Groundwater Monitoring Report
1-5 Holland Avenue, White Plains, New York

FILE: 14206/72276

Dear **Ms. Thompson**:

In accordance with the *Site Management Plan*, *BCP No. C360115, 1-5 Holland Avenue, White Plains, New York*, *December 2014* (SMP), the following is the semi-annual Groundwater Monitoring Report for the above referenced Brownfield site.

This report has been organized into the following sections:

- Section 1 - Background
- Section 2 - Field Activities
- Section 3 - Sample Results
- Section 4 - Remedial Action Objectives Assessment

1. BACKGROUND

As detailed in the *Remedial Investigation Report, BCP No. C360115, 1-5 Holland Avenue, White Plains, New York*, *April 2014*, results of groundwater sampling indicated the presence of tetrachloroethylene (PCE) in on-site monitoring wells in the source area, in on-site monitoring wells at the downgradient/sidegradient property boundary, and in off-site downgradient monitoring wells, at concentrations above the NYS Class GA groundwater standard of 5 µg/L.

The site cleanup goal for groundwater is, to the extent practicable, to meet NYS Class GA standards. The Class GA standards for the Site's Constituents of Concern (COC) are as follows:

- Tetrachloroethene – 5 µg/L
- cis-1,2-Dichloroethene – 5 µg/L
- Trichloroethene – 5 µg/L
- Vinyl chloride – 2 µg/L

As detailed in the *Interim Remedial Measure Construction Completion Report*, *BCP No. C360115, 1-5 Holland Avenue, White Plains, New York, October 2014* (IRM), groundwater treatment by In-situ Chemical Oxidation (ISCO) was selected to meet this goal. Two ISCO groundwater treatment injection events were conducted as part of the IRM in June 2013 and September 2014.

As detailed in the most recently updated and NYSDEC approved SMP, groundwater samples are to be collected annually. This report presents groundwater data for the sampling event conducted in April 2019, which is the fifth year the SMP has been implemented. As requested in the Periodic Review Report (PRR) for reporting year 2018 and approved by NYSDEC, this event does not include the two upgradient wells (MW-6 and 6SB) on the 7-11 Holland Avenue property decommissioned in December 2018.

The purpose of the groundwater monitoring is to evaluate concentrations of the Site's COC that exceed Class GA standards, primarily PCE and associated degradation products; to assess the extent of concentration rebound following ISCO treatment; and to monitor the continued attenuation of COC.

2. FIELD ACTIVITIES

On April 4, 2019, OBG set passive diffusion bags (PDBs) in on-site (MW-1, -2, -2S, -2D, -4S, -4D, -5, -5SB, -5DB) and off-site (MW-7, -7SB, -8, -8SB, -9, -9SB) groundwater monitoring wells, as depicted on **Figure 1**. PDBs were retrieved on April 26, 2019. Sampling activities were conducted in accordance with the SMP Field Activities Plan. Groundwater sampling logs and a summary of water quality field parameters are presented in **Appendix A**. Groundwater samples were submitted under chain-of-custody to Merit Laboratories, Inc. (Merit), a NYSDOH ELAP certified laboratory, for analysis of volatile organic compounds (VOCs) by USEPA Test Method 8260.

3. SAMPLE RESULTS

Groundwater analytical results for this sampling event and historical sampling events are summarized on **Table 1**. Merit's laboratory analytical report and OBG's *Data Usability Summary Report* (DUSR) for this sampling event are presented in **Appendices B and C**, respectively. These data have been entered into the NYSDEC Environmental Information Management System. A graphical presentation of current and historical groundwater analytical data is presented in **Appendix D**. A summary of groundwater analytical results for this sampling event are as follows:

- On-site Groundwater Characterization – Source Area

  A summary table of PCE concentrations in source area groundwater since the first ISCO event is presented below.

Well No.	6/10/13		11/14/13	1/14/14	7/17/14		10/10/14	5/8/15	10/09/15	5/04/16	10/25/16	5/18/17	10/30/17	5/15/18	4/26/19
MW-4S	**1,040**		**10**	**21** (BD **21**)	**890**		**327**	**460**	**730**	**400**	**107**	**158**	**151**	**180**	**24**
MW-4D	**5,500**		**332**	**317**	**2,000** (BD **1,750**)		**54** (BD **63**)	**29** (BD **25**)	**2490** (BD **840**)	**1,300** (BD **1,300**)	**990** (BD **860**)	**300** (BD **260**)	**221** (BD **189**)	**270** (BD **300**)	**116**

Notes: ISCO injection events occurred June 11-14, 2013 and September 9-11, 2014 as noted by hatched areas.
Bold values exceed Class GA standards.
Units = ug/L, ppb, BD = Blind Duplicate

Compared to the prior sampling event, the PCE concentration in MW-4D is within the same order of magnitude and have decreased from 2,490 µg/L to 116 µg/L since 2015. Compared to the prior sampling event, concentrations of PCE in well MW-4S have decreased an order of magnitude from 180 µg/L to 24 µg/L. PCE degradation compounds were not detected in source area wells.

- On-site Groundwater Characterization – Downgradient/Sidegradient Property Boundary

  A summary table of PCE concentrations in groundwater along the downgradient/sidegradient property boundary since the first ISCO event is presented below.

Well No.	06/10/13	11/15/13	01/14/14	07/17/14	10/10/14	5/8/15	10/9/15	5/4/16	10/25/16	5/18/17	10/30/17	05/15/18	4/26/19
MW-1 (Sidegrad)	2	0.39	3	**16**	3	**10**	3	1	2	**29**	2	**34**	**56**
MW-2 (Downgrad)	**27**	**6**	**19**	**94**	**158**	**33**	**64**	**55**	**15**	**44**	**83**	**123**	**40**
MW-2SB (Downgrad)	0.78	0.71	1	0.52	0.48	0.34	0.24	0.36	0.22	<1.0	0.37	0.43	<1.0
MW-2DB (Downgrad)	3	0.42	3	4	4	3	3	3	2	2	4	4	**6**
MW-5 (Downgrad)	**165**	**5**	**67**	**5**	4	4	2	2	**32**	**42**	**7**	4	**7**
MW-5SB (Downgrad)	4	3	3	3	2	2	2	1	2	0.43 J	2	4	**7**
MW-5DB (Downgrad)	1	0.81	0.95	0.41	0.48	0.55	0.39	0.31	0.25	3	0.34	0.28	<1.0

Notes: ISCO injection events occurred June 11-14, 2013 and September 9-11, 2014 as noted by hatched areas.
Bold values exceed Class GA standards.
J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.
Units = µg/L, ppb

The most recent round of groundwater data indicates that groundwater from five out of the seven property boundary wells exceeded the GA groundwater standard for PCE; however, it is noted that three of these wells had exceedances of only 1-2 µg/L. Consistent with the prior round of groundwater sampling, no PCE degradation compounds were detected in these wells above the GA groundwater standard.

- Downgradient Off-site Groundwater Characterization

  A summary table of PCE concentrations in off-site downgradient groundwater since the first ISCO event is presented below.

Well No.	06/10/13	07/17/14	10/10/14	5/7/15	10/9/15	5/4/16	10/25/16	5/18/-6/8/17	10/30/17	05/15/18	4/26/19
MW-7	**14**	**57**	**71**	**47**	**32**	**34**	**15**	**32**	**31**	**68**	**54**
MW-7SB	**6**	**7**	3	1	0.97	0.86	0.59	0.27 J	<1.0	0.32	<1.0
MW-8	1 (BD <0.67)	4	1	2	1	1	1	3	2	1	2
MW-8SB	**265**	**292**	3	**280**	**359**	**240**	**190**	**229**	**271**	**360**	**177 (BD 168)**
MW-9	0.18	<1.0	0.38	<1.0	0.25	<1.0	0.31	<1.0	0.31	<1.0	<1.0
MW-9SB	0.3	0.34	0.26	0.21	<1.0	<1.0	<1.0	<1.0	<1.0	0.28	<1.0

Notes: ISCO injection events occurred June 11-14, 2013 and September 9-11, 2014 as noted by hatched areas.
Bold values exceed Class GA standards.
J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.
Units = ug/L, ppb, BD = Blind Duplicate

Consistent with the previous groundwater sampling event, groundwater from two out of the six downgradient off-site wells exceeded the GA standard for PCE. PCE degradation compounds detected above GA standards included: cis-1,2-dichloroethene at 7 µg/L in MW-7SB; vinyl chloride at 12 µg/L in MW-8; cis-1,2-dichloroethene at 7 (BD 7) µg/L and trichloroethene at 14 (BD 13) µg/L in MW-8SB. The GA standards for vinyl chloride, cis-1,2-dichloroethene, and trichloroethene are 2 µg/L, 5 µg/L, and 5 µg/L, respectively.

4. REMEDIAL ACTION OBJECTIVES ASSESSMENT

As detailed in the *Final Engineering Report, NYSDEC Site Number: C360115, 1-5 Holland Avenue, White Plains, New York*, *December 2014*, the Remedial Action Objectives (RAOs) for groundwater are as follows:

- RAOs for Public Health Protection
  - Prevent ingestion of groundwater with COC concentrations exceeding drinking water standards.
  - Prevent contact with, or inhalation of, volatiles from contaminated groundwater.
- RAOs for Environmental Protection
  - Restore groundwater aquifer to pre-disposal/pre-release conditions, to the extent practicable.
  - Prevent the discharge of COCs to surface water.
  - Remove the source of groundwater or surface water COCs.

Based on the groundwater analytical results collected as part of this sampling event and the institutional and engineering controls currently in-place at the site, the remedy is effective for protection of human health and the environment. Institutional and engineering controls currently in-place include:

- Engineering Controls
  - composite cover system (Cap) to reduce potential contact with contaminated soils; and
  - sub-slab depressurization system to control the potential for vapor intrusion.
- Institutional Controls
  - implement, maintain and monitor Engineering Control systems;
  - prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and
  - limit the use and development of the Site to Commercial and Industrial uses only.

Should you have any questions or concerns regarding this matter, please feel free to contact me at (781) 883-6432.

Very truly yours,
O'BRIEN & GERE ENGINEERS, INC.

Mark A. Randazzo, CHMM, CPG, CSP
Project Manager

Appendices: Table 1 – Historical Summary of Groundwater Monitoring Data
Figure 1 – Groundwater Monitoring Well Location Map
Appendix A – Groundwater Sampling Logs
Appendix B – Merit's Laboratory Analytical Report
Appendix C – Data Usability Summary Report
Appendix D - Graphical Presentation of PCE Groundwater Concentrations

cc: Kevin Carpenter, P.E – NYSDEC
Stephanie Selmer – NYSDOH
Karen Puckett – OHAD
Neal Frink, Esq. – The Frink Law Firm, LLC
Douglas Crawford, PE – OBG

Tables

Table 1
Groundwater Quality VOC Summary
Groundwater Sampling Report
Brownfield Cleanup Program NO. C360115

Parameter		Well ID:	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-2
		Screen Interval (ft above msl):	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	181.4 - 191.4
		Date Sampled:	10/19/2011	5/1/2012	6/10/2013	11/14/2013 (Post ISCO)	1/14/2014 (Post ISCO)	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	5/18/2017 (Post ISCO)	10/30/2017 (Post ISCO)	05/15/2018 (Post ISCO)	04/26/2019 (Post ISCO)	10/21/2011
		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards	On-Site Locations															On-Site Locations
VOLATILE ORGANIC COMPOUNDS (VOCs)	Units																	
1,1,1-Trichloroethane	ug/L	5	<0.350	<0.330	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.350
1,1,2,2-Tetrachloroethane	ug/L	5	<0.310	<0.320	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.310
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5	<0.440	<0.420	<0.46	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.440
1,1,2-Trichloroethane	ug/L	1	<0.360	<0.220	<0.34	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.360
1,1-Dichloroethane	ug/L	5	<0.430	<0.260	<0.15	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.430
1,1-Dichloroethene	ug/L	5	<0.710	<0.410	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.710
1,2,3-Trichlorobenzene	ug/L	5	<0.420	<0.210	<0.25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.420
1,2,4-Trichlorobenzene	ug/L	5	<0.390	<0.200	<0.24	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.390
1,2-Dibromo-3-chloropropane	ug/L	0.04	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.00855
1,2-Dibromoethane (EDB)	ug/L	0.0006	<0.00855	<0.00855	<0.12	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.00855
1,2-Dichlorobenzene	ug/L	3	<0.360	<0.230	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.360
1,2-Dichloroethane (EDC)	ug/L	0.6	<0.420	<0.200	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.420
1,2-Dichloropropane	ug/L	1	<0.520	<0.250	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.520
1,3-Dichlorobenzene	ug/L	3	<0.420	<0.230	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.420
1,4-Dichlorobenzene	ug/L	3	<0.330	<0.230	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.330
1,4-Dioxane	ug/L	NC	<22.5 R	<0.301	<0.97	<5	<5	<5	<5	<5	<3	<1	<3	<3	<1	<1	<1	<22.5 R
2-Butanone (MEK)	ug/L	50	<0.630	<0.550	3.4 J	<10	0.79 J	0.63 J	<10	<10	<10	0.43 J	8.3 J	<10	<10	1.30 J	<10	<0.630
2-Hexanone	ug/L	50	<0.260	<0.370	<0.19	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<0.260
4-Methyl-2-pentanone (MIBK)	ug/L	NC	<0.510	<0.350	<0.35	<10	<10	<10	0.37 J	<10	<10	<10	<10	<10	<10	<10	<10	<0.510
Acetone	ug/L	50	<0.870	<0.280	<4.0	1.38 J	4.24 J	2.67 J	<10	1.27 J	<10	2.89 J	18	<10	2.44 J	4.60 J	2.94 J	<0.870
Benzene	ug/L	1	<0.430	<0.250	<0.11	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.430
Bromochloromethane	ug/L	5	<0.470	<0.300	<0.36	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.470
Bromodichloromethane	ug/L	50	<0.350	<0.260	<0.19	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.350
Bromoform	ug/L	50	<0.260	<0.460	<0.35	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.260
Bromomethane	ug/L	5	<0.510	<0.250	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.670
Carbon disulfide	ug/L	NC	<0.670	<0.300	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.27 J	<1	<0.500
Carbon tetrachloride	ug/L	5	<0.500	<0.360	`````````-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.400
Chlorobenzene	ug/L	5	<0.400	<0.220	<0.16	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.480
Chloroethane	ug/L	5	<0.480	<0.360	<0.21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.780
Chloroform	ug/L	7	<0.340	<0.220	<0.15	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.20 J	<1	<0.340
Chloromethane	ug/L	5	<0.350	<0.280	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.350
cis-1,2-Dichloroethene	ug/L	5	<0.380	<0.300	<0.21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.380
cis-1,3-Dichloropropene	ug/L	0.4	<0.360	<0.250	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.360
Cyclohexane	ug/L	NC	<0.460	<0.380	<0.32	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.460
Dibromochloromethane	ug/L	50	<0.360	<0.240	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.360
Dichlorodifluoromethane	ug/L	5	<0.420	<0.290	<0.57	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.420
Ethylbenzene	ug/L	5	<0.340	<0.220	<0.10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.340
Isopropylbenzene	ug/L	5	<0.390	<0.210	<0.12	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.390
Methyl acetate	ug/L	NC	<0.350	<0.220	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.350
Methyl tert-butyl ether (MTBE)	ug/L	NC	<0.380	<0.240	<0.25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.380
Methylcyclohexane	ug/L	NC	<0.460	<0.360	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	0.29 J	<1	<1	<1	<0.460
Methylene chloride	ug/L	5	<1.98	<1.98	<0.16	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.52 J	<1.98
Styrene	ug/L	5	<0.330	<0.250	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.330
Tetrachloroethene	ug/L	5	**57.9**	**17.1**	2	0.39 J	3	**16**	3	**10**	3	1	2	**29**	2	**34**	**56**	**71.7**
Toluene	ug/L	5	<0.390	<0.270	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.390
trans-1,2-Dichloroethene	ug/L	5	<0.550	<0.350	<0.14	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.550
trans-1,3-Dichloropropene	ug/L	0.4	<0.320	<0.220	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.320
Trichloroethene	ug/L	5	<0.550	<0.270	<0.29	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.550
Trichlorofluoromethane	ug/L	5	<0.660	<0.450	<0.28	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.660
Vinyl Chloride	ug/L	2	<0.460	<0.290	<0.24	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.460
Xylenes (Total)	ug/L	5	<0.630	<0.690	<0.58	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<0.630
Total VOCs	ug/L	NA	57.9	17.1	5.4 J	1.77 J	7.24 J	19.3 J	0.37 J	11.27 J	3	4.32 J	26.3	29.3 J	4.44 J	40.37 J	59.46 J	71.7

Notes:

6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Series: Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

* = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Summary
Groundwater Sampling Report
Brownfield Cleanup Program NO. C360115

Parameter		Well ID:	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2DB	MW-2DB
		Screen Interval (ft above msl):	181.4 - 191.4	181.4 - 191.4	181.4 - 191.4	181.4 - 191.4	181.4 - 191.4	181.4 - 191.4	181.4 - 191.4	181.4 - 191.4	181.4 - 191.4	181.4 - 191.4	181.4 - 191.4	181.4 - 191.4	181.4 - 191.4	181.4 - 191.4	126.3 - 136.3	126.3 - 136.3
		Date Sampled:	5/2/2012	6/10/2013	11/14/2013 (Post ISCO)	1/14/2014 (Post ISCO)	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	5/18/2017 (Post ISCO)	10/30/2017 (Post ISCO)	05/15/2018 (Post ISCO)	04/26/2019 (Post ISCO)	5/5/2011	10/20/2011
		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards															On-Site Locations	
VOLATILE ORGANIC COMPOUNDS (VOCs)	Units																	
1,1,1-Trichloroethane	ug/L	5	<0.330	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.350
1,1,2,2-Tetrachloroethane	ug/L	5	<0.320	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.280	<0.310
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5	<0.420	<0.46	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.320	<0.440
1,1,2-Trichloroethane	ug/L	1	<0.220	<0.34	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.570	<0.360
1,1-Dichloroethane	ug/L	5	<0.260	<0.15	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.440	<0.430
1,1-Dichloroethene	ug/L	5	<0.410	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.410	<0.710
1,2,3-Trichlorobenzene	ug/L	5	<0.210	<0.25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.550	<0.420
1,2,4-Trichlorobenzene	ug/L	5	<0.200	<0.24	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.390
1,2-Dibromo-3-chloropropane	ug/L	0.04	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.660	<0.00855
1,2-Dibromoethane (EDB)	ug/L	0.0006	<0.00855	<0.12	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.400	<0.00855
1,2-Dichlorobenzene	ug/L	3	<0.230	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.360
1,2-Dichloroethane (EDC)	ug/L	0.6	<0.200	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.420
1,2-Dichloropropane	ug/L	1	<0.250	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.520
1,3-Dichlorobenzene	ug/L	3	<0.230	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.410	<0.420
1,4-Dichlorobenzene	ug/L	3	<0.230	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.330
1,4-Dioxane	ug/L	NC	<0.301	<0.97	<5	<5	<5	<5	<5	<3	<1	<3	<3	<1	<1	<1	<20.2 R	<22.5 R
2-Butanone (MEK)	ug/L	50	<0.550	4.7 J	<10	0.69 J	0.56 J	<10	<10	<10	0.34 J	13	<10	<10	1.28 J	<10	<0.510	<0.630
2-Hexanone	ug/L	50	<0.370	<0.19	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<0.370	<0.260
4-Methyl-2-pentanone (MIBK)	ug/L	NC	<0.350	<0.35	<10	<10	<10	<10	<10	<10	<10	0.15 J	<10	<10	0.16 J	<10	<0.410	<0.510
Acetone	ug/L	50	<0.280	<4.0	0.96 J	1.92 J	3.36 J	<10	1.39 J	<10	2.04 J	11	<10	2.11 J	4.67 J	2.94 J	<0.610	<0.870
Benzene	ug/L	1	<0.250	<0.11	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.250	<0.430
Bromochloromethane	ug/L	5	<0.300	<0.36	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.560	<0.470
Bromodichloromethane	ug/L	50	<0.260	<0.19	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.350
Bromoform	ug/L	50	<0.460	<0.35	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.520	<0.260
Bromomethane	ug/L	5	<0.250	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.680	<0.670
Carbon disulfide	ug/L	NC	<0.300	<0.13	<1	<1	<1	0.18 J	<1	<1	<1	<1	<1	<1	<1	<1	<0.330	<0.500
Carbon tetrachloride	ug/L	5	<0.360	<0.19	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.290	<0.400
Chlorobenzene	ug/L	5	<0.220	<0.16	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.480
Chloroethane	ug/L	5	<0.360	<0.21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.480	<0.780
Chloroform	ug/L	7	<0.220	<0.15	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.32 J	<1	2.41	<0.340
Chloromethane	ug/L	5	<0.280	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.350
cis-1,2-Dichloroethene	ug/L	5	<0.300	<0.21	<1	<1	<1	<1	<1	<1	<1	0.15 J	<1	<1	<1	<1	<0.560	<0.380
cis-1,3-Dichloropropene	ug/L	0.4	<0.250	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.360
Cyclohexane	ug/L	NC	<0.380	<0.32	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.230	<0.460
Dibromochloromethane	ug/L	50	<0.240	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.360
Dichlorodifluoromethane	ug/L	5	<0.290	<0.57	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.420
Ethylbenzene	ug/L	5	<0.220	<0.10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.340
Isopropylbenzene	ug/L	5	<0.210	<0.12	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.300	<0.390
Methyl acetate	ug/L	NC	<0.220	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.600	<0.350
Methyl tert-butyl ether (MTBE)	ug/L	NC	<0.240	<0.25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.450	<0.380
Methylcyclohexane	ug/L	NC	<0.360	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.290	<0.460
Methylene chloride	ug/L	5	<1.98	<0.16	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.48 J	<1.98	<1.98
Styrene	ug/L	5	<0.250	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.380	<0.330
Tetrachloroethene	ug/L	5	**189 D**	**27**	**6**	**19**	**94**	**158**	**33**	**64**	**55**	**15**	**44**	**83**	**123**	**40**	4.83	4.96
Toluene	ug/L	5	<0.270	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.19	<0.390
trans-1,2-Dichloroethene	ug/L	5	<0.350	<0.14	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.500	<0.550
trans-1,3-Dichloropropene	ug/L	0.4	<0.220	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.450	<0.320
Trichloroethene	ug/L	5	<0.270	<0.29	<1	<1	<1	<1	<1	<1	<1	0.15 J	<1	<1	<1	<1	<0.440	<0.550
Trichlorofluoromethane	ug/L	5	<0.450	<0.28	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.220	<0.660
Vinyl Chloride	ug/L	2	<0.290	<0.24	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.300	<0.460
Xylenes (Total)	ug/L	5	<0.690	<0.58	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<0.660	<0.630
Total VOCs	ug/L	NA	189 D	31.7 J	6.96 J	21.61 J	97.92 J	158.18 J	34.39 J	64	57.38 J	39.45	44.0	85.11 J	129.43 J	43.42 J	8.43	4.96

Notes:

6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Series Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

***** = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Summary
Groundwater Sampling Report
Brownfield Cleanup Program NO. C360115

Parameter		Well ID:	MW-2DB	MW-2DB	MW-2DB	MW-2DB	MW-2DB	MW-2DB	MW-2DB	MW-2DB	MW-2DB	MW-2DB	MW-2DB	MW-2DB	MW-2DB	MW-2DB	MW-2SB	MW-2SB
		Screen Interval (ft above msl):	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3	148.9 - 158.9	148.9 - 158.9
		Date Sampled:	5/2/2012	6/10/2013	11/14/2013 (Post ISCO)	1/14/2014 (Post ISCO)	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	5/18/2017 (Post ISCO)	10/30/2017 (Post ISCO)	05/15/2018 (Post ISCO)	04/26/2019 (Post ISCO)	5/5/2011	10/21/2011
		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards														On-Site Locations		
VOLATILE ORGANIC COMPOUNDS (VOCs)	Units																	
1,1,1-Trichloroethane	ug/L	5	<0.330	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.350
1,1,2,2-Tetrachloroethane	ug/L	5	<0.320	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.280	<0.310
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5	<0.420	<0.46	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.320	<0.440
1,1,2-Trichloroethane	ug/L	1	<0.220	<0.34	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.570	<0.360
1,1-Dichloroethane	ug/L	5	<0.260	<0.15	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.440	<0.430
1,1-Dichloroethene	ug/L	5	<0.410	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.410	<0.710
1,2,3-Trichlorobenzene	ug/L	5	<0.210	<0.25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.550	<0.420
1,2,4-Trichlorobenzene	ug/L	5	<0.200	<0.24	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.390
1,2-Dibromo-3-chloropropane	ug/L	0.04	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.660	<0.00855
1,2-Dibromoethane (EDB)	ug/L	0.0006	<0.00855	<0.12	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.400	<0.00855
1,2-Dichlorobenzene	ug/L	3	<0.230	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.360
1,2-Dichloroethane (EDC)	ug/L	0.6	<0.200	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.420
1,2-Dichloropropane	ug/L	1	<0.250	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.520
1,3-Dichlorobenzene	ug/L	3	<0.230	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.410	<0.420
1,4-Dichlorobenzene	ug/L	3	<0.230	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.330
1,4-Dioxane	ug/L	NC	<0.301	<0.97	<5	<5	<5	<5	<5	<3	<1	<3	<3	<1	<1	<1	<20.2 R	<22.5 R
2-Butanone (MEK)	ug/L	50	<0.550	3.4 J	<10	1.15 J	0.54 J	<10	<10	<10	<10	12	<10	<10	1.80 J	<10	<0.510	<0.630
2-Hexanone	ug/L	50	<0.370	<0.19	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<0.370	<0.260
4-Methyl-2-pentanone (MIBK)	ug/L	NC	<0.350	<0.35	<10	<10	<10	<10	<10	<10	<10	0.15 J	<10	<10	0.29 J	<10	<0.410	<0.510
Acetone	ug/L	50	<0.280	<4.0	1.23 J	5.22 J	2.07 J	<10	1.30 J	<10	<10	13	<10	2.21 J	2.49 J	3.30 J	<0.610	<0.870
Benzene	ug/L	1	<0.250	<0.11	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.510	<0.430
Bromochloromethane	ug/L	5	<0.300	<0.36	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.560	<0.470
Bromodichloromethane	ug/L	50	<0.260	<0.19	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.440	<0.350
Bromoform	ug/L	50	<0.460	<0.35	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.520	<0.260
Bromomethane	ug/L	5	<0.250	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.680	<0.670
Carbon disulfide	ug/L	NC	<0.300	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.330	<0.500
Carbon tetrachloride	ug/L	5	<0.360	<0.19	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.290	<0.400
Chlorobenzene	ug/L	5	<0.220	<0.16	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.480
Chloroethane	ug/L	5	<0.360	<0.21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.480	<0.780
Chloroform	ug/L	7	<0.220	0.26 J	<1	<1	0.30 J	0.19 J	<1	0.24 J	<1	0.16 J	<1	<1	<1	<1	**13**	2.69
Chloromethane	ug/L	5	<0.280	<0.20	<1	<1	<1	0.24 J	<1	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.350
cis-1,2-Dichloroethene	ug/L	5	<0.300	<0.21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.560	<0.380
cis-1,3-Dichloropropene	ug/L	0.4	<0.250	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.360
Cyclohexane	ug/L	NC	<0.380	<0.32	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.230	<0.460
Dibromochloromethane	ug/L	50	<0.240	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.360
Dichlorodifluoromethane	ug/L	5	<0.290	<0.57	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.420
Ethylbenzene	ug/L	5	<0.220	<0.10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.340
Isopropylbenzene	ug/L	5	<0.210	<0.12	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.300	<0.390
Methyl acetate	ug/L	NC	<0.220	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.600	<0.350
Methyl tert-butyl ether (MTBE)	ug/L	NC	<0.240	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.450	<0.380
Methylcyclohexane	ug/L	NC	<0.360	<0.16	<1	<1	<1	<1	<1	<1	<1	<1	0.22 J	<1	<1	<1	<0.290	<0.460
Methylene chloride	ug/L	5	<1.98	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.45 J	<1.98	<1.98
Styrene	ug/L	5	<0.250	<0.25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.380	<0.330
Tetrachloroethene	ug/L	5	4.41	3	0.42 J	3	4	4	3	3	3	2	2	4	4	**6**	0.988 J	0.670 J
Toluene	ug/L	5	<0.270	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.230	<0.390
trans-1,2-Dichloroethene	ug/L	5	<0.350	<0.58	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.500	<0.550
trans-1,3-Dichloropropene	ug/L	0.4	<0.220	<0.14	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.450	<0.320
Trichloroethene	ug/L	5	<0.270	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.440	<0.550
Trichlorofluoromethane	ug/L	5	<0.450	<0.29	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.220	<0.660
Vinyl Chloride	ug/L	2	<0.290	<0.28	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.300	<0.460
Xylenes (Total)	ug/L	5	<0.690	<0.24	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<0.660	<0.630
Total VOCs	ug/L	NA	4.41	6.66 J	1.65 J	9.37 J	6.91 J	4.43 J	4.3 J	3.24 J	3	27.31	2.22 J	6.21 J	8.58 J	9.75 J	13.988 J	3.36 J

Notes:

6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Series Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

***** = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Summary
Groundwater Sampling Report
Brownfield Cleanup Program NO. C360115

