

January 7, 2022

Mr. Daniel R. Lanners, P.E.
Project Manager

via email: daniel.lanners@dec.ny.gov

New York State Department of Environmental Conservation
Division of Environmental Remediation, Remedial Bureau C
625 Broadway, 12th Floor
Albany, New York 12233-7014

Subject: Former M. Argueso and Company, Inc.
441 & 442 Waverly Avenue, Mamaroneck, NY
Site #C360108
2nd Semiannual 2021 Groundwater Monitoring Report
STERLING File #28012 (Task 995)

Dear Mr. Lanners,

Sterling Environmental Engineering P.C. (STERLING) performed semiannual groundwater monitoring at the subject site on November 19, 2021. Groundwater monitoring was conducted in accordance with the approved Site Management Plan (SMP) dated October 2013, and the modifications approved by the New York State Department of Environmental Conservation (NYSDEC) dated March 7, 2014, April 29, 2015, and September 9, 2021. The most recent September 9, 2021 modification approved the removal of offsite monitoring well OSMW-4 from the monitoring program and reduced the site groundwater monitoring frequency to every nine months. A copy of the September 9, 2021 modification letter is attached.

Scope & Background

In June 2013, Hydrogen Release Compound (HRC) was injected into the subsurface surrounding wells GZ-22D and GZ-23D. Quarterly groundwater monitoring was conducted for one (1) year after the injection was completed. Semiannual monitoring was approved by the NYSDEC starting in 2015. This report presents the results of the second semiannual groundwater monitoring event for 2021, which included: groundwater gauging of eight (8) groundwater monitoring wells, calculation of groundwater flow direction, and sampling of five (5) groundwater monitoring wells for analysis of volatile organic compounds (VOC) by United States Environmental Protection Agency (USEPA) Method 8260C.

Groundwater Flow Direction

The estimated groundwater flow in the deep overburden hydrogeologic unit is to the north-northeast (Figure 1), which is consistent with historical conditions. The deep overburden groundwater elevation increased an average of 0.11 feet compared to groundwater elevation measurements collected in June 2021.

Groundwater Monitoring

Groundwater samples were collected from four (4) onsite monitoring wells (GZ-21D, GZ-22D, GZ-23D, and B6-OWD) and one (1) offsite monitoring wells (OSMW-3). The locations of the groundwater monitoring wells are presented in Figure 1. All groundwater samples were analyzed for TCL VOCs via USEPA Method 8260C. Groundwater samples were collected in accordance with the SMP and submitted

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to Alpha Analytical, Inc. of Westborough, Massachusetts under chain-of-custody protocol for analysis. Samples were shipped in a cooler with ice and analyzed within applicable holding times. The Daily Field Report and Sampling Data Sheets are attached.

Results of the laboratory analysis for chlorinated VOCs (cVOC) and comparison to Part 703.5 Groundwater Standards and NYSDEC TOGS 1.1.1 Water Quality Standards and Guidance Values are summarized in Table 1. The laboratory analytical report is attached.

Chlorinated Volatile Organic Compounds (cVOC)

Since the HRC injections in June 2013, groundwater quality has improved in the wells closest to the injection. Concentrations of tetrachloroethylene (PCE) and trichloroethylene (TCE) have decreased and are remaining stable in monitoring wells GZ-21D, GZ-22D, and GZ-23D, while concentrations of degradation compounds have increased with some compounds remaining above standards. Concentrations of PCE and TCE have shown increasing concentrations in onsite well B6-OWD. While the treatment has been successful in reducing volatile compounds in groundwater, concentrations of contaminants of concern remain above standards at concentrations that suggest additional action may be needed. Graphs of concentrations versus time for each well are attached.

Other VOCs

Benzene was detected above the groundwater standard of 1.0 µg/L in GZ-22D (2.3 µg/L), GZ-23D (7.2 µg/L), and B6-OWD (estimated 5.2 µg/L). Methyl tert butyl ether (MTBE) was detected in GZ-22D (0.8 µg/L), below the Guidance Value of 10 µg/L.

The following sections detail data trends in each deep zone monitoring well based on data summarized in Table 1 and shown on the attached graphs:

Onsite Wells

GZ-21D

Since 2014, concentrations of all VOCs steadily decreased through November 2017 to below standards with the exception of 1,2-Dichloroethane (1,2-DCA). Beginning in 2018, concentrations of the following cVOCs have increased to levels above standards: 1,2-DCA, cis-1,2-Dichloroethene (cis-1,2-DCE), and vinyl chloride (VC). Total cVOCs increased from the previous monitoring event in June 2021 but are lower than the highest levels in 2014. Concentrations of PCE and TCE remain below standards.

GZ-22D

PCE and TCE concentrations have decreased below standards for the last fourteen (14) sampling events. All other cVOCs have decreased to levels below standards with the exception of 1,2-DCA, cis-1,2-DCE, trans-1,2-Dichloroethene (trans-1,2-DCE), and VC. Total cVOCs have remained relatively stable since March 2019.

GZ-23D

PCE and TCE concentrations in this well have consistently been detected above the groundwater standard of 5 µg/L, from a high of 9,700 µg/L for PCE in 2009 and 1,600 µg/L for TCE in 2012 to below groundwater standards for the last two (2) sampling events. VC, a degradation product of PCE and TCE, increased to

levels above groundwater standards following the 2013 injections and has consistently decreased or remained stable since late 2015, remaining above or at standards. The most recent VC concentration of 2.0 µg/L is equal to the groundwater standard of 2.0 µg/L. Cis-1,2-DCE concentrations are consistently detected above standards. Trans-1,2-DCE was not detected in this sampling event, and 1,2-DCA was detected at 0.65 µg/L, just above the 0.6 µg/L standard.

B6-OWD

Following an initial increase in cVOC concentrations immediately after the injections, all cVOCs decreased to below standards from November 2014 through June 2017. Since November 2017, PCE, TCE, 1,2-DCA, cis-1,2-DCE, and trans-1,2-DCE concentrations have increased above standards.

Offsite Wells

Offsite wells OSMW-3 and OSMW-4 are located upgradient of the treatment zone to determine upgradient groundwater quality.

OSMW-3

PCE, TCE, 1,2-DCA, and cis-1,2-DCE concentrations in this well have consistently remained above groundwater standards, while trans-1,2-DCE and VC are below groundwater standards.

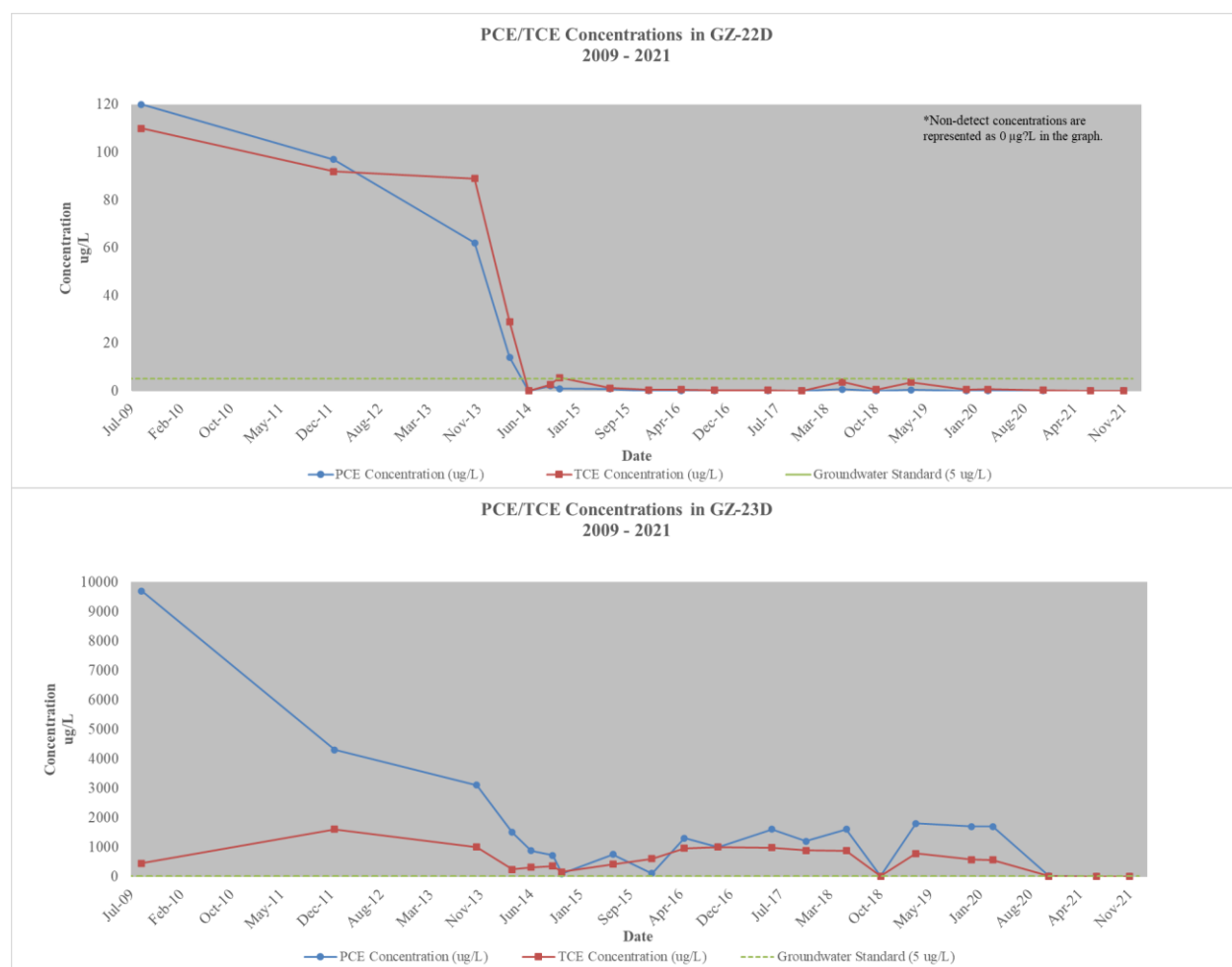
OSMW-4

All cVOCs have been below groundwater standards from March 2014 to June 2021. OSMW-4 has been removed from the monitoring program as documented in the September 9, 2021 modification letter from NYSDEC.

Monitoring Well Data Trends

The graphs below depict PCE and TCE concentrations in monitoring wells GZ-22D and GZ-23D over time (2009 - 2021). Initially, monitoring wells GZ-22D and GZ-23D contained the highest concentrations of PCE and TCE in onsite groundwater and were therefore selected for remediation.

Additional data trend graphs for all monitoring wells sampled are attached, showing concentrations levels over time for the cVOCs that have been consistently detected in these wells.

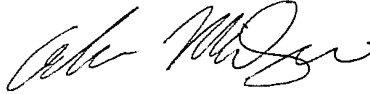


Conclusions and Recommendations

- Groundwater monitoring data collected subsequent to the 2013 injections indicate an overall decrease in the concentration of cVOCs. While overall concentrations have decreased, exceedances of groundwater standards are persisting. As requested by NYSDEC, additional remedial actions are being evaluated and will be submitted in a work plan under separate cover.
- The groundwater monitoring has been reduced to once every nine months; therefore, the next sampling event is scheduled in or before August 2022.
- Emerging contaminants (i.e., PFAS compounds and 1,4-Dioxane) must be sampled every three years and were last sampled in November 2020; therefore, emerging contaminants will next be sampled during the regularly scheduled sample event that occurs before November 2023.

Please contact me should you have any questions.

Very truly yours,
STERLING ENVIRONMENTAL ENGINEERING, P.C.



Andrew M. Millspaugh, P.E.
Vice President

andrew.millspaugh@sterlingenvironmental.com

Email

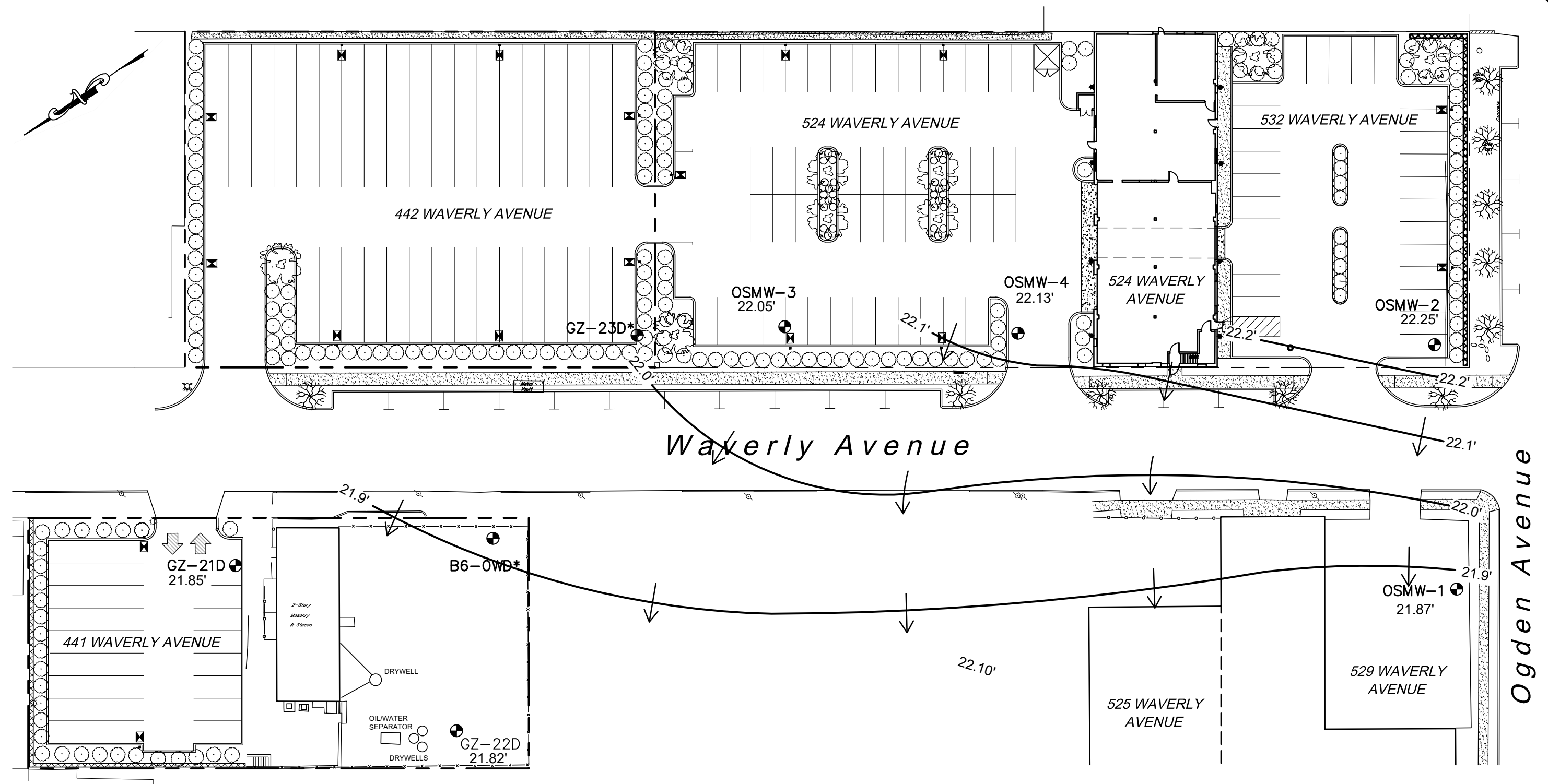
Attachments

cc: T.J. Milo, New Waverly Avenue Associates, LLC
Kevin Young, Young Sommer, LLC
Amen Omorogbe, P.E., NYSDEC

S:\Sterling\Projects\2008 Projects\Waverly Avenue (441 & 442) - 28012\Reports & Work Plans\GWM Reports\2021 2nd GWM\2022-01-07_2nd 2021 GW
Monitoring Results Letter_Waverly Avenue.docx

FIGURES

S:\Sterling\Projects\2008 Projects\Waverly Avenue (441 & 442) - 28012\Drawings-Maps-Figures\ACAD\28012115_F-1 - GW Elev 11-19-2021.dwg CAD 12/20/2021 3:54 PM



LEGEND:

- GZ-22D 21.82' MONITORING WELL WITH CORRESPONDING GROUNDWATER ELEVATION
- 21.8' GROUNDWATER CONTOUR NOVEMBER 19, 2021
- ← GROUNDWATER FLOW DIRECTION (DASHED WHERE INFERRED)
- - - SITE BOUNDARY (441 & 442 WAVERLY AVENUE)
- ⊠ LIGHT POLE
- ▨ CONCRETE SIDEWALK
- x - x - FENCE

TOTAL cVOCs (µg/L)		
WELL ID	HIGHEST CONCENTRATION PRIOR TO 2013	NOVEMBER 2021
B6-OWD	615.70	3,975.2
GZ-21D	524.60	309.1
GZ-22D	260.40	124.3
GZ-23D	10,178.5	16.35
OSMW-3	900.10	1,438.1

* DEPTH TO GROUNDWATER MEASUREMENT NOT CONSIDERED REPRESENTATIVE OF THE GROUNDWATER FLOW DIRECTION.

BASE MAP PROVIDED BY SITE DESIGN CONSULTANTS, DATED FEBRUARY 22, 2010.

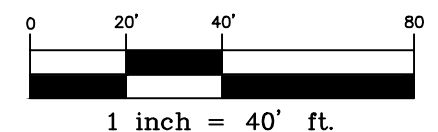


FIGURE 1

STERLING

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24 Wade Road • Latham, New York 12110

GROUNDWATER CONTOUR MAP
NOVEMBER 19, 2021

SITE# C360108

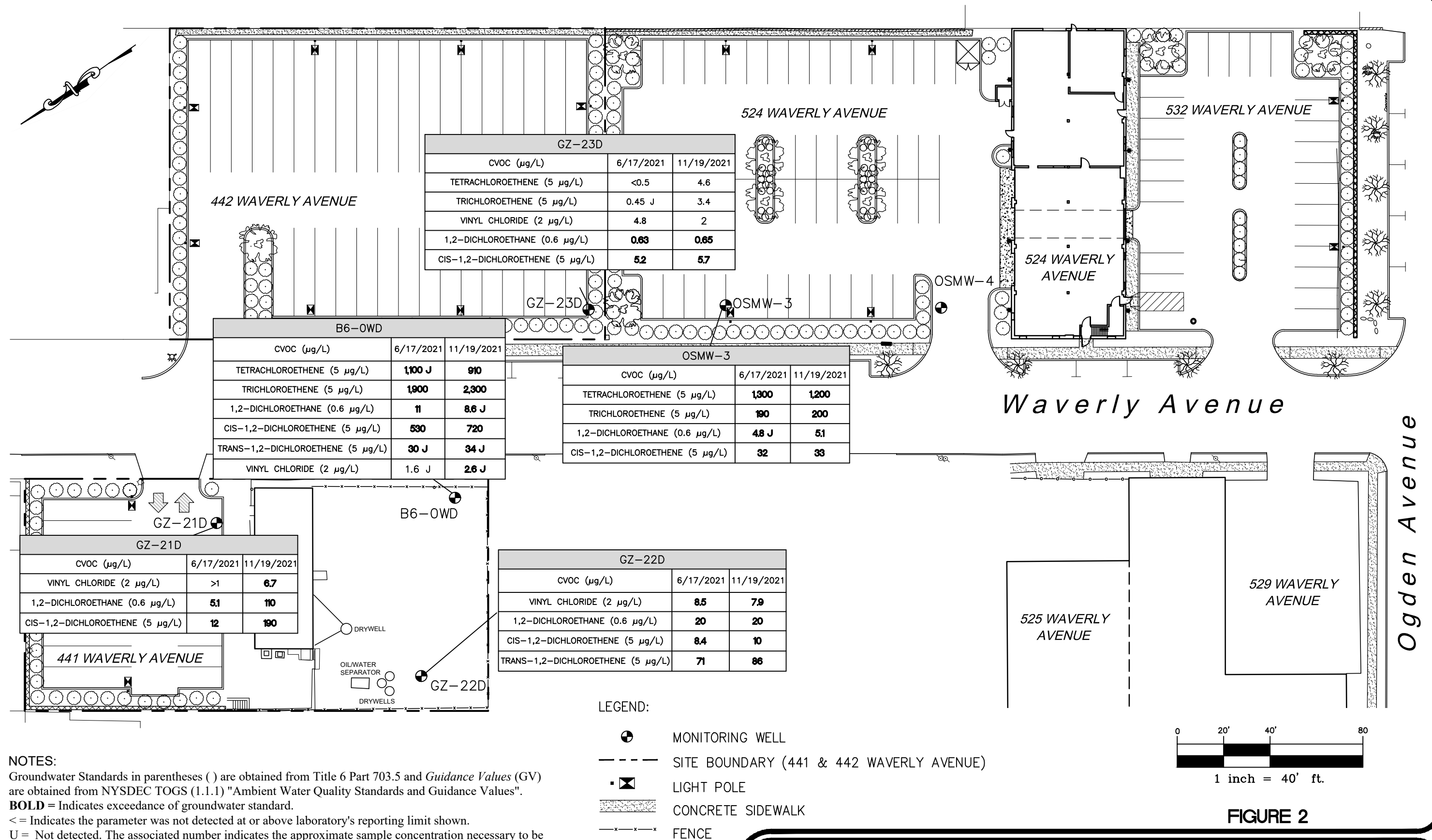
NEW WAVERLY AVENUE ASSOCIATES, LLC

V/T OF MAMARONECK

WESTCHESTER CO., N.Y.

PROJ. No.: 28012 | DATE: 12/20/2021 | SCALE: 1" = 40' | DWG. NO. 28012115 | FIGURE 1

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BASE MAP PROVIDED BY SITE DESIGN CONSULTANTS, DATED FEBRUARY 22, 2010.

STERLING
Sterling Environmental Engineering, P.C.
24 Wade Road • Latham, New York 12110

MONITORING LOCATION MAP WITH EXCEEDANCES
NOVEMBER 19, 2021
SITE# C360108
NEW WAVERLY AVENUE ASSOCIATES, LLC
V/T OF MAMARONECK WESTCHESTER CO., N.Y.

PROJ. No.: 28012 | DATE: 12/23/2021 | SCALE: 1" = 40' | DWG. NO. 28012116 | FIGURE 2

TABLES

Table 1
Summary of Groundwater Analytical Data Results to Title 6 Part 703.5 Groundwater Standards and NYSDEC TOGS 1.1.1 Guidance Values
441 and 442 Waverly Avenue
Chlorinated Volatile Organic Compounds
Site #C360108

Sample ID	Water Quality Standard*	GZ-21D																				DUP-1	DUP-1	DUP-1	
Unit	µg/L	µg/L																				µg/L	µg/L	µg/L	
Sample Date		08/20/09	01/11/12	10/15/13	03/24/14	06/18/14	09/24/14	11/05/14	06/23/15	12/16/15	05/12/16	10/12/16	06/13/17	11/14/17	05/16/18	10/18/18	03/27/19	12/04/19	03/09/20	11/18/20	06/17/21	11/19/21	06/18/14	10/12/16	12/04/19
Chlorinated Volatile Organic Compounds:																									
1,1,1-Trichloroethane	5.0	---	---	<5.0	<5.0	<5.0	<1.0	<1.0	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<10	<2.5	<6.2	<2.5	<2.5	<2.5	<2.5	<5	<4.0	<2.5	<2.5
1,1,2,2-Tetrachloroethane	5.0	---	---	---	---	---	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<1.2	<0.5	<0.5	<0.5	<0.5	<1	---	<0.5	<0.5
1,1,2-Trichloroethane	1.0	---	---	---	---	---	---	---	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<6.0	<1.5	<3.8	<1.5	<1.5	<1.5	<1.5	<3	---	<1.5	<1.5
1,1-Dichloroethane	5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<10	<2.5	<6.2	<2.5	<2.5	<2.5	<2.5	<5	<4.0	<2.5	<2.5
1,1-Dichloroethene	5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<0.5	<1.2	<0.5	<0.5	<0.5	<0.5	<1	<4.0	<0.50	<0.5
1,2-Dichloroethane	0.6	170 D	5.3	<5.0	190 D	190	4.1	0.4 J	54	55	28	48	11	11	140	52	110	74	77	110	5.1	110	190	56	74
cis-1,2-Dichloroethene	5.0	270 D	10	7.6	310 D	290	5.6	<1.0	100	<2.5	0.83 J	3.5	<2.5	1.7 J	270	120	230	110	91	140	12	190	350	2.9	110
trans-1,2-Dichloroethene	5.0	6.6	<5.0	<5.0	3.8	<5.0	<1.0	<1.0	0.99 J	0.86 J	<2.5	0.81 J	<2.5	<2.5	3.4 J	2.4 J	2.6 J	1.9 J	1.6 J	1.9 J	<2.5	2.4 J	<4.0	0.75 J	1.7 J
1,2-Dichloropropane	1.0	---	---	---	---	---	---	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<2.5	<1.0	<1.0	<1.0	<1	<2	---	<1.0	<1.0
Bromochloromethane	5.0	---	---	---	---	---	---	---	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<10	10	<6.2	<2.5	<2.5	<2.5	<2.5	<5	---	<2.5	<2.5
Bromodichloromethane	50	---	---	---	---	---	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<1.2	<0.5	<0.5	<0.5	<0.5	<1	---	<0.5	<0.5
Carbon Tetrachloride	5.0	---	---	<5.0	<5.0	<5.0	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<1.2	<0.5	<0.5	<0.5	<0.5	<1	<4.0	<0.5	<0.5
Chloroethane	5.0	---	---	---	---	---	---	---	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<10	<2.5	<6.2	<2.5	<2.5	<2.5	<2.5	<5	---	<2.5	<2.5
Chloroform	7.0	---	---	<5.0	<5.0	<5.0	<1.0	<1.0	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<10	<2.5	<6.2	<2.5	<2.5	<2.5	<2.5	<5	<4.0	<2.5	<2.5
Chloromethane	5.0	---	---	---	---	---	---	---	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<10	<2.5	<6.2	<2.5	<2.5	<2.5	<2.5	<5	---	<2.5	<2.5
cis-1,3-Dichloropropene	0.4	---	---	---	---	---	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<1.2	<0.5	<0.5	<0.5	<0.5	<1	---	<0.5	<0.5
Dibromochloromethane	50	---	---	---	---	---	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	1.7 J	<1.2	<0.5	<0.5	<0.5	<0.5	<1	---	<0.5	<0.5
Dichlorodifluoromethane	5.0	---	---	---	---	---	---	---	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<20	<5.0	<12	<5	<5	<5	<5	<10	---	<5.0	<5
Freon-113	5.0	---	---	---	---	---	---	---	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<10	<2.5	<6.2	<2.5	<2.5	<2.5	<2.5	<5	---	<2.5	<2.5
Methylene Chloride	5.0	---	---	<5.0	<5.0	5.4	<1.0	<1.0	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<10	<2.5	<6.2	<2.5	<2.5	<2.5	<2.5	<5	<4.0	<2.5	<2.5
Trichlorofluoromethane	5.0	---	---	---	---	---	---	---	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<10	<2.5	<6.2	<2.5	<2.5	<2.5	<2.5	<5	---	<2.5	<2.5
Tetrachloroethene	5.0	41	1.7 J	<5.0	9.8	3.4 J	0.89 J	1.0	0.18 J	<0.50	<0.50	<0.50	<0.50	0.19 J	<2.0	<0.5	<1.2	<0.5	<0.5	<0.5	<0.5	<1	2.9 J	<0.50	<0.5
Trichloroethene	5.0	33	0.58 J	<5.0	7.8	15	0.82 J	2.3	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<0.5	<1.2	<0.5	<0.5	<0.5	<0.5	<1	13	<0.50	<0.5
Vinyl chloride	2.0	4 J	<5.0	<5.0	4.3	<5.0	<1.0	<1.0	1.7	<1.0	0.43 J	<2.3	<1.0	0.59 J	19	12	16	5	1.4	2.1 J	<1	6.7	<4.0	2.8	4.8
TOTAL CVOCs		524.6	17.58	7.6	525.7	503.8	11.41	3.7	156.87	55.9	29.26	52.31	11	13.48	432.4	198.1	358.6	190.9	171.0	254.0	17.1	309.1	555.9	62.45	190.5

Notes:

- BOLD** Indicates exceedance of groundwater standard
- * Groundwater Standards are obtained from Title 6 Part 703.5 and *Guidance Values* (GV) are obtained from NYSDEC TOGS (1.1.1) "Ambient Water Quality Standards and Guidance Values".
- < Indicates the parameter was not detected at or above laboratory's reporting limit shown.
- NA Not Analyzed.
- No standard or not applicable.

Laboratory Qualifiers:

- D Indicates the undiluted analysis exceeded the equipment calibration range. The concentration shown is obtained from a diluted analysis.
- J Indicates the concentration shown is an estimated value because the compound was detected below the reporting limit.

Data Usability Summary Report (DUSR) Qualifiers:

- j Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.
- U Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.
- J+ The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high.
- J- The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low.
- UJ The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.

