GeoEngineers

Technical Memorandum

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From:	Nick Rohrbach and Phil Welker, PE, GeoEngineers, Inc. on the behalf of the Washington State Department of Transportation
Date:	February 14, 2022
File:	0180-345-05
Subject:	Remedial Action Progress Summary & Proposed Modified Compliance Groundwater Monitoring Program Former WSDOT NCRC Site (VCP Project ID: CE0496) Wenatchee, Washington

INTRODUCTION AND BACKGROUND

This Technical Memorandum (memo) summarizes the progress to date of the remedial action completed at the Former Washington State Department of Transportation (WSDOT) North Central Region Complex (NCRC) Site (Site) located at 1551 North Wenatchee Avenue in Wenatchee, Washington. Remedial actions are focused on the Smaller Parcel of this Site where contaminants of concern (COCs) are still present, since the Larger Parcel portion of the Site has received a no-further-action (NFA) from the Washington State Department of Ecology (Ecology). Completed remedial action elements on the Smaller Parcel include subsurface injections and post-injection performance groundwater monitoring. This memorandum also includes a proposed modified compliance groundwater monitoring program, as compared to the program presented in GeoEngineers' *Work Plan, Preferred Remedial Action* dated March 9, 2021 (RAWP; provided as Appendix B to GeoEngineers' *Focused Feasibility Study* [FS] report).

Proposed modifications to the compliance groundwater monitoring program are in response to the results of the completed performance groundwater monitoring summarized in this memo. The Site is enrolled in the Ecology Voluntary Cleanup Program (VCP) and is identified as VCP Project ID CE0496.

REMEDIAL ACTION PURPOSE AND SUMMARY

The purpose of the completed remedial action was to address the volatile organic compound (VOC), trichloroethene (TCE) contamination in groundwater at the Site via the subsurface injection of chemically reducing and bioremediation compounds. The goal of the remedial action was to eliminate, reduce, or otherwise control to the extent practicable, unacceptable risks to human health and the environment posed by TCE in accordance with the Model Toxics Control Act (MTCA) cleanup regulation (Chapter 173-340 WAC) and other applicable regulatory requirements and to receive a no further action (NFA) determination for the Site from Ecology.

Completed remedial action elements, including injections and associated performance groundwater monitoring activities, were performed in accordance with the RAWP and are summarized below.

Injection Well Installation and Subsurface Injections

Thirty-two (32) injection wells (IW-1 through IW-32) were installed at the Site between August 9 and September 9, 2021, using sonic drilling methods. Injection well locations were selected to cover two areas of the Site: (1) the suspected TCE source area located directly adjacent to (downgradient from) the former WSDOT materials testing laboratory; and (2) the area with the highest detected TCE concentrations at the Site located approximately 90 to 110 feet downgradient from the suspected TCE source area and adjacent to the northeast property boundary (two rows of injection wells, installed in a barrier wall configuration). Injection well locations are shown on the attached Figure 1. Each injection well was constructed using 2-inch, Schedule 40 polyvinyl chloride (PVC) well casing and riser installed to approximately 70 feet below ground surface (bgs) and was developed in accordance with the RAWP following installation.

Subsurface injections into the newly installed injection wells were completed between September 1 and September 22, 2021. A total of 24,500 gallons of product (REGENESIS products CRS®, BDI Plus® and 3-D Microemulsion®) were injected into the suspected TCE source area wells (IW-1 through IW-7), and 62,500 gallons of product (REGENESIS Products BDI Plus®, 3-D Microemulsion® and S-MicroZVI®) were injected into the highest TCE concentration area wells/barrier wall (IW-8 through IW-32).

Further detail regarding the injection well installation and subsurface injection program, including well logs, daily injection logs (products, volume, pressures, etc.) and monitoring activities completed during injections will be provided in the Technical Completion Report to be prepared for the Site following completion of the compliance groundwater monitoring program.

Performance Groundwater Monitoring

Two-rounds of performance groundwater monitoring were conducted following completion of the injection program. Performance monitoring was completed approximately 2 weeks post-injection (October 21, 2021) and 6 weeks post injection (November 22, 2021). Five existing monitoring wells on the Property were used for monitoring performance: MW-2, MW-7, MW-8, MW-9 and MW-11 (Figure 1). Groundwater samples were collected using passive diffusion bags (PDBs) for VOCs (TCE and its degradation products) and standard low-flow techniques for general chemistry parameters as outlined in the RAWP. Groundwater quality parameters were measured and recorded as a part of the low-flow sampling procedure, and depth to water measurements were recorded prior to all sampling (low-flow and PDBs). Groundwater samples were collected, stored and transported in accordance with GeoEngineers' standard operating procedures outlined in the RAWP. The Ecology-accredited laboratories OnSite Environmental of Redmond, Washington and AmTest Inc. of Kirkland, Washington were used for groundwater sample chemical analysis.

GROUNDWATER MONITORING RESULTS

Post-injection performance groundwater monitoring data for monitoring wells MW-2, MW-7, MW-8, MW-9 and MW-11 are summarized and interpreted below, relative to the pre-remedial action (baseline) groundwater conditions. Depth to groundwater and groundwater elevation data, field-measured groundwater parameters, and lab-analyzed groundwater quality parameters are summarized in Table 1. VOC groundwater chemical analytical data are summarized in Table 2 and on Figure 1 (TCE data only). Performance monitoring trends used for evaluating remedial action performance are summarized in Table 3. Lab data for the October and November 2021 performance monitoring events are also attached to this memo.

TCE and Other VOCs

TCE was either not detected or was detected below the MTCA Method A cleanup level of 5 micrograms per liter (µg/L) in the performance groundwater samples analyzed. Detected TCE concentrations in the post-injection monitoring period ranged from 0.24 µg/L to 2.1 µg/L, as compared to detections in the baseline period which ranged from 0.52 µg/L to 9.3 µg/L.

Note that monitoring well MW-2 is the only monitoring location in which TCE concentrations in groundwater exceeded the MTCA Method A cleanup level of 5 µg/L during the March 2019 baseline monitoring period. This observation is consistent with previous Site groundwater data collected as a part of the Remedial Investigation (RI) between 2015 and 2019 which indicated TCE concentrations exceeding MTCA Method A cleanup level are limited to the immediate vicinity of monitoring well MW-2.

In general, TCE concentrations decreased in the performance groundwater monitoring period as compared to the baseline sampling results with two exceptions: (1) TCE concentrations increased from baseline (0.52 µg/L) at the 2-week and 6-week post-injection events (2.0 and 1.1 µg/L respectively) in the groundwater samples from monitoring well MW-8 collected from approximately 59 to 60 feet bgs; and (2) TCE concentrations increased from baseline (TCE was not detected above the laboratory reporting limit of 0.20 µg/L) at the 6-week post-injection event (2.1 µg/L) in the groundwater sample from monitoring well MW-11 collected from approximately 60 feet bgs.

TCE breakdown products including cis- and trans-1,2-Dichloroethene, 1,1-Dichloroehtene, and vinyl chloride were not detected above laboratory reporting limits in the performance groundwater samples analyzed. These breakdown products were similarly not detected in the baseline groundwater samples analyzed.

Other VOCs including benzene, carbon disulfide, chloroform, methyl ethyl ketone, and methylene chloride were detected during one or more of the previous compliance groundwater monitoring events and the performance groundwater monitoring events (post-injection and baseline). These detections were below MTCA cleanup levels, where established.

Benzene, in particular, has been detected in Site groundwater during previous compliance monitoring events. However, it was detected greater than the MTCA Method A CUL in MW-9 during the March 2021 event, prior to injection implementation. This is the only time benzene exceeded a regulatory threshold since the beginning of Site investigation activities. Benzene was not considered a Site COC during the RI activities. Following the injections, benzene has either not been detected above laboratory reporting limits or has been detected at concentrations less than the MTCA CUL. We will continue to monitor benzene concentrations as a part of the post-injection compliance monitoring program outlined in this memo. However, we expect benzene concentrations will remain below the MTCA CUL consistent with the RI- and post-injection-phase data collected.

General Chemistry and Field-Measured Parameters

General chemistry and field-measured parameters were assessed relative to the expected performance monitoring trends for each analyte as summarized in Table 3. In general, the expected performance monitoring trends were observed, indicating successful subsurface injectate distribution and induced groundwater conditions favorable for reductive dechlorination of TCE including reduced dissolved oxygen concentrations and increased methane concentrations, among other indicators. These results were also shared with our

subcontractor Regenesis, who reviewed the data and concurred that the pre- and post-injection groundwater events are demonstrating the expected groundwater results based on the completed injections.