Parameter		Well ID:	MW-2SB	(DUP) MW-2SB	MW-2SB	MW-2SB	MW-2SB	MW-2SB	MW-2SB	MW-2SB	MW-2SB	MW-2SB	MW-2SB	MW-2SB	MW-2SB	MW-2SB	MW-2SB	MW-4D
		Screen Interval (ft above msl):	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	158 - 168
		Date Sampled:	5/2/2012	5/2/2012	6/10/2013	11/14/2013 (Post ISCO)	1/14/2014 (Post ISCO)	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	5/18/2017 (Post ISCO)	10/30/2017 (Post ISCO)	05/15/2018 (Post ISCO)	04/26/2019 (Post ISCO)	5/5/2011
		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards													On-Site Locations			
VOLATILE ORGANIC COMPOUNDS (VOCs)	Units																	
1,1,1-Trichloroethane	ug/L	5	<0.330	<0.330	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<8.40
1,1,2,2-Tetrachloroethane	ug/L	5	<0.320	<0.320	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5.60
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5	<0.420	<0.420	<0.46	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<6.40
1,1,2-Trichloroethane	ug/L	1	<0.220	<0.220	<0.34	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<11.4
1,1-Dichloroethane	ug/L	5	<0.260	<0.260	<0.15	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<8.80
1,1-Dichloroethene	ug/L	5	<0.410	<0.410	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<8.20
1,2,3-Trichlorobenzene	ug/L	5	<0.210	<0.210	<0.25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<11.0
1,2,4-Trichlorobenzene	ug/L	5	<0.200	<0.200	<0.24	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<6.80
1,2-Dibromo-3-chloropropane	ug/L	0.04	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<13.2
1,2-Dibromoethane (EDB)	ug/L	0.0006	<0.00855	<0.00855	<0.12	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<8.00
1,2-Dichlorobenzene	ug/L	3	<0.230	<0.230	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<6.80
1,2-Dichloroethane (EDC)	ug/L	0.6	<0.200	<0.200	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<9.20
1,2-Dichloropropane	ug/L	1	<0.250	<0.250	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<9.20
1,3-Dichlorobenzene	ug/L	3	<0.230	<0.230	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<8.20
1,4-Dichlorobenzene	ug/L	3	<0.230	<0.230	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<8.60
1,4-Dioxane	ug/L	NC	<0.301	<0.301	<0.97	<5	<5	<5	<5	<5	<3	<1	<3	<3	<1	<1	<1	<404
2-Butanone (MEK)	ug/L	50	<0.550	<0.550	4.7 J	<10	0.62 J	0.64 J	<10	<10	<10	<10	12	<10	<10	2.76 J	0.91 J	<10.2
2-Hexanone	ug/L	50	<0.370	<0.370	<0.19	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<7.40
4-Methyl-2-pentanone (MIBK)	ug/L	NC	<0.350	<0.350	<0.35	<10	<10	<10	<10	<10	<10	<10	0.17 J	<10	<10	0.35 J	<10	<8.20
Acetone	ug/L	50	<0.280	<0.280	5.0 J	1.38 J	3.13 J	3.81 J	<10	2.26 J	<10	2.07 J	13	**53 J**	4.96 J	7.60 J	8.17 J	<12.2
Benzene	ug/L	1	<0.250	<0.250	<0.11	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5.00
Bromochloromethane	ug/L	5	<0.300	<0.300	<0.36	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<11.2
Bromodichloromethane	ug/L	50	<0.260	<0.260	<0.19	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<7.00
Bromoform	ug/L	50	<0.460	<0.460	<0.35	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10.4
Bromomethane	ug/L	5	<0.250	<0.250	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<13.6
Carbon disulfide	ug/L	NC	<0.300	<0.300	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<6.60
Carbon tetrachloride	ug/L	5	<0.360	<0.360	<0.19	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5.80
Chlorobenzene	ug/L	5	<0.220	<0.220	<0.16	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<8.40
Chloroethane	ug/L	5	<0.360	<0.360	<0.21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<9.60
Chloroform	ug/L	7	2.5	2.49	1	0.96 J	0.84 J	0.60 J	0.63 J	0.55 J	0.36 J	0.36 J	0.32 J	0.25 J	0.32 J	0.23 J	<1	<8.20
Chloromethane	ug/L	5	<0.280	<0.280	<0.20	<1	<1	<1	<1	<1	<1	<1	0.15 J	<1	<1	<1	<1	<8.60
cis-1,2-Dichloroethene	ug/L	5	<0.300	<0.300	<0.21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<11.2
cis-1,3-Dichloropropene	ug/L	0.4	<0.250	<0.250	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<7.20
Cyclohexane	ug/L	NC	<0.380	<0.380	<0.32	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<4.60
Dibromochloromethane	ug/L	50	<0.240	<0.240	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<8.60
Dichlorodifluoromethane	ug/L	5	<0.290	<0.290	<0.57	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<8.40
Ethylbenzene	ug/L	5	<0.220	<0.220	<0.10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<6.80
Isopropylbenzene	ug/L	5	<0.210	<0.210	<0.12	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<6.00
Methyl acetate	ug/L	NC	<0.220	<0.220	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<12.0
Methyl tert-butyl ether (MTBE)	ug/L	NC	<0.240	<0.240	<0.25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<9.00
Methylcyclohexane	ug/L	NC	<0.360	<0.360	<0.13	<1	<1	<1	<1	<1	<1	0.24 J	<1	<1	<1	<1	<1	<5.80
Methylene chloride	ug/L	5	<1.98	<1.98	<0.16	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.66 J	<39.6
Styrene	ug/L	5	<0.250	<0.250	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<7.60
Tetrachloroethene	ug/L	5	<0.330	<0.330	0.78 J	0.71 J	1	0.52 J	0.48 J	0.34 J	0.24 J	0.36 J	0.22 J	<1	0.37 J	0.43 J	0.53 J	**2570**
Toluene	ug/L	5	<0.270	<0.270	<0.17	<1	<1	<1	<1	<1	<1	<1	0.13 J	<1	<1	<1	<1	<4.60
trans-1,2-Dichloroethene	ug/L	5	<0.350	<0.350	<0.14	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10.0
trans-1,3-Dichloropropene	ug/L	0.4	<0.220	<0.220	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<9.00
Trichloroethene	ug/L	5	<0.270	<0.270	<0.29	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<8.80
Trichlorofluoromethane	ug/L	5	<0.450	<0.450	<0.28	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<4.40
Vinyl Chloride	ug/L	2	<0.290	<0.290	<0.24	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<6.00
Xylenes (Total)	ug/L	5	<0.690	<0.690	<0.58	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<13.2
Total VOCs	ug/L	NA	2.5	2.49	11.48 J	3.05 J	5.59 J	5.57 J	1.11 J	3.15 J	0.60 J	3.03 J	25.99	53.3 J	5.65 J	11.37 J	10.27 J	2,570

Notes:

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BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

***** = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Summary
Groundwater Sampling Report
Brownfield Cleanup Program NO. C360115

Parameter		Well ID:	MW-4D	MW-4D	MW-4D	MW-4D	MW-4D	MW-4D	DUP (MW-4D)	MW-4D	DUP (MW-4D)	MW-4D	DUP (MW-4D)	MW-4D	DUP (MW-4D)	MW-4D	DUP (MW-4D)	MW-4D
		Screen Interval (ft above msl):	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168
		Date Sampled:	10/19/2011	5/1/2012	6/10/2013	11/14/2013 (Post ISCO)	1/14/2014 (Post ISCO)	7/17/2014 (Post ISCO)	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)
		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards												On-Site Locations				
VOLATILE ORGANIC COMPOUNDS (VOCs)	**Units**																	
1,1,1-Trichloroethane	ug/L	5	<17.5	<16.5	<54	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
1,1,2,2-Tetrachloroethane	ug/L	5	<15.5	<16.0	<53	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5	<22.0	<21.0	<93	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
1,1,2-Trichloroethane	ug/L	1	<18.0	<11.0	<69	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
1,1-Dichloroethane	ug/L	5	<21.5	<13.0	<29	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
1,1-Dichloroethene	ug/L	5	<35.5	<20.5	<54	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
1,2,3-Trichlorobenzene	ug/L	5	<21.0	<10.5	<49	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
1,2,4-Trichlorobenzene	ug/L	5	<19.5	<10.0	<49	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
1,2-Dibromo-3-chloropropane	ug/L	0.04	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006	<0.00855	<0.00855	<24	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
1,2-Dichlorobenzene	ug/L	3	<18.0	<11.5	<27	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
1,2-Dichloroethane (EDC)	ug/L	0.6	<21.0	<10.0	<34	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
1,2-Dichloropropane	ug/L	1	<26.0	<12.5	<36	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
1,3-Dichlorobenzene	ug/L	3	<21.0	<11.5	<40	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
1,4-Dichlorobenzene	ug/L	3	<16.5	<11.5	<36	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
1,4-Dioxane	ug/L	NC	<1130 R	<0.301	<0.97	<5	<5	<5	<5	<5	<5	<5	<5	<3	<3	<1	<1	<3
2-Butanone (MEK)	ug/L	50	<31.5	<27.5	<650	<10	0.78 J	<200	<200	<10	<10	<10	<10	20 J	2.9 J	<1000	<1000	<500
2-Hexanone	ug/L	50	<13.0	<18.5	<37	<10	<10	<200	<200	<10	<10	<10	<10	<500	<100	<1000	<1000	<500
4-Methyl-2-pentanone (MIBK)	ug/L	NC	<25.5	<17.5	<70	<10	<10	<200	<200	<10	<10	<10	<10	<500	<100	<1000	<1000	<500
Acetone	ug/L	50	<43.5	<14.0	<800	5.06 J	4.61 J	12 J	<200	<10	<10	1.97 J	2.02 J	<500	<100	<1000	<1000	<500
Benzene	ug/L	1	<21.5	<12.5	<22	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
Bromochloromethane	ug/L	5	<23.5	<15.0	<72	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
Bromodichloromethane	ug/L	50	<17.5	<13.0	<38	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
Bromoform	ug/L	50	<13.0	<23.0	<70	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
Bromomethane	ug/L	5	<33.5	<12.5	<37	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
Carbon disulfide	ug/L	NC	<25.0	<15.0	<25	<1	<1	<20	<20	0.35 J	0.19 J	<1	0.28 J	<50	<10	<100	<100	<50
Carbon tetrachloride	ug/L	5	<20.0	<18.0	<38	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
Chlorobenzene	ug/L	5	<24.0	<11.0	<31	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
Chloroethane	ug/L	5	<39.0	<18.0	<43	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
Chloroform	ug/L	7	<17.0	<11.0	<30	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
Chloromethane	ug/L	5	<17.5	<14.0	<39	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
cis-1,2-Dichloroethene	ug/L	5	<19.0	<15.0	<42	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
cis-1,3-Dichloropropene	ug/L	0.4	<18.0	<12.5	<33	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
Cyclohexane	ug/L	NC	<23.0	<19.0	<65	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
Dibromochloromethane	ug/L	50	<18.0	<12.0	<40	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
Dichlorodifluoromethane	ug/L	5	<21.0	<14.5	<110	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
Ethylbenzene	ug/L	5	<17.0	<11.0	<20	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
Isopropylbenzene	ug/L	5	<19.5	<10.5	<23	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
Methyl acetate	ug/L	NC	<17.5	<11.0	<40	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
Methyl tert-butyl ether (MTBE)	ug/L	NC	<19.0	<12.0	<50	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
Methylcyclohexane	ug/L	NC	<23.0	<18.0	<26	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
Methylene chloride	ug/L	5	<99.0	<99.0	<32	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
Styrene	ug/L	5	<16.5	<12.5.0	<25	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
Tetrachloroethene	ug/L	5	**6070**	**6140**	**5500**	**332**	**317**	**2000**	**1750**	**54**	**63**	**29**	**25**	**2490**	**840**	**1300**	**1300**	**990**
Toluene	ug/L	5	<19.5	<13.5	<33	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
trans-1,2-Dichloroethene	ug/L	5	<27.5	<17.5	<29	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
trans-1,3-Dichloropropene	ug/L	0.4	<16.0	<11.0	<40	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
Trichloroethene	ug/L	5	<27.5	<13.5	<58	0.28 J	0.30 J	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
Trichlorofluoromethane	ug/L	5	<33.0	<22.5	<57	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
Vinyl Chloride	ug/L	2	<23.0	<14.5	<48	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<50
Xylenes (Total)	ug/L	5	<31.5	<34.5	<120	<3	<3	<60	<60	<3	<3	<3	<3	<200	<30	<300	<300	<200
Total VOCs	ug/L	NA	6,070	6,140	5,500	337.34 J	322.69 J	2,012 J	1,750	54.35 J	63.19 J	30.97 J	27.30 J	2510 J	842.9 J	1,300	1,300	990

Notes:

6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Series Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

***** = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Summary
Groundwater Sampling Report
Brownfield Cleanup Program NO. C360115

Parameter		Well ID:	DUP (MW-4D)	MW-4D	(DUP) MW-4D	MW-4D	(DUP) MW-4D	MW-4D	(DUP) MW-4D	MW-4D	MW-4S	MW-4S	MW-4S	MW-4S	MW-4S	MW-4S	DUP (MW-4S)	MW-4S	MW-4S
		Screen Interval (ft above msl):	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5
		Date Sampled:	10/26/2016 (Post ISCO)	5/18/2017 (Post ISCO)	5/18/2017 (Post ISCO)	10/30/2017 (Post ISCO)	10/30/2017 (Post ISCO)	05/15/2018 (Post ISCO)	05/15/2018 (Post ISCO)	04/26/2019 (Post ISCO)	10/19/2011	5/1/2012	6/10/2013	11/14/2013 (Post ISCO)	1/14/2014 (Post ISCO)	1/14/2014 (Post ISCO)	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)
		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards											On-Site Locations					
VOLATILE ORGANIC COMPOUNDS (VOCs)	Units																		
1,1,1-Trichloroethane	ug/L	5	<50	<50	<50	<5	<1	<10	<10	<1	<3.50	<3.30	<14	<1	<1	<1	<10	<1
1,1,2,2-Tetrachloroethane	ug/L	5	<50	<50	<50	<5	<1	<10	<10	<1	<3.10	<3.20	<13	<1	<1	<1	<10	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5	<50	<50	<50	<5	<1	<10	<10	<1	<4.40	<4.20	<23	<1	<1	<1	<10	<1
1,1,2-Trichloroethane	ug/L	1	<50	<50	<50	<5	<1	<10	<10	<1	<3.60	<2.20	<17	<1	<1	<1	<10	<1
1,1-Dichloroethane	ug/L	5	<50	<50	<50	<5	<1	<10	<10	<1	<4.30	<2.60	**7.3**	<1	<1	<1	<10	<1
1,1-Dichloroethene	ug/L	5	<50	<50	<50	<5	<1	<10	<10	<1	<7.10	<4.10	<13	<1	<1	<1	<10	<1
1,2,3-Trichlorobenzene	ug/L	5	<50	<50	<50	<5	<1	<10	<10	<1	<4.20	<2.10	<12	<1	<1	<1	<10	<1
1,2,4-Trichlorobenzene	ug/L	5	<50	<50	<50	<5	<1	<10	<10	<1	<3.90	<2.00	<12	<1	<1	<1	<10	<1
1,2-Dibromo-3-chloropropane	ug/L	0.04	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006	<50	<50	<50	<5	<1	<10	<10	<1	<0.00855	<0.00855	<6.1	<1	<1	<1	<10	<1
1,2-Dichlorobenzene	ug/L	3	<50	<50	<50	<5	<1	<10	<10	<1	<3.60	<2.30	<6.7	<1	<1	<1	<10	<1
1,2-Dichloroethane (EDC)	ug/L	0.6	<50	<50	<50	<5	<1	<10	<10	<1	<4.20	<2.00	<8.6	<1	<1	<1	<10	<1
1,2-Dichloropropane	ug/L	1	<50	<50	<50	<5	<1	<10	<10	<1	<5.20	<2.50	<9.1	<1	<1	<1	<10	<1
1,3-Dichlorobenzene	ug/L	3	<50	<50	<50	<5	<1	<10	<10	<1	<4.20	<2.30	<10	<1	<1	<1	<10	<1
1,4-Dichlorobenzene	ug/L	3	<50	<50	<50	<5	0.31 J	<10	<10	<1	<3.30	<2.30	<9.0	<1	<1	<1	<10	<1
1,4-Dioxane	ug/L	NC	<3	<3	<3	<1	<1	<1	<1	<1	<225 R	<0.301	<0.97	<5	<5	<5	<5	<5
2-Butanone (MEK)	ug/L	50	<500	<500	<500	1.5 J	<10	<100	<100	<10	<6.30	<5.50	<160	<10	0.71 J	1.00 J	<100	<10
2-Hexanone	ug/L	50	<500	<500	<500	<50	<10	<100	<100	<10	<2.60	<3.70	<9.4	<10	<10	<10	<100	<10
4-Methyl-2-pentanone (MIBK)	ug/L	NC	<500	<500	<500	<50	<10	<100	<100	<10	<5.10	<3.50	<18	<10	<10	<10	<100	<10
Acetone	ug/L	50	<500	<500	<500	4.4 J	3.81 J	28.3 J	30.2 J	3.35 J	<8.70	<2.80	<200	3.71 J	2.65 J	3.06 J	9.3 J	4.6 J
Benzene	ug/L	1	<50	<50	<50	<5	<1	<10	<10	<1	<4.30	<2.50	<5.6	<1	<1	<1	<10	<1
Bromochloromethane	ug/L	5	<50	<50	<50	<5	<1	<10	<10	<1	<4.70	<3.00	<18	<1	<1	<1	<10	<1
Bromodichloromethane	ug/L	50	<50	<50	<50	<5	<1	<10	<10	<1	<3.50	<2.60	<9.6	<1	<1	<1	<10	<1
Bromoform	ug/L	50	<50	<50	<50	<5	<1	<10	<10	<1	<2.60	<4.60	<18	<1	<1	<1	<10	<1
Bromomethane	ug/L	5	<50	<50	<50	<5	<1	<10	<10	<1	<5.10	<2.50	<9.2	<1	<1	<1	<10	<1
Carbon disulfide	ug/L	NC	<50	<50	<50	<5	<1	<10	<10	<1	<6.70	<3.00	<6.3	<1	<1	<1	<10	<1
Carbon tetrachloride	ug/L	5	<50	<50	<50	<5	<1	<10	<10	<1	<5.00	<3.60	<9.4	<1	<1	<1	<10	<1
Chlorobenzene	ug/L	5	<50	<50	<50	<5	<1	<10	<10	<1	<4.00	<2.20	<7.8	<1	<1	<1	<10	<1
Chloroethane	ug/L	5	<50	<50	<50	<5	<1	<10	<10	<1	<4.80	<3.60	<11	<1	<1	<1	<10	<1
Chloroform	ug/L	7	<50	<50	<50	<5	<1	<10	<10	<1	<3.40	<2.20	<7.5	<1	<1	<1	<10	<1
Chloromethane	ug/L	5	<50	<50	<50	<5	<1	<10	<10	0.40 J	<3.50	<2.80	<9.8	<1	<1	<1	<10	<1
cis-1,2-Dichloroethene	ug/L	5	<50	<50	<50	<5	<1	<10	<10	<1	<3.80	<3.00	<11	<1	<1	<1	<10	<1
cis-1,3-Dichloropropene	ug/L	0.4	<50	<50	<50	<5	<1	<10	<10	<1	<3.60	<2.50	<8.4	<1	<1	<1	<10	<1
Cyclohexane	ug/L	NC	<50	<50	<50	<5	<1	<10	<10	<1	<4.60	<3.80	<16	<1	<1	<1	<10	<1
Dibromochloromethane	ug/L	50	<50	<50	<50	<5	<1	<10	<10	<1	<3.60	<2.40	<10.0	<1	<1	<1	<10	<1
Dichlorodifluoromethane	ug/L	5	<50	<50	<50	<5	<1	<10	<10	<1	<4.20	<2.90	<29	<1	<1	<1	<10	<1
Ethylbenzene	ug/L	5	<50	<50	<50	<5	<1	<10	<10	<1	<3.40	<2.20	<5.1	<1	<1	<1	<10	<1
Isopropylbenzene	ug/L	5	<50	<50	<50	<5	<1	<10	<10	<1	<3.90	<2.10	<5.8	<1	<1	<1	<10	<1
Methyl acetate	ug/L	NC	<50	<50	<50	<5	<1	<10	<10	<1	<3.50	<2.20	<10	<1	<1	<1	<10	<1
Methyl tert-butyl ether (MTBE)	ug/L	NC	<50	<50	<50	<5	<1	<10	<10	<1	<3.80	<2.40	<12	<1	<1	<1	<10	<1
Methylcyclohexane	ug/L	NC	<50	<50	<50	<5	<1	<10	<10	<1	<4.60	<3.60	<6.4	<1	<1	<1	<10	<1
Methylene chloride	ug/L	5	<50	<50	<50	<5	<1	<10	<10	0.56 J	<1.98	<19.8	<8.1	<1	<1	<1	<10	<1
Styrene	ug/L	5	<50	<50	<50	<5	<1	<10	<10	<1	<3.30	<2.50	<6.4	<1	<1	<1	<10	<1
Tetrachloroethene	ug/L	5	**860**	**300**	**260**	**221**	**189**	**270**	**300**	**116**	**1410**	**1020**	**1040**	**10**	**21**	**21**	**890**	**327**
Toluene	ug/L	5	<50	<50	<50	<5	<1	<10	<10	0.29 J	<3.90	<2.70	<8.3	<1	<1	<1	<10	<1
trans-1,2-Dichloroethene	ug/L	5	<50	<50	<50	<5	<1	<10	<10	<1	<5.50	<3.50	<7.2	<1	<1	<1	<10	<1
trans-1,3-Dichloropropene	ug/L	0.4	<50	<50	<50	<5	<1	<10	<10	<1	<3.20	<2.20	<10	<1	<1	<1	<10	<1
Trichloroethene	ug/L	5	<50	<50	<50	<5	<1	<10	<10	<1	<5.50	<2.70	<15	<1	<1	<1	<10	<1
Trichlorofluoromethane	ug/L	5	<50	<50	<50	<5	<1	<10	<10	<1	<6.60	<4.50	<14	<1	<1	<1	<10	<1
Vinyl Chloride	ug/L	2	<50	<50	<50	<5	<1	<10	<10	<1	<4.60	<2.90	<12	<1	<1	<1	<10	<1
Xylenes (Total)	ug/L	5	<200	<200	<200	<20	<3	<30	<30	<3	<6.30	<6.90	<29	<3	<3	<3	<30	<3
Total VOCs	ug/L	NA	860	300	260	226.9 J	193.12 J	298.3 J	330.2 J	120.6 J	1,410	1,020	1047.3	13.71 J	24.36 J	25.06 J	899.3 J	331.6 J

Notes:

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ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

***** = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Summary
Groundwater Sampling Report
Brownfield Cleanup Program NO. C360115

Parameter		Well ID:	MW-4S	MW-4S	MW-4S	MW-4S	MW-4S	MW-4S	MW-4S	MW-4S	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5
		Screen Interval (ft above msl):	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	179.7 - 189.7	179.7 - 189.7	179.7 - 189.7	179.7 - 189.7	179.7 - 189.7	179.7 - 189.7	179.7 - 189.7	179.7 - 189.7
		Date Sampled:	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	5/18/2017 (Post ISCO)	10/30/2017 (Post ISCO)	05/15/2018 (Post ISCO)	04/26/2019 (Post ISCO)	10/21/2011	5/2/2012	6/10/2013	11/15/2013 (Post ISCO)	1/14/2014 (Post ISCO)	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)
		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards										On-Site Locations						
VOLATILE ORGANIC COMPOUNDS (VOCs)	Units																	
1,1,1-Trichloroethane	ug/L	5	<20	<10	<10	<1	<1	<1	<10	<1	<0.350	<0.330	<0.27	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	5	<20	<10	<10	<1	<1	<1	<10	<1	<0.310	<0.320	<0.27	<1	<1	<1	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5	<20	<10	<10	<1	<1	<1	<10	<1	<0.440	<0.420	<0.46	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	ug/L	1	<20	<10	<10	<1	<1	<1	<10	<1	<0.360	<0.220	<0.34	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	5	<20	<10	<10	<1	<1	<1	<10	<1	<0.430	<0.260	<0.15	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	5	<20	<10	<10	<1	<1	<1	<10	<1	<0.710	<0.410	<0.27	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	5	<20	<10	<10	<1	<1	<1	<10	<1	<0.420	<0.210	<0.25	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	5	<20	<10	<10	<1	<1	<1	<10	<1	<0.390	<0.200	<0.24	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	0.04	<0.05	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006	<20	<10	<10	<1	<1	<1	<10	<1	<0.00855	<0.00855	<0.12	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	3	<20	<10	<10	<1	<1	<1	<10	<1	<0.360	<0.230	<0.13	<1	<1	<1	<1	<1
1,2-Dichloroethane (EDC)	ug/L	0.6	<20	<10	<10	<1	<1	<1	<10	<1	<0.420	<0.200	<0.17	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	1	<20	<10	<10	<1	<1	<1	<10	<1	<0.520	<0.250	<0.18	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	3	<20	<10	<10	<1	<1	<1	<10	<1	<0.420	<0.230	<0.20	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	3	<20	<10	<10	<1	<1	<1	<10	<1	<0.330	<0.230	<0.18	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	NC	<5	<3	<1	<3	<3	<1	<1	<1	<22.5 R	<0.301	<0.97	<5	<5	<5	<5	<5
2-Butanone (MEK)	ug/L	50	<200	3.0 J	<100	9.1 J	<10	<10	<100	<10	<0.630	<0.550	8.0 J	<10	0.42 J	0.84 J	<10	<10
2-Hexanone	ug/L	50	<200	<100	<100	<10	<10	<10	<100	<10	<0.260	<0.370	<0.19	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (MIBK)	ug/L	NC	<200	<100	<100	0.12 J	<10	<10	<100	<10	<0.510	<0.350	<0.35	<10	<10	<10	<10	<10
Acetone	ug/L	50	<200	<100	<100	11	<10	2.46 J	26.7 J	2.71 J	<0.870	<0.280	<4.0	1.25 J	1.99 J	6.02 J	<10	0.69 J
Benzene	ug/L	1	<20	<10	<10	<1	<1	<1	<10	<1	<0.430	<0.250	<0.11	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	5	<20	<10	<10	<1	<1	<1	<10	<1	<0.470	<0.300	<0.36	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	50	<20	<10	<10	<1	<1	<1	<10	<1	<0.350	<0.260	<0.19	<1	<1	<1	<1	<1
Bromoform	ug/L	50	<20	<10	<10	<1	<1	<1	<10	<1	<0.260	<0.460	<0.35	<1	<1	<1	<1	<1
Bromomethane	ug/L	5	<20	<10	<10	<1	<1	<1	<10	<1	<0.670	<0.250	<0.18	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	NC	<20	<10	<10	<1	<1	<1	<10	<1	<0.500	<0.300	<0.13	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5	<20	<10	<10	<1	<1	<1	<10	<1	<0.400	<0.360	<0.19	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	5	<20	<10	<10	<1	<1	<1	<10	<1	<0.480	<0.220	<0.16	<1	<1	<1	<1	<1
Chloroethane	ug/L	5	<20	<10	<10	<1	<1	<1	<10	<1	<0.780	<0.360	<0.21	<1	<1	<1	<1	<1
Chloroform	ug/L	7	<20	<10	<10	<1	<1	<1	<10	<1	<0.340	<0.220	<0.15	<1	<1	<1	<1	<1
Chloromethane	ug/L	5	<20	<10	<10	0.16 J	<1	<1	<10	<1	<0.350	<0.280	<0.20	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	5	<20	<10	<10	<1	<1	<1	<10	<1	<0.380	<0.300	<0.21	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	0.4	<20	<10	<10	<1	<1	<1	<10	<1	<0.360	<0.250	<0.17	<1	<1	<1	<1	<1
Cyclohexane	ug/L	NC	<20	<10	<10	<1	<1	<1	<10	<1	<0.460	<0.380	<0.32	<1	<1	<1	<1	<1
Dibromochloromethane	ug/L	50	<20	<10	<10	<1	<1	<1	<10	<1	<0.360	<0.240	<0.20	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	5	<20	<10	<10	<1	<1	<1	<10	<1	<0.420	<0.290	<0.57	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	5	<20	<10	<10	<1	<1	<1	<10	<1	<0.340	<0.220	<0.10	<1	<1	<1	<1	<1
Isopropylbenzene	ug/L	5	<20	<10	<10	<1	<1	<1	<10	<1	<0.390	<0.210	<0.12	<1	<1	<1	<1	<1
Methyl acetate	ug/L	NC	<20	<10	<10	<1	<1	<1	<10	<1	<0.350	<0.220	<0.20	<1	<1	<1	<1	<1
Methyl tert-butyl ether (MTBE)	ug/L	NC	<20	<10	<10	<1	<1	<1	<10	<1	<0.380	<0.240	<0.25	<1	<1	<1	<1	<1
Methylcyclohexane	ug/L	NC	<20	<10	<10	<1	<1	<1	<10	<1	<0.460	<0.360	<0.13	<1	<1	<1	<1	<1
Methylene chloride	ug/L	5	<20	<10	<10	<1	<1	<1	<10	0.48	<1.98	<1.98	<0.16	<1	<1	<1	<1	<1
Styrene	ug/L	5	<20	<10	<10	<1	<1	<1	<10	<1	<0.330	<0.250	<0.13	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5	**460**	**730**	**400**	**107**	**158**	**151**	**180**	**24**	**9.19**	3.14	**165**	**5**	**67**	**5**	4	4
Toluene	ug/L	5	<20	<10	<10	0.15 J	<1	<1	<10	<1	<0.390	<0.270	<0.17	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	5	<20	<10	<10	<1	<1	<1	<10	<1	<0.550	<0.350	<0.14	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	0.4	<20	<10	<10	<1	<1	<1	<10	<1	<0.320	<0.220	<0.20	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	<20	<10	<10	<1	<1	<1	<10	<1	<0.550	<0.270	<0.29	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	5	<20	<10	<10	<1	<1	<1	<10	<1	<0.660	<0.450	<0.28	<1	<1	<1	<1	<1
Vinyl Chloride	ug/L	2	<20	<10	<10	<1	<1	<1	<10	<1	<0.460	<0.290	<0.24	<1	<1	<1	<1	<1
Xylenes (Total)	ug/L	5	<60	<30	<30	<3	<3	<3	<30	<3	<0.630	<0.690	<0.58	<3	<3	<3	<3	<3
Total VOCs	ug/L	NA	460	733 J	400	127.53	158	153.46 J	206.7 J	27.19 J	9.19	3.14	173 J	6.25 J	69.41 J	11.86 J	4	4.69 J

Notes:

6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Series Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

***** = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Summary
Groundwater Sampling Report
Brownfield Cleanup Program NO. C360115

Parameter		Well ID:	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5DB	MW-5DB	MW-5DB	MW-5DB	MW-5DB	DUP (MW-5DB)	MW-5DB	MW-5DB	MW-5DB
		Screen Interval (ft above msl):	179.7 - 189.7	179.7 - 189.7	179.7 - 189.7	179.7 - 189.7	179.7 - 189.7	179.7 - 189.7	179.7 - 189.7	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3
		Date Sampled:	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	5/18/2017 (Post ISCO)	10/30/2017 (Post ISCO)	05/15/2018 (Post ISCO)	04/26/2019 (Post ISCO)	5/5/2011	10/21/2011	5/2/2012	6/10/2013	11/15/2013 (Post ISCO)	11/15/2013 (Post ISCO)	1/14/2014 (Post ISCO)	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)
VOLATILE ORGANIC COMPOUNDS (VOCs)	Units	6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards																
1,1,1-Trichloroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.350	<0.330	<0.27	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.280	<0.310	<0.320	<0.27	<1	<1	<1	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.320	<0.440	<0.420	<0.46	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<0.570	<0.360	<0.220	<0.34	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.440	<0.430	<0.260	<0.15	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.410	<0.710	<0.410	<0.27	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.550	<0.420	<0.210	<0.25	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.390	<0.200	<0.24	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	0.04	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.660	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006	<1	<1	<1	<1	<1	<1	<1	<0.400	<0.00855	<0.00855	<0.12	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	3	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.360	<0.230	<0.13	<1	<1	<1	<1	<1
1,2-Dichloroethane (EDC)	ug/L	0.6	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.420	<0.200	<0.17	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.520	<0.250	<0.18	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	3	<1	<1	<1	<1	<1	<1	<1	<0.410	<0.420	<0.230	<0.20	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	3	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.330	<0.230	<0.18	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	NC	<3	<1	<3	<3	<1	<1	<1	<20.2	<22.5 R	<0.301	<0.97	<5	<5	<5	<5	<5
2-Butanone (MEK)	ug/L	50	<10	0.39 J	9.0 J	<10	<10	1.59 J	<10	<0.510	<0.630	<0.550	4.8 J	<10	<10	0.47 J	0.79 J	<10
2-Hexanone	ug/L	50	<10	<10	<10	<10	<10	<10	<10	<0.370	<0.260	<0.370	<0.19	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (MIBK)	ug/L	NC	<10	<10	0.14 J	<10	<10	0.26 J	<10	<0.410	<0.510	<0.350	<0.35	<10	<10	<10	<10	0.38 J
Acetone	ug/L	50	<10	2.40 J	9.9 J	<10	2.39 J	4.88 J	3.25 J	<0.610	<0.870	<0.280	<4.0	<10	0.89 J	3.42 J	4.48 J	<10
Benzene	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<0.250	<0.430	<0.250	<0.11	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.560	<0.470	<0.300	<0.36	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	50	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.350	<0.260	<0.19	<1	<1	<1	<1	<1
Bromoform	ug/L	50	<1	<1	<1	<1	<1	<1	<1	<0.520	<0.260	<0.460	<0.35	<1	<1	<1	<1	<1
Bromomethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.680	<0.670	<0.250	<0.18	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	NC	<1	<1	<1	<1	<1	<1	<1	<0.330	<0.500	<0.300	<0.13	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.290	<0.400	<0.360	<0.19	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.480	<0.220	<0.16	<1	<1	<1	<1	<1
Chloroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.480	<0.780	<0.360	<0.21	<1	<1	<1	<1	<1
Chloroform	ug/L	7	<1	<1	0.11 J	<1	<1	<1	<1	1.54	0.425 J	<0.220	0.26 J	0.27 J	0.26 J	0.29 J	0.23 J	0.25 J
Chloromethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.350	<0.280	<0.20	<1	<1	<1	0.44 J	0.52 J
cis-1,2-Dichloroethene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.560	<0.380	<0.300	<0.21	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	0.4	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.360	<0.250	<0.17	<1	<1	<1	<1	<1
Cyclohexane	ug/L	NC	<1	<1	<1	<1	<1	<1	<1	<0.230	<0.460	<0.380	<0.32	<1	<1	<1	<1	<1
Dibromochloromethane	ug/L	50	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.360	<0.240	<0.20	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.420	<0.290	<0.57	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.340	<0.220	<0.10	<1	<1	<1	<1	<1
Isopropylbenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.300	<0.390	<0.210	<0.12	<1	<1	<1	<1	<1
Methyl acetate	ug/L	NC	<1	<1	<1	<1	<1	<1	<1	<0.600	<0.350	<0.220	<0.20	<1	<1	<1	<1	<1
Methyl tert-butyl ether (MTBE)	ug/L	NC	<1	<1	<1	<1	<1	<1	<1	<0.450	<0.380	<0.240	<0.25	<1	<1	<1	<1	<1
Methylcyclohexane	ug/L	NC	<1	<1	<1	<1	<1	<1	<1	<0.290	<0.460	<0.360	<0.13	<1	<1	<1	<1	<1
Methylene chloride	ug/L	5	<1	<1	<1	<1	<1	<1	0.41 J	<1.98	<1.98	<1.98	<0.16	<1	<1	<1	<1	<1
Styrene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.380	<0.330	<0.250	<0.13	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5	2	2	**32**	**42**	**7**	4	**7**	2.53	2.37	4.08	1	0.81 J	0.75 J	0.95 J	0.41 J	0.48 J
Toluene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	0.504 J	<0.390	<0.270	<0.17	<1	<1	<1	0.30 J	0.25 J
trans-1,2-Dichloroethene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.500	<0.550	<0.350	<0.14	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	0.4	<1	<1	<1	<1	<1	<1	<1	<0.450	<0.320	<0.220	<0.20	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	<1	<1	0.13 J	<1	<1	<1	<1	<0.440	<0.550	<0.270	<0.29	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.220	<0.660	<0.450	<0.28	<1	<1	<1	<1	<1
Vinyl Chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<0.300	<0.460	<0.290	<0.24	<1	<1	<1	<1	<1
Xylenes (Total)	ug/L	5	<3	<3	<3	<3	<3	<3	<3	<0.660	<0.630	<0.690	<0.58	<3	<3	<3	<3	<3
Total VOCs	ug/L	NA	2	4.79 J	51.28	42	9.39 J	10.73 J	10.66 J	4.57 J	2.80 J	4.08	6.06 J	1.08 J	1.9 J	5.13 J	6.65 J	1.88 J