Table 1, Cont.
Summary of Groundwater Analytical Data Results to Title 6 Part 703.5 Groundwater Standards and NYSDEC TOGS 1.1.1 Guidance Values
441 and 442 Waverly Avenue
Chlorinated Volatile Organic Compounds
Site #C360108

Sample ID	Water Quality Standard*	GZ-22D																				DUP-1	DUP-1	DUP-1	DUP-1	
Unit	µg/L	µg/L																				ug/L	ug/L	ug/L	ug/L	
Sample Date		08/19/09	01/11/12	10/15/13	03/24/14	06/18/14	09/24/14	11/05/14	06/23/15	12/16/15	05/12/16	10/12/16	06/13/17	11/14/17	05/16/18	10/18/18	03/27/19	12/04/19	03/09/20	11/18/20	06/17/21	11/19/21	11/19/21	11/18/20	03/24/14	03/09/20
Chlorinated Volatile Organic Compounds:																										
1,1,1-Trichloroethane	5.0	---	---	<5.0	<25	<25	<1.0	<1.0	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<25	2.5 U
1,1,2,2-Tetrachloroethane	5.0	---	---	---	---	---	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	0.5 U
1,1,2-Trichloroethane	1.0	---	---	---	---	---	---	---	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	---	<1.5 U
1,1-Dichloroethane	5.0	<5.0	<5.0	<5.0	<25	<25	<1.0	<1.0	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<25	2.5 U
1,1-Dichloroethene	5.0	<5.0	<5.0	<5.0	<25	<25	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	0.5 U
1,2-Dichloroethane	0.6	22	17	16	24 J	<25	1.3	0.64 J	5.4	14	15	18	18	16	21	9.6	20	18	21	19	20	20	20	19	22 J	20
cis-1,2-Dichloroethene	5.0	8.4	6.5	12	110	<25	1.9	1.7	4.5	6.8	5.2	3.5	4.2	2.4 J	12	7	17	5.7	4.7	8.6	8.4	10	9.7	7.9	100	4.3
trans-1,2-Dichloroethene	5.0	<5.0	1.3 J	4.2 J	<25	<25	5.8	5.5	9.4	21	28	40	50	54	66	11	75	82	81	78	71	86	87	78	<25	77
1,2-Dichloropropane	1.0	---	---	---	---	---	---	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	---	<1 U
Bromochloromethane	5.0	---	---	---	---	---	---	---	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	---	2.5 U
Bromodichloromethane	50	---	---	---	---	---	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	0.5 U
Carbon Tetrachloride	5.0	---	---	<5.0	<25	<25	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	0.5 U	
Chloroethane	5.0	---	---	---	---	---	---	---	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	---	2.5 U
Chloroform	7.0	---	---	<5.0	<25	<25	<1.0	<1.0	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<25	2.5 U
Chloromethane	5.0	---	---	---	---	---	---	---	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	---	2.5 U
cis-1,3-Dichloropropene	0.4	---	---	---	---	---	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	<0.5 U
Dibromochloromethane	50	---	---	---	---	---	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	0.5 U
Dichlorodifluoromethane	5.0	---	---	---	---	---	---	---	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.5	<5.0	<5	<5	<5	<5	<5	<5	<5	<5	---	<5 U
Freon-113	5.0	---	---	---	---	---	---	---	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	---	2.5 U
Methylene Chloride	5.0	---	---	<5.0	<25	19 J	<1.0	<1.0	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<25	2.5 U
Trichlorofluoromethane	5.0	---	---	---	---	---	---	---	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	---	2.5 U
Tetrachloroethene	5.0	120	97	62	14 J	<25	2.1	0.88 J	0.69	<0.50	<0.50	<0.50	<0.50	<0.50	0.62 J-	<0.50	0.4 J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	21 J	0.5 U
Trichloroethene	5.0	110	92	89	29	<25	2.5	5.5	1.2	0.33 J	0.46 J	0.29 J	0.2 J	<0.50	3.7	0.52	3.6	0.5	0.23 J	0.56	<0.5	0.39 J	0.56	0.48 J	34	0.32 J
Vinyl chloride	2.0	<5.0	<5.0	<5.0	<25	<25	<1.0	<1.0	1.8	6.5	5.7	3.1	3.8 j	2.9	5.9	<1.0	8.3	5.8	6.7	5.6	8.5	7.9	7.9	5.7	<25	7.1
TOTAL CVOCs		260.4	213.8	183.2	177	19	13.6	14.22	22.99	48.6	54.36	64.89	76.2	75.3	109.22	28.12	124.3	112.0	113.63	111.76	107.9	124.3	125.2	111.1	177.0	108.72

Notes:

- BOLD** Indicates exceedance of groundwater standard
- * Groundwater Standards are obtained from Title 6 Part 703.5 and *Guidance Values* (GV) are obtained from NYSDEC TOGS (1.1.1) "Ambient Water Quality Standards and Guidance Values".
- < Indicates the parameter was not detected at or above laboratory's reporting limit shown.
- NA Not Analyzed.
- No standard or not applicable.

Laboratory Qualifiers:

- D Indicates the undiluted analysis exceeded the equipment calibration range. The concentration shown is obtained from a diluted analysis.
- J Indicates the concentration shown is an estimated value because the compound was detected below the reporting limit.

Data Usability Summary Report (DUSR) Qualifiers:

- j Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.
- U Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.
- J+ The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high.
- J- The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low.
- UJ The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.

Table 1, Cont.
Summary of Groundwater Analytical Data Results to Title 6 Part 703.5 Groundwater Standards and NYSDEC TOGS 1.1.1 Guidance Values
441 and 442 Waverly Avenue
Chlorinated Volatile Organic Compounds
Site #C360108

Well ID	Water Quality Standard*	GZ-23D																						DUP-1
Unit	µg/L	µg/L																						µg/L
Sample Date		08/20/09	01/11/12	10/15/13	03/25/14	06/19/14	09/25/14	11/05/14	06/24/15	12/17/15	05/12/16	10/12/16	06/13/17	11/14/17	05/16/18	10/18/18	03/28/19	12/04/19	03/09/20	11/18/20	06/17/21	11/19/21	06/13/17	
Chlorinated Volatile Organic Compounds:																								
1,1,1-Trichloroethane	5.0	---	---	<100	<40	<20	<20	<20	<25	<50	<25	<62	<50	<50	<25	<12	<50	<50	<50	<2.5	<2.5	<2.5	<50	
1,1,2,2-Tetrachloroethane	5.0	---	---	---	---	---	---	---	<5.0	<10	<5.0	<12	<10	<10	<5.0	<2.5	<10	<10	<10	<0.5	<0.5	<0.5	<10	
1,1,2-Trichloroethane	1.0	---	---	---	---	---	---	---	<15	<30	<15	<38	<30	<30	<15	<7.5	<30	<30	<30	<1.5	<1.5	<1.5	<30	
1,1-Dichloroethane	5.0	<5.0	<5.0	<100	<1.0	<20	<20	<20	<25	<50	<25	<62	<50	<50	<25	<12	<50	<50	<50	<2.5	<2.5	<2.5	<50	
1,1-Dichloroethene	5.0	5.5	1.6 J	<100	1.7	<20	<20	<20	1.9 J	<10	<5.0	<12	<10	<10	<5.0	<2.5	<10	<10	<10	0.18 J	<0.5	<0.5	<10	
1,2-Dichloroethane	0.6	13	9	<100	7.8	6.6 J	7.6 J	<20	3.6 J	<10	4.3 J	4.2 J	3.9 J	3.3 D,J	1.8 J	1.6 J	3.8 J	6.8 J	4.9 J	1.1	0.63	0.65	4.1 D,J	
cis-1,2-Dichloroethene	5.0	10	780 D	380	2,200 D	930	1,100	1,100	780	1,000 j	400	320	280	220 D	240	660	150	240	160	23	5.2	5.7	290 D	
trans-1,2-Dichloroethene	5.0	<5.0	9.1	<100	41	<20	<20	18 J	22 J	37 J,j	32	36 J	22 J	18 D,J	19 J	10 J	15 J	47 J	16 J	<2.5	<2.5	<2.5	21 D,J	
1,2-Dichloropropane	1.0	---	---	---	---	---	---	---	<10	<20	<10	<25	<20	<20	<10	<5.0	<20	<20	<20	<1.0	<1	<1	<20	
Bromochloromethane	5.0	---	---	---	---	---	---	---	<25	<50	<25	<62	<50	<50	<25	<12	<50	<50	<50	<2.5	<2.5	<2.5	<50	
Bromodichloromethane	50	---	---	---	---	---	---	---	<5.0	<10	<5.0	<12	<10	<10	<5.0	<2.5	<10	<10	<10	<0.5	<0.5	<0.5	<10	
Carbon Tetrachloride	5.0	---	---	<100	<40	<20	<20	<20	<5.0	<10	<5.0	<12	<10	<10	<5.0	<2.5	<10	<10	<10	<0.5	<0.5	<0.5	<10	
Chloroethane	5.0	---	---	---	---	---	---	---	<25	<50	<25	<62	<50	<50	<25	<12	<50	<50	<50	<2.5	<2.5	<2.5	<50	
Chloroform	7.0	---	---	<100	<40	<20	<20	<20	<25	<50	<25	<62	<50	<50	<25	<12	<50	<50	<50	<2.5	<2.5	<2.5	<50	
Chloromethane	5.0	---	---	---	---	---	---	---	<25	<50	<25	<62	<50	<50	<25	<12	<50	<50	<50	<2.5	<2.5	<2.5	<50	
cis-1,3-Dichloropropene	0.4	---	---	---	---	---	---	---	<5.0	<10	<5.0	<12	<10	<10	<5.0	<2.5	<10	<10	<10	<0.5	<0.5	<0.5	<10	
Dibromochloromethane	50	---	---	---	---	---	---	---	<5.0	<10	<5.0	<12	<10	<10	<5.0	<2.5	<10	<10	<10	<0.5	<0.5	<0.5	<10	
Dichlorodifluoromethane	5.0	---	---	---	---	---	---	---	<50	<100	<50	<120	<100	<100	<50	<25	<100	<100	<100	<5.0	<5	<5	<100	
Freon-113	5.0	---	---	---	---	---	---	---	<25	<50	<25	<62	<50	<50	<25	<12	<50	<50	<50	<2.5	<2.5	<2.5	<50	
Methylene Chloride	5.0	---	---	<100	<40	<20	<20	<20	<25	<50	<25	<62	<50	<50	<25	<12	<50	<50	<50	<2.5	<2.5	<2.5	<50	
Trichlorofluoromethane	5.0	---	---	---	---	---	---	---	<25	<50	<25	<62	<50	<50	<25	<12	<50	<50	<50	<2.5	<2.5	<2.5	<50	
Tetrachloroethene	5.0	9,700 D	4,300 D	3,100	1,500 D	880	720	94	750	110 j	1,300	1,000	1,600	1,200 D	1,600	7.6	1,800	1,700	1,700	19	<0.5	4.6	1,500 D	
Trichloroethene	5.0	450 DJ	1,600 D	1,000	240 D	310	350	160	420	600 j	960	1,000	980	890 D	880	16	780	570	560	15	0.45 J	3.4	950 D	
Vinyl chloride	2.0	<5.0	1.2 J	28 J	200 D	250	390	320	230 j	<20	200	82	72	58 D	40	96	32	57	30	5.6	4.8	2	71 D	
TOTAL CVOCs		10,178.5	6,700.9	4,508	4,191	2,376.6	2,567.6	1,692	2,207.5	1,747	2,896.3	2,442.2	2,957.9	2,389.3	2,780.8	791.2	2,780.8	2,620.8	2,470.9	63.88	11.08	16.35	2,836.1	

Notes:

- BOLD** Indicates exceedance of groundwater standard
- * Groundwater Standards are obtained from Title 6 Part 703.5 and *Guidance Values* (GV) are obtained from NYSDEC TOGS (1.1.1) "Ambient Water Quality Standards and Guidance Values".
- < Indicates the parameter was not detected at or above laboratory's reporting limit shown.
- NA Not Analyzed.
- No standard or not applicable.

Laboratory Qualifiers:

- D Indicates the undiluted analysis exceeded the equipment calibration range. The concentration shown is obtained from a diluted analysis.
- J Indicates the concentration shown is an estimated value because the compound was detected below the reporting limit.

Data Usability Summary Report (DUSR) Qualifiers:

- j Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.
- U Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.
- J+ The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high.
- J- The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low.
- UJ The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.

Table 1, Cont.

Summary of Groundwater Analytical Data Results to Title 6 Part 703.5 Groundwater Standards and NYSDEC TOGS 1.1.1 Guidance Values

441 and 442 Waverly Avenue

Chlorinated Volatile Organic Compounds

Site #C360108

Well ID	Water Quality Standard*	B6-OWD																				DUP-1	DUP-1	DUP-1	DUP-1	DUP-1	
Unit	µg/L	µg/L																				µg/L	µg/L	µg/L	µg/L	µg/L	
Sample Date		08/21/09	01/11/12	10/15/13	03/24/14	06/18/14	09/24/14	11/05/14	06/23/15	12/16/15	05/12/16	10/12/16	06/13/17	11/14/17	05/16/18	10/18/18	03/27/19	12/04/19	03/09/20	11/18/20	06/17/21	11/19/21	12/16/15	05/16/18	10/18/18	10/18/18	06/17/21
Chlorinated Volatile Organic Compounds:																											
1,1,1-Trichloroethane	5.0	---	---	<5.0	---	<20	<4.0	<8.0	<2.5	<2.5	<2.5	<2.5	<5.0	<12	<50	<25	<50	<25	<50	<25	<50	<50	<2.5	<50	<25	<25	<50
1,1,2,2-Tetrachloroethane	5.0	---	---	---	---	---	---	---	<0.5	<0.5	<0.5	<0.5	<1.0	<2.5	<10	<5.0	<10	<5.0	<10	<5.0	<10	<10	<0.5	<10	<5.0	<5.0	<10
1,1,2-Trichloroethane	1.0	---	---	---	---	---	---	---	<1.5	<1.5	<1.5	<1.5	<3.0	<7.5	<30	<15	<30	<15	<30	<15	<30	<30	<1.5	<30	<15	<15	<30
1,1-Dichloroethane	5.0	<5.0	<5.0	<5.0	<1.0	<4.0	<4.0	<8.0	<2.5	<2.5	<2.5	<2.5	<5.0	<12	<50	<25	<50	<25	<50	<25	<50	<50	<2.5	<50	<25	<25	<50
1,1-Dichloroethene	5.0	<5.0	<5.0	<5.0	<1.0	<4.0	<4.0	<8.0	<0.50	<0.50	<0.50	<0.50	<1.0	<2.5	<10	<5.0	<10	<5.0	<10	<5.0	<10	<10	<0.50	<10	<5.0	<5.0	<10
1,2-Dichloroethane	0.6	9.7	<5.0	1.9 J	2.8	8.0	9.1	<8.0	0.36 J	<0.50	0.31 J	0.32 J	0.29 J	3.7 D	11	8.5	15	12 J+	8.9 J	9.7	11	8.6 J	<0.50	9.1 J	9.4	9.4	8 J
cis-1,2-Dichloroethene	5.0	390 D	1.5 J	76	180 D	330	430 D	<8.0	1.3 J	1.1 J	2.4 J	2.1 J	1.8 J	150 D	390	360	700	620	530	760	530	720	1.2 J	330	380	380	480
trans-1,2-Dichloroethene	5.0	150	<5.0	6.8	7.2	8.4	14	<8.0	<2.5	<2.5	<2.5	<2.5	<5.0	6.0 J,1	22 J	16 J	41 J	24 J+	26 J	26	30 J	34 J	<2.5	20 J	17 J	17 J	22 J
1,2-Dichloropropane	1.0	---	---	---	---	---	---	---	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	<20	<10	<20	<10	<20	<10	<20	<20	<1.0	<20	<10	<10	<20
Bromochloromethane	5.0	---	---	---	---	---	---	---	<2.5	<2.5	<2.5	<2.5	<5.0	<12	<50	<25	<50	<25	<50	<25	<50	<50	<2.5	<50	<25	<25	<50
Bromodichloromethane	50	---	---	---	---	---	---	---	<0.5	<0.5	<0.5	<0.5	<1.0	<2.5	<10	<5.0	<10	<5.0	<10	<5.0	<10	<10	<0.5	<10	<5.0	<5.0	<10
Carbon Tetrachloride	5.0	---	---	<5.0	---	<20	<4.0	<8.0	<0.5	<0.5	<0.5	<0.5	<1.0	<2.5	<10	<5.0	<10	<5.0	<10	<5.0	<10	<10	<0.5	<10	<5.0	<5.0	<10
Chloroethane	5.0	---	---	---	---	---	---	---	<2.5	<2.5	<2.5	<2.5	<5.0	<12	<50	<25	<50	<25	<50	<25	<50	<50	<2.5	<50	<25	<25	<50
Chloroform	7.0	---	---	<5.0	---	<20	4	<8.0	<2.5	<2.5	<2.5	<2.5	<5.0	<12	<50	<25	<50	<25	<50	<25	<50	<50	<2.5	<50	<25	<25	<50
Chloromethane	5.0	---	---	---	---	---	---	---	<2.5	<2.5	<2.5	<2.5	<5.0	<12	<50	<25	<50	<25	<50	<25	<50	<50	<2.5	<50	<25	<25	<50
cis-1,3-Dichloropropene	0.4	---	---	---	---	---	---	---	<0.5	<0.5	<0.5	<0.5	<1.0	<2.5	<10	<5.0	<10	<5.0	<10	<5.0	<10	<10	<0.5	<10	<5.0	<5.0	<10
Dibromochloromethane	50	---	---	---	---	---	---	---	<0.5	<0.5	<0.5	<0.5	<1.0	<2.5	<10	<5.0	<10	<5.0	<10	<5.0	<10	<10	<0.5	<10	<5.0	<5.0	<10
Dichlorodifluoromethane	5.0	---	---	---	---	---	---	---	<5.0	<5.0	<5.0	<5.0	<10	<25	<100	<50	<100	<50	<100	<50	<100	<100	<5.0	<100	<50	<50	<100
Freon-113	5.0	---	---	---	---	---	---	---	<2.5	<2.5	<2.5	<2.5	<5.0	<12	<50	<25	<50	<25	<50	<25	<50	<50	<2.5	<50	<25	<25	<50
Methylene Chloride	5.0	---	---	<5.0	---	<20	<4.0	<8.0	<2.5	<2.5	<2.5	<2.5	<5.0	<12	<50	<25	<50	<25	<50	<25	<50	<50	<2.5	<50	<25	<25	<50
Trichlorofluoromethane	5.0	---	---	---	---	---	---	---	<2.5	<2.5	<2.5	<2.5	<5.0	<12	<50	<25	<50	<25	<50	<25	<50	<50	<2.5	<50	<25	<25	<50
Tetrachloroethene	5.0	23	6.2	18	59	47	110	<8.0	2.4	2.1	2.4	2.6	2.6	190 D	1,200 J-	860	1400	520	740	580	1,100 J	910	2.2	1,100 J-	950	950	800 J
Trichloroethene	5.0	43	2.1 J	41	170 D	180	330	<8.0	1.3	1.4	1.7	1.7	1.4	470 D	1,400	1,300	2000	1,200	2,200	1,400	1,900	2,300	1.4	1,400	1,400	1400	1,700
Vinyl chloride	2.0	<5.0	<5.0	<5.0	<1.0	<4.0	<4.0	<8.0	<1.0	<1.0	0.27 J	0.28 J	0.2 j	<5.0	1.8 J	<10	3.6 J	<10	<20	<10	1.6 J	2.6 J	<1.0	1.8 J	2.1 J	2.1 J	1.7 J
TOTAL CVOCs		615.7	9.8	143.7	419	573.4	893.1	ND	5.36	4.6	7.08	7	6.29	819.7	3,024.8	2,544.5	4,159.6	2,376.0	3,504.9	2,775.7	3,572.6	3,975.2	4.8	2,860.9	2,758.5	2,758.5	3,011.7

Notes:

BOLD Indicates exceedance of groundwater standard

* Groundwater Standards are obtained from Title 6 Part 703.5 and *Guidance Values* (GV) are obtained from NYSDEC TOGS (1.1.1) "Ambient Water Quality Standards and Guidance Values".

< Indicates the parameter was not detected at or above laboratory's reporting limit shown.

NA Not Analyzed.

--- No standard or not applicable.

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Data Usability Summary Report (DUSR) Qualifiers:

j Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.

U Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.

J+ The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high.

J- The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low.

UJ The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.

Table 1, Cont.
Summary of Groundwater Analytical Data Results to Title 6 Part 703.5 Groundwater Standards and NYSDEC TOGS 1.1.1 Guidance Values
441 and 442 Waverly Avenue
Chlorinated Volatile Organic Compounds
Site #C360108

Well ID	Water Quality Standard*	OSMW-3																				DUP-1	DUP-1
Unit	µg/L	µg/L																				µg/L	µg/L
Sample Date		01/10/12	10/16/13	03/24/14	06/19/14	09/24/14	11/05/14	06/24/15	12/17/15	05/12/16	10/12/16	06/13/17	11/14/17	05/16/18	10/18/18	03/28/19	12/04/19	03/09/20	11/18/20	06/17/21	11/19/21	11/05/14	11/14/17
Chlorinated Volatile Organic Compounds:																							
1,1,1-Trichloroethane	5.0	---	<80	---	<20	---	<50	<50	<100	<12	<25	<2.5	<25	<5.0	<62	<62	<120	<62	<50	<25	<25	<1.0	---
1,1,2,2-Tetrachloroethane	5.0	---	---	---	---	---	---	<10	<20	<2.5	<5.0	<0.5	<5.0	<1.0	<12	<12	<25	<12	<10	<5	<5	---	---
1,1,2-Trichloroethane	1.0	---	---	---	---	---	---	<30	<60	<7.5	<15	<1.5	<15	<3.0	<38	<38	<75	<38	<30	<15	<15	---	---
1,1-Dichloroethane	5.0	<5.0	<80	<1.0	<20	<20	<50	<50	<100	<12	<25	<2.5	<25	<5.0	<62	<62	<120	<62	<50	<25	<25	<1.0	<25
1,1-Dichloroethene	5.0	<5.0	<80	<1.0	<20	<20	<50	<10	<20	<2.5	<5.0	0.46 J	<5.0	<1.0	<12	<12	<25	<12	<10	<5	<5	1.4	<5.0
1,2-Dichloroethane	0.6	4.4 J	<80	4.7	<20	<20	<50	<10	<20	3.8	4.2 J	5.2	4.5 J,D	1.7	<12	3.9 J	<25	<12	4.7 J	4.8 J	5.1	3.5	4.3 J,D
cis-1,2-Dichloroethene	5.0	14	31 J	46	100	220	210	180	120 j	92	63	40	39 D	17	200	85	75 J	42 J+	42 J	32	33	210 D	39 D
trans-1,2-Dichloroethene	5.0	1.7 J	<80	3.7	<20	28	<50	25 J	<100	21	14 J	7.4	<25	<5.0	<62	<62	<120	<62	<50	<25	<25	26	7.1 J,D
1,2-Dichloropropane	1.0	---	---	---	---	---	---	<20	<40	<5.0	<10	<1.0	<10	<2.0	<25	<25	<50	<25	<20	<10	<10	---	---
Bromochloromethane	5.0	---	---	---	---	---	---	<50	<100	<12	<25	<2.5	<25	<5.0	<62	<62	<120	<62	<50	<25	<25	---	---
Bromodichloromethane	50	---	---	---	---	---	---	<10	<20	<2.5	<5.0	<0.5	<5.0	<1.0	<12	<12	<25	<12	<10	<5	<5	---	---
Carbon Tetrachloride	5.0	---	<80	---	<20	---	<50	<10	<20	<2.5	<5.0	<0.5	<5.0	<1.0	<12	<12	<25	<12	<10	<5	<5	<1.0	---
Chloroethane	5.0	---	---	---	---	---	---	<50	<100	<12	<25	<2.5	<25	<5.0	<62	<62	<120	<62	<50	<25	<25	---	---
Chloroform	7.0	---	<80	---	<20	---	<50	<50	<100	<12	<25	<2.5	<25	<5.0	<62	<62	<120	<62	<50	<25	<25	<1.0	---
Chloromethane	5.0	---	---	---	---	---	---	<50	<100	<12	<25	<2.5	<25	<5.0	<62	<62	<120	<62	<50	<25	<25	---	---
cis-1,3-Dichloropropene	0.4	---	---	---	---	---	---	<10	<20	<2.5	<5.0	<0.5	<5.0	<1.0	<12	<12	<25	<12	<10	<5	<5	---	---
Dibromochloromethane	50	---	---	---	---	---	---	<10	<20	<2.5	<5.0	<0.5	<5.0	<1.0	<12	<12	<25	<12	<10	<5	<5	---	---
Dichlorodifluoromethane	5.0	---	---	---	---	---	---	<100	<200	<25	<50	<5.0	<50	<10	<120	<120	<250	<120	<100	<50	<50	---	---
Freon-113	5.0	---	---	---	---	---	---	<50	<100	<12	<25	<2.5	<25	<5.0	<62	<62	<120	<62	<50	<25	<25	---	---
Methylene Chloride	5.0	---	<80	---	<20	---	<50	<50	<100	<12	<25	<2.5	<25	<5.0	<62	<62	<120	<62	<50	<25	<25	<1.0	---
Trichlorofluoromethane	5.0	---	---	---	---	---	---	<50	<100	<12	<25	<2.5	<25	<5.0	<62	<62	<120	<62	<50	<25	<25	---	---
Tetrachloroethene	5.0	760 D	1,900	2,400 D	1,300	2,600 D	3,400	1,500	1,200 j	670	470	620 D	750 D	220 J-	3,600	2,900	4,900	2,300	2,200	1,300	1,200	2,900 D	760 D
Trichloroethene	5.0	120	280	330 D	440	1,000	1,000	610	480 j	290	230	170 D	220 D	110	500	450	440	340	290	190	200	900 D	220 D
Vinyl chloride	2.0	<5.0	<80	<1.0	<20	<20	<50	<1.4 j	<40	0.44 J	<10	0.14 J	<10	<2.0	8.1 J	<25	<50	<25	<20	<10	<10	<1.0	<10
TOTAL CVOCs		900.1	2,211	2,784	1,840	3,848	4,610	2,315	1,800	1,077	781.2	843.2	1,014	348.7	4,308.1	3,438.9	5,415.0	2,682.0	2,536.7	1,526.8	1,438.1	4,041	1,030

Notes:

- BOLD** Indicates exceedance of groundwater standard
- * Groundwater Standards are obtained from Title 6 Part 703.5 and *Guidance Values* (GV) are obtained from NYSDEC TOGS (1.1.1) "Ambient Water Quality Standards and Guidance Values".
- < Indicates the parameter was not detected at or above laboratory's reporting limit shown.
- NA Not Analyzed.
-
- No standard or not applicable.

Laboratory Qualifiers:

- D Indicates the undiluted analysis exceeded the equipment calibration range. The concentration shown is obtained from a diluted analysis.
- J Indicates the concentration shown is an estimated value because the compound was detected below the reporting limit.

Data Usability Summary Report (DUSR) Qualifiers:

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- U Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.
- J+ The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high.
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Table 1, Cont.