Note that the observed data trends for monitoring well MW-8 indicate injectate distribution was somewhat depressed at that location relative to the other monitoring wells within/immediately downgradient of the barrier wall injection area (MW-2 and MW-9). This observation is primarily supported by the lack of a significant increase in total iron concentrations during performance monitoring as compared to the baseline condition and may explain the relative lack of TCE concentration reduction in MW-8 to date. However, TCE concentrations in MW-8 were already below the MTCA Method A cleanup level prior to the remedial action. Meaning the treatment barrier performance in this vicinity, even if less than optimal, is not expected to impact the remedial action goals for the Site.

Groundwater Elevations

Groundwater elevations measured during the performance groundwater sampling events were within the expected range of groundwater elevations observed prior to the remedial action considering seasonal and year to year variability. Post-remedial action groundwater contours will be presented in the Technical Completion Report.

PROPOSED PATH FORWARD

Based on the successful completion of the remedial action and the results of the post-remedial action performance groundwater monitoring, the following changes to the compliance groundwater monitoring program and overall project schedule are proposed (as compared to the that presented in the RAWP).

- **Compliance Groundwater Monitoring**: We are proposing to utilize the two completed performance groundwater monitoring events as a part of the planned four-quarters (1-year) of compliance groundwater monitoring. Under this plan, two additional groundwater monitoring events would be completed at the Site to indicate compliance with MTCA requirements as follows.
  - Quarter 1: October 2021 Event (completed)
  - Quarter 2: November 2021 Event (completed)
  - Quarter 3: March 2022 Event (planned)
  - Quarter 4: July 2022 Event (planned)
- **Compliance Monitoring Well Locations:** the RAWP identifies wells MW-2, MW-5, MW-7, MW-9, MW-11 and MW-15 as the planned wells to conduct the compliance monitoring to reach regulatory closure. This set of wells is the same set used for performance monitoring with the addition of monitoring well MW-15 which is located approximately 530 feet northeast (downgradient from) of the Site within City of Wenatchee right of way for North Miller Street. The location of monitoring well MW-15 is shown on FS Figure 5. These locations will be utilized to verify compliance with MTCA, which meets the stated cleanup goals for this project.
  - GeoEngineers is also continuing to collect general chemistry and in-field groundwater parameters, consistent with the performance monitoring events. These parameters will provide additional lines of evidence of injection success.

- **Reporting Schedule and Request for Opinion**: Assuming Site chemicals of concern remain below MTCA Method A cleanup levels throughout the proposed compliance monitoring period, a Technical Completion Report will be prepared and submitted to Ecology, following review and comment by WSDOT, after completion of the July 2022 compliance monitoring event. A request for opinion will be submitted to Ecology with the Technical Completion Report, with the intent to receive a NFA determination for the Site.

LIMITATIONS

GeoEngineers, Inc. has prepared this memorandum on behalf of WSDOT for the WSDOT NCRC Smaller Parcel Site. Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted environmental science practices in this area at the time this document was prepared. The conclusions and opinions presented in this document are based on our professional knowledge, judgment and experience.5

No warranty, express or implied, applies to this document. Any electronic form, facsimile or hard copy of the original document and any attachments should be considered a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

SJB:NER:PW:tjh:mce

Attachments:
Figure 1. Baseline and Performance Groundwater Monitoring Locations & Chemical Analytical Detections (TCE)
Table 1. Remedial Action Groundwater Results: Groundwater Elevations and Field-Measured and General Chemistry Parameters
Table 2. Remedial Action Groundwater Results: Volatile Organic Compounds (VOCs)
Table 3. Performance Monitoring Trends for Reductive Dechlorination of TCE in Groundwater
Chemical Analytical Laboratory Reports (March 2021 Baseline Event [VOCs], October and November 2021 Performance Monitoring Events)

Former Northwest Wholesale Property

Stemilt Property

BNSF Railway

Former Building 05 (Equipment Storage Building)

Former Building 01 (Office)

Former Building 03 (Maintenance Building)

Former Soils Lab

Former Traffic Division

Former Division 1 Office

Former Division 1 Crew Office

Former Division 1 Store Room

Former Steam Cleaning Bays

Former Materials Lab

Former Sign, Body & Machine Shop

Former TCE Drum Storage Area

TCE distillation shed

Septic Tank

Former Oil/Water Separator (1,000 Gallon Tank) Currently in Place

MW-11/GEI-10

MW-8/GEI-6

MW-7

MW-6

MW-13

MW-5/B5

MW-14

MW-9 GEI-2

MW-3/B3

GEI-1 MW-2/B2

GEI-3

GEI-7

GEI-13

GEI-19

GEI-20 IW2

GEI-21

GEI-22

GEI-23

B14

B15

B19

B20

B21

IW1

IW3

IW4

IW5

IW6

IW7

IW8

IW9

IW10

IW11

IW12

IW13

IW14

IW16

IW17

IW18

IW19

IW20

IW21

IW22

IW23

IW24

IW25

IW26

IW27

IW28

IW29

IW30

IW31

IW32

MW-8

Sample Date	Sampling Event	Sample Depth (ft BTOC)	TCE (µg/L)
3/2/2021	Baseline	50	**1.8**
10/21/2021	Post-Injection (2-weeks)	50	**1.3**
11/22/2021	Post-Injection (6-weeks)	50	**1.1**
3/2/2021	Baseline	59	**0.52**
10/21/2021	Post-Injection (2-weeks)	60	**2.0**
11/22/2021	Post-Injection (6-weeks)	60	**1.1**

MW-11

Sample Date	Sampling Event	Sample Depth (ft BTOC)	TCE (µg/L)
3/2/2021	Baseline	48	**2.1**
10/21/2021	Post-Injection (2-weeks)	50	<0.20
11/22/2021	Post-Injection (6-weeks)	50	**0.88**
3/2/2021	Baseline	57	<0.20
10/21/2021	Post-Injection (2-weeks)	60	<0.20
11/22/2021	Post-Injection (6-weeks)	60	**2.1**

MW-2

Sample Date	Sampling Event	Sample Depth (ft BTOC)	TCE (µg/L)
3/2/2021	Baseline	50	**9.3**
10/21/2021	Post-Injection (2-weeks)	51	< 0.20
11/22/2021	Post-Injection (6-weeks)	51	< 0.20

MW-9

Sample Date	Sampling Event	Sample Depth (ft BTOC)	TCE (µg/L)
3/2/2021	Baseline	50	**1.3**
10/21/2021	Post-Injection (2-weeks)	50	<0.20
11/22/2021	Post-Injection (6-weeks)	50	<0.20
3/2/2021	Baseline	59	**0.66**
10/21/2021	Post-Injection (2-weeks)	60	<0.20
11/22/2021	Post-Injection (6-weeks)	60	<0.20

MW-7

Sample Date	Sampling Event	Sample Depth (ft BTOC)	TCE (µg/L)
3/2/2021	Baseline	51	**3.5**
10/21/2021	Post-Injection (2-weeks)	51	**0.24**
11/22/2021	Post-Injection (6-weeks)	51	**2.1**
3/2/2021	Baseline	60	**1.3**
10/21/2021	Post-Injection (2-weeks)	61	<0.20
11/22/2021	Post-Injection (6-weeks)	61	< 0.20

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Site features including the former oil/water separator based on utility maps provided by WSDOT and are approximate based on available scale.

Data Source: Site Boundary from Chelan County parcel data. Aerial from Google Earth, July 2017.