Notes:
6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Series Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.
ft above msl = feet above mean sea level
BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria
***** = Analyzed for but Not Detected at the Method Detection Limit (MDL)
J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.
R = The result was rejected during data validation.
D = Diluted sample result
units = ug/L or parts per billion
NA = Not Available
NC = No Criteria

Table 1
Groundwater Quality VOC Summary
Groundwater Sampling Report
Brownfield Cleanup Program NO. C360115

Parameter		Well ID:	MW-5DB	MW-5DB	MW-5DB	MW-5DB	MW-5DB	MW-5DB	MW-5DB	MW-5DB	MW-5SB	MW-5SB	MW-5SB	MW-5SB	MW-5SB	MW-5SB	MW-5SB	MW-5SB
		Screen Interval (ft above msl):	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1
		Date Sampled:	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	5/18/2017 (Post ISCO)	10/30/2017 (Post ISCO)	05/15/2018 (Post ISCO)	4/26/2019 (Post ISCO)	5/5/2011	10/25/2011	5/2/2012	6/10/2013	11/15/2013 (Post ISCO)	1/14/2014 (Post ISCO)	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)
		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards								On-Site Locations								
VOLATILE ORGANIC COMPOUNDS (VOCs)	Units																	
1,1,1-Trichloroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.350	<0.330	<0.27	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.280	<0.310	<0.320	<0.27	<1	<1	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.320	<0.440	<0.420	<0.46	<1	<1	<1	<1
1,1,2-Trichloroethane	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<1	<0.570	<0.360	<0.220	<0.34	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.440	<0.430	<0.260	<0.15	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.410	<0.710	<0.410	<0.27	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.550	<0.420	<0.210	<0.25	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.390	<0.200	<0.24	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	0.04	<0.05	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.660	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006	<1	<1	<1	<1	<1	<1	<1	<1	<0.400	<0.00855	<0.00855	<0.12	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	3	<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.360	<0.230	<0.13	<1	<1	<1	<1
1,2-Dichloroethane (EDC)	ug/L	0.6	<1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.420	<0.200	<0.17	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.520	<0.250	<0.18	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	3	<1	<1	<1	<1	<1	<1	<1	<1	<0.410	<0.420	<0.230	<0.20	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	3	<1	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.330	<0.230	<0.18	<1	<1	<1	<1
1,4-Dioxane	ug/L	NC	<5	<3	<1	<3	<3	<1	<1	<1	<20.2	<22.5 R	<0.301	<0.97	<5	<5	<5	<5
2-Butanone (MEK)	ug/L	50	<10	<10	<10	10	<10	<10	1.55 J	<10	<0.510	<0.630	<0.550	<3.3	<10	0.70 J	0.64 J	<10
2-Hexanone	ug/L	50	<10	<10	<10	<10	<10	<10	<10	<10	<0.370	<0.260	<0.370	<0.19	<10	<10	<10	<10
4-Methyl-2-pentanone (MIBK)	ug/L	NC	<10	<10	<10	0.15 J	<10	<10	0.26 J	<10	<0.410	<0.510	<0.350	<0.35	<10	<10	<10	<10
Acetone	ug/L	50	1.63 J	<10	2.01 J	9.9 J	<10	2.23 J	5.41 J	4.05 J	10.2	<0.870	<0.280	<4.0	0.86 J	3.86 J	4.27 J	<10
Benzene	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<1	<0.250	<0.430	<0.250	<0.11	<1	<1	<1	<1
Bromochloromethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.560	<0.470	<0.300	<0.36	<1	<1	<1	<1
Bromodichloromethane	ug/L	50	<1	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.350	<0.260	<0.19	<1	<1	<1	<1
Bromoform	ug/L	50	<1	<1	<1	<1	<1	<1	<1	<1	<0.520	<0.260	<0.460	<0.35	<1	<1	<1	<1
Bromomethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.680	<0.670	<0.250	<0.18	<1	<1	<1	<1
Carbon disulfide	ug/L	NC	<1	<1	<1	<1	<1	<1	<1	<1	<0.330	<0.500	<0.300	<0.13	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.290	<0.400	<0.360	<0.19	<1	<1	<1	<1
Chlorobenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.480	<0.220	<0.16	<1	<1	<1	<1
Chloroethane	ug/L	5	<1	<1	<1	<1	0.85 J	<1	<1	<1	<0.480	<0.780	<0.360	<0.21	<1	<1	<1	<1
Chloroform	ug/L	7	0.30 J	0.25 J	0.26 J	0.23 J	0.29 J	0.25 J	0.33 J	0.29 J	4.22	3.12	0.533 J	0.56 J	0.50 J	0.55 J	0.40 J	0.36 J
Chloromethane	ug/L	5	0.46 J	<1	<1	0.29 J	0.37 J	<1	0.30 J	0.31 J	<0.430	<0.350	<0.280	<0.20	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.560	<0.380	<0.300	<0.21	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	0.4	<1	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.360	<0.250	<0.17	<1	<1	<1	<1
Cyclohexane	ug/L	NC	<1	<1	<1	<1	<1	<1	<1	<1	<0.230	<0.460	<0.380	<0.32	<1	<1	<1	<1
Dibromochloromethane	ug/L	50	<1	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.360	<0.240	<0.20	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.420	<0.290	<0.57	<1	<1	<1	<1
Ethylbenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.340	<0.220	<0.10	<1	<1	<1	<1
Isopropylbenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.300	<0.390	<0.210	<0.12	<1	<1	<1	<1
Methyl acetate	ug/L	NC	<1	<1	<1	<1	<1	<1	<1	<1	<0.600	<0.350	<0.220	<0.20	<1	<1	<1	<1
Methyl tert-butyl ether (MTBE)	ug/L	NC	<1	<1	0.24 J	<1	<1	<1	<1	<1	<0.450	<0.380	<0.240	<0.25	<1	<1	<1	<1
Methylcyclohexane	ug/L	NC	<1	<1	<1	<1	0.25 J	<1	<1	<1	<0.290	<0.460	<0.360	<0.13	<1	<1	<1	<1
Methylene chloride	ug/L	5	<1	<1	<1	<1	<1	<1	<1	0.62 J	<1.98	<1.98	<1.98	<0.16	<1	<1	<1	<1
Styrene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.380	<0.330	<0.250	<0.13	<1	<1	<1	<1
Tetrachloroethene	ug/L	5	0.55 J	0.39 J	0.31 J	0.25 J	3	0.34 J	0.28 J	0.51 J	**37.6**	**5.67**	**24.1**	4	3	3	3	2
Toluene	ug/L	5	<1	<1	<1	0.16 J	<1	<1	<1	<1	<0.230	<0.390	<0.270	<0.17	<1	<1	<1	0.33 J
trans-1,2-Dichloroethene	ug/L	5	<1	<1	<3	<1	<1	<1	<1	<1	<0.500	<0.550	<0.350	<0.14	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	0.4	<1	<1	<1	<1	<1	<1	<1	<1	<0.450	<0.320	<0.220	<0.20	<1	<1	<1	<1
Trichloroethene	ug/L	5	<1	<1	<1	<1	1	<1	<1	<1	<0.440	<0.550	<0.270	<0.29	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.220	<0.660	<0.450	<0.28	<1	<1	<1	<1
Vinyl Chloride	ug/L	2	0.49 J	0.45 J	<1	0.28 J	0.82 J	0.46 J	0.50 J	0.59 J	<0.300	<0.460	<0.290	<0.24	<1	<1	<1	<1
Xylenes (Total)	ug/L	5	<3	<3	0.47 J	<3	<3	<3	<3	<3	<0.660	<0.630	<0.690	<0.58	<3	<3	<3	<3
Total VOCs	ug/L	NA	3.43	1.09 J	3.29 J	21.26	4.76 J	3.28 J	8.63 J	6.37 J	52.02	8.79	24.6 J	4.56 J	4.36 J	8.11	8.31	2.69 J

Notes:
6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Series Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.
ft above msl = feet above mean sea level
BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria
***** = Analyzed for but Not Detected at the Method Detection Limit (MDL)
J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.
R = The result was rejected during data validation.
D = Diluted sample result
units = ug/L or parts per billion
NA = Not Available
NC = No Criteria

Table 1
Groundwater Quality VOC Summary
Groundwater Sampling Report
Brownfield Cleanup Program NO. C360115

Parameter		Well ID:	MW-5SB	MW-5SB	MW-5SB	MW-5SB	MW-5SB	MW-5SB	MW-5SB	MW-5SB	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6
		Screen Interval (ft above msl):	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1	179.6 - 189.6	179.6 - 189.6	179.6 - 189.6	179.6 - 189.6	179.6 - 189.6	179.6 - 189.6	179.6 - 189.6	179.6 - 189.6
		Date Sampled:	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	5/18/2017 (Post ISCO)	10/30/2017 (Post ISCO)	05/15/2018 (Post ISCO)	04/26/2019 (Post ISCO)	8/3/2011	10/18/2011	4/30/2012	6/10/2013	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/7/2015 (Post ISCO)	10/9/2015 (Post ISCO)
		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards							On-Site Locations		Off-Site Upgradient Locations							
VOLATILE ORGANIC COMPOUNDS (VOCs)	Units																	
1,1,1-Trichloroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.350	<0.330	<0.27	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.280	<0.310	<0.320	<0.27	<1	<1	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.320	<0.440	<0.420	<0.46	<1	<1	<1	<1
1,1,2-Trichloroethane	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<1	<0.570	<0.360	<0.220	<0.34	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.440	<0.430	<0.260	<0.15	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.410	<0.710	<0.410	<0.27	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.550	<0.420	<0.210	<0.25	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.390	<0.200	<0.24	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	0.04	<0.05	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.660	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006	<1	<1	<1	<1	<1	<1	<1	<1	<0.400	<0.00855	<0.00855	<0.12	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	3	<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.360	<0.230	<0.13	<1	<1	<1	<1
1,2-Dichloroethane (EDC)	ug/L	0.6	<1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.420	<0.200	<0.17	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.520	<0.250	<0.18	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	3	<1	<1	<1	<1	<1	<1	<1	<1	<0.410	<0.420	<0.230	<0.20	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	3	<1	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.330	<0.230	<0.18	<1	<1	<1	<1
1,4-Dioxane	ug/L	NC	<5	<3	<1	<3	<3	<1	<1	<1	<20.2	<22.5 R	<0.301	<0.97	<5	<5	<5	<3
2-Butanone (MEK)	ug/L	50	<10	<10	<10	13	<10	<10	1.67 J	<10	2.33	<0.630	<0.550	6.2 J	0.83 J	<10	<10	<10
2-Hexanone	ug/L	50	<10	<10	<10	<10	<10	<10	<10	<10	<0.370	<0.260	<0.370	<0.19	<10	<10	<10	<10
4-Methyl-2-pentanone (MIBK)	ug/L	NC	<10	<10	<10	0.19 J	<10	<10	0.25 J	<10	<0.410	<0.510	<0.350	<0.35	<10	<10	<10	<10
Acetone	ug/L	50	1.45 J	<10	1.23 J	21	<10	2.49 J	4.97 J	2.91 J	17.7	<0.870	<0.280	<4.0	4.96 J	<10	1.31 J	<10
Benzene	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<1	<0.250	<0.430	<0.250	<0.11	<1	<1	<1	<1
Bromochloromethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.560	<0.470	<0.300	<0.36	<1	<1	<1	<1
Bromodichloromethane	ug/L	50	<1	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.550	<0.260	<0.19	<1	<1	<1	<1
Bromoform	ug/L	50	<1	<1	<1	<1	<1	<1	<1	<1	<0.520	<0.260	<0.460	<0.35	<1	<1	<1	<1
Bromomethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.680	<0.670	<0.250	<0.18	<1	<1	<1	<1
Carbon disulfide	ug/L	NC	<1	<1	<1	<1	<1	<1	<1	<1	<0.330	<0.500	<0.300	<0.13	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.290	<0.400	<0.360	<0.19	<1	<1	<1	<1
Chlorobenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.480	<0.220	<0.16	<1	<1	<1	<1
Chloroethane	ug/L	5	0.35 J	<1	0.43 J	0.41 J	<1	<1	<1	<1	<0.480	<0.780	<0.360	<0.21	<1	<1	<1	<1
Chloroform	ug/L	7	0.38 J	0.32 J	0.26 J	0.24 J	0.31 J	<1	0.21 J	<1	**11.1**	<0.340	<0.220	<0.15	<1	<1	<1	<1
Chloromethane	ug/L	5	<1	<1	<1	0.15 J	0.47 J	<1	<1	<1	<0.430	<0.350	<0.280	<0.20	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	5	<1	<1	<1	0.11 J	<1	<1	0.26 J	0.27 J	<0.560	<0.380	<0.300	<0.21	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	0.4	<1	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.360	<0.250	<0.17	<1	<1	<1	<1
Cyclohexane	ug/L	NC	<1	<1	<1	<1	<1	<1	<1	<1	<0.230	<0.460	<0.380	<0.32	<1	<1	<1	<1
Dibromochloromethane	ug/L	50	<1	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.360	<0.240	<0.20	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.420	<0.290	<0.57	<1	<1	<1	<1
Ethylbenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.340	<0.220	<0.10	<1	<1	<1	<1
Isopropylbenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.300	<0.390	<0.210	<0.12	<1	<1	<1	<1
Methyl acetate	ug/L	NC	<1	<1	<1	<1	<1	<1	<1	<1	<0.600	<0.350	<0.220	<0.20	<1	<1	<1	<1
Methyl tert-butyl ether (MTBE)	ug/L	NC	<1	<1	<1	<1	<1	<1	<1	<1	<0.450	<0.380	<0.240	<0.25	<1	<1	<1	<1
Methylcyclohexane	ug/L	NC	<1	<1	0.22 J	0.20 J	<1	<1	<1	<1	<0.290	<0.460	<0.360	<0.13	<1	<1	<1	<1
Methylene chloride	ug/L	5	0.30 J	<1	<1	<1	<1	<1	<1	0.47 J	<1.98	<1.98	<1.98	<0.16	<1	<1	<1	<1
Styrene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.380	<0.330	<0.250	<0.13	<1	<1	<1	<1
Tetrachloroethene	ug/L	5	2	2	1	2	0.43 J	2	4	**7**	<0.380	<0.470	<0.330	0.15 J	<1	<1	<1	<1
Toluene	ug/L	5	0.26 J	<1	<1	0.26 J	<1	<1	<1	<1	<0.230	<0.350	<0.270	<0.17	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.500	<0.550	<0.350	<0.14	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	0.4	<1	<1	<1	<1	<1	<1	<1	<1	<0.450	<0.320	<0.220	<0.20	<1	<1	<1	<1
Trichloroethene	ug/L	5	<1	<1	0.35 J	0.70 J	<1	1	2	2	<0.440	<0.350	<0.270	<0.29	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.220	<0.660	<0.450	<0.28	<1	<1	<1	<1
Vinyl Chloride	ug/L	2	0.39 J	0.44 J	0.45 J	0.36 J	0.89 J	0.38 J	0.37 J	0.32 J	<0.300	<0.460	<0.290	<0.24	<1	<1	<1	<1
Xylenes (Total)	ug/L	5	<3	<3	<3	<3	<3	<3	<3	<3	<0.660	<0.630	<0.690	<0.58	<3	<3	<3	<3
Total VOCs	ug/L	NA	5.13 J	2.76 J	3.94 J		1.21 J	5.87 J	13.73 J	12.97 J	31.1	---	---	6.35 J	5.79 J	---	1.31 J	---

Notes:

6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Series Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

***** = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Summary
Groundwater Sampling Report
Brownfield Cleanup Program NO. C360115

Parameter		Well ID:	MW-6	MW-6	MW-6	MW-6	MW-6
		Screen Interval (ft above msl):	179.6 - 189.6	179.6 - 189.6	179.6 - 189.6	179.6 - 189.6	179.6 - 189.6
		Date Sampled:	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	5/18/2017 (Post ISCO)	10/30/2017 (Post ISCO)	05/15/2018 (Post ISCO)
		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards					
VOLATILE ORGANIC COMPOUNDS (VOCs)	Units						
1,1,1-Trichloroethane	ug/L	5	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	5	<1	<1	<1	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	ug/L	1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	5	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	5	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	5	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	5	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	0.04	<0.02	<0.05	<0.05	<0.05	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	3	<1	<1	<1	<1	<1
1,2-Dichloroethane (EDC)	ug/L	0.6	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	3	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	3	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	NC	<1	<3	<3	<1	<1
2-Butanone (MEK)	ug/L	50	<10	<10	<10	<10	1.37 J
2-Hexanone	ug/L	50	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (MIBK)	ug/L	NC	<10	<10	<10	<10	0.22 J
Acetone	ug/L	50	0.99 J	45	<10	2.24 J	5.35 J
Benzene	ug/L	1	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	5	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	50	<1	<1	<1	<1	<1
Bromoform	ug/L	50	<1	<1	<1	<1	<1
Bromomethane	ug/L	5	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	NC	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	5	<1	<1	<1	<1	<1
Chloroethane	ug/L	5	<1	<1	<1	<1	<1
Chloroform	ug/L	7	<1	<1	<1	<1	<1
Chloromethane	ug/L	5	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	5	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	0.4	<1	<1	<1	<1	<1
Cyclohexane	ug/L	NC	<1	<1	<1	<1	<1
Dibromochloromethane	ug/L	50	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	5	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	5	<1	<1	<1	<1	<1
Isopropylbenzene	ug/L	5	<1	<1	<1	<1	<1
Methyl acetate	ug/L	NC	<1	<1	<1	<1	<1
Methyl tert-butyl ether (MTBE)	ug/L	NC	<1	<1	<1	<1	<1
Methylcyclohexane	ug/L	NC	<1	<1	<1	<1	<1
Methylene chloride	ug/L	5	<1	<1	<1	<1	<1
Styrene	ug/L	5	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5	<1	<1	<1	<1	<1
Toluene	ug/L	5	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	5	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	0.4	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	5	<1	<1	<1	<1	<1
Vinyl Chloride	ug/L	2	<1	<1	<1	<1	<1
Xylenes (Total)	ug/L	5	<3	<3	<3	<3	<3
Total VOCs	ug/L	NA	0.99 J	45	---	2.24 J	6.94 J

Notes:
6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Serie
Ambient Water Quality Standards and Guidance Values and Groundwater Effluent
Limitations.
ft above msl = feet above mean sea level
BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria
***** = Analyzed for but Not Detected at the Method Detection Limit (MDL)
J = The concentration was detected at a value below the Reporting Limit (RL) and
above the MDL.
R = The result was rejected during data validation.
D = Diluted sample result
units = ug/L or parts per billion
NA = Not Available
NC = No Criteria

Table 1
Groundwater Quality VOC Summary
Groundwater Sampling Report
Brownfield Cleanup Program NO. C360115

Parameter		Well ID:	MW-6SB[1]	MW-6SB	DUP (MW-6SB)	MW-6SB	MW-6SB	MW-6SB	MW-6SB	MW-6SB	MW-6SB	MW-6SB	MW-6SB	MW-6SB	MW-6SB	MW-6SB	MW-7	MW-7
		Screen Interval (ft above msl):	151.9 - 161.9	151.9 - 161.9	151.9 - 161.9	151.9 - 161.9	151.9 - 161.9	151.9 - 161.9	151.9 - 161.9	151.9 - 161.9	151.9 - 161.9	151.9 - 161.9	151.9 - 161.9	151.9 - 161.9	151.9 - 161.9	151.9 - 161.9	174.7 - 184.7	174.7 - 184.7
		Date Sampled:	8/3/2011	10/18/2011	10/18/2011	4/30/2012	6/10/2013	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/7/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	5/4/2016 (Post ISCO)	5/18/2017 (Post ISCO)	10/30/2017 (Post ISCO)	05/15/2018 (Post ISCO)	10/18/2011	5/1/2012
		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards	Off-Site Upgradient Locations														Off-Site Downgradient Locations	Off-Site Downgradi
VOLATILE ORGANIC COMPOUNDS (VOCs)	Units																	
1,1,1-Trichloroethane	ug/L	5	<0.420	<0.350	<0.350	<0.330	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.330
1,1,2,2-Tetrachloroethane	ug/L	5	<0.280	<0.310	<0.310	<0.320	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.310	<0.320
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5	<0.320	<0.440	<0.440	<0.420	<0.46	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.440	<0.420
1,1,2-Trichloroethane	ug/L	1	<0.570	<0.360	<0.360	<0.220	<0.34	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.220
1,1-Dichloroethane	ug/L	5	<0.440	<0.430	<0.430	<0.260	<0.15	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.260
1,1-Dichloroethene	ug/L	5	<0.410	<0.710	<0.710	<0.410	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.710	<0.410
1,2,3-Trichlorobenzene	ug/L	5	<0.550	<0.420	<0.420	<0.210	<0.25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.210
1,2,4-Trichlorobenzene	ug/L	5	<0.340	<0.390	<0.390	<0.200	<0.24	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.390	<0.200
1,2-Dibromo-3-chloropropane	ug/L	0.04	<0.660	<0.00855	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.00855	<0.00855
1,2-Dibromoethane (EDB)	ug/L	0.0006	<0.400	<0.00855	<0.00855	<0.00855	<0.12	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.00855	<0.00855
1,2-Dichlorobenzene	ug/L	3	<0.340	<0.360	<0.360	<0.230	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.230
1,2-Dichloroethane (EDC)	ug/L	0.6	<0.460	<0.420	<0.420	<0.200	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.200
1,2-Dichloropropane	ug/L	1	<0.460	<0.520	<0.520	<0.250	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.520	<0.250
1,3-Dichlorobenzene	ug/L	3	<0.410	<0.420	<0.420	<0.230	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.230
1,4-Dichlorobenzene	ug/L	3	<0.430	<0.330	<0.330	<0.230	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.330	<0.230
1,4-Dioxane	ug/L	NC	<20.2	<22.5 R	<22.5 R	<0.301	<0.97	<5	<5	<5	<3	<1	<3	<3	<1	<1	<22.5 R	<0.301
2-Butanone (MEK)	ug/L	50	<0.510	<0.630	<0.630	<0.550	6.4 J	0.88 J	<10	<10	<10	<10	12	<10	<10	1.43 J	<0.630	<0.550
2-Hexanone	ug/L	50	<0.370	<0.260	<0.260	<0.370	<0.19	<10	<10	<10	<10	<10	<10	<10	<10	<10	<0.260	<0.370
4-Methyl-2-pentanone (MIBK)	ug/L	NC	<0.410	<0.510	<0.510	<0.350	<0.35	<10	<10	<10	<10	<10	0.15 J	<10	<10	<10	<0.510	<0.350
Acetone	ug/L	50	1.37	<0.870	<0.870	<0.280	<4.0	5.39 J	<10	1.50 J	<10	1.68 J	13	<10	2.62 J	5.13 J	<0.870	<0.280
Benzene	ug/L	1	<0.250	<0.430	<0.430	<0.250	<0.11	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.250
Bromochloromethane	ug/L	5	<0.560	<0.470	<0.470	<0.300	<0.36	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.470	<0.300
Bromodichloromethane	ug/L	50	0.767 J	<0.350	<0.350	<0.260	<0.19	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.260
Bromoform	ug/L	50	<0.520	<0.260	<0.260	<0.460	<0.35	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.260	<0.460
Bromomethane	ug/L	5	<0.680	<0.670	<0.670	<0.250	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.670	<0.250
Carbon disulfide	ug/L	NC	<0.330	<0.500	<0.500	<0.300	<0.13	<1	<1	<1	<1	0.32 J	<1	<1	<1	<1	<0.500	<0.300
Carbon tetrachloride	ug/L	5	<0.290	<0.400	<0.400	<0.360	<0.19	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.400	<0.360
Chlorobenzene	ug/L	5	<0.420	<0.480	<0.480	<0.220	<0.16	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.480	<0.220
Chloroethane	ug/L	5	<0.480	<0.780	<0.780	<0.360	<0.21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.780	<0.360
Chloroform	ug/L	7	**7.28**	<0.340	<0.340	<0.220	<0.15	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.220
Chloromethane	ug/L	5	<0.430	<0.350	<0.350	<0.280	<0.20	<1	<1	<1	<1	<1	<1	0.70 J	<1	<1	<0.350	<0.280
cis-1,2-Dichloroethene	ug/L	5	<0.560	<0.380	<0.380	<0.300	<0.21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.380	<0.300
cis-1,3-Dichloropropene	ug/L	0.4	<0.360	<0.360	<0.360	<0.250	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.250
Cyclohexane	ug/L	NC	<0.230	<0.460	<0.460	<0.380	<0.32	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.380
Dibromochloromethane	ug/L	50	<0.430	<0.360	<0.360	<0.240	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.240
Dichlorodifluoromethane	ug/L	5	<0.420	<0.420	<0.420	<0.290	<0.57	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.290
Ethylbenzene	ug/L	5	<0.340	<0.340	<0.340	<0.220	<0.10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.220
Isopropylbenzene	ug/L	5	<0.300	<0.390	<0.390	<0.210	<0.12	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.390	<0.210
Methyl acetate	ug/L	NC	<0.600	<0.350	<0.350	<0.220	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.220
Methyl tert-butyl ether (MTBE)	ug/L	NC	<0.450	<0.380	<0.380	<0.240	<0.25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.380	<0.240
Methylcyclohexane	ug/L	NC	<0.290	<0.460	<0.460	<0.360	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.360
Methylene chloride	ug/L	5	<1.98	<1.98	<1.98	<1.98	<0.16	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1.98	<1.98
Styrene	ug/L	5	<0.380	<0.330	<0.330	<0.250	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.330	<0.250
Tetrachloroethene	ug/L	5	<0.380	<0.470	<0.470	<0.330	0.16 J	<1	<1	<1	<1	<1	<1	<1	<1	<1	**26.2**	**9.53**
Toluene	ug/L	5	<0.230	<0.390	<0.390	<0.270	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.390	<0.270
trans-1,2-Dichloroethene	ug/L	5	<0.500	<0.550	<0.550	<0.350	<0.14	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.550	<0.350
trans-1,3-Dichloropropene	ug/L	0.4	<0.450	<0.320	<0.320	<0.220	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.320	<0.220
Trichloroethene	ug/L	5	<0.440	<0.550	<0.550	<0.270	<0.29	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.550	<0.270
Trichlorofluoromethane	ug/L	5	<0.220	<0.660	<0.660	<0.450	<0.28	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.660	<0.450
Vinyl Chloride	ug/L	2	<0.300	<0.460	<0.460	<0.290	<0.24	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.290
Xylenes (Total)	ug/L	5	<0.660	<0.630	<0.630	<0.690	<0.58	<3	<3	<3	<3	<3	<3	<3	<3	<3	<0.630	<0.690
Total VOCs	ug/L	NA	9.42 J	---	---	---	---	6.27 J	---	1.50 J	---	2 J	25.15	0.70 J	2.62 J	6.56 J	26.2	9.53

Notes:

6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Serie Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

* = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Summary
Groundwater Sampling Report
Brownfield Cleanup Program NO. C360115

Parameter		Well ID:	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7SB	MW-7SB	MW-7SB	MW-7SB	MW-7SB
		Screen Interval (ft above msl):	174.7 - 184.7	174.7 - 184.7	174.7 - 184.7	174.7 - 184.7	174.7 - 184.7	174.7 - 184.7	174.7 - 184.7	174.7 - 184.7	174.7 - 184.7	174.7 - 184.7	174.7 - 184.7	145.8 - 155.8	145.8 - 155.8	145.8 - 155.8	145.8 - 155.8	145.8 - 155.8
		Date Sampled:	6/11/2013	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	5/18/2017 (Post ISCO)	10/30/2017 (Post ISCO)	05/15/2018 (Post ISCO)	04/26/2019 (Post ISCO)	10/19/2011	5/2/2012	6/11/2013	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)
		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards	nt Locations														Off-Site Downgradient Locations	
VOLATILE ORGANIC COMPOUNDS (VOCs)	Units																	
1,1,1-Trichloroethane	ug/L	5	<0.10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.330	<0.10	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	5	<0.067	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.310	<0.320	<0.067	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5	<0.15	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.440	<0.420	<0.15	<1	<1
1,1,2-Trichloroethane	ug/L	1	<0.039	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.220	<0.039	<1	<1
1,1-Dichloroethane	ug/L	5	<0.041	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.260	<0.041	<1	<1
1,1-Dichloroethene	ug/L	5	<0.055	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.710	<0.410	<0.055	<1	<1
1,2,3-Trichlorobenzene	ug/L	5	<0.030	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.210	0.040 JB	<1	<1
1,2,4-Trichlorobenzene	ug/L	5	0.020 JB	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.390	<0.200	0.040 JB	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	0.04	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.00855	<0.00855	<0.0080	<0.05	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006	<0.045	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.00855	<0.00855	<0.045	<1	<1
1,2-Dichlorobenzene	ug/L	3	<0.053	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.230	<0.053	<1	<1
1,2-Dichloroethane (EDC)	ug/L	0.6	<0.039	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.200	<0.039	<1	<1
1,2-Dichloropropane	ug/L	1	<0.045	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.520	<0.250	<0.045	<1	<1
1,3-Dichlorobenzene	ug/L	3	<0.027	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.230	<0.027	<1	<1
1,4-Dichlorobenzene	ug/L	3	<0.036	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.330	<0.230	<0.036	<1	<1
1,4-Dioxane	ug/L	NC	<0.97	<5	<5	<5	<3	<1	<3	<3	<1	<1	<1	<22.5 R	<0.301	<0.97	<5	<5
2-Butanone (MEK)	ug/L	50	4.3 J	0.79 J	<10	<10	<10	<10	11	<10	<10	1.70 J	<10	<0.630	<0.550	4.6 J	0.65 J	<10
2-Hexanone	ug/L	50	<0.30	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<0.260	<0.370	<0.30	<10	<10
4-Methyl-2-pentanone (MIBK)	ug/L	NC	<0.14	<10	<10	<10	<10	<10	0.14 J	<10	<10	0.32 J	<10	<0.510	<0.350	<0.14	<10	<10
Acetone	ug/L	50	<3.0	5.40 J	<10	1.57 J	<10	1.79 J	13	<10	2.14 J	6.22 J	3.35 J	<0.870	<0.280	<3.0	5.50 J	<10
Benzene	ug/L	1	<0.014	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.250	0.030 J	<1	<1
Bromochloromethane	ug/L	5	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.470	<0.300	<0.13	<1	<1
Bromodichloromethane	ug/L	50	<0.025	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.260	<0.025	<1	<1
Bromoform	ug/L	50	<0.035	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.260	<0.460	<0.035	<1	<1
Bromomethane	ug/L	5	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.510	<0.250	<0.13	<1	<1
Carbon disulfide	ug/L	NC	<0.028	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.670	<0.300	<0.028	<1	<1
Carbon tetrachloride	ug/L	5	<0.025	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.500	<0.360	<0.025	<1	<1
Chlorobenzene	ug/L	5	<0.032	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.400	<0.220	<0.032	<1	<1
Chloroethane	ug/L	5	<0.11	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.480	<0.360	<0.11	<1	<1
Chloroform	ug/L	7	0.080 J	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.635 J	0.868 J	0.810 J	0.92 J	0.72 J
Chloromethane	ug/L	5	<0.072	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.280	<0.072	<1	<1
cis-1,2-Dichloroethene	ug/L	5	<0.045	<1	0.22 J	<1	<1	<1	<1	0.26 J	<1	<1	<1	1.03	<0.300	<0.045	<1	<1
cis-1,3-Dichloropropene	ug/L	0.4	<0.019	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.250	<0.019	<1	<1
Cyclohexane	ug/L	NC	<0.11	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.380	<0.11	<1	<1
Dibromochloromethane	ug/L	50	<0.031	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.240	<0.031	<1	<1
Dichlorodifluoromethane	ug/L	5	<0.058	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.290	<0.058	<1	<1
Ethylbenzene	ug/L	5	<0.011	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.220	<0.011	<1	<1
Isopropylbenzene	ug/L	5	<0.014	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.390	<0.210	<0.014	<1	<1
Methyl acetate	ug/L	NC	<0.15	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.220	<0.15	<1	<1
Methyl tert-butyl ether (MTBE)	ug/L	NC	<0.039	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.380	<0.240	<0.039	<1	<1
Methylcyclohexane	ug/L	NC	<0.070	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.360	<0.070	<1	<1
Methylene chloride	ug/L	5	<0.10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1.98	<1.98	<0.10	<1	<1
Styrene	ug/L	5	<0.016	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.330	<0.250	<0.016	<1	<1
Tetrachloroethene	ug/L	5	**14**	**57**	**71**	**47**	**32**	**34**	**15**	**32**	**31**	**68**	**54**	**24.7**	**16**	**6**	**7**	3
Toluene	ug/L	5	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.390	<0.270	<0.17	<1	0.22 J
trans-1,2-Dichloroethene	ug/L	5	<0.072	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.550	<0.350	<0.072	<1	<1
trans-1,3-Dichloropropene	ug/L	0.4	<0.027	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.320	<0.220	<0.027	<1	<1
Trichloroethene	ug/L	5	<0.10	<1	<1	0.28 J	<1	<1	<1	0.30 J	<1	0.27 J	<1	**6.71**	2.81	3	4	3
Trichlorofluoromethane	ug/L	5	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.660	<0.450	<0.13	<1	<1
Vinyl Chloride	ug/L	2	<0.066	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.290	<0.066	<1	<1
Xylenes (Total)	ug/L	5	<0.041	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<0.630	<0.690	<0.041	<3	<3
Total VOCs	ug/L	NA	14	63.19 J	71.22 J	48.85 J	32	35.79 J	39.14	32.26 J	33.14 J	76.51 J	57.35 J	33.1 J	19.7 J	6	18.07 J	6.94 J