Summary of Groundwater Analytical Data Results to Title 6 Part 703.5 Groundwater Standards and NYSDEC TOGS 1.1.1 Guidance Values

441 and 442 Waverly Avenue

Chlorinated Volatile Organic Compounds

Site #C360108

Well ID	Water Quality Standard*	OSMW-4																			DUP-1	DUP-1	DUP-1	DUP-1
Unit	µg/L	µg/L																			µg/L	µg/L	µg/L	µg/L
Sample Date		01/10/12	10/16/13	03/25/14	06/18/14	09/24/14	11/05/14	06/24/15	12/17/15	05/12/16	10/12/16	06/13/17	11/14/17	05/16/18	10/18/18	03/27/19	12/04/19	03/09/20	11/18/20	06/17/21	01/10/12	09/24/14	06/24/15	05/12/16
Chlorinated Volatile Organic Compounds:																								
1,1,1-Trichloroethane	5.0	---	<5.0	<25	<25	<1.0	<1.0	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<5.0	<2.5	<2.5	<2.5	<2.5	2.5 U	<2.5	---	<1.0	<2.5	<2.5
1,1,2,2-Tetrachloroethane	5.0	---	---	---	---	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	0.5 U	<0.5	---	---	<0.5	<0.5
1,1,2-Trichloroethane	1.0	---	---	---	---	---	---	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<3.0	<1.5	<1.5	<1.5	<1.5	1.5 U	<1.5	---	---	<1.5	<1.5
1,1-Dichloroethane	5.0	<5.0	<5.0	<25	<25	<1.0	<1.0	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<5.0	<2.5	<2.5	<2.5	<2.5	2.5 U	<2.5	<5.0	<1.0	<2.5	<2.5
1,1-Dichloroethene	5.0	<5.0	<5.0	<25	<25	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.5	<0.5	<0.5	<0.5	0.5 U	<0.5	<5.0	<1.0	<0.50	<0.50
1,2-Dichloroethane	0.6	1.1 J	<5.0	<25	<25	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.5	<0.5	<0.5	<0.5	0.5 U	<0.5	1.1 J	<1.0	<0.50	<0.50
cis-1,2-Dichloroethene	5.0	29	3.8 J	<25	<25	6.2	6.0	1.2 J	<2.5	<2.5	<2.5	<2.5	<2.5	<5.0	4.5	0.72 J	<2.5	<2.5	2.5 U	<2.5	29	5.2	1.2 J	<2.5
trans-1,2-Dichloroethene	5.0	6.9	1 J	<25	<25	<1.0	<1.0	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<5.0	1.3 J	<2.5	<2.5	<2.5	2.5 U	<2.5	7.2	<1.0	<2.5	<2.5
1,2-Dichloropropane	1.0	---	---	---	---	---	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1	<1	<1	1 U	<1	---	---	<1.0	<1.0
Bromochloromethane	5.0	---	---	---	---	---	---	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<5.0	<2.5	<2.5	<2.5	<2.5	2.5 U	<2.5	---	---	<2.5	<2.5
Bromodichloromethane	50	---	---	---	---	---	---	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	0.5 U	<0.5	---	---	<0.5	<0.5
Carbon Tetrachloride	5.0	---	<5.0	<25	<25	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	0.5 U	<0.5	---	<1.0	<0.5	<0.5
Chloroethane	5.0	---	---	---	---	---	---	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<5.0	<2.5	<2.5	<2.5	<2.5	2.5 U	<2.5	---	---	<2.5	<2.5
Chloroform	7.0	---	<5.0	<25	<25	<1.0	<1.0	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<5.0	<2.5	<2.5	<2.5	<2.5	2.5 U	<2.5	---	<1.0	<2.5	<2.5
Chloromethane	5.0	---	---	---	---	---	---	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<5.0	<2.5	<2.5	<2.5	<2.5	2.5 U	<2.5	---	---	<2.5	<2.5
cis-1,3-Dichloropropene	0.4	---	---	---	---	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	0.5 U	<0.5	---	---	<0.5	<0.5
Dibromochloromethane	50	---	---	---	---	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	0.5 U	<0.5	---	---	<0.5	<0.5
Dichlorodifluoromethane	5.0	---	---	---	---	---	---	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5	<5	<5	5 U	<5	---	---	<5.0	<5.0
Freon-113	5.0	---	---	---	---	---	---	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<5.0	<2.5	<2.5	<2.5	<2.5	2.5 U	<2.5	---	---	<2.5	<2.5
Methylene Chloride	5.0	---	<5.0	<25	33	<1.0	<1.0	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<5.0	<2.5	<2.5	<2.5	<2.5	2.5 U	<2.5	---	<1.0	<2.5	<2.5
Trichlorofluoromethane	5.0	---	---	---	---	---	---	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<5.0	<2.5	<2.5	<2.5	<2.5	2.5 U	<2.5	---	---	<2.5	<2.5
Tetrachloroethene	5.0	790 D	11	<25	<25	3.4	3.2	0.44 J	<0.50	0.2 J,j	2.0	1.1	0.25 J	<1.0 J	0.25 J	<0.5	<0.5	<0.5	0.5 U	<0.5	730 D	3.4	0.48 J	0.19 J,j
Trichloroethene	5.0	230 D	15	<25	<25	6.0	4.5	1.0	0.56	0.53	1.1	0.57	<0.50	<1.0	0.48 J	<0.5	<0.5	<0.5	0.39 J	<0.5	220 D	5.5	1.1	0.58
Vinyl chloride	2.0	<5.0	<5.0	<25	<25	<1.0	<1.0	<0.07 j	<1.0	<1.0	<1.0	<1.0 j	<1.0	<2.0	0.54 J	<1	<1	<1	1 U	<1	<5.0	<1.0	<1.0 j	<1.0
TOTAL CVOCs		1,057	30.8	ND	33	15.6	13.7	2.6	0.56	0.73	3.1	1.67	0.25	ND	7.07	0.72	ND	ND	0.39	ND	987	14.1	2.78	0.77

Notes:

- BOLD**Indicates exceedance of groundwater standard
- *Groundwater Standards are obtained from Title 6 Part 703.5 and *Guidance Values* (GV) are obtained from NYSDEC TOGS (1.1.1) "Ambient Water Quality Standards and Guidance Values".
- <Indicates the parameter was not detected at or above laboratory's reporting limit shown.
- NDNot Detected.
- No standard or not applicable.

Laboratory Qualifiers:

- DIndicates the undiluted analysis exceeded the equipment calibration range. The concentration shown is obtained from a diluted analysis.
- JIndicates the concentration shown is an estimated value because the compound was detected below the reporting limit.

Data Usability Summary Report (DUSR) Qualifiers:

- jReported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.
- UNot detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.
- J+The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high.
- J-The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low.
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Table 1, Cont.
Summary of Groundwater Analytical Data Results to Title 6 Part 703.5 Groundwater Standards and NYSDEC TOGS 1.1.1 Guidance Values
441 and 442 Waverly Avenue
Chlorinated Volatile Organic Compounds
Site #C360108

Well ID	Water Quality Standard*	OSMW-1		OSMW-2		DUP-1
Unit	µg/L	µg/L		µg/L		
Sample Date		01/10/12	03/28/19	01/10/12	03/28/19	03/28/19
Chlorinated Volatile Organic Compounds:						
1,1,1-Tricholoroethane	5.0	<5	<2.5	<5	<2.5	<2.5
1,1,2,2-Tetrachloroethane	5.0	NA	<0.5	NA	<0.5	<0.5
1,1,2-Trichloroethane	1.0	NA	<1.5	NA	<1.5	<1.5
1,1-Dichloroethane	5.0	<5	<2.5	<5	<2.5	<2.5
1,1-Dichloroethene	5.0	<5	<0.5	<5	<0.5	<0.5
1,2-Dichloroethane	0.6	<5	<0.5	<5	<0.5	<0.5
cis-1,2-Dichloroethene	5.0	<5	<2.5	1.1 J	<2.5	<2.5
trans-1,2-Dichloroethene	5.0	<5	<2.5	<5	<2.5	<2.5
1,2-Dichloropropane	1.0	NA	0.27 J	NA	<1	<1
Bromochloromethane	5.0	NA	<2.5	NA	<2.5	<2.5
Bromodichloromethane	50	NA	<0.5	NA	<0.5	<0.5
Carbon Tetrachloride	5.0	<5	<0.5	<5	<0.5	<0.5
Chloroethane	5.0	NA	<2.5	NA	<2.5	<2.5
Chloroform	7.0	<5	<2.5	<5	<2.5	<2.5
Chloromethane	5.0	NA	<2.5	NA	<2.5	<2.5
cis-1,3-Dichloropropene	0.4	NA	<0.5	NA	<0.5	<0.5
Dibromochloromethane	50	NA	<0.5	NA	<0.5	<0.5
Dichlorodifluoromethane	5.0	NA	<5	NA	<5	<5
Freon-113	5.0	NA	<2.5	NA	<2.5	<2.5
Methylene Chloride	5.0	<5	<2.5	<5	<2.5	<2.5
Trichlorofluoromethane	5.0	NA	<2.5	NA	<2.5	<2.5
Tetrachloroethene	5.0	<5	<0.5	<5	<0.5	<0.5
Trichloroethene	5.0	<5	<0.5	<5	<0.5	<0.5
Vinyl chloride	2.0	<5	<1	<5	<1	<1
TOTAL CVOCs		0	0.27	1.1 J	0	0

Notes:

- BOLD** Indicates exceedance of groundwater standard
- *

Groundwater Standards are obtained from Title 6 Part 703.5 and *Guidance Values* (GV) are obtained from NYSDEC TOGS (1.1.1) "Ambient Water Quality Standards and Guidance Values".
- <

Indicates the parameter was not detected at or above laboratory's reporting limit shown.
- NA

Not Analyzed.
- No standard or not applicable.

Laboratory Qualifiers:

- D

Indicates the undiluted analysis exceeded the equipment calibration range. The concentration shown is obtained from a diluted analysis.
- J

Indicates the concentration shown is an estimated value because the compound was detected below the reporting limit.

Data Usability Summary Report (DUSR) Qualifiers:

- j

Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.
- U

Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.
- J+

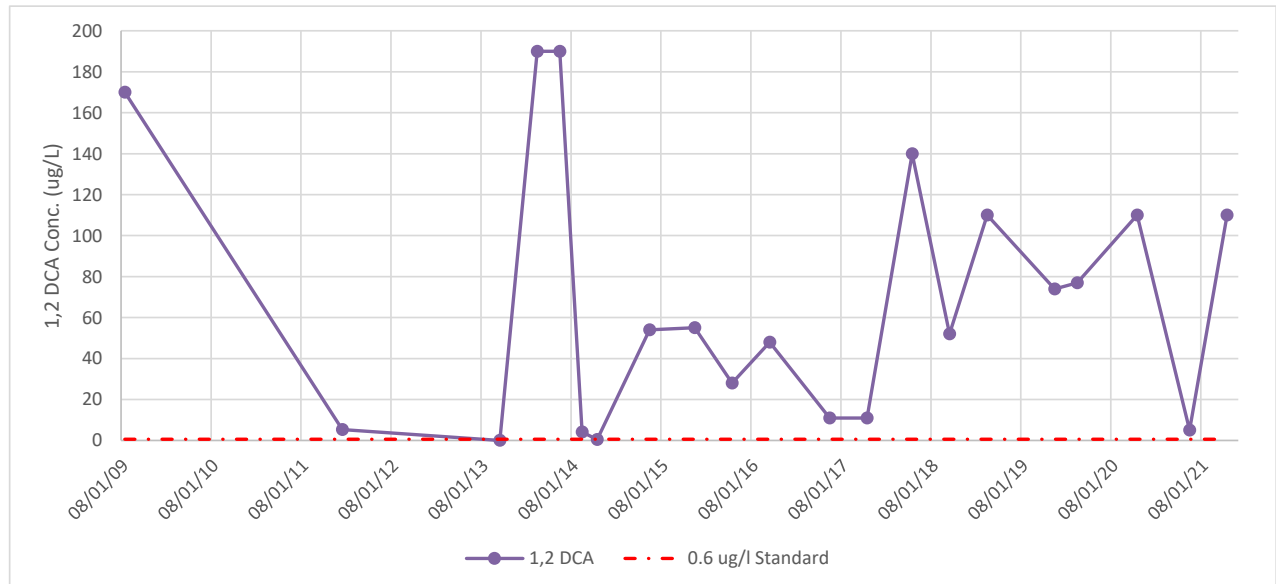
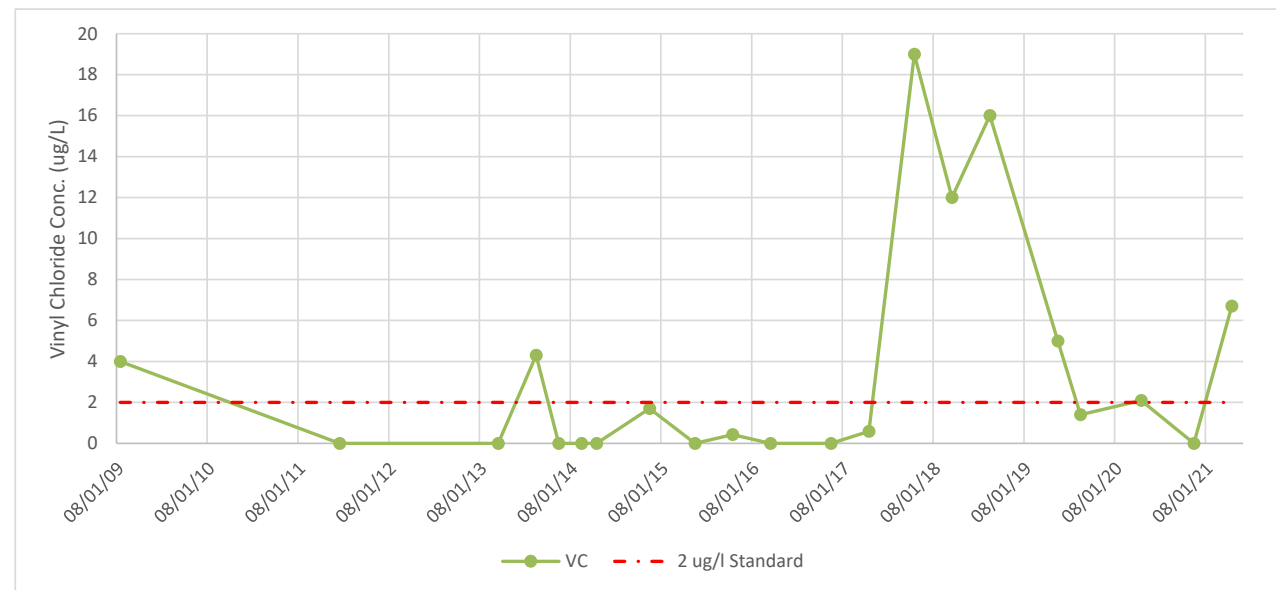
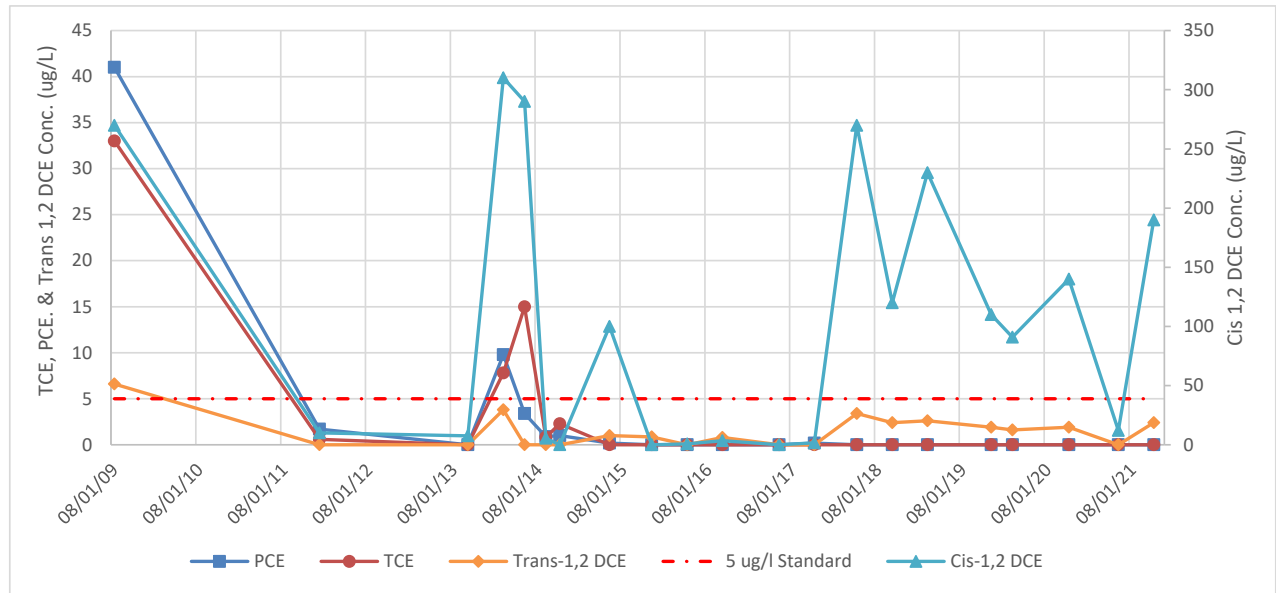
The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high.
- J-

The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low.
- UJ

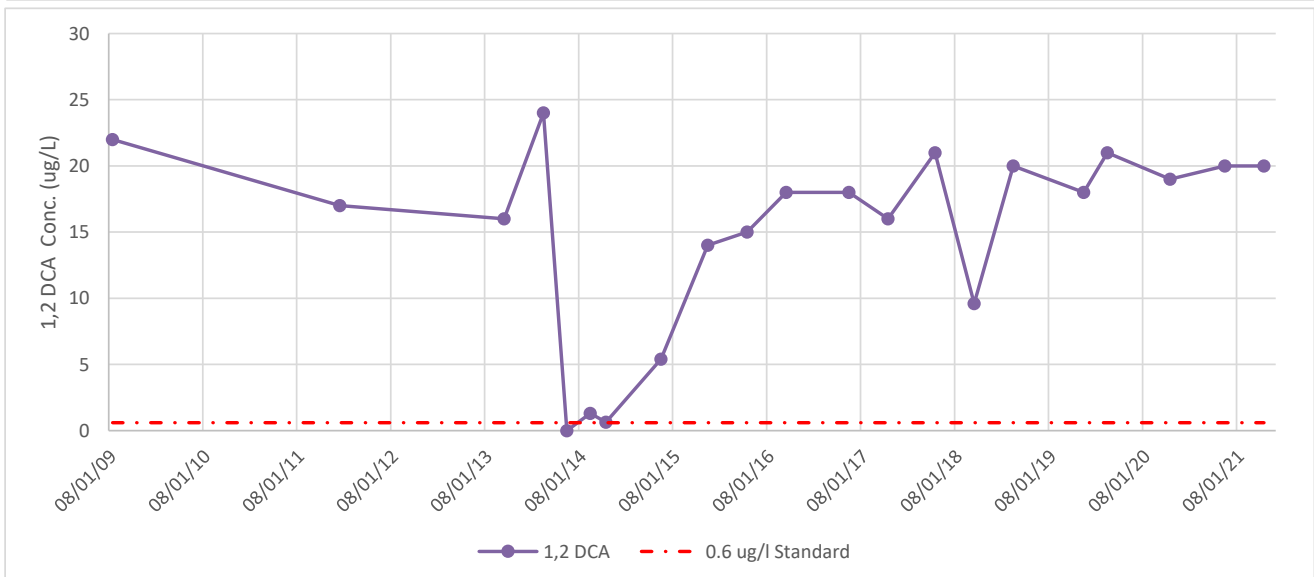
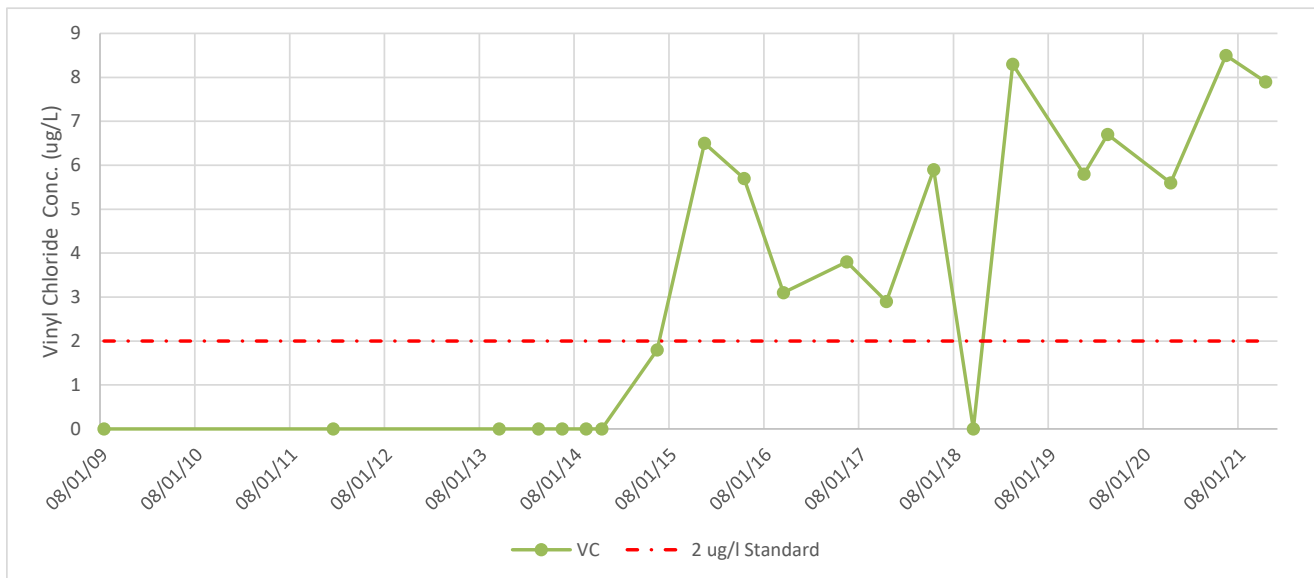
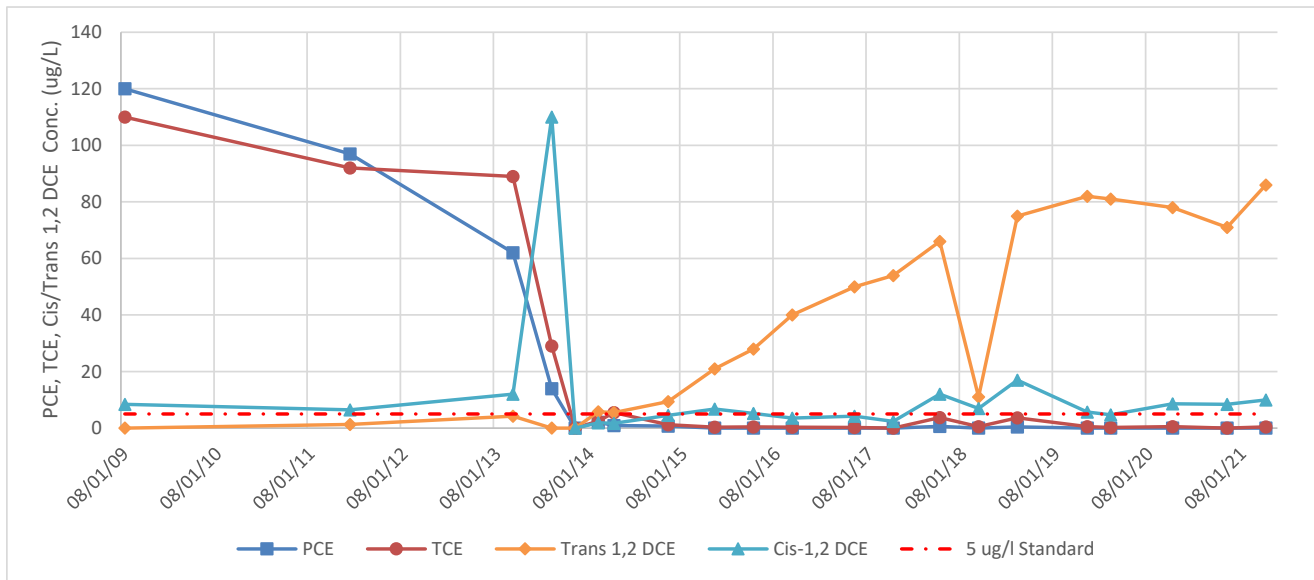
The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.

DATA TREND GRAPHS

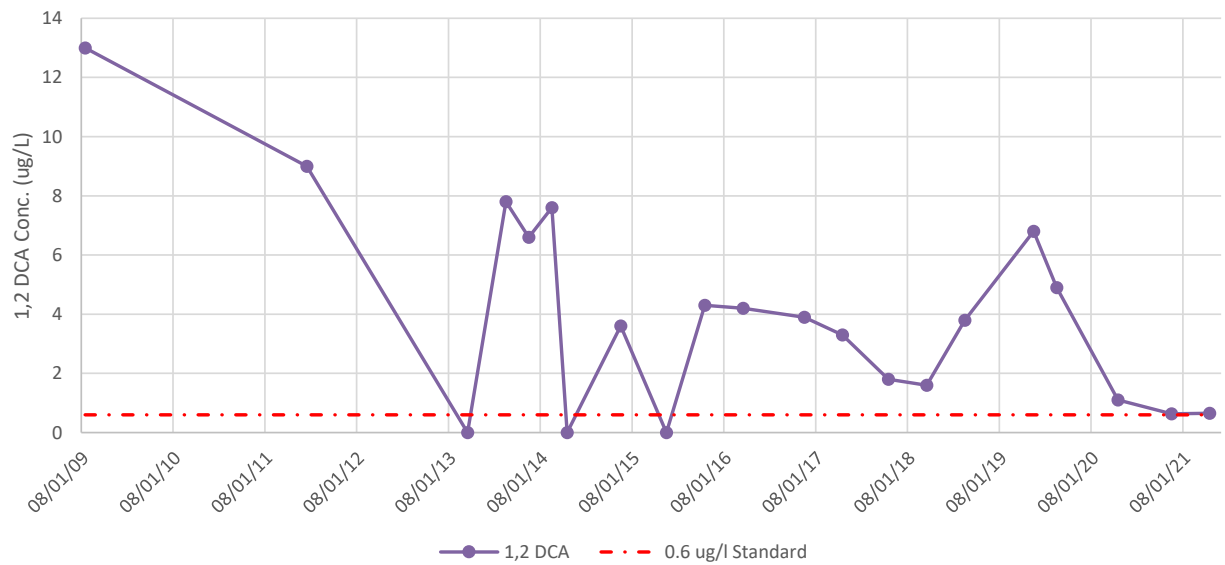
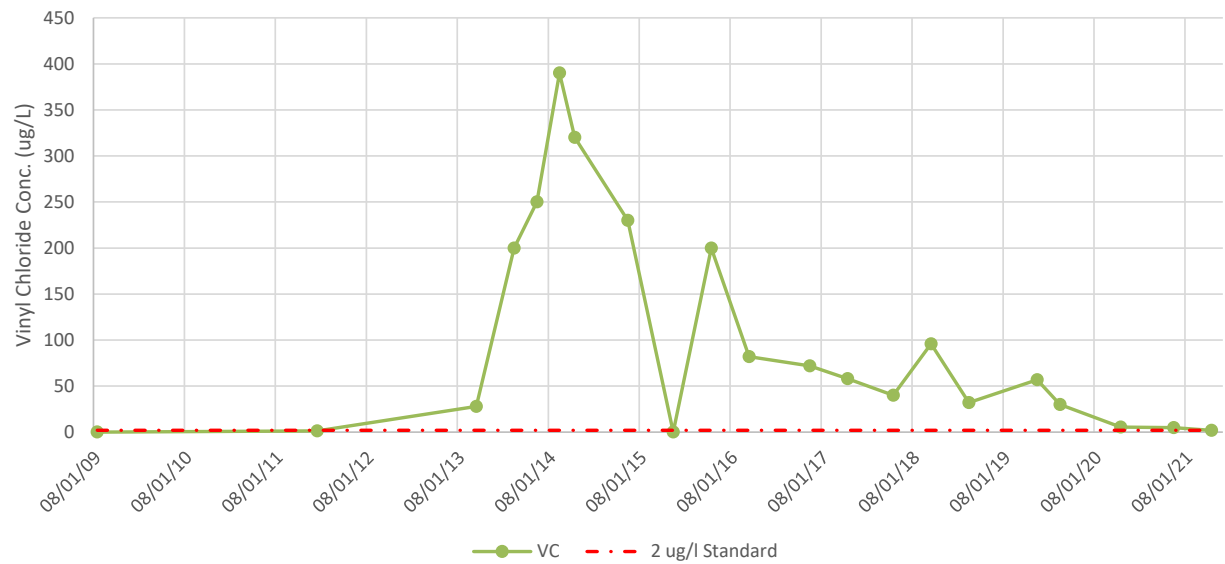
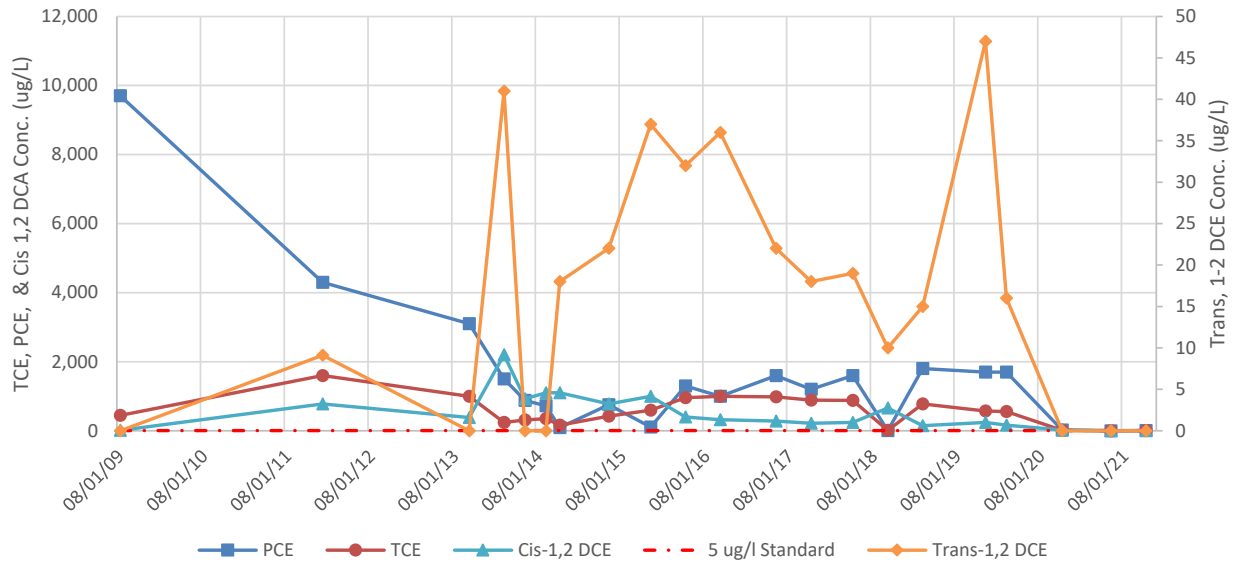
**Groundwater Quality Trends
Monitoring Well GZ-21D
441 and 442 Waverly Avenue**