Projection: NAD 1983 UTM Zone 10N

Legend

- Boring
- Monitoring Well
- Injection Well

Current Parcel Boundaries

- Larger Parcel, currently owned by City of Wenatchee
- Smaller Parcel, currently owned by WSDOT

Red text = TCE concentration exceeds the MTCA Method A CUL (5 µg/L)

- Structure and Associated Former Building Use
- Proposed Right-of-Way Boundaries for the City of Wenatchee
- 8" Sewer Line
- Parcel Boundary

TCE = trichloroethene
MTCA = Model Toxics Control Act
CUL = cleanup level
µg/L = micrograms per liter
ft BTOC = feet below top of casing

Utilities

- Buried Telephone
- Gas
- Steam
- Stormwater
- Water

N W E S

40 0 40

Feet

Baseline and Performance Groundwater Monitoring Locations & Chemical Analytical Detections (TCE)

Former WSDOT North Central Region Complex Site

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Figure 1

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Table 1

Remedial Action Groundwater Results:
Groundwater Elevations, Field-Measured Parameters, and Water Quality Parameters

Former WSDOT North Central Region Complex, Smaller Parcel Site

Wenatchee, Washington

Sample Location[1]			**MW-2**				**MW-7**				**MW-8**			
Sample Identification			**MW-2_190419**	**MW-2-190814**	**MW-2_100621**	**MW-2_110821**	**MW-7_190418**	**MW-7-190813**	**MW-7_100621**	**MW-7_1103214**	**MW-8_190419**	**MW-8-190814**	**MW-8_100621**	**MW-8_110821**
Date Sampled[2]			**4/19/2019**	**8/14/2019**	**10/06/21**	**11/08/21**	**4/18/2019**	**8/13/2019**	**10/06/21**	**11/03/21**	**4/19/2019**	**8/14/2019**	**10/06/21**	**11/08/21**
Remedial Action (RA) Phase	**Analytical Method**	**Screening Level**[3]	**Pre-Remedial Action**		**Performance (2 Weeks)**	**Performance (6 Weeks)**	**Pre-Remedial Action**		**Performance (2 Weeks)**	**Performance (6 Weeks)**	**Pre-Remedial Action**		**Performance (2 Weeks)**	**Performance (6 Weeks)**
Well Location			**Downgradient TCE Area (Barrier Wall Injection)**				**Suspected Source Area (Grid Injection)**				**Downgradient TCE Area (Barrier Wall Injection)**			
Field-Measured Parameters[4] **(units)**														
Top of Casing Elevation[5] (feet)	n/a	NE	672.6209				673.6466				672.8487			
Depth to Groundwater (feet)[6]	n/a	NE	48.35	48.74	49.47	49.29	49.12	49.56	50.32	50.18	48.56	48.96	49.65	49.50
Groundwater Elevation (feet)[7]	n/a	NE	624.27	623.88	623.15	623.33	624.53	624.09	623.33	623.47	624.29	623.89	623.20	623.35
pH	n/a	NE	7.17	7.29	7.56	6.61	7.27	7.36	6.50	6.26	7.26	7.28	6.91	6.78
Conductivity (µS/cm)	n/a	NE	1,119	0.91	1,677	1,082	1.022	0.700	1,154	732	0.972	0.720	827	814
Turbidity (NTU)	n/a	NE	43.2	12.7	92.9	15.7	129	43.2	161	see note 8	62.7	9.43	289	57.15
Dissolved Oxygen (mg/l)	n/a	NE	8.1	6.97	0.00	0.00	7.81	6.61	0.00	2.19	7.38	6.83	0.00	3.22
Temperature (°C)	n/a	NE	15.1	18.1	19.4	15.7	15.7	16.4	16.34	12.91	14.8	17.1	16.84	14.8
Total Dissolved Solids (mg/L)	n/a	NE	897	676	--	--	806	539	--	--	786.5	552.5	--	--
Oxidation Reduction Potential (mV)	n/a	NE	73.8	102.6	-360.1	-429.8	71.3	134.8	-128.8	61.8	46.3	95.3	-148.3	-298.5
Salinity (ppt)	n/a	NE	0.70	0.52	--	--	0.62	0.41	--	--	0.01	0.42	--	--
Ferrous Iron (mg/L)[9]	n/a	NE	0.0	0.1	>10	7.0	0.2	0.2	>10	10.0	0.1	0.2	0.70	0.0
Water Quality Parameters (units)														
Sulfate (mg/L)	ASTM D516-11	NE	**38**	**50**	**8.7**	5.0 U	**36**	**29**	5.0 U	5.0 U	**34**	**30**	**38**	**39**
Total Sulfide (mg/L)	SM 4500-S2-D	NE	0.02 U	0.02 UJ	**0.14**	**0.05**	**0.04**	0.02 UJ	**0.28**	**0.17**	0.02 U	0.02 UJ	**0.05**	0.05 U
Nitrate (mg/L-N)	EPA 353.2	26,000	**12**	**18**	0.050 U	0.050 U	**10**	**11**	0.050 U	**0.098**	**9.5**	**10**	**6.2**	**9.4**
Total Iron (µg/L)	EPA 6010D	11,000	**760**	**2,200**	**20,000**	**69,000**	**7,100**	**3,600**	**16,000**	**46,000**	**1,400**	**3,100**	**1,800**	**840**
Total Manganese (µg/L)	EPA 6010D	750	**29**	**60**	**3,500**	**4,200**	**280**	**110**	**4,300**	**11,000**	**82**	**75**	**480**	**63**
Dissolved Manganese (µg/L)	EPA 6010D	750	11 U	11 U	**2,300**	**4,000**	11 U	11 U	**4,400**	**9,500**	11 U	11 U	**390**	**29**
Alkalinity (mg $CaCO_3$/L)	SM 2320B	NE	**350**	**350**	**750**	**490**	**350**	**330**	**610**	**470**	**340**	**330**	**380**	**350**
Chloride (mg/L)	SM 4500-CL E	NE	**42**	**46**	**23**	**39**	**21**	**17**	**9.6**	**11**	**15**	**19**	**23**	**22**
TOC (mg/L)	SM 5310B	NE	1.0 U	1.0 U	**950**	**240**	1.0 U	1.0 U	**230**	**350**	1.0 U	1.0 U	**10**	1.0 U
COD (mg/L)	EPA 410.4	NE	10 U	10 U	**2,800**	**540**	10 U	10 U	**550**	**1,300**	10 U	10 U	**12**	10 U
Methane (µg/L)	RSK 175	NE	1.0 U	1.0 U	**130**	**1,700**	1.0 U	1.0 U	**1.3**	**1.2**	1.0 U	1.0 U	**1.3**	**2.5**
Ethane (µg/L)	RSK 175	NE	0.50 U	0.50 U	**86**	**240**	0.50 U	0.50 U	**1.2**	**2.7**	0.50 U	0.50 U	0.22 U	0.22 U
Ethene (µg/L)	RSK 175	NE	0.50 U	0.50 U	**46**	**110**	0.50 U	0.50 U	**0.39**	**1.2**	0.50 U	0.50 U	0.29 U	0.29 U

Notes:

[1] Sampling locations (monitoring wells) are shown on Figure 1. Chemical Analysis was performed by OnSite Environmental of Redmond, Washington and AmTest Laboratories of Kirkland, Washington.

[2] Groundwater samples collected for field parameter measurement and water quality parameter analysis were collected using low-flow sampling techniques.

[3] Washington State Model Toxics Control Act (MTCA) Method A cleanup levels were used as screening levels for water quality analytes. MTCA Method B cleanup levels were used for analytes where MTCA Method A cleanup levels are not established.

[4] Field parameters (excluding ferrous iron) were measured using one or more of the following meters: Horiba U-54 and flow-through cell, YSI DSSPro multi-meter and flow through cell, LaMont turbidity meter, Hach turbidity meter.

[5] Top of monitoring well casing elevations (north edge of PVC casing) were surveyed by Truland Survey, LLC of Gig Harbor, Washington on October 21, 2021 using NAVD88 (vertical) and NAD 83/2011 (horizontal) datums.

[6] Depth to groundwater measurements were taken from the north edge of the top of the PVC well casing. The 2019 depth to groundwater measurements provided were collected prior to the groundwater sampling events during site-wide groundwater 'snapshots' on 4/17/2019 and 8/12/2019.

[7] Groundwater elevations were calculated using the formula: Groundwater Elevation = Top of Casing Elevation - Depth to Water

[8] Turbidity was not collected due to equipment malfunction.

[9] Ferrous Iron was measured by using Hach or Chemetrics field test kits. For ferrous iron measurements exceeding field test kit measurement range, measurements are qualified as '>' (greater than) the top of the measurement range noted.

-- = not measured/analyzed

n/a = not applicable; mg/L = milligram per liter; µg/L = micrograms per liter; mS/cm = millisiemens per centimeter; NTU = Nephelometric Turbidity Unit; mV = millivolt; C = Celsius

ASTM = American Society for Testing and Materials International; EPA = Environmental Protection Agency; SM = Standard Method

U = The analyte was not detected at a concentration greater than the value identified; J = The analyte was detected and the detected concentration is considered an estimate.