Notes:

6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Serie Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

* = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Summary
Groundwater Sampling Report
Brownfield Cleanup Program NO. C360115

Parameter		Well ID:	MW-7SB	MW-7SB	MW-7SB	MW-7SB	MW-7SB	MW-7SB	MW-7SB	MW-7SB	MW-8	MW-8	MW-8	DUP (MW-8)	MW-8	MW-8	MW-8	MW-8
		Screen Interval (ft above msl):	145.8 - 155.8	145.8 - 155.8	145.8 - 155.8	145.8 - 155.8	145.8 - 155.8	145.8 - 155.8	145.8 - 155.8	145.8 - 155.8	172.3 - 182.3	172.3 - 182.3	172.3 - 182.3	172.3 - 182.3	172.3 - 182.3	172.3 - 182.3	172.3 - 182.3	172.3 - 182.3
		Date Sampled:	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	5/18/2017 (Post ISCO)	10/30/2017 (Post ISCO)	05/15/2018 (Post ISCO)	04/26/2019 (Post ISCO)	10/20/2011	4/30/2012	6/10/2013	6/10/2013	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/7/2015 (Post ISCO)	10/9/2015 (Post ISCO)
		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards														Off-Site Downgradient Locations		
VOLATILE ORGANIC COMPOUNDS (VOCs)	Units																	
1,1,1-Trichloroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.330	<0.27	<1.4	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.310	<0.320	<0.27	<1.3	<1	<1	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.440	<0.420	<0.46	<2.3	<1	<1	<1	<1
1,1,2-Trichloroethane	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.220	<0.34	**7**	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.260	<0.15	<0.73	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.710	<0.410	<0.27	<1.3	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.210	<0.25	<1.2	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.390	<0.200	<0.24	<1.2	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	0.04	<0.05	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.00855	<0.00855	<0.0080	<0.0080	<0.05	<0.05	<0.05	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006	<1	<1	<1	<1	<1	<1	<1	<1	<0.00855	<0.00855	<0.12	<0.61	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	3	<1	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.230	<0.13	<0.67	<1	<1	<1	<1
1,2-Dichloroethane (EDC)	ug/L	0.6	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.200	<0.17	<0.86	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<1	<0.520	<0.250	<0.18	<0.91	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	3	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.230	<0.20	<1.0	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	3	<1	<1	<1	<1	<1	<1	<1	<1	<0.330	<0.230	<0.18	<0.90	<1	<1	<1	<1
1,4-Dioxane	ug/L	NC	<5	<3	<1	<3	<3	<1	<1	<1	<22.5 R	<0.301	<0.97	<0.97	<5	<5	<5	<3
2-Butanone (MEK)	ug/L	50	<10	<10	0.56 J	13	<10	<10	1.57 J	<10	<0.630	<0.550	6.3 J	<16	0.75 J	<10	<10	<10
2-Hexanone	ug/L	50	<10	<10	<10	<10	<10	<10	<10	<10	<0.260	<0.370	<0.19	<0.94	<10	<10	<10	<10
4-Methyl-2-pentanone (MIBK)	ug/L	NC	<10	<10	<10	0.18 J	<10	<10	0.28 J	<10	<0.510	<0.350	<0.35	<1.8	<10	<10	<10	<10
Acetone	ug/L	50	1.43 J	<10	3.06 J	17	<10	2.21 J	3.55 J	2.35 J	<0.870	<0.280	<4.0	<20	5.26 J	<10	1.53 J	<10
Benzene	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.250	<0.11	<0.56	<1	<1	<1	<1
Bromochloromethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.470	<0.300	<0.36	<1.8	<1	<1	<1	<1
Bromodichloromethane	ug/L	50	<1	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.260	<0.19	<0.96	<1	<1	<1	<1
Bromoform	ug/L	50	<1	<1	<1	<1	<1	<1	<1	<1	<0.260	<0.460	<0.35	<1.8	<1	<1	<1	<1
Bromomethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.510	<0.250	<0.18	<0.92	<1	<1	<1	<1
Carbon disulfide	ug/L	NC	<1	<1	<1	<1	<1	<1	<1	<1	<0.670	<0.300	<0.13	<0.63	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.500	<0.360	<0.19	<0.94	<1	<1	<1	<1
Chlorobenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.400	<0.220	<0.16	<0.78	<1	<1	<1	<1
Chloroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.480	<0.360	<0.21	<1.1	<1	<1	<1	<1
Chloroform	ug/L	7	0.22 J	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.220	<0.15	<0.75	<1	<1	<1	<1
Chloromethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.280	<0.20	<0.98	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	5	<1	0.29 J	<1	0.15 J	1	2	4	**7**	2.21	**8.56**	**5**	4.8 J	2	**5**	2	**5**
cis-1,3-Dichloropropene	ug/L	0.4	<1	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.250	<0.17	<0.84	<1	<1	<1	<1
Cyclohexane	ug/L	NC	<1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.380	<0.32	<1.6	<1	<1	<1	<1
Dibromochloromethane	ug/L	50	<1	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.240	<0.20	<1.00	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.290	<0.57	<2.9	<1	<1	<1	<1
Ethylbenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.220	<0.10	<0.51	<1	<1	<1	<1
Isopropylbenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.390	<0.210	<0.12	<0.58	<1	<1	<1	<1
Methyl acetate	ug/L	NC	<1	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.220	<0.20	<1.0	<1	<1	<1	<1
Methyl tert-butyl ether (MTBE)	ug/L	NC	<1	<1	<1	<1	<1	<1	<1	<1	<0.380	<0.240	<0.25	<1.2	<1	<1	<1	<1
Methylcyclohexane	ug/L	NC	<1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.360	<0.13	<0.64	<1	<1	<1	<1
Methylene chloride	ug/L	5	<1	<1	<1	<1	<1	<1	<1	0.47 J	<1.98	<1.98	<0.16	<0.81	<1	<1	0.36 J	<1
Styrene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.330	<0.250	<0.13	<0.64	<1	<1	<1	<1
Tetrachloroethene	ug/L	5	1	0.97 J	0.86 J	0.59 J	0.27 J	<1	0.32 J	0.27 J	**21.3**	**26.3**	1	<0.67	4	1	2	1
Toluene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.390	<0.270	<0.17	<0.83	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.550	<0.350	0.26 J	<0.72	0.22 J	0.31 J	0.26 J	0.30 J
trans-1,3-Dichloropropene	ug/L	0.4	<1	<1	<1	<1	<1	<1	<1	<1	<0.320	<0.220	<0.20	<1.0	<1	<1	<1	<1
Trichloroethene	ug/L	5	2	2	0.62 J	0.89 J	1	2	1	0.35 J	0.598 J	<0.270	0.38 J	**9**	0.42 J	0.35 J	0.26 J	0.49 J
Trichlorofluoromethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.660	<0.450	<0.28	<1.4	<1	<1	<1	<1
Vinyl Chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1	**2.67**	**3.34**	<0.24	<1.2	**16**	**14**	**17**	**12**
Xylenes (Total)	ug/L	5	<3	<3	<3	<3	<3	<3	<3	<3	<0.630	<0.690	<0.58	<2.9	<3	<3	<3	<3
Total VOCs	ug/L	NA	4.65 J	3.26 J	5.1 J	31.81	1.27 J	6.21 J	10.72 J	10.44 J	26.8 J	39.5	5	20.8 J	28.65 J	20.66 J	23.41 J	18.79 J

Notes:

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ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

* = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Summary
Groundwater Sampling Report
Brownfield Cleanup Program NO. C360115

Parameter		Well ID:	MW-8	MW-8	MW-8	MW-8	MW-8	MW-8	MW-8SB	MW-8SB	MW-8SB	MW-8SB	MW-8SB	MW-8SB	MW-8SB	MW-8SB	MW-8SB
		Screen Interval (ft above msl):	172.3 - 182.3	172.3 - 182.3	172.3 - 182.3	172.3 - 182.3	172.3 - 182.3	172.3 - 182.3	141.7 - 151.7	141.7 - 151.7	141.7 - 151.7	141.7 - 151.7	141.7 - 151.7	141.7 - 151.7	141.7 - 151.7	141.7 - 151.7	141.7 - 151.7
		Date Sampled:	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	6/8/2017 (Post ISCO)	10/30/2017 (Post ISCO)	05/15/2018 (Post ISCO)	04/26/2019 (Post ISCO)	10/20/2011	4/30/2012	6/10/2013	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/7/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	6/8/2017 (Post ISCO)
		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards													Off-Site Downgradient Locations			
VOLATILE ORGANIC COMPOUNDS (VOCs)	Units																	
1,1,1-Trichloroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<0.700	<0.330	<1.4	<5	<1	<10	<5	<10	<20	<1
1,1,2,2-Tetrachloroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<0.620	<0.320	<1.3	<5	<1	<10	<5	<10	<20	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<0.880	<0.420	<2.3	<5	<1	<10	<5	<10	<20	<1
1,1,2-Trichloroethane	ug/L	1	<1	<1	<1	<1	<1	<1	<0.720	<0.220	<1.7	<5	<1	<10	<5	<10	<20	<1
1,1-Dichloroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<0.860	<0.260	<0.73	<5	<1	<10	<5	<10	<20	<1
1,1-Dichloroethene	ug/L	5	<1	<1	<1	<1	<1	<1	<1.42	<0.410	<1.3	<5	<1	<10	<5	<10	<20	<1
1,2,3-Trichlorobenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<0.840	<0.210	<1.2	<5	<1	<10	<5	<10	<20	<1
1,2,4-Trichlorobenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<0.780	<0.200	<1.2	<5	<1	<10	<5	<10	<20	<1
1,2-Dibromo-3-chloropropane	ug/L	0.04	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006	<1	<1	<1	<1	<1	<1	<0.00855	<0.00855	<0.61	<5	<1	<10	<5	<10	<20	<1
1,2-Dichlorobenzene	ug/L	3	<1	<1	<1	<1	<1	<1	<0.720	<0.230	<0.67	<5	<1	<10	<5	<10	<20	<1
1,2-Dichloroethane (EDC)	ug/L	0.6	<1	<1	<1	<1	<1	<1	<0.840	<0.200	<0.86	<5	<1	<10	<5	<10	<20	<1
1,2-Dichloropropane	ug/L	1	<1	<1	<1	<1	<1	<1	<1.04	<0.250	<0.91	<5	<1	<10	<5	<10	<20	<1
1,3-Dichlorobenzene	ug/L	3	<1	<1	<1	<1	<1	<1	<0.840	<0.230	<1.0	<5	<1	<10	<5	<10	<20	<1
1,4-Dichlorobenzene	ug/L	3	<1	<1	<1	<1	<1	<1	<0.660	<0.230	<0.90	<5	<1	<10	<5	<10	<20	<1
1,4-Dioxane	ug/L	NC	<1	<3	<1	<1	<1	<1	<45.1 R	<0.301	<0.97	<5	<5	<5	<3	<1	<3	<1
2-Butanone (MEK)	ug/L	50	<10	12	<10	<10	1.68 J	<10	<1.26	<0.550	<16	<50	<10	<100	1.7 J	<100	<200	<10
2-Hexanone	ug/L	50	<10	<10	<10	<10	<10	<10	<0.520	<0.370	<0.94	<50	<10	<100	<50	<100	<200	<10
4-Methyl-2-pentanone (MIBK)	ug/L	NC	<10	0.13 J	<10	<10	0.22 J	<10	<1.02	<0.350	<1.8	<50	<10	<100	<50	<100	<200	<10
Acetone	ug/L	50	1.2 J	13	<10	2.21 J	5.34 J	4.18 J	<1.74	<0.280	<20	6.9 J	<10	<100	<50	<100	<200	<10
Benzene	ug/L	1	<1	<1	<1	<1	<1	<1	<0.860	<0.250	<0.56	<5	<1	<10	<5	<10	<20	<1
Bromochloromethane	ug/L	5	<1	<1	<1	<1	<1	<1	<0.940	<0.300	<1.8	<5	<1	<10	<5	<10	<20	<1
Bromodichloromethane	ug/L	50	<1	<1	<1	<1	<1	<1	<0.700	<0.260	<0.96	<5	<1	<10	<5	<10	<20	<1
Bromoform	ug/L	50	<1	<1	<1	<1	<1	<1	<0.520	<0.460	<1.8	<5	<1	<10	<5	<10	<20	<1
Bromomethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1.34	<0.250	<0.92	<5	<1	<10	<5	<10	<20	<1
Carbon disulfide	ug/L	NC	<1	<1	<1	<1	<1	<1	<1.00	<0.300	<0.63	<5	<1	<10	<5	<10	<20	<1
Carbon tetrachloride	ug/L	5	<1	<1	<1	<1	<1	<1	<0.800	<0.360	<0.94	<5	<1	<10	<5	<10	<20	<1
Chlorobenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<0.960	<0.220	<0.78	<5	<1	<10	<5	<10	<20	<1
Chloroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1.56	<0.360	<1.1	<5	<1	<10	<5	<10	<20	<1
Chloroform	ug/L	7	<1	<1	<1	<1	<1	<1	2.23	<0.220	<0.75	<5	5	<10	<5	<10	<20	<1
Chloromethane	ug/L	5	<1	<1	<1	<1	<1	<1	<0.700	<0.280	<0.98	<5	<1	<10	<5	<10	<20	<1
cis-1,2-Dichloroethene	ug/L	5	2	**5**	4	4	2	2	**7.32**	**3.98**	4.4 J	**9**	<1	**10**	**10**	**8.3 J**	**9.6 J**	**9**
cis-1,3-Dichloropropene	ug/L	0.4	<1	<1	<1	<1	<1	<1	<0.720	<0.250	<0.84	<5	<1	<10	<5	<10	<20	<1
Cyclohexane	ug/L	NC	<1	<1	<1	<1	<1	<1	<0.920	<0.380	<1.6	<5	<1	<10	<5	<10	<20	<1
Dibromochloromethane	ug/L	50	<1	<1	<1	<1	<1	<1	<0.720	<0.240	<1.00	<5	<1	<10	<5	<10	<20	<1
Dichlorodifluoromethane	ug/L	5	<1	<1	<1	<1	<1	<1	<0.840	<0.290	<2.9	<5	<1	<10	<5	<10	<20	<1
Ethylbenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<0.680	<0.220	<0.51	<5	<1	<10	<5	<10	<20	<1
Isopropylbenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<0.780	<0.210	<0.58	<5	<1	<10	<5	<10	<20	<1
Methyl acetate	ug/L	NC	<1	<1	<1	<1	<1	<1	<0.700	<0.220	<1.0	<5	<1	<10	<5	<10	<20	<1
Methyl tert-butyl ether (MTBE)	ug/L	NC	<1	<1	<1	<1	<1	<1	<0.760	<0.240	<1.2	<5	<1	<10	<5	<10	<20	<1
Methylcyclohexane	ug/L	NC	<1	<1	<1	<1	<1	<1	<0.920	<0.360	<0.64	<5	<1	<10	<5	<10	<20	0.21 J
Methylene chloride	ug/L	5	<1	<1	<1	<1	<1	0.35 J	<3.96	<1.98	<0.81	<5	<1	<10	<5	<10	<20	<1
Styrene	ug/L	5	<1	<1	<1	<1	<1	<1	<0.660	<0.250	<0.64	<5	<1	<10	<5	<10	<20	<1
Tetrachloroethene	ug/L	5	1	1	3	2	1	2	**250**	**217 D**	**265**	**292**	3	**280**	**359**	**240**	**190**	**229**
Toluene	ug/L	5	<1	<1	<1	<1	<1	<1	<0.780	<0.270	<0.83	<5	<1	<10	<5	<10	<20	<1
trans-1,2-Dichloroethene	ug/L	5	0.20 J	0.27 J	0.33 J	0.24 J	0.20 J	0.24 J	<1.10	<0.350	<0.72	<5	<1	<10	<5	<10	<20	<1
trans-1,3-Dichloropropene	ug/L	0.4	<1	<1	<1	<1	<1	<1	<0.640	<0.220	<1.0	<5	<1	<10	<5	<10	<20	<1
Trichloroethene	ug/L	5	0.24 J	0.50 J	0.59 J	0.50 J	<1	0.27 J	**8.99**	**9.22**	**10**	**12**	<1	10	**14**	**10**	**14.2 J**	**14**
Trichlorofluoromethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1.32	<0.450	<1.4	<5	<1	<10	<5	<10	<20	<1
Vinyl Chloride	ug/L	2	**20**	**8**	**19**	**13**	**12**	**12**	<0.920	<0.290	<1.2	<5	<1	<10	<5	<10	<20	<1
Xylenes (Total)	ug/L	5	<3	<3	<3	<3	<3	<3	<1.26	<0.690	<2.9	<20	<3	<30	<20	<30	<60	<3
Total VOCs	ug/L	NA	24.64 J	39.9	7.00 J	21.95 J	22.44 J	21.04 J	269	230	275	319.9 J	8	300	384.7 J	258.3 J	213.8	238 J

Notes:

6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Serie Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

* = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Summary
Groundwater Sampling Report
Brownfield Cleanup Program NO. C360115

Parameter		Well ID:	MW-8SB	MW-8SB	MW-8SB	DUP (MW-8SB)	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9
		Screen Interval (ft above msl):	141.7 - 151.7	141.7 - 151.7	141.7 - 151.7	172.3 - 182.3	175.8 - 185.8	175.8 - 185.8	175.8 - 185.8	175.8 - 185.8	175.8 - 185.8	175.8 - 185.8	175.8 - 185.8	175.8 - 185.8	175.8 - 185.8	175.8 - 185.8	175.8 - 185.8	175.8 - 185.8
		Date Sampled:	10/30/2017 (Post ISCO)	05/15/2018 (Post ISCO)	04/26/2019 (Post ISCO)	04/26/2019 (Post ISCO)	10/20/2011	5/1/2012	6/10/2013	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/7/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	5/18/2017 (Post ISCO)	10/30/2017 (Post ISCO)	05/15/2018 (Post ISCO)
		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards												Off-Site Downgradient Locations				
VOLATILE ORGANIC COMPOUNDS (VOCs)	**Units**																	
1,1,1-Trichloroethane	ug/L	5	<5	<10	<1	<1	<0.350	<0.330	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	5	<5	<10	<1	<1	<0.310	<0.320	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5	<5	<10	<1	<1	<0.440	<0.420	<0.46	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	ug/L	1	<5	<10	<1	<1	<0.360	<0.220	<0.34	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	5	<5	<10	<1	<1	<0.430	<0.260	<0.15	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	5	<5	<10	<1	<1	<0.710	<0.410	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	5	<5	<10	<1	<1	<0.420	<0.210	<0.25	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	5	<5	<10	<1	<1	<0.390	<0.200	<0.24	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	0.04	<0.05	<0.05	<0.05	<0.05	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006	<5	<10	<1	<1	<0.00855	<0.00855	<0.12	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	3	<5	<10	<1	<1	<0.360	<0.230	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane (EDC)	ug/L	0.6	<5	<10	<1	<1	<0.420	<0.200	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	1	<5	<10	<1	<1	<0.520	<0.250	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	3	<5	<10	<1	<1	<0.420	<0.230	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	3	<5	<10	<1	<1	<0.330	<0.230	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	NC	<1	<1	<1	<1	<22.5 R	<0.301	<0.97	<5	<5	<5	<3	<1	<3	<3	<1	<1
2-Butanone (MEK)	ug/L	50	<50	<100	<10	<10	<0.630	<0.550	3.7 J	1.09 J	<10	<10	<10	<10	<10	<10	<10	1.96 J
2-Hexanone	ug/L	50	<50	<100	<10	<10	<0.260	<0.370	<0.19	<10	<10	<10	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (MIBK)	ug/L	NC	<50	<100	<10	<10	<0.510	<0.350	<0.35	<10	<10	<10	<10	<10	<10	<10	<10	0.41 J
Acetone	ug/L	50	<50	23.7 J	1.94 J	3.38 J	<0.870	<0.280	<4.0	5.10 J	<10	1.60 J	<10	2.63 J	41	<10	2.01 J	6.13 J
Benzene	ug/L	1	<5	<10	<1	<1	<0.430	<0.250	<0.11	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	5	<5	<10	<1	<1	<0.470	<0.300	<0.36	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	50	<5	<10	<1	<1	<0.350	<0.260	<0.19	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	50	<5	<10	<1	<1	<0.260	<0.460	<0.35	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	5	<5	<10	<1	<1	<0.670	<0.250	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	NC	<5	<10	<1	<1	<0.500	<0.300	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5	<5	<10	<1	<1	<0.400	<0.360	<0.19	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	5	<5	<10	<1	<1	<0.480	<0.220	<0.16	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	5	<5	<10	<1	<1	<0.780	<0.360	<0.21	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	7	<5	<10	<1	<1	**9.28**	<0.220	<0.15	<1	<1	<1	<1	<1	0.11 J	<1	<1	0.32 J
Chloromethane	ug/L	5	<5	<10	<1	<1	<0.350	<0.280	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	5	**8**	**10**	**7**	**7**	<0.380	<0.300	<0.21	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	0.4	<5	<10	<1	<1	<0.360	<0.250	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cyclohexane	ug/L	NC	<5	<10	<1	<1	<0.460	<0.380	<0.32	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromochloromethane	ug/L	50	<5	<10	<1	<1	<0.360	<0.240	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	5	<5	<10	<1	<1	<0.420	<0.290	<0.57	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	5	<5	<10	<1	<1	<0.340	<0.220	<0.10	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isopropylbenzene	ug/L	5	<5	<10	<1	<1	<0.390	<0.210	<0.12	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl acetate	ug/L	NC	<5	<10	<1	<1	<0.350	<0.220	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl tert-butyl ether (MTBE)	ug/L	NC	<5	<10	<1	<1	<0.380	<0.240	<0.25	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylcyclohexane	ug/L	NC	<5	<10	<1	<1	<0.460	<0.360	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	5	<5	<10	0.31 J	0.30 J	<1.98	<1.98	<0.16	<1	<1	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	5	<5	<10	<1	<1	<0.330	<0.250	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5	**271**	**360**	**177**	**168**	<0.470	<0.330	0.18 J	<1	0.38 J	<1	0.25 J	<1	0.31 J	<1	0.31 J	<1
Toluene	ug/L	5	<5	<10	<1	<1	<0.390	<0.270	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	5	<5	<10	<1	<1	<0.550	<0.350	<0.14	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	0.4	<5	<10	<1	<1	<0.320	<0.220	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	**14**	**20**	**14**	**13**	<0.550	<0.270	<0.29	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	5	<5	<10	<1	<1	<0.660	<0.450	<0.28	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl Chloride	ug/L	2	<5	<10	<1	<1	<0.460	<0.290	<0.24	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes (Total)	ug/L	5	<20	<30	<3	<3	<0.630	<0.690	<0.58	<3	<3	<3	<3	<3	<3	<3	<3	<3
Total VOCs	ug/L	NA	293	413.7 J	200.25 J	191.68 J	9.28	---	---	6.19 J	0.38 J	1.60 J	0.25 J	2.63 J	41.42	---	2.32 J	8.82 J

Notes:

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ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

* = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Summary
Groundwater Sampling Report
Brownfield Cleanup Program NO. C360115

Parameter		Well ID:	MW-9	MW-9SB	MW-9SB	MW-9SB	MW-9SB	MW-9SB	MW-9SB	MW-9SB	MW-9SB	MW-9SB	MW-9SB	MW-9SB	MW-9SB	MW-9SB
		Screen Interval (ft above msl):	175.8 - 185.8	144.8 - 155.8	144.8 - 155.8	144.8 - 155.8	144.8 - 155.8	144.8 - 155.8	144.8 - 155.8	144.8 - 155.8	144.8 - 155.8	144.8 - 155.8	144.8 - 155.8	144.8 - 155.8	144.8 - 155.8	144.8 - 155.8
		Date Sampled:	04/26/2019 (Post ISCO)	10/20/2011	5/2/2012	6/10/2013	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/7/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	5/18/2017 (Post ISCO)	10/30/2017 (Post ISCO)	05/15/2018 (Post ISCO)	04/26/2019 (Post ISCO)
		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards	Off-Site Downgradient Locations													
VOLATILE ORGANIC COMPOUNDS (VOCs)	Units															
1,1,1-Trichloroethane	ug/L	5	<1	<0.350	<0.330	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	5	<1	<0.310	<0.320	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5	<1	<0.440	<0.420	<0.46	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	ug/L	1	<1	<0.360	<0.220	<0.34	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	5	<1	<0.430	<0.260	<0.15	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	5	<1	<0.710	<0.410	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	5	<1	<0.420	<0.210	<0.25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	5	<1	<0.390	<0.200	<0.24	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	0.04	<0.05	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006	<1	<0.00855	<0.00855	<0.12	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	3	<1	<0.360	<0.230	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane (EDC)	ug/L	0.6	<1	<0.420	<0.200	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	1	<1	<0.520	<0.250	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	3	<1	<0.420	<0.230	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	3	<1	<0.330	<0.230	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	NC	<1	<22.5 R	<0.301	<0.97	<5	<5	<5	<3	<1	<3	<3	<1	<1	<1
2-Butanone (MEK)	ug/L	50	<10	<0.630	<0.550	<3.3	0.69 J	<10	<10	<10	<10	<10	<10	<10	1.31 J	<10
2-Hexanone	ug/L	50	<10	<0.260	<0.370	<0.19	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (MIBK)	ug/L	NC	<10	<0.510	<0.350	<0.35	<10	<10	<10	<10	<10	0.10 J	<10	<10	0.17 J	<10
Acetone	ug/L	50	3.17 J	<0.870	<0.280	<4.0	4.63 J	<10	1.70 J	<10	1.29 J	42	<10	2.61 J	4.95 J	2.82 J
Benzene	ug/L	1	<1	**2**	<0.250	<0.11	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	5	<1	<0.470	<0.300	<0.36	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	50	<1	<0.350	<0.260	<0.19	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	50	<1	<0.260	<0.460	<0.35	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	5	<1	<0.670	<0.250	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	NC	<1	<0.500	<0.300	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5	<1	<0.400	<0.360	<0.19	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	5	<1	<0.480	<0.220	<0.16	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	5	<1	<0.780	<0.360	<0.21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	7	<1	3.81	0.563 J	<0.94 J	0.88 J	0.88 J	0.86 J	0.83 J	0.61 J	0.53 J	0.48 J	0.40 J	<1	0.20 J
Chloromethane	ug/L	5	<1	<0.350	<0.280	<0.20	<1	<1	<1	<1	<1	<1	0.70 J	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	5	<1	1.55	1.14	0.36 J	<1	<1	<1	<1	<1	0.15 J	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	0.4	<1	<0.360	<0.250	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cyclohexane	ug/L	NC	<1	<0.460	<0.380	<0.32	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromochloromethane	ug/L	50	<1	<0.360	<0.240	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	5	<1	<0.420	<0.290	<0.57	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	5	<1	<0.340	<0.220	<0.10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isopropylbenzene	ug/L	5	<1	<0.390	<0.210	<0.12	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl acetate	ug/L	NC	<1	<0.350	<0.220	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl tert-butyl ether (MTBE)	ug/L	NC	<1	<0.380	<0.240	<0.25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylcyclohexane	ug/L	NC	<1	<0.460	<0.360	<0.13	<1	<1	<1	<1	<1	<1	0.32 J	<1	<1	<1
Methylene chloride	ug/L	5	<1	<1.98	<1.98	<0.16	<1	<1	<1	<1	<1	0.10 J	<1	<1	<1	0.32 J
Styrene	ug/L	5	<1	<0.330	<0.250	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5	<1	1.23	1.09	0.30 J	0.34 J	0.26 J	0.21 J	<1	<1	<1	<1	<1	0.28 J	0.49 J
Toluene	ug/L	5	<1	<0.390	<0.270	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	5	<1	<0.550	<0.350	<0.14	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	0.4	<1	<0.320	<0.220	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	<1	<0.550	<0.270	<0.29	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	5	<1	<0.660	<0.450	<0.28	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl Chloride	ug/L	2	<1	<0.460	<0.290	<0.24	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes (Total)	ug/L	5	<3	<0.630	<0.690	<0.58	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Total VOCs	ug/L	NA	3.17 J	8.59	2.79 J	0.66	6.54 J	1.14 J	2.77 J	0.83 J	1.9 J	42.88	1.5 J	3.01 J	6.71 J	3.83 J

Notes:

6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Serie Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

* = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Figures

FIGURE 1

N

LEGEND

- OVERBURDEN MONITORING WELL
- SHALLOW BEDROCK MONITORING WELL
- DEEP BEDROCK MONITORING WELL
- PROPERTY BOUNDARY

NOTE: MW-6 AND MW-6SB DECOMMISSIONED DECEMBER 2018

BROWNFIELD CLEANUP PROGRAM NO. C360115
1-5 HOLLAND AVENUE
WHITE PLAINS, NY

GROUNDWATER MONITORING WELL LOCATIONS

0 60 120 240
Feet

MAY 2019
14206.72276

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This document was developed in color. Reproduction in B/W may not represent the data as intended.