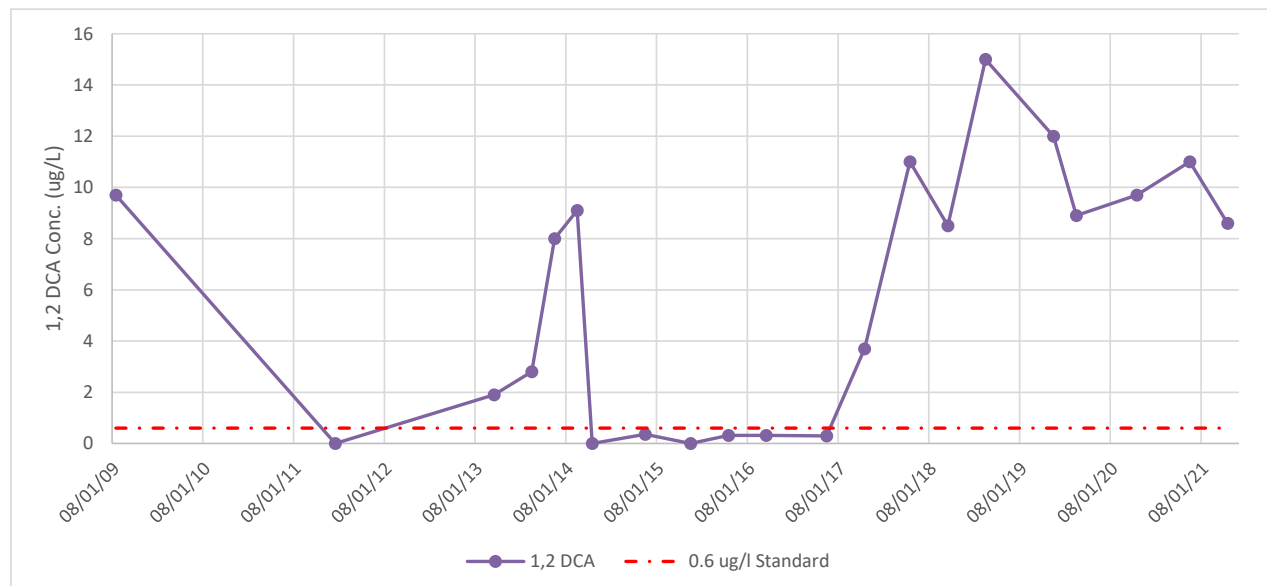
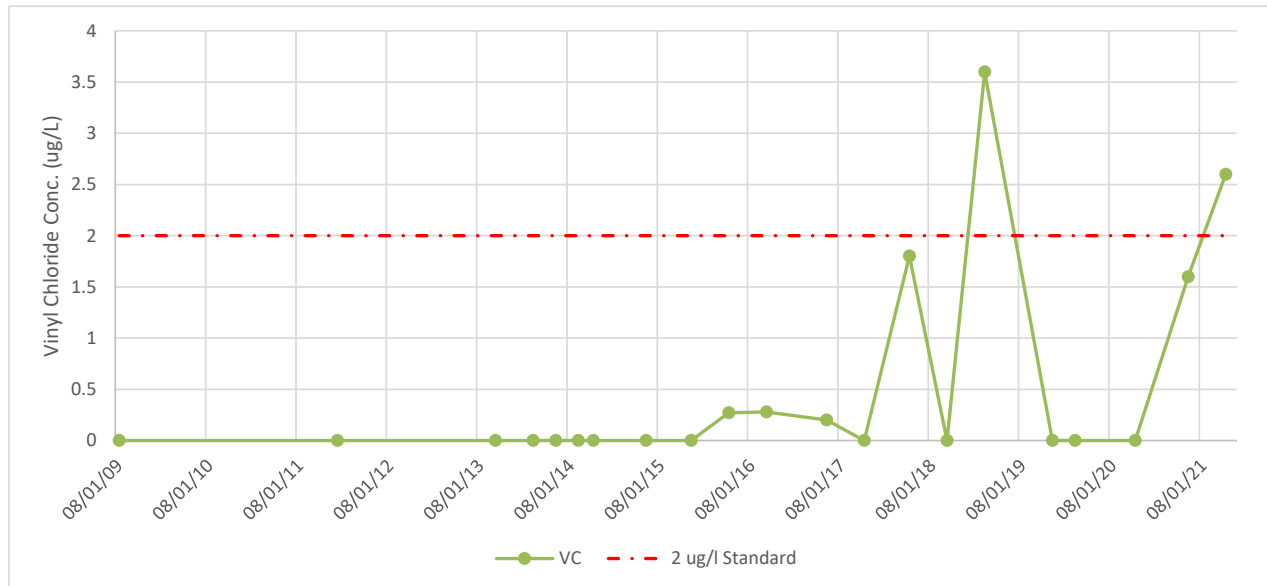
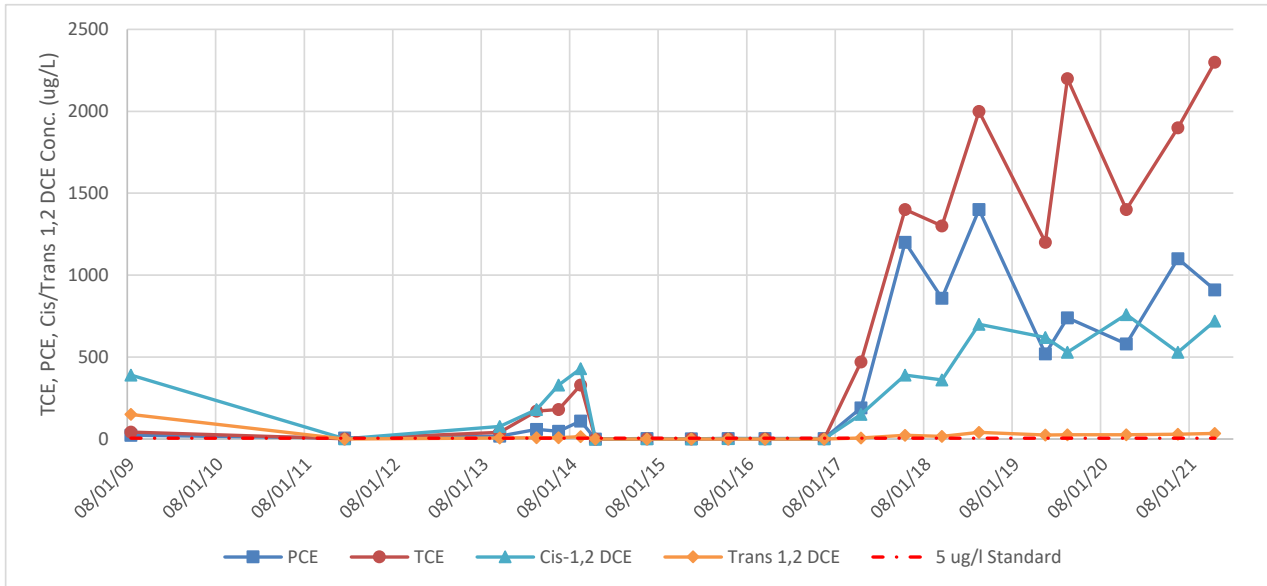
**Groundwater Quality Trends
Monitoring Well GZ-22D
441 and 442 Waverly Avenue**



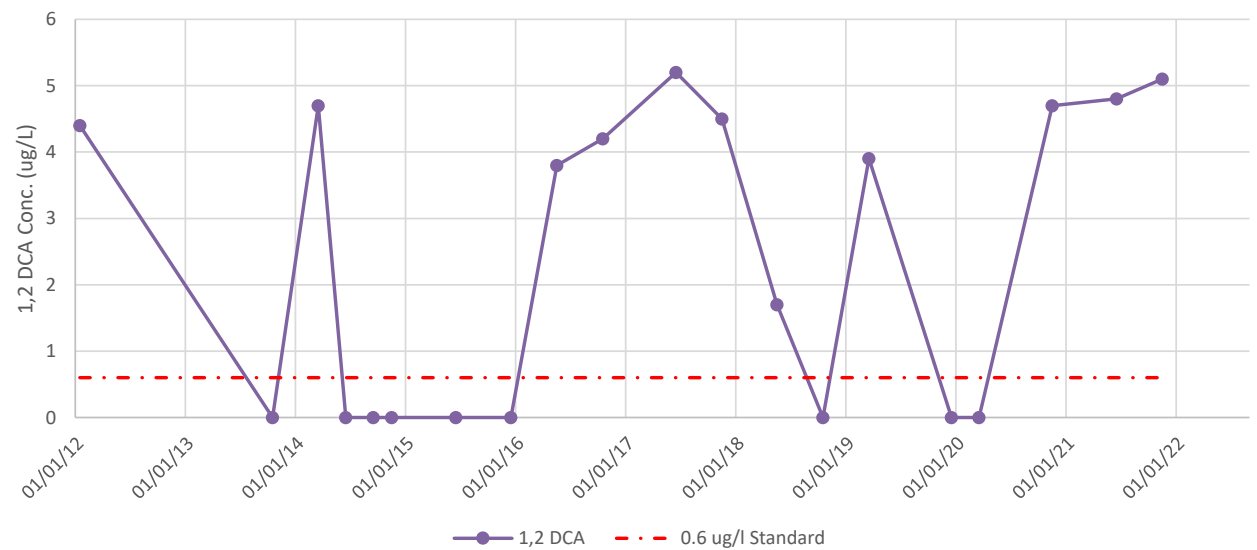
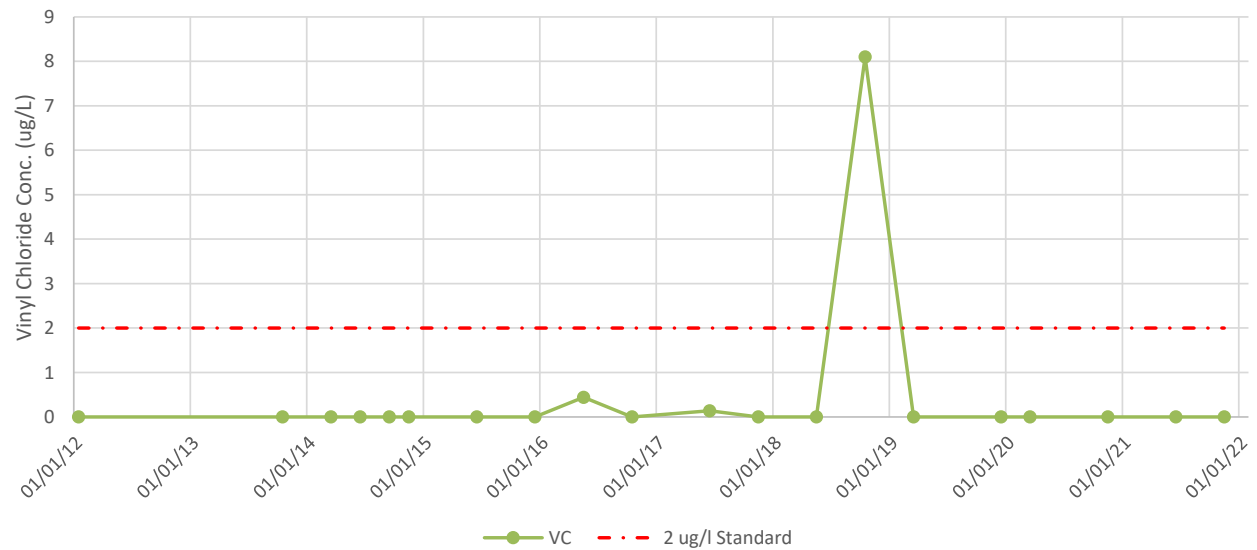
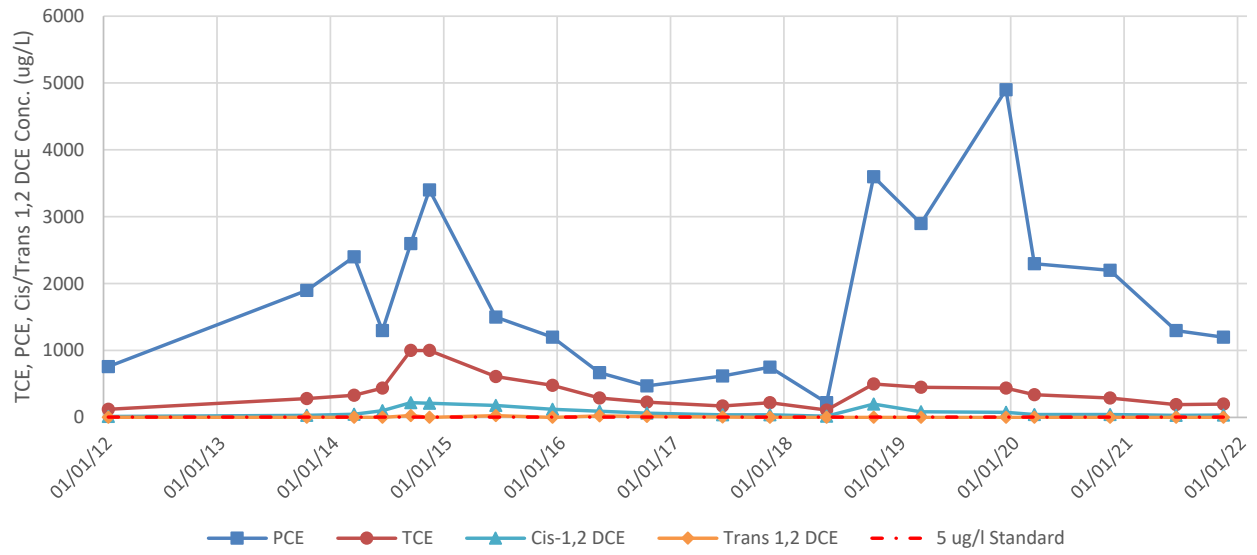
**Groundwater Quality Trends
Monitoring Well GZ-23D
441 and 442 Waverly Avenue**



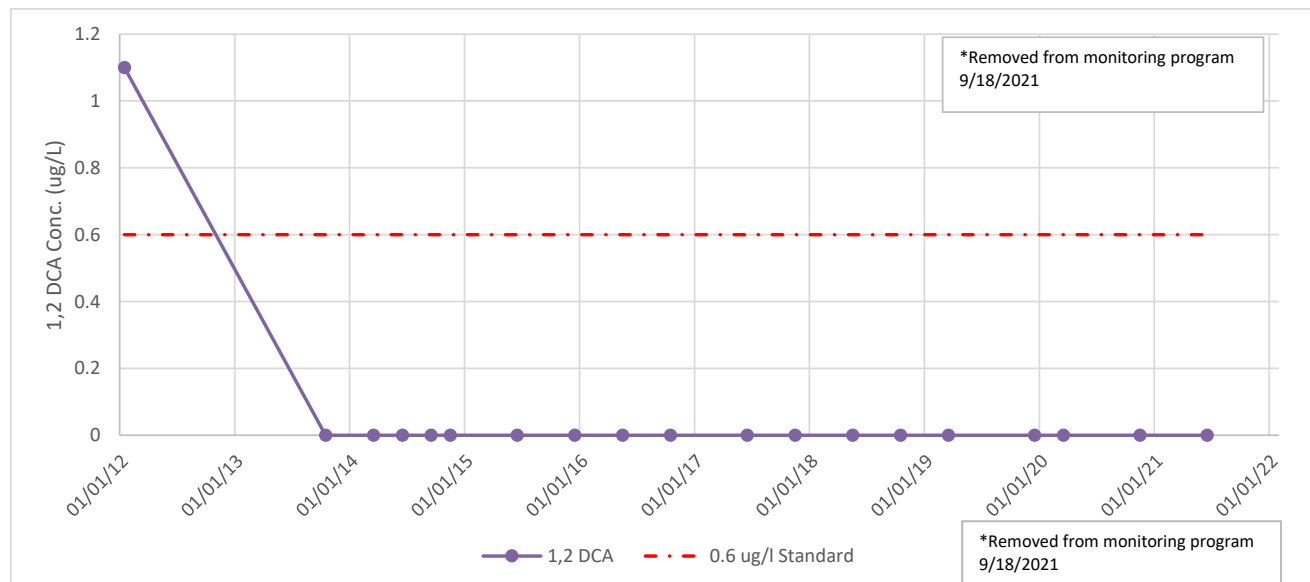
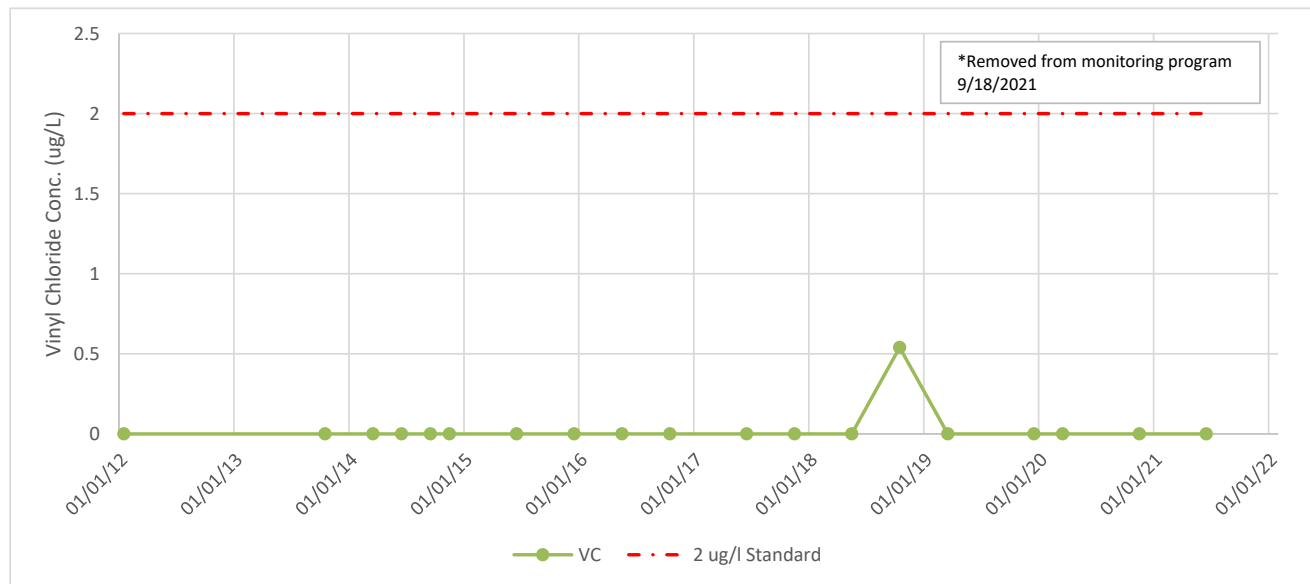
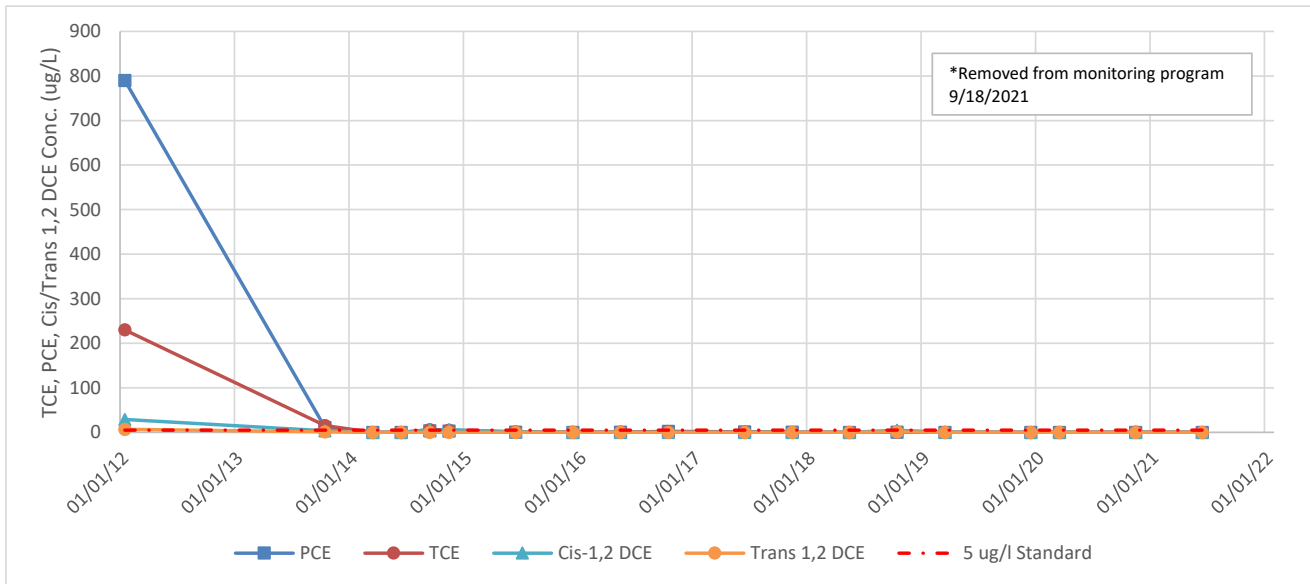
**Groundwater Quality Trends
Monitoring Well B6-OWD
441 and 442 Waverly Avenue**



**Groundwater Quality Trends
Monitoring Well OSMW-3
441 and 442 Waverly Avenue**



**Groundwater Quality Trends
Monitoring Well OSMW-4
441 and 442 Waverly Avenue**



**NYSDEC CORRESPONDENCE
DATED SEPTEMBER 9, 2021**

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau C

625 Broadway, 12th Floor, Albany, NY 12233-7014

P: (518) 402-9662 | F: (518) 402-9679

www.dec.ny.gov

Via Electronic Mail Only

September 9, 2021

Mr. Andrew M. Millspaugh, P.E.
(andrew.millspaugh@sterlingenvironmental.com)

Vice President

Sterling Environmental Engineering, P.C.

24 Wade Road

Latham, NY 12110

**Re: Revised 2020 Periodic Review Report and
Revised 2nd Semiannual 2020 Groundwater Monitoring Report
Former M. Argueso and Co., Inc. Site
NYSDEC Site No. C360108
Mamaroneck, Westchester County, NY**

Dear Mr. Millspaugh:

The New York State Department of Environmental Conservation (NYSDEC) has reviewed the revised submittals *Periodic Review Report (PRR)* and *IC/EC Certification (January 15, 2020 through January 14, 2021)* and *2nd Semiannual 2020 Groundwater Monitoring Report* (report), both dated May 14, 2021, for the above-referenced site. Based on our review, the NYSDEC's requested modifications to both documents have been adequately addressed.

In response to your recommendations included in the PRR, and considering the current site groundwater conditions, we offer/request the following regarding the site monitoring program:

1. Since chlorinated volatile organic compound (CVOC) levels in upgradient well OSMW-4 have consistently remained below ambient water quality standards (AWQS), the NYSDEC concurs continued monitoring of this well is no longer necessary at this time.
2. Beginning in 2022, the groundwater monitoring frequency for VOCs can be reduced from semi-annual (every six months) to once every nine months.
3. Due to the presence of emerging contaminants (PFAS and 1,4-dioxane) in site groundwater above the state's screening levels, future monitoring of site groundwater will include emerging contaminants at a frequency of once every three years (once every four monitoring events).

4. Cover system and site-wide inspections will continue to be performed at a minimum of once a year and included in the PRR.
5. Following submittal of the 2021 PRR, the certification period can be extended from one to two years and future PRRs be submitted once every two years.
6. Based on the elevated levels of CVOCs that persist on-site, the NYSDEC is requesting additional remedial actions be taken to further reduce CVOC levels in site groundwater.

Should you have any questions or wish to discuss any of the items above, please feel free to contact me at (518) 402-9652, or e-mail at daniel.lanners@dec.ny.gov.

Sincerely,

A handwritten signature in blue ink that reads "Daniel R. Lanners". The signature is fluid and cursive, with the first name "Daniel" being more prominent.

Daniel R. Lanners, P.E.
Project Manager
Remedial Bureau C, Section D
Division of Environmental Remediation

cc: Amen Omorogbe – NYSDEC
Maureen Schuck – NYSDOH
Angela Martin – NYSDOH
Stephen Lawrence – NYSDOH
T.J. Milo, New Waverly Avenue Associates, LLC; (tjnilo0997@gmail.com)
Jennifer DiCerbo, Sterling; (jennifer.dicerbo@sterlingenvironmental.com)
DECDocs

DAILY FIELD REPORT



Sterling Environmental Engineering, P.C.

DAILY FIELD REPORT

Project Name: 441 & 442 Waverly Avenue Project No: 28012
 Client Name: TJ Milo Date: 11-19-2021
 Location: Mamaroneck, NY Personnel: PWS - Paul Scholer
 Weather: 30-42°F sunny, windy

Work Description:

945 - PWS onsite; collect GW depth to water at
 offsite monitoring wells. Calibrate YSI Pro DSS
 1030 - Setup at GZ-22D
 1105 - Sample GZ-22D
 1110 - Collect DUP11192021 at GZ-22D
 1130 - Inspect onsite building floor, No cracks or
 damage to floor observed.
 1230 - Sample GZ-21D
 1305 - Sample GZ-23D, sweet odor, red coloration
 during first purge
 1310 - Collect GZ-23D MS 1315 - Collect GZ-23D MSD
 1320 - Inspect asphalt on 441 and 442 Waverly Ave.
 Minor cracks noted. Similar to 2020 inspection.
 1355 - Sample OSMW-3
 1435 - Sample BG-OWD
 1445 - containerize purge water. Perform Bottle
 check
 1530 - Final asphalt inspection. No deficiencies
 1600 - PWS offsite

Signature: 

Page 1 of 1

PURGING/SAMPLING DATA SHEETS

441/442 Waverly Avenue –Semiannual Groundwater Sampling Event

Name: Paul Scholar

Date: 11/19/2021

Event: 1st / 2nd

Well I.D.	Total Well Depth (feet below measuring point)	Measuring Point Elevation (to inner riser mark from datum)	Depth to Water (feet below measuring point)	Ground Water Elevation	Color	Odor	Sheen
OSMW-4	35.62	31.27	9.14	22.13	NA	NA	NA
GZ-21D	44.21	29.79	7.94	21.85	Clear	None	None
GZ-22D	46.04	30.87	9.05	21.82	Clear	None	None
B6-OWD	35.30	30.15	7.78	22.37	Clear	None	None
OSMW-3	39.40	30.88	8.83	22.05	Clear	Sweet	None
GZ-23D*	44.86	31.41	9.80	21.61	Clear	Sweet	None
OSMW-1	36.24	31.05	9.18	21.87	NA	NA	NA
OSMW-2	40.84	31.29	9.04	22.25	NA	NA	NA

*Adjusted +0.31 to Ground Water Elevation at Well GZ-23 to account for 30° bend in monitoring well.