Grey shading indicates exceedance of the groundwater screening level.

Bold font type indicates the analyte was detected at the reported concentration.

Sample Location[1]	MW-9				MW-11			
Sample Identification	MW-9_190419	MW-9-190814	MW-9_100621	MW-9_110821	Not Sampled	Not Sampled	MW-11_100621	MW-11_110821
Date Sampled[2]	4/19/2019	8/14/2019	10/06/21	11/08/21	4/17/2019	8/12/2019	10/06/21	11/08/21
Remedial Action (RA) Phase	Pre-Remedial Action		Performance (2 Weeks)	Performance (6 Weeks)	Pre-Remedial Action		Performance (2 Weeks)	Performance (6 Weeks)
Well Location	Downgradient TCE Area (Barrier Wall Injection)				Downgradient of Injection Areas			
Field-Measured Parameters[4] (units)								
Top of Casing Elevation[5] (feet)	672.3482				670.8372			
Depth to Groundwater (feet)[6]	48.10	48.49	49.20	49.03	46.54	46.97	47.67	47.49
Groundwater Elevation (feet)[7]	624.25	623.86	623.15	623.32	624.30	623.87	623.17	623.35
pH	7.16	7.29	6.71	6.76	--	--	7.12	7.73
Conductivity (µS/cm)	1.082	0.760	1,084	1,042	--	--	722	772
Turbidity (NTU)	103	32.7	167	94.17	--	--	97.8	15.15
Dissolved Oxygen (mg/l)	4.96	6.25	0.00	0.18	--	--	5.02	6.97
Temperature (°C)	15.2	17.8	18.2	15.2	--	--	15.76	14.2
Total Dissolved Solids (mg/L)	864.5	572	--	--	--	--	--	--
Oxidation Reduction Potential (mV)	59.1	114.7	-163.4	-467.5	--	--	11.3	-312.0
Salinity (ppt)	0.67	0.44	--	--	--	--	--	--
Ferrous Iron (mg/L)[9]	0.3	0.2	>10	3.50	--	--	0.15	0.50
Water Quality Parameters (units)								
Sulfate (mg/L)	**43**	**28**	5.0 U	5.0 U	--	--	**32**	**33**
Total Sulfide (mg/L)	0.02 U	0.06 J	**0.30**	**0.10**	--	--	**0.15**	0.05 U
Nitrate (mg/L-N)	**8.9**	**10**	0.050 U	**0.17**	--	--	**9.3**	**10**
Total Iron (µg/L)	**3,200**	**7,800**	**18,000**	**24,000**	--	--	**4,100**	**420**
Total Manganese (µg/L)	**110**	**180**	**3,800**	**4,200**	--	--	**330**	**26**
Dissolved Manganese (µg/L)	11 U	11 U	**3,500**	**3,700**	--	--	11 U	11 U
Alkalinity (mg $CaCO_3$/L)	**370**	**350**	**560**	**520**	--	--	**320**	**330**
Chloride (mg/L)	**22**	**20**	**37**	**33**	--	--	**12**	**21**
TOC (mg/L)	1.0 U	1.0 U	**160**	**48**	--	--	1.0 U	1.0 U
COD (mg/L)	10 U	10 U	**410**	**130**	--	--	10 U	10 U
Methane (µg/L)	**2.4**	**1.6**	**17**	**640**	--	--	0.55 U	0.55 U
Ethane (µg/L)	0.50 U	0.50 U	**4.8**	0.22 U	--	--	0.22 U	0.22 U
Ethene (µg/L)	0.50 U	0.50 U	**2.5**	**0.40**	--	--	0.29 U	0.29 U

Table 2

Remedial Action Groundwater Results:
Volatile Organic Compounds (VOCs)

Former WSDOT North Central Region Complex, Smaller Parcel Site
Wenatchee, Washington

Sample Location[1]	MTCA Cleanup Level[4]	MW-2			MW-7						MW-8					
Sample Identification		MW-2-50_030221	MW-2-51_102121	MW-2-51_112221	MW-7-51_030221	MW-7-51_102121	MW-7-51_112221	MW-7-60_030221	MW-7-61_102121	MW-7-61_112221	MW-8-50_030221	MW-8-50_102121	MW-8-50_112221	MW-8-59_030221	MW-8-60_102121	MW-8-60_112221
Sample Depth (feet BTOC)[2]		50	51	51	51	51	51	60	61	61	50	50	50	59	60	60
Date Sampled[3]		3/2/2021	10/21/21	11/22/21	3/2/2021	10/21/2021	11/22/2021	3/2/2021	10/21/21	11/22/21	3/2/2021	10/21/2021	11/22/2021	3/2/2021	10/21/21	11/22/21
Remedial Action (RA) Phase		Pre-Remedial Action	Performance (2 Weeks)	Performance (6 Weeks)	Pre-Remedial Action	Performance (2 Weeks)	Performance (6 Weeks)	Pre-Remedial Action	Performance (2 Weeks)	Performance (6 Weeks)	Pre-Remedial Action	Performance (2 Weeks)	Performance (6 Weeks)	Pre-Remedial Action	Performance (2 Weeks)	Performance (6 Weeks)
Well Location		Downgradient TCE Area (Barrier Wall Injection)			Suspected Source Area (Grid Injection)						Downgradient TCE Area (Barrier Wall Injection)					
Primary cVOCs by EPA 8260D (µg/L)																
Trichloroethene	5	**9.3**	0.20 U	0.20 U	**3.5**	**0.24**	**2.1**	**1.3**	0.20 U	0.20 U	**1.8**	**1.3**	**1.1**	**0.52**	**2**	**1.1**
cis-1,2-Dichloroethene	NE	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
trans-1,2-Dichloroethene	NE	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,1-Dichloroethene	NE	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Vinyl Chloride	0.2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Other VOCs[5] by EPA 8260D (µg/L)																
1,1,1-Trichloroethane	200	**0.5**	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Acetone	NE	**5.2**	5.0 U	5.0 U	**5.2**	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzene	5	0.20 U	**0.31**	**0.44**	**0.31**	0.20 U	**0.49**	0.20 U	0.20 U	0.20 U	**1.4**	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Carbon Disulfide	NE	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	**0.87**	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	**0.99**	0.20 U	0.20 U	0.20 U
Chloroform	NE	**0.27**	0.20 U	0.20 U	**0.21**	**0.27**	0.20 U	0.20 U	**0.38**	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Dichlorodifluoromethane	NE	0.20 U	0.25 U	0.26 U	0.20 U	0.25 U	0.26 U	0.20 U	0.25 U	0.26 U	0.20 U	0.25 U	0.26 U	0.20 U	0.25 U	0.26 U
Methyl ethyl ketone (MEK)	NE	5.0 U	**16**	**34**	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**1.8**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Notes:

[1] Sampling locations (monitoring wells) are shown on Figure 1. Chemical Analysis was performed by OnSite Environmental of Redmond, Washington.

[2] Groundwater samples collected for VOC analysis were collected using passive-diffusion bags (PDBs). PDBs were deployed within the saturated well screen at the depth indicated. At locations where multiple PDBs were deployed (MW-7, MW-8, MW-9 and MW-11), the deployment depth for each PDB is listed separately corresponding to the groundwater sample collected.

[3] Pre-Remdial Action PDB samples were collected over a 17-day period from February 12 to March 3, 2021. Two-week post-injection monitoring PDB samples were collected over a 14-day period from October 8 to October 21, 2021. Six-week post-injection monitoring PDB samples were collected over a 13-day period from November 9 to November 22, 2021.

[4] Washington State Model Toxics Control Act (MTCA) Method A cleanup levels for unrestricted land use. MTCA Method B cleanup levels were used for analytes where MTCA Method A cleanup levels are not established.

[5] VOCs not listed were not detected above laboratory reporting limits. Refer to the laboratory reports for the full-list of VOC analytes and reporting limits.

µg/L = micrograms per liter

U = The analyte was not detected at a concentration greater than the value identified.

BTOC = below top of casing

EPA = Environmental Protection Agency

Grey shading indicates exceedance of the groundwater cleanup level.

Bold font type indicates the analyte was detected at the reported concentration.