Appendices

Groundwater Sampling Logs

Location ID	Ground Elevation (ft amsl)	Well Casing Elevation (ft amsl)	Well Screen Interval (ft)		Well Screen Interval (ft bgs)	Hydrogeologic Screen Interval	Date Deployment	Time Deployment	Depth to GW (PVC)	Date Retrieval/Sample Collection	Time Collected	Depth to GW (PVC)	Field Parameters					
			Top	Bottom									pH	Temp. (°C)	Spec. Conductance (mS/cm)	ORP (mV)	TDS (ppm)	Dis. Ox. (mg/L)
MW-1	198.9	198.61	192.7	182.7	5.9-15.9	Overburden	4/4/2019	AM	10.7	4/26/2019	1400	10.85	7.49	11.32	0.47	140.3	314	8.21
MW-2	204.7	204.39	191.4	181.4	13-23	Overburden	4/4/2019	AM	16.8	4/26/2019	1230	16.83	7.59	11.01	0.45	96.8	304	8.76
MW-2DB	204.3	204.04	136.3	126.3	68-78	Deep Bedrock	4/4/2019	AM	16.1	4/26/2019	1200	16.31	8.02	11.78	0.35	-4.2	235	0.96
MW-2SB	203.9	203.55	158.9	148.9	45-55	Shallow Bedrock	4/4/2019	AM	15.5	4/26/2019	1215	15.96	8.01	11.99	0.33	44.9	221	1.41
MW-4S	202.5	202.27	188.5	178.4	14-24	Overburden	4/4/2019	AM	14	4/26/2019	1430	14.12	10.66	12.56	0.80	64.6	537	4.46
MW-4D	202.5	202.07	168.0	158.0	34.5-44.5	Shallow Bedrock	4/4/2019	AM	13.9	4/26/2019	1445	13.93	8.63	12.49	0.50	105.2	336	8.07
MW-5	203.7	203.39	189.7	179.7	14-24	Overburden	4/4/2019	AM	15.75	4/26/2019	1100	15.81	7.18	10.24	0.32	74.6	212	8.6
MW-5DB	203.4	203.07	115.4	105.4	88-98	Deep Bedrock	4/4/2019	AM	14.55	4/26/2019	1130	15.35	9.15	11.07	0.35	-122	234	0.39
MW-5SB	203.1	202.80	155.1	145.1	48-58	Shallow Bedrock	4/4/2019	AM	14.8	4/26/2019	1145	14.86	7.96	11.29	0.65	-100.2	436	0.99
MW-7	200.2	199.73	185.2	175.2	15-25	Overburden	4/4/2019	AM	14.04	4/26/2019	830	13.9	7.32	11.33	1.62	77.7	1088	7.75
MW-7SB	200.2	199.79	156.2	146.2	44-54	Shallow Bedrock	4/4/2019	AM	13.79	4/26/2019	840	13.8	7.66	11.24	2.82	-99	1889	0.48
MW-8	197.6	197.34	182.6	172.6	15-25	Overburden	4/4/2019	AM	13.96	4/26/2019	1000	10.95	6.79	9.76	3.71	76.7	2486	1.9
MW-8SB	197.3	196.68	152.3	142.3	45-55	Shallow Bedrock	4/4/2019	AM	10.37	4/26/2019	1015	10.26	7.17	11.62	2.60	46.4	1743	1.86

Location ID	Ground Elevation (ft amsl)	Well Casing Elevation (ft amsl)	Well Screen Interval (ft)		Well Screen Interval (ft bgs)	Hydrogeologic Screen Interval	Date Deployment	Time Deployment	Depth to GW (PVC)	Date Retrieval/Sample Collection	Time Collected	Depth to GW (PVC)	Field Parameters					
			Top	Bottom									pH	Temp. (°C)	Spec. Conductance (mS/cm)	ORP (mV)	TDS (ppm)	Dis. Ox. (mg/L)
MW-9	201.3	200.80	186.3	176.3	15-25	Overburden	4/4/2019	AM	14.95	4/26/2019	930	14.95	7.28	9.3	2.23	51.9	1493	8.12
MW-9SB	201.3	200.76	155.3	145.3	46-56	Shallow Bedrock	4/4/2019	AM	14.96	4/26/2019	915	14.9	7.87	10.85	0.98	-86.1	657	1.38

Field Notes Blind Duplicate Installed: MW-8SB
MS/MSD Installed: MW-2SB
TDS calculation = (TDS) ppm = Conductivity mS/cm x 0.67 x 1,000

Sampler Deployment: Mark Randazzo
Sampler Retrieval: Mark Randazzo

INSTRUMENT CALIBRATION REPORT

Pine Environmental Services LLC
92 North Main St, Building 20
Windsor, NJ 08561
Toll-free: (800) 301-9663

Pine Environmental Services, Inc.

Instrument ID 6667
Description YSI 600 XLM
Calibrated 4/24/2019 3:33:54PM

Manufacturer YSI
Model Number 600 XLM
Serial Number/ Lot Number 05H2025AB
Location New Jersey
Department

State Certified
Status Pass
Temp °C 26.8
Humidity % 29

Calibration Specifications

Group # 1
Group Name PH
Stated Accy Pct of Reading
Range Acc % 0.0000
Reading Acc % 3.0000
Plus/Minus 0.00

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
7.00 / 7.00	PH	7.00	PH	7.12	7.00	0.00%	Pass
4.00 / 4.00	PH	4.00	PH	3.89	4.00	0.00%	Pass
10.00 / 10.00	PH	10.00	PH	10.23	10.00	0.00%	Pass

Group # 2
Group Name Conductivity
Stated Accy Pct of Reading
Range Acc % 0.0000
Reading Acc % 3.0000
Plus/Minus 0.000

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
1.413 / 1.413	ms/cm	1.413	ms/cm	1.396	1.414	0.07%	Pass

Group # 3
Group Name Redox (ORP)
Stated Accy Pct of Reading
Range Acc % 0.0000
Reading Acc % 3.0000
Plus/Minus 0.00

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
240.00 / 240.00	mv	240.00	mv	233.60	240.00	0.00%	Pass

Group # 4
Group Name Disolved Oxygen Span
Stated Accy Pct of Reading
Range Acc % 0.0000
Reading Acc % 3.0000
Plus/Minus 0.00

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
100.00 / 100.00	%	100.00	%	91.30	99.90	-0.10%	Pass

Group # 5
Group Name Disolved Oxygen Zero
Test Performed: N/A **As Found Result:** **As Left Result:**

INSTRUMENT CALIBRATION REPORT

Pine Environmental Services LLC
92 North Main St, Building 20
Windsor, NJ 08561
Toll-free: (800) 301-9663

Pine Environmental Services, Inc.

Instrument ID 6667
Description YSI 600 XLM
Calibrated 4/24/2019 3:33:54PM

Test Instruments Used During the Calibration (As Of Cal Entry Date)

Test Standard ID	Description	Manufacturer	Model Number	Serial Number / Lot Number	Last Cal Date/ Opened Date	Next Cal Date / Expiration Date
NJ COND 1413: 8GK310	1413 conductivity standard	AquaPhoenix Scientific	1413	8GK310	12/21/2018	11/30/2019
NJ ORP 240: 2062	ORP solution 240mv	Hanna	HI7021L	2062	1/19/2018	10/31/2022
NJ PH 10: 7GL670	BUFFER, PH10 BLUE	AquaPhoenix Scientific	PH10	7GL670	3/30/2018	12/31/2019
NJ PH 4: 7GI837	BUFFER, PH4 RED	AquaPhoenix Scientific	PH4	7GI837	3/30/2018	9/30/2019
NJ PH 7: 8GB386	BUFFER, PH7 YELLOW	AquaPhoenix Scientific	PH7	8GB386	3/30/2018	2/29/2020

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated William Bass

All instruments are calibrated by Pine Environmental Services LLC according to the manufacturer's specifications, but it is the customer's responsibility to calibrate and maintain this unit in accordance with the manufacturer's specifications and/or the customer's own specific needs.

Notify Pine Environmental Services LLC of any defect within 24 hours of receipt of equipment
Please call 800-301-9663 for Technical Assistance

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PDB Groundwater Sampling Log

Well ID: MW-1

Project No.: 72276
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 4/4/19
Weather: Cloudy

Well Information:

Depth of Well: 15.9 ft. bmp*
Depth to Water: 10.68 ft. bmp*
Length of Water Column (LWC): 5.22 ft.
PDB Midpoint: 13.3 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other: _____

PDB Installation Date: 4/4/19
PDB Removal Date: 4/26/19

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

OBG
Part of Nemboll

PDB Groundwater Sampling Log

Well ID: MW-4S

Project No.: 72276
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date:
Weather: Cloudy

Well Information:

Depth of Well: 24 ft. bmp*
Depth to Water: 14.0 ft. bmp*
Length of Water Column (LWC): 10 ft.
PDB Midpoint: 19 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other: _____

PDB Installation Date: 4/4/19
PDB Removal Date: 4/26/19

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

OBG Part of Kemboll

PDB Groundwater Sampling Log

Well ID: MW-4D

Project No.: 72276
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 4/4/19
Weather: Cloudy

Well Information:

Depth of Well: 44.5 ft. bmp*
Depth to Water: 13.88 ft. bmp* (4/4/19)
Length of Water Column (LWC): 30.6 ft.
PDB Midpoint: 39.5 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other: _____

PDB Installation Date: 4/4/19
PDB Removal Date: 4/26/19

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

OBG Part of Kemboll

PDB Groundwater Sampling Log

Well ID: _____

Project No.: 72276
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: _____
Weather: Cloudy

Well Information:

Depth of Well: _____ ft. bmp*
Depth to Water: _____ ft. bmp*
Length of Water Column (LWC): _____ ft.
PDB Midpoint: _____ ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other: _____

PDB Installation Date: _____
PDB Removal Date: _____

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA		No	HCL	<2

Notes:

OBG Part of Ramboll

PDB Groundwater Sampling Log

Well ID: MW-5

Project No.: 72276
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 4/4/19
Weather: Cloudy

Well Information:

Depth of Well: 24 ft. bmp*
Depth to Water: 15.75 ft. bmp*
Length of Water Column (LWC): 8.25 ft.
PDB Midpoint: 19.9 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 4/4/19
PDB Removal Date: 4/26/19

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

OBG Part of Ramboll

PDB Groundwater Sampling Log

Well ID: MW-2

Project No.: 72276
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date:
Weather: Cloudy

Well Information:

Depth of Well: 23 ft. bmp*
Depth to Water: 16.76 ft. bmp*
Length of Water Column (LWC): 6.2 ft.
PDB Midpoint: 19.9 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 4/4/19
PDB Removal Date: 4/26/19

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

OBG
Part of Kemboll

PDB Groundwater Sampling Log

Well ID: MW-2DB

Project No.: 72276
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 4/4/19
Weather: Cloudy

Well Information:

Depth of Well: 78 ft. bmp*
Depth to Water: 16.09 ft. bmp*
Length of Water Column (LWC): 61.9 ft.
PDB Midpoint: 73 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other: _____

PDB Installation Date: 4/4/19
PDB Removal Date: 4/26/19

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

OBG
Part of Kemboll

PDB Groundwater Sampling Log

Well ID: MW-25B

Project No.: 72276
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 4/4/19
Weather: Cloudy

Well Information:

Depth of Well: 55 ft. bmp*
Depth to Water: 15.49 ft. bmp*
Length of Water Column (LWC): 39.5 ft.
PDB Midpoint: 50 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other: _____

PDB Installation Date: 4/4/19
PDB Removal Date: 4/26/19

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	9	No	HCL	<2

Notes: MS/MSD

OBG
Part of Ramboll

PDB Groundwater Sampling Log

Well ID: MW-5DB

Project No.: 72276
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 4/4/19
Weather: Cloudy

Well Information:

Depth of Well: 98 ft. bmp*
Depth to Water: 14.81 ft. bmp*
Length of Water Column (LWC): 83.2 ft.
PDB Midpoint: 43 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other: _____

PDB Installation Date: 4/4/19
PDB Removal Date: 4/26/19

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

OBG
Part of Ramboll

PDB Groundwater Sampling Log

Well ID: MW-5SB

Project No.: 72276
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 4/4/19
Weather: Cloudy

Well Information:

Depth of Well: 58 ft. bmp*
Depth to Water: 14.55 ft. bmp*
Length of Water Column (LWC): 43.45 ft.
PDB Midpoint: 53 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other: _____

PDB Installation Date: 4/4/19
PDB Removal Date: 4/26/19

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

OBG
Part of Ramboll

PDB Groundwater Sampling Log

Well ID: MW-7

Project No.: 72276
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 4/4/19
Weather: Cloudy

Well Information:

Depth of Well: 25 ft. bmp*
Depth to Water: 14.04 ft. bmp*
Length of Water Column (LWC): 10.96 ft.
PDB Midpoint: 20 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 4/4/19
PDB Removal Date: 4/26/19

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

OBG
Part of Ramboll

PDB Groundwater Sampling Log

Well ID: MW-7S B

Project No.: 72276
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 4/4/19
Weather: Cloudy

Well Information:

Depth of Well: 54 ft. bmp*
Depth to Water: 13.79 ft. bmp*
Length of Water Column (LWC): 40.2 ft.
PDB Midpoint: 49 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 4/4/19
PDB Removal Date: 4/26/19

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

OBG Part of Kamboll

PDB Groundwater Sampling Log

Well ID: MW-8

Project No.: 72276
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 4/4/19
Weather: Cloudy

Well Information:

Depth of Well: 25 ft. bmp*
Depth to Water: 11.04 ft. bmp*
Length of Water Column (LWC): 13.96 ft.
PDB Midpoint: 20 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other: _____

PDB Installation Date: 4/4/19
PDB Removal Date: 4/26/19

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

OBG Part of Kamboll

PDB Groundwater Sampling Log

Well ID: MW-85B

Project No.: 72276
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 4/4/19
Weather: Cloudy

Well Information:

Depth of Well: ~~100~~ 55 ft. bmp* ✓
Depth to Water: 10.37 ft. bmp*
Length of Water Column (LWC): 44.63 ft.
PDB Midpoint: 50 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other: _____

PDB Installation Date: 4/5/19
PDB Removal Date: 4/26/19

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3 + MS	No	HCL	<2

Notes:

9 SB

OBG Part of Kemboll

PDB Groundwater Sampling Log

Well ID: MW-9S

Project No.: 72276
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 4/4/19
Weather: Cloudy

Well Information:

Depth of Well: 56 ft. bmp*
Depth to Water: 14.96 ft. bmp*
Length of Water Column (LWC): 41.04 ft.
PDB Midpoint: 51 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 4/4/19
PDB Removal Date: 4/26/19

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

OBG Part of Kemboll

PDB Groundwater Sampling Log

Well ID: MW-9S

Project No.: 72276
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 4/4/19
Weather: Cloudy

Well Information:

Depth of Well: 25 ft. bmp*
Depth to Water: 14.95 ft. bmp*
Length of Water Column (LWC): 10.05 ft.
PDB Midpoint: 20 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 4/4/19
PDB Removal Date: 4/26/19

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

Merit's Laboratory Analytical Report

Analytical Laboratory Report

Revised Report

Report ID: S01341.01(02)
Generated on 07/09/2019
Replaces report S01341.01(01) generated on 05/15/2019

Report to

Attention: Mark Randazzo
O'Brien & Gere Engineers
50 Main St, Suite 1060
White Plains, NY 10606

Phone: 781-883-6432 FAX:
Email: mark.randazzo@obg.com

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Laverty (johnlaverty@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S01341.01-S01341.19
Project: OHAD - BCP No. C360115
Collected Date(s): 04/26/2019
Submitted Date/Time: 04/29/2019 08:15
Sampled by: Mark Randazzo
P.O. #: 11900472

Table of Contents

Maya Murshak
Technical Director

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.
QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.
Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

Report Narrative

Sample results revised to report down to J values

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched

Method Summary

Method	Version
N/A	Not Applicable
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003
SW8260B - SIM	SW 846 Method 8260B Revision 2 December 1996 SIMs

Sample Summary (19 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S01341.01	MW-1	Groundwater	04/26/19 14:00
S01341.02	MW-2	Groundwater	04/26/19 12:30
S01341.03	MW-2SB	Groundwater	04/26/19 12:15
S01341.04	MW-2SB MS	Groundwater	04/26/19 12:15
S01341.05	MW-2SB MSD	Groundwater	04/26/19 12:15
S01341.06	MW-2DB	Groundwater	04/26/19 12:00
S01341.07	MW-4S	Groundwater	04/26/19 14:30
S01341.08	MW-4D	Groundwater	04/26/19 14:45
S01341.09	MW-5	Groundwater	04/26/19 11:00
S01341.10	MW-5SB	Groundwater	04/26/19 11:45
S01341.11	MW-5DB	Groundwater	04/26/19 11:30
S01341.12	MW-7	Groundwater	04/26/19 08:30
S01341.13	MW-7SB	Groundwater	04/26/19 08:45
S01341.14	MW-8	Groundwater	04/26/19 10:00
S01341.15	MW-8SB	Groundwater	04/26/19 10:15
S01341.16	MW-9	Groundwater	04/26/19 09:30
S01341.17	MW-9SB	Groundwater	04/26/19 09:15
S01341.18	TB-4/26/19	Water	04/26/19 00:01
S01341.19	MW-BD-1	Groundwater	04/26/19 00:01

Lab Sample ID: S01341.01
Sample Tag: MW-1
Collected Date/Time: 04/26/2019 14:00
Matrix: Groundwater
COC Reference: 122822

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/01/19 12:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 05/09/19 22:05, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 14:20, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1	0.18	ug/L	1	76-13-1	
Acetone	2.94	10	0.56	ug/L	1	67-64-1	JB
Carbon disulfide	Not detected	1	0.24	ug/L	1	75-15-0	
Methyl Acetate	Not detected	1	0.25	ug/L	1	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	1	0.19	ug/L	1	1634-04-4	
2-Butanone (MEK)	Not detected	10	0.26	ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	1	0.50	ug/L	1	75-71-8	
Chloromethane	Not detected	1	0.26	ug/L	1	74-87-3	
Vinyl chloride	Not detected	1	0.31	ug/L	1	75-01-4	
Bromomethane	Not detected	1	0.32	ug/L	1	74-83-9	
Chloroethane	Not detected	1	0.34	ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1	0.33	ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1	0.27	ug/L	1	75-35-4	
Methylene chloride	0.52	1	0.29	ug/L	1	75-09-2	JB
trans-1,2-Dichloroethene	Not detected	1	0.20	ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1	0.20	ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1	0.26	ug/L	1	156-59-2	
Chloroform	Not detected	1	0.20	ug/L	1	67-66-3	
Bromochloromethane	Not detected	1	0.38	ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1	0.28	ug/L	1	71-55-6	
Cyclohexane	Not detected	1	0.29	ug/L	1	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	10	0.14	ug/L	1	108-10-1	
2-Hexanone	Not detected	10	0.29	ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1	0.20	ug/L	1	56-23-5	
Benzene	Not detected	1	0.20	ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1	0.16	ug/L	1	107-06-2	
Trichloroethene	Not detected	1	0.23	ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1	0.20	ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1	0.23	ug/L	1	75-27-4	
Methyl cyclohexane	Not detected	1	0.21	ug/L	1	108-87-2	
cis-1,3-Dichloropropene	Not detected	1	0.19	ug/L	1	10061-01-5	

J-Estimated value less than reporting limit, but greater than MDL B-Compound also found in associated method blank

Lab Sample ID: S01341.01 (continued)
Sample Tag: MW-1

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 14:20, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	Not detected	1	0.25	ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1	0.25	ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1	0.28	ug/L	1	79-00-5	
Tetrachloroethene	56	1	0.20	ug/L	1	127-18-4	
Dibromochloromethane	Not detected	1	0.24	ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1	0.30	ug/L	1	106-93-4	
Chlorobenzene	Not detected	1	0.17	ug/L	1	108-90-7	
Ethylbenzene	Not detected	1	0.26	ug/L	1	100-41-4	
Total Xylenes	Not detected	3	0.66	ug/L	1	1330-20-7	
Styrene	Not detected	1	0.18	ug/L	1	100-42-5	
Isopropylbenzene	Not detected	1	0.25	ug/L	1	98-82-8	
Bromoform	Not detected	1	0.22	ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1	0.18	ug/L	1	79-34-5	
1,3-Dichlorobenzene	Not detected	1	0.24	ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1	0.23	ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1	0.28	ug/L	1	95-50-1	
1,2,4-Trichlorobenzene	Not detected	1	0.19	ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	1	0.20	ug/L	1	87-61-6	

Lab Sample ID: S01341.02
Sample Tag: MW-2
Collected Date/Time: 04/26/2019 12:30
Matrix: Groundwater
COC Reference: 122822

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/01/19 12:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 05/09/19 22:27, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 14:40, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1	0.18	ug/L	1	76-13-1	
Acetone	2.94	10	0.56	ug/L	1	67-64-1	JB
Carbon disulfide	Not detected	1	0.24	ug/L	1	75-15-0	
Methyl Acetate	Not detected	1	0.25	ug/L	1	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	1	0.19	ug/L	1	1634-04-4	
2-Butanone (MEK)	Not detected	10	0.26	ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	1	0.50	ug/L	1	75-71-8	
Chloromethane	Not detected	1	0.26	ug/L	1	74-87-3	
Vinyl chloride	Not detected	1	0.31	ug/L	1	75-01-4	
Bromomethane	Not detected	1	0.32	ug/L	1	74-83-9	
Chloroethane	Not detected	1	0.34	ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1	0.33	ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1	0.27	ug/L	1	75-35-4	
Methylene chloride	0.48	1	0.29	ug/L	1	75-09-2	JB
trans-1,2-Dichloroethene	Not detected	1	0.20	ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1	0.20	ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1	0.26	ug/L	1	156-59-2	
Chloroform	Not detected	1	0.20	ug/L	1	67-66-3	
Bromochloromethane	Not detected	1	0.38	ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1	0.28	ug/L	1	71-55-6	
Cyclohexane	Not detected	1	0.29	ug/L	1	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	10	0.14	ug/L	1	108-10-1	
2-Hexanone	Not detected	10	0.29	ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1	0.20	ug/L	1	56-23-5	
Benzene	Not detected	1	0.20	ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1	0.16	ug/L	1	107-06-2	
Trichloroethene	Not detected	1	0.23	ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1	0.20	ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1	0.23	ug/L	1	75-27-4	
Methyl cyclohexane	Not detected	1	0.21	ug/L	1	108-87-2	
cis-1,3-Dichloropropene	Not detected	1	0.19	ug/L	1	10061-01-5	

J-Estimated value less than reporting limit, but greater than MDL B-Compound also found in associated method blank

Lab Sample ID: S01341.02 (continued)
Sample Tag: MW-2

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 14:40, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	Not detected	1	0.25	ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1	0.25	ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1	0.28	ug/L	1	79-00-5	
Tetrachloroethene	40	1	0.20	ug/L	1	127-18-4	
Dibromochloromethane	Not detected	1	0.24	ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1	0.30	ug/L	1	106-93-4	
Chlorobenzene	Not detected	1	0.17	ug/L	1	108-90-7	
Ethylbenzene	Not detected	1	0.26	ug/L	1	100-41-4	
Total Xylenes	Not detected	3	0.66	ug/L	1	1330-20-7	
Styrene	Not detected	1	0.18	ug/L	1	100-42-5	
Isopropylbenzene	Not detected	1	0.25	ug/L	1	98-82-8	
Bromoform	Not detected	1	0.22	ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1	0.18	ug/L	1	79-34-5	
1,3-Dichlorobenzene	Not detected	1	0.24	ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1	0.23	ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1	0.28	ug/L	1	95-50-1	
1,2,4-Trichlorobenzene	Not detected	1	0.19	ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	1	0.20	ug/L	1	87-61-6	

Lab Sample ID: S01341.03
Sample Tag: MW-2SB
Collected Date/Time: 04/26/2019 12:15
Matrix: Groundwater
COC Reference: 122822

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/01/19 12:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 05/09/19 22:49, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 14:01, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1	0.18	ug/L	1	76-13-1	
Acetone	8.17	10	0.56	ug/L	1	67-64-1	JB
Carbon disulfide	Not detected	1	0.24	ug/L	1	75-15-0	
Methyl Acetate	Not detected	1	0.25	ug/L	1	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	1	0.19	ug/L	1	1634-04-4	
2-Butanone (MEK)	0.91	10	0.26	ug/L	1	78-93-3	JB
Dichlorodifluoromethane	Not detected	1	0.50	ug/L	1	75-71-8	
Chloromethane	Not detected	1	0.26	ug/L	1	74-87-3	
Vinyl chloride	Not detected	1	0.31	ug/L	1	75-01-4	
Bromomethane	Not detected	1	0.32	ug/L	1	74-83-9	
Chloroethane	Not detected	1	0.34	ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1	0.33	ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1	0.27	ug/L	1	75-35-4	
Methylene chloride	0.66	1	0.29	ug/L	1	75-09-2	JB
trans-1,2-Dichloroethene	Not detected	1	0.20	ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1	0.20	ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1	0.26	ug/L	1	156-59-2	
Chloroform	Not detected	1	0.20	ug/L	1	67-66-3	
Bromochloromethane	Not detected	1	0.38	ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1	0.28	ug/L	1	71-55-6	
Cyclohexane	Not detected	1	0.29	ug/L	1	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	10	0.14	ug/L	1	108-10-1	
2-Hexanone	Not detected	10	0.29	ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1	0.20	ug/L	1	56-23-5	
Benzene	Not detected	1	0.20	ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1	0.16	ug/L	1	107-06-2	
Trichloroethene	Not detected	1	0.23	ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1	0.20	ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1	0.23	ug/L	1	75-27-4	
Methyl cyclohexane	Not detected	1	0.21	ug/L	1	108-87-2	
cis-1,3-Dichloropropene	Not detected	1	0.19	ug/L	1	10061-01-5	

J-Estimated value less than reporting limit, but greater than MDL B-Compound also found in associated method blank

Lab Sample ID: S01341.03 (continued)
Sample Tag: MW-2SB

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 14:01, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	Not detected	1	0.25	ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1	0.25	ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1	0.28	ug/L	1	79-00-5	
Tetrachloroethene	0.53	1	0.20	ug/L	1	127-18-4	J
Dibromochloromethane	Not detected	1	0.24	ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1	0.30	ug/L	1	106-93-4	
Chlorobenzene	Not detected	1	0.17	ug/L	1	108-90-7	
Ethylbenzene	Not detected	1	0.26	ug/L	1	100-41-4	
Total Xylenes	Not detected	3	0.66	ug/L	1	1330-20-7	
Styrene	Not detected	1	0.18	ug/L	1	100-42-5	
Isopropylbenzene	Not detected	1	0.25	ug/L	1	98-82-8	
Bromoform	Not detected	1	0.22	ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1	0.18	ug/L	1	79-34-5	
1,3-Dichlorobenzene	Not detected	1	0.24	ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1	0.23	ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1	0.28	ug/L	1	95-50-1	
1,2,4-Trichlorobenzene	Not detected	1	0.19	ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	1	0.20	ug/L	1	87-61-6	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S01341.04
Sample Tag: MW-2SB MS
Collected Date/Time: 04/26/2019 12:15
Matrix: Groundwater
COC Reference: 122822

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/01/19 12:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 05/10/19 03:48, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	0.11	0.05		ug/L	1	96-12-8	1
1,4-Dioxane*	67	1		ug/L	1	123-91-1	2

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 11:42, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1,2-Trichloro-1,2,2-trifluoroethane	48	1	0.18	ug/L	1	76-13-1	2
Acetone	42	10	0.56	ug/L	1	67-64-1	B2
Carbon disulfide	49	1	0.24	ug/L	1	75-15-0	2
Methyl Acetate	45	1	0.25	ug/L	1	79-20-9	2
tert-Methyl butyl ether (MTBE)	40	1	0.19	ug/L	1	1634-04-4	2
2-Butanone (MEK)	40	10	0.26	ug/L	1	78-93-3	B2
Dichlorodifluoromethane	38	1	0.50	ug/L	1	75-71-8	2
Chloromethane	45	1	0.26	ug/L	1	74-87-3	2
Vinyl chloride	47	1	0.31	ug/L	1	75-01-4	2
Bromomethane	42	1	0.32	ug/L	1	74-83-9	2
Chloroethane	47	1	0.34	ug/L	1	75-00-3	2
Trichlorofluoromethane	38	1	0.33	ug/L	1	75-69-4	2
1,1-Dichloroethene	44	1	0.27	ug/L	1	75-35-4	2
Methylene chloride	42	1	0.29	ug/L	1	75-09-2	B2
trans-1,2-Dichloroethene	45	1	0.20	ug/L	1	156-60-5	2
1,1-Dichloroethane	45	1	0.20	ug/L	1	75-34-3	2
cis-1,2-Dichloroethene	45	1	0.26	ug/L	1	156-59-2	2
Chloroform	42	1	0.20	ug/L	1	67-66-3	2
Bromochloromethane	41	1	0.38	ug/L	1	74-97-5	2
1,1,1-Trichloroethane	42	1	0.28	ug/L	1	71-55-6	2
Cyclohexane	44	1	0.29	ug/L	1	110-82-7	2
4-Methyl-2-pentanone (MIBK)	44	10	0.14	ug/L	1	108-10-1	2
2-Hexanone	44	10	0.29	ug/L	1	591-78-6	2
Carbon tetrachloride	42	1	0.20	ug/L	1	56-23-5	2
Benzene	49	1	0.20	ug/L	1	71-43-2	2
1,2-Dichloroethane	38	1	0.16	ug/L	1	107-06-2	2
Trichloroethene	48	1	0.23	ug/L	1	79-01-6	2
1,2-Dichloropropane	48	1	0.20	ug/L	1	78-87-5	2
Bromodichloromethane	43	1	0.23	ug/L	1	75-27-4	2

1-Spiked at 0.1ug/L
2-Spiked at 50ug/L
B-Compound also found in associated method blank

Lab Sample ID: S01341.04 (continued)
Sample Tag: MW-2SB MS

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 11:42, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Methyl cyclohexane	44	1	0.21	ug/L	1	108-87-2	1
cis-1,3-Dichloropropene	46	1	0.19	ug/L	1	10061-01-5	1
Toluene	46	1	0.25	ug/L	1	108-88-3	1
trans-1,3-Dichloropropene	44	1	0.25	ug/L	1	10061-02-6	1
1,1,2-Trichloroethane	44	1	0.28	ug/L	1	79-00-5	1
Tetrachloroethene	52	1	0.20	ug/L	1	127-18-4	1
Dibromochloromethane	43	1	0.24	ug/L	1	124-48-1	1
1,2-Dibromoethane	45	1	0.30	ug/L	1	106-93-4	1
Chlorobenzene	46	1	0.17	ug/L	1	108-90-7	1
Ethylbenzene	46	1	0.26	ug/L	1	100-41-4	1
Total Xylenes	132	3	0.66	ug/L	1	1330-20-7	1
Styrene	44	1	0.18	ug/L	1	100-42-5	1
Isopropylbenzene	44	1	0.25	ug/L	1	98-82-8	1
Bromoform	42	1	0.22	ug/L	1	75-25-2	1
1,1,2,2-Tetrachloroethane	45	1	0.18	ug/L	1	79-34-5	1
1,3-Dichlorobenzene	43	1	0.24	ug/L	1	541-73-1	1
1,4-Dichlorobenzene	44	1	0.23	ug/L	1	106-46-7	1
1,2-Dichlorobenzene	44	1	0.28	ug/L	1	95-50-1	1
1,2,4-Trichlorobenzene	40	1	0.19	ug/L	1	120-82-1	1
1,2,3-Trichlorobenzene	40	1	0.20	ug/L	1	87-61-6	1

1-Spiked at 50ug/L

Lab Sample ID: S01341.05
Sample Tag: MW-2SB MSD
Collected Date/Time: 04/26/2019 12:15
Matrix: Groundwater
COC Reference: 122822

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/01/19 12:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 05/10/19 04:08, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	0.11	0.05		ug/L	1	96-12-8	1
1,4-Dioxane*	65	1		ug/L	1	123-91-1	2