Well Sampling Data Sheet

Project: 441 & 442 Waverly Avenue
 Site: Mamaroneck, NY
 Date: 11-19-2021
 Sampling Personnel: PWS
 Sampling Device: Bladder Pump
 Static Water Level: 9.05
 Measuring Point: Top of PVC
 Total Volume Purged: 4L

Well No.: GZ-22D
 Sample Time: 1105
 Well Depth: 46.0'
 Well Diameter: 2"
 Screen Length: 5'
 Casing Type: Steel
 Tubing Type: 1/4" LDPE
 Other Info: NA

Time	Pump Rate (L/min.)	Depth to Water (ft.)	Drawdown (< 1m)	pH (± 0.1)	Temp. (°C) (± 3%)	SC (mS/cm) (± 3%)	ORP (mV) (± 10)	DO (mg/L) (± 10%)	Turbidity (nTu) (± 10%)
1050	0.200	9.05	NA	6.98	14.8	0.859	-107.6	1.05	7.63
1055	0.200	9.21	0.16	7.19	14.9	0.837	-138.4	0.43	10.66
1100	0.200	9.22	0.01	7.20	14.8	0.838	-140.0	0.36	12.30
1105	0.200	9.22	0.00	7.20	14.9	0.841	-142.1	0.29	10.28

Notes: Clear, No Odor, No Sheen

Types of Samples Collected: VOCs

Information: 2 in. = 617 ml/ft., 4 in. = 2,470 ml/ft., $\text{Vol}_{\text{cyl}} = \pi r^2 h$, 1 ft³ = 7.48 gal./28.31L

Well Sampling Data Sheet

Project: 441 & 442 Waverly Avenue
 Site: Mamaroneck, NY
 Date: 11-19-2021
 Sampling Personnel: PWS
 Sampling Device: Bladder Pump
 Static Water Level: 7.94
 Measuring Point: Top of PVC
 Total Volume Purged:

Well No.: GZ-21D
 Sample Time: ~~1230~~ 1230
 Well Depth: 44.21'
 Well Diameter: 2"
 Screen Length: 5'
 Casing Type: Steel
 Tubing Type: 1/4" LDPE
 Other Info: NA

Time	Pump Rate (L/min.)	Depth to Water (ft.)	Drawdown (< 1m)	pH (± 0.1)	Temp. (°C) (± 3%)	SC (mS/cm) (± 3%)	ORP (mV) (± 10)	DO (mg/L) (± 10%)	Turbidity (nTu) (± 10%)
1205	0.200	7.94	NA	6.32	14.1	0.171	-33.1	2.33	8.10
1210	0.200	8.39	0.45	6.72	15.8	0.835	-51.0	1.56	12.06
1215	0.200	8.39	0.0	7.02	15.5	1.843	-60.0	1.05	16.80
1220	0.200	8.39	0.0	7.10	15.5	1.850	-72.7	0.80	15.05
1225	0.200	8.39	0.0	7.10	15.5	1.898	-74.3	0.89	20.01
1230	0.200	8.39	0.0	7.11	15.3	1.903	-75.4	0.96	18.78

Notes: Clear, No Odors, No Sheen

Types of Samples Collected: VOCs

Information: 2 in. = 617 ml/ft., 4 in. = 2,470 ml/ft., Vol_{cyl} = π r²h, 1 ft³ = 7.48 gal./28.31L

Well Sampling Data Sheet

Project: 441 & 442 Waverly Avenue
 Site: Mamaroneck, NY
 Date: 11-19-2021
 Sampling Personnel: PWS
 Sampling Device: ~~Water~~ Peristaltic
 Static Water Level: 9.80
 Measuring Point: Top of PVC
 Total Volume Purged: 5L

Well No.: GZ-23D
 Sample Time: 1305
 Well Depth: 44.86'
 Well Diameter: 2"
 Screen Length: 5'
 Casing Type: Steel
 Tubing Type:
 Other Info: Bends in Well

Time	Pump Rate (L/min.)	Depth to Water (ft.)	Drawdown (<1m)	pH (± 0.1)	Temp. (°C) (± 3%)	SC (mS/cm) (± 3%)	ORP (mV) (± 10)	DO (mg/L) (± 10%)	Turbidity (nTu) (± 10%)
1245	0.200	9.80	NA	6.66	17.4	0.521	-113.9	0.31	139.25
1250	0.200	9.86	0.06	6.66	17.4	0.521	-114.5	0.30	24.91
1255	0.200	9.87	0.01	6.65	17.3	0.521	-119.8	0.44	13.51
1300	0.200	9.87	0.00	6.65	17.3	0.521	-124.9	0.34	12.73
1305	0.200	9.87	0.00	6.64	17.4	0.521	-125.7	0.30	11.37

Notes: Sweet smell. Clear. No Sleep
 Water ~~Red~~ Red during first purge.

Types of Samples Collected:

VOCs

GZ-23D MS @ 1310
 GZ-23D MSD @ 1315

Information: 2 in. = 617 ml/ft., 4 in. = 2,470 ml/ft., Vol_{cyl} = π r²h, 1 ft³ = 7.48 gal./28.31L

Well Sampling Data Sheet

Project: 441 & 442 Waverly Avenue
 Site: Mamaroneck, NY
 Date: 11-19-2021
 Sampling Personnel: PWS
 Sampling Device: Bailer
 Static Water Level: 8.83
 Measuring Point: Top of PVC
 Total Volume Purged: 3 gallons

Well No.: OSMW-3
 Sample Time: 1355
 Well Depth: 39.40'
 Well Diameter: 1"
 Screen Length: NA
 Casing Type: Steel
 Tubing Type: NA
 Other Info: NA

Time	Pump Rate (L/min.)	Depth to Water (ft.)	Drawdown (< 1m)	pH (± 0.1)	Temp. (°C) (± 3%)	SC (mS/cm) (± 3%)	ORP (mV) (± 10)	DO (mg/L) (± 10%)	Turbidity (nTu) (± 10%)
1340	NA	NA	NA	7.22	15.2	0.816	-35.9	8.00	16.72
1345	NA	NA	NA	7.29	15.5	0.391	-45.3	6.63	40.73
1355	NA	NA	NA	7.47	15.5	0.805	-40.9	9.16	54.66

Notes: Clear, Sweet odor, No smell

Types of Samples Collected: VOCs

Information: 2 in. = 617 ml/ft., 4 in. = 2,470 ml/ft., Vol_{cyl} = π r²h, 1 ft³ = 7.48 gal./28.31L

Well Sampling Data Sheet

Project: 441 & 442 Waverly Avenue
 Site: Mamaroneck, NY
 Date: 11-19-2021
 Sampling Personnel: PWS
 Sampling Device: Peristaltic Pump
 Static Water Level: 8.78
 Measuring Point: Top of PVC
 Total Volume Purged: 5L

Well No.: B6-OWD
 Sample Time: 1435
 Well Depth: 36.05'
 Well Diameter: 2"
 Screen Length: 5'
 Casing Type: PVC
 Tubing Type: 1/4" HDPE
 Other Info: NA

Time	Pump Rate (L/min.)	Depth to Water (ft.)	Drawdown (< 1m)	pH (± 0.1)	Temp. (°C) (± 3%)	SC (mS/cm) (± 3%)	ORP (mV) (± 10)	DO (mg/L) (± 10%)	Turbidity (nTu) (± 10%)
1415	0.200	8.78	NA	7.18	15.5	1.640	-52.5	2.19	30.74
1420	0.200	10.34	1.56	7.14	15.8	1.675	-76.6	0.44	4.98
1425	0.200	10.38	0.04	7.16	15.7	1.672	-84.3	0.30	7.03
1430	0.200	10.40	0.02	7.17	15.6	1.672	-82.0	0.21	11.95
1435	0.200	10.40	0.0	7.19	15.5	1.685	-86.8	0.19	12.00

Notes: Clear, No Odor, No Sludge

Types of Samples Collected: VOCs

Information: 2 in. = 617 ml/ft., 4 in. = 2,470 ml/ft., Vol_{cyl} = π r²h, 1 ft³ = 7.48 gal./28.31L

24 Wade Road
Latham, N.Y. 12110

Project No. 28012

Weather: 30-42°F Sunny, Windy

Measuring Device: Depth to Water Meter[illegible]

**LABORATORY ANALYSIS REPORT
AND
DATA USABILITY SUMMARY REPORT (DUSR)**



ANALYTICAL REPORT

Lab Number:	L2164369
Client:	Sterling Environmental Engineering 24 Wade Road Latham, NY 12110
ATTN:	Andrew Millspaugh
Phone:	(518) 456-4900
Project Name:	441 & 442 WAVERLY AVE
Project Number:	28012
Report Date:	12/07/21

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: 441 &442 WAVERLY AVE
Project Number: 28012

Lab Number: L2164369
Report Date: 12/07/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2164369-01	GZ-22D	WATER	MAMARONECK, NY	11/19/21 11:05	11/19/21
L2164369-02	GZ-21D	WATER	MAMARONECK, NY	11/19/21 12:30	11/19/21
L2164369-03	GZ-23D	WATER	MAMARONECK, NY	11/19/21 13:05	11/19/21
L2164369-04	OSMW-3	WATER	MAMARONECK, NY	11/19/21 13:55	11/19/21
L2164369-05	B6-OWD	WATER	MAMARONECK, NY	11/19/21 14:35	11/19/21
L2164369-06	TB11192021	WATER	MAMARONECK, NY	11/19/21 00:00	11/19/21
L2164369-07	DUP11192021	WATER	MAMARONECK, NY	11/19/21 00:00	11/19/21

Project Name: 441 &442 WAVERLY AVE
Project Number: 28012

Lab Number: L2164369
Report Date: 12/07/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: 441 &442 WAVERLY AVE
Project Number: 28012

Lab Number: L2164369
Report Date: 12/07/21

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Cristin Walker

Title: Technical Director/Representative

Date: 12/07/21

ORGANICS

VOLATILES

Project Name: 441 &442 WAVERLY AVE
Project Number: 28012

Lab Number: L2164369
Report Date: 12/07/21

SAMPLE RESULTS

Lab ID: L2164369-01
Client ID: GZ-22D
Sample Location: MAMARONECK, NY

Date Collected: 11/19/21 11:05
Date Received: 11/19/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 11/29/21 15:56
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	20		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	2.3		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	7.9		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	86		ug/l	2.5	0.70	1
Trichloroethene	0.39	J	ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: 441 &442 WAVERLY AVE

Lab Number: L2164369

Project Number: 28012

Report Date: 12/07/21

SAMPLE RESULTS

Lab ID: L2164369-01

Date Collected: 11/19/21 11:05

Client ID: GZ-22D

Date Received: 11/19/21

Sample Location: MAMARONECK, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	0.80	J	ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	10		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	1.2	J	ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	0.61	J	ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	91		70-130
Dibromofluoromethane	104		70-130

Project Name: 441 &442 WAVERLY AVE
Project Number: 28012

Lab Number: L2164369
Report Date: 12/07/21

SAMPLE RESULTS

Lab ID: L2164369-02 D
Client ID: GZ-21D
Sample Location: MAMARONECK, NY

Date Collected: 11/19/21 12:30
Date Received: 11/19/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 11/29/21 16:16
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	5.0	1.4	2
1,1-Dichloroethane	ND		ug/l	5.0	1.4	2
Chloroform	ND		ug/l	5.0	1.4	2
Carbon tetrachloride	ND		ug/l	1.0	0.27	2
1,2-Dichloropropane	ND		ug/l	2.0	0.27	2
Dibromochloromethane	ND		ug/l	1.0	0.30	2
1,1,2-Trichloroethane	ND		ug/l	3.0	1.0	2
Tetrachloroethene	ND		ug/l	1.0	0.36	2
Chlorobenzene	ND		ug/l	5.0	1.4	2
Trichlorofluoromethane	ND		ug/l	5.0	1.4	2
1,2-Dichloroethane	110		ug/l	1.0	0.26	2
1,1,1-Trichloroethane	ND		ug/l	5.0	1.4	2
Bromodichloromethane	ND		ug/l	1.0	0.38	2
trans-1,3-Dichloropropene	ND		ug/l	1.0	0.33	2
cis-1,3-Dichloropropene	ND		ug/l	1.0	0.29	2
Bromoform	ND		ug/l	4.0	1.3	2
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.33	2
Benzene	0.61	J	ug/l	1.0	0.32	2
Toluene	ND		ug/l	5.0	1.4	2
Ethylbenzene	ND		ug/l	5.0	1.4	2
Chloromethane	ND		ug/l	5.0	1.4	2
Bromomethane	ND		ug/l	5.0	1.4	2
Vinyl chloride	6.7		ug/l	2.0	0.14	2
Chloroethane	ND		ug/l	5.0	1.4	2
1,1-Dichloroethene	ND		ug/l	1.0	0.34	2
trans-1,2-Dichloroethene	2.4	J	ug/l	5.0	1.4	2
Trichloroethene	ND		ug/l	1.0	0.35	2
1,2-Dichlorobenzene	ND		ug/l	5.0	1.4	2

Project Name: 441 &442 WAVERLY AVE

Lab Number: L2164369

Project Number: 28012

Report Date: 12/07/21

SAMPLE RESULTS

Lab ID: L2164369-02 D

Date Collected: 11/19/21 12:30

Client ID: GZ-21D

Date Received: 11/19/21

Sample Location: MAMARONECK, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	5.0	1.4	2
1,4-Dichlorobenzene	ND		ug/l	5.0	1.4	2
Methyl tert butyl ether	ND		ug/l	5.0	1.4	2
p/m-Xylene	ND		ug/l	5.0	1.4	2
o-Xylene	ND		ug/l	5.0	1.4	2
cis-1,2-Dichloroethene	190		ug/l	5.0	1.4	2
Styrene	ND		ug/l	5.0	1.4	2
Dichlorodifluoromethane	ND		ug/l	10	2.0	2
Acetone	ND		ug/l	10	2.9	2
Carbon disulfide	ND		ug/l	10	2.0	2
2-Butanone	ND		ug/l	10	3.9	2
4-Methyl-2-pentanone	ND		ug/l	10	2.0	2
2-Hexanone	ND		ug/l	10	2.0	2
Bromochloromethane	ND		ug/l	5.0	1.4	2
1,2-Dibromoethane	ND		ug/l	4.0	1.3	2
1,2-Dibromo-3-chloropropane	ND		ug/l	5.0	1.4	2
Isopropylbenzene	ND		ug/l	5.0	1.4	2
1,2,3-Trichlorobenzene	ND		ug/l	5.0	1.4	2
1,2,4-Trichlorobenzene	ND		ug/l	5.0	1.4	2
Methyl Acetate	ND		ug/l	4.0	0.47	2
Cyclohexane	ND		ug/l	20	0.54	2
1,4-Dioxane	ND		ug/l	500	120	2
Freon-113	ND		ug/l	5.0	1.4	2
Methyl cyclohexane	ND		ug/l	20	0.79	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	90		70-130
Dibromofluoromethane	109		70-130

Project Name: 441 &442 WAVERLY AVE
Project Number: 28012

Lab Number: L2164369
Report Date: 12/07/21

SAMPLE RESULTS

Lab ID: L2164369-03
Client ID: GZ-23D
Sample Location: MAMARONECK, NY

Date Collected: 11/19/21 13:05
Date Received: 11/19/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 11/29/21 16:36
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	4.6		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	0.65		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	7.2		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	2.0		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	3.4		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: 441 &442 WAVERLY AVE

Lab Number: L2164369

Project Number: 28012

Report Date: 12/07/21

SAMPLE RESULTS

Lab ID: L2164369-03

Date Collected: 11/19/21 13:05

Client ID: GZ-23D

Date Received: 11/19/21

Sample Location: MAMARONECK, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	5.7		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	ND		ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	ND		ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	86		70-130
Dibromofluoromethane	102		70-130

Project Name: 441 &442 WAVERLY AVE
Project Number: 28012

Lab Number: L2164369
Report Date: 12/07/21

SAMPLE RESULTS

Lab ID: L2164369-04 D
Client ID: OSMW-3
Sample Location: MAMARONECK, NY

Date Collected: 11/19/21 13:55
Date Received: 11/19/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 11/29/21 16:56
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	25	7.0	10
1,1-Dichloroethane	ND		ug/l	25	7.0	10
Chloroform	ND		ug/l	25	7.0	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
1,2-Dichloropropane	ND		ug/l	10	1.4	10
Dibromochloromethane	ND		ug/l	5.0	1.5	10
1,1,2-Trichloroethane	ND		ug/l	15	5.0	10
Tetrachloroethene	1200		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	25	7.0	10
Trichlorofluoromethane	ND		ug/l	25	7.0	10
1,2-Dichloroethane	5.1		ug/l	5.0	1.3	10
1,1,1-Trichloroethane	ND		ug/l	25	7.0	10
Bromodichloromethane	ND		ug/l	5.0	1.9	10
trans-1,3-Dichloropropene	ND		ug/l	5.0	1.6	10
cis-1,3-Dichloropropene	ND		ug/l	5.0	1.4	10
Bromoform	ND		ug/l	20	6.5	10
1,1,2,2-Tetrachloroethane	ND		ug/l	5.0	1.7	10
Benzene	ND		ug/l	5.0	1.6	10
Toluene	ND		ug/l	25	7.0	10
Ethylbenzene	ND		ug/l	25	7.0	10
Chloromethane	ND		ug/l	25	7.0	10
Bromomethane	ND		ug/l	25	7.0	10
Vinyl chloride	ND		ug/l	10	0.71	10
Chloroethane	ND		ug/l	25	7.0	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
trans-1,2-Dichloroethene	ND		ug/l	25	7.0	10
Trichloroethene	200		ug/l	5.0	1.8	10
1,2-Dichlorobenzene	ND		ug/l	25	7.0	10

Project Name: 441 &442 WAVERLY AVE**Lab Number:** L2164369**Project Number:** 28012**Report Date:** 12/07/21**SAMPLE RESULTS**

Lab ID: L2164369-04 D

Date Collected: 11/19/21 13:55

Client ID: OSMW-3

Date Received: 11/19/21

Sample Location: MAMARONECK, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	25	7.0	10
1,4-Dichlorobenzene	ND		ug/l	25	7.0	10
Methyl tert butyl ether	ND		ug/l	25	7.0	10
p/m-Xylene	ND		ug/l	25	7.0	10
o-Xylene	ND		ug/l	25	7.0	10
cis-1,2-Dichloroethene	33		ug/l	25	7.0	10
Styrene	ND		ug/l	25	7.0	10
Dichlorodifluoromethane	ND		ug/l	50	10.	10
Acetone	ND		ug/l	50	15.	10
Carbon disulfide	ND		ug/l	50	10.	10
2-Butanone	ND		ug/l	50	19.	10
4-Methyl-2-pentanone	ND		ug/l	50	10.	10
2-Hexanone	ND		ug/l	50	10.	10
Bromochloromethane	ND		ug/l	25	7.0	10
1,2-Dibromoethane	ND		ug/l	20	6.5	10
1,2-Dibromo-3-chloropropane	ND		ug/l	25	7.0	10
Isopropylbenzene	ND		ug/l	25	7.0	10
1,2,3-Trichlorobenzene	ND		ug/l	25	7.0	10
1,2,4-Trichlorobenzene	ND		ug/l	25	7.0	10
Methyl Acetate	ND		ug/l	20	2.3	10
Cyclohexane	ND		ug/l	100	2.7	10
1,4-Dioxane	ND		ug/l	2500	610	10
Freon-113	ND		ug/l	25	7.0	10
Methyl cyclohexane	ND		ug/l	100	4.0	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	104		70-130

Project Name: 441 &442 WAVERLY AVE
Project Number: 28012

Lab Number: L2164369
Report Date: 12/07/21

SAMPLE RESULTS

Lab ID: L2164369-05 D
Client ID: B6-OWD
Sample Location: MAMARONECK, NY

Date Collected: 11/19/21 14:35
Date Received: 11/19/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 11/29/21 17:17
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	50	14.	20
1,1-Dichloroethane	ND		ug/l	50	14.	20
Chloroform	ND		ug/l	50	14.	20
Carbon tetrachloride	ND		ug/l	10	2.7	20
1,2-Dichloropropane	ND		ug/l	20	2.7	20
Dibromochloromethane	ND		ug/l	10	3.0	20
1,1,2-Trichloroethane	ND		ug/l	30	10.	20
Tetrachloroethene	910		ug/l	10	3.6	20
Chlorobenzene	ND		ug/l	50	14.	20
Trichlorofluoromethane	ND		ug/l	50	14.	20
1,2-Dichloroethane	8.6	J	ug/l	10	2.6	20
1,1,1-Trichloroethane	ND		ug/l	50	14.	20
Bromodichloromethane	ND		ug/l	10	3.8	20
trans-1,3-Dichloropropene	ND		ug/l	10	3.3	20
cis-1,3-Dichloropropene	ND		ug/l	10	2.9	20
Bromoform	ND		ug/l	40	13.	20
1,1,2,2-Tetrachloroethane	ND		ug/l	10	3.3	20
Benzene	5.2	J	ug/l	10	3.2	20
Toluene	ND		ug/l	50	14.	20
Ethylbenzene	ND		ug/l	50	14.	20
Chloromethane	ND		ug/l	50	14.	20
Bromomethane	ND		ug/l	50	14.	20
Vinyl chloride	2.6	J	ug/l	20	1.4	20
Chloroethane	ND		ug/l	50	14.	20
1,1-Dichloroethene	ND		ug/l	10	3.4	20
trans-1,2-Dichloroethene	34	J	ug/l	50	14.	20
Trichloroethene	2300		ug/l	10	3.5	20
1,2-Dichlorobenzene	ND		ug/l	50	14.	20

Project Name: 441 &442 WAVERLY AVE

Lab Number: L2164369

Project Number: 28012

Report Date: 12/07/21

SAMPLE RESULTS

Lab ID: L2164369-05 D

Date Collected: 11/19/21 14:35

Client ID: B6-OWD

Date Received: 11/19/21

Sample Location: MAMARONECK, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	50	14.	20
1,4-Dichlorobenzene	ND		ug/l	50	14.	20
Methyl tert butyl ether	ND		ug/l	50	14.	20
p/m-Xylene	ND		ug/l	50	14.	20
o-Xylene	ND		ug/l	50	14.	20
cis-1,2-Dichloroethene	720		ug/l	50	14.	20
Styrene	ND		ug/l	50	14.	20
Dichlorodifluoromethane	ND		ug/l	100	20.	20
Acetone	ND		ug/l	100	29.	20
Carbon disulfide	ND		ug/l	100	20.	20
2-Butanone	ND		ug/l	100	39.	20
4-Methyl-2-pentanone	ND		ug/l	100	20.	20
2-Hexanone	ND		ug/l	100	20.	20
Bromochloromethane	ND		ug/l	50	14.	20
1,2-Dibromoethane	ND		ug/l	40	13.	20
1,2-Dibromo-3-chloropropane	ND		ug/l	50	14.	20
Isopropylbenzene	ND		ug/l	50	14.	20
1,2,3-Trichlorobenzene	ND		ug/l	50	14.	20
1,2,4-Trichlorobenzene	ND		ug/l	50	14.	20
Methyl Acetate	ND		ug/l	40	4.7	20
Cyclohexane	ND		ug/l	200	5.4	20
1,4-Dioxane	ND		ug/l	5000	1200	20
Freon-113	ND		ug/l	50	14.	20
Methyl cyclohexane	ND		ug/l	200	7.9	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	106		70-130

Project Name: 441 &442 WAVERLY AVE
Project Number: 28012

Lab Number: L2164369
Report Date: 12/07/21

SAMPLE RESULTS

Lab ID: L2164369-06
Client ID: TB11192021
Sample Location: MAMARONECK, NY

Date Collected: 11/19/21 00:00
Date Received: 11/19/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 11/29/21 15:36
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: 441 &442 WAVERLY AVE
Project Number: 28012

Lab Number: L2164369
Report Date: 12/07/21

SAMPLE RESULTS

Lab ID: L2164369-06
Client ID: TB11192021
Sample Location: MAMARONECK, NY

Date Collected: 11/19/21 00:00
Date Received: 11/19/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	ND		ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	ND		ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	110		70-130

Project Name: 441 &442 WAVERLY AVE
Project Number: 28012

Lab Number: L2164369
Report Date: 12/07/21

SAMPLE RESULTS

Lab ID: L2164369-07
Client ID: DUP11192021
Sample Location: MAMARONECK, NY

Date Collected: 11/19/21 00:00
Date Received: 11/19/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 11/29/21 17:37
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	20		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	2.4		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	7.9		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	87		ug/l	2.5	0.70	1
Trichloroethene	0.56		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: 441 &442 WAVERLY AVE

Lab Number: L2164369

Project Number: 28012

Report Date: 12/07/21

SAMPLE RESULTS

Lab ID: L2164369-07
 Client ID: DUP11192021
 Sample Location: MAMARONECK, NY

Date Collected: 11/19/21 00:00
 Date Received: 11/19/21
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	0.89	J	ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	9.7		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	1.0	J	ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	0.63	J	ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	89		70-130
Dibromofluoromethane	107		70-130

Project Name: 441 & 442 WAVERLY AVE
Project Number: 28012

Lab Number: L2164369
Report Date: 12/07/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 11/29/21 10:40
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-07 Batch: WG1577265-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
Bromoform	ND		ug/l	2.0	0.65
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70

Project Name: 441 & 442 WAVERLY AVE
Project Number: 28012

Lab Number: L2164369
Report Date: 12/07/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 11/29/21 10:40
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-07 Batch: WG1577265-5					
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
Methyl Acetate	ND		ug/l	2.0	0.23
Cyclohexane	ND		ug/l	10	0.27
1,4-Dioxane	ND		ug/l	250	61.
Freon-113	ND		ug/l	2.5	0.70
Methyl cyclohexane	ND		ug/l	10	0.40

Project Name: 441 &442 WAVERLY AVE
Project Number: 28012

Lab Number: L2164369
Report Date: 12/07/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 11/29/21 10:40
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-07 Batch: WG1577265-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	113		70-130

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 441 &442 WAVERLY AVE

Lab Number: L2164369

Project Number: 28012

Report Date: 12/07/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-07 Batch: WG1577265-3 WG1577265-4								
Methylene chloride	92		100		70-130	8		20
1,1-Dichloroethane	100		110		70-130	10		20
Chloroform	100		110		70-130	10		20
Carbon tetrachloride	100		100		63-132	0		20
1,2-Dichloropropane	97		100		70-130	3		20
Dibromochloromethane	97		110		63-130	13		20
1,1,2-Trichloroethane	86		95		70-130	10		20
Tetrachloroethene	110		110		70-130	0		20
Chlorobenzene	96		100		75-130	4		20
Trichlorofluoromethane	110		120		62-150	9		20
1,2-Dichloroethane	94		100		70-130	6		20
1,1,1-Trichloroethane	100		110		67-130	10		20
Bromodichloromethane	97		110		67-130	13		20
trans-1,3-Dichloropropene	86		87		70-130	1		20
cis-1,3-Dichloropropene	90		99		70-130	10		20
Bromoform	100		110		54-136	10		20
1,1,2,2-Tetrachloroethane	83		90		67-130	8		20
Benzene	98		100		70-130	2		20
Toluene	96		100		70-130	4		20
Ethylbenzene	99		100		70-130	1		20
Chloromethane	110		110		64-130	0		20
Bromomethane	110		110		39-139	0		20
Vinyl chloride	100		100		55-140	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 441 &442 WAVERLY AVE

Project Number: 28012

Lab Number: L2164369

Report Date: 12/07/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-07 Batch: WG1577265-3 WG1577265-4								
Chloroethane	110		120		55-138	9		20
1,1-Dichloroethene	110		110		61-145	0		20
trans-1,2-Dichloroethene	100		110		70-130	10		20
Trichloroethene	99		100		70-130	1		20
1,2-Dichlorobenzene	100		110		70-130	10		20
1,3-Dichlorobenzene	100		110		70-130	10		20
1,4-Dichlorobenzene	100		110		70-130	10		20
Methyl tert butyl ether	80		95		63-130	17		20
p/m-Xylene	105		110		70-130	5		20
o-Xylene	105		110		70-130	5		20
cis-1,2-Dichloroethene	99		110		70-130	11		20
Styrene	110		115		70-130	4		20
Dichlorodifluoromethane	120		120		36-147	0		20
Acetone	76		81		58-148	6		20
Carbon disulfide	110		110		51-130	0		20
2-Butanone	67		79		63-138	16		20
4-Methyl-2-pentanone	68		70		59-130	3		20
2-Hexanone	62		69		57-130	11		20
Bromochloromethane	110		120		70-130	9		20
1,2-Dibromoethane	88		94		70-130	7		20
1,2-Dibromo-3-chloropropane	87		100		41-144	14		20
Isopropylbenzene	100		100		70-130	0		20
1,2,3-Trichlorobenzene	92		100		70-130	8		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 441 &442 WAVERLY AVE

Lab Number: L2164369

Project Number: 28012

Report Date: 12/07/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-07 Batch: WG1577265-3 WG1577265-4								
1,2,4-Trichlorobenzene	96		99		70-130	3		20
Methyl Acetate	68	Q	81		70-130	17		20
Cyclohexane	92		99		70-130	7		20
1,4-Dioxane	108		122		56-162	12		20
Freon-113	110		110		70-130	0		20
Methyl cyclohexane	92		100		70-130	8		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	100		104		70-130
Toluene-d8	98		97		70-130
4-Bromofluorobenzene	91		92		70-130
Dibromofluoromethane	109		109		70-130