Sample Location[1]	MTCA Cleanup Level[4]	MW-9						MW-11					
Sample Identification		MW-9-50_030221	MW-9-50_102121	MW-9-50_112221	MW-9-59_030221	MW-9-60_102121	MW-9-60_112221	MW-11-48_030221	MW-11-50_102121	MW-11-50_112221	MW-11-57_030221	MW-11-60_102121	MW-11-60_112221
Sample Depth (feet BTOC)[2]		50	50	50	59	60	60	48	50	50	57	60	60
Date Sampled[3]		3/2/2021	10/21/2021	11/22/2021	3/2/2021	10/21/21	11/22/21	03/02/21	10/21/21	11/22/21	3/2/2021	10/21/21	11/22/21
Remedial Action (RA) Phase		Pre-Remedial Action	Performance (2 Weeks)	Performance (6 Weeks)	Pre-Remedial Action	Performance (2 Weeks)	Performance (6 Weeks)	Pre-Remedial Action	Performance (2 Weeks)	Performance (6 Weeks)	Remedial Action	Performance (2 Weeks)	Performance (6 Weeks)
Well Location		Downgradient TCE Area (Barrier Wall Injection)						Downgradient of Injection Areas					
Primary cVOCs by EPA 8260D (µg/L)													
Trichloroethene	5	**1.3**	0.20 U	0.20 U	**0.66**	0.20 U	0.20 U	**2.1**	0.20 U	**0.88**	0.20 U	0.20 U	**2.1**
cis-1,2-Dichloroethene	NE	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
trans-1,2-Dichloroethene	NE	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,1-Dichloroethene	NE	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Vinyl Chloride	0.2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Other VOCs[5] by EPA 8260D (µg/L)													
1,1,1-Trichloroethane	200	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	**0.51**	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Acetone	NE	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	**5.1**	5.0 U	5.0 U	**8.5**	5.0 U	5.0 U
Benzene	5	**8.2**	0.20 U	**0.29**	**3.4**	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Carbon Disulfide	NE	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Chloroform	NE	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	**1.7**	**0.28**	**0.23**	**0.48**	**0.26**	**0.25**
Dichlorodifluoromethane	NE	**0.21**	0.25 U	0.25 U	0.20 U	0.26 U	0.26 U	0.20 U	0.25 U	0.26 U	0.20 U	0.25 U	0.26 U
Methyl ethyl ketone (MEK)	NE	5.0 U	5.0 U	**76**	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride	5	1.0 U	1.0 U	1.0 U	1.0 U	**1.5**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 3

Performance Monitoring Trends for Reductive Dechlorination of TCE in Groundwater[1]

Former WSDOT North Central Region Complex, Smaller Parcel Site
Wenatchee, Washington

Parameter	Data Use	Data Significance	Threshold Measurement	General Expected Trend[2]	Expected Trend Observed?
Primary cVOCs					
TCE, DCEs, VC	Regulatory Compliance	Provides the primary means to evaluate whether the remedial action was successful in reducing cVOC concentrations to meet regulatory compliance criteria (MTCA).	MTCA Method A CULs (Table 2)	Decrease (temporary increase in DCEs and VC is possible)	Yes
Field-Measured Parameters					
pH	Indicator Parameter	Measures how suitable the groundwater is to support a range of bacteria that could degrade cVOCs.	5 < pH < 9	Stable	Yes
Conductivity (µS/cm)	Groundwater Stabilization Criteria During Well Purging	Measures the ability of the groundwater to conduct electricity, which is directly related to the concentration of ions in the groundwater. Helps to assess how representative a given sample is with respect to actual groundwater conditions.	n/a	n/a	n/a
Dissolved Oxygen (mg/L)	Indicator Parameter	Helps evaluate whether aquifer conditions are aerobic or anaerobic.	<0.5	Decrease	Yes
Temperature (°C)	Indicator Parameter	Relates to the rate of dechlorination. Generally, the warmer the water temperature, the faster dechlorination takes place.	>20	Stable	Yes
Oxidation Reduction Potential (mV)	Indicator Parameter	Measures the relative tendency of water to transfer electrons, and thereby facilitate reactions. The ORP of groundwater influences the rate of biodegradation. ORP is used as a general indicator only. Precise measurement of ORP is difficult because it rarely equilibrates during monitoring of the natural environment.	<0	Decrease	Yes
Ferrous Iron (mg/L)	Indicator Parameter	Indicates the presence of anaerobic degradation. It is an important trace nutrient for bacterial growth, and an indicator for the presence of reducing bacteria. Ferrous iron production is also expected as a direct result of the iron-based injectates (zero-valent iron, iron sulfide and ferrous gluconate).	> 1.0	Increase	Yes
Water Quality Parameters					
Sulfate (mg/L)	Indicator Parameter	Once ferrous iron has been depleted, sulfate is used as a substitute nutrient for anaerobic biodegradation.	<20	Decrease	Yes, except MW-8
Total Sulfide (mg/L)	Indicator Parameter	Indicates the degree to which sulfate reduction is occurring and can serve as a measure of bacterial competition for anaerobic dechlorination.	n/a	n/a	n/a
Nitrate (mg/L-N)	Indicator Parameter	If there is a lack of dissolved oxygen in the environment, nitrates serve as a continued source of anaerobic degradation by bacteria.	<1.0	Decrease	Yes
Total Iron (µg/L)	Indicator Parameter	The ratio of ferrous iron to total iron concentrations in groundwater provides an indication of whether aquifer conditions support the generation of ferrous iron to promote anaerobic biodegradation. Iron is also a primary component of multiple injectates used and therefore provides a metric for evaluating subsurface distribution performance.	n/a	Increase	Yes, except MW-8

Parameter	Data Use	Data Significance	Threshold Measurement	General Expected Trend[2]	Expected Trend Observed?
Total Manganese (µg/L) Dissolved Manganese (µg/L)	Indicator Parameter	If there is a lack of dissolved oxygen and nitrate in the environment, manganese serves as a continued source of anaerobic degradation by bacteria. The ratio of dissolved to total manganese is an indicator of the degree to which anaerobic microbial activity is solubilizing manganese from the aquifer material.	n/a	Increase	Yes
Alkalinity (mg $CaCO_3$/L)	Indicator Parameter	The total alkalinity of groundwater is an indicator of the groundwater's capacity to neutralize acid. Alkalinity is important in the maintenance of groundwater pH because it buffers the groundwater against acids generated during anaerobic biodegradation.	> 2x baseline	Increase	Yes
Chloride (mg/L)	Indicator Parameter	Chloride is released during biodegradation of cVOCs in groundwater, resulting in elevated chloride concentrations within the contaminant plume. Elevated chloride concentrations are an indicator of reductive dechlorination.	> 3x baseline	Increase	Mixed (concentrations were not appreciably different than baseline)
TOC (mg/L)	Indicator Parameter	Helps determine if there is enough carbon (electron donors) available to support anaerobic reductive dechlorination. Can be used as an indicator of injectate	> 20	Increase	Yes
COD (mg/L)	Indicator Parameter	Indicates the potential for aquifer materials, such as carbonate-containing minerals, to compete with biodegradation processes for available oxygen in the aquifer. Can be used as an indicator of injectate distribution.	n/a	Increase	Yes
Methane (µg/L) Ethane (µg/L) Ethene (µg/L)	Indicator Parameter	Ethane and ethene are daughter products of the breakdown of vinyl chloride and are strong indicators of complete biodegradation of cVOCs via reductive dechlorination. The presence of methane in groundwater is indicative of strongly reducing conditions, which are favorable for reductive dechlorination.	> 1.0 (methane)	Increase (methane; ethane and ethene may not appreciably increase initially as the primary degradation pathway is expected to be abiotic [ZVI-driven] for at least the first two months post-injection)	Yes

Notes:

[1] This table was adapted from Contaminated Site Clean-up Information (CLU-IN) Table 1. Performance Monitoring Parameters for Biodegradation of DNAPL Chemicals: Anaerobic Route (https://clu-in.org/contaminantfocus/default.focus/sec/Dense_Nonaqueous_Phase_Liquids_(DNAPLs)/cat/Treatment_Technologies/p/1#dnapltable1).