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 12:01, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1,2-Trichloro-1,2,2-trifluoroethane	52	1	0.18	ug/L	1	76-13-1	2
Acetone	48	10	0.56	ug/L	1	67-64-1	B2
Carbon disulfide	53	1	0.24	ug/L	1	75-15-0	2
Methyl Acetate	50	1	0.25	ug/L	1	79-20-9	2
tert-Methyl butyl ether (MTBE)	44	1	0.19	ug/L	1	1634-04-4	2
2-Butanone (MEK)	46	10	0.26	ug/L	1	78-93-3	B2
Dichlorodifluoromethane	41	1	0.50	ug/L	1	75-71-8	2
Chloromethane	48	1	0.26	ug/L	1	74-87-3	2
Vinyl chloride	51	1	0.31	ug/L	1	75-01-4	2
Bromomethane	45	1	0.32	ug/L	1	74-83-9	2
Chloroethane	51	1	0.34	ug/L	1	75-00-3	2
Trichlorofluoromethane	41	1	0.33	ug/L	1	75-69-4	2
1,1-Dichloroethene	48	1	0.27	ug/L	1	75-35-4	2
Methylene chloride	45	1	0.29	ug/L	1	75-09-2	B2
trans-1,2-Dichloroethene	49	1	0.20	ug/L	1	156-60-5	2
1,1-Dichloroethane	49	1	0.20	ug/L	1	75-34-3	2
cis-1,2-Dichloroethene	49	1	0.26	ug/L	1	156-59-2	2
Chloroform	46	1	0.20	ug/L	1	67-66-3	2
Bromochloromethane	45	1	0.38	ug/L	1	74-97-5	2
1,1,1-Trichloroethane	46	1	0.28	ug/L	1	71-55-6	2
Cyclohexane	48	1	0.29	ug/L	1	110-82-7	2
4-Methyl-2-pentanone (MIBK)	49	10	0.14	ug/L	1	108-10-1	2
2-Hexanone	50	10	0.29	ug/L	1	591-78-6	2
Carbon tetrachloride	45	1	0.20	ug/L	1	56-23-5	2
Benzene	52	1	0.20	ug/L	1	71-43-2	2
1,2-Dichloroethane	40	1	0.16	ug/L	1	107-06-2	2
Trichloroethene	52	1	0.23	ug/L	1	79-01-6	2
1,2-Dichloropropane	51	1	0.20	ug/L	1	78-87-5	2
Bromodichloromethane	47	1	0.23	ug/L	1	75-27-4	2

1-Spiked at 0.1ug/L
2-Spiked at 50ug/L
B-Compound also found in associated method blank

Lab Sample ID: S01341.05 (continued)
Sample Tag: MW-2SB MSD

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 12:01, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Methyl cyclohexane	46	1	0.21	ug/L	1	108-87-2	1
cis-1,3-Dichloropropene	50	1	0.19	ug/L	1	10061-01-5	1
Toluene	50	1	0.25	ug/L	1	108-88-3	1
trans-1,3-Dichloropropene	48	1	0.25	ug/L	1	10061-02-6	1
1,1,2-Trichloroethane	48	1	0.28	ug/L	1	79-00-5	1
Tetrachloroethene	55	1	0.20	ug/L	1	127-18-4	1
Dibromochloromethane	48	1	0.24	ug/L	1	124-48-1	1
1,2-Dibromoethane	50	1	0.30	ug/L	1	106-93-4	1
Chlorobenzene	51	1	0.17	ug/L	1	108-90-7	1
Ethylbenzene	51	1	0.26	ug/L	1	100-41-4	1
Total Xylenes	146	3	0.66	ug/L	1	1330-20-7	1
Styrene	48	1	0.18	ug/L	1	100-42-5	1
Isopropylbenzene	49	1	0.25	ug/L	1	98-82-8	1
Bromoform	47	1	0.22	ug/L	1	75-25-2	1
1,1,2,2-Tetrachloroethane	52	1	0.18	ug/L	1	79-34-5	1
1,3-Dichlorobenzene	47	1	0.24	ug/L	1	541-73-1	1
1,4-Dichlorobenzene	48	1	0.23	ug/L	1	106-46-7	1
1,2-Dichlorobenzene	47	1	0.28	ug/L	1	95-50-1	1
1,2,4-Trichlorobenzene	43	1	0.19	ug/L	1	120-82-1	1
1,2,3-Trichlorobenzene	43	1	0.20	ug/L	1	87-61-6	1

1-Spiked at 50ug/L

Lab Sample ID: S01341.06
Sample Tag: MW-2DB
Collected Date/Time: 04/26/2019 12:00
Matrix: Groundwater
COC Reference: 122822

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/01/19 12:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 05/09/19 23:10, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 15:00, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1	0.18	ug/L	1	76-13-1	
Acetone	3.30	10	0.56	ug/L	1	67-64-1	JB
Carbon disulfide	Not detected	1	0.24	ug/L	1	75-15-0	
Methyl Acetate	Not detected	1	0.25	ug/L	1	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	1	0.19	ug/L	1	1634-04-4	
2-Butanone (MEK)	Not detected	10	0.26	ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	1	0.50	ug/L	1	75-71-8	
Chloromethane	Not detected	1	0.26	ug/L	1	74-87-3	
Vinyl chloride	Not detected	1	0.31	ug/L	1	75-01-4	
Bromomethane	Not detected	1	0.32	ug/L	1	74-83-9	
Chloroethane	Not detected	1	0.34	ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1	0.33	ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1	0.27	ug/L	1	75-35-4	
Methylene chloride	0.45	1	0.29	ug/L	1	75-09-2	JB
trans-1,2-Dichloroethene	Not detected	1	0.20	ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1	0.20	ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1	0.26	ug/L	1	156-59-2	
Chloroform	Not detected	1	0.20	ug/L	1	67-66-3	
Bromochloromethane	Not detected	1	0.38	ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1	0.28	ug/L	1	71-55-6	
Cyclohexane	Not detected	1	0.29	ug/L	1	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	10	0.14	ug/L	1	108-10-1	
2-Hexanone	Not detected	10	0.29	ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1	0.20	ug/L	1	56-23-5	
Benzene	Not detected	1	0.20	ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1	0.16	ug/L	1	107-06-2	
Trichloroethene	Not detected	1	0.23	ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1	0.20	ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1	0.23	ug/L	1	75-27-4	
Methyl cyclohexane	Not detected	1	0.21	ug/L	1	108-87-2	
cis-1,3-Dichloropropene	Not detected	1	0.19	ug/L	1	10061-01-5	

J-Estimated value less than reporting limit, but greater than MDL B-Compound also found in associated method blank

Lab Sample ID: S01341.06 (continued)
Sample Tag: MW-2DB

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 15:00, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	Not detected	1	0.25	ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1	0.25	ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1	0.28	ug/L	1	79-00-5	
Tetrachloroethene	6	1	0.20	ug/L	1	127-18-4	
Dibromochloromethane	Not detected	1	0.24	ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1	0.30	ug/L	1	106-93-4	
Chlorobenzene	Not detected	1	0.17	ug/L	1	108-90-7	
Ethylbenzene	Not detected	1	0.26	ug/L	1	100-41-4	
Total Xylenes	Not detected	3	0.66	ug/L	1	1330-20-7	
Styrene	Not detected	1	0.18	ug/L	1	100-42-5	
Isopropylbenzene	Not detected	1	0.25	ug/L	1	98-82-8	
Bromoform	Not detected	1	0.22	ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1	0.18	ug/L	1	79-34-5	
1,3-Dichlorobenzene	Not detected	1	0.24	ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1	0.23	ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1	0.28	ug/L	1	95-50-1	
1,2,4-Trichlorobenzene	Not detected	1	0.19	ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	1	0.20	ug/L	1	87-61-6	

Lab Sample ID: S01341.07
Sample Tag: MW-4S
Collected Date/Time: 04/26/2019 14:30
Matrix: Groundwater
COC Reference: 122822

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/01/19 12:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 05/09/19 23:32, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 15:20, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1	0.18	ug/L	1	76-13-1	
Acetone	2.71	10	0.56	ug/L	1	67-64-1	JB
Carbon disulfide	Not detected	1	0.24	ug/L	1	75-15-0	
Methyl Acetate	Not detected	1	0.25	ug/L	1	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	1	0.19	ug/L	1	1634-04-4	
2-Butanone (MEK)	Not detected	10	0.26	ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	1	0.50	ug/L	1	75-71-8	
Chloromethane	Not detected	1	0.26	ug/L	1	74-87-3	
Vinyl chloride	Not detected	1	0.31	ug/L	1	75-01-4	
Bromomethane	Not detected	1	0.32	ug/L	1	74-83-9	
Chloroethane	Not detected	1	0.34	ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1	0.33	ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1	0.27	ug/L	1	75-35-4	
Methylene chloride	0.48	1	0.29	ug/L	1	75-09-2	JB
trans-1,2-Dichloroethene	Not detected	1	0.20	ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1	0.20	ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1	0.26	ug/L	1	156-59-2	
Chloroform	Not detected	1	0.20	ug/L	1	67-66-3	
Bromochloromethane	Not detected	1	0.38	ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1	0.28	ug/L	1	71-55-6	
Cyclohexane	Not detected	1	0.29	ug/L	1	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	10	0.14	ug/L	1	108-10-1	
2-Hexanone	Not detected	10	0.29	ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1	0.20	ug/L	1	56-23-5	
Benzene	Not detected	1	0.20	ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1	0.16	ug/L	1	107-06-2	
Trichloroethene	Not detected	1	0.23	ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1	0.20	ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1	0.23	ug/L	1	75-27-4	
Methyl cyclohexane	Not detected	1	0.21	ug/L	1	108-87-2	
cis-1,3-Dichloropropene	Not detected	1	0.19	ug/L	1	10061-01-5	

J-Estimated value less than reporting limit, but greater than MDL B-Compound also found in associated method blank

Lab Sample ID: S01341.07 (continued)
Sample Tag: MW-4S

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 15:20, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	Not detected	1	0.25	ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1	0.25	ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1	0.28	ug/L	1	79-00-5	
Tetrachloroethene	24	1	0.20	ug/L	1	127-18-4	
Dibromochloromethane	Not detected	1	0.24	ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1	0.30	ug/L	1	106-93-4	
Chlorobenzene	Not detected	1	0.17	ug/L	1	108-90-7	
Ethylbenzene	Not detected	1	0.26	ug/L	1	100-41-4	
Total Xylenes	Not detected	3	0.66	ug/L	1	1330-20-7	
Styrene	Not detected	1	0.18	ug/L	1	100-42-5	
Isopropylbenzene	Not detected	1	0.25	ug/L	1	98-82-8	
Bromoform	Not detected	1	0.22	ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1	0.18	ug/L	1	79-34-5	
1,3-Dichlorobenzene	Not detected	1	0.24	ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1	0.23	ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1	0.28	ug/L	1	95-50-1	
1,2,4-Trichlorobenzene	Not detected	1	0.19	ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	1	0.20	ug/L	1	87-61-6	

Lab Sample ID: S01341.08
Sample Tag: MW-4D
Collected Date/Time: 04/26/2019 14:45
Matrix: Groundwater
COC Reference: 122822

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/01/19 12:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 05/09/19 23:53, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 15:39, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1	0.18	ug/L	1	76-13-1	
Acetone	3.35	10	0.56	ug/L	1	67-64-1	JB
Carbon disulfide	Not detected	1	0.24	ug/L	1	75-15-0	
Methyl Acetate	Not detected	1	0.25	ug/L	1	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	1	0.19	ug/L	1	1634-04-4	
2-Butanone (MEK)	Not detected	10	0.26	ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	1	0.50	ug/L	1	75-71-8	
Chloromethane	0.40	1	0.26	ug/L	1	74-87-3	J
Vinyl chloride	Not detected	1	0.31	ug/L	1	75-01-4	
Bromomethane	Not detected	1	0.32	ug/L	1	74-83-9	
Chloroethane	Not detected	1	0.34	ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1	0.33	ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1	0.27	ug/L	1	75-35-4	
Methylene chloride	0.56	1	0.29	ug/L	1	75-09-2	JB
trans-1,2-Dichloroethene	Not detected	1	0.20	ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1	0.20	ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1	0.26	ug/L	1	156-59-2	
Chloroform	Not detected	1	0.20	ug/L	1	67-66-3	
Bromochloromethane	Not detected	1	0.38	ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1	0.28	ug/L	1	71-55-6	
Cyclohexane	Not detected	1	0.29	ug/L	1	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	10	0.14	ug/L	1	108-10-1	
2-Hexanone	Not detected	10	0.29	ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1	0.20	ug/L	1	56-23-5	
Benzene	Not detected	1	0.20	ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1	0.16	ug/L	1	107-06-2	
Trichloroethene	Not detected	1	0.23	ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1	0.20	ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1	0.23	ug/L	1	75-27-4	
Methyl cyclohexane	Not detected	1	0.21	ug/L	1	108-87-2	
cis-1,3-Dichloropropene	Not detected	1	0.19	ug/L	1	10061-01-5	

J-Estimated value less than reporting limit, but greater than MDL B-Compound also found in associated method blank

Lab Sample ID: S01341.08 (continued)
Sample Tag: MW-4D

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 15:39, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	0.29	1	0.25	ug/L	1	108-88-3	J
trans-1,3-Dichloropropene	Not detected	1	0.25	ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1	0.28	ug/L	1	79-00-5	
Tetrachloroethene	116	1	0.20	ug/L	1	127-18-4	
Dibromochloromethane	Not detected	1	0.24	ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1	0.30	ug/L	1	106-93-4	
Chlorobenzene	Not detected	1	0.17	ug/L	1	108-90-7	
Ethylbenzene	Not detected	1	0.26	ug/L	1	100-41-4	
Total Xylenes	Not detected	3	0.66	ug/L	1	1330-20-7	
Styrene	Not detected	1	0.18	ug/L	1	100-42-5	
Isopropylbenzene	Not detected	1	0.25	ug/L	1	98-82-8	
Bromoform	Not detected	1	0.22	ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1	0.18	ug/L	1	79-34-5	
1,3-Dichlorobenzene	Not detected	1	0.24	ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1	0.23	ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1	0.28	ug/L	1	95-50-1	
1,2,4-Trichlorobenzene	Not detected	1	0.19	ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	1	0.20	ug/L	1	87-61-6	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S01341.09
Sample Tag: MW-5
Collected Date/Time: 04/26/2019 11:00
Matrix: Groundwater
COC Reference: 122822

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/01/19 12:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 05/10/19 00:15, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 15:59, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1	0.18	ug/L	1	76-13-1	
Acetone	3.25	10	0.56	ug/L	1	67-64-1	JB
Carbon disulfide	Not detected	1	0.24	ug/L	1	75-15-0	
Methyl Acetate	Not detected	1	0.25	ug/L	1	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	1	0.19	ug/L	1	1634-04-4	
2-Butanone (MEK)	Not detected	10	0.26	ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	1	0.50	ug/L	1	75-71-8	
Chloromethane	Not detected	1	0.26	ug/L	1	74-87-3	
Vinyl chloride	Not detected	1	0.31	ug/L	1	75-01-4	
Bromomethane	Not detected	1	0.32	ug/L	1	74-83-9	
Chloroethane	Not detected	1	0.34	ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1	0.33	ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1	0.27	ug/L	1	75-35-4	
Methylene chloride	0.41	1	0.29	ug/L	1	75-09-2	JB
trans-1,2-Dichloroethene	Not detected	1	0.20	ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1	0.20	ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1	0.26	ug/L	1	156-59-2	
Chloroform	Not detected	1	0.20	ug/L	1	67-66-3	
Bromochloromethane	Not detected	1	0.38	ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1	0.28	ug/L	1	71-55-6	
Cyclohexane	Not detected	1	0.29	ug/L	1	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	10	0.14	ug/L	1	108-10-1	
2-Hexanone	Not detected	10	0.29	ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1	0.20	ug/L	1	56-23-5	
Benzene	Not detected	1	0.20	ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1	0.16	ug/L	1	107-06-2	
Trichloroethene	Not detected	1	0.23	ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1	0.20	ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1	0.23	ug/L	1	75-27-4	
Methyl cyclohexane	Not detected	1	0.21	ug/L	1	108-87-2	
cis-1,3-Dichloropropene	Not detected	1	0.19	ug/L	1	10061-01-5	

J-Estimated value less than reporting limit, but greater than MDL B-Compound also found in associated method blank

Lab Sample ID: S01341.09 (continued)
Sample Tag: MW-5

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 15:59, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	Not detected	1	0.25	ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1	0.25	ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1	0.28	ug/L	1	79-00-5	
Tetrachloroethene	7	1	0.20	ug/L	1	127-18-4	
Dibromochloromethane	Not detected	1	0.24	ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1	0.30	ug/L	1	106-93-4	
Chlorobenzene	Not detected	1	0.17	ug/L	1	108-90-7	
Ethylbenzene	Not detected	1	0.26	ug/L	1	100-41-4	
Total Xylenes	Not detected	3	0.66	ug/L	1	1330-20-7	
Styrene	Not detected	1	0.18	ug/L	1	100-42-5	
Isopropylbenzene	Not detected	1	0.25	ug/L	1	98-82-8	
Bromoform	Not detected	1	0.22	ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1	0.18	ug/L	1	79-34-5	
1,3-Dichlorobenzene	Not detected	1	0.24	ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1	0.23	ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1	0.28	ug/L	1	95-50-1	
1,2,4-Trichlorobenzene	Not detected	1	0.19	ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	1	0.20	ug/L	1	87-61-6	

Lab Sample ID: S01341.10
Sample Tag: MW-5SB
Collected Date/Time: 04/26/2019 11:45
Matrix: Groundwater
COC Reference: 122822

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/01/19 12:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 05/10/19 00:36, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 16:19, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1	0.18	ug/L	1	76-13-1	
Acetone	2.91	10	0.56	ug/L	1	67-64-1	JB
Carbon disulfide	Not detected	1	0.24	ug/L	1	75-15-0	
Methyl Acetate	Not detected	1	0.25	ug/L	1	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	1	0.19	ug/L	1	1634-04-4	
2-Butanone (MEK)	Not detected	10	0.26	ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	1	0.50	ug/L	1	75-71-8	
Chloromethane	Not detected	1	0.26	ug/L	1	74-87-3	
Vinyl chloride	0.32	1	0.31	ug/L	1	75-01-4	J
Bromomethane	Not detected	1	0.32	ug/L	1	74-83-9	
Chloroethane	Not detected	1	0.34	ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1	0.33	ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1	0.27	ug/L	1	75-35-4	
Methylene chloride	0.47	1	0.29	ug/L	1	75-09-2	JB
trans-1,2-Dichloroethene	Not detected	1	0.20	ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1	0.20	ug/L	1	75-34-3	
cis-1,2-Dichloroethene	0.27	1	0.26	ug/L	1	156-59-2	J
Chloroform	Not detected	1	0.20	ug/L	1	67-66-3	
Bromochloromethane	Not detected	1	0.38	ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1	0.28	ug/L	1	71-55-6	
Cyclohexane	Not detected	1	0.29	ug/L	1	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	10	0.14	ug/L	1	108-10-1	
2-Hexanone	Not detected	10	0.29	ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1	0.20	ug/L	1	56-23-5	
Benzene	Not detected	1	0.20	ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1	0.16	ug/L	1	107-06-2	
Trichloroethene	2	1	0.23	ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1	0.20	ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1	0.23	ug/L	1	75-27-4	
Methyl cyclohexane	Not detected	1	0.21	ug/L	1	108-87-2	
cis-1,3-Dichloropropene	Not detected	1	0.19	ug/L	1	10061-01-5	

J-Estimated value less than reporting limit, but greater than MDL B-Compound also found in associated method blank

Lab Sample ID: S01341.10 (continued)
Sample Tag: MW-5SB

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 16:19, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	Not detected	1	0.25	ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1	0.25	ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1	0.28	ug/L	1	79-00-5	
Tetrachloroethene	7	1	0.20	ug/L	1	127-18-4	
Dibromochloromethane	Not detected	1	0.24	ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1	0.30	ug/L	1	106-93-4	
Chlorobenzene	Not detected	1	0.17	ug/L	1	108-90-7	
Ethylbenzene	Not detected	1	0.26	ug/L	1	100-41-4	
Total Xylenes	Not detected	3	0.66	ug/L	1	1330-20-7	
Styrene	Not detected	1	0.18	ug/L	1	100-42-5	
Isopropylbenzene	Not detected	1	0.25	ug/L	1	98-82-8	
Bromoform	Not detected	1	0.22	ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1	0.18	ug/L	1	79-34-5	
1,3-Dichlorobenzene	Not detected	1	0.24	ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1	0.23	ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1	0.28	ug/L	1	95-50-1	
1,2,4-Trichlorobenzene	Not detected	1	0.19	ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	1	0.20	ug/L	1	87-61-6	

Lab Sample ID: S01341.11
Sample Tag: MW-5DB
Collected Date/Time: 04/26/2019 11:30
Matrix: Groundwater
COC Reference: 122822

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/01/19 12:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 05/10/19 00:57, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 16:39, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1	0.18	ug/L	1	76-13-1	
Acetone	4.05	10	0.56	ug/L	1	67-64-1	JB
Carbon disulfide	Not detected	1	0.24	ug/L	1	75-15-0	
Methyl Acetate	Not detected	1	0.25	ug/L	1	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	1	0.19	ug/L	1	1634-04-4	
2-Butanone (MEK)	Not detected	10	0.26	ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	1	0.50	ug/L	1	75-71-8	
Chloromethane	0.31	1	0.26	ug/L	1	74-87-3	J
Vinyl chloride	0.59	1	0.31	ug/L	1	75-01-4	J
Bromomethane	Not detected	1	0.32	ug/L	1	74-83-9	
Chloroethane	Not detected	1	0.34	ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1	0.33	ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1	0.27	ug/L	1	75-35-4	
Methylene chloride	0.62	1	0.29	ug/L	1	75-09-2	JB
trans-1,2-Dichloroethene	Not detected	1	0.20	ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1	0.20	ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1	0.26	ug/L	1	156-59-2	
Chloroform	0.29	1	0.20	ug/L	1	67-66-3	J
Bromochloromethane	Not detected	1	0.38	ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1	0.28	ug/L	1	71-55-6	
Cyclohexane	Not detected	1	0.29	ug/L	1	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	10	0.14	ug/L	1	108-10-1	
2-Hexanone	Not detected	10	0.29	ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1	0.20	ug/L	1	56-23-5	
Benzene	Not detected	1	0.20	ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1	0.16	ug/L	1	107-06-2	
Trichloroethene	Not detected	1	0.23	ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1	0.20	ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1	0.23	ug/L	1	75-27-4	
Methyl cyclohexane	Not detected	1	0.21	ug/L	1	108-87-2	
cis-1,3-Dichloropropene	Not detected	1	0.19	ug/L	1	10061-01-5	

J-Estimated value less than reporting limit, but greater than MDL B-Compound also found in associated method blank

Lab Sample ID: S01341.11 (continued)
Sample Tag: MW-5DB

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 16:39, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	Not detected	1	0.25	ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1	0.25	ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1	0.28	ug/L	1	79-00-5	
Tetrachloroethene	0.51	1	0.20	ug/L	1	127-18-4	J
Dibromochloromethane	Not detected	1	0.24	ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1	0.30	ug/L	1	106-93-4	
Chlorobenzene	Not detected	1	0.17	ug/L	1	108-90-7	
Ethylbenzene	Not detected	1	0.26	ug/L	1	100-41-4	
Total Xylenes	Not detected	3	0.66	ug/L	1	1330-20-7	
Styrene	Not detected	1	0.18	ug/L	1	100-42-5	
Isopropylbenzene	Not detected	1	0.25	ug/L	1	98-82-8	
Bromoform	Not detected	1	0.22	ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1	0.18	ug/L	1	79-34-5	
1,3-Dichlorobenzene	Not detected	1	0.24	ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1	0.23	ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1	0.28	ug/L	1	95-50-1	
1,2,4-Trichlorobenzene	Not detected	1	0.19	ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	1	0.20	ug/L	1	87-61-6	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S01341.12
Sample Tag: MW-7
Collected Date/Time: 04/26/2019 08:30
Matrix: Groundwater
COC Reference: 122822

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/01/19 12:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 05/10/19 01:18, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 16:59, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1	0.18	ug/L	1	76-13-1	
Acetone	3.35	10	0.56	ug/L	1	67-64-1	JB
Carbon disulfide	Not detected	1	0.24	ug/L	1	75-15-0	
Methyl Acetate	Not detected	1	0.25	ug/L	1	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	1	0.19	ug/L	1	1634-04-4	
2-Butanone (MEK)	Not detected	10	0.26	ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	1	0.50	ug/L	1	75-71-8	
Chloromethane	Not detected	1	0.26	ug/L	1	74-87-3	
Vinyl chloride	Not detected	1	0.31	ug/L	1	75-01-4	
Bromomethane	Not detected	1	0.32	ug/L	1	74-83-9	
Chloroethane	Not detected	1	0.34	ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1	0.33	ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1	0.27	ug/L	1	75-35-4	
Methylene chloride	Not detected	1	0.29	ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1	0.20	ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1	0.20	ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1	0.26	ug/L	1	156-59-2	
Chloroform	Not detected	1	0.20	ug/L	1	67-66-3	
Bromochloromethane	Not detected	1	0.38	ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1	0.28	ug/L	1	71-55-6	
Cyclohexane	Not detected	1	0.29	ug/L	1	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	10	0.14	ug/L	1	108-10-1	
2-Hexanone	Not detected	10	0.29	ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1	0.20	ug/L	1	56-23-5	
Benzene	Not detected	1	0.20	ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1	0.16	ug/L	1	107-06-2	
Trichloroethene	Not detected	1	0.23	ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1	0.20	ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1	0.23	ug/L	1	75-27-4	
Methyl cyclohexane	Not detected	1	0.21	ug/L	1	108-87-2	
cis-1,3-Dichloropropene	Not detected	1	0.19	ug/L	1	10061-01-5	

J-Estimated value less than reporting limit, but greater than MDL B-Compound also found in associated method blank

Lab Sample ID: S01341.12 (continued)
Sample Tag: MW-7

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 16:59, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	Not detected	1	0.25	ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1	0.25	ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1	0.28	ug/L	1	79-00-5	
Tetrachloroethene	54	1	0.20	ug/L	1	127-18-4	
Dibromochloromethane	Not detected	1	0.24	ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1	0.30	ug/L	1	106-93-4	
Chlorobenzene	Not detected	1	0.17	ug/L	1	108-90-7	
Ethylbenzene	Not detected	1	0.26	ug/L	1	100-41-4	
Total Xylenes	Not detected	3	0.66	ug/L	1	1330-20-7	
Styrene	Not detected	1	0.18	ug/L	1	100-42-5	
Isopropylbenzene	Not detected	1	0.25	ug/L	1	98-82-8	
Bromoform	Not detected	1	0.22	ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1	0.18	ug/L	1	79-34-5	
1,3-Dichlorobenzene	Not detected	1	0.24	ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1	0.23	ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1	0.28	ug/L	1	95-50-1	
1,2,4-Trichlorobenzene	Not detected	1	0.19	ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	1	0.20	ug/L	1	87-61-6	

Lab Sample ID: S01341.13
Sample Tag: MW-7SB
Collected Date/Time: 04/26/2019 08:45
Matrix: Groundwater
COC Reference: 122822

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/01/19 12:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 05/10/19 01:40, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 17:18, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1	0.18	ug/L	1	76-13-1	
Acetone	2.35	10	0.56	ug/L	1	67-64-1	JB
Carbon disulfide	Not detected	1	0.24	ug/L	1	75-15-0	
Methyl Acetate	Not detected	1	0.25	ug/L	1	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	1	0.19	ug/L	1	1634-04-4	
2-Butanone (MEK)	Not detected	10	0.26	ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	1	0.50	ug/L	1	75-71-8	
Chloromethane	Not detected	1	0.26	ug/L	1	74-87-3	
Vinyl chloride	Not detected	1	0.31	ug/L	1	75-01-4	
Bromomethane	Not detected	1	0.32	ug/L	1	74-83-9	
Chloroethane	Not detected	1	0.34	ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1	0.33	ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1	0.27	ug/L	1	75-35-4	
Methylene chloride	0.47	1	0.29	ug/L	1	75-09-2	JB
trans-1,2-Dichloroethene	Not detected	1	0.20	ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1	0.20	ug/L	1	75-34-3	
cis-1,2-Dichloroethene	7	1	0.26	ug/L	1	156-59-2	
Chloroform	Not detected	1	0.20	ug/L	1	67-66-3	
Bromochloromethane	Not detected	1	0.38	ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1	0.28	ug/L	1	71-55-6	
Cyclohexane	Not detected	1	0.29	ug/L	1	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	10	0.14	ug/L	1	108-10-1	
2-Hexanone	Not detected	10	0.29	ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1	0.20	ug/L	1	56-23-5	
Benzene	Not detected	1	0.20	ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1	0.16	ug/L	1	107-06-2	
Trichloroethene	0.35	1	0.23	ug/L	1	79-01-6	J
1,2-Dichloropropane	Not detected	1	0.20	ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1	0.23	ug/L	1	75-27-4	
Methyl cyclohexane	Not detected	1	0.21	ug/L	1	108-87-2	
cis-1,3-Dichloropropene	Not detected	1	0.19	ug/L	1	10061-01-5	

J-Estimated value less than reporting limit, but greater than MDL B-Compound also found in associated method blank

Lab Sample ID: S01341.13 (continued)
Sample Tag: MW-7SB

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 17:18, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	Not detected	1	0.25	ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1	0.25	ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1	0.28	ug/L	1	79-00-5	
Tetrachloroethene	0.27	1	0.20	ug/L	1	127-18-4	J
Dibromochloromethane	Not detected	1	0.24	ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1	0.30	ug/L	1	106-93-4	
Chlorobenzene	Not detected	1	0.17	ug/L	1	108-90-7	
Ethylbenzene	Not detected	1	0.26	ug/L	1	100-41-4	
Total Xylenes	Not detected	3	0.66	ug/L	1	1330-20-7	
Styrene	Not detected	1	0.18	ug/L	1	100-42-5	
Isopropylbenzene	Not detected	1	0.25	ug/L	1	98-82-8	
Bromoform	Not detected	1	0.22	ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1	0.18	ug/L	1	79-34-5	
1,3-Dichlorobenzene	Not detected	1	0.24	ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1	0.23	ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1	0.28	ug/L	1	95-50-1	
1,2,4-Trichlorobenzene	Not detected	1	0.19	ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	1	0.20	ug/L	1	87-61-6	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S01341.14
Sample Tag: MW-8
Collected Date/Time: 04/26/2019 10:00
Matrix: Groundwater
COC Reference: 122822

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/01/19 12:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 05/10/19 02:01, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 17:38, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1	0.18	ug/L	1	76-13-1	
Acetone	4.18	10	0.56	ug/L	1	67-64-1	JB
Carbon disulfide	Not detected	1	0.24	ug/L	1	75-15-0	
Methyl Acetate	Not detected	1	0.25	ug/L	1	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	1	0.19	ug/L	1	1634-04-4	
2-Butanone (MEK)	Not detected	10	0.26	ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	1	0.50	ug/L	1	75-71-8	
Chloromethane	Not detected	1	0.26	ug/L	1	74-87-3	
Vinyl chloride	12	1	0.31	ug/L	1	75-01-4	
Bromomethane	Not detected	1	0.32	ug/L	1	74-83-9	
Chloroethane	Not detected	1	0.34	ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1	0.33	ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1	0.27	ug/L	1	75-35-4	
Methylene chloride	0.35	1	0.29	ug/L	1	75-09-2	JB
trans-1,2-Dichloroethene	0.24	1	0.20	ug/L	1	156-60-5	J
1,1-Dichloroethane	Not detected	1	0.20	ug/L	1	75-34-3	
cis-1,2-Dichloroethene	2	1	0.26	ug/L	1	156-59-2	
Chloroform	Not detected	1	0.20	ug/L	1	67-66-3	
Bromochloromethane	Not detected	1	0.38	ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1	0.28	ug/L	1	71-55-6	
Cyclohexane	Not detected	1	0.29	ug/L	1	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	10	0.14	ug/L	1	108-10-1	
2-Hexanone	Not detected	10	0.29	ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1	0.20	ug/L	1	56-23-5	
Benzene	Not detected	1	0.20	ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1	0.16	ug/L	1	107-06-2	
Trichloroethene	0.27	1	0.23	ug/L	1	79-01-6	J
1,2-Dichloropropane	Not detected	1	0.20	ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1	0.23	ug/L	1	75-27-4	
Methyl cyclohexane	Not detected	1	0.21	ug/L	1	108-87-2	
cis-1,3-Dichloropropene	Not detected	1	0.19	ug/L	1	10061-01-5	

J-Estimated value less than reporting limit, but greater than MDL B-Compound also found in associated method blank

Lab Sample ID: S01341.14 (continued)
Sample Tag: MW-8

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 17:38, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	Not detected	1	0.25	ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1	0.25	ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1	0.28	ug/L	1	79-00-5	
Tetrachloroethene	2	1	0.20	ug/L	1	127-18-4	
Dibromochloromethane	Not detected	1	0.24	ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1	0.30	ug/L	1	106-93-4	
Chlorobenzene	Not detected	1	0.17	ug/L	1	108-90-7	
Ethylbenzene	Not detected	1	0.26	ug/L	1	100-41-4	
Total Xylenes	Not detected	3	0.66	ug/L	1	1330-20-7	
Styrene	Not detected	1	0.18	ug/L	1	100-42-5	
Isopropylbenzene	Not detected	1	0.25	ug/L	1	98-82-8	
Bromoform	Not detected	1	0.22	ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1	0.18	ug/L	1	79-34-5	
1,3-Dichlorobenzene	Not detected	1	0.24	ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1	0.23	ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1	0.28	ug/L	1	95-50-1	
1,2,4-Trichlorobenzene	Not detected	1	0.19	ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	1	0.20	ug/L	1	87-61-6	