Matrix Spike Analysis

Batch Quality Control

Project Name: 441 &442 WAVERLY AVE

Project Number: 28012

Lab Number: L2164369

Report Date: 12/07/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-07 QC Batch ID: WG1577265-6 WG1577265-7 QC Sample: L2164369-03 Client ID: GZ-23D												
Methylene chloride	ND	10	9.8	98		10	100		70-130	2		20
1,1-Dichloroethane	ND	10	11	110		11	110		70-130	0		20
Chloroform	ND	10	10	100		11	110		70-130	10		20
Carbon tetrachloride	ND	10	10	100		11	110		63-132	10		20
1,2-Dichloropropane	ND	10	9.6	96		10	100		70-130	4		20
Dibromochloromethane	ND	10	10	100		11	110		63-130	10		20
1,1,2-Trichloroethane	ND	10	9.3	93		10	100		70-130	7		20
Tetrachloroethene	4.6	10	17	124		17	124		70-130	0		20
Chlorobenzene	ND	10	9.8	98		11	110		75-130	12		20
Trichlorofluoromethane	ND	10	11	110		12	120		62-150	9		20
1,2-Dichloroethane	0.65	10	10	94		11	104		70-130	10		20
1,1,1-Trichloroethane	ND	10	10	100		11	110		67-130	10		20
Bromodichloromethane	ND	10	10	100		11	110		67-130	10		20
trans-1,3-Dichloropropene	ND	10	8.2	82		8.4	84		70-130	2		20
cis-1,3-Dichloropropene	ND	10	8.8	88		9.8	98		70-130	11		20
Bromoform	ND	10	9.9	99		10	100		54-136	1		20
1,1,1,2-Tetrachloroethane	ND	10	9.4	94		9.8	98		67-130	4		20
Benzene	7.2	10	17	98		18	108		70-130	6		20
Toluene	ND	10	9.9	99		10	100		70-130	1		20
Ethylbenzene	ND	10	11	110		12	120		70-130	9		20
Chloromethane	ND	10	9.9	99		11	110		64-130	11		20
Bromomethane	ND	10	9.1	91		11	110		39-139	19		20
Vinyl chloride	2.0	10	12	100		14	120		55-140	15		20

Matrix Spike Analysis

Batch Quality Control

Project Name: 441 &442 WAVERLY AVE

Project Number: 28012

Lab Number: L2164369

Report Date: 12/07/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-07 QC Batch ID: WG1577265-6 WG1577265-7 QC Sample: L2164369-03 Client ID: GZ-23D												
Chloroethane	ND	10	12	120		12	120		55-138	0		20
1,1-Dichloroethene	ND	10	11	110		12	120		61-145	9		20
trans-1,2-Dichloroethene	ND	10	11	110		12	120		70-130	9		20
Trichloroethene	3.4	10	14	106		15	116		70-130	7		20
1,2-Dichlorobenzene	ND	10	10	100		11	110		70-130	10		20
1,3-Dichlorobenzene	ND	10	9.9	99		10	100		70-130	1		20
1,4-Dichlorobenzene	ND	10	10	100		11	110		70-130	10		20
Methyl tert butyl ether	ND	10	9.4	94		10	100		63-130	6		20
p/m-Xylene	ND	20	22	110		23	115		70-130	4		20
o-Xylene	ND	20	21	105		23	115		70-130	9		20
cis-1,2-Dichloroethene	5.7	10	16	103		17	113		70-130	6		20
Styrene	ND	20	22	110		24	120		70-130	9		20
Dichlorodifluoromethane	ND	10	12	120		13	130		36-147	8		20
Acetone	ND	10	7.0	70		8.7	87		58-148	22	Q	20
Carbon disulfide	ND	10	10	100		12	120		51-130	18		20
2-Butanone	ND	10	8.9	89		9.1	91		63-138	2		20
4-Methyl-2-pentanone	ND	10	7.5	75		8.2	82		59-130	9		20
2-Hexanone	ND	10	7.7	77		8.2	82		57-130	6		20
Bromochloromethane	ND	10	12	120		12	120		70-130	0		20
1,2-Dibromoethane	ND	10	9.4	94		9.7	97		70-130	3		20
1,2-Dibromo-3-chloropropane	ND	10	10	100		9.8	98		41-144	2		20
Isopropylbenzene	ND	10	9.7	97		10	100		70-130	3		20
1,2,3-Trichlorobenzene	ND	10	10	100		10	100		70-130	0		20

Matrix Spike Analysis**Batch Quality Control****Project Name:** 441 &442 WAVERLY AVE**Project Number:** 28012**Lab Number:** L2164369**Report Date:** 12/07/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-07 QC Batch ID: WG1577265-6 WG1577265-7 QC Sample: L2164369-03 Client ID: GZ-23D												
1,2,4-Trichlorobenzene	ND	10	10	100		10	100		70-130	0		20
Methyl Acetate	ND	10	7.5	75		7.9	79		70-130	5		20
Cyclohexane	ND	10	9.6J	96		10	100		70-130	4		20
1,4-Dioxane	ND	500	670	134		560	112		56-162	18		20
Freon-113	ND	10	11	110		11	110		70-130	0		20
Methyl cyclohexane	ND	10	9.3J	93		10	100		70-130	7		20

Surrogate	MS % Recovery	Qualifier	MSD % Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		102		70-130
4-Bromofluorobenzene	88		85		70-130
Dibromofluoromethane	107		105		70-130
Toluene-d8	96		98		70-130

Project Name: 441 &442 WAVERLY AVE**Lab Number:** L2164369**Project Number:** 28012**Report Date:** 12/07/21**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2164369-01A	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2164369-01B	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2164369-01C	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2164369-02A	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2164369-02B	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2164369-02C	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2164369-03A	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2164369-03A1	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2164369-03A2	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2164369-03B	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2164369-03B1	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2164369-03B2	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2164369-03C	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2164369-03C1	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2164369-03C2	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2164369-04A	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2164369-04B	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2164369-04C	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2164369-05A	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2164369-05B	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2164369-05C	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2164369-06A	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2164369-06B	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)

Project Name: 441 & 442 WAVERLY AVE
Project Number: 28012

Serial_No:12072107:53
Lab Number: L2164369
Report Date: 12/07/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2164369-06C	Vial HCl preserved	NA	NA			Y	Absent		-
L2164369-07A	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2164369-07B	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2164369-07C	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)

Project Name: 441 &442 WAVERLY AVE
Project Number: 28012

Lab Number: L2164369
Report Date: 12/07/21

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers



Project Name: 441 &442 WAVERLY AVE
Project Number: 28012

Lab Number: L2164369
Report Date: 12/07/21

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers



Project Name: 441 &442 WAVERLY AVE**Lab Number:** L2164369**Project Number:** 28012**Report Date:** 12/07/21**Data Qualifiers**

- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: 441 &442 WAVERLY AVE
Project Number: 28012

Lab Number: L2164369
Report Date: 12/07/21

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

Revision 19

Published Date: 4/2/2021 1:14:23 PM

Page 1 of 1

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility**EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625/625.1:** alpha-Terpineol**EPA 8260C/8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D/8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility****SM 2540D:** TSS**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

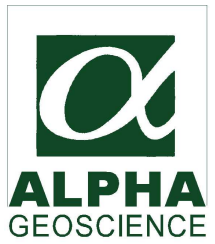
The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:**Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,****SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.****EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1 Hg.****SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



Geology

Hydrology

Remediation

Water Supply

December 14, 2021

Ms. Amanda Castignetti, EIT
Environmental Engineer
Sterling Environmental Engineering, P.C.
24 Wade Road
Latham, New York 12110

Re: Data Validation Report
Waverly Avenue (P.O. 28012)
November 2021 Ground Water Samples

Dear Ms. Castignetti:

The data usability summary report (DUSR) and QA/QC reviews are attached to this letter for the above referenced project sampling event. The data for Alpha Analytical, SDG number: L2164369 are mostly acceptable with some issues identified and discussed in the DUSR and validation summary. There are volatile data that are qualified as rejected, unusable (R) in the data pack. The DUSR and QA/QC review outline the reason for rejecting the data. The data is rejected based solely on the validation guidance criteria. The rejected data may be determined to be acceptable to the user based on additional information that is not contained in the data validation criteria.

A list of common data validation acronyms is attached to this letter to assist you in interpreting the validation summaries. If you have any questions concerning the work performed, please contact me at (518) 348-6995. Thank you for the opportunity to assist Sterling Environmental Engineering, P.C.

Sincerely,
Alpha Geoscience

Donald Anné
Senior Chemist

DCA:dca
attachments

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Geology

Hydrology

Remediation

Water Supply

**Data Usability Summary Report
for Alpha Analytical Labs
SDG Number: L2164369**

**5 Ground Water Samples, 1 Field Duplicate,
and 1 Trip Blank
Collected November 19, 2021**

Prepared by: Donald Anné
December 14, 2021

The data package contained the documentation as required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appeared legible and complete. The data pack contained volatile results for 5 ground water samples, 1 field duplicate, and 1 trip blank.

The overall performances of the analyses are acceptable. Alpha Analytical Labs did fulfill the requirements of the analytical method.

The data are mostly acceptable with some issues that are identified in the accompanying data validation review. The following data were qualified:

- The “not detected” volatile results for methyl acetate were qualified as estimated (UJ) in all 5 ground water samples, field duplicate, and trip blank because 1 of 2 percent recoveries for methyl acetate was below QC limits, but not below 30% in the associated aqueous LCS/LCSD.
- The “not detected” volatile results for 1,4-dioxane were qualified as rejected, unusable (R) in all 5 ground water samples, field duplicate, and trip blank because the RRF for 1,4-dioxane was below allowable minimum in the associated continuing calibration.

All data that are not qualified rejected (R) are considered usable with estimated (UJ) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation review.

Qualified Data Section

Results Summary

Form 1

Volatile Organics by GC/MS

Client : Sterling Environmental Engineering
 Project Name : 441 & 442 WAVERLY AVE
 Lab ID : L2164369-01
 Client ID : GZ-22D
 Sample Location : MAMARONECK, NY
 Sample Matrix : WATER
 Analytical Method : 1,8260C
 Lab File ID : VE211129A20
 Sample Amount : 10 ml
 Level : LOW
 Extract Volume (MeOH) : N/A

Lab Number : L2164369
 Project Number : 28012
 Date Collected : 11/19/21 11:05
 Date Received : 11/19/21
 Date Analyzed : 11/29/21 15:56
 Dilution Factor : 1
 Analyst : NLK
 Instrument ID : ELAINE
 GC Column : RTX-502.2
 %Solids : N/A
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
75-09-2	Methylene chloride	ND	2.5	0.70	U
75-34-3	1,1-Dichloroethane	ND	2.5	0.70	U
67-66-3	Chloroform	ND	2.5	0.70	U
56-23-5	Carbon tetrachloride	ND	0.50	0.13	U
78-87-5	1,2-Dichloropropane	ND	1.0	0.14	U
124-48-1	Dibromochloromethane	ND	0.50	0.15	U
79-00-5	1,1,2-Trichloroethane	ND	1.5	0.50	U
127-18-4	Tetrachloroethene	ND	0.50	0.18	U
108-90-7	Chlorobenzene	ND	2.5	0.70	U
75-69-4	Trichlorofluoromethane	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	20	0.50	0.13	
71-55-6	1,1,1-Trichloroethane	ND	2.5	0.70	U
75-27-4	Bromodichloromethane	ND	0.50	0.19	U
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	U
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	U
75-25-2	Bromoform	ND	2.0	0.65	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.17	U
71-43-2	Benzene	2.3	0.50	0.16	
108-88-3	Toluene	ND	2.5	0.70	U
100-41-4	Ethylbenzene	ND	2.5	0.70	U
74-87-3	Chloromethane	ND	2.5	0.70	U
74-83-9	Bromomethane	ND	2.5	0.70	U
75-01-4	Vinyl chloride	7.9	1.0	0.07	
75-00-3	Chloroethane	ND	2.5	0.70	U
75-35-4	1,1-Dichloroethene	ND	0.50	0.17	U



Results Summary

Form 1

Volatile Organics by GC/MS

Client : Sterling Environmental Engineering
 Project Name : 441 & 442 WAVERLY AVE
 Lab ID : L2164369-01
 Client ID : GZ-22D
 Sample Location : MAMARONECK, NY
 Sample Matrix : WATER
 Analytical Method : 1,8260C
 Lab File ID : VE211129A20
 Sample Amount : 10 ml
 Level : LOW
 Extract Volume (MeOH) : N/A

Lab Number : L2164369
 Project Number : 28012
 Date Collected : 11/19/21 11:05
 Date Received : 11/19/21
 Date Analyzed : 11/29/21 15:56
 Dilution Factor : 1
 Analyst : NLK
 Instrument ID : ELAINE
 GC Column : RTX-502.2
 %Solids : N/A
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
156-60-5	trans-1,2-Dichloroethene	86	2.5	0.70	
79-01-6	Trichloroethene	0.39	0.50	0.18	J
95-50-1	1,2-Dichlorobenzene	ND	2.5	0.70	U
541-73-1	1,3-Dichlorobenzene	ND	2.5	0.70	U
106-46-7	1,4-Dichlorobenzene	ND	2.5	0.70	U
1634-04-4	Methyl tert butyl ether	0.80	2.5	0.70	J
179601-23-1	p/m-Xylene	ND	2.5	0.70	U
95-47-6	o-Xylene	ND	2.5	0.70	U
156-59-2	cis-1,2-Dichloroethene	10	2.5	0.70	
100-42-5	Styrene	ND	2.5	0.70	U
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	U
67-64-1	Acetone	ND	5.0	1.5	U
75-15-0	Carbon disulfide	ND	5.0	1.0	U
78-93-3	2-Butanone	ND	5.0	1.9	U
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	U
591-78-6	2-Hexanone	ND	5.0	1.0	U
74-97-5	Bromochloromethane	ND	2.5	0.70	U
106-93-4	1,2-Dibromoethane	ND	2.0	0.65	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	0.70	U
98-82-8	Isopropylbenzene	ND	2.5	0.70	U
87-61-6	1,2,3-Trichlorobenzene	ND	2.5	0.70	U
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	0.70	U
79-20-9	Methyl Acetate	ND	2.0	0.23	U UJ
110-82-7	Cyclohexane	1.2	10	0.27	J
123-91-1	1,4-Dioxane	ND	250	61.	U R



Results Summary

Form 1

Volatile Organics by GC/MS

Client	: Sterling Environmental Engineering	Lab Number	: L2164369
Project Name	: 441 & 442 WAVERLY AVE	Project Number	: 28012
Lab ID	: L2164369-01	Date Collected	: 11/19/21 11:05
Client ID	: GZ-22D	Date Received	: 11/19/21
Sample Location	: MAMARONECK, NY	Date Analyzed	: 11/29/21 15:56
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 1,8260C	Analyst	: NLK
Lab File ID	: VE211129A20	Instrument ID	: ELAINE
Sample Amount	: 10 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
76-13-1	Freon-113	ND	2.5	0.70	U
108-87-2	Methyl cyclohexane	0.61	10	0.40	J

Results Summary

Form 1

Volatile Organics by GC/MS

Client : Sterling Environmental Engineering
 Project Name : 441 & 442 WAVERLY AVE
 Lab ID : L2164369-02D
 Client ID : GZ-21D
 Sample Location : MAMARONECK, NY
 Sample Matrix : WATER
 Analytical Method : 1,8260C
 Lab File ID : VE211129A21
 Sample Amount : 5 ml
 Level : LOW
 Extract Volume (MeOH) : N/A

Lab Number : L2164369
 Project Number : 28012
 Date Collected : 11/19/21 12:30
 Date Received : 11/19/21
 Date Analyzed : 11/29/21 16:16
 Dilution Factor : 2
 Analyst : NLK
 Instrument ID : ELAINE
 GC Column : RTX-502.2
 %Solids : N/A
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
75-09-2	Methylene chloride	ND	5.0	1.4	U
75-34-3	1,1-Dichloroethane	ND	5.0	1.4	U
67-66-3	Chloroform	ND	5.0	1.4	U
56-23-5	Carbon tetrachloride	ND	1.0	0.27	U
78-87-5	1,2-Dichloropropane	ND	2.0	0.27	U
124-48-1	Dibromochloromethane	ND	1.0	0.30	U
79-00-5	1,1,2-Trichloroethane	ND	3.0	1.0	U
127-18-4	Tetrachloroethene	ND	1.0	0.36	U
108-90-7	Chlorobenzene	ND	5.0	1.4	U
75-69-4	Trichlorofluoromethane	ND	5.0	1.4	U
107-06-2	1,2-Dichloroethane	110	1.0	0.26	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.4	U
75-27-4	Bromodichloromethane	ND	1.0	0.38	U
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.33	U
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	U
75-25-2	Bromoform	ND	4.0	1.3	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.33	U
71-43-2	Benzene	0.61	1.0	0.32	J
108-88-3	Toluene	ND	5.0	1.4	U
100-41-4	Ethylbenzene	ND	5.0	1.4	U
74-87-3	Chloromethane	ND	5.0	1.4	U
74-83-9	Bromomethane	ND	5.0	1.4	U
75-01-4	Vinyl chloride	6.7	2.0	0.14	
75-00-3	Chloroethane	ND	5.0	1.4	U
75-35-4	1,1-Dichloroethene	ND	1.0	0.34	U



Results Summary

Form 1

Volatile Organics by GC/MS

Client : Sterling Environmental Engineering
 Project Name : 441 & 442 WAVERLY AVE
 Lab ID : L2164369-02D
 Client ID : GZ-21D
 Sample Location : MAMARONECK, NY
 Sample Matrix : WATER
 Analytical Method : 1,8260C
 Lab File ID : VE211129A21
 Sample Amount : 5 ml
 Level : LOW
 Extract Volume (MeOH) : N/A

Lab Number : L2164369
 Project Number : 28012
 Date Collected : 11/19/21 12:30
 Date Received : 11/19/21
 Date Analyzed : 11/29/21 16:16
 Dilution Factor : 2
 Analyst : NLK
 Instrument ID : ELAINE
 GC Column : RTX-502.2
 %Solids : N/A
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
156-60-5	trans-1,2-Dichloroethene	2.4	5.0	1.4	J
79-01-6	Trichloroethene	ND	1.0	0.35	U
95-50-1	1,2-Dichlorobenzene	ND	5.0	1.4	U
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.4	U
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.4	U
1634-04-4	Methyl tert butyl ether	ND	5.0	1.4	U
179601-23-1	p/m-Xylene	ND	5.0	1.4	U
95-47-6	o-Xylene	ND	5.0	1.4	U
156-59-2	cis-1,2-Dichloroethene	190	5.0	1.4	
100-42-5	Styrene	ND	5.0	1.4	U
75-71-8	Dichlorodifluoromethane	ND	10	2.0	U
67-64-1	Acetone	ND	10	2.9	U
75-15-0	Carbon disulfide	ND	10	2.0	U
78-93-3	2-Butanone	ND	10	3.9	U
108-10-1	4-Methyl-2-pentanone	ND	10	2.0	U
591-78-6	2-Hexanone	ND	10	2.0	U
74-97-5	Bromochloromethane	ND	5.0	1.4	U
106-93-4	1,2-Dibromoethane	ND	4.0	1.3	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.4	U
98-82-8	Isopropylbenzene	ND	5.0	1.4	U
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.4	U
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.4	U
79-20-9	Methyl Acetate	ND	4.0	0.47	U UJ
110-82-7	Cyclohexane	ND	20	0.54	U
123-91-1	1,4-Dioxane	ND	500	120	U R



Results Summary

Form 1

Volatile Organics by GC/MS

Client : Sterling Environmental Engineering
 Project Name : 441 & 442 WAVERLY AVE
 Lab ID : L2164369-02D
 Client ID : GZ-21D
 Sample Location : MAMARONECK, NY
 Sample Matrix : WATER
 Analytical Method : 1,8260C
 Lab File ID : VE211129A21
 Sample Amount : 5 ml
 Level : LOW
 Extract Volume (MeOH) : N/A

Lab Number : L2164369
 Project Number : 28012
 Date Collected : 11/19/21 12:30
 Date Received : 11/19/21
 Date Analyzed : 11/29/21 16:16
 Dilution Factor : 2
 Analyst : NLK
 Instrument ID : ELAINE
 GC Column : RTX-502.2
 %Solids : N/A
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
76-13-1	Freon-113	ND	5.0	1.4	U
108-87-2	Methyl cyclohexane	ND	20	0.79	U



Results Summary

Form 1

Volatile Organics by GC/MS

Client : Sterling Environmental Engineering
 Project Name : 441 & 442 WAVERLY AVE
 Lab ID : L2164369-03
 Client ID : GZ-23D
 Sample Location : MAMARONECK, NY
 Sample Matrix : WATER
 Analytical Method : 1,8260C
 Lab File ID : VE211129A22
 Sample Amount : 10 ml
 Level : LOW
 Extract Volume (MeOH) : N/A

Lab Number : L2164369
 Project Number : 28012
 Date Collected : 11/19/21 13:05
 Date Received : 11/19/21
 Date Analyzed : 11/29/21 16:36
 Dilution Factor : 1
 Analyst : NLK
 Instrument ID : ELAINE
 GC Column : RTX-502.2
 %Solids : N/A
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
75-09-2	Methylene chloride	ND	2.5	0.70	U
75-34-3	1,1-Dichloroethane	ND	2.5	0.70	U
67-66-3	Chloroform	ND	2.5	0.70	U
56-23-5	Carbon tetrachloride	ND	0.50	0.13	U
78-87-5	1,2-Dichloropropane	ND	1.0	0.14	U
124-48-1	Dibromochloromethane	ND	0.50	0.15	U
79-00-5	1,1,2-Trichloroethane	ND	1.5	0.50	U
127-18-4	Tetrachloroethene	4.6	0.50	0.18	
108-90-7	Chlorobenzene	ND	2.5	0.70	U
75-69-4	Trichlorofluoromethane	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	0.65	0.50	0.13	
71-55-6	1,1,1-Trichloroethane	ND	2.5	0.70	U
75-27-4	Bromodichloromethane	ND	0.50	0.19	U
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	U
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	U
75-25-2	Bromoform	ND	2.0	0.65	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.17	U
71-43-2	Benzene	7.2	0.50	0.16	
108-88-3	Toluene	ND	2.5	0.70	U
100-41-4	Ethylbenzene	ND	2.5	0.70	U
74-87-3	Chloromethane	ND	2.5	0.70	U
74-83-9	Bromomethane	ND	2.5	0.70	U
75-01-4	Vinyl chloride	2.0	1.0	0.07	
75-00-3	Chloroethane	ND	2.5	0.70	U
75-35-4	1,1-Dichloroethene	ND	0.50	0.17	U



Results Summary

Form 1

Volatile Organics by GC/MS

Client : Sterling Environmental Engineering
 Project Name : 441 & 442 WAVERLY AVE
 Lab ID : L2164369-03
 Client ID : GZ-23D
 Sample Location : MAMARONECK, NY
 Sample Matrix : WATER
 Analytical Method : 1,8260C
 Lab File ID : VE211129A22
 Sample Amount : 10 ml
 Level : LOW
 Extract Volume (MeOH) : N/A

Lab Number : L2164369
 Project Number : 28012
 Date Collected : 11/19/21 13:05
 Date Received : 11/19/21
 Date Analyzed : 11/29/21 16:36
 Dilution Factor : 1
 Analyst : NLK
 Instrument ID : ELAINE
 GC Column : RTX-502.2
 %Solids : N/A
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
156-60-5	trans-1,2-Dichloroethene	ND	2.5	0.70	U
79-01-6	Trichloroethene	3.4	0.50	0.18	
95-50-1	1,2-Dichlorobenzene	ND	2.5	0.70	U
541-73-1	1,3-Dichlorobenzene	ND	2.5	0.70	U
106-46-7	1,4-Dichlorobenzene	ND	2.5	0.70	U
1634-04-4	Methyl tert butyl ether	ND	2.5	0.70	U
179601-23-1	p/m-Xylene	ND	2.5	0.70	U
95-47-6	o-Xylene	ND	2.5	0.70	U
156-59-2	cis-1,2-Dichloroethene	5.7	2.5	0.70	
100-42-5	Styrene	ND	2.5	0.70	U
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	U
67-64-1	Acetone	ND	5.0	1.5	U
75-15-0	Carbon disulfide	ND	5.0	1.0	U
78-93-3	2-Butanone	ND	5.0	1.9	U
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	U
591-78-6	2-Hexanone	ND	5.0	1.0	U
74-97-5	Bromochloromethane	ND	2.5	0.70	U
106-93-4	1,2-Dibromoethane	ND	2.0	0.65	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	0.70	U
98-82-8	Isopropylbenzene	ND	2.5	0.70	U
87-61-6	1,2,3-Trichlorobenzene	ND	2.5	0.70	U
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	0.70	U
79-20-9	Methyl Acetate	ND	2.0	0.23	U UJ
110-82-7	Cyclohexane	ND	10	0.27	U
123-91-1	1,4-Dioxane	ND	250	61.	U R



Results Summary

Form 1

Volatile Organics by GC/MS

Client : Sterling Environmental Engineering
 Project Name : 441 & 442 WAVERLY AVE
 Lab ID : L2164369-03
 Client ID : GZ-23D
 Sample Location : MAMARONECK, NY
 Sample Matrix : WATER
 Analytical Method : 1,8260C
 Lab File ID : VE211129A22
 Sample Amount : 10 ml
 Level : LOW
 Extract Volume (MeOH) : N/A

Lab Number : L2164369
 Project Number : 28012
 Date Collected : 11/19/21 13:05
 Date Received : 11/19/21
 Date Analyzed : 11/29/21 16:36
 Dilution Factor : 1
 Analyst : NLK
 Instrument ID : ELAINE
 GC Column : RTX-502.2
 %Solids : N/A
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
76-13-1	Freon-113	ND	2.5	0.70	U
108-87-2	Methyl cyclohexane	ND	10	0.40	U



Results Summary

Form 1

Volatile Organics by GC/MS

Client : Sterling Environmental Engineering
 Project Name : 441 & 442 WAVERLY AVE
 Lab ID : L2164369-04D
 Client ID : OSMW-3
 Sample Location : MAMARONECK, NY
 Sample Matrix : WATER
 Analytical Method : 1,8260C
 Lab File ID : VE211129A23
 Sample Amount : 1 ml
 Level : LOW
 Extract Volume (MeOH) : N/A

Lab Number : L2164369
 Project Number : 28012
 Date Collected : 11/19/21 13:55
 Date Received : 11/19/21
 Date Analyzed : 11/29/21 16:56
 Dilution Factor : 10
 Analyst : NLK
 Instrument ID : ELAINE
 GC Column : RTX-502.2
 %Solids : N/A
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
75-09-2	Methylene chloride	ND	25	7.0	U
75-34-3	1,1-Dichloroethane	ND	25	7.0	U
67-66-3	Chloroform	ND	25	7.0	U
56-23-5	Carbon tetrachloride	ND	5.0	1.3	U
78-87-5	1,2-Dichloropropane	ND	10	1.4	U
124-48-1	Dibromochloromethane	ND	5.0	1.5	U
79-00-5	1,1,2-Trichloroethane	ND	15	5.0	U
127-18-4	Tetrachloroethene	1200	5.0	1.8	
108-90-7	Chlorobenzene	ND	25	7.0	U
75-69-4	Trichlorofluoromethane	ND	25	7.0	U
107-06-2	1,2-Dichloroethane	5.1	5.0	1.3	
71-55-6	1,1,1-Trichloroethane	ND	25	7.0	U
75-27-4	Bromodichloromethane	ND	5.0	1.9	U
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.6	U
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.4	U
75-25-2	Bromoform	ND	20	6.5	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.7	U
71-43-2	Benzene	ND	5.0	1.6	U
108-88-3	Toluene	ND	25	7.0	U
100-41-4	Ethylbenzene	ND	25	7.0	U
74-87-3	Chloromethane	ND	25	7.0	U
74-83-9	Bromomethane	ND	25	7.0	U
75-01-4	Vinyl chloride	ND	10	0.71	U
75-00-3	Chloroethane	ND	25	7.0	U
75-35-4	1,1-Dichloroethene	ND	5.0	1.7	U



Results Summary

Form 1

Volatile Organics by GC/MS

Client : Sterling Environmental Engineering
 Project Name : 441 & 442 WAVERLY AVE
 Lab ID : L2164369-04D
 Client ID : OSMW-3
 Sample Location : MAMARONECK, NY
 Sample Matrix : WATER
 Analytical Method : 1,8260C
 Lab File ID : VE211129A23
 Sample Amount : 1 ml
 Level : LOW
 Extract Volume (MeOH) : N/A

Lab Number : L2164369
 Project Number : 28012
 Date Collected : 11/19/21 13:55
 Date Received : 11/19/21
 Date Analyzed : 11/29/21 16:56
 Dilution Factor : 10
 Analyst : NLK
 Instrument ID : ELAINE
 GC Column : RTX-502.2
 %Solids : N/A
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
156-60-5	trans-1,2-Dichloroethene	ND	25	7.0	U
79-01-6	Trichloroethene	200	5.0	1.8	
95-50-1	1,2-Dichlorobenzene	ND	25	7.0	U
541-73-1	1,3-Dichlorobenzene	ND	25	7.0	U
106-46-7	1,4-Dichlorobenzene	ND	25	7.0	U
1634-04-4	Methyl tert butyl ether	ND	25	7.0	U
179601-23-1	p/m-Xylene	ND	25	7.0	U
95-47-6	o-Xylene	ND	25	7.0	U
156-59-2	cis-1,2-Dichloroethene	33	25	7.0	
100-42-5	Styrene	ND	25	7.0	U
75-71-8	Dichlorodifluoromethane	ND	50	10.	U
67-64-1	Acetone	ND	50	15.	U
75-15-0	Carbon disulfide	ND	50	10.	U
78-93-3	2-Butanone	ND	50	19.	U
108-10-1	4-Methyl-2-pentanone	ND	50	10.	U
591-78-6	2-Hexanone	ND	50	10.	U
74-97-5	Bromochloromethane	ND	25	7.0	U
106-93-4	1,2-Dibromoethane	ND	20	6.5	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	25	7.0	U
98-82-8	Isopropylbenzene	ND	25	7.0	U
87-61-6	1,2,3-Trichlorobenzene	ND	25	7.0	U
120-82-1	1,2,4-Trichlorobenzene	ND	25	7.0	U
79-20-9	Methyl Acetate	ND	20	2.3	U UJ
110-82-7	Cyclohexane	ND	100	2.7	U
123-91-1	1,4-Dioxane	ND	2500	610	U R