[2] Expected trends noted are relative to pre-remedial action (baseline) site conditions as measured in April and August, 2019. Refer to Tables 1 and 2 for site data.

n/a = not applicable
mg/L = milligram per liter
mg/L-N = milligrams per liter as nitrogen
mg $CaCO_3$/L = milligrams of calcium carbonate per liter
µg/L = micrograms per liter
mS/cm = milliseimens per centimeter
mV = millivolt
C = Celsius
cVOCs = chlorinated volatile organic compounds
ZVI = zero-valent iron
COD = chemical oxygen demand
TOC = total organic carbon
DCEs = cis- and trans-1,2-Dichloroethene and 1,1-Dichloroethene
VC = vinyl chloride

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

March 8, 2021

Nick Rohrbach
GeoEngineers, Inc.
1101 Fawcett Avenue South, Suite 200
Tacoma, WA 98402

Re: Analytical Data for Project 180-345-05
Laboratory Reference No. 2103-036

Dear Nick:

Enclosed are the analytical results and associated quality control data for samples submitted on March 3, 2021.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: March 8, 2021
Samples Submitted: March 3, 2021
Laboratory Reference: 2103-036
Project: 180-345-05

Case Narrative

Samples were collected on March 2, 2021 and received by the laboratory on March 3, 2021. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: March 8, 2021
Samples Submitted: March 3, 2021
Laboratory Reference: 2103-036
Project: 180-345-05

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-9-50_030221	03-036-01	Water	3-2-21	3-3-21	
MW-9-59_030221	03-036-02	Water	3-2-21	3-3-21	
MW-2-50_030221	03-036-03	Water	3-2-21	3-3-21	
MW-8-50_030221	03-036-04	Water	3-2-21	3-3-21	
MW-8-59_030221	03-036-05	Water	3-2-21	3-3-21	
MW-11-48_030221	03-036-06	Water	3-2-21	3-3-21	
MW-11-57_030221	03-036-07	Water	3-2-21	3-3-21	
MW-7-51_030221	03-036-08	Water	3-2-21	3-3-21	
MW-7-60_030221	03-036-09	Water	3-2-21	3-3-21	

Date of Report: March 8, 2021
Samples Submitted: March 3, 2021
Laboratory Reference: 2103-036
Project: 180-345-05

VOLATILE ORGANICS EPA 8260D
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-9-50_030221**					
Laboratory ID:	03-036-01					
Dichlorodifluoromethane	0.21	0.20	EPA 8260D	3-5-21	3-5-21	Y
Chloromethane	ND	1.3	EPA 8260D	3-5-21	3-5-21	
Vinyl Chloride	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromomethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloroethane	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Trichlorofluoromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Acetone	ND	5.0	EPA 8260D	3-5-21	3-5-21	
Iodomethane	ND	3.4	EPA 8260D	3-5-21	3-5-21	
Carbon Disulfide	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methylene Chloride	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Vinyl Acetate	ND	1.3	EPA 8260D	3-5-21	3-5-21	
2,2-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Butanone	ND	5.0	EPA 8260D	3-5-21	3-5-21	
Bromochloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloroform	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Carbon Tetrachloride	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Benzene	8.2	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichloroethane	ND	0.25	EPA 8260D	3-5-21	3-5-21	
Trichloroethene	1.3	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Dibromomethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromodichloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	3-5-21	3-5-21	
Toluene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	

Date of Report: March 8, 2021
Samples Submitted: March 3, 2021
Laboratory Reference: 2103-036
Project: 180-345-05

VOLATILE ORGANICS EPA 8260D
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-9-50_030221**					
Laboratory ID:	03-036-01					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Tetrachloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Hexanone	ND	2.0	EPA 8260D	3-5-21	3-5-21	
Dibromochloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dibromoethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Ethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
m,p-Xylene	ND	0.40	EPA 8260D	3-5-21	3-5-21	
o-Xylene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Styrene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromoform	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Isopropylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
n-Propylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Chlorotoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
4-Chlorotoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
tert-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
sec-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
p-Isopropyltoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
n-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	3-5-21	3-5-21	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Hexachlorobutadiene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Naphthalene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*96*	*75-127*				
Toluene-d8	*96*	*80-127*				
4-Bromofluorobenzene	*93*	*78-125*				

Date of Report: March 8, 2021
Samples Submitted: March 3, 2021
Laboratory Reference: 2103-036
Project: 180-345-05

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-9-59_030221**					
Laboratory ID:	03-036-02					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloromethane	ND	1.3	EPA 8260D	3-5-21	3-5-21	
Vinyl Chloride	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromomethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloroethane	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Trichlorofluoromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Acetone	ND	5.0	EPA 8260D	3-5-21	3-5-21	
Iodomethane	ND	3.4	EPA 8260D	3-5-21	3-5-21	
Carbon Disulfide	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methylene Chloride	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Vinyl Acetate	ND	1.3	EPA 8260D	3-5-21	3-5-21	
2,2-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Butanone	ND	5.0	EPA 8260D	3-5-21	3-5-21	
Bromochloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloroform	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Carbon Tetrachloride	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Benzene	3.4	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichloroethane	ND	0.25	EPA 8260D	3-5-21	3-5-21	
Trichloroethene	0.66	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Dibromomethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromodichloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	3-5-21	3-5-21	
Toluene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	

Date of Report: March 8, 2021
Samples Submitted: March 3, 2021
Laboratory Reference: 2103-036
Project: 180-345-05

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-9-59_030221**					
Laboratory ID:	03-036-02					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Tetrachloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Hexanone	ND	2.0	EPA 8260D	3-5-21	3-5-21	
Dibromochloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dibromoethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Ethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
m,p-Xylene	ND	0.40	EPA 8260D	3-5-21	3-5-21	
o-Xylene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Styrene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromoform	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Isopropylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
n-Propylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Chlorotoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
4-Chlorotoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
tert-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
sec-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
p-Isopropyltoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
n-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	3-5-21	3-5-21	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Hexachlorobutadiene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Naphthalene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*96*	*75-127*				
Toluene-d8	*98*	*80-127*				
4-Bromofluorobenzene	*91*	*78-125*				

Date of Report: March 8, 2021
Samples Submitted: March 3, 2021
Laboratory Reference: 2103-036
Project: 180-345-05

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2-50_030221**					
Laboratory ID:	03-036-03					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloromethane	ND	1.3	EPA 8260D	3-5-21	3-5-21	
Vinyl Chloride	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromomethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloroethane	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Trichlorofluoromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Acetone	5.2	5.0	EPA 8260D	3-5-21	3-5-21	
Iodomethane	ND	3.4	EPA 8260D	3-5-21	3-5-21	
Carbon Disulfide	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methylene Chloride	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Vinyl Acetate	ND	1.3	EPA 8260D	3-5-21	3-5-21	
2,2-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Butanone	ND	5.0	EPA 8260D	3-5-21	3-5-21	
Bromochloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloroform	0.27	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,1-Trichloroethane	0.50	0.20	EPA 8260D	3-5-21	3-5-21	
Carbon Tetrachloride	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Benzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichloroethane	ND	0.25	EPA 8260D	3-5-21	3-5-21	
Trichloroethene	9.3	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Dibromomethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromodichloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	3-5-21	3-5-21	
Toluene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	

Date of Report: March 8, 2021
Samples Submitted: March 3, 2021
Laboratory Reference: 2103-036
Project: 180-345-05

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2-50_030221**					
Laboratory ID:	03-036-03					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Tetrachloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Hexanone	ND	2.0	EPA 8260D	3-5-21	3-5-21	
Dibromochloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dibromoethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Ethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
m,p-Xylene	ND	0.40	EPA 8260D	3-5-21	3-5-21	
o-Xylene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Styrene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromoform	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Isopropylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
n-Propylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Chlorotoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
4-Chlorotoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
tert-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
sec-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
p-Isopropyltoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
n-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	3-5-21	3-5-21	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Hexachlorobutadiene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Naphthalene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*93*	*75-127*				
Toluene-d8	*99*	*80-127*				
4-Bromofluorobenzene	*90*	*78-125*				

Date of Report: March 8, 2021
Samples Submitted: March 3, 2021
Laboratory Reference: 2103-036
Project: 180-345-05

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-8-50_030221**					
Laboratory ID:	03-036-04					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloromethane	ND	1.3	EPA 8260D	3-5-21	3-5-21	
Vinyl Chloride	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromomethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloroethane	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Trichlorofluoromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Acetone	ND	5.0	EPA 8260D	3-5-21	3-5-21	
Iodomethane	ND	3.4	EPA 8260D	3-5-21	3-5-21	
Carbon Disulfide	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methylene Chloride	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Vinyl Acetate	ND	1.3	EPA 8260D	3-5-21	3-5-21	
2,2-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Butanone	ND	5.0	EPA 8260D	3-5-21	3-5-21	
Bromochloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloroform	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Carbon Tetrachloride	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Benzene	1.4	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichloroethane	ND	0.25	EPA 8260D	3-5-21	3-5-21	
Trichloroethene	1.8	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Dibromomethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromodichloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	3-5-21	3-5-21	
Toluene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	