Lab Sample ID: S01341.15
Sample Tag: MW-8SB
Collected Date/Time: 04/26/2019 10:15
Matrix: Groundwater
COC Reference: 122474

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/01/19 12:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 05/10/19 02:22, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 17:58, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1	0.18	ug/L	1	76-13-1	
Acetone	1.94	10	0.56	ug/L	1	67-64-1	JB
Carbon disulfide	Not detected	1	0.24	ug/L	1	75-15-0	
Methyl Acetate	Not detected	1	0.25	ug/L	1	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	1	0.19	ug/L	1	1634-04-4	
2-Butanone (MEK)	Not detected	10	0.26	ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	1	0.50	ug/L	1	75-71-8	
Chloromethane	Not detected	1	0.26	ug/L	1	74-87-3	
Vinyl chloride	Not detected	1	0.31	ug/L	1	75-01-4	
Bromomethane	Not detected	1	0.32	ug/L	1	74-83-9	
Chloroethane	Not detected	1	0.34	ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1	0.33	ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1	0.27	ug/L	1	75-35-4	
Methylene chloride	0.31	1	0.29	ug/L	1	75-09-2	JB
trans-1,2-Dichloroethene	Not detected	1	0.20	ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1	0.20	ug/L	1	75-34-3	
cis-1,2-Dichloroethene	7	1	0.26	ug/L	1	156-59-2	
Chloroform	Not detected	1	0.20	ug/L	1	67-66-3	
Bromochloromethane	Not detected	1	0.38	ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1	0.28	ug/L	1	71-55-6	
Cyclohexane	Not detected	1	0.29	ug/L	1	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	10	0.14	ug/L	1	108-10-1	
2-Hexanone	Not detected	10	0.29	ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1	0.20	ug/L	1	56-23-5	
Benzene	Not detected	1	0.20	ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1	0.16	ug/L	1	107-06-2	
Trichloroethene	14	1	0.23	ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1	0.20	ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1	0.23	ug/L	1	75-27-4	
Methyl cyclohexane	Not detected	1	0.21	ug/L	1	108-87-2	
cis-1,3-Dichloropropene	Not detected	1	0.19	ug/L	1	10061-01-5	

J-Estimated value less than reporting limit, but greater than MDL B-Compound also found in associated method blank

Lab Sample ID: S01341.15 (continued)
Sample Tag: MW-8SB

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 17:58, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	Not detected	1	0.25	ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1	0.25	ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1	0.28	ug/L	1	79-00-5	
Tetrachloroethene	177	1	0.20	ug/L	1	127-18-4	
Dibromochloromethane	Not detected	1	0.24	ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1	0.30	ug/L	1	106-93-4	
Chlorobenzene	Not detected	1	0.17	ug/L	1	108-90-7	
Ethylbenzene	Not detected	1	0.26	ug/L	1	100-41-4	
Total Xylenes	Not detected	3	0.66	ug/L	1	1330-20-7	
Styrene	Not detected	1	0.18	ug/L	1	100-42-5	
Isopropylbenzene	Not detected	1	0.25	ug/L	1	98-82-8	
Bromoform	Not detected	1	0.22	ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1	0.18	ug/L	1	79-34-5	
1,3-Dichlorobenzene	Not detected	1	0.24	ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1	0.23	ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1	0.28	ug/L	1	95-50-1	
1,2,4-Trichlorobenzene	Not detected	1	0.19	ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	1	0.20	ug/L	1	87-61-6	

Lab Sample ID: S01341.16
Sample Tag: MW-9
Collected Date/Time: 04/26/2019 09:30
Matrix: Groundwater
COC Reference: 122474

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/01/19 12:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 05/10/19 02:44, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 05/07/19 15:06, Analyst: JML

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1	0.18	ug/L	1	76-13-1	
Acetone	3.17	10	0.56	ug/L	1	67-64-1	JB
Carbon disulfide	Not detected	1	0.24	ug/L	1	75-15-0	
Methyl Acetate	Not detected	1	0.25	ug/L	1	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	1	0.19	ug/L	1	1634-04-4	
2-Butanone (MEK)	Not detected	10	0.26	ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	1	0.50	ug/L	1	75-71-8	
Chloromethane	Not detected	1	0.26	ug/L	1	74-87-3	
Vinyl chloride	Not detected	1	0.31	ug/L	1	75-01-4	
Bromomethane	Not detected	1	0.32	ug/L	1	74-83-9	
Chloroethane	Not detected	1	0.34	ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1	0.33	ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1	0.27	ug/L	1	75-35-4	
Methylene chloride	Not detected	1	0.29	ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1	0.20	ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1	0.20	ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1	0.26	ug/L	1	156-59-2	
Chloroform	Not detected	1	0.20	ug/L	1	67-66-3	
Bromochloromethane	Not detected	1	0.38	ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1	0.28	ug/L	1	71-55-6	
Cyclohexane	Not detected	1	0.29	ug/L	1	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	10	0.14	ug/L	1	108-10-1	
2-Hexanone	Not detected	10	0.29	ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1	0.20	ug/L	1	56-23-5	
Benzene	Not detected	1	0.20	ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1	0.16	ug/L	1	107-06-2	
Trichloroethene	Not detected	1	0.23	ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1	0.20	ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1	0.23	ug/L	1	75-27-4	
Methyl cyclohexane	Not detected	1	0.21	ug/L	1	108-87-2	
cis-1,3-Dichloropropene	Not detected	1	0.19	ug/L	1	10061-01-5	

J-Estimated value less than reporting limit, but greater than MDL B-Compound also found in associated method blank

Lab Sample ID: S01341.16 (continued)
Sample Tag: MW-9

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 05/07/19 15:06, Analyst: JML (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	Not detected	1	0.25	ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1	0.25	ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1	0.28	ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1	0.20	ug/L	1	127-18-4	
Dibromochloromethane	Not detected	1	0.24	ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1	0.30	ug/L	1	106-93-4	
Chlorobenzene	Not detected	1	0.17	ug/L	1	108-90-7	
Ethylbenzene	Not detected	1	0.26	ug/L	1	100-41-4	
Total Xylenes	Not detected	3	0.66	ug/L	1	1330-20-7	
Styrene	Not detected	1	0.18	ug/L	1	100-42-5	
Isopropylbenzene	Not detected	1	0.25	ug/L	1	98-82-8	
Bromoform	Not detected	1	0.22	ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1	0.18	ug/L	1	79-34-5	
1,3-Dichlorobenzene	Not detected	1	0.24	ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1	0.23	ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1	0.28	ug/L	1	95-50-1	
1,2,4-Trichlorobenzene	Not detected	1	0.19	ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	1	0.20	ug/L	1	87-61-6	

Lab Sample ID: S01341.17
Sample Tag: MW-9SB
Collected Date/Time: 04/26/2019 09:15
Matrix: Groundwater
COC Reference: 122474

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/01/19 12:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 05/10/19 03:06, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 18:38, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1	0.18	ug/L	1	76-13-1	
Acetone	2.82	10	0.56	ug/L	1	67-64-1	JB
Carbon disulfide	Not detected	1	0.24	ug/L	1	75-15-0	
Methyl Acetate	Not detected	1	0.25	ug/L	1	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	1	0.19	ug/L	1	1634-04-4	
2-Butanone (MEK)	Not detected	10	0.26	ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	1	0.50	ug/L	1	75-71-8	
Chloromethane	Not detected	1	0.26	ug/L	1	74-87-3	
Vinyl chloride	Not detected	1	0.31	ug/L	1	75-01-4	
Bromomethane	Not detected	1	0.32	ug/L	1	74-83-9	
Chloroethane	Not detected	1	0.34	ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1	0.33	ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1	0.27	ug/L	1	75-35-4	
Methylene chloride	0.32	1	0.29	ug/L	1	75-09-2	JB
trans-1,2-Dichloroethene	Not detected	1	0.20	ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1	0.20	ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1	0.26	ug/L	1	156-59-2	
Chloroform	0.20	1	0.20	ug/L	1	67-66-3	J
Bromochloromethane	Not detected	1	0.38	ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1	0.28	ug/L	1	71-55-6	
Cyclohexane	Not detected	1	0.29	ug/L	1	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	10	0.14	ug/L	1	108-10-1	
2-Hexanone	Not detected	10	0.29	ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1	0.20	ug/L	1	56-23-5	
Benzene	Not detected	1	0.20	ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1	0.16	ug/L	1	107-06-2	
Trichloroethene	Not detected	1	0.23	ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1	0.20	ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1	0.23	ug/L	1	75-27-4	
Methyl cyclohexane	Not detected	1	0.21	ug/L	1	108-87-2	
cis-1,3-Dichloropropene	Not detected	1	0.19	ug/L	1	10061-01-5	

J-Estimated value less than reporting limit, but greater than MDL B-Compound also found in associated method blank

Lab Sample ID: S01341.17 (continued)
Sample Tag: MW-9SB

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 18:38, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	Not detected	1	0.25	ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1	0.25	ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1	0.28	ug/L	1	79-00-5	
Tetrachloroethene	0.49	1	0.20	ug/L	1	127-18-4	J
Dibromochloromethane	Not detected	1	0.24	ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1	0.30	ug/L	1	106-93-4	
Chlorobenzene	Not detected	1	0.17	ug/L	1	108-90-7	
Ethylbenzene	Not detected	1	0.26	ug/L	1	100-41-4	
Total Xylenes	Not detected	3	0.66	ug/L	1	1330-20-7	
Styrene	Not detected	1	0.18	ug/L	1	100-42-5	
Isopropylbenzene	Not detected	1	0.25	ug/L	1	98-82-8	
Bromoform	Not detected	1	0.22	ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1	0.18	ug/L	1	79-34-5	
1,3-Dichlorobenzene	Not detected	1	0.24	ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1	0.23	ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1	0.28	ug/L	1	95-50-1	
1,2,4-Trichlorobenzene	Not detected	1	0.19	ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	1	0.20	ug/L	1	87-61-6	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S01341.18
Sample Tag: TB-4/26/19
Collected Date/Time: 04/26/2019 00:01
Matrix: Water
COC Reference: 122474

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	3.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/01/19 12:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 05/09/19 21:44, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 13:41, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1	0.18	ug/L	1	76-13-1	
Acetone	4.74	10	0.56	ug/L	1	67-64-1	JB
Carbon disulfide	Not detected	1	0.24	ug/L	1	75-15-0	
Methyl Acetate	Not detected	1	0.25	ug/L	1	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	1	0.19	ug/L	1	1634-04-4	
2-Butanone (MEK)	Not detected	10	0.26	ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	1	0.50	ug/L	1	75-71-8	
Chloromethane	Not detected	1	0.26	ug/L	1	74-87-3	
Vinyl chloride	Not detected	1	0.31	ug/L	1	75-01-4	
Bromomethane	Not detected	1	0.32	ug/L	1	74-83-9	
Chloroethane	Not detected	1	0.34	ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1	0.33	ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1	0.27	ug/L	1	75-35-4	
Methylene chloride	0.74	1	0.29	ug/L	1	75-09-2	JB
trans-1,2-Dichloroethene	Not detected	1	0.20	ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1	0.20	ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1	0.26	ug/L	1	156-59-2	
Chloroform	Not detected	1	0.20	ug/L	1	67-66-3	
Bromochloromethane	Not detected	1	0.38	ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1	0.28	ug/L	1	71-55-6	
Cyclohexane	Not detected	1	0.29	ug/L	1	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	10	0.14	ug/L	1	108-10-1	
2-Hexanone	Not detected	10	0.29	ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1	0.20	ug/L	1	56-23-5	
Benzene	Not detected	1	0.20	ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1	0.16	ug/L	1	107-06-2	
Trichloroethene	Not detected	1	0.23	ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1	0.20	ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1	0.23	ug/L	1	75-27-4	
Methyl cyclohexane	Not detected	1	0.21	ug/L	1	108-87-2	
cis-1,3-Dichloropropene	Not detected	1	0.19	ug/L	1	10061-01-5	

J-Estimated value less than reporting limit, but greater than MDL B-Compound also found in associated method blank

Lab Sample ID: S01341.18 (continued)
Sample Tag: TB-4/26/19

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 13:41, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	Not detected	1	0.25	ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1	0.25	ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1	0.28	ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1	0.20	ug/L	1	127-18-4	
Dibromochloromethane	Not detected	1	0.24	ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1	0.30	ug/L	1	106-93-4	
Chlorobenzene	Not detected	1	0.17	ug/L	1	108-90-7	
Ethylbenzene	Not detected	1	0.26	ug/L	1	100-41-4	
Total Xylenes	Not detected	3	0.66	ug/L	1	1330-20-7	
Styrene	Not detected	1	0.18	ug/L	1	100-42-5	
Isopropylbenzene	Not detected	1	0.25	ug/L	1	98-82-8	
Bromoform	Not detected	1	0.22	ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1	0.18	ug/L	1	79-34-5	
1,3-Dichlorobenzene	Not detected	1	0.24	ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1	0.23	ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1	0.28	ug/L	1	95-50-1	
1,2,4-Trichlorobenzene	Not detected	1	0.19	ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	1	0.20	ug/L	1	87-61-6	

Lab Sample ID: S01341.19
Sample Tag: MW-BD-1
Collected Date/Time: 04/26/2019 00:01
Matrix: Groundwater
COC Reference: 122474

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/01/19 12:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 05/10/19 03:27, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 18:57, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1	0.18	ug/L	1	76-13-1	
Acetone	3.38	10	0.56	ug/L	1	67-64-1	JB
Carbon disulfide	Not detected	1	0.24	ug/L	1	75-15-0	
Methyl Acetate	Not detected	1	0.25	ug/L	1	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	1	0.19	ug/L	1	1634-04-4	
2-Butanone (MEK)	Not detected	10	0.26	ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	1	0.50	ug/L	1	75-71-8	
Chloromethane	Not detected	1	0.26	ug/L	1	74-87-3	
Vinyl chloride	Not detected	1	0.31	ug/L	1	75-01-4	
Bromomethane	Not detected	1	0.32	ug/L	1	74-83-9	
Chloroethane	Not detected	1	0.34	ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1	0.33	ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1	0.27	ug/L	1	75-35-4	
Methylene chloride	0.30	1	0.29	ug/L	1	75-09-2	JB
trans-1,2-Dichloroethene	Not detected	1	0.20	ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1	0.20	ug/L	1	75-34-3	
cis-1,2-Dichloroethene	7	1	0.26	ug/L	1	156-59-2	
Chloroform	Not detected	1	0.20	ug/L	1	67-66-3	
Bromochloromethane	Not detected	1	0.38	ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1	0.28	ug/L	1	71-55-6	
Cyclohexane	Not detected	1	0.29	ug/L	1	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	10	0.14	ug/L	1	108-10-1	
2-Hexanone	Not detected	10	0.29	ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1	0.20	ug/L	1	56-23-5	
Benzene	Not detected	1	0.20	ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1	0.16	ug/L	1	107-06-2	
Trichloroethene	13	1	0.23	ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1	0.20	ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1	0.23	ug/L	1	75-27-4	
Methyl cyclohexane	Not detected	1	0.21	ug/L	1	108-87-2	
cis-1,3-Dichloropropene	Not detected	1	0.19	ug/L	1	10061-01-5	

J-Estimated value less than reporting limit, but greater than MDL B-Compound also found in associated method blank

Lab Sample ID: S01341.19 (continued)
Sample Tag: MW-BD-1

TCL Volatile Organics 8260, Method: SW5030C/8260C, Run Date: 04/30/19 18:57, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	Not detected	1	0.25	ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1	0.25	ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1	0.28	ug/L	1	79-00-5	
Tetrachloroethene	168	1	0.20	ug/L	1	127-18-4	
Dibromochloromethane	Not detected	1	0.24	ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1	0.30	ug/L	1	106-93-4	
Chlorobenzene	Not detected	1	0.17	ug/L	1	108-90-7	
Ethylbenzene	Not detected	1	0.26	ug/L	1	100-41-4	
Total Xylenes	Not detected	3	0.66	ug/L	1	1330-20-7	
Styrene	Not detected	1	0.18	ug/L	1	100-42-5	
Isopropylbenzene	Not detected	1	0.25	ug/L	1	98-82-8	
Bromoform	Not detected	1	0.22	ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1	0.18	ug/L	1	79-34-5	
1,3-Dichlorobenzene	Not detected	1	0.24	ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1	0.23	ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1	0.28	ug/L	1	95-50-1	
1,2,4-Trichlorobenzene	Not detected	1	0.19	ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	1	0.20	ug/L	1	87-61-6	

Merit Laboratories Login Checklist

Lab Set ID: S01341
Client: OBGNY (O'Brien & Gere Engineers, Inc.)
Project: OHAD - BCP No. C360115
Submitted: 04/29/2019 08:15 Login User: SRS

Attention: Mark Randazzo
Address: O'Brien & Gere Engineers
50 Main St, Suite 1060
White Plains, NY 10606

Phone: 781-883-6432 FAX:
Email: mark.randazzo@obg.com

Selection				Description	Note
Sample Receiving					
01.	[X] Yes	[ ] No	[ ] N/A	Samples are received at 4C +/- 2C Thermometer #	IR 3.9
02.	[X] Yes	[ ] No	[ ] N/A	Received on ice/ cooling process begun	
03.	[X] Yes	[ ] No	[ ] N/A	Samples shipped	FedEx
04.	[ ] Yes	[X] No	[ ] N/A	Samples left in 24 hr. drop box	
05.	[X] Yes	[ ] No	[ ] N/A	Are there custody seals/tape or is the drop box locked	
Chain of Custody					
06.	[X] Yes	[ ] No	[ ] N/A	COC adequately filled out	
07.	[X] Yes	[ ] No	[ ] N/A	COC signed and relinquished to the lab	
08.	[X] Yes	[ ] No	[ ] N/A	Sample tag on bottles match COC	
09.	[ ] Yes	[X] No	[ ] N/A	Subcontracting needed? Subcontacted to:	
Preservation					
10.	[X] Yes	[ ] No	[ ] N/A	Do sample have correct chemical preservation	
11.	[ ] Yes	[ ] No	[X] N/A	Completed pH checks on preserved samples? (no VOAs)	
12.	[ ] Yes	[X] No	[ ] N/A	Did any samples need to be preserved in the lab?	
Bottle Conditions					
13.	[X] Yes	[ ] No	[ ] N/A	All bottles intact	
14.	[X] Yes	[ ] No	[ ] N/A	Appropriate analytical bottles are used	
15.	[X] Yes	[ ] No	[ ] N/A	Merit bottles used	
16.	[X] Yes	[ ] No	[ ] N/A	Sufficient sample volume received	
17.	[ ] Yes	[X] No	[ ] N/A	Samples require laboratory filtration	
18.	[X] Yes	[ ] No	[ ] N/A	Samples submitted within holding time	
19.	[ ] Yes	[X] No	[ ] N/A	Do water VOC or TOX bottles contain headspace	

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____

Merit Laboratories, Inc.
2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 2 122822

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Mark A. Randazzo
COMPANY: O'Brien & Gere Engineers
ADDRESS: 50 Main Street, Suite 1060
CITY: White Plains STATE: NY ZIP CODE: 10606
PHONE NO.: 781-883-6432 FAX NO.:
P.O. NO.: 1190047 2
E-MAIL ADDRESS: Mark.Randazzo@obg.com QUOTE NO.:

INVOICE TO

CONTACT NAME: X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: OHAD – BCP No. C360115
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Mark Randazzo

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS X STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV X EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit X New York
☐ Other QCD

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	8260	Special Instructions
01341.01	4/26	1400	MW-1	GW	3		X						X	
.02	4/26	1230	MW-2	GW	3		X						X	
.03/.04/.05	4/26	1215	MW-2SB	GW	9		X						X	MS/MSD
.06 .04	4/26	1200	MW-2DB	GW	3		X						X	
.07 .05	4/26	1430	MW-4S	GW	3		X						X	
.08 .06	4/26	1445	MW-4D	GW	3		X						X	
.09 .07	4/26	1100	MW-5	GW	3		X						X	
.10 .08	4/26	1145 1130 MS/MSD	MW-5SB	GW	3		X						X	
.11 .09	4/26	1130	MW-5DB	GW	3		X						X	
.12 .10	4/26/19	0830	MW-7	GW	3		X						X	
.13 .11	4/26/19	0845	MW-7SB	GW	3		X						X	
.14 .12	4/26/19	1000	MW-8	GW	3		X						X	

RELINQUISHED BY: SIGNATURE/ORGANIZATION: O'Brien & Gere X Sampler DATE: 4/26/19 TIME: 1610
RECEIVED BY: SIGNATURE/ORGANIZATION: FEDEX DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION: FEDEX DATE: 04/27/19 TIME: 1050
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: 04/29/19 TIME: 1030

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: 04/27/19 TIME: 1130
RECEIVED BY: SIGNATURE/ORGANIZATION: Merit Fridge DATE: 4/27/19 TIME: 1130

SEAL NO.: Merit Fridge SEAL INTACT: YES ☐ NO ☐ INITIALS:
SEAL NO.: SEAL INTACT: YES ☐ NO ☐ INITIALS: 4/29/19 815

NOTES: 4/29/19 815 TEMP. ON ARRIVAL: 3.9

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Merit Laboratories, Inc.
2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
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C.O.C. PAGE # 2 OF 2

122474

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Mark A. Randazzo
COMPANY: O'Brien & Gere Engineers
ADDRESS: 50 Main Street, Suite 1060
CITY: White Plains STATE: NY ZIP CODE: 10606
PHONE NO.: 781-883-6432 FAX NO.: P.O. NO.: 11900472
E-MAIL ADDRESS: Mark.Randazzo@OBG.com QUOTE NO.:

INVOICE TO

CONTACT NAME: X SAME
COMPANY:
ADDRESS:
CITY STATE ZIP CODE
PHONE NO. E-MAIL ADDRESS

PROJECT NO./NAME: OHAD-BCP No. C360115
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Mark Randazzo

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☒ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

8260

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☒ New York
☒ Other QCD

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	8260
01341.15	4/26/19	1015	MW-8SB	GW	3		X						X
.16	4/26/19	0930	MW-9	GW	3		X						X
.17	4/26/19	0915	MW-9SB	GW	3		X						X
.18	—	—	TB-4/26/19	—	2		X						X
.19	4/26/19	—	MW-BD-1	GW	3		X						X

RELINQUISHED BY: SIGNATURE/ORGANIZATION: FEDEX — DATE: 4/26/19 TIME: 1610
RECEIVED BY: SIGNATURE/ORGANIZATION: X Sampler — DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION: FED EX — DATE: 04/27/19 TIME: 10:30 am
RECEIVED BY: SIGNATURE/ORGANIZATION: — DATE: 04/27/19 TIME: 10:30 am

RELINQUISHED BY: SIGNATURE/ORGANIZATION: MERIT FRIDGE — DATE: 04/27/19 TIME: 1:20
RECEIVED BY: SIGNATURE/ORGANIZATION: — DATE: 04/27/19 TIME: 1:30

SEAL NO. Merit fridge SEAL INTACT YES ☐ NO ☐ INITIALS 4/29/19 NOTES TEMP. ON ARRIVAL 3.9
SEAL NO. SEAL INTACT YES ☒ NO ☐ INITIALS 4/29/19 Shipped on ICE

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Data Usability Summary Report

MEMORANDUM

TO:	Mark Randazzo	cc:	Doug Crawford, PE Guy Swenson, CPG
FROM:	KA Storne		
RE:	Data Usability Summary Report for One Holland Avenue Site, Sampling April 2019		
FILE:	14206/72276		
DATE:	July 18, 2019		

This Data Usability Summary Report (DUSR) presents the results of data validation performed for groundwater samples collected by O'Brien & Gere, Part of Ramboll (OBG) in April 2019 as part of the 1-5 Holland Avenue Site Remedial Investigation (RI) in White Plains, New York.

Merit Laboratories, Inc. (Merit) of East Lansing, Michigan performed the laboratory analyses for the sampling event. The laboratory packages contain summary forms for quality control analysis and supportive raw data.

The analysis performed for this sampling event is summarized in Table 1.

Table 1. ***Analytical Methods and References***

Parameter	Method	Reference
Volatile Organic Compounds (VOCs)	USEPA Method 8260B/8260C/SIM	1

Notes:

1. United States Environmental Protection Agency (USEPA). 2006. *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846,* 3rd Edition. Washington D.C.
2. SIM indicates selected ion monitoring.

The samples submitted for data validation are summarized in attached Table 2. Table 3 presents the specific data validation approach applied to data generated for this investigation. Table 4 presents the Laboratory QA/QC analysis definitions.

Full validation was performed on the samples collected for this sampling event.

The analytical data generated for this investigation were evaluated by OBG using the quality assurance/quality control (QA/QC) information presented in the following document:

- O'Brien & Gere. 2010. *Quality Control Document (QCD), 1 – 5 Holland Avenue Site White Plains, New York*. Syracuse, New York.

Data affected by excursions from the previously mentioned QA/QC criteria were qualified using the following USEPA data validation guidance and professional judgment:

- USEPA. 2014. *USEPA Region II Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B & 8260C, SOP HW-24 Revision 4*.

Qualifiers were applied to data that failed to meet the quality control criteria presented in the USEPA methods and the QCD applying professional judgement.

The validation included evaluating the following audit parameters:

- QCD compliance
- Chain-of-custody record
- Sample collection
- Holding times
- Calibrations

- Blank analysis
- Surrogate results
- Matrix spike/ matrix spike duplicate (MS/MSD) analysis
- Laboratory control sample (LCS) analysis
- Internal standards performance
- Field duplicate analysis
- Gas chromatography/mass spectrometry (GC/MS) instrument performance check
- Target analyte quantitation, identification, and quantitation limits (QLs); and
- Documentation completeness.

The following sections of this report present the results of the comparison of the analytical data to the QA/QC criteria specified above. Based on the QA/QC information review, an overall evaluation of data usability is also presented in the final section.

VOLATILE ORGANIC COMPOUND DATA EVALUATION SUMMARY

The following QA/QC parameters were found to meet method and validation criteria or did not result in additional qualification of sample results:

- QCD compliance
- Sample collection
- Holding times
- Surrogate results
- LCS analysis
- Internal standards performance
- Field duplicate analysis
- GC/MS instrument performance check
- Target analyte identification

Excursions from method or validation criteria and additional observations are described below.

I. CHAIN OF CUSTODY RECORD

For the samples collected 4/26/19, the year the samples were collected was not consistently documented for each sample listed on the chain-of-custody record.

II. BLANK ANALYSIS

The following results were qualified as non-detected (U) due to minor blank representativeness excursions:

- Results for acetone in samples MW-1, MW-2, MW-2SB, MW-2DB, MW-4S, MW-4D, MW-5, MW-5SB, MW-5DB, MW-7, MW-7SB, MW-8, MW-8SB, MW-9, MW-9SB and MW-BD-1 [MW-8SB]].
- Results for methylene chloride in samples MW-1, MW-2, MW-2SB, MW-2DB, MW-4S, MW-4D, MW-5, MW-5SB, MW-5DB, MW-7SB, MW-8, MW-8SB, MW-9SB and MW-BD-1 [MW-8SB]].
- Result for 2-butanone in samples MW-2SB.

III. CALIBRATIONS

The following results were qualified as approximate (UJ, J) due to minor calibration accuracy excursions:

- Results for acetone, 2-methyl-2-pentanone and 2-hexanone in samples MW-1, MW-2, MW-2SB, MW-2DB, MW-4S, MW-4D, MW-5, MW-5SB, MW-5DB, MW-7, MW-7SB, MW-8, MW-8SB, MW-9, MW-9SB, TB-4/26/19 and MW-BD-1 [MW-8SB]].
- 2-Hexanone, 1,1,2-trichloro-1,2,2-trifluoroethane, and vinyl chloride in samples MW-1, MW-2, MW-2SB, MW-2DB, MW-4S, MW-4D, MW-5, MW-5SB, MW-5DB, MW-7, MW-7SB, MW-8, MW-8SB, MW-9SB, TB-4/26/19 and MW-BD-1 [MW-8SB]].
- 4-Methyl-2-pentanone, 2-hexanone, 1,1,2-trichloro-1,2,2-trifluoroethane, carbon disulfide and dichlorodifluoromethane in sample MW-9.
- Results for 1,2-dibromo-3-chloropropane and 1,4-dioxane in samples MW-1, MW-2, MW-2SB, MW-2DB, MW-4S, MW-4D, MW-5, MW-5SB, MW-5DB, MW-7, MW-7SB, MW-8, MW-8SB, MW-9, MW-9SB, TB-4/26/19 and MW-BD-1 [MW-8SB]].

IV. TARGET ANALYTE QUANTITATION AND QLS

Sample results detected at concentrations greater than laboratory MDLs but less than laboratory QLs were qualified as approximate (J).

V. DOCUMENT COMPLETENESS

As requested during data validation, the laboratory revised the quantitation reports for the samples collected during this sampling event. During the secondary review, the laboratory identified a reporting error and revised the majority of the sample results. The revised results were included in the data validation report.

DATA USABILITY

The groundwater samples collected as part of the 1-5 Holland Avenue Site RI in White Plains, New York were evaluated based on QA/QC criteria established by methods as listed in Table 1 and the data validation approach as described in Table 3.

Major deficiencies in the data generation process would have resulted in results being rejected, indicating that the rejected data are considered unusable for either quantitative or qualitative purposes. Major excursions were not identified during the validation process. Minor deficiencies in the data generation process resulted in sample data being characterized as approximate or non-detected as specified above.

A discussion of the data quality with regard to the data usability parameters follows:

Precision: Data were not rejected for precision excursions.

Sensitivity: Sensitivity is established by QLs, which represent measurable concentrations of analytes which can be determined with a designated level of confidence, that meet project requirements. Dilutions were not performed for these analyses.

Accuracy: Results were not rejected due to major accuracy excursions.

Representativeness: Results were not rejected due to major representativeness excursions.

Comparability: Data usability with respect to comparability is 100 percent, as standardized analytical methods, QLs, reference materials, and data deliverables were used throughout the data generation process for this project.

Completeness: Overall data usability with respect to completeness is 100 percent for the complete data set. Therefore, the data were identified as usable for qualitative and quantitative purposes.

Sample collected and submitted for data validation

Laboratory Name	Date Collected	Laboratory Identification	Client Identification	Matrix	Analysis Required
Merit	4/26/2019	S01341.01	MW-1	Groundwater	1,2-Dibromo-3-chloropropane- SIM, 1,4-Dioxane- SIM, TCL VOCs- 8260
Merit	4/26/2019	S01341.02	MW-2	Groundwater	1,2-Dibromo-3-chloropropane- SIM, 1,4-Dioxane- SIM, TCL VOCs- 8260
Merit	4/26/2019	S01341.03	MW-2SB	Groundwater	1,2-Dibromo-3-chloropropane- SIM, 1,4-Dioxane- SIM, TCL VOCs- 8260
Merit	4/26/2019	S01341.04	MW-2SB MS	Groundwater	1,2-Dibromo-3-chloropropane- SIM, 1,4-Dioxane- SIM, TCL VOCs- 8260
Merit	4/26/2019	S01341.05	MW-2SB MSD	Groundwater	1,2-Dibromo-3-chloropropane- SIM, 1,4-Dioxane- SIM, TCL VOCs- 8260
Merit	4/26/2019	S01341.06	MW-2DB	Groundwater	1,2-Dibromo-3-chloropropane- SIM, 1,4-Dioxane- SIM, TCL VOCs- 8260
Merit	4/26/2019	S01341.07	MW-4S	Groundwater	1,2-Dibromo-3-chloropropane- SIM, 1,4-Dioxane- SIM, TCL VOCs- 8260
Merit	4/26/2019	S01341.08	MW-4D	Groundwater	1,2-Dibromo-3-chloropropane- SIM, 1,4-Dioxane- SIM, TCL VOCs- 8260
Merit	4/26/2019	S01341.09	MW-5	Groundwater	1,2-Dibromo-3-chloropropane- SIM, 1,4-Dioxane- SIM, TCL VOCs- 8260
Merit	4/26/2019	S01341.10	MW-5SB	Groundwater	1,2-Dibromo-3-chloropropane- SIM, 1,4-Dioxane- SIM, TCL VOCs- 8260
Merit	4/26/2019	S01341.11	MW-5DB	Groundwater	1,2-Dibromo-3-chloropropane- SIM, 1,4-Dioxane- SIM, TCL VOCs- 8260
Merit	4/26/2019	S01341.12	MW-7	Groundwater	1,2-Dibromo-3-chloropropane- SIM, 1,4-Dioxane- SIM, TCL VOCs- 8260
Merit	4/26/2019	S01341.13	MW-7SB	Groundwater	1,2-Dibromo-3-chloropropane- SIM, 1,4-Dioxane- SIM, TCL VOCs- 8260
Merit	4/26/2019	S01341.14	MW-8	Groundwater	1,2-Dibromo-3-chloropropane- SIM, 1,4-Dioxane- SIM, TCL VOCs- 8260
Merit	4/26/2019	S01341.15	MW-8SB	Groundwater	1,2-Dibromo-3-chloropropane- SIM, 1,4-Dioxane- SIM, TCL VOCs- 8260
Merit	4/26/2019	S01341.16	MW-9	Groundwater	1,2-Dibromo-3-chloropropane- SIM, 1,4-Dioxane- SIM, TCL VOCs- 8260
Merit	4/26/2019	S01341.17	MW-9SB	Groundwater	1,2-Dibromo-3-chloropropane- SIM, 1,4-Dioxane- SIM, TCL VOCs- 8260
Merit	4/26/2019	S01341.18	TB-4/26/19	Groundwater	1,2-Dibromo-3-chloropropane- SIM, 1,4-Dioxane- SIM, TCL VOCs- 8260
Merit	4/26/2019	S01341.19	MW-BD-1 [MW-8SB}	Groundwater	1,2-Dibromo-3-chloropropane- SIM, 1,4-Dioxane- SIM, TCL VOCs- 8260

Note:
Merit indicates Merit Laboratories, Inc. of East Lansing, Michigan.
VOCs indicates volatile organic compounds.
SIM indicates selected ion monitoring.
TB indicates trip blank.
MS/MSD indicates matrix spike/matrix spike duplicate.
BD indicates field duplicate.
The location in brackets indicates the field duplicate sampling location.

O'Brien & Gere Data validation approach based on USEPA Region II data validation guidelines for the following SW-846 analytical method: VOCs (8260C)	
General Validation Approach	The validation approach taken by O'Brien & Gere is a conservative one; qualifiers are applied to sample data to indicate both major and minor excursions so that data associated with any type of excursion are identified to the data user. Major excursions result in data being rejected (R), indicating that the data are considered unusable for either quantitative or qualitative purposes. Minor excursions result in sample data being qualified as approximate (J, UJ, JN) or non-detected (U) that is otherwise usable for quantitative or qualitative purposes.
	Excursions are subdivided into excursions that are within the laboratory's control and those that are out of the laboratory's control. Excursions involving laboratory control sample recovery, calibration response, method blank excursions, low or high spike recovery due to inaccurate spiking solutions or poor instrument response, holding times, interpretation errors, and quantitation errors are within the control of the laboratory. Excursions resulting from matrix spike recovery, serial dilution recovery, surrogate, and internal standard performance due to interference from the matrix of the samples are examples of those excursions that are not within the laboratory's control if the laboratory has followed proper method procedures, including performing appropriate cleanup techniques.
Applying professional judgment	USEPA data validation directs professional judgment to be used when applying qualifiers in some cases. When utilizing professional judgment, provide justification for actions taken in the associated validation notes.
Validation Parameter	O'Brien & Gere Data Validation Approach based on Region II guidelines for SW-846 method. Since Region II guidelines available for metals apply only to the CLP method, only the general approach to applying qualifiers was utilized for metals and inorganics.
Validation Qualifiers - Organics	U - The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the quantitation limit (QL). J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the QL). NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. UJ - The analyte was not detected at a level greater than or equal to the QL. However, the QL is approximate and may be inaccurate or imprecise. R - The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
Cooler Temperature	Results for samples submitted for organic and inorganic analyses that are impacted by coolers that did not contain ice, or if the ice melted upon receipt and the cooler temperatures are greater than 10°C, are qualified as approximate (UJ, J). If samples are delivered to the laboratory the same day as sample collection and samples did not have sufficient time to reach 10°C, samples are not qualified, unless proper preservation was not provided for samples between sample collection and sample receipt at the laboratory. Results for samples received at ambient temperature involved in extended shipment-day issues may be rejected, applying professional judgment.

O'Brien & Gere Data validation approach based on USEPA Region II data validation guidelines for the following SW-846 analytical method: VOCs (8260C)	
Holding Time	Results for samples analyzed less than two times the holding time window established in the method or the QAPP for preparation and/or analysis are qualified as approximate (UJ, J). Non-detected results for samples analyzed greater than two times the holding time window for preparation and/or analysis are rejected (R). Detected results for samples analyzed greater than two times the holding time window for preparation and/or analysis are qualified as approximate (J). The entire sample target list for a VOC sample impacted by a holding time excursion is qualified.
General Calibration Actions	Due to relative standard deviation (RSD) calibration excursions, detected results for analytes in samples associated with the calibration are qualified as approximate (J). Non-detected results associated with RSD excursions may be qualified as approximate (UJ) based on professional judgment. If the RSD calibration excursion is greater than 90, detected results for analytes in samples associated with the calibration are qualified as approximate (J) and non-detected results may be rejected (R), applying professional judgment. Due to %D calibration verification excursions, detected and non-detected results for analytes in samples associated with the calibration are qualified as approximate (J, UJ). The response direction and detection of target analytes in associated sample may be considered in applying qualifiers. For response factor excursions, detected results are qualified as approximate (J) and non-detected results are rejected (R). For initial calibration verifications (ICV) excursions, detected and non-detected results for analytes in samples associated with the calibration are qualified as approximate (J, UJ). The response direction and detection of target analytes in associated sample may be considered in applying qualifiers.
VOCs Calibration Evaluation	VOC target analytes are evaluated using the criteria of 20 percent relative standard deviation (%RSD) or correlation coefficient of 0.990 for initial calibration curves. Calibration verifications are evaluated using a criterion of 20 percent difference (%D) for target analytes. Initial calibrations and calibration verifications are also evaluated using the response factor (RF) criteria described in the method Table 4. If not listed on the Table, RF ≥0.05, RF ≥0.01 for other poor responding analytes. ICV recoveries are evaluated using laboratory control limits if available or 70 to 130%.
Associating samples with Field and Laboratory QC Samples	Trip blanks are associated with samples in the same sample cooler.
	Equipment blanks (Rinsate blanks) are associated with samples collected in the same day (or sampling event) using the same sample collection equipment and decontamination solutions. When sampling equipment or decontamination solutions are changed, a new equipment blank should be collected. Each sample should be associated with one equipment blank, which is collected as close to the sample collection date/time as possible. Use professional judgment.
	Field blanks are associated with the sample containers used to collect samples. When sampling container lots are changed, a new field blank should be collected.

O'Brien & Gere Data validation approach based on USEPA Region II data validation guidelines for the following SW-846 analytical method: VOCs (8260C)	
	Method blanks are associated with samples prepared at the same time (if preparation is required) or analyzed in the same analytical batch as the samples. Method blanks should reflect the sample matrix type (aqueous, low level solid, medium level solid).
	LCSs are associated with samples prepared at the same time (if preparation is required) or analyzed in the same analytical batch as the samples.
	MS/MSD and laboratory duplicate samples are collected in the field. The laboratory must prepare using project samples. MS/MSDs and laboratory duplicates are associated with samples prepared at the same time or close to the same time (if preparation is required) with the same matrix type.
	Field duplicates are collected in the field and are associated with samples of the same matrix type.
	In the case that insufficient QC samples are provided due to field or laboratory problems, use professional judgment to associate each sample with a QC sample that reflects the sample matrix and analysis conditions. If insufficient QC samples are available to properly associate samples, record the impact in the DV notes.
Evaluation and Action for MS/MSD, LCS,	The laboratory control limit (CL) is used to assess MS/MSD, LCS, surrogate and laboratory duplicate data. Refer to Region II guidelines if laboratory control limits are not available.
Surrogate and Laboratory Duplicate Data for VOCs	In the case that excursions are identified in more than one quality control sample of the same matrix within one sample delivery group, samples are batched according to sample preparation or analysis date and qualified accordingly (see batching description above)
	If percent recoveries are less than laboratory CLs but greater than 10%, non-detected and detected results are qualified as approximate (UJ, J).
	If percent recoveries are greater than laboratory CLs, detected results are qualified as approximate (J).
	If percent recoveries are less than 10%, detected results are qualified as approximate (J) and non-detected results are qualified as rejected (R).
	If RPDs for MSDs or laboratory duplicates are outside of laboratory CLs, detected results are qualified as approximate (J). Non-detected results may not be qualified, applying professional judgment.
Evaluation of MS/MSD, Surrogate, and Field Duplicate Data for VOCs	Qualification is performed only when both MS and MSD recoveries are outside of laboratory CLs.
	Organic data are rejected (R) in the case that both MS/MSD recoveries are less than 10%.
	Qualification is not performed if MS/MSD or surrogate recoveries are outside of laboratory CLs with an analysis that applied a dilution factor of 10 times or more, applying professional judgment.
	Qualification of data associated with MS/MSD or field duplicate excursions is limited to the un-spiked sample or the field duplicate pair, respectively.
	Field duplicate data are evaluated against relative percent difference (RPD) criteria of less than 50 percent for aqueous samples and less than 100 percent for soils when results are greater than or equal to five times the QL. When a field duplicate result is less than five times the QL, a control limit of plus or minus two times the QL (difference criterion) is applied. If RPDs or differences are outside of criterion, detected and non-detected results are qualified as approximate (UJ, J) to indicate minor excursions.

O'Brien & Gere Data validation approach based on USEPA Region II data validation guidelines for the following SW-846 analytical method: VOCs (8260C)	
Evaluation and Actions for Blank Results for VOC Data	Blanks are not qualified due to contamination of another blank. Sample results qualified as non-detected (U) are treated as hits when qualifying for surrogate or calibration excursions. The following approach is utilized for applying qualifiers, using twice the quantitation limit (QL) for methylene chloride, 2-butanone and acetone: 1. For blank results less than the QL, samples with concentrations less than the QL are reported at the QL and qualified as non-detected (U). Samples with concentrations greater than or equal to the QL are not qualified or may apply the Blank Rule Option. 2. For blank results greater than the QL, samples with concentrations less than the QL are reported at the QL and qualified as non-detected (U). Samples with concentrations greater than or equal to the QL and less than the blank contamination level are reported and qualified as non-detected (U). Samples with concentrations greater than or equal to the QL and greater than or equal to the blank contamination level are not qualified or may apply the Blank Rule Option. 3. For blank results equal to the QL, sample concentrations less than the QL are reported at the QL value and qualified as non-detected (U). Samples greater than or equal to the QL are not qualified or may apply the Blank Rule Option. 4. For gross contamination in blanks (saturated peaks, interference peaks, poor baselines), all associated sample detected results are rejected (R) or qualified as non-detected (U) using professional judgment. Blank Rule Option: If methylene chloride, acetone or 2-butanone is detected in the sample at a concentration that is less than ten times the concentration in the associated blank, the sample result is qualified as "U". If other target analytes are detected in the sample at a concentration that is less than five times the concentration detected in the associated blank, the sample result is qualified as "U".
Source O'Brien & Gere	

Table 4. ***Laboratory QA/QC analysis definitions***

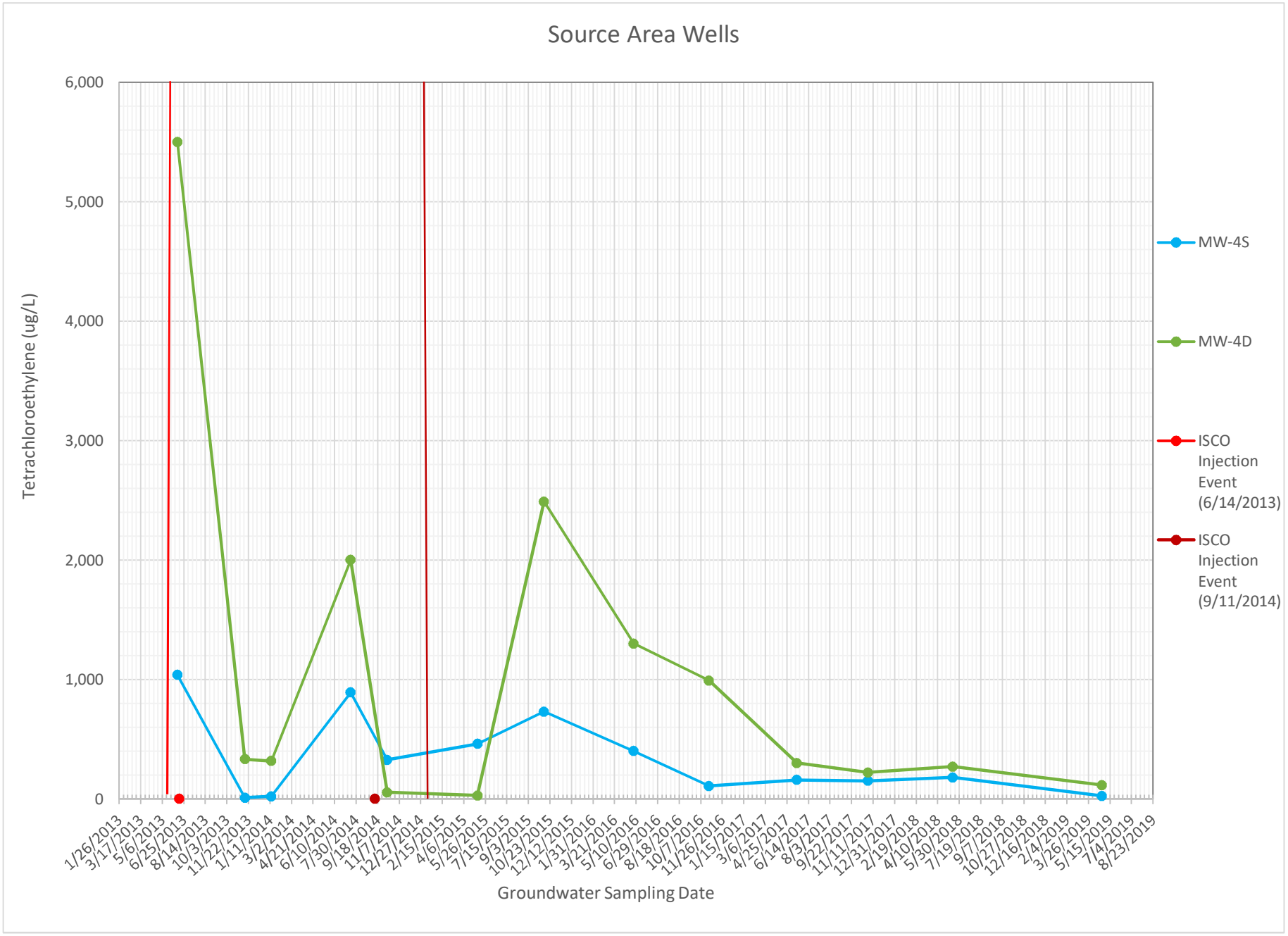
QA/QC Term	Definition
Accuracy	The closeness or agreement of the observed value or test response to the true or acceptable reference value or the test response from a reference method. It is influenced by both random error (precision) and systematic error (bias). The terms "bias" and "precision" are often used in lieu of "accuracy".
Precision	A measure of mutual agreement between two or more individual measurements of the same property, obtained under similar conditions.
Representativeness	A measure of the degree to which data accurately and precisely characterize a population; the correspondence between the analytical result and the actual quality or condition experienced by a contaminant receptor.
Sensitivity	The capability of a method or instrument to discriminate between measurement responses representing different levels of a variable of interest.
Completeness	A measure of the amount of valid data obtained from a measurement system as compared to the planned amount, usually expressed as a percentage; also a measure of the degree to which the sampling scheme represents the available range in something, regardless of what was planned.
Detection limit	The lowest concentration or amount of the target analyte that can be determined to be different from zero by a single measurement at a stated level of probability.
Quantitation limit	The level above which numerical results may be obtained with a specified degree of confidence; the minimum concentration of an analyte in a specific matrix that can be identified and quantified above the method detection limit and within specified limits of precision and bias during routine analytical operating conditions.
Method detection limit	The minimum concentration of an analyte that undergoes preparation similar to the environmental samples and can be reported with a stated level of confidence that the analyte concentration is greater than zero.
Instrument detection limit	The lowest concentration of a metal target analyte that, when directly inputted and processed on a specific analytical instrument, produces a signal/response that is statistically distinct from the signal/response arising from equipment "noise" alone.
Gas chromatography/mass spectrometry (GC/MS) instrument performance check	Performed to verify mass resolution, identification, and to some degree, instrument sensitivity. These criteria are not sample specific; conformance is determined using standard materials.
Control limits	The variation in a process data set expressed as plus/minus standard deviations from the mean, generally placed on a chart to indicate the upper and lower acceptable ranges of process data and to judge whether the process is in or out of statistical limitations.
Calibration	Compliance requirements for satisfactory instrument calibration are established to verify that the instrument is capable of producing acceptable quantitative data. Initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of analysis and calibration verifications document satisfactory maintenance and adjustment of the instrument on a day-to-day basis.
Relative Response Factor	A measure of the relative mass spectral response of an analyte compared to its internal standard. Relative Response Factors are determined by analysis of standards and are used in the calculation of concentrations of analytes in samples.

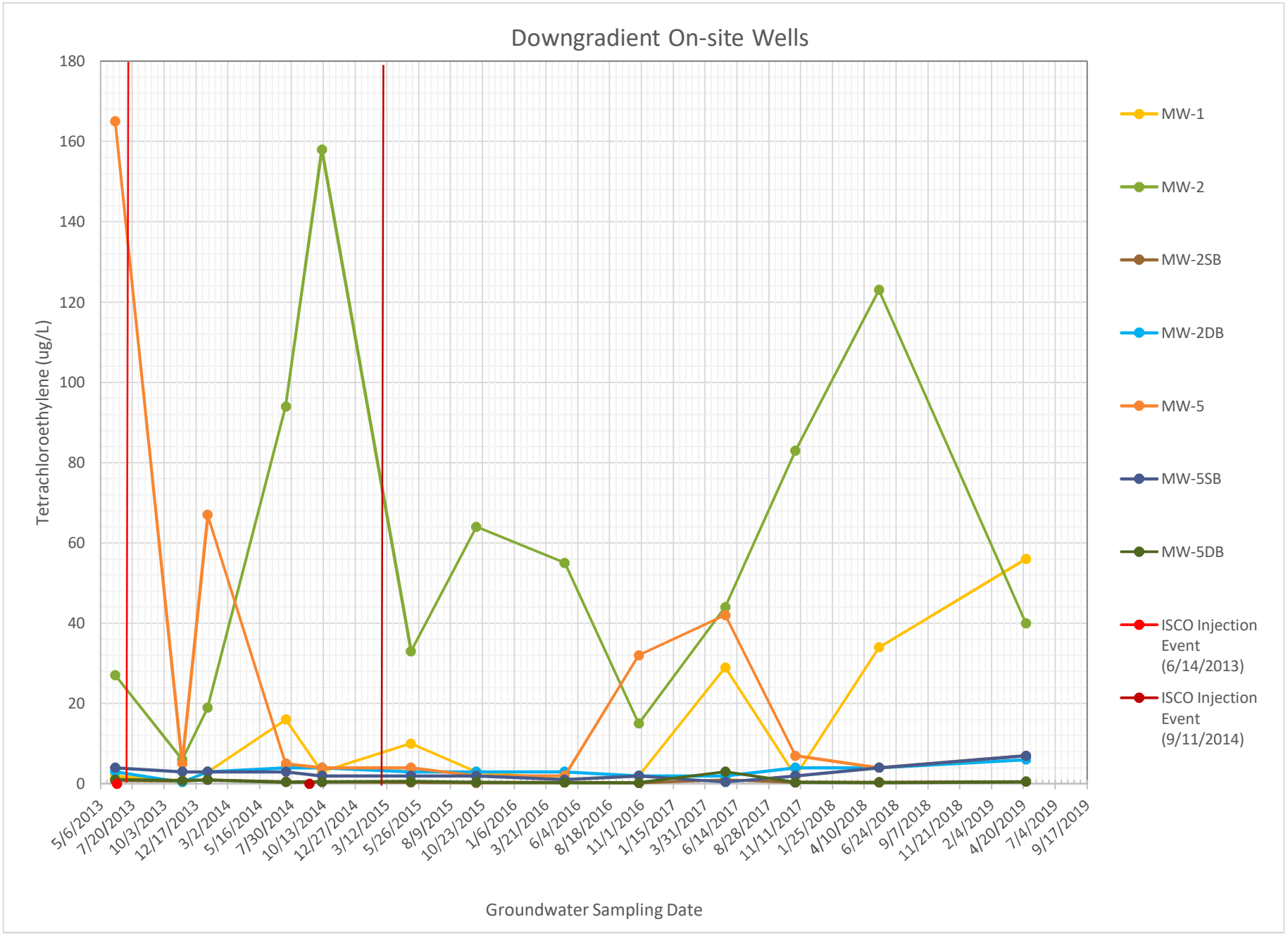
QA/QC Term	Definition
Relative standard deviation	The standard deviation divided by the mean; a unit-free measure of variability.
Correlation coefficient	A measure of the strength of the relationship between two variables.
Relative Percent Difference	Used to compare two values; the relative percent difference is based on the mean of the two values, and is reported as an absolute value, i.e., always expressed as a positive number or zero.
Percent Difference	Used to compare two values; the percent difference indicates both the direction and the magnitude of the comparison, i.e., the percent difference may be either negative, positive, or zero.
Drift	The deviation in instrument response from its set or reference value over a period of time.
Percent Recovery	The act of determining whether or not the methodology measures all of the target analytes contained in a sample.
Blanks	Several types of blanks are analyzed by the laboratory. Corrective action procedures are implemented for blank analyses if target compounds are detected at concentrations greater than the method criteria. The criteria for evaluation of blanks apply to any blank associated with a group of samples. If problems with a blank exist, data associated with the project are evaluated to determine whether or not there is an inherent variability in the data for the project or if the problem is an isolated occurrence not affecting other data.
Reagent blank	Consists of laboratory target analyte-free water and any reagents added to a sample during analysis. This type of blank is analyzed to evaluate whether contamination occurred during the analysis of the sample due to reagent contamination. A reagent blank is usually analyzed following highly contaminated samples to assess the potential for cross-contamination during analysis.
Instrument blank	Consists of clean solvent spiked with the surrogates and analyzed on each GC column and instrument used for sample analysis by GC. This type of blank is analyzed to evaluate whether contamination occurred during the analysis of the sample due to instrument contamination.
Calibration blank	Consists of acids and reagent water used to prepare metal samples for analysis. This type of blank is analyzed to evaluate whether contamination is occurring during the preparation and analysis of the sample.
Method blank	A water or soil blank that undergoes the preparation procedures applied to a sample (i.e., extraction, digestion, clean-up). These samples are analyzed to examine whether sample preparation, clean-up, and analysis techniques result in sample contamination.
Field/equipment	Collected and submitted for laboratory analysis, where appropriate. Field/equipment blanks are handled in the same manner as environmental samples. Equipment/field blanks are analyzed to assess contamination introduced during field sampling procedures.
Trip blank	Consist of samples of analyte-free water that have undergone shipment from the sampling site to the laboratory in coolers with the environmental samples submitted for volatile organic compound (VOC) analysis. Trip blanks will be analyzed for VOCs to determine if contamination has taken place during sample handling and/or shipment. Trip blanks will be utilized at a frequency of one each per cooler sent to the laboratory for VOC analysis.

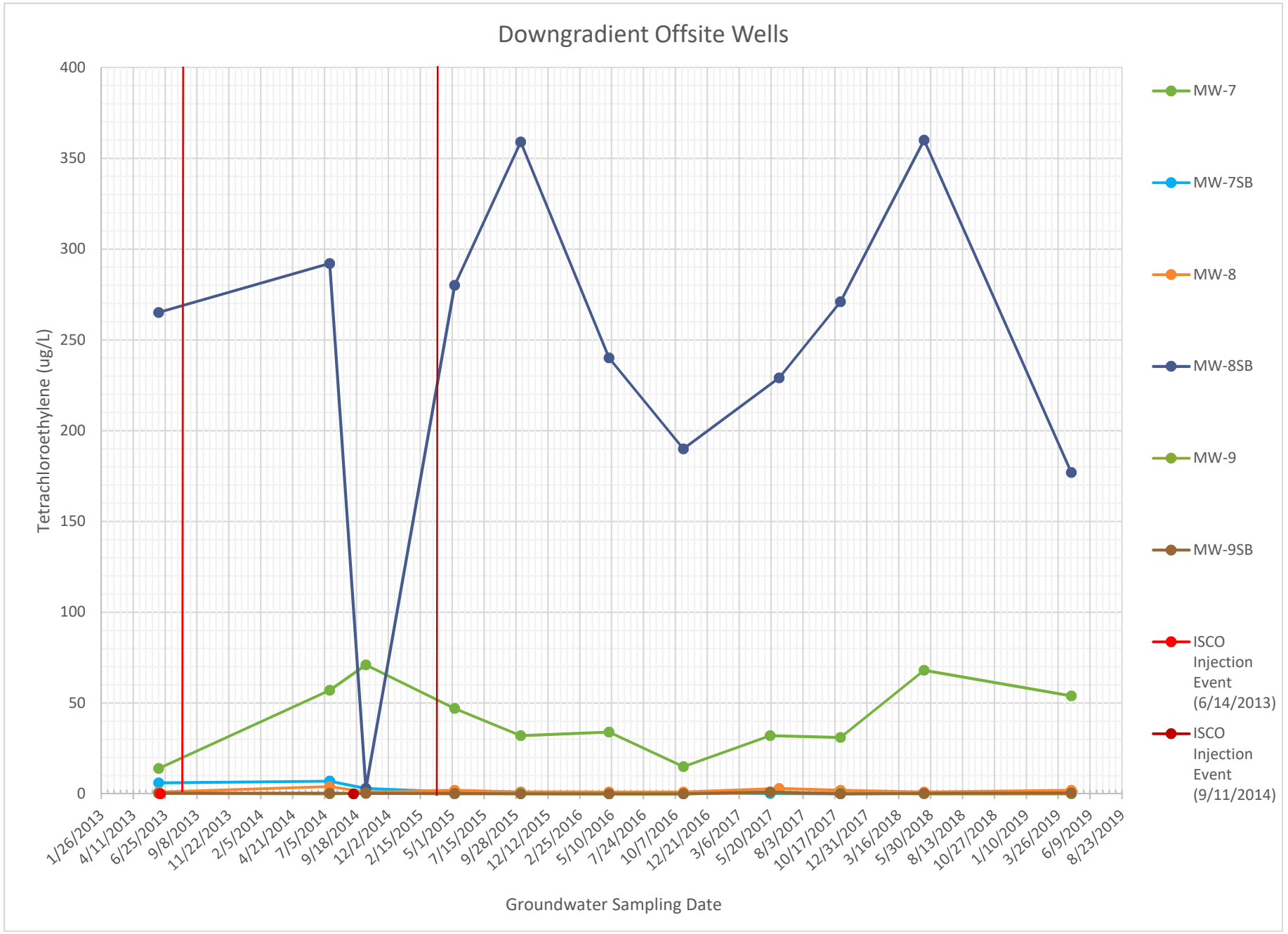
QA/QC Term	Definition
Storage blank	Consists of sample vials filled with laboratory analyte-free water. The vials are stored at the laboratory with the samples collected for VOC analysis, under the same conditions as the samples. The storage blank is analyzed with the VOC samples to evaluate for contamination due to sample storage.
Internal standards performance	Compounds not found in environmental samples which are spiked into samples and quality control samples at the time of sample preparation for organic analyses. Internal standards must meet retention time and recovery criteria specified in the analytical method. Internal standards are used as the basis for quantitation of the target analytes.
Surrogate recovery	Compounds similar in nature to the target analytes but not expected to be detected in the environmental media which are spiked into environmental samples, blanks, and quality control samples prior to sample preparation for organic analyses. Surrogates are used to evaluate analytical efficiency by measuring recovery.
Laboratory control sample Matrix spike blank analyses	Standard solutions that consist of known concentrations of the target analytes spiked into laboratory analyte-free water or sand. They are prepared or purchased from a certified manufacturer from a source independent from the calibration standards to provide an independent verification of the calibration procedure. They are prepared and analyzed following the same procedures employed for environmental sample analysis to assess method accuracy independently of sample matrix effects.
Laboratory duplicate	Two or more representative portions taken from one homogeneous sample by the analyst and analyzed in the same laboratory.
Matrix	The material of which the sample is composed or the substrate containing the analyte of interest, such as drinking water, waste water, air, soil/sediment, biological material.
Matrix Spike (MS)	An aliquot of a matrix (water or soil) fortified (spiked) with known quantities of specific target analytes and subjected to the entire analytical procedure in order to indicate the appropriateness of the method for the matrix by measuring recovery.
Matrix spike duplicate (MSD)	A second aliquot of the same matrix as the matrix spike that is spiked in order to determine the precision of the method.
Retention time	The time a target analyte is retained on a GC column before elution. The identification of a target analyte is dependent on a target compound's retention time falling within the specified retention time window established for that compound.
Relative retention time	The ratio of the retention time of a compound to that of a standard.
Resolution	The separation between peaks on a chromatogram.
Interference	An element, compound, or other matrix effect present in a sample which disturbs the detection of a target analyte leading to inaccurate concentration results for the target analyte.
Percent Moisture	An approximation of the amount of water in a soil/sediment sample made by drying an aliquot of the sample.
Raw data	The documentation generated during sampling and analysis which includes, but is not limited to, field notes, hardcopies of electronic data, disks, un-tabulated sample results, QC sample results, printouts of chromatograms, instrument outputs, and handwritten notes.

Source: O'Brien & Gere

Graphical Presentation of PCE Groundwater Data


Source Area Wells
Tetrachloroethylene (ug/L)
6,000
5,000
4,000
3,000
2,000
1,000
0
1/26/2013
3/17/2013
5/6/2013
6/25/2013
8/14/2013
10/3/2013
11/22/2013
1/11/2014
3/2/2014
4/21/2014
6/10/2014
7/30/2014
9/18/2014
11/7/2014
12/27/2014
2/15/2015
4/6/2015
5/26/2015
7/15/2015
9/3/2015
10/23/2015
12/12/2015
1/31/2016
3/21/2016
5/10/2016
6/29/2016
8/18/2016
10/7/2016
11/26/2016
1/15/2017
3/6/2017
4/25/2017
6/14/2017
8/3/2017
9/22/2017
11/11/2017
12/31/2017
2/19/2018
4/10/2018
5/30/2018
7/19/2018
9/7/2018
10/27/2018
12/16/2018
2/4/2019
3/26/2019
5/15/2019
7/4/2019
8/23/2019
Groundwater Sampling Date
MW-4S
MW-4D
ISCO Injection Event (6/14/2013)
ISCO Injection Event (9/11/2014)


Downgradient On-site Wells
Tetrachloroethylene (ug/L)
180
160
140
120
100
80
60
40
20
0
5/6/2013
7/20/2013
10/3/2013
12/17/2013
3/2/2014
5/16/2014
7/30/2014
10/13/2014
12/27/2014
3/12/2015
5/26/2015
8/9/2015
10/23/2015
1/6/2016
3/21/2016
6/4/2016
8/18/2016
11/1/2016
1/15/2017
3/31/2017
6/14/2017
8/28/2017
11/11/2017
1/25/2018
4/10/2018
6/24/2018
9/7/2018
11/21/2018
2/4/2019
4/20/2019
7/4/2019
9/17/2019
Groundwater Sampling Date
MW-1
MW-2
MW-2SB
MW-2DB
MW-5
MW-5SB
MW-5DB
ISCO Injection Event (6/14/2013)
ISCO Injection Event (9/11/2014)


Downgradient Offsite Wells
Tetrachloroethylene (ug/L)
400
350
300
250
200
150
100
50
0
1/26/2013
4/11/2013
6/25/2013
9/8/2013
11/22/2013
2/5/2014
4/21/2014
7/5/2014
9/18/2014
12/2/2014
2/15/2015
5/1/2015
7/15/2015
9/28/2015
12/12/2015
2/25/2016
5/10/2016
7/24/2016
10/7/2016
12/21/2016
3/6/2017
5/20/2017
8/3/2017
10/17/2017
12/31/2017
3/16/2018
5/30/2018
8/13/2018
10/27/2018
1/10/2019
3/26/2019
6/9/2019
8/23/2019
Groundwater Sampling Date
MW-7
MW-7SB
MW-8
MW-8SB
MW-9
MW-9SB
ISCO Injection Event (6/14/2013)
ISCO Injection Event (9/11/2014)