Results Summary

Form 1

Volatile Organics by GC/MS

Client : Sterling Environmental Engineering
 Project Name : 441 &442 WAVERLY AVE
 Lab ID : L2164369-04D
 Client ID : OSMW-3
 Sample Location : MAMARONECK, NY
 Sample Matrix : WATER
 Analytical Method : 1,8260C
 Lab File ID : VE211129A23
 Sample Amount : 1 ml
 Level : LOW
 Extract Volume (MeOH) : N/A

Lab Number : L2164369
 Project Number : 28012
 Date Collected : 11/19/21 13:55
 Date Received : 11/19/21
 Date Analyzed : 11/29/21 16:56
 Dilution Factor : 10
 Analyst : NLK
 Instrument ID : ELAINE
 GC Column : RTX-502.2
 %Solids : N/A
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
76-13-1	Freon-113	ND	25	7.0	U
108-87-2	Methyl cyclohexane	ND	100	4.0	U



Results Summary

Form 1

Volatile Organics by GC/MS

Client : Sterling Environmental Engineering
 Project Name : 441 & 442 WAVERLY AVE
 Lab ID : L2164369-05D
 Client ID : B6-OWD
 Sample Location : MAMARONECK, NY
 Sample Matrix : WATER
 Analytical Method : 1,8260C
 Lab File ID : VE211129A24
 Sample Amount : 0.5 ml
 Level : LOW
 Extract Volume (MeOH) : N/A

Lab Number : L2164369
 Project Number : 28012
 Date Collected : 11/19/21 14:35
 Date Received : 11/19/21
 Date Analyzed : 11/29/21 17:17
 Dilution Factor : 20
 Analyst : NLK
 Instrument ID : ELAINE
 GC Column : RTX-502.2
 %Solids : N/A
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
75-09-2	Methylene chloride	ND	50	14.	U
75-34-3	1,1-Dichloroethane	ND	50	14.	U
67-66-3	Chloroform	ND	50	14.	U
56-23-5	Carbon tetrachloride	ND	10	2.7	U
78-87-5	1,2-Dichloropropane	ND	20	2.7	U
124-48-1	Dibromochloromethane	ND	10	3.0	U
79-00-5	1,1,2-Trichloroethane	ND	30	10.	U
127-18-4	Tetrachloroethene	910	10	3.6	
108-90-7	Chlorobenzene	ND	50	14.	U
75-69-4	Trichlorofluoromethane	ND	50	14.	U
107-06-2	1,2-Dichloroethane	8.6	10	2.6	J
71-55-6	1,1,1-Trichloroethane	ND	50	14.	U
75-27-4	Bromodichloromethane	ND	10	3.8	U
10061-02-6	trans-1,3-Dichloropropene	ND	10	3.3	U
10061-01-5	cis-1,3-Dichloropropene	ND	10	2.9	U
75-25-2	Bromoform	ND	40	13.	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	10	3.3	U
71-43-2	Benzene	5.2	10	3.2	J
108-88-3	Toluene	ND	50	14.	U
100-41-4	Ethylbenzene	ND	50	14.	U
74-87-3	Chloromethane	ND	50	14.	U
74-83-9	Bromomethane	ND	50	14.	U
75-01-4	Vinyl chloride	2.6	20	1.4	J
75-00-3	Chloroethane	ND	50	14.	U
75-35-4	1,1-Dichloroethene	ND	10	3.4	U



Results Summary

Form 1

Volatile Organics by GC/MS

Client : Sterling Environmental Engineering
 Project Name : 441 & 442 WAVERLY AVE
 Lab ID : L2164369-05D
 Client ID : B6-OWD
 Sample Location : MAMARONECK, NY
 Sample Matrix : WATER
 Analytical Method : 1,8260C
 Lab File ID : VE211129A24
 Sample Amount : 0.5 ml
 Level : LOW
 Extract Volume (MeOH) : N/A

Lab Number : L2164369
 Project Number : 28012
 Date Collected : 11/19/21 14:35
 Date Received : 11/19/21
 Date Analyzed : 11/29/21 17:17
 Dilution Factor : 20
 Analyst : NLK
 Instrument ID : ELAINE
 GC Column : RTX-502.2
 %Solids : N/A
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
156-60-5	trans-1,2-Dichloroethene	34	50	14.	J
79-01-6	Trichloroethene	2300	10	3.5	
95-50-1	1,2-Dichlorobenzene	ND	50	14.	U
541-73-1	1,3-Dichlorobenzene	ND	50	14.	U
106-46-7	1,4-Dichlorobenzene	ND	50	14.	U
1634-04-4	Methyl tert butyl ether	ND	50	14.	U
179601-23-1	p/m-Xylene	ND	50	14.	U
95-47-6	o-Xylene	ND	50	14.	U
156-59-2	cis-1,2-Dichloroethene	720	50	14.	
100-42-5	Styrene	ND	50	14.	U
75-71-8	Dichlorodifluoromethane	ND	100	20.	U
67-64-1	Acetone	ND	100	29.	U
75-15-0	Carbon disulfide	ND	100	20.	U
78-93-3	2-Butanone	ND	100	39.	U
108-10-1	4-Methyl-2-pentanone	ND	100	20.	U
591-78-6	2-Hexanone	ND	100	20.	U
74-97-5	Bromochloromethane	ND	50	14.	U
106-93-4	1,2-Dibromoethane	ND	40	13.	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	50	14.	U
98-82-8	Isopropylbenzene	ND	50	14.	U
87-61-6	1,2,3-Trichlorobenzene	ND	50	14.	U
120-82-1	1,2,4-Trichlorobenzene	ND	50	14.	U
79-20-9	Methyl Acetate	ND	40	4.7	U UJ
110-82-7	Cyclohexane	ND	200	5.4	U
123-91-1	1,4-Dioxane	ND	5000	1200	U R



Results Summary

Form 1

Volatile Organics by GC/MS

Client	: Sterling Environmental Engineering	Lab Number	: L2164369
Project Name	: 441 & 442 WAVERLY AVE	Project Number	: 28012
Lab ID	: L2164369-05D	Date Collected	: 11/19/21 14:35
Client ID	: B6-OWD	Date Received	: 11/19/21
Sample Location	: MAMARONECK, NY	Date Analyzed	: 11/29/21 17:17
Sample Matrix	: WATER	Dilution Factor	: 20
Analytical Method	: 1,8260C	Analyst	: NLK
Lab File ID	: VE211129A24	Instrument ID	: ELAINE
Sample Amount	: 0.5 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
76-13-1	Freon-113	ND	50	14.	U
108-87-2	Methyl cyclohexane	ND	200	7.9	U

Results Summary

Form 1

Volatile Organics by GC/MS

Client : Sterling Environmental Engineering
 Project Name : 441 & 442 WAVERLY AVE
 Lab ID : L2164369-06
 Client ID : TB11192021
 Sample Location : MAMARONECK, NY
 Sample Matrix : WATER
 Analytical Method : 1,8260C
 Lab File ID : VE211129A19
 Sample Amount : 10 ml
 Level : LOW
 Extract Volume (MeOH) : N/A

Lab Number : L2164369
 Project Number : 28012
 Date Collected : 11/19/21 00:00
 Date Received : 11/19/21
 Date Analyzed : 11/29/21 15:36
 Dilution Factor : 1
 Analyst : NLK
 Instrument ID : ELAINE
 GC Column : RTX-502.2
 %Solids : N/A
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
75-09-2	Methylene chloride	ND	2.5	0.70	U
75-34-3	1,1-Dichloroethane	ND	2.5	0.70	U
67-66-3	Chloroform	ND	2.5	0.70	U
56-23-5	Carbon tetrachloride	ND	0.50	0.13	U
78-87-5	1,2-Dichloropropane	ND	1.0	0.14	U
124-48-1	Dibromochloromethane	ND	0.50	0.15	U
79-00-5	1,1,2-Trichloroethane	ND	1.5	0.50	U
127-18-4	Tetrachloroethene	ND	0.50	0.18	U
108-90-7	Chlorobenzene	ND	2.5	0.70	U
75-69-4	Trichlorofluoromethane	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-55-6	1,1,1-Trichloroethane	ND	2.5	0.70	U
75-27-4	Bromodichloromethane	ND	0.50	0.19	U
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	U
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	U
75-25-2	Bromoform	ND	2.0	0.65	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.17	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U
100-41-4	Ethylbenzene	ND	2.5	0.70	U
74-87-3	Chloromethane	ND	2.5	0.70	U
74-83-9	Bromomethane	ND	2.5	0.70	U
75-01-4	Vinyl chloride	ND	1.0	0.07	U
75-00-3	Chloroethane	ND	2.5	0.70	U
75-35-4	1,1-Dichloroethene	ND	0.50	0.17	U



Results Summary

Form 1

Volatile Organics by GC/MS

Client : Sterling Environmental Engineering
 Project Name : 441 & 442 WAVERLY AVE
 Lab ID : L2164369-06
 Client ID : TB11192021
 Sample Location : MAMARONECK, NY
 Sample Matrix : WATER
 Analytical Method : 1,8260C
 Lab File ID : VE211129A19
 Sample Amount : 10 ml
 Level : LOW
 Extract Volume (MeOH) : N/A

Lab Number : L2164369
 Project Number : 28012
 Date Collected : 11/19/21 00:00
 Date Received : 11/19/21
 Date Analyzed : 11/29/21 15:36
 Dilution Factor : 1
 Analyst : NLK
 Instrument ID : ELAINE
 GC Column : RTX-502.2
 %Solids : N/A
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
156-60-5	trans-1,2-Dichloroethene	ND	2.5	0.70	U
79-01-6	Trichloroethene	ND	0.50	0.18	U
95-50-1	1,2-Dichlorobenzene	ND	2.5	0.70	U
541-73-1	1,3-Dichlorobenzene	ND	2.5	0.70	U
106-46-7	1,4-Dichlorobenzene	ND	2.5	0.70	U
1634-04-4	Methyl tert butyl ether	ND	2.5	0.70	U
179601-23-1	p/m-Xylene	ND	2.5	0.70	U
95-47-6	o-Xylene	ND	2.5	0.70	U
156-59-2	cis-1,2-Dichloroethene	ND	2.5	0.70	U
100-42-5	Styrene	ND	2.5	0.70	U
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	U
67-64-1	Acetone	ND	5.0	1.5	U
75-15-0	Carbon disulfide	ND	5.0	1.0	U
78-93-3	2-Butanone	ND	5.0	1.9	U
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	U
591-78-6	2-Hexanone	ND	5.0	1.0	U
74-97-5	Bromochloromethane	ND	2.5	0.70	U
106-93-4	1,2-Dibromoethane	ND	2.0	0.65	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	0.70	U
98-82-8	Isopropylbenzene	ND	2.5	0.70	U
87-61-6	1,2,3-Trichlorobenzene	ND	2.5	0.70	U
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	0.70	U
79-20-9	Methyl Acetate	ND	2.0	0.23	U UJ
110-82-7	Cyclohexane	ND	10	0.27	U
123-91-1	1,4-Dioxane	ND	250	61.	U R



Results Summary

Form 1

Volatile Organics by GC/MS

Client	: Sterling Environmental Engineering	Lab Number	: L2164369
Project Name	: 441 & 442 WAVERLY AVE	Project Number	: 28012
Lab ID	: L2164369-06	Date Collected	: 11/19/21 00:00
Client ID	: TB11192021	Date Received	: 11/19/21
Sample Location	: MAMARONECK, NY	Date Analyzed	: 11/29/21 15:36
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 1,8260C	Analyst	: NLK
Lab File ID	: VE211129A19	Instrument ID	: ELAINE
Sample Amount	: 10 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
76-13-1	Freon-113	ND	2.5	0.70	U
108-87-2	Methyl cyclohexane	ND	10	0.40	U

Results Summary

Form 1

Volatile Organics by GC/MS

Client : Sterling Environmental Engineering
 Project Name : 441 & 442 WAVERLY AVE
 Lab ID : L2164369-07
 Client ID : DUP11192021
 Sample Location : MAMARONECK, NY
 Sample Matrix : WATER
 Analytical Method : 1,8260C
 Lab File ID : VE211129A25
 Sample Amount : 10 ml
 Level : LOW
 Extract Volume (MeOH) : N/A

Lab Number : L2164369
 Project Number : 28012
 Date Collected : 11/19/21 00:00
 Date Received : 11/19/21
 Date Analyzed : 11/29/21 17:37
 Dilution Factor : 1
 Analyst : NLK
 Instrument ID : ELAINE
 GC Column : RTX-502.2
 %Solids : N/A
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
75-09-2	Methylene chloride	ND	2.5	0.70	U
75-34-3	1,1-Dichloroethane	ND	2.5	0.70	U
67-66-3	Chloroform	ND	2.5	0.70	U
56-23-5	Carbon tetrachloride	ND	0.50	0.13	U
78-87-5	1,2-Dichloropropane	ND	1.0	0.14	U
124-48-1	Dibromochloromethane	ND	0.50	0.15	U
79-00-5	1,1,2-Trichloroethane	ND	1.5	0.50	U
127-18-4	Tetrachloroethene	ND	0.50	0.18	U
108-90-7	Chlorobenzene	ND	2.5	0.70	U
75-69-4	Trichlorofluoromethane	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	20	0.50	0.13	
71-55-6	1,1,1-Trichloroethane	ND	2.5	0.70	U
75-27-4	Bromodichloromethane	ND	0.50	0.19	U
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	U
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	U
75-25-2	Bromoform	ND	2.0	0.65	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.17	U
71-43-2	Benzene	2.4	0.50	0.16	
108-88-3	Toluene	ND	2.5	0.70	U
100-41-4	Ethylbenzene	ND	2.5	0.70	U
74-87-3	Chloromethane	ND	2.5	0.70	U
74-83-9	Bromomethane	ND	2.5	0.70	U
75-01-4	Vinyl chloride	7.9	1.0	0.07	
75-00-3	Chloroethane	ND	2.5	0.70	U
75-35-4	1,1-Dichloroethene	ND	0.50	0.17	U



Results Summary

Form 1

Volatile Organics by GC/MS

Client : Sterling Environmental Engineering
 Project Name : 441 & 442 WAVERLY AVE
 Lab ID : L2164369-07
 Client ID : DUP11192021
 Sample Location : MAMARONECK, NY
 Sample Matrix : WATER
 Analytical Method : 1,8260C
 Lab File ID : VE211129A25
 Sample Amount : 10 ml
 Level : LOW
 Extract Volume (MeOH) : N/A

Lab Number : L2164369
 Project Number : 28012
 Date Collected : 11/19/21 00:00
 Date Received : 11/19/21
 Date Analyzed : 11/29/21 17:37
 Dilution Factor : 1
 Analyst : NLK
 Instrument ID : ELAINE
 GC Column : RTX-502.2
 %Solids : N/A
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
156-60-5	trans-1,2-Dichloroethene	87	2.5	0.70	
79-01-6	Trichloroethene	0.56	0.50	0.18	
95-50-1	1,2-Dichlorobenzene	ND	2.5	0.70	U
541-73-1	1,3-Dichlorobenzene	ND	2.5	0.70	U
106-46-7	1,4-Dichlorobenzene	ND	2.5	0.70	U
1634-04-4	Methyl tert butyl ether	0.89	2.5	0.70	J
179601-23-1	p/m-Xylene	ND	2.5	0.70	U
95-47-6	o-Xylene	ND	2.5	0.70	U
156-59-2	cis-1,2-Dichloroethene	9.7	2.5	0.70	
100-42-5	Styrene	ND	2.5	0.70	U
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	U
67-64-1	Acetone	ND	5.0	1.5	U
75-15-0	Carbon disulfide	ND	5.0	1.0	U
78-93-3	2-Butanone	ND	5.0	1.9	U
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	U
591-78-6	2-Hexanone	ND	5.0	1.0	U
74-97-5	Bromochloromethane	ND	2.5	0.70	U
106-93-4	1,2-Dibromoethane	ND	2.0	0.65	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	0.70	U
98-82-8	Isopropylbenzene	ND	2.5	0.70	U
87-61-6	1,2,3-Trichlorobenzene	ND	2.5	0.70	U
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	0.70	U
79-20-9	Methyl Acetate	ND	2.0	0.23	U UJ
110-82-7	Cyclohexane	1.0	10	0.27	J
123-91-1	1,4-Dioxane	ND	250	61.	U R



Results Summary

Form 1

Volatile Organics by GC/MS

Client	: Sterling Environmental Engineering	Lab Number	: L2164369
Project Name	: 441 &442 WAVERLY AVE	Project Number	: 28012
Lab ID	: L2164369-07	Date Collected	: 11/19/21 00:00
Client ID	: DUP11192021	Date Received	: 11/19/21
Sample Location	: MAMARONECK, NY	Date Analyzed	: 11/29/21 17:37
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 1,8260C	Analyst	: NLK
Lab File ID	: VE211129A25	Instrument ID	: ELAINE
Sample Amount	: 10 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
76-13-1	Freon-113	ND	2.5	0.70	U
108-87-2	Methyl cyclohexane	0.63	10	0.40	J

VOC Data Section



**QA/QC Review of Method 8260C Volatiles Data
for Alpha Analytical, SDG Number: L2164369**

**5 Ground Water Samples, 1 Field Duplicate,
and 1 Trip Blank
Collected November 19, 2021**

Prepared by: Donald Anné
December 14, 2021

Geology

Hydrology

Remediation

Water Supply

Holding Times: The samples were analyzed within USEPA SW-846 holding times.

GC/MS Tuning and Mass Calibration: The BFB tuning criteria were within control limits.

Initial Calibration: The average RRFs for 13 compounds (highlighted yellow on attached Form 6) were below the method minimums, but not below 0.010 for ELAINE on 11-03-21. No action is taken on fewer than 20% of the compounds with method criteria outside control limits per calibration, provided no average RRF is less than 0.010.

The average RRFs for target compounds were above the allowable minimum (0.001 for 1,4-dioxane, 0.010 for all other compounds) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The RRFs for 14 compounds (highlighted yellow on attached Form 7) were below the method minimums, but not below 0.010 on 11-29-21 (VE211129A01). The %Ds for 5 compounds (highlighted yellow on attached Form 7) were above the method maximum on 11-29-21 (VE211129A01). No action is taken on fewer than 20% of the compounds with method criteria outside control limits per calibration, provided no RRF is less than 0.010.

The RRF for 1,4-dioxane was below the allowable minimum (0.001) on 11-29-21 (VE211129A01). Positive results for 1,4-dioxane should be considered estimated, biased low (J-) and “not detected” results rejected, unusable (R) in associated samples.

The %Ds for 5 compounds (highlighted yellow on attached Form 7) were above the allowable maximum (25%) on 11-29-21 (VE211129A01). Positive results for these compounds should be considered estimated (J) in associated samples.

Blanks: The analyses of the method and trip blanks reported target compounds as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for the ground water samples and trip blank.

Matrix Spike/Matrix Spike Duplicate: The percent recoveries for target compounds were within QC limits, but the relative percent difference for acetone was above the allowable maximum for aqueous MS/MSD sample GZ-23D. Sample GZ-23D reported acetone as “not detected”; therefore, no action is taken.

Laboratory Control Sample: The relative percent differences for target compounds were below the allowable maximum, but 1 of 2 percent recoveries for methyl acetate was below QC limits, but not below 30% for aqueous samples WG1577265-3/4. Positive results for methyl acetate should be considered estimated, biased low (J-) and “not detected” results estimated (UJ) in associated aqueous samples.

Field Duplicates: The relative percent differences for applicable compounds were below the allowable maximum (20%) for aqueous field duplicate pair GZ-22D/DUP11192021 (attached table), as required.

Compound ID: Checked compounds and surrogates were within GC/MS quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

Laboratory Control Sample Summary

Form 3

Volatiles

Client : Sterling Environmental Engineering Lab Number : L2164369
 Project Name : 441 & 442 WAVERLY AVE Project Number : 28012
 Matrix : WATER
 LCS Sample ID : WG1577265-3 Analysis Date : 11/29/21 09:19 File ID : VE211129A01
 LCSD Sample ID : WG1577265-4 Analysis Date : 11/29/21 09:39 File ID : VE211129A02

Parameter	Laboratory Control Sample			Laboratory Control Duplicate			RPD	Recovery Limits	RPD Limit
	True (ug/l)	Found (ug/l)	%R	True (ug/l)	Found (ug/l)	%R			
Methylene chloride	10	9.2	92	10	10	100	8	70-130	20
1,1-Dichloroethane	10	10	100	10	11	110	10	70-130	20
Chloroform	10	10	100	10	11	110	10	70-130	20
Carbon tetrachloride	10	10	100	10	10	100	0	63-132	20
1,2-Dichloropropane	10	9.7	97	10	10	100	3	70-130	20
Dibromochloromethane	10	9.7	97	10	11	110	13	63-130	20
1,1,2-Trichloroethane	10	8.6	86	10	9.5	95	10	70-130	20
Tetrachloroethene	10	11	110	10	11	110	0	70-130	20
Chlorobenzene	10	9.6	96	10	10	100	4	75-130	20
Trichlorofluoromethane	10	11	110	10	12	120	9	62-150	20
1,2-Dichloroethane	10	9.4	94	10	10	100	6	70-130	20
1,1,1-Trichloroethane	10	10	100	10	11	110	10	67-130	20
Bromodichloromethane	10	9.7	97	10	11	110	13	67-130	20
trans-1,3-Dichloropropene	10	8.6	86	10	8.7	87	1	70-130	20
cis-1,3-Dichloropropene	10	9.0	90	10	9.9	99	10	70-130	20
Bromoform	10	10	100	10	11	110	10	54-136	20
1,1,2,2-Tetrachloroethane	10	8.3	83	10	9.0	90	8	67-130	20
Benzene	10	9.8	98	10	10	100	2	70-130	20
Toluene	10	9.6	96	10	10	100	4	70-130	20
Ethylbenzene	10	9.9	99	10	10	100	1	70-130	20
Chloromethane	10	11	110	10	11	110	0	64-130	20
Bromomethane	10	11	110	10	11	110	0	39-139	20
Vinyl chloride	10	10	100	10	10	100	0	55-140	20
Chloroethane	10	11	110	10	12	120	9	55-138	20
1,1-Dichloroethene	10	11	110	10	11	110	0	61-145	20
trans-1,2-Dichloroethene	10	10	100	10	11	110	10	70-130	20



Laboratory Control Sample Summary

Form 3

Volatiles

Client : Sterling Environmental Engineering Lab Number : L2164369
 Project Name : 441 & 442 WAVERLY AVE Project Number : 28012
 Matrix : WATER
 LCS Sample ID : WG1577265-3 Analysis Date : 11/29/21 09:19 File ID : VE211129A01
 LCSD Sample ID : WG1577265-4 Analysis Date : 11/29/21 09:39 File ID : VE211129A02

Parameter	Laboratory Control Sample			Laboratory Control Duplicate			RPD	Recovery Limits	RPD Limit
	True (ug/l)	Found (ug/l)	%R	True (ug/l)	Found (ug/l)	%R			
Trichloroethene	10	9.9	99	10	10	100	1	70-130	20
1,2-Dichlorobenzene	10	10	100	10	11	110	10	70-130	20
1,3-Dichlorobenzene	10	10	100	10	11	110	10	70-130	20
1,4-Dichlorobenzene	10	10	100	10	11	110	10	70-130	20
Methyl tert butyl ether	10	8.0	80	10	9.5	95	17	63-130	20
p/m-Xylene	20	21	105	20	22	110	5	70-130	20
o-Xylene	20	21	105	20	22	110	5	70-130	20
cis-1,2-Dichloroethene	10	9.9	99	10	11	110	11	70-130	20
Styrene	20	22	110	20	23	115	4	70-130	20
Dichlorodifluoromethane	10	12	120	10	12	120	0	36-147	20
Acetone	10	7.6	76	10	8.1	81	6	58-148	20
Carbon disulfide	10	11	110	10	11	110	0	51-130	20
2-Butanone	10	6.7	67	10	7.9	79	16	63-138	20
4-Methyl-2-pentanone	10	6.8	68	10	7.0	70	3	59-130	20
2-Hexanone	10	6.2	62	10	6.9	69	11	57-130	20
Bromochloromethane	10	11	110	10	12	120	9	70-130	20
1,2-Dibromoethane	10	8.8	88	10	9.4	94	7	70-130	20
1,2-Dibromo-3-chloropropane	10	8.7	87	10	10	100	14	41-144	20
Isopropylbenzene	10	10	100	10	10	100	0	70-130	20
1,2,3-Trichlorobenzene	10	9.2	92	10	10	100	8	70-130	20
1,2,4-Trichlorobenzene	10	9.6	96	10	9.9	99	3	70-130	20
Methyl Acetate	10	6.8	68 Q	10	8.1	81	17	70-130	20
Cyclohexane	10	9.2	92	10	9.9	99	7	70-130	20
1,4-Dioxane	500	540	108	500	610	122	12	56-162	20
Freon-113	10	11	110	10	11	110	0	70-130	20
Methyl cyclohexane	10	9.2	92	10	10	100	8	70-130	20



Matrix Spike Sample Summary

Form 3

Volatiles

Client : Sterling Environmental Engineering
 Project Name : 441 & 442 WAVERLY AVE
 Client Sample ID : GZ-23D
 Lab Sample ID : L2164369-03
 Matrix Spike : WG1577265-6
 Matrix Spike Dup : WG1577265-7

Lab Number : L2164369
 Project Number : 28012
 Matrix : WATER
 Analysis Date : 11/29/21 16:36
 MS Analysis Date : 11/29/21 17:57
 MSD Analysis Date : 11/29/21 18:17

Parameter	Sample Conc. (ug/l)	Matrix Spike Sample			Matrix Spike Duplicate			RPD	Recovery Limits	RPD Limit
		Spike Added (ug/l)	Spike Conc. (ug/l)	%R	Spike Added (ug/l)	Spike Conc. (ug/l)	%R			
Methylene chloride	ND	10	9.8	98	10	10	100	2	70-130	20
1,1-Dichloroethane	ND	10	11	110	10	11	110	0	70-130	20
Chloroform	ND	10	10	100	10	11	110	10	70-130	20
Carbon tetrachloride	ND	10	10	100	10	11	110	10	63-132	20
1,2-Dichloropropane	ND	10	9.6	96	10	10	100	4	70-130	20
Dibromochloromethane	ND	10	10	100	10	11	110	10	63-130	20
1,1,2-Trichloroethane	ND	10	9.3	93	10	10	100	7	70-130	20
Tetrachloroethene	4.6	10	17	124	10	17	124	0	70-130	20
Chlorobenzene	ND	10	9.8	98	10	11	110	12	75-130	20
Trichlorofluoromethane	ND	10	11	110	10	12	120	9	62-150	20
1,2-Dichloroethane	0.65	10	10	94	10	11	104	10	70-130	20
1,1,1-Trichloroethane	ND	10	10	100	10	11	110	10	67-130	20
Bromodichloromethane	ND	10	10	100	10	11	110	10	67-130	20
trans-1,3-Dichloropropene	ND	10	8.2	82	10	8.4	84	2	70-130	20
cis-1,3-Dichloropropene	ND	10	8.8	88	10	9.8	98	11	70-130	20
Bromoform	ND	10	9.9	99	10	10	100	1	54-136	20
1,1,2,2-Tetrachloroethane	ND	10	9.4	94	10	9.8	98	4	67-130	20
Benzene	7.2	10	17	98	10	18	108	6	70-130	20
Toluene	ND	10	9.9	99	10	10	100	1	70-130	20
Ethylbenzene	ND	10	11	110	10	12	120	9	70-130	20
Chloromethane	ND	10	9.9	99	10	11	110	11	64-130	20
Bromomethane	ND	10	9.1	91	10	11	110	19	39-139	20



Matrix Spike Sample Summary

Form 3

Volatiles

Client : Sterling Environmental Engineering
 Project Name : 441 & 442 WAVERLY AVE
 Client Sample ID : GZ-23D
 Lab Sample ID : L2164369-03
 Matrix Spike : WG1577265-6
 Matrix Spike Dup : WG1577265-7

Lab Number : L2164369
 Project Number : 28012
 Matrix : WATER
 Analysis Date : 11/29/21 16:36
 MS Analysis Date : 11/29/21 17:57
 MSD Analysis Date : 11/29/21 18:17

Parameter	Sample Conc. (ug/l)	Matrix Spike Sample			Matrix Spike Duplicate			RPD	Recovery Limits	RPD Limit
		Spike Added (ug/l)	Spike Conc. (ug/l)	%R	Spike Added (ug/l)	Spike Conc. (ug/l)	%R			
Vinyl chloride	2.0	10	12	100	10	14	120	15	55-140	20
Chloroethane	ND	10	12	120	10	12	120	0	55-138	20
1,1-Dichloroethene	ND	10	11	110	10	12	120	9	61-145	20
trans-1,2-Dichloroethene	ND	10	11	110	10	12	120	9	70-130	20
Trichloroethene	3.4	10	14	106	10	15	116	7	70-130	20
1,2-Dichlorobenzene	ND	10	10	100	10	11	110	10	70-130	20
1,3-Dichlorobenzene	ND	10	9.9	99	10	10	100	1	70-130	20
1,4-Dichlorobenzene	ND	10	10	100	10	11	110	10	70-130	20
Methyl tert butyl ether	ND	10	9.4	94	10	10	100	6	63-130	20
p/m-Xylene	ND	20	22	110	20	23	115	4	70-130	20
o-Xylene	ND	20	21	105	20	23	115	9	70-130	20
cis-1,2-Dichloroethene	5.7	10	16	103	10	17	113	6	70-130	20
Styrene	ND	20	22	110	20	24	120	9	70-130	20
Dichlorodifluoromethane	ND	10	12	120	10	13	130	8	36-147	20
Acetone	ND	10	7.0	70	10	8.7	87	22 Q	58-148	20
Carbon disulfide	ND	10	10	100	10	12	120	18	51-130	20
2-Butanone	ND	10	8.9	89	10	9.1	91	2	63-138	20
4-Methyl-2-pentanone	ND	10	7.5	75	10	8.2	82	9	59-130	20
2-Hexanone	ND	10	7.7	77	10	8.2	82	6	57-130	20
Bromochloromethane	ND	10	12	120	10	12	120	0	70-130	20
1,2-Dibromoethane	ND	10	9.4	94	10	9.7	97	3	70-130	20
1,2-Dibromo-3-chloropropane	ND	10	10	100	10	9.8	98	2	41-144	20



Matrix Spike Sample Summary

Form 3

Volatiles

Client	: Sterling Environmental Engineering	Lab Number	: L2164369
Project Name	: 441 & 442 WAVERLY AVE	Project Number	: 28012
Client Sample ID	: GZ-23D	Matrix	: WATER
Lab Sample ID	: L2164369-03	Analysis Date	: 11/29/21 16:36
Matrix Spike	: WG1577265-6	MS Analysis Date	: 11/29/21 17:57
Matrix Spike Dup	: WG1577265-7	MSD Analysis Date	: 11/29/21 18:17

Parameter	Sample Conc. (ug/l)	Matrix Spike Sample			Matrix Spike Duplicate			RPD	Recovery Limits	RPD Limit
		Spike Added (ug/l)	Spike Conc. (ug/l)	%R	Spike Added (ug/l)	Spike Conc. (ug/l)	%R			
Isopropylbenzene	ND	10	9.7	97	10	10	100	3	70-130	20
1,2,3-Trichlorobenzene	ND	10	10	100	10	10	100	0	70-130	20
1,2,4-Trichlorobenzene	ND	10	10	100	10	10	100	0	70-130	20
Methyl Acetate	ND	10	7.5	75	10	7.9	79	5	70-130	20
Cyclohexane	ND	10	9.6J	96	10	10	100	4	70-130	20
1,4-Dioxane	ND	500	670	134	500	560	112	18	56-162	20
Freon-113	ND	10	11	110	10	11	110	0	70-130	20
Methyl cyclohexane	ND	10	9.3J	93	10	10	100	7	70-130	20

Initial Calibration Summary

Form 6

Volatiles

Client : Sterling Environmental Engineering
 Project Name : 441 &442 WAVERLY AVE
 Instrument ID : ELAINE
 Calibration dates : 11/03/21 13:15 11/03/21 16:20

Lab Number : L2164369
 Project Number : 28012
 Ical Ref : ICAL18433

Calibration Files

L11 =VE211103A03.D L1 =VE211103A05.D L2 =VE211103A07.D L3 =VE211103A08.D L4 =VE211103A09.D
 L6 =VE211103A10.D L8 =VE211103A11.D L10 =VE211103A12.D

Compound	L11	L1	L2	L3	L4	L6	L8	L10	Avg	%RSD
1) I Fluorobenzene	-----ISTD-----									
2) TP Dichlorodifluo		0.117	0.165	0.189	0.189	0.181	0.184	0.178	0.172	14.92
3) TP Chloromethane		0.233	0.308	0.282	0.265	0.260	0.267	0.261	0.268	8.55
4) TC Vinyl chloride	0.276	0.165	0.244	0.251	0.241	0.237	0.245	0.241	0.238	13.39
5) TP Bromomethane		0.083	0.114	0.115	0.105	0.104	0.111	0.113	0.106	10.55
6) TP Chloroethane		0.082	0.127	0.129	0.119	0.113	0.112	0.100	0.112	14.76
7) TP Trichlorofluor		0.178	0.246	0.258	0.242	0.242	0.248	0.244	0.237	11.17
8) TP Ethyl ether		0.054	0.086	0.090	0.089	0.090	0.092	0.092	0.085	16.08
10) TC 1,1-Dichloroet		0.143	0.161	0.159	0.158	0.157	0.160	0.160	0.157	3.91
11) TP Carbon disulfide		0.342	0.438	0.411	0.411	0.407	0.416	0.412	0.405	7.35
12) TP Freon-113		0.116	0.146	0.172	0.164	0.153	0.162	0.161	0.153	11.96
13) TP Iodomethane			0.101	0.129	0.151	0.168	0.168	0.164	0.147	18.26
14) TP Acrolein			0.003	0.007	0.008	0.009	0.010	0.010	*L	0.9971
15) TP Methylene chlo		0.231	0.214	0.205	0.188	0.185	0.183	0.180	0.198	9.59
17) TP Acetone		0.038	0.044	0.036	0.042	0.043	0.045	0.042	0.042	7.92
18) TP trans-1,2-Dich		0.126	0.181	0.174	0.164	0.161	0.167	0.170	0.163	10.86
19) TP Methyl acetate		0.109	0.099	0.102	0.094	0.094	0.097	0.100	0.099	5.10
20) TP Methyl tert butyl ether		0.371	0.406	0.424	0.428	0.437	0.455	0.450	0.424	6.73
21) TP tert-Butyl alc			0.007	0.010	0.011	0.011	0.011	0.012	0.010	16.39
22) TP Diisopropyl ether		0.620	0.719	0.786	0.782	0.799	0.808	0.797	0.759	8.95
23) TP 1,1-Dichloroet		0.305	0.387	0.369	0.364	0.359	0.369	0.367	0.360	7.15
24) TP Halothane			0.109	0.129	0.122	0.126	0.131	0.129	0.124	6.52
25) TP Acrylonitrile			0.048	0.052	0.054	0.056	0.057	0.057	0.054	6.24
26) TP Ethyl tert-but		0.425	0.596	0.618	0.632	0.656	0.669	0.669	0.609	14.05
27) TP Vinyl acetate		0.262	0.405	0.391	0.406	0.418	0.408	0.460	0.393	15.70
28) TP cis-1,2-Dichlo		0.137	0.200	0.193	0.178	0.185	0.187	0.189	0.181#	11.39
29) TP 2,2-Dichloropr		0.191	0.249	0.278	0.267	0.267	0.276	0.272	0.257	11.91
30) TP Bromochloromet		0.044	0.065	0.081	0.076	0.077	0.077	0.074	0.071#	17.92
31) TP Cyclohexane			0.320	0.409	0.402	0.401	0.417	0.410	0.393	9.26
32) TC Chloroform		0.245	0.324	0.329	0.305	0.309	0.310	0.314	0.305	9.13
33) TP Ethyl acetate		0.074	0.134	0.134	0.137	0.136	0.147	0.145	0.129	19.41
34) TP Carbon tetrachloride	0.108	0.105	0.182	0.202	0.213	0.212	0.226	0.228	*Q	0.9997
35) TP Tetrahydrofuran			0.031	0.030	0.038	0.039	0.038	0.040	0.036	11.56
36) S Dibromofluoromethane	0.221	0.222	0.228	0.233	0.217	0.224	0.213	0.216	0.222	2.93
37) TP 1,1,1-Trichlor		0.147	0.232	0.283	0.274	0.276	0.282	0.283	0.254	19.83
39) TP 2-Butanone			0.056	0.067	0.064	0.067	0.069	0.066	0.065	7.11



Initial Calibration Summary

Form 6

Volatiles

Client : Sterling Environmental Engineering
 Project Name : 441 &442 WAVERLY AVE
 Instrument ID : ELAINE
 Calibration dates : 11/03/21 13:15 11/03/21 16:20

Lab Number : L2164369
 Project Number : 28012
 Ical Ref : ICAL18433

Calibration Files

L11 =VE211103A03.D L1 =VE211103A05.D L2 =VE211103A07.D L3 =VE211103A08.D L4 =VE211103A09.D
 L6 =VE211103A10.D L8 =VE211103A11.D L10 =VE211103A12.D

Compound	L11	L1	L2	L3	L4	L6	L8	L10	Avg	%RSD
40) TP 1,1-Dichloropr		0.146	0.225	0.252	0.242	0.251	0.258	0.257	0.233	17.15
41) TP Benzene	0.777	0.607	0.760	0.767	0.745	0.751	0.766	0.753	0.741	7.40
42) TP Tertiary-Amyl Methyl Ether		0.347	0.421	0.450	0.451	0.480	0.495	0.500	0.449	11.79
43) S 1,2-Dichloroethane-d4	0.253	0.260	0.270	0.271	0.257	0.252	0.251	0.253	0.258	3.06
44) TP 1,2-Dichloroet		0.181	0.239	0.241	0.226	0.234	0.238	0.234	0.227	9.21
47) TP Methyl cyclohe			0.281	0.318	0.326	0.331	0.344	0.340	0.323	7.09
48) TP Trichloroethene	0.173	0.113	0.178	0.191	0.183	0.183	0.191	0.184	0.174#	14.63
50) TP Dibromomethane		0.062	0.076	0.091	0.086	0.087	0.089	0.089	0.083	12.80
51) TC 1,2-Dichloropr		0.171	0.208	0.208	0.204	0.210	0.212	0.211	0.203	7.21
53) TP 2-Chloroethyl		0.058	0.076	0.086	0.090	0.097	0.101	0.101	0.087	18.04
54) TP Bromodichlorom		0.176	0.214	0.217	0.223	0.232	0.239	0.241	0.220#	10.08
57) TP 1,4-Dioxane		0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001#	13.85
58) TP cis-1,3-Dichloropropene	0.215	0.216	0.234	0.270	0.266	0.286	0.296	0.296	0.260#	13.03
59) I Chlorobenzene-d5	-----ISTD-----									
60) S Toluene-d8	1.378	1.399	1.396	1.424	1.421	1.427	1.456	1.438	1.417	1.78
61) TC Toluene	0.625	0.597	0.666	0.670	0.685	0.663	0.691	0.687	0.661	5.02
62) TP 4-Methyl-2-pen			0.067	0.075	0.082	0.084	0.090	0.090	0.081	11.23
63) TP Tetrachloroethene		0.155	0.237	0.252	0.262	0.248	0.259	0.257	0.239	15.81
65) TP trans-1,3-Dichloropropene	0.271	0.270	0.255	0.328	0.348	0.368	0.387	0.392	0.328	16.93
67) TP Ethyl methacry		0.181	0.212	0.252	0.276	0.282	0.299	0.300	0.258	17.68
68) TP 1,1,2-Trichlor		0.142	0.163	0.171	0.172	0.174	0.177	0.179	0.168#	7.44
69) TP Chlorodibromom		0.128	0.168	0.195	0.207	0.219	0.235	0.237	0.198#	19.80
70) TP 1,3-Dichloropr		0.267	0.362	0.373	0.380	0.375	0.388	0.385	0.361	11.73
71) TP 1,2-Dibromoethane		0.151	0.182	0.184	0.184	0.188	0.194	0.196	0.183#	8.13
72) TP 2-Hexanone		0.125	0.128	0.130	0.147	0.150	0.156	0.150	0.141	8.99
73) TP Chlorobenzene		0.569	0.692	0.708	0.722	0.692	0.717	0.694	0.685	7.69
74) TC Ethylbenzene	1.015	0.981	1.195	1.263	1.305	1.267	1.297	1.246	1.196	10.63
75) TP 1,1,1,2-Tetrac		0.180	0.207	0.221	0.233	0.241	0.247	0.250	0.225	11.11
76) TP p/m Xylene	0.398	0.319	0.451	0.481	0.490	0.471	0.479	0.455	0.443	13.04
77) TP o Xylene	0.435	0.383	0.409	0.468	0.471	0.451	0.453	0.436	0.438	6.83
78) TP Styrene	0.552	0.534	0.682	0.765	0.794	0.755	0.754	0.704	0.692	14.26
79) I 1,4-Dichlorobenzene-d4	-----ISTD-----									
80) TP Bromoform		0.142	0.180	0.200	0.213	0.232	0.248	0.244	0.208	18.23
82) TP Isopropylbenzene		1.633	2.168	2.245	2.336	2.311	2.381	2.263	2.191	11.66
83) S 4-Bromofluorobenzene	1.020	1.007	1.010	0.982	0.987	1.020	1.032	1.016	1.009	1.71
84) TP Bromobenzene		0.425	0.473	0.490	0.496	0.507	0.522	0.512	0.489	6.66



Initial Calibration Summary

Form 6

Volatiles

Client : Sterling Environmental Engineering
 Project Name : 441 &442 WAVERLY AVE
 Instrument ID : ELAINE
 Calibration dates : 11/03/21 13:15 11/03/21 16:20

Lab Number : L2164369
 Project Number : 28012
 Ical Ref : ICAL18433

Calibration Files

L11 =VE211103A03.D L1 =VE211103A05.D L2 =VE211103A07.D L3 =VE211103A08.D L4 =VE211103A09.D
 L6 =VE211103A10.D L8 =VE211103A11.D L10 =VE211103A12.D

Compound	L11	L1	L2	L3	L4	L6	L8	L10	Avg	%RSD
85) TP n-Propylbenzene	2.012	2.460	2.656	2.776	2.746	2.826	2.643	2.588	10.84	
86) TP 1,4-Dichlorobu	0.675	0.797	0.841	0.842	0.861	0.894	0.854	0.824	8.71	
87) TP 1,1,2,2-Tetrac	0.385	0.407	0.390	0.414	0.432	0.447	0.445	0.417	6.00	
88) TP 4-Ethyltoluene	1.678	2.016	2.194	2.285	2.296	2.354	2.209	2.147	10.87	
89) TP 2-Chlorotoluene	1.616	1.848	1.871	1.914	1.924	1.961	1.863	1.857	6.10	
90) TP 1,3,5-Trimethy	1.371	1.749	1.849	1.933	1.942	1.974	1.864	1.812	11.51	
91) TP 1,2,3-Trichlor	0.381	0.345	0.362	0.362	0.373	0.384	0.370	0.368	3.62	
92) TP trans-1,4-Dich	0.082	0.129	0.132	0.135	0.148	0.145	0.136	0.130	17.10	
93) TP 4-Chlorotoluene	1.459	1.615	1.663	1.707	1.728	1.761	1.679	1.659	6.02	
94) TP tert-Butylbenzene	0.898	1.379	1.495	1.556	1.545	1.592	1.518	1.426	17.01	
97) TP 1,2,4-Trimethy	1.310	1.651	1.833	1.890	1.920	1.960	1.870	1.776	12.84	
98) TP sec-Butylbenzene	1.541	2.122	2.235	2.412	2.377	2.421	2.301	2.201	14.09	
99) TP p-Isopropyltol	1.208	1.649	1.830	1.946	1.956	1.974	1.913	1.782	15.54	
100) TP 1,3-Dichlorobe	0.811	0.964	0.957	0.990	0.993	1.002	0.970	0.955	6.88	
101) TP 1,4-Dichlorobe	0.932	0.940	0.984	0.966	0.981	0.995	0.973	0.967	2.40	
102) TP p-Diethylbenzene	0.772	0.950	1.066	1.145	1.158	1.176	1.174	1.063	14.27	
103) TP n-Butylbenzene	1.116	1.492	1.620	1.750	1.759	1.773	1.782	1.613	15.09	
104) TP 1,2-Dichlorobe	0.773	0.938	0.912	0.925	0.923	0.929	0.909	0.901	6.37	
105) TP 1,2,4,5-Tetram	1.174	1.419	1.602	1.747	1.791	1.844	1.830	1.630	15.42	
106) TP 1,2-Dibromo-3-	0.009	0.035	0.048	0.054	0.060	0.062	0.064	*Q	0.9996	Ave RRF = 0.047
107) TP 1,3,5-Trichlor	0.552	0.606	0.619	0.635	0.637	0.675	0.681	0.629	6.96	
108) TP Hexachlorobuta	0.156	0.205	0.170	0.202	0.201	0.212	0.219	0.195	11.89	
109) TP 1,2,4-Trichlor	0.417	0.517	0.532	0.557	0.578	0.623	0.611	0.548	12.70	
110) TP Naphthalene	0.855	0.932	1.111	1.213	1.289	1.395	1.355	1.164	17.90	
111) TP 1,2,3-Trichlor	0.379	0.452	0.497	0.477	0.515	0.556	0.541	0.488	12.25	

Calibration Verification Summary

Form 7

Volatiles

Client : Sterling Environmental Engineering
 Project Name : 441 & 442 WAVERLY AVE
 Instrument ID : ELAINE
 Lab File ID : VE211129A01
 Sample No : WG1577265-2
 Channel :

Lab Number : L2164369
 Project Number : 28012
 Calibration Date : 11/29/21 09:19
 Init. Calib. Date(s) : 11/03/21 11/03/21
 Init. Calib. Times : 13:15 16:20

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	159	0
Dichlorodifluoromethane	0.172	0.199	-	-15.7	20	168	0
Chloromethane	0.268	0.293	-	-9.3	20	166	0
Vinyl chloride	0.238	0.243	-	-2.1	20	155	0
Bromomethane	0.106	0.114	-	-7.5	20	159	0
Chloroethane	0.112	0.124	-	-10.7	20	153	0
Trichlorofluoromethane	0.237	0.273	-	-15.2	20	168	0
Ethyl ether	0.085	0.092	-	-8.2	20	163	0
1,1-Dichloroethene	0.157	0.168	-	-7	20	168	0
Carbon disulfide	0.405	0.44	-	-8.6	20	171	0
Freon-113	0.153	0.163	-	-6.5	20	151	0
Acrolein	10	9.979	-	0.2	20	182	0
Methylene chloride	0.198	0.183	-	7.6	20	142	0
Acetone	0.042	0.032	-	23.8*	20	140	0
trans-1,2-Dichloroethene	0.163	0.166	-	-1.8	20	152	0
Methyl acetate	0.099	0.068	-	31.3*	20	106	0
Methyl tert-butyl ether	0.424	0.342	-	19.3	20	128	0
tert-Butyl alcohol	0.01017	0.00673*	-	33.8*	20	110	-0.01
Diisopropyl ether	0.759	0.7	-	7.8	20	142	0
1,1-Dichloroethane	0.36	0.366	-	-1.7	20	158	0
Halothane	0.124	0.131	-	-5.6	20	162	0
Acrylonitrile	0.054	0.046	-	14.8	20	140	0
Ethyl tert-butyl ether	0.609	0.511	-	16.1	20	132	0
Vinyl acetate	0.393	0.315	-	19.8	20	128	0
cis-1,2-Dichloroethene	0.181	0.179*	-	1.1	20	148	0
2,2-Dichloropropane	0.257	0.23	-	10.5	20	132	0
Bromochloromethane	0.071	0.076*	-	-7	20	149	0
Cyclohexane	0.393	0.362	-	7.9	20	141	0
Chloroform	0.305	0.311	-	-2	20	151	0
Ethyl acetate	0.129	0.093	-	27.9*	20	110	0
Carbon tetrachloride	10	10.195	-	-2	20	166	0
Tetrahydrofuran	0.036	0.028	-	22.2*	20	150	0
Dibromofluoromethane	0.222	0.241	-	-8.6	20	165	0
1,1,1-Trichloroethane	0.254	0.259	-	-2	20	146	0
2-Butanone	0.065	0.044	-	32.3*	20	104	0
1,1-Dichloropropene	0.233	0.23	-	1.3	20	145	0
Benzene	0.741	0.722	-	2.6	20	150	0
tert-Amyl methyl ether	0.449	0.34	-	24.3*	20	120	0
1,2-Dichloroethane-d4	0.258	0.257	-	0.4	20	151	0
1,2-Dichloroethane	0.227	0.215	-	5.3	20	142	0
Methyl cyclohexane	0.323	0.296	-	8.4	20	148	0
Trichloroethene	0.174	0.172*	-	1.1	20	144	0
Dibromomethane	0.083	0.076	-	8.4	20	133	0

* Value outside of QC limits.



Calibration Verification Summary

Form 7

Volatiles

Client : Sterling Environmental Engineering
 Project Name : 441 & 442 WAVERLY AVE
 Instrument ID : ELAINE
 Lab File ID : VE211129A01
 Sample No : WG1577265-2
 Channel :

Lab Number : L2164369
 Project Number : 28012
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 Init. Calib. Date(s) : 11/03/21 11/03/21
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Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dichloropropane	0.203	0.197	-	3	20	151	0
Bromodichloromethane	0.22	0.214*	-	2.7	20	158	0
1,4-Dioxane	0.00082	0.00089*	-	-8.5	20	172	0
cis-1,3-Dichloropropene	0.26	0.235*	-	9.6	20	139	0
Chlorobenzene-d5	1	1	-	0	20	163	0
Toluene-d8	1.417	1.395	-	1.6	20	159	0
Toluene	0.661	0.631	-	4.5	20	153	0
4-Methyl-2-pentanone	0.081	0.055	-	32.1*	20	120	0
Tetrachloroethene	0.239	0.265	-	-10.9	20	171	0
trans-1,3-Dichloropropene	0.328	0.281*	-	14.3	20	140	0
Ethyl methacrylate	0.258	0.193	-	25.2*	20	125	0
1,1,2-Trichloroethane	0.168	0.146*	-	13.1	20	139	0
Chlorodibromomethane	0.198	0.192*	-	3	20	160	0
1,3-Dichloropropane	0.361	0.317	-	12.2	20	138	0
1,2-Dibromoethane	0.183	0.161*	-	12	20	142	0
2-Hexanone	0.141	0.087	-	38.3*	20	109	0
Chlorobenzene	0.685	0.661	-	3.5	20	152	0
Ethylbenzene	1.196	1.189	-	0.6	20	153	0
1,1,1,2-Tetrachloroethane	0.225	0.22	-	2.2	20	162	0
p/m Xylene	0.443	0.473	-	-6.8	20	160	0
o Xylene	0.438	0.458	-	-4.6	20	159	0
Styrene	0.692	0.755	-	-9.1	20	161	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	162	0
Bromoform	0.208	0.213	-	-2.4	20	173	0
Isopropylbenzene	2.191	2.183	-	0.4	20	158	0
4-Bromofluorobenzene	1.009	0.923	-	8.5	20	152	0
Bromobenzene	0.489	0.512	-	-4.7	20	169	0
n-Propylbenzene	2.588	2.488	-	3.9	20	152	0
1,4-Dichlorobutane	0.824	0.691	-	16.1	20	133	0
1,1,2,2-Tetrachloroethane	0.417	0.346	-	17	20	144	0
4-Ethyltoluene	2.147	2.097	-	2.3	20	155	0
2-Chlorotoluene	1.857	1.776	-	4.4	20	154	0
1,3,5-Trimethylbenzene	1.812	1.805	-	0.4	20	158	0
1,2,3-Trichloropropane	0.368	0.3	-	18.5	20	135	0
trans-1,4-Dichloro-2-buten	0.13	0.116	-	10.8	20	142	0
4-Chlorotoluene	1.659	1.604	-	3.3	20	156	0
tert-Butylbenzene	1.426	1.469	-	-3	20	159	0
1,2,4-Trimethylbenzene	1.776	1.786	-	-0.6	20	158	0
sec-Butylbenzene	2.201	2.206	-	-0.2	20	160	0
p-Isopropyltoluene	1.782	1.769	-	0.7	20	157	0
1,3-Dichlorobenzene	0.955	0.984	-	-3	20	167	0
1,4-Dichlorobenzene	0.967	0.998	-	-3.2	20	165	0
p-Diethylbenzene	1.063	1.016	-	4.4	20	155	0

* Value outside of QC limits.



Calibration Verification Summary

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 Instrument ID : ELAINE
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Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
n-Butylbenzene	1.613	1.506	-	6.6	20	151	0
1,2-Dichlorobenzene	0.901	0.922	-	-2.3	20	164	0
1,2,4,5-Tetramethylbenzene	1.63	1.54	-	5.5	20	156	0
1,2-Dibromo-3-chloropropan	10	8.674	-	13.3	20	153	0
1,3,5-Trichlorobenzene	0.629	0.641	-	-1.9	20	168	0
Hexachlorobutadiene	0.195	0.222	-	-13.8	20	212	0
1,2,4-Trichlorobenzene	0.548	0.527	-	3.8	20	161	0
Naphthalene	1.164	0.959	-	17.6	20	140	0
1,2,3-Trichlorobenzene	0.488	0.449	-	8	20	147	0

* Value outside of QC limits.



Field Duplicate Calculation Section

Volatiles

Calculations for Field Duplicate Relative Percent Difference (RPD)

SDG No. L2164369

S1= GZ-22D

S2= DUP11192021

<u>Analyte</u>	<u>S1</u>	<u>S2</u>	<u>RPD (%)</u>
1,2-Dichloroethane	20	20	0%
Benzene	2.3	2.4	4%
Vinyl chloride	7.9	7.9	0%
trans-1,2-Dichloroethene	86	87	1%
Trichloroethene	0.39	0.56	NC
Methyl tert butyl ether	0.80	0.89	NC
cis-1,2-Dichloroethene	10	9.7	3%
Cyclohexane	1.2	1.0	NC
Methyl cyclohexane	0.61	0.63	NC

* RPD is above the allowable maximum waters 20%.

Results are in units of ug/L.

Bold numbers were values that are below the CRQL or above the high standard.

ND - Not detected.

NC - Not calculated, both results must be within the linear range for valid RPDs to be calculated.

Alpha Geoscience: Acronyms and Definitions

Data Validation Acronyms

AA	Atomic absorption, flame technique
BHC	Hexachlorocyclohexane
BFB	Bromofluorobenzene
CCB	Continuing calibration blank
CCC	Calibration check compound
CCV	Continuing calibration verification
CN	Cyanide
CRDL	Contract required detection limit
CRQL	Contract required quantitation limit
CVAA	Atomic adsorption, cold vapor technique
DCAA	2,4-Dichlorophenylacetic acid
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenyl phosphine
ECD	Electron capture detector
FAA	Atomic absorption, furnace technique
FID	Flame ionization detector
FNP	1-Fluoronaphthalene
GC	Gas chromatography
GC/MS	Gas chromatography/mass spectrometry
GPC	Gel permeation chromatography
ICB	Initial calibration blank
ICP	Inductively coupled plasma-atomic emission spectrometer
ICV	Initial calibration verification
IDL	Instrument detection limit
IS	Internal standard
LCS	Laboratory control sample
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate
MSA	Method of standard additions
MS/MSD	Matrix spike/matrix spike duplicate
PID	Photo ionization detector
PCB	Polychlorinated biphenyl
PCDD	Polychlorinated dibenzodioxins
PCDF	Polychlorinated dibenzofurans
QA	Quality assurance
QC	Quality control
RF	Response factor
RPD	Relative percent difference
RRF	Relative response factor
RRF(number)	Relative response factor at concentration of the number following
RT	Retention time
RRT	Relative retention time
SDG	Sample delivery group
SPCC	System performance check compound
TCX	Tetrachloro-m-xylene
%D	Percent difference
%R	Percent recovery
%RSD	Percent relative standard deviation

Data Validation Qualifiers Used in the QA/QC Reviews for USEPA Region II

U	=	Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.
R	=	Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information is necessary to confirm the result.
N	=	Tentative identification. Analyte is considered present. Special methods may be needed to confirm its presence or absence during future sampling efforts.
J	=	Analyte is present. Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.
J-	=	Analyte is present. Reported value may be biased low and associated with a higher level of uncertainty than is normally expected with the analytical method.
J+	=	Analyte is present. Reported value may be biased high and associated with a higher level of uncertainty than is normally expected with the analytical method.
UJ	=	Not detected, quantitation limit may be inaccurate or imprecise.

Note: These qualifiers are used for data validation purposes. The data validation qualifiers may differ from the qualifiers that the laboratory assigns to the data. Refer to the laboratory analytical report for the definitions of the laboratory qualifiers.