Date of Report: March 8, 2021
Samples Submitted: March 3, 2021
Laboratory Reference: 2103-036
Project: 180-345-05

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-8-50_030221**					
Laboratory ID:	03-036-04					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Tetrachloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Hexanone	ND	2.0	EPA 8260D	3-5-21	3-5-21	
Dibromochloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dibromoethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Ethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
m,p-Xylene	ND	0.40	EPA 8260D	3-5-21	3-5-21	
o-Xylene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Styrene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromoform	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Isopropylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
n-Propylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Chlorotoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
4-Chlorotoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
tert-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
sec-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
p-Isopropyltoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
n-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	3-5-21	3-5-21	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Hexachlorobutadiene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Naphthalene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*94*	*75-127*				
Toluene-d8	*96*	*80-127*				
4-Bromofluorobenzene	*91*	*78-125*				

Date of Report: March 8, 2021
Samples Submitted: March 3, 2021
Laboratory Reference: 2103-036
Project: 180-345-05

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-8-59_030221**					
Laboratory ID:	03-036-05					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloromethane	ND	1.3	EPA 8260D	3-5-21	3-5-21	
Vinyl Chloride	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromomethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloroethane	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Trichlorofluoromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Acetone	ND	5.0	EPA 8260D	3-5-21	3-5-21	
Iodomethane	ND	3.4	EPA 8260D	3-5-21	3-5-21	
Carbon Disulfide	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methylene Chloride	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Vinyl Acetate	ND	1.3	EPA 8260D	3-5-21	3-5-21	
2,2-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Butanone	ND	5.0	EPA 8260D	3-5-21	3-5-21	
Bromochloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloroform	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Carbon Tetrachloride	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Benzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichloroethane	ND	0.25	EPA 8260D	3-5-21	3-5-21	
Trichloroethene	0.52	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Dibromomethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromodichloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	3-5-21	3-5-21	
Toluene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	

Date of Report: March 8, 2021
Samples Submitted: March 3, 2021
Laboratory Reference: 2103-036
Project: 180-345-05

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-8-59_030221**					
Laboratory ID:	03-036-05					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Tetrachloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Hexanone	ND	2.0	EPA 8260D	3-5-21	3-5-21	
Dibromochloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dibromoethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Ethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
m,p-Xylene	ND	0.40	EPA 8260D	3-5-21	3-5-21	
o-Xylene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Styrene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromoform	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Isopropylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
n-Propylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Chlorotoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
4-Chlorotoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
tert-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
sec-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
p-Isopropyltoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
n-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	3-5-21	3-5-21	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Hexachlorobutadiene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Naphthalene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*95*	*75-127*				
Toluene-d8	*97*	*80-127*				
4-Bromofluorobenzene	*93*	*78-125*				

Date of Report: March 8, 2021
Samples Submitted: March 3, 2021
Laboratory Reference: 2103-036
Project: 180-345-05

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-11-48_030221**					
Laboratory ID:	03-036-06					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloromethane	ND	1.3	EPA 8260D	3-5-21	3-5-21	
Vinyl Chloride	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromomethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloroethane	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Trichlorofluoromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Acetone	5.1	5.0	EPA 8260D	3-5-21	3-5-21	
Iodomethane	ND	3.4	EPA 8260D	3-5-21	3-5-21	
Carbon Disulfide	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methylene Chloride	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Vinyl Acetate	ND	1.3	EPA 8260D	3-5-21	3-5-21	
2,2-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Butanone	ND	5.0	EPA 8260D	3-5-21	3-5-21	
Bromochloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloroform	1.7	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,1-Trichloroethane	0.51	0.20	EPA 8260D	3-5-21	3-5-21	
Carbon Tetrachloride	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Benzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichloroethane	ND	0.25	EPA 8260D	3-5-21	3-5-21	
Trichloroethene	2.1	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Dibromomethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromodichloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	3-5-21	3-5-21	
Toluene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	

Date of Report: March 8, 2021
Samples Submitted: March 3, 2021
Laboratory Reference: 2103-036
Project: 180-345-05

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-11-48_030221**					
Laboratory ID:	03-036-06					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Tetrachloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Hexanone	ND	2.0	EPA 8260D	3-5-21	3-5-21	
Dibromochloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dibromoethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Ethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
m,p-Xylene	ND	0.40	EPA 8260D	3-5-21	3-5-21	
o-Xylene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Styrene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromoform	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Isopropylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
n-Propylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Chlorotoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
4-Chlorotoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
tert-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
sec-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
p-Isopropyltoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
n-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	3-5-21	3-5-21	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Hexachlorobutadiene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Naphthalene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*96*	*75-127*				
Toluene-d8	*97*	*80-127*				
4-Bromofluorobenzene	*94*	*78-125*				

Date of Report: March 8, 2021
Samples Submitted: March 3, 2021
Laboratory Reference: 2103-036
Project: 180-345-05

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-11-57_030221**					
Laboratory ID:	03-036-07					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloromethane	ND	1.3	EPA 8260D	3-5-21	3-5-21	
Vinyl Chloride	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromomethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloroethane	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Trichlorofluoromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Acetone	8.5	5.0	EPA 8260D	3-5-21	3-5-21	
Iodomethane	ND	3.4	EPA 8260D	3-5-21	3-5-21	
Carbon Disulfide	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methylene Chloride	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Vinyl Acetate	ND	1.3	EPA 8260D	3-5-21	3-5-21	
2,2-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Butanone	ND	5.0	EPA 8260D	3-5-21	3-5-21	
Bromochloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloroform	0.48	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Carbon Tetrachloride	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Benzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichloroethane	ND	0.25	EPA 8260D	3-5-21	3-5-21	
Trichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Dibromomethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromodichloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	3-5-21	3-5-21	
Toluene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	

Date of Report: March 8, 2021
Samples Submitted: March 3, 2021
Laboratory Reference: 2103-036
Project: 180-345-05

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-11-57_030221**					
Laboratory ID:	03-036-07					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Tetrachloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Hexanone	ND	2.0	EPA 8260D	3-5-21	3-5-21	
Dibromochloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dibromoethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Ethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
m,p-Xylene	ND	0.40	EPA 8260D	3-5-21	3-5-21	
o-Xylene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Styrene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromoform	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Isopropylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
n-Propylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Chlorotoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
4-Chlorotoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
tert-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
sec-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
p-Isopropyltoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
n-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	3-5-21	3-5-21	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Hexachlorobutadiene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Naphthalene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*95*	*75-127*				
Toluene-d8	*96*	*80-127*				
4-Bromofluorobenzene	*93*	*78-125*				

Date of Report: March 8, 2021
Samples Submitted: March 3, 2021
Laboratory Reference: 2103-036
Project: 180-345-05

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7-51_030221**					
Laboratory ID:	03-036-08					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloromethane	ND	1.3	EPA 8260D	3-5-21	3-5-21	
Vinyl Chloride	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromomethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloroethane	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Trichlorofluoromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Acetone	5.2	5.0	EPA 8260D	3-5-21	3-5-21	
Iodomethane	ND	3.4	EPA 8260D	3-5-21	3-5-21	
Carbon Disulfide	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methylene Chloride	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Vinyl Acetate	ND	1.3	EPA 8260D	3-5-21	3-5-21	
2,2-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Butanone	ND	5.0	EPA 8260D	3-5-21	3-5-21	
Bromochloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloroform	0.21	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Carbon Tetrachloride	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Benzene	0.31	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichloroethane	ND	0.25	EPA 8260D	3-5-21	3-5-21	
Trichloroethene	3.5	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Dibromomethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromodichloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	3-5-21	3-5-21	
Toluene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	

Date of Report: March 8, 2021
Samples Submitted: March 3, 2021
Laboratory Reference: 2103-036
Project: 180-345-05

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7-51_030221**					
Laboratory ID:	03-036-08					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Tetrachloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Hexanone	ND	2.0	EPA 8260D	3-5-21	3-5-21	
Dibromochloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dibromoethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Ethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
m,p-Xylene	ND	0.40	EPA 8260D	3-5-21	3-5-21	
o-Xylene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Styrene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromoform	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Isopropylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
n-Propylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Chlorotoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
4-Chlorotoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
tert-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
sec-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
p-Isopropyltoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
n-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	3-5-21	3-5-21	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Hexachlorobutadiene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Naphthalene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*95*	*75-127*				
Toluene-d8	*98*	*80-127*				
4-Bromofluorobenzene	*91*	*78-125*				

Date of Report: March 8, 2021
Samples Submitted: March 3, 2021
Laboratory Reference: 2103-036
Project: 180-345-05

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7-60_030221**					
Laboratory ID:	03-036-09					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloromethane	ND	1.3	EPA 8260D	3-5-21	3-5-21	
Vinyl Chloride	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromomethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloroethane	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Trichlorofluoromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Acetone	ND	5.0	EPA 8260D	3-5-21	3-5-21	
Iodomethane	ND	3.4	EPA 8260D	3-5-21	3-5-21	
Carbon Disulfide	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methylene Chloride	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Vinyl Acetate	ND	1.3	EPA 8260D	3-5-21	3-5-21	
2,2-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Butanone	ND	5.0	EPA 8260D	3-5-21	3-5-21	
Bromochloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloroform	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Carbon Tetrachloride	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Benzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichloroethane	ND	0.25	EPA 8260D	3-5-21	3-5-21	
Trichloroethene	1.3	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Dibromomethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromodichloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	3-5-21	3-5-21	
Toluene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	

Date of Report: March 8, 2021
Samples Submitted: March 3, 2021
Laboratory Reference: 2103-036
Project: 180-345-05

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7-60_030221**					
Laboratory ID:	03-036-09					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Tetrachloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Hexanone	ND	2.0	EPA 8260D	3-5-21	3-5-21	
Dibromochloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dibromoethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Ethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
m,p-Xylene	ND	0.40	EPA 8260D	3-5-21	3-5-21	
o-Xylene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Styrene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromoform	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Isopropylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
n-Propylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Chlorotoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
4-Chlorotoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
tert-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
sec-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
p-Isopropyltoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
n-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	3-5-21	3-5-21	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Hexachlorobutadiene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Naphthalene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*97*	*75-127*				
Toluene-d8	*97*	*80-127*				
4-Bromofluorobenzene	*91*	*78-125*				

Date of Report: March 8, 2021
Samples Submitted: March 3, 2021
Laboratory Reference: 2103-036
Project: 180-345-05

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0305W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloromethane	ND	1.3	EPA 8260D	3-5-21	3-5-21	
Vinyl Chloride	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromomethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloroethane	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Trichlorofluoromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Acetone	ND	5.0	EPA 8260D	3-5-21	3-5-21	
Iodomethane	ND	3.4	EPA 8260D	3-5-21	3-5-21	
Carbon Disulfide	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methylene Chloride	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Vinyl Acetate	ND	1.3	EPA 8260D	3-5-21	3-5-21	
2,2-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Butanone	ND	5.0	EPA 8260D	3-5-21	3-5-21	
Bromochloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chloroform	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Carbon Tetrachloride	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Benzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichloroethane	ND	0.25	EPA 8260D	3-5-21	3-5-21	
Trichloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Dibromomethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromodichloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	3-5-21	3-5-21	
Toluene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	3-5-21	3-5-21	

Date of Report: March 8, 2021
Samples Submitted: March 3, 2021
Laboratory Reference: 2103-036
Project: 180-345-05

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QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0305W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Tetrachloroethene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3-Dichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Hexanone	ND	2.0	EPA 8260D	3-5-21	3-5-21	
Dibromochloromethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dibromoethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Chlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Ethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
m,p-Xylene	ND	0.40	EPA 8260D	3-5-21	3-5-21	
o-Xylene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Styrene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromoform	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Isopropylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Bromobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	3-5-21	3-5-21	
n-Propylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
2-Chlorotoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
4-Chlorotoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
tert-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
sec-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
p-Isopropyltoluene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
n-Butylbenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	3-5-21	3-5-21	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Hexachlorobutadiene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
Naphthalene	ND	1.0	EPA 8260D	3-5-21	3-5-21	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	3-5-21	3-5-21	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*94*	*75-127*				
Toluene-d8	*98*	*80-127*				
4-Bromofluorobenzene	*90*	*78-125*				

Date of Report: March 8, 2021
Samples Submitted: March 3, 2021
Laboratory Reference: 2103-036
Project: 180-345-05

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0305W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**8.93**	**9.25**	10.0	10.0	89	93	65-126	4	19	
Benzene	**8.68**	**8.74**	10.0	10.0	87	87	71-119	1	16	
Trichloroethene	**10.4**	**10.8**	10.0	10.0	104	108	82-123	4	18	
Toluene	**9.88**	**10.2**	10.0	10.0	99	102	77-119	3	18	
Chlorobenzene	**9.66**	**10.1**	10.0	10.0	97	101	80-120	4	17	
Surrogate:										
Dibromofluoromethane					*93*	*88*	*75-127*			
Toluene-d8					*99*	*99*	*80-127*			
4-Bromofluorobenzene					*98*	*98*	*78-125*			

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

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

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

Page 1 of 1

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 180-345-05
Project Name: WSDOT Wenatchee Semi Anual GW
Project Manager: Nick Rohrbach
Sampled by: Katy Ataletürk

Turnaround Request (in working days)

(Check One)

☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 03-036

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A					% Moisture
1	MW-9-50_030221	3/2/21	1200	gw	3					X																	
2	MW-9-59_030221		1210		3					X																	
3	MW-2-50_030221		1220		3					X																	
4	MW-8-50_030221		1230		3					X																	
5	MW-8-59_030221		1240		3					X																	
6	MW-11-48_030221		1250		3					X																	
7	MW-11-57_030221		1300		3					X																	
8	MW-7-51_030221		1310		3					X																	
9	MW-7-60_030221		1320		3					X																	

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished	Katy Ataletürk	GeoEngineers	3/2/21	11:30	
Received	Bob Bordo	Speedy	3-3-21	1220	
Relinquished	Bob Bordo	Speedy	3-3-21	1339	
Received		OSE	3/3/21	13:39	
Relinquished					
Received					Data Package: Standard ☑ Level III ☐ Level IV ☐
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☑

Sample/Cooler Receipt and Acceptance Checklist

Client: GET

Client Project Name/Number: 180-345-05

OnSite Project Number: 03-036

Initiated by: HL

Date Initiated: 3/3/21

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	(No)	N/A	1 2 3 4	
1.2 Were the custody seals intact?	Yes	No	(N/A)	1 2 3 4	
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	(N/A)	1 2 3 4	
1.4 Were the samples delivered on ice or blue ice?	(Yes)	No	N/A	1 2 3 4	
1.5 Were samples received between 0-6 degrees Celsius?	(Yes)	No	N/A	Temperature:	5°C
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	(N/A)			
1.7 How were the samples delivered?	Client	(Courier)	UPS/FedEx	OSE Pickup	Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	(Yes)	No		1 2 3 4
2.2 Was the COC legible and written in permanent ink?	(Yes)	No		1 2 3 4
2.3 Have samples been relinquished and accepted by each custodian?	(Yes)	No		1 2 3 4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	(Yes)	No		1 2 3 4
2.5 Were all of the samples listed on the COC submitted?	(Yes)	No		1 2 3 4
2.6 Were any of the samples submitted omitted from the COC?	Yes	**No**		1 2 3 4

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	(No)		1 2 3 4
3.2 Were any sample labels missing or illegible?	Yes	(No)		1 2 3 4
3.3 Have the correct containers been used for each analysis requested?	(Yes)	No		1 2 3 4
3.4 Have the samples been correctly preserved?	(Yes)	No	N/A	1 2 3 4
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	(Yes)	No	N/A	1 2 3 4
3.6 Is there sufficient sample submitted to perform requested analyses?	(Yes)	No		1 2 3 4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	(No)		1 2 3 4
3.8 Was method 5035A used?	Yes	No	(N/A)	1 2 3 4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		(N/A)	1 2 3 4

Explain any discrepancies:

3 Trip Blanks included but not listed on Chain of Custody
└ NO NEED FOR TB per KA. JB. 3/3

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed