ARCADIS Design & Consultancy for natural and built assets

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

Division of Environmental Remediation

REMEDIAL SYSTEM OPTIMIZATION REPORT - THIRD QUARTER 2018

Vestal Water Supply Site

Vestal, New York (Site No. 7-04-009A)

November 2018

REMEDIAL SYSTEM OPTIMIZATION REPORT - THIRD QUARTER 2018

Vestal Water Supply Site
Vestal, New York (Site No. 7-04-009A)

Prepared for:

New York State Department of Environmental Conservation

Andrew R. Vitolins P.G.
Principal Scientist

Jeremy Wyckoff
Project Geologist

Katie Bidwell
Staff Geologist

Prepared by:

Arcadis CE, Inc.
855 Route 146
Suite 210
Clifton Park
New York 12065
Tel 518 250 7300
Fax 518 250 7301

Our Ref.:

00266401.0000.

Date:

November 7, 2018

CONTENTS

TABLES

FIGURES

APPENDIX

1 INTRODUCTION

The New York State Department of Environmental Conservation (NYSDEC) issued a Work Assignment (# D004443-4) to Arcadis CE, Inc. (Arcadis) for Operation, Maintenance, and Monitoring at the Vestal Water Supply Site (site) in New York State (Site # 7-04-009A) (Figure 1-1).

The NYSDEC is evaluating the efficiency, effectiveness, environmental benefit, and cost of existing environmental remedies by performing a Remedial System Optimization (RSO). The purpose of the RSO is to assess the site's Conceptual Site Model (CSM), provide a summary of the performance of the remedy, document current cleanup practices, provide a summary of progress toward the cleanup goals, and provide recommendations for improvements, if required.

The Well 1-1A groundwater treatment plant was shut down on February 28, 2014 as part of the RSO to evaluate the impacts to groundwater quality while the treatment plant is not operating. In particular, plume migration is being monitored to assess the effects of groundwater withdrawals from the Town of Vestal water supply wells 1-2A and 1-3 on the groundwater plume distribution and migration. In addition, soil and groundwater samples have been collected to further evaluate the horizontal and vertical distribution of VOCs in the area of the site.

This Quarterly Report has been prepared to summarize the July 2018 through September 2018 field activities.

2 INVESTIGATION ACTIVITIES

The scope of work for the RSO was designed to provide data for use in evaluation of the existing remedy and to further characterize the nature and extent of contamination in soil and groundwater at the site. The RSO provides information that is being used to assess the efficiency of the remedy and evaluate potential alternative remedial approaches. These data are summarized in the Final Focused Feasibility Study (FFS), which was submitted to the NYSDEC on September 25, 2015.

The basic scope of work included field oversight of subcontractors (i.e., driller and surveyor), preparation of daily field logs, collection of subsurface and surface soil samples, installation of monitoring wells, monitoring well development and hydraulic conductivity testing, measuring groundwater levels, installation of groundwater level data loggers, shut-down of the Well 1-1A groundwater treatment plant for a period of at least one year, collection of groundwater samples from new and existing wells, evaluation of data, and reporting of conclusions and recommendations.

Currently the investigation includes monthly pre-treatment and post treatment (Well 1-3) sampling for the Town of Vestal water supply wells 1-2A and 1-3 and quarterly groundwater sampling from the new and existing monitoring wells.

2.1 Groundwater Sampling

The quarterly groundwater monitoring is being conducted to evaluate the distribution of the VOC groundwater plume on the north side of NYS Route 17 over time. The sampling includes wells surrounding the Town of Vestal water supply wells 1-2A and 1-3 and Well 1-1 (Figure 2-2). As recommended in the 4th quarter 2016 RSO report, 3rd quarter 2018 groundwater samples were collected from a revised sample list (Table 2-1), which was approved by NYSDEC on January 26, 2017. The revised list includes three additional monitoring wells, 4009-7, 4009-8, and 4009-26. These wells were added to the sample list to evaluate whether the ERT source area is the cause of elevated benzene concentrations noted in the last several sampling events.

Groundwater samples were collected using passive diffusion bags (PDBs) in accordance with the RSO Work Plan. All samples were submitted for analysis of TCL VOCs by USEPA Method 8260 to TestAmerica-Buffalo following chain-of-custody sample handling procedures. The USEPA ERT monitoring wells on the ECO International property and Well 1-1A are not included on the revised sample list (discussed above) and were not sampled during this event.

2.1.1 Water Level Data

On September 13, 2018 groundwater levels were measured at all wells to be sampled using an electronic water-level meter. As indicated in Section 1, the Well 1-1A treatment plant continues to be shut down, therefore, groundwater levels are representative of static (non-pumping) conditions. Groundwater levels were used to calculate groundwater elevations and assess groundwater flow conditions across the site. A summary of groundwater elevation data is provided in Table 2-2. Groundwater flow in the shallow and intermediate groundwater monitoring zones is generally west to northwest and north to northwest in the deep groundwater monitoring zone toward the Susquehanna River.

2.1.2 September 2018 Groundwater Sampling

Groundwater samples were collected using PDBs that were deployed on September 13, 2018 in the wells identified on Table 2-1. Former treatment system Well 1-1 was also included in accordance with the fourth quarter 2014 RSO Report recommendations and subsequent NYSDEC approval in March 2015, Extraction Well 1-1A was sampled during the baseline event, but since the shutdown of the Well 1-1A treatment facility a sample is not able to be collected from this well.

2.1.2.1 September 2018 Groundwater Sampling Results

Groundwater results from the September 2018 groundwater sampling event are provided in Table 2-3. Detected constituents were compared to NYSDEC Technical and Operation Guidance Series (TOGS 1.1.1) Class GA Groundwater Quality Criteria (Class GA Standard). The VOCs measured at the highest concentrations were benzene, 1,1,1-trichloroethane (1,1,1-TCA), 1,1-dichloroethane (1,1-DCA), 1,1-dichloroethene (1,1-DCE), cis-1,2-dichloroethene (cis-1,2-DCE), trichloroethene (TCE), and vinyl chloride (VC). VOC concentrations measured at the shallow, intermediate, and deep groundwater monitoring zones, during the September groundwater sampling event are presented on Figures 2-2, 2-3, and 2-4, respectively.

As shown in Table 2-3, with the exception of low estimated concentrations of acetone, a common laboratory contaminant, VOCs were not detected in the shallow groundwater zone monitoring wells 4009-11A, 4009-13A, 4009-16A, and 4009-30A. Acetone and benzene were the only VOCs detected in the shallow monitoring well 4009-10 at low estimated concentrations less than the Class GA Standards (50 µg/L and 1.0 µg/L respectively). Monitoring wells 4009-7 (65.1 µg/L) and 4009-9 (13.73 µg/L) were the only two wells screened in the shallow groundwater zone in which VOCs were detected above the Class GA Standards during the September 2018 sampling event. Acetone, benzene, 1,1-DCE, 1,1-DCA, and TCE were detected at low estimated concentrations less than the respective Class GA Standards in monitoring well 4009-7 and cis-1,2-DCE and VC were detected at concentrations greater than the respective Class GA Standards (5 µg/L and 2.0 µg/L). Cis-1,2-DCE was the only analyte detected in 4009-9 that exceeded the Class GA Standard (5 µg/L). TCE was also detected in the groundwater sample from well 4009-9 at a low estimated concentration less than the Class GA Standard. As shown in Figure 2-2, VOCs have not been detected at concentrations greater than the Class GA Standards in samples from monitoring wells 4009-10, 4009-11A, 4009-13A, 4009-16A, and 4009-30A in the past six sampling events. The concentrations detailed above in 4009-7 and 4009-9 have generally been consistent the past seven sampling events, showing slight fluctuations (Figure 2-2).

As shown in Figure 2-3 and Table 2-3, the highest concentrations of VOCs are in the intermediate groundwater zone, down-gradient of the source area (ECO International property). The highest total VOC concentrations in groundwater samples collected from the intermediate zone during the September 2018 sampling event were from Wells 4009-8 (5,500 µg/L), 4009-29S (1,849 µg/L), and 4009-29I (2,015 µg/L). Well 4009-8 is located on the south side of NYS Route 17, just west of the source property. Wells 4009-29S and 4009-29I are on the north side of NYS Route 17, farther downgradient of the source area where higher concentrations are typically reported for the intermediate groundwater zone. With the exception of monitoring well 4009-27I, 1,1,1-TCA, cis-1,2-DCE, and TCE were detected at concentrations greater than the respective Class GA Standards in the remaining five intermediate groundwater zone monitoring wells. 1,1-DCE and 1,1-DCA were detected in four of the remaining intermediate wells, and VC was detected in

three of the remaining intermediate wells all with concentrations exceeding the respective Class GA Standards. Monitoring well 4009-27I (1.70 µg/L) contained the lowest total VOC concentration in the intermediate groundwater zone with a low concentration of TCE. As shown on Figure 2-3, the majority of the detected analytes in monitoring wells 4009-27S, 4009-27I, and 4009-29I are showing consistent or slightly decreasing concentrations over the past seven events. VOC concentrations in monitoring wells 4009-8, 4009-26, and 4009-29S continue to fluctuate; however, recent monitoring results are showing a slightly increasing trend that will continue to be monitored during the next quarter.

The following eleven monitoring wells screened in the deep groundwater monitoring zone contained concentrations of VOCs that exceeded the Class GA Standards; 4009-11, 4009-12, 4009-14, 4009-15, 4009-16, 4009-19, 4009-21, 4009-22, 4009-29D, 4009-30, and Well 1-1 (Figure 2-4 and Table 2-3). Benzene (discussed below) was the only VOC detected in seven of the eleven monitoring wells listed above at concentrations exceeding the Class GA Standard of 1.0 µg/L ranging from 1.2 µg/L (4009-22) to 33 µg/L (4009-30). The total VOCs measured in the remaining four deep monitoring wells where concentrations exceeded the Class GA Standards is as follows; 4009-11 (19.4 µg/L), 4009-12 (190 µg/L), 4009-29D (324 µg/L), and Well 1-1 (393 µg/L). 1,1,1-TCA, 1,1-DCE, 1,1-DCA, cis-1,2-DCE, and TCE were detected at concentrations greater than the respective Class GA Standards in at least three of the remaining four monitoring wells and VC was detected above the Class GA Standard in two of the four remaining wells (Figure 2-4). VOCs were not detected in the deep groundwater zone monitoring well 4009-18 and only low estimated VOCs were detected below the Class GA Standards in monitoring wells 4009-13, 4009-27D, and 4009-28 during the September 2018 sampling event (Table 2-3). As shown in Figure 2-4 there have been no VOC concentrations exceeding the Class GA Standards in samples from monitoring wells 4009-13, 4009-18, and 4009-27D for the past seven events.

Quarterly groundwater monitoring data continue to indicate that there is little change in the shallow, intermediate, and deep groundwater plume distribution and migration since the shutdown of the Well 1-1A groundwater treatment plant. Total VOCs detected in the groundwater samples collected in the September 2018 sampling event are generally consistent with the range of results reported during the last seven events with the exception of six wells: 4009-8, 4009-11, 4009-12, 4009-26, 4009-29S, and 4009-29D. VOC concentrations in 4009-8, 4009-11, 4009-12, and 4009-29D continue to fluctuate. As shown on Figure 2-3 monitoring well 4009-26 has shown a slight increase in several analytes in the past seven events and monitoring wells 4009-8 and 4009-29S have shown increases in several analytes since the last sampling event. With the exception of 4009-8, these fluctuations and noted increases in VOC concentrations are generally in the historical range for the remaining five wells. VOC concentrations in 4009-8 are slightly greater than the range of typical concentrations previously recorded (Table 2-3). Concentration trends will continue to be monitored during the next quarter.

Concentrations of VOCs in samples from the monitoring wells in the vicinity of the Town of Vestal's water supply wells 1-2A and 1-3 (monitoring wells 4009-16/16A, 4009-18, 4009-19, 4009-21, 4009-30/30A) are generally consistent with the previous sampling events. VOCs were not detected at concentrations greater than the Class GA Standards in monitoring wells 4009-16A, 4009-18, and 4009-30A. Benzene was the only VOC detected at a concentration exceeding the Class GA Standard (1 µg/L) in wells 4009-16 (1.5 µg/L), 4009-19 (1.5 µg/L), 4009-21 (5.3 µg/L), and 4009-30 (33 µg/L). Concentration trends will continue to be monitored during the next quarter.

Benzene concentrations have increased in the central portion of the study area over the past several years in the samples from monitoring wells, 4009-14, 4009-15, 4009-16, 4009-21 and more recently 4009-30. Benzene concentrations also continue to fluctuate in monitoring wells 4009-11 and 4009-12. Benzene was not detected at concentrations greater than the Class GA Standard in the samples collected from the shallow and intermediate zones during the September 2018 sampling event. Benzene concentrations in the samples collected from deep monitoring wells 4009-11 (8.9 µg/L), 4009-14 (1.6 µg/L), 4009-15 (7.3 µg/L), 4009-16 (1.5 µg/L), 4009-19 (1.5 µg/L), 4009-21 (5.3 µg/L) 4009-22 (1.2 µg/L), and 4009-30 (33 µg/L), exceeded the Class GA Standard of 1.0 µg/L during the September 2018 sampling event. As shown in Table 2-3, these concentrations are similar to previous sampling results with the exception of the concentration in 4009-30, which is slightly greater than the range of typical concentrations previously recorded. As noted previously, three monitoring wells (4009-7, 4009-8, and 4009-26) were added to the first quarter 2017 sampling list in an attempt to identify the source of the benzene increases. However, benzene was not detected at concentrations greater than the Class GA Standard in the samples from those monitoring wells during the 2017 and 2018 sampling events. Benzene concentrations will continue to be monitored during the next quarter.

2.1.3 Town of Vestal Municipal Well Sampling

Monthly analytical data are provided by the Town of Vestal Water Superintendent for Well 1-2A and 1-3. Samples were collected on July 17, 2018, August 27, 2018, and September 24, 2018. Pre-treatment groundwater samples were also collected by Arcadis from the Town of Vestal water supply wells 1-2A and 1-3 and post-treatment samples from Well 1-3 on July 6, 2018, August 8, 2018, and September 13, 2018. These samples were used to supplement the Town's monthly influent sampling data and to evaluate potential impacts to the Town's water supply wells related to the shutdown of the Well 1-1A treatment plant. Samples were collected in consultation with the Town of Vestal Water District Superintendent and submitted to TestAmerica for analysis of VOCs by USEPA Method 8260.

Until April 2018, VOCs associated with contamination from the source area had not been detected in any of the pre-treatment effluent samples collected from the Town of Vestal water supply wells 1-2A and 1-3 since the RSO evaluation has been implemented through 2017. In April 2018, 1,1,1-TCA was detected at an estimated concentration of 0.29 J ug/L in Well 1-3 pre-treatment sample. The Class GA Standard for this compound is 5 ug/L. As part of the RSO contingency plan, Arcadis has continued to collect a post-treatment sample from Well 1-3 since May 2018. With the exception of low estimated concentrations of acetone, VOCs were not detected in the June 2018 samples or from any of the monthly samples for this reporting period (July, August, September 2018) collected from Well 1-2A, Well 1-3, and Well-1-3 post-treatment. The monthly analytical data provided by the Town of Vestal Water Superintendent for Well 1-2A and 1-3 were also non-detect during all three months of this reporting period. As approved by the NYSDEC (May 24, 2018 via email), Arcadis will continue with routine monthly sampling of the pre-treatment (Well 1-2A, 1-3) and post-treatment of Well 1-3. A summary of the monthly analytical data is provided in Table 2-4. Laboratory analytical reporting forms are provided in Appendix A.

3 RECOMMENDATIONS

Town of Vestal Wells 1-2A and 1-3 (pre-and post-treatment) should continue to be sampled on a monthly basis to supplement the Town's sampling program at least until the final remedies for OU1 and OU2 are implemented. In addition, quarterly groundwater monitoring should continue while Well 1-1A treatment plant is shut down. It is recommended that the monitoring program continue to include sampling of the locations listed in the most recently revised sample list.

4 ACTIVITIES FOR NEXT QUARTER

Scheduled activities for the next quarter are summarized below.

- Monthly sampling at Town of Vestal Wells 1-2A and 1-3 (pre and post treatment).
- Quarterly groundwater sampling (December 2018).

TABLES

Table 2-1. Summary of the Groundwater Monitoring Locatons
Remedial Site Optimization Report
Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Well I.D.	2018 Quarterly Monitoring Locatons
4009-7	x
4009-8	x
4009-9	x
4009-10	x
4009-11	x
4009-11A	x
4009-12	x
4009-13	x
4009-13A	x
4009-14	x
4009-15	x
4009-16	x
4009-16A	x
4009-18	x
4009-19	x
4009-21	x
4009-22	x
4009-26	x
4009-27S	x
4009-27I	x
4009-27D	x
4009-28	x
4009-29S	x
4009-29I	x
4009-29D	x
4009-30	x
4009-30A	x
WELL 1-1	x

Table 2-2. Summary of Groundwater Elevation Data
Remedial Site Optimization Report / Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

WELL I.D.	*Top of Riser (f* AMSL)		2/19/2014			3/17/2014			5/12/2014		
			D*W (fbgs)	D*P (fbgs)	GW ELEV (famsl)	D*W (fbgs)	D*P (fbgs)	GW ELEV (famsl)	D*W (fbgs)	D*P (fbgs)	GW ELEV (famsl)
4009-7	824.27		18.76	NP	805.51	16.28	NP	807.99	16.91	NP	807.36
4009-8	824.52		19.69	NP	804.83	13.28	NP	811.24	17.60	NP	806.92
4009-9	825.05		20.36	NP	804.69	18.00	NP	807.05	18.82	NP	806.23
4009-10	831.31		26.44	NP	804.87	24.28	NP	807.03	24.95	NP	806.36
4009-11	830.06		26.95	NP	803.11	23.75	NP	806.31	24.89	NP	805.17
4009-11A	830.80		15.22	NP	815.58	14.78	NP	816.02	14.56	NP	816.24
4009-12	823.34		18.80	NP	804.54	16.68	NP	806.66	17.52	NP	805.82
4009-13	816.28		12.31	NP	803.97	8.97	NP	807.31	10.42	NP	805.86
4009-13A	816.17		11.74	NP	804.43	8.72	NP	807.45	9.94	NP	806.23
4009-14	820.71		16.62	NP	804.09	13.43	NP	807.28	15.36	NP	805.35
4009-15	826.54		22.63	NP	803.91	19.35	NP	807.19	11.93	NP	814.61
4009-16	826.72		22.68	NP	804.04	19.50	NP	807.22	21.12	NP	805.60
4009-16A	826.84		22.45	NP	804.39	19.45	NP	807.39	21.22	NP	805.62
4009-18	834.78		30.59	NP	804.19	27.61	NP	807.17	29.38	NP	805.40
4009-19	824.94		20.79	NP	804.15	17.78	NP	807.16	19.54	NP	805.40
4009-21	825.02	**	18.90	NP	804.20	15.90	NP	807.20	17.65	NP	805.45
4009-22	817.40		13.06	NP	804.34	9.85	NP	807.55	11.50	NP	805.90
4009-26	824.31		19.36	NP	804.95	16.55	NP	807.76	17.39	NP	806.92
4009-27S	826.19		21.97	NP	804.22	18.80	NP	807.39	20.02	NP	806.17
4009-27I	826.03		21.93	NP	804.10	18.63	NP	807.40	19.98	NP	806.05
4009-27D	825.87		21.90	NP	803.97	18.43	NP	807.44	19.88	NP	805.99
4009-28	821.59		17.71	NP	803.88	14.45	NP	807.14	16.00	NP	805.59
4009-29S	825.77		21.75	NP	804.02	18.42	NP	807.35	19.75	NP	806.02
4009-29I	825.68		21.94	NP	803.74	18.51	NP	807.17	19.86	NP	805.82
4009-29D	825.67		21.92	NP	803.75	18.54	NP	807.13	19.80	NP	805.87
4009-30	827.50	**	NM	NM	NM	NM	NM	NM	NM	NM	NM
4009-30A	826.69	**	NM	NM	NM	NM	NM	NM	NM	NM	NM

Notes:

fbgs - feet below ground surface
famsl - feet above mean sea level

* - Elevation data from Conceptual Site Model (Lockheed Martin, 2012).

** - Elevation data remeasured on 4/1/15 after well repairs
NM - Not measured
NP - No product / LNAPL
Starting in 2018, only wells that are sampled will be gauged.

Corrected based on assumed LNAPL density of 0.85 g/cm3

Table 2-2. Summary of Groundwater Elevation Data
Remedial Site Optimization Report / Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

WELL I.D.	*Top of Riser (f* AMSL)	8/11/2014			11/24/2014			4/1/2015			7/13/2015		
		D*W (fbgs)	D*P (fbgs)	GW ELEV (famsl)	D*W (fbgs)	D*P (fbgs)	GW ELEV (famsl)	D*W (fbgs)	D*P (fbgs)	GW ELEV (famsl)	D*W (fbgs)	D*P (fbgs)	GW ELEV (famsl)
4009-7	824.27	20.22	NP	804.05	19.34	NP	804.93	17.74	NP	806.53	16.53	NP	807.74
4009-8	824.52	20.96	NP	803.56	20.24	NP	804.28	18.26	NP	806.26	17.05	NP	807.47
4009-9	825.05	21.84	NP	803.21	21.28	NP	803.77	19.23	NP	805.82	18.02	NP	807.03
4009-10	831.31	27.88	NP	803.43	27.43	NP	803.88	25.48	NP	805.83	24.16	NP	807.15
4009-11	830.06	28.36	NP	801.70	26.51	NP	803.55	24.89	NP	805.17	24.72	NP	805.34
4009-11A	830.80	16.69	NP	814.11	20.43	NP	810.37	14.94	NP	815.86	14.77	NP	816.03
4009-12	823.34	20.90	NP	802.44	19.22	NP	804.12	17.45	NP	805.89	17.34	NP	806.00
4009-13	816.28	13.60	NP	802.68	12.07	NP	804.21	10.37	NP	805.91	10.09	NP	806.19
4009-13A	816.17	13.00	NP	803.17	11.93	NP	804.24	10.09	NP	806.08	9.38	NP	806.79
4009-14	820.71	18.07	NP	802.64	16.57	NP	804.14	14.80	NP	805.91	14.66	NP	806.05
4009-15	826.54	24.18	NP	802.36	22.53	NP	804.01	20.76	NP	805.78	20.85	NP	805.69
4009-16	826.72	24.30	NP	802.42	22.70	NP	804.02	20.93	NP	805.79	26.87	NP	799.85
4009-16A	826.84	24.31	NP	802.53	22.72	NP	804.12	20.94	NP	805.90	27.03	NP	799.81
4009-18	834.78	32.23	NP	802.55	30.73	NP	804.05	26.51	NP	808.27	29.02	NP	805.76
4009-19	824.94	22.42	NP	802.52	20.91	NP	804.03	19.15	NP	805.79	19.19	NP	805.75
4009-21	825.02 **	20.55	NP	802.55	19.03	NP	804.07	19.33	NP	805.69	19.41	NP	805.61
4009-22	817.40	14.03	NP	803.37	13.27	NP	804.13	11.55	NP	805.85	9.90	NP	807.50
4009-26	824.31	20.62	NP	803.69	19.92	NP	804.39	17.94	NP	806.37	16.75	NP	807.56
4009-27S	826.19	23.29	NP	802.90	22.02	NP	804.17	20.27	NP	805.92	19.56	NP	806.63
4009-27I	826.03	23.18	NP	802.85	21.85	NP	804.18	20.03	NP	806.00	19.58	NP	806.45
4009-27D	825.87	23.02	NP	802.85	21.65	NP	804.22	19.86	NP	806.01	19.41	NP	806.46
4009-28	821.59	19.23	NP	802.36	17.65	NP	803.94	15.80	NP	805.79	15.72	NP	805.87
4009-29S	825.77	23.03	NP	802.74	21.60	NP	804.17	19.80	NP	805.97	19.40	NP	806.37
4009-29I	825.68	23.22	NP	802.46	21.61	NP	804.07	19.89	NP	805.79	19.63	NP	806.05
4009-29D	825.67	23.18	NP	802.49	21.60	NP	804.07	19.86	NP	805.81	19.81	NP	805.86
4009-30	827.50 **	NM	NM	NM	NM	NM	NM	21.32	NP	806.18	20.81	NP	806.69
4009-30A	826.69 **	NM	NM	NM	NM	NM	NM	20.82	NP	805.87	20.97	NP	805.72

Notes:
fbgs - feet below ground surface
famsl - feet above mean sea level

* - Elevation data from Conceptual Site Model (Lockheed Martin, 2012).

** - Elevation data remeasured on 4/1/15 after well repairs
NM - Not measured
NP - No product / LNAPL
Starting in 2018, only wells that are sampled will be gauged.

Corrected based on assumed LNAPL density of 0.85 g/cm3

Table 2-2. Summary of Groundwater Elevation Data
Remedial Site Optimization Report / Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

WELL I.D.	*Top of Riser (f* AMSL)	10/12/2015			3/28/2016			6/1/2016		
		D*W (fbgs)	D*P (fbgs)	GW ELEV (famsl)	D*W (fbgs)	D*P (fbgs)	GW ELEV (famsl)	D*W (fbgs)	D*P (fbgs)	GW ELEV (famsl)
4009-7	824.27	21.17	NP	803.10	18.35	NP	805.92	19.69	NP	804.58
4009-8	824.52	22.03	NP	802.49	18.97	NP	805.55	20.46	NP	804.06
4009-9	825.05	22.83	NP	802.22	19.84	NP	805.21	21.43	NP	803.62
4009-10	831.31	28.84	NP	802.47	20.95	NP	810.36	27.44	NP	803.87
4009-11	830.06	28.80	NP	801.26	26.25	NP	803.81	27.69	NP	802.37
4009-11A	830.80	16.97	NP	813.83	16.05	NP	814.75	16.60	NP	814.20
4009-12	823.34	21.56	NP	801.78	18.9	NP	804.44	20.26	NP	803.08
4009-13	816.28	14.29	NP	801.99	11.68	NP	804.60	12.98	NP	803.30
4009-13A	816.17	13.97	NP	802.20	11.12	NP	805.05	12.51	NP	803.66
4009-14	820.71	18.73	NP	801.98	16.23	NP	804.48	17.47	NP	803.24
4009-15	826.54	24.79	NP	801.75	22.21	NP	804.33	23.48	NP	803.06
4009-16	826.72	25.01	NP	801.71	22.38	NP	804.34	23.62	NP	803.10
4009-16A	826.84	25.18	NP	801.66	22.51	NP	804.33	23.49	NP	803.35
4009-18	834.78	33.04	NP	801.74	30.65	NP	804.13	31.59	NP	803.19
4009-19	824.94	23.31	NP	801.63	20.99	NP	803.95	21.78	NP	803.16
4009-21	825.02 **	23.98	NP	801.04	22.03	NP	802.99	21.98	NP	803.04
4009-22	817.40	13.28	NP	804.12	11.42	NP	805.98	11.95	NP	805.45
4009-26	824.31	21.69	NP	802.62	18.68	NP	805.63	20.12	NP	804.19
4009-27S	826.19	24.14	NP	802.05	21.30	NP	804.89	22.72	NP	803.47
4009-27I	826.03	23.98	NP	802.05	21.23	NP	804.80	22.61	NP	803.42
4009-27D	825.87	23.80	NP	802.07	21.05	NP	804.82	22.42	NP	803.45
4009-28	821.59	19.85	NP	801.74	17.3	NP	804.29	18.58	NP	803.01
4009-29S	825.77	23.83	NP	801.94	21.11	NP	804.66	22.43	NP	803.34
4009-29I	825.68	23.91	NP	801.77	21.27	NP	804.41	22.55	NP	803.13
4009-29D	825.67	23.89	NP	801.78	21.19	NP	804.48	22.55	NP	803.12
4009-30	827.50 **	25.81	NP	801.69	22.38	NP	805.12	24.26	NP	803.24
4009-30A	826.69 **	25.12	NP	801.57	22.41	NP	804.28	23.55	NP	803.14

Notes:

fbgs - feet below ground surface
famsl - feet above mean sea level

* - Elevation data from Conceptual Site Model (Lockheed Martin, 2012).

** - Elevation data remeasured on 4/1/15 after well repairs
NM - Not measured
NP - No product / LNAPL
Starting in 2018, only wells that are sampled will be gauged.

Corrected based on assumed LNAPL density of 0.85 g/cm3

Table 2-2. Summary of Groundwater Elevation Data
Remedial Site Optimization Report / Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

WELL I.D.	*Top of Riser (f* AMSL)	9/15/2016			11/3/2016			4/10/2017			6/6/2017		
		D*W (fbgs)	D*P (fbgs)	GW ELEV (famsl)	D*W (fbgs)	D*P (fbgs)	GW ELEV (famsl)	D*W (fbgs)	D*P (fbgs)	GW ELEV (famsl)	D*W (fbgs)	D*P (fbgs)	GW ELEV (famsl)
4009-7	824.27	21.92	NP	802.35	19.39	NP	804.88	5.33	NP	818.94	16.22	NP	808.05
4009-8	824.52	22.74	NP	801.78	19.84	NP	804.68	8.94	NP	815.58	17.04	NP	807.48
4009-9	825.05	23.19	NP	801.86	21.28	NP	803.77	8.85	NP	816.20	18.16	NP	806.89
4009-10	831.31	29.13	NP	802.18	27.52	NP	803.79	15.13	NP	816.18	24.32	NP	806.99
4009-11	830.06	21.10	NP	808.96	26.83	NP	803.23	17.43	NP	812.63	23.93	NP	806.13
4009-11A	830.80	20.63	NP	810.17	20.40	NP	810.40	11.4	NP	819.40	13.59	NP	817.21
4009-12	823.34	22.51	NP	800.83	19.45	NP	803.89	9.25	NP	814.09	16.16	NP	807.18
4009-13	816.28	15.23	NP	801.05	11.80	NP	804.48	2.23	NP	814.05	8.84	NP	807.44
4009-13A	816.17	14.73	NP	801.44	12.25	NP	803.92	1.24	NP	814.93	9.02	NP	807.15
4009-14	820.71	9.71	NP	811.00	16.68	NP	804.03	6.85	NP	813.86	14.02	NP	806.69
4009-15	826.54	25.79	NP	800.75	22.68	NP	803.86	12.59	NP	813.95	19.31	NP	807.23
4009-16	826.72	26.08	NP	800.64	22.80	NP	803.92	13.08	NP	813.64	24.04	NP	802.68
4009-16A	826.84	26.49	NP	800.35	22.70	NP	804.14	12.85	NP	813.99	19.97	NP	806.87
4009-18	834.78	34.24	NP	800.54	30.77	NP	804.01	20.99	NP	813.79	27.95	NP	806.83
4009-19	824.94	24.76	NP	800.18	21.00	NP	803.94	11.2	NP	813.74	18.16	NP	806.78
4009-21	825.02 **	24.96	NP	800.06	21.17	NP	803.85	11.55	NP	813.47	18.41	NP	806.61
4009-22	817.40	13.85	NP	803.55	13.09	NP	804.31	2.21	NP	815.19	9.41	NP	807.99
4009-26	824.31	22.39	NP	801.92	19.62	NP	804.69	5.72	NP	818.59	16.85	NP	807.46
4009-27S	826.19	24.96	NP	801.23	21.97	NP	804.22	11.31	NP	814.88	18.9	NP	807.29
4009-27I	826.03	24.83	NP	801.20	21.87	NP	804.16	11.58	NP	814.45	18.75	NP	807.28
4009-27D	825.87	24.65	NP	801.22	21.70	NP	804.17	11.54	NP	814.33	18.52	NP	807.35
4009-28	821.59	20.79	NP	800.80	17.78	NP	803.81	7.35	NP	814.24	14.52	NP	807.07
4009-29S	825.77	24.71	NP	801.06	21.72	NP	804.05	11.39	NP	814.38	18.51	NP	807.26
4009-29I	825.68	24.79	NP	800.89	21.80	NP	803.88	11.44	NP	814.24	18.48	NP	807.20
4009-29D	825.67	24.79	NP	800.88	21.75	NP	803.92	12.29	NP	813.38	18.39	NP	807.28
4009-30	827.50 **	26.6	NP	800.90	23.32	NP	804.18	12.29	NP	815.21	20.86	NP	806.64
4009-30A	826.69 **	26.32	NP	800.37	22.73	NP	803.96	12.83	NP	813.86	19.83	NP	806.86

Notes:
fbgs - feet below ground surface
famsl - feet above mean sea level

* - Elevation data from Conceptual Site Model (Lockheed Martin, 2012).

** - Elevation data remeasured on 4/1/15 after well repairs
NM - Not measured
NP - No product / LNAPL
Starting in 2018, only wells that are sampled will be gauged.

Corrected based on assumed LNAPL density of 0.85 g/cm3

Table 2-2. Summary of Groundwater Elevation Data
Remedial Site Optimization Report / Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

WELL I.D.	*Top of Riser (f* AMSL)	10/5/2017			12/12/2017			3/16/2018		
		D*W (fbgs)	D*P (fbgs)	GW ELEV (famsl)	D*W (fbgs)	D*P (fbgs)	GW ELEV (famsl)	D*W (fbgs)	D*P (fbgs)	GW ELEV (famsl)
4009-7	824.27	20.89	NP	803.38	19.29	NP	804.98	17.27	NP	807.00
4009-8	824.52	21.79	NP	802.73	20.06	NP	804.46	16.81	NP	807.71
4009-9	825.05	22.79	NP	802.26	21.12	NP	803.93	18.09	NP	806.96
4009-10	831.31	28.66	NP	802.65	27.23	NP	804.08	26.41	NP	804.90
4009-11	830.06	29.19	NP	800.87	26.89	NP	803.17	24.55	NP	805.51
4009-11A	830.80	15.26	NP	815.54	17.15	NP	813.65	13.91	NP	816.89
4009-12	823.34	21.80	NP	801.54	19.58	NP	803.76	17.23	NP	806.11
4009-13	816.28	14.44	NP	801.84	12.35	NP	803.93	8.86	NP	807.42
4009-13A	816.17	13.88	NP	802.29	12.02	NP	804.15	9.24	NP	806.93
4009-14	820.71	18.94	NP	801.77	16.82	NP	803.89	14.51	NP	806.20
4009-15	826.54	25.03	NP	801.51	22.81	NP	803.73	20.49	NP	806.05
4009-16	826.72	25.23	NP	801.49	22.94	NP	803.78	20.72	NP	806.00
4009-16A	826.84	25.29	NP	801.55	22.91	NP	803.93	20.84	NP	806.00
4009-18	834.78	33.10	NP	801.68	30.93	NP	803.85	28.89	NP	805.89
4009-19	824.94	23.33	NP	801.61	21.13	NP	803.81	19.05	NP	805.89
4009-21	825.02 **	23.46	NP	801.56	21.3	NP	803.72	19.53	NP	805.49
4009-22	817.40	11.56	NP	805.84	11.78	NP	805.62	9.93	NP	807.47
4009-26	824.31	21.48	NP	802.83	19.73	NP	804.58	16.60	NP	807.71
4009-27S	826.19	24.21	NP	801.98	22.12	NP	804.07	19.46	NP	806.73
4009-27I	826.03	24.10	NP	801.93	22.01	NP	804.02	19.47	NP	806.56
4009-27D	825.87	23.92	NP	801.95	21.84	NP	804.03	19.26	NP	806.61
4009-28	821.59	20.13	NP	801.46	17.92	NP	803.67	15.56	NP	806.03
4009-29S	825.77	23.95	NP	801.82	21.84	NP	803.93	19.32	NP	806.45
4009-29I	825.68	24.14	NP	801.54	21.91	NP	803.77	19.29	NP	806.39
4009-29D	825.67	24.08	NP	801.59	21.89	NP	803.78	19.46	NP	806.21
4009-30	827.50 **	25.98	NP	801.52	23.74	NP	803.76	21.56	NP	805.94
4009-30A	826.69 **	25.23	NP	801.46	23.05	NP	803.64	20.73	NP	805.96

Notes:

fbgs - feet below ground surface
famsl - feet above mean sea level

* - Elevation data from Conceptual Site Model (Lockheed Martin, 2012).

** - Elevation data remeasured on 4/1/15 after well repairs
NM - Not measured
NP - No product / LNAPL
Starting in 2018, only wells that are sampled will be gauged.

Corrected based on assumed LNAPL density of 0.85 g/cm3

Table 2-2. Summary of Groundwater Elevation Data
Remedial Site Optimization Report / Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

WELL I.D.	*Top of Riser (f* AMSL)	5/31/2018			9/13/2018		
		D*W (fbgs)	D*P (fbgs)	GW ELEV (famsl)	D*W (fbgs)	D*P (fbgs)	GW ELEV (famsl)
4009-7	824.27	17.64	NP	806.63	17.07	NP	807.20
4009-8	824.52	18.36	NP	806.16	17.78	NP	806.74
4009-9	825.05	19.57	NP	805.48	19.23	NP	805.82
4009-10	831.31	25.65	NP	805.66	25.48	NP	805.83
4009-11	830.06	26.65	NP	803.41	24.39	NP	805.67
4009-11A	830.80	14.54	NP	816.26	13.58	NP	817.22
4009-12	823.34	18.57	NP	804.77	16.95	NP	806.39
4009-13	816.28	11.44	NP	804.84	9.75	NP	806.53
4009-13A	816.17	10.74	NP	805.43	9.44	NP	806.73
4009-14	820.71	16.87	NP	803.84	14.19	NP	806.52
4009-15	826.54	22.08	NP	804.46	20.21	NP	806.33
4009-16	826.72	22.23	NP	804.49	20.41	NP	806.31
4009-16A	826.84	21.81	NP	805.03	20.24	NP	806.60
4009-18	834.78	30.27	NP	804.51	28.53	NP	806.25
4009-19	824.94	20.43	NP	804.51	18.79	NP	806.15
4009-21	825.02 **	20.63	NP	804.39	20.58	NP	804.44
4009-22	817.40	10.51	NP	806.89	9.70	NP	807.70
4009-26	824.31	18.09	NP	806.22	17.39	NP	806.92
4009-27S	826.19	20.98	NP	805.21	19.54	NP	806.65
4009-27I	826.03	20.96	NP	805.07	19.48	NP	806.55
4009-27D	825.87	20.81	NP	805.06	19.30	NP	806.57
4009-28	821.59	17.16	NP	804.43	15.83	NP	805.76
4009-29S	825.77	20.83	NP	804.94	19.28	NP	806.49
4009-29I	825.68	21.04	NP	804.64	19.30	NP	806.38
4009-29D	825.67	21.01	NP	804.66	19.26	NP	806.41
4009-30	827.50 **	30.02	NP	797.48	21.15	NP	806.35
4009-30A	826.69 **	22.16	NP	804.53	20.29	NP	806.40

Notes:

fbgs - feet below ground surface
famsl - feet above mean sea level

* - Elevation data from Conceptual Site Model (Lockheed Martin, 2012).

** - Elevation data remeasured on 4/1/15 after well repairs
NM - Not measured
NP - No product / LNAPL
Starting in 2018, only wells that are sampled will be gauged.

Corrected based on assumed LNAPL density of 0.85 g/cm3

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard ug/L	4009-7 2/20/2014 Shallow ug/L	4009-7 5/28/2014 Shallow ug/L	4009-7 8/28/2014 Shallow ug/L	4009-7 12/9/2014 Shallow ug/L	4009-7 4/10/2017 Shallow ug/L	4009-7 6/20/2017 Shallow ug/L	4009-7 10/23/2017 Shallow ug/L	4009-7 12/28/2017 Shallow ug/L	4009-7 3/30/2018 Shallow ug/L	4009-7 6/14/2018 Shallow ug/L	4009-7 9/27/2018 Shallow ug/L	4009-8 2/20/2014 Intermediate ug/L	4009-8 5/28/2014 Intermediate ug/L	4009-8 8/28/2014 Intermediate ug/L	4009-8 12/9/2014 Intermediate ug/L
1,1,1-Trichloroethane	5	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	790 D	1000	2900 DJ	1500
1,1,2,2-Tetrachloroethane	5	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	14	13 J	20 UDJ	17 J
1,1,2-Trichloroethane	1	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 J	20 U	20 UDJ	25 U
1,1-Dichloroethane	5	1.0 J	0.48 J	1.0 UJ	3.3 U	1.1	0.59 J	0.44 J	0.63 J	0.47 J	0.59 J	0.62 J	40	62	72 DJ	58
1,1-Dichloroethene	5	1.0 U	0.29 J	1.0 UJ	3.3 U	0.44 J	0.38 J	0.39 J	0.67 J	1.0 U	0.41 J	0.53 J	31	120	94 DJ	120
1,2,3-Trimethylbenzene		1.0 U	1.0 U	1.0 UJ	17 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	130 U
1,2,4-Trichlorobenzene	5	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
1,2,4-Trimethylbenzne	5	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 U	1.0 UJ	6.7 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	50 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
1,2-Dichlorobenzene	3	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
1,2-Dichloropropane	1	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
1,3-Dichlorobenzene	3	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
1,4-Dichlorobenzene	3	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
2-B'U*anone (MEK)	50	10 U	1.4 J	10 UJ	33 U	10 U*	10 U	5.0 U	10 U	10 U*	5.0 U	10 U	10 U	200 U	200 UDJ	250 U
2-Hexanone	50*	5.0 U	5.0 U	5.0 UJ	33 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U*	5.0 U	5.0 U	100 U	100 UDJ	250 U
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 U	5.0 UJ	33 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U*	5.0 U	5.0 U	100 U	100 UDJ	250 U
Acetone	50*	5.3 J	7.1 J	14 J	33 U	3.4 J	4.7 J	1.4 J	10 U	10 U	5.0 U	4.0 J	9.6 J	200 U	200 UDJ	250 U
Benzene	1	1.1	1.0 U	0.41 J	3.3 U	1.0 U	1.0 U	0.28 J	0.43 J	1.0 U	1.0 U	0.45 J	0.67 J	20 U	20 UDJ	25 U
Bromodichloromethane	50	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
Bromoform	50*	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U*
Bromomethane	5	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
Carbon disulfide		1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
Carbon tetrachloride	5	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
Chlorobenzene	5	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
Chloroethane	5	1.0 U	0.3 J	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.2	20 U	20 UDJ	25 U
Chloroform	7	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.6 J	20 U	20 UDJ	25 U
Chloromethane		1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
cis-1,2-Dichloroethene	5	20	46	36 J	38	42	41	36	53	26	38	55	440 D	310	550 DJ	490
cis-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
Cyclohexane		1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
Dibromochloromethane	50	1.0 U	1.0 U	1.0 UJ	3.3 U*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
Dichlorodifluoromethane	5	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
Ethylbenzene	5	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
Isopropylbenzne (Cumene)	5	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
Methyl Acetate		2.5 U	2.5 U	2.5 UJ	33 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	50 U	50 UDJ	250 U
Methyl Cyclohexane		1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
Methylene Chloride	5	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	9.1 DJ	25 U
Methyl Tert B'U*yl Ether	10	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
Styrene	5	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
Tetrachloroethene	5	1.0 U	1.0 U	1.0 UJ	3.3 U*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.3	20 U	20 UDJ	25 U
Toluene	5	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	0.29 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	0.29 J	1.0 U	1.0 U	0.28 J	1.0 U	1.1	20 U	20 UDJ	25 U
trans-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 UJ	3.3 U*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	20 UDJ	25 U
Trichloroethene	5	2.1	4.1	3.3 J	2.7 J	0.93 J	1.2	0.76 J	1.1	1.0 U	0.72 J	0.97 J	19	20 U	20 UDJ	7.1 J
Trichlorofluoromethane	5	1.0 U	1.0 U	1.0 UJ	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	20 U	20 UDJ	25 U
Vinyl chloride	2	2.5	3.1	3.1 J	3.0 J	22	4.6	4.3	10	1.0 U	5.6	7.5	44	140	92 DJ	44
Xylenes, Total		2.0 U	2.0 U	2.0 UJ	6.7 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	40 U	40 UDJ	50 U
Total VOCs		32.0	62.8	56.8	43.7	69.9	52.5	44.2	65.8	26.5	45.6	69.1	1394	1645	3717	2236
Total VOCs (w/o Acteone or Methlyene Chloride)		26.7	55.7	42.8	43.7	66.5	47.8	42.8	65.8	26.5	45.6	65.1	1384	1645	3717	2236

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard ug/L	4009-8 4/10/2017 Intermediate ug/L	4009-8 6/20/2017 Intermediate ug/L	4009-8 10/23/2017 Intermediate ug/L	4009-8 12/28/2017 Intermediate ug/L	4009-8 3/30/2018 Intermediate ug/L	4009-8 6/14/2018 Intermediate ug/L	4009-8 9/27/2018 Intermediate ug/L	4009-9 2/20/2014 Shallow ug/L	4009-9 5/28/2014 Shallow ug/L	4009-9 8/28/2014 Shallow ug/L	4009-9 12/9/2014 Shallow ug/L	4009-9 4/20/2015 Shallow ug/L	4009-9 7/29/2015 Shallow ug/L	4009-9 11/4/2015 Shallow ug/L	4009-9 3/28/2016 Shallow ug/L
1,1,1-Trichloroethane	5	**560**	**490**	**2500**	**2100**	**1100**	**800**	**3700**	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		5.1 J	10 U	16	13	40 U	6.7	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	**51**	**45**	**96**	**80**	**51**	**44**	**150**	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	0.38 J	1.0 U
1,1-Dichloroethene	5	**31**	**80**	**80**	**70**	**47**	**34**	**160**	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trimethylbenzene		10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-B'U*anone (MEK)	50	100 U*	100 U	50 U	100 U	400 U*	10 U	400 U	1.4 J	10 U	10 UJ	10 U	10 U	10.0 U	10.0 U	10.0 U
2-Hexanone	50*	50 U	50 U	50 U	50 U	200 U	10 U*	200 U	5.0 U	5.0 U	5.0 UJ	10 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)		50 U	50 U	50 U	50 U	200 U	10 U*	200 U	5.0 U	5.0 U	5.0 UJ	10 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	50*	100 U	100 U	50 U	100 U	400 U	10 U	400 U	12	3.3 J	11 J	10 U	7.1 J	10.0 U	10.0 U	3.5 J
Benzene	1	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	**1.3 J**	**1.3**	1.0 U	**3.4**	**2.5**	1.0 U
Bromodichloromethane	50	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	50*	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	5	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide		10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	5	**7.8 J**	3.7 J	4.4 J	10 U	40 U	**5.2**	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	7	10 U	10 U	10 U	10 U	40 U	0.66 J	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane		10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	**230**	**190**	**500**	**680**	**490**	**320**	**910**	**6.3**	4.0	**13 J**	**7.0**	1.9	**15**	**21**	4.0
cis-1,3-Dichloropropene	0.4	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane		10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	50	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane	5	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	5	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Acetate		25 U	25 U	50 U	10 U	100 U	10 U	100 U	2.5 U	2.5 U	2.5 UJ	10 U	2.5 U	2.5 U	2.5 U	2.5 U
Methyl Cyclohexane		10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Tert B'U*yl Ether	10	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	5	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5	10 U	10 U	3.3 J	10 U	40 U	1.6 J	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	5	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	10 U	10 U	10 U	10 U	40 U	1.2 J	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5	**150**	**160**	**300**	**300**	**300**	**190**	**580**	0.5 J	0.66 J	0.67 J	0.80 J	0.52 J	0.59 J	0.52 J	0.74 J
Trichlorofluoromethane	5	10 U	10 U	10 U	10 U	40 U	2.0 U	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2	**30**	**15**	**19**	**24**	40 U	**11**	40 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total		20 U	20 U	20 U	20 U	80 U	4.0 U	80 U	1.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total VOCs		1065	984	3519	3267	1988	1414	5500	20.2	7.96	26.0	9.10	9.52	19.0	24.4	8.24
Total VOCs (w/o Acteone or Methlyene Chloride)		1065	984	3519	3267	1988	1414	5500	8.24	4.66	15.0	9.10	2.42	19.0	24.4	4.74

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID	NYSDEC GA	4009-9	4009-9	4009-9	4009-9	4009-9	4009-9	4009-9	4009-9	4009-9	4009-9	4009-9	4009-10	4009-10	4009-10	4009-10	4009-10
Sampling Date	Standard	6/30/2016	9/29/2016	11/28/2016	4/10/2017	6/20/2017	10/23/2017	12/28/2017	3/30/2018	6/14/2018	9/27/2018	2/20/2014	5/28/2014	8/28/2014	12/9/2014	4/20/2015
Groundwater Monitoring Zone		Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,1,1-Trichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.43 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	0.32 J	1.0 U
1,1,2,2-Tetrachloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
1,1,2-Trichloroethane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
1,1-Dichloroethane	5	0.39 J	1.0 U	1.0 U	1.0 U	1.0 U	0.40 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
1,1-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
1,2,3-Trimethylbenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	5.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
1,2-Dichloropropane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
2-B'U*anone (MEK)	50	10 U	10 U	10 U	10 U*	10 U	5.0 U	10 U	10 U*	5.0 U	10 U	10 U	10 U	10 UJ	10 U	10 U
2-Hexanone	50*	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U	5.0 U	5.0 UJ	10 U	5.0 U
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U	5.0 U	5.0 UJ	10 U	5.0 U
Acetone	50*	10 U	10 U	10 U	3.5 J	3.1 J	2.2 J	10 U	10 U	5.0 U	3.6 J	10	3.2 J	7.5 J	10 U	9.2 J
Benzene	1	1.0 U	**3.7**	**1.3**	1.0 U	1.0 U	0.15 J	1.0 U	1.0 U	1.0 U	1.0 U	0.6 J	0.53 J	**2.3 J**	**26**	1.0 U
Bromodichloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Bromoform	50*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Bromomethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Carbon disulfide		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Carbon tetrachloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Chlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Chloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Chloroform	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Chloromethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	**21**	**22**	**19**	**8.2**	**10**	**21**	**11**	2.6	**8.2**	**13**	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
cis-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Dibromochloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U*	1.0 U
Dichlorodifluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Ethylbenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Methyl Acetate		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 UJ	10 U	2.5 U
Methyl Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Methylene Chloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Methyl Tert B'U*yl Ether	10	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Styrene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Tetrachloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U*	1.0 U
Toluene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0	1.0 U	1.0 UJ	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U*	1.0 U
Trichloroethene	5	0.65 J	0.57 J	0.81 J	0.97 J	1.0 U	1.3	1.0 U	1.0 U	0.32 J	0.73 J	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Trichlorofluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Vinyl chloride	2	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.25 J	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Xylenes, Total		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U
Total VOCs		22.0	26.3	21.1	12.7	13.1	25.5	11.0	2.60	8.77	17.33	12.6	3.73	9.80	26.3	9.20
Total VOCs (w/o Acteone or Methlyene Chloride)		22.0	26.3	21.1	9.17	10.0	23.3	11.0	2.60	8.77	13.73	2.60	0.53	2.30	26.3	0.00

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID	NYSDEC GA	4009-10	4009-10	4009-10	4009-10	4009-10	4009-10	4009-10	4009-10	4009-10	4009-10	4009-10	4009-10	4009-10	4009-10	4009-11	4009-11
Sampling Date	Standard	7/29/2015	11/4/2015	3/28/2016	6/30/2016	9/29/2016	11/28/2016	4/10/2017	6/20/2017	10/23/2017	12/28/2017	3/30/2018	6/14/2018	9/27/2018	2/20/2014	5/28/2014
Groundwater Monitoring Zone		Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Deep	Deep
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,1,1-Trichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.41 J	1.0 U	1.0 U	0.31 J	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trimethylbenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-B'U*anone (MEK)	50	10 U	10 U	10 U	10 U	10 U	10 U	10 U*	10 U	5.0 U	10 U	10 U*	5.0 U	10 U	10 U	10 U
2-Hexanone	50*	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U	5.0 U
Acetone	50*	10 U	10 U	10 U	10 U	10 U	10 U	3.4 J	10 U	3.1 J	10 U	10 U	5.0 U	3.1 J	7.8 J	4.6 J
Benzene	1	**1.8**	0.97 J	1.0 U	**1.9**	0.65 J	**3.4**	1.0 U	1.0 U	0.45 J	1.0 U	1.0 U	1.0 U	0.51 J	1.0 U	1.0 U
Bromodichloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	50*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Acetate		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	2.5 U
Methyl Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Tert B'U*yl Ether	10	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total VOCs		1.80	0.97	0.00	1.90	0.65	3.40	3.40	0.00	3.96	0.00	0.00	0.31	3.61	7.80	4.60
Total VOCs (w/o Acteone or Methlyene Chloride)		1.80	0.97	0.00	1.90	0.65	3.40	0.00	0.00	0.86	0.00	0.00	0.31	0.51	0.00	0.00

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID	NYSDEC GA	4009-11	4009-11	4009-11	4009-11	4009-11	4009-11	4009-11	4009-11	4009-11	4009-11	4009-11	4009-11	4009-11	4009-11	4009-11
Sampling Date	Standard	8/28/2014	12/9/2014	4/20/2015	7/29/2015	11/4/2015	3/28/2016	6/30/2016	9/29/2016	11/28/2016	4/10/2017	6/20/2017	10/23/2017	12/28/2017	3/30/2018	6/14/2018
Groundwater Monitoring Zone		Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,1,1-Trichloroethane	5	1.9 J	1.0 U	1.0 U	1.0 U	79	1.0 U	57	87	1.0 U	1.0 U	170	65	1.0 U	88	68
1,1,2,2-Tetrachloroethane	5	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.74 J	1.2	1.0 U	1.0 U	2.9	1.4	1.0 U	1.0 U	1.2
1,1,2-Trichloroethane	1	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	1.0 UJ	1.0 U	1.0 U	1.0 U	20	0.76 J	13	21	2.1	2.8	43	18	2.1	24	21
1,1-Dichloroethene	5	1.0 UJ	1.0 U	1.0 U	1.0 U	8.7	1.0 U	3.4	5.4	1.0 U	1.0 U	27	5.0	1.0 U	7.2	6.4
1,2,3-Trimethylbenzene		1.0 UJ	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.21 J	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-B'U*anone (MEK)	50	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U*	10 U	5.0 U	10 U	10 U*	5.0 U
2-Hexanone	50*	5.0 UJ	10 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*
4-Methyl-2-pentanone (MIBK)		5.0 UJ	10 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*
Acetone	50*	10 UJ	10 U	6.7 J	10 U	10 U	4.4 J	10 U	10 U	10 U	3.7 J	3.6 J	5.0 U	4.5 J	10 U	5.0 U
Benzene	1	1.0 UJ	7.8	5.6	8.4	1.0 U	18	1.0 U	1.3	16	15	1.0 U	1.0 U	6.5	1.0 U	1.0 U
Bromodichloromethane	50	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	50*	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	5	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide		1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	5	1.0 UJ	1.0 U	1.0 U	1.0 U	1.5	1.5	1.2	1.8	1.0 U	1.0 U	1.8	0.9 J	1.0 U	1.3	1.2
Chloroform	7	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane		1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	1.0 UJ	1.0 U	1.0 U	1.0 U	12	1.0 U	8.8	15	1.0 U	1.0 U	35	15	1.0 U	23	20
cis-1,3-Dichloropropene	0.4	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane		1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	50	1.0 UJ	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane	5	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	5	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Acetate		2.5 UJ	10 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	5.0 U
Methyl Cyclohexane		1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Tert B'U*yl Ether	10	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	5	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5	1.0 UJ	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	5	1.0 UJ	1.0	1.0	1.0	1.0 U	0.79 J	1.0 U	1.0 U	0.82 J	0.85 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4	1.0 UJ	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1	0.5 J	1.0 U	1.6	1.1
Trichlorofluoromethane	5	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2	1.0 UJ	1.0 U	1.0 U	1.0 U	19	1.0 U	14	17	2.0 U	1.1	37	13	1.0 U	17	19
Xylenes, Total		2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total VOCs		1.90	8.80	13.3	9.40	140	25.5	98.1	150	18.9	23.5	322	119	13.1	162	138
Total VOCs (w/o Acteone or Methlyene Chloride)		1.90	8.80	6.60	9.40	140	21.1	98.1	150	18.9	19.8	318	119	8.60	162	138

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID	NYSDEC GA	4009-11	4009-11A	4009-11A	4009-11A	4009-11A	4009-11A	4009-11A	4009-11A	4009-11A	4009-11A	4009-11A	4009-11A	4009-11A	4009-11A	4009-11A
Sampling Date	Standard	9/27/2018	2/20/2014	5/28/2014	8/28/2014	12/9/2014	4/20/2015	7/29/2015	11/4/2015	3/28/2016	6/30/2016	9/29/2016	11/28/2016	4/10/2017	6/20/2017	10/23/2017
Groundwater Monitoring Zone		Deep	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,1,1-Trichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	**7.0**	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trimethylbenzene		1.0 U	1.0 U	1.0 U	1.0 UJ	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-B'U*anone (MEK)	50	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U*	10 U	5.0 U
2-Hexanone	50*	5.0 U	5.0 U	5.0 U	5.0 UJ	10 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 U	5.0 U	5.0 UJ	10 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	50*	10 U	9.8 J	4.1 J	10 J	10 U	7.6 J	10 U	10 U	4.6 J	3.5 J	10 U	10 U	4.1 J	5.4 J	5.0 U
Benzene	1	**8.9**	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	50	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	50*	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	5	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide		1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	5	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	7	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane		1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	1.3	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	50	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	5	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Acetate		2.5 U	2.5 U	2.5 U	2.5 UJ	10 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5.0 U
Methyl Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Tert B'U*yl Ether	10	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	5	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	5	0.52 J	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2	1.7	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total		2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total VOCs		19.4	9.80	4.10	10.0	0.00	7.60	0.00	0.00	4.60	3.50	0.00	0.00	4.10	5.40	0.00
Total VOCs (w/o Acteone or Methlyene Chloride)		19.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID	NYSDEC GA	4009-11A	4009-11A	4009-11A	4009-11A	4009-12	4009-12	4009-12	4009-12	4009-12	4009-12	4009-12	4009-12	4009-12	4009-12	4009-12
Sampling Date	Standard	12/28/2017	3/30/2018	6/14/2018	9/27/2018	2/20/2014	5/28/2014	8/28/2014	12/9/2014	4/20/2015	7/29/2015	11/4/2015	3/28/2016	6/30/2016	9/29/2016	11/28/2016
Groundwater Monitoring Zone		Shallow	Shallow	Shallow	Shallow	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,1,1-Trichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	**32**	**43**	1.0 U	**290**	1.0 U	**180**	**67**	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	4.0	**6.5**	1.0 U	**29**	1.8	**25**	**29**	3.1	2.9	2.4	2.9
1,1-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	3.4	**6.1**	1.0 U	**30**	1.0 U	**20**	**8.5**	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trimethylbenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	110 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	44 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-B'U*anone (MEK)	50	10 U	10 U*	5.0 U	10 U	10 U	10 U	10 U	220 U	10 U	50 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	50*	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U	5.0 U	5.0 U	220 U	5.0 U	25 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U	5.0 U	5.0 U	220 U	5.0 U	25 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	50*	10 U	10 U	5.0 U	5.0 J	5.8 J	3.8 J	7.0 J	220 U	7.1 J	50 U	10 U	10 U	10 U	10 U	10 U
Benzene	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**1.5**	**1.6**	22 U	**2.7**	**2.9 J**	**2.4**	**6.7**	**7.5**	**8.7**	**9.1**
Bromodichloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	50*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U*	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	0.83 J	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	**13**	**9.5**	**8.5**	**63**	4.1	**41**	**18**	1.5	1.1	1.0	0.95 J
cis-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Acetate		2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U	220 U	2.5 U	13 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Methyl Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	0.50 JB	1.0 U	1.0 U	1.0 U
Methyl Tert B'U*yl Ether	10	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.8 J	0.74 J	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	**17**	**18**	1.0 U	**64**	1.0 U	**39**	**11**	0.77 J	0.81 J	0.55 J	0.60 J
Trichlorofluoromethane	5	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U	22 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2	1.0 U	1.0 U	1.0 U	1.0 U	**6.1**	**3.7**	0.9 J	**30**	**2.3**	**51**	**41**	1.7	1.4	1.1	1.6
Xylenes, Total		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	44 U	2.0 U	10 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total VOCs		0.00	0.00	0.00	5.0	81.3	93.9	18.7	506	18.0	359	178	14.3	13.7	13.8	15.2
Total VOCs (w/o Acteone or Methlyene Chloride)		0.00	0.00	0.00	0.00	75.5	90.1	11.7	506	10.9	359	178	13.8	13.7	13.8	15.2

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard ug/L	4009-12 4/10/2017 Deep ug/L	4009-12 6/20/2017 Deep ug/L	4009-12 10/23/2017 Deep ug/L	4009-12 12/28/2017 Deep ug/L	4009-12 3/30/2018 Deep ug/L	4009-12 6/14/2018 Deep ug/L	4009-12 9/27/2018 Deep ug/L	DUP-1 9/27/2018 Deep ug/L	4009-13 2/20/2014 Deep ug/L	4009-13 5/28/2014 Deep ug/L	4009-13 8/28/2014 Deep ug/L	4009-13 12/9/2014 Deep ug/L	4009-13 4/20/2015 Deep ug/L	4009-13 7/29/2015 Deep ug/L	4009-13 11/4/2015 Deep ug/L
1,1,1-Trichloroethane	5	**100**	**45**	1.0 U	**330**	**45**	1.0 U	**95**	**130**	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	1.0 U	2 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.9 J	1.0 J	1.0 U	5.4	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1	1.0 U	2 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	**18**	**9.2**	**5.6**	**46**	**13**	**6.2**	**11**	**15**	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	5	3.2	**7.7**	0.53 J	**16**	5.0	0.54 J	**6.9**	**11**	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trimethylbenzene		1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	5.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
2-B'U*anone (MEK)	50	10 U*	20 U	5.0 U	10 U	10 U	5.0 U	10 U	50 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U
2-Hexanone	50*	5.0 U	10 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	25 U	5.0 U	5.0 U	5.0 UJ	10 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)		5.0 U	10 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	25 U	5.0 U	5.0 U	5.0 UJ	10 U	5.0 U	5.0 U	5.0 U
Acetone	50*	5.5 J	20 U	3.3 J	10 U	10 U	5.0 U	4.4 J	50 U	8.4 J	3.8 J	10 UJ	10 U	8.9 J	10 U	10 U
Benzene	1	**3.6**	**2.8**	**2.5**	0.51 J	**2.5**	**1.7**	0.73 J	5.0 U	1.0 U	0.42 J	**4.8 J**	**1.0**	0.96 J	**1.7**	**3.2**
Bromodichloromethane	50	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	50*	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	5	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide		1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	5	1.1	2.0 U	1.0 U	4.9	0.88 J	1.0 U	0.68 J	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	7	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane		1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	**11**	**8.7**	2.0	**62**	**15**	2.0	**25**	**43**	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	0.4	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane		1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	50	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	5.0 U*	1.0 U	1.0 U	1.0 UJ	1.0 U*	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane	5	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	5	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Acetate		2.5 U	5.0 U	5.0 U	2.5 U	2.5 U	5.0 U	2.5 U	13 U	2.5 U	2.5 U	2.5 UJ	10 U	2.5 U	2.5 U	2.5 U
Methyl Cyclohexane		1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	1.0 U	1.0 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Tert B'U*yl Ether	10	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	5	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U*	1.0 U	1.0 U	1.0 U
Toluene	5	1.0 U	2.0 U	0.26 J	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	3.7	2.7 J	0.55 J	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U*	1.0 U	1.0 U	1.0 U
Trichloroethene	5	3.0	**10**	1.9	**69**	**14**	1.6	**25**	**38**	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	5	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2	**5.7**	**22**	1.3	**96**	**38**	**2.6**	**26**	**31**	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total		2.0 U	4.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	10 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U
Total VOCs		153	107	17.4	630	133	14.6	195	268	8.40	7.92	7.50	1.55	9.90	1.70	3.20
Total VOCs (w/o Acteone or Methlyene Chloride)		148	106	14.1	630	133	14.6	190	268	0.00	4.12	7.50	1.55	1.00	1.70	3.20

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID	NYSDEC GA	4009-13	4009-13	4009-13	4009-13	4009-13	4009-13	4009-13	4009-13	4009-13	4009-13	4009-13	4009-13A	4009-13A	4009-13A	4009-13A
Sampling Date	Standard	3/28/2016	6/30/2016	9/29/2016	11/28/2016	4/26/2017	6/20/2017	10/23/2017	12/28/2017	3/30/2018	6/14/2018	9/27/2018	2/20/2014	5/28/2014	8/28/2014	12/9/2014
Groundwater Monitoring Zone		Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Shallow	Shallow	Shallow	Shallow
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,1,1-Trichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,1,2,2-Tetrachloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,1,2-Trichloroethane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,1-Dichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,1-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,2,3-Trimethylbenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	5.0 U
1,2,4-Trichlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,2,4-Trimethylbenzne	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,2-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,2-Dichloropropane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,3-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,4-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
2-B'U*anone (MEK)	50	10 U	10 U	10 U	10 U	10 U	10 U	5.0 U	10 U	10 U*	5.0 U	10 U	10 U	10 U	10 UJ	10 U
2-Hexanone	50*	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	10 U
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	10 U
Acetone	50*	10 U	3.5 J	10 U	10 U	10 U	4.2 J	3.4 J	10 U	10 U	5.0 U	3.0 J	8.4 J	10 U	11 J	10 U
Benzene	1	**3.2**	**2.4**	**1.9**	**1.9**	0.41 J	1.0 U	0.2 J	1.0 U	1.0 U	1.0 U	0.44 J	1.0 U	0.58 J	1.0 UJ	0.96 J
Bromodichloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Bromoform	50*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Bromomethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Carbon disulfide		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Carbon tetrachloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Chlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Chloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Chloroform	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Chloromethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
cis-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
cis-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Dibromochloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 UJ	1.0 U*
Dichlorodifluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Ethylbenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Isopropylbenzne (Cumene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Methyl Acetate		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 UJ	10 U
Methyl Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Methylene Chloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Methyl Tert B'U*yl Ether	10	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Styrene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Tetrachloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U*
Toluene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
trans-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U*
Trichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Trichlorofluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Vinyl chloride	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Xylenes, Total		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U
Total VOCs		3.20	5.90	1.90	1.90	0.41	4.20	3.60	0.00	0.00	0.00	3.44	8.40	0.58	11.0	0.96
Total VOCs (w/o Acteone or Methlyene Chloride)		3.20	2.40	1.90	1.90	0.41	0.00	0.20	0.00	0.00	0.00	0.44	0.00	0.58	0.00	0.96

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard ug/L	4009-13A 4/20/2015 Shallow ug/L	4009-13A 7/29/2015 Shallow ug/L	4009-13A 11/4/2015 Shallow ug/L	4009-13A 3/28/2016 Shallow ug/L	4009-13A 6/30/2016 Shallow ug/L	4009-13A 9/29/2016 Shallow ug/L	4009-13A 11/28/2016 Shallow ug/L	4009-13A 4/26/2017 Shallow ug/L	4009-13A 6/20/2017 Shallow ug/L	4009-13A 10/23/2017 Shallow ug/L	4009-13A 12/28/2017 Shallow ug/L	4009-13A 3/30/2018 Shallow ug/L	4009-13A 6/14/2018 Shallow ug/L	4009-13A 9/27/2018 Shallow ug/L	4009-14 2/20/2014 Deep ug/L
1,1,1-Trichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trimethylbenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-B'U*anone (MEK)	50	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5.0 U	10 U	10 U*	5.0 U	10 U	10 U
2-Hexanone	50*	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U
Acetone	50*	6.8 J	10 U	10 U	10 U	10 U	10 U	10 U	3.0 J	4.1 J	2.6 J	10 U	10 U	5.0 U	3.6 J	6.3 J
Benzene	1	1.0 U	1.0 U	0.44 J	**1.2**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.90 J	1.0 U	1.0 U
Bromodichloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	50*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U
Dichlorodifluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Acetate		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U
Methyl Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Tert B'U*yl Ether	10	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total VOCs		6.80	0.00	0.44	1.20	0.00	0.00	0.00	3.00	4.10	2.60	0.00	0.00	0.90	3.60	6.30
Total VOCs (w/o Acteone or Methlyene Chloride)		0.00	0.00	0.44	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90	0.00	0.00

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard ug/L	4009-14 5/28/2014 Deep ug/L	4009-14 8/28/2014 Deep ug/L	4009-14 12/9/2014 Deep ug/L	4009-14 4/20/2015 Deep ug/L	4009-14 7/29/2015 Deep ug/L	4009-14 11/4/2015 Deep ug/L	4009-14 3/28/2016 Deep ug/L	4009-14 6/30/2016 Deep ug/L	4009-14 9/29/2016 Deep ug/L	4009-14 11/28/2016 Deep ug/L	4009-14^ 4/10/2017 Deep ug/L	4009-14 6/20/2017 Deep ug/L	4009-14 10/23/2017 Deep ug/L	4009-14 12/28/2017 Deep ug/L	4009-14 3/30/2018 Deep ug/L
1,1,1-Trichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trimethylbenzene		1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
2-B'U*anone (MEK)	50	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS	10.0 U	5.0 U	10 U	10 U
2-Hexanone	50*	5.0 U	5.0 U	10 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 U	10 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	50*	4.3 J	11	10 U	7.1 J	10 U	3.1 J	10 U	4.1 J	10 U	10 U	NS	3.4 J	3.3 J	10 U	10 U
Benzene	1	1.0 U	1.0 U	0.54 J	**1.2**	**4.0**	**12**	**18**	**14**	**15**	**17**	NS	**9.2**	**11**	**12**	**13**
Bromodichloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	50*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	50	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Acetate		2.5 U	2.5 U	10 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	NS	2.5 U	5.0 U	2.5 U	2.5 U
Methyl Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Tert B'U*yl Ether	10	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	5	0.91 J	1.0	0.92 J	1.0	1.2	1.2	0.78 J	1.0 U	0.55 J	1.0 U	NS	1.0 U	0.31 J	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	2.0 U	2.0 U	2.0 U	2.0 U
Total VOCs		5.21	12.0	1.46	9.30	5.20	16.3	18.8	18.1	15.6	17.0	-	12.6	14.6	12.0	13.0
Total VOCs (w/o Acteone or Methlyene Chloride)		0.91	1.00	1.46	2.20	5.20	13.2	18.8	14.0	15.6	17.0	-	9.2	11.3	12.0	13.0

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID	NYSDEC GA	4009-14	4009-14	4009-15	4009-15	4009-15	4009-15	4009-15	4009-15	4009-15	4009-15	4009-15	4009-15	4009-15	4009-15	4009-15
Sampling Date	Standard	6/14/2018	9/27/2018	2/20/2014	5/28/2014	8/28/2014	12/9/2014	4/20/2015	7/29/2015	11/4/2015	3/28/2016	6/30/2016	9/29/2016	11/28/2016	4/10/2017	6/20/2017
Groundwater Monitoring Zone		Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,1,1-Trichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1	1.0 U
1,1,2,2-Tetrachloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	1.0 U	1.0 U	0.5 J	0.53 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.98 J	1.0 U
1,1-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trimethylbenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-B'U*anone (MEK)	50	5.0 U	10 U	10 U	1.3 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U*	10 U
2-Hexanone	50*	5.0 U*	5.0 U	5.0 U	5.0 U	5.0 U	10 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)		5.0 U*	5.0 U	5.0 U	5.0 U	5.0 U	10 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	50*	5.0 U	3.8 J	7.5 J	5.1 J	7.2 J	10 U	5.8 J	10 U	4.9 J	5.1 J	9.1 J	4.3 J	8.4 J	4.5 J	9.5 J
Benzene	1	**11**	**1.6**	1.0 U	1.0 U	0.5 J	0.86 J	**1.8**	**9.1**	**8.0**	**9.1**	**8.5**	**7.8**	**9.0**	0.97 J	**12**
Bromodichloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	50*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	50	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Acetate		5.0 U	2.5 U	2.5 U	2.5 U	2.5 U	10 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Methyl Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Tert B'U*yl Ether	10	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	5	1.0 U	1.0 U	1.0 U	0.56 J	0.61 J	0.72 J	0.77 J	1.0	0.84 J	0.57 J	1.0 U	0.61 J	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total VOCs		11.0	5.40	8.02	7.49	8.31	1.58	8.37	10.1	13.7	14.8	17.6	12.7	17.4	7.55	21.5
Total VOCs (w/o Acteone or Methlyene Chloride)		11.0	1.60	0.52	2.39	1.11	1.58	2.57	10.1	8.84	9.67	8.50	8.41	9.00	3.05	12.0

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID	NYSDEC GA	4009-15	4009-15	4009-15	4009-15	4009-15	4009-16	4009-16	4009-16	4009-16	4009-16	4009-16	4009-16	4009-16	4009-16	4009-16
Sampling Date	Standard	10/23/2017	12/28/2017	3/30/2018	6/14/2018	9/27/2018	2/20/2014	5/28/2014	8/28/2014	12/9/2014	4/20/2015	7/29/2015	11/4/2015	3/28/2016	6/30/2016	9/29/2016
Groundwater Monitoring Zone		Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,1,1-Trichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trimethylbenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-B'U*anone (MEK)	50	5.0 U	10 U	10 U	5.0 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	50*	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U	5.0 U	5.0 U	10 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U	5.0 U	5.0 U	10 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	50*	9.7	5.1 J	4.4 J	5.0 U	7.3 J	5.9 J	3.5 J	7.1 J	10 U	6.0 J	10 U	10 U	10 U	4.5 J	10 U
Benzene	1	**10**	**9.1**	**9.3**	**9.0**	**7.3**	1.0 U	1.0 U	**8.2**	0.39 J	1.0 U	1.0 U	1.0 U	1.0 U	**8.4**	**8.0**
Bromodichloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	50*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Acetate		5.0 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U	10 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Methyl Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Tert B'U*yl Ether	10	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	5	0.34 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.69 J
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total VOCs		20.0	14.2	13.7	9.00	14.6	5.90	3.50	16.8	0.39	6.00	0.00	0.00	0.00	12.9	8.69
Total VOCs (w/o Acteone or Methlyene Chloride)		10.3	9.10	9.30	9.00	7.30	0.00	0.00	9.70	0.39	0.00	0.00	0.00	0.00	8.40	8.69

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID	NYSDEC GA	4009-16	4009-16^	4009-16^	4009-16	4009-16	4009-16	4009-16	4009-16	4009-16A	4009-16A	4009-16A	4009-16A	4009-16A	4009-16A	4009-16A
Sampling Date	Standard	11/28/2016	4/10/2017	6/20/2017	10/23/2017	12/28/2017	3/30/2018***	6/14/2018	9/27/2018	2/20/2014	5/28/2014	8/28/2014	12/9/2014	4/20/2015	7/29/2015	11/4/2015
Groundwater Monitoring Zone		Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,1,1-Trichloroethane	5	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	5	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trimethylbenzene		1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-B'U*anone (MEK)	50	10 U	NS	10.0 U	5.0 U	10 U	10 U	5.0 U	10 U	1.6 J	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	50*	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U	5.0 U	5.0 U	10 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)		5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U	5.0 U	5.0 U	10 U	5.0 U	5.0 U	5.0 U
Acetone	50*	10 U	NS	4.2 J	3.3 J	10 U	10 U	5.0 U	3.1 J	12	4.0 J	7.6 J	10 U	6.4 J	10 U	10 U
Benzene	1	**1.8**	NS	**18.0**	**1.5**	**5.8**	**1.1**	**5.7**	**1.5**	1.0 U	**1.9**	**7.2**	**8.0**	**5.7**	**11**	**3.0**
Bromodichloromethane	50	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	50*	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	5	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide		1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	5	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	7	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane		1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	0.4	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane		1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	50	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane	5	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	5	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Acetate		2.5 U	NS	2.5 U	5.0 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U	10 U	2.5 U	2.5 U	2.5 U
Methyl Cyclohexane		1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Tert B'U*yl Ether	10	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	5	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U
Toluene	5	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U
Trichloroethene	5	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	5	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total		2.0 U	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total VOCs		1.80	-	22.2	4.80	5.80	1.10	5.70	4.60	13.6	5.90	14.8	8.00	12.1	11.0	3.00
Total VOCs (w/o Acteone or Methlyene Chloride)		1.80	-	18.0	1.50	5.80	1.10	5.70	1.50	1.60	1.90	7.20	8.00	5.70	11.0	3.00

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID	NYSDEC	4009-16A	4009-16A	4009-16A	4009-16A	4009-16A	4009-16A	4009-16A	4009-16A	4009-16A	4009-16A	4009-16A	4009-18	4009-18	4009-18	4009-18
Sampling Date	GA	3/28/2016	6/30/2016	9/29/2016	11/28/2016	4/10/2017	6/20/2017	10/23/2017	12/28/2017	3/30/2018	6/14/2018	9/27/2018	5/6/2015	7/29/2015	11/4/2015	3/28/2016
Groundwater Monitoring Zone	Standard	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Deep	Deep	Deep	Deep
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,1,1-Trichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.31 J	1.0 U	1.0 U	1.0 U	1.0 U	0.86 J	1.0	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trimethylbenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-B'U*anone (MEK)	50	10 U	10 U	10 U	10 U	10 U*	10 U	5.0 U	10 U	10 U	5.0 U	10 U	3.3 J	10 U	10 U	10 U
2-Hexanone	50*	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	50*	10 U	10 U	10 U	10 U	5.0 J	3.8 J	5.0 U	10 U	10 U	5.0 U	3.3 J	10	10 U	10 U	10 U
Benzene	1	**4.2**	0.49 J	**1.4**	**36**	**1.8**	1.0 U	0.23 J	1.0 U	1.0 U	0.56 J	1.0 U	1.0 U	1.0 U	1.0 U	0.41 J
Bromodichloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	50*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Acetate		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Methyl Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.58 J
Methyl Tert B'U*yl Ether	10	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total VOCs		4.20	0.49	1.40	36.0	6.80	3.80	0.54	0.00	0.00	0.56	3.30	14.2	1.00	0.00	0.99
Total VOCs (w/o Acteone or Methlyene Chloride)		4.20	0.49	1.40	36.0	1.80	0.00	0.54	0.00	0.00	0.56	0.00	4.16	1.00	0.00	0.41

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID	NYSDEC GA	4009-18	4009-18	4009-18	4009-18	4009-18	4009-18	4009-18	4009-18	4009-18	4009-18	4009-19	4009-19	4009-19	4009-19
Sampling Date	Standard	6/30/2016	9/29/2016	11/28/2016	4/10/2017	6/20/2017	10/23/2017	12/28/2017	3/30/2018	6/14/2018	9/27/2018	4/20/2015	7/29/2015	11/4/2015	3/28/2016	6/30/2016
Groundwater Monitoring Zone		Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,1,1-Trichloroethane	5	0.83 J	1.0 U	1.0 U	0.83 J	1.0 U	0.69 J	1.0 U	0.88 J	0.57 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trimethylbenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-B'U*anone (MEK)	50	10 U	10 U	10 U	10 U*	10 U	5.0 U	10 U	10 U	5.0 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	50*	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	50*	10 U	10 U	10 U	6.4 J	4.1 J	2.9 J	10 U	10 U	5.0 U	5.0 U	8.5 J	10 U	10 U	10 U	10 U
Benzene	1	1.0 U	0.47 J	**1.7**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	**2.7**	**1.0**	1.0 U	1.0 U	1.0 U
Bromodichloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	50*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Acetate		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	5.0 U	1.0 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Methyl Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Tert B'U*yl Ether	10	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total VOCs		0.83	0.47	1.70	7.23	4.10	3.59	0.00	0.88	0.57	0.00	11.2	1.00	0.00	0.00	0.00
Total VOCs (w/o Acteone or Methlyene Chloride)		0.83	0.47	1.70	0.83	0.00	0.69	0.00	0.88	0.57	0.00	2.70	1.00	0.00	0.00	0.00

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID	NYSDEC GA	4009-19	4009-19	4009-19	4009-19	4009-19	4009-19	4009-19	4009-19	4009-19	4009-21	4009-21	4009-21	4009-21	4009-21	4009-21
Sampling Date	Standard	9/29/2016	11/28/2016	4/10/2017	6/20/2017	10/23/2017	12/28/2017	3/30/2018	6/14/2018	9/27/2018	4/20/2015	7/29/2015	11/4/2015	3/28/2016	6/30/2016	9/29/2016
Groundwater Monitoring Zone		Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,1,1-Trichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trimethylbenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-B'U*anone (MEK)	50	10 U	10 U	10 U*	10 U	5.0 U	10 U	10 U	5.0 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	50*	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	50*	10 U	10 U	4.2 J	3.4 J	5.0 U	10 U	10 U	5.0 U	10 U	7.9 J	10 U	10 U	10 U	10 U	10 U
Benzene	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**1.5**	1.0 U	1.0 U	**11**	**31**	**21**	**21**
Bromodichloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	50*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.26 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Acetate		2.5 U	2.5 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Methyl Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.64 J	1.0 U	1.0 U
Methyl Tert B'U*yl Ether	10	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total VOCs		0.00	0.00	4.20	3.40	0.00	0.00	0.00	0.26	1.50	7.90	0.00	11.0	31.6	21.0	21.0
Total VOCs (w/o Acteone or Methlyene Chloride)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	1.50	0.00	0.00	11.0	31.0	21.0	21.0

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID	NYSDEC GA	4009-21	4009-21^	4009-21^	4009-21	4009-21	4009-21	4009-21	4009-21	4009-22	4009-22	4009-22	4009-22	4009-22	4009-22	4009-22
Sampling Date	Standard	11/28/2016	4/10/2017	6/20/2017	10/23/2017	12/28/2017	3/30/2018	6/14/2018	9/27/2018	12/3/2013	2/20/2014	5/28/2014	8/28/2014	12/9/2014	4/20/2015	7/29/2015
Groundwater Monitoring Zone		Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,1,1-Trichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trimethylbenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-B'U*anone (MEK)	50	10 U	10 U*	10 U	5.0 U	10 U	10 U	5.0 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	50*	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U	5.0 U	5.0 U
Acetone	50*	10 U	7.1 J	4.5 J	3.0 J	10 U	10 U	5.0 U	10 U	3.1 J	12	10 U	11	10 U	6.5 J	10.0 U
Benzene	1	**19**	**24**	**25**	**18**	**18**	**17**	**11**	**5.3**	0.7 J	0.7 J	0.92 J	0.98 J	0.82 J	**1.2**	**1.1**
Bromodichloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	50*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U
Dichlorodifluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Acetate		2.5 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	5.0 U	2.5 U	1.0 U	2.5 U	2.5 U	2.5 U	10 U	2.5 U	2.5 U
Methyl Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	1.0 U	1.0 U	0.44 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Tert B'U*yl Ether	10	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U
Toluene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.7 J	0.6 J	1.1	0.83 J	0.64 J	0.93 J	1.1
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U
Trichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total VOCs		19.0	31.1	29.9	21.0	18.0	17.0	11.0	5.30	4.44	13.2	2.02	12.8	1.46	8.63	2.20
Total VOCs (w/o Acteone or Methlyene Chloride)		19.0	24.0	25.0	18.0	18.0	17.0	11.0	5.30	1.34	1.24	2.02	1.81	1.46	2.13	2.20

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard ug/L	4009-22 11/4/2015 Deep ug/L	4009-22 3/28/2016 Deep ug/L	4009-22 6/30/2016 Deep ug/L	4009-22 9/29/2016 Deep ug/L	4009-22 11/28/2016 Deep ug/L	4009-22 4/10/2017 Deep ug/L	4009-22 6/20/2017 Deep ug/L	4009-22 10/23/2017 Deep ug/L	4009-22 12/28/2017 Deep ug/L	4009-22 3/30/2018 Deep ug/L	4009-22 6/14/2018 Deep ug/L	4009-22 9/27/2018 Deep ug/L	4009-26 2/20/2014 Intermediate ug/L	4009-26 5/28/2014 Intermediate ug/L	4009-26 8/28/2014 Intermediate ug/L
1,1,1-Trichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**98**	**370**	**150 DJ**
1,1,2,2-Tetrachloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	7.7	13	6.0 DJ
1,1,2-Trichloroethane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
1,1-Dichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**27**	**39**	**16 DJ**
1,1-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**6.0**	**46**	**9.9 DJ**
1,2,3-Trimethylbenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 UD	8.0 U	2.0 UDJ
1,2,4-Trichlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
1,2,4-Trimethylbenzne	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 UD	8.0 U	2.0 UDJ
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
1,2-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
1,2-Dichloroethane	0.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
1,2-Dichloropropane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 UD	8.0 U	2.0 UDJ
1,3-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
1,4-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
2-B'U*anone (MEK)	50	10 U	10 U	10 U	10 U	10 U	10 U*	10 U	2.3 J	10 U	10 U	5.0 U	10 U	10 U	80 U	20 UDJ
2-Hexanone	50*	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	0.90 J	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U	40 U	10 UDJ
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U	40 U	10 UDJ
Acetone	50*	10.0 U	10.0 U	4.0 J	10 U	10 U	6.5 J	4.2 J	3.5 J	10 U	10 U	5.0 U	3.4 J	10	80 U	20 UDJ
Benzene	1	**1.2**	**1.6**	**1.3**	**1.3**	**1.1**	**1.1**	**1.1**	**1.1**	**1.0**	**1.2**	0.96 J	**1.2**	0.81 J	8.0 U	2.0 UDJ
Bromodichloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
Bromoform	50*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
Bromomethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
Carbon disulfide		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
Carbon tetrachloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
Chlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
Chloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
Chloroform	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
Chloromethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
cis-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**120 D**	**190**	**96 DJ**
cis-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
Dibromochloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	8.0 U	2.0 UDJ
Dichlorodifluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.9	**5.8 J**	**5.0 DJ**
Ethylbenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
Isopropylbenzne (Cumene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
Methyl Acetate		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	20 U	5.0 UDJ
Methyl Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
Methylene Chloride	5	1.0 U	0.46 J	1.0 U	1.0 U	1.0 U	1.8	0.69 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**8.4**	2.0 UDJ
Methyl Tert B'U*yl Ether	10	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
Styrene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
Tetrachloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1	8.0 U	0.97 DJ
Toluene	5	0.81 J	0.92 J	1.0 U	0.90 J	1.3	1.0	0.88 J	0.85 J	1.0	0.72 J	0.55 J	0.65 J	1.0 U	8.0 U	2.0 UDJ
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
trans-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
Trichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**45**	**71**	**47 DJ**
Trichlorofluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0 U	2.0 UDJ
Vinyl chloride	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**12**	**21**	**13 DJ**
Xylenes, Total		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	16.0 U	4.0 UDJ
Total VOCs		2.01	2.98	5.30	2.20	2.40	10.4	6.87	8.65	2.0	1.92	1.51	5.25	332	764	344
Total VOCs (w/o Acteone or Methlyene Chloride)		2.01	2.52	1.30	2.20	2.40	2.10	1.98	5.15	2.0	1.92	1.51	1.85	322	756	344

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard ug/L	4009-26 12/9/2014 Intermediate ug/L	4009-26 4/10/2017 Intermediate ug/L	4009-26 6/20/2017 Intermediate ug/L	4009-26 10/23/2017 Intermediate ug/L	4009-26 12/28/2017 Intermediate ug/L	4009-26 3/30/2018 Intermediate ug/L	4009-26 6/14/2018 Intermediate ug/L	4009-26 9/27/2018 Intermediate ug/L	4009-27S 2/20/2014 Intermediate ug/L	4009-27S 5/28/2014 Intermediate ug/L	4009-27S 8/28/2014 Intermediate ug/L	4009-27S 12/9/2014 Intermediate ug/L	4009-27S 4/20/2015 Intermediate ug/L	4009-27S 7/29/2015 Intermediate ug/L	4009-27S 11/4/2015 Intermediate ug/L
1,1,1-Trichloroethane	5	**92**	**100**	**350**	**140**	**82**	**290**	**280**	**350**	**54**	**61**	**65 J**	**49**	**61**	**62**	**61**
1,1,2,2-Tetrachloroethane	5	2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		7.7	5.3	5.7	6.6	3.4	8.8	8.4	11	2.8	3.4	2.3 J	2.6	3.3	3.3	3.5
1,1,2-Trichloroethane	1	2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	**14**	**30**	**43**	**12**	**14**	**35**	**32**	**42**	1.9	2.2	2.2 J	1.9 J	2.6	2.7	2.4
1,1-Dichloroethene	5	**7.8**	3.8	**34**	4.5	2.9	**8.5**	**8.7**	**17**	**5.7**	**8.9**	**5.6 J**	4.6	**6.2**	**10**	**7.0**
1,2,3-Trimethylbenzene		10 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	10 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	2 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	4.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	4.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	**0.9 J**	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
2-B'U*anone (MEK)	50	20 U	20 U*	20 U	5.0 U	20 U	20 U*	5.0 U	50 U	10 U	10 U	10 UJ	20 U	10 U	10 U	10 U
2-Hexanone	50*	20 U	10 U	10 U	5.0 U	10 U	10 U	5.0 U*	25 U	5.0 U	5.0 U	5.0 UJ	20 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)		20 U	10 U	10 U	5.0 U	10 U	10 U	5.0 U*	25 U	5.0 U	5.0 U	5.0 UJ	20 U	5.0 U	5.0 U	5.0 U
Acetone	50*	20 U	7.4 J	20 U	1.3 J	20 U	20 U	5.0 U	50 U	9.9 J	3.8 J	8.1 UJ	20 U	8.1 J	10 U	10 U
Benzene	1	0.55 J	2.0 U	0.87 J	0.27 J	2.0 U	2.0 U	0.53 J	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	50	2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
Bromoform	50*	2.0 U*	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	5	2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide		2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	5	2.0 U	3.6	3.1	0.65 J	2.0 U	0.91 J	2.3	2.0 J	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
Chloroform	7	2.0 U	2.0 U	2 U	0.29 J	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
Chloromethane		2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	**85**	**81**	**130**	**59**	**54**	**120**	**110**	**170**	**18**	**20**	**19 J**	**19**	**21**	**24**	**21**
cis-1,3-Dichloropropene	0.4	2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane		2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	50	2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane	5	2.8	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	5	2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
Methyl Acetate		20 U	5.0 U	5 U	5.0 U	2.0 U	5.0 U	5.0 U	13 U	2.5 U	2.5 U	2.5 UJ	20 U	2.5 U	2.5 U	2.5 U
Methyl Cyclohexane		2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2.0 U	2.0 U	1.8 J	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
Methyl Tert B'U*yl Ether	10	2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
Styrene	5	2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5	0.89 J	0.84 J	1.1 J	0.84 J	2.0 U	1.3 J *	1.2	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
Toluene	5	2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	2.0 U	2.0 U	2 U	0.41 J	2.0 U	2.0 U	0.74 J	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4	2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5	**49**	**45**	**63**	**57**	**49**	**88**	**65**	**140**	**25**	**28**	**24 J**	**22**	**25**	**28**	**25**
Trichlorofluoromethane	5	2.0 U	2.0 U	2 U	1.0 U	2.0 U	2.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2	**9.4**	**5.2**	**11**	**5.1**	**4.6**	**9.9**	**8.1**	**13**	1.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total		4.0 U	4.0 U	4 U	2.0 U	4.0 U	4.0 U	2.0 U	10 U	2.0 U	2.0 U	2.0 UJ	4.0 U	2.0 U	2.0 U	2.0 U
Total VOCs		269	282	644	283	210	562	517	745	117	128	126	99.1	127	130	120
Total VOCs (w/o Acteone or Methlyene Chloride)		269	275	642	282	210	562	517	745	107	124	118	99.1	119	130	120

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard ug/L	4009-27S 3/28/2016 Intermediate ug/L	4009-27S 6/30/2016 Intermediate ug/L	4009-27S 9/29/2016 Intermediate ug/L	4009-27S 11/28/2016 Intermediate ug/L	4009-27S** 4/10/2017 Intermediate ug/L	4009-27S** 6/20/2017 Intermediate ug/L	4009-27S 10/23/2017 Intermediate ug/L	4009-27S 12/28/2017 Intermediate ug/L	4009-27S 3/30/2018 Intermediate ug/L	4009-27S 6/14/2018 Intermediate ug/L	4009-27S 9/27/2018 Intermediate ug/L	4009-27I 2/20/2014 Intermediate ug/L	4009-27I 5/28/2014 Intermediate ug/L	4009-27I 8/28/2014 Intermediate ug/L	4009-27I 12/9/2014 Intermediate ug/L
1,1,1-Trichloroethane	5	58	54	54	61	54	46	53	53	52	43	47	1.0 U	1.0 U	1.3 J	1.0 U
1,1,2,2-Tetrachloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		2.9	2.7	2.4	2.6	3.0	2.4	3.5	3.1	2.4	2.6	1.5 J	1.0 U	0.37 J	1.0 UJ	1.0 U
1,1,2-Trichloroethane	1	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,1-Dichloroethane	5	2.4	2.1	2.0	2.5	2.4	2.1	2.3	2.3	2.2	1.9	2.2	1.0 U	1.0 U	1.0 UJ	1.0 U
1,1-Dichloroethene	5	4.5	5.0	4.9	8.8	5.1	9.1	4.8	4.8	4.4	4.1	4.5	1.0 U	1.0 U	1.0 UJ	1.0 U
1,2,3-Trimethylbenzene		1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	5.0 U
1,2,4-Trichlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,2,4-Trimethylbenzne	5	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,2-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,2-Dichloropropane	1	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,3-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,4-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
2-B'U*anone (MEK)	50	10 U	10 U	10 U	10 U	20 U*	20 U	5.0 U	20 U	20 U	5.0 U	20 U	10 U	10 U	10 UJ	10 U
2-Hexanone	50*	5.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U	5.0 U	10 U	10 U	5.0 U*	10 U	5.0 U	5.0 U	5.0 UJ	10 U
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U	5.0 U	10 U	10 U	5.0 U*	10 U	5.0 U	5.0 U	5.0 UJ	10 U
Acetone	50*	10 U	10 U	10 U	10 U	20 U	20 U	3.5 J	20 U	20 U	5.0 U	20 U	5.8 J	10 U	7.9 J	10 U
Benzene	1	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	0.71 J	1.0 U
Bromodichloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Bromoform	50*	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Bromomethane	5	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U*	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Carbon disulfide		1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	0.86 J
Carbon tetrachloride	5	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Chlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Chloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Chloroform	7	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	0.27 J	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Chloromethane		1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
cis-1,2-Dichloroethene	5	22	20	20	23	20	17	20	22	21	18	21	1.0 U	1.0 U	1.0 UJ	1.0 U
cis-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Dibromochloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U*	1.0 U	1.0 U	1.0 UJ	1.0 U
Dichlorodifluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Ethylbenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Isopropylbenzne (Cumene)	5	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Methyl Acetate		2.5 U	2.5 U	2.5 U	2.5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.5 U	2.5 U	2.5 UJ	10 U
Methyl Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Methylene Chloride	5	0.48 J	1.0 U	1.0 U	1.0 U	2.0 U	1.2 J	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Methyl Tert B'U*yl Ether	10	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Styrene	5	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Tetrachloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Toluene	5	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	0.77 J
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	0.19 J	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
trans-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Trichloroethene	5	24	23	22	24	22	24	22	27	26	20	25	1.4	1.1	1.2 J	0.34 J
Trichlorofluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Vinyl chloride	2	1.0 U	1.2	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Xylenes, Total		2.0 U	2.0 U	2.0 U	2.0 U	4.0 U	4.0 U	2.0 U	4.0 U	4.0 U	2.0 U	4.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U
Total VOCs		114	108	105	119	107	102	110	112	108	89.6	101	7.20	1.47	11.1	1.97
Total VOCs (w/o Acteone or Methlyene Chloride)		114	108	105	119	107	101	106	112	108	89.6	101	1.40	1.47	3.21	1.97

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard ug/L	4009-27I 4/20/2015 Intermediate ug/L	4009-27I 7/29/2015 Intermediate ug/L	4009-27I 11/4/2015 Intermediate ug/L	4009-27I 3/28/2016 Intermediate ug/L	4009-27I 6/30/2016 Intermediate ug/L	4009-27I 9/29/2016 Intermediate ug/L	4009-27I 11/28/2016 Intermediate ug/L	4009-27I** 4/10/2017 Intermediate ug/L	4009-27I 6/20/2017 Intermediate ug/L	4009-27I 10/23/2017 Intermediate ug/L	4009-27I 12/28/2017 Intermediate ug/L	4009-27I 3/30/2018 Intermediate ug/L	4009-27I 6/14/2018 Intermediate ug/L	4009-27I 9/27/2018 Intermediate ug/L	4009-27D 2/20/2014 Deep ug/L
1,1,1-Trichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.3	1.0 U	1.0 U	1.0 U	1.0 U	1.0	1.0 U	1.0 U	0.61 J	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	0.31 J	1.0 U	0.39 J	0.40 J	1.0 U	1.0 U	1.0 U	0.4 J	0.68 J	1.0 U	1.0 U	0.42 J	1.0 U	1.0 U
1,1,2-Trichloroethane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trimethylbenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-B'U*anone (MEK)	50	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U*	10 U	5.0 U	10 U	10 U*	5.0 U	10 U	10 U
2-Hexanone	50*	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U
Acetone	50*	9.3 J	10 U	10 U	10 U	10 U	10 U	10 U	5.3 J	3.3 J	5.0 U	10 U	10 U	5.0 U	4.6 J	9.8 J
Benzene	1	1.0 U	1.0 U	0.61 J	1.0 U	0.95 J	**4.6**	**1.5**	1.0 U	1.0 U	0.12 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	50*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.41 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U
Dichlorodifluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Acetate		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U
Methyl Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Tert B'U*yl Ether	10	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U
Toluene	5	0.87 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5	1.0 U	1.9	1.0 U	1.4	0.84 J	1.0 U	1.0 U	0.74 J	1.7	0.98 J	0.73 J	1.6	1.4	1.7	1.0 U
Trichlorofluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total VOCs		10.2	2.21	0.61	1.79	3.49	4.60	1.50	6.04	5.40	3.19	0.73	1.60	2.43	6.30	9.80
Total VOCs (w/o Acteone or Methlyene Chloride)		0.87	2.21	0.61	1.79	3.49	4.60	1.50	0.74	2.10	3.19	0.73	1.60	2.43	1.70	0.00

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard ug/L	4009-27D 5/28/2014 Deep ug/L	4009-27D 8/28/2014 Deep ug/L	4009-27D 12/9/2014 Deep ug/L	4009-27D 4/20/2015 Deep ug/L	4009-27D 7/29/2015 Deep ug/L	4009-27D 11/4/2015 Deep ug/L	4009-27D 3/28/2016 Deep ug/L	4009-27D 6/30/2016 Deep ug/L	4009-27D 9/29/2016 Deep ug/L	4009-27D 11/28/2016 Deep ug/L	4009-27D** 4/10/2017 Deep ug/L	4009-27D 6/20/2017 Deep ug/L	4009-27D 10/23/2017 Deep ug/L	4009-27D 12/28/2017 Deep ug/L	4009-27D 3/30/2018 Deep ug/L
1,1,1-Trichloroethane	5	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	5	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trimethylbenzene		1.0 U	1.0 UJ	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 UJ	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-B'U*anone (MEK)	50	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U*	10 U	5.0 U	10 U	10 U
2-Hexanone	50*	5.0 U	5.0 UJ	10 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 UJ	10 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	50*	4.8 J	8.0 J	10 U	7.1 J	10.0 U	10.0 U	10.0 U	10 U	10 U	10 U	3.9 J	3.5 J	5.0 U	10 U	10 U
Benzene	1	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	50	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	50*	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	5	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U
Carbon disulfide		1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	5	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	7	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane		1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	0.4	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane		1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	50	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane	5	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	5	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Acetate		2.5 U	2.5 UJ	10 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U
Methyl Cyclohexane		1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.60 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Tert B'U*yl Ether	10	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	5	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	5	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5	1.0 U	0.48 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	5	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total		2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total VOCs		4.80	8.48	0.00	7.10	0.00	0.00	0.60	0.00	0.00	0.00	3.90	3.50	0.00	0.00	0.00
Total VOCs (w/o Acteone or Methlyene Chloride)		0.00	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID	NYSDEC GA	4009-27D	4009-27D	4009-28	4009-28	4009-28	4009-28	4009-28	4009-28	4009-28	4009-28	4009-28	4009-28	4009-28	4009-28	4009-28
Sampling Date	Standard	6/14/2018	9/27/2018	2/20/2014	5/28/2014	8/28/2014	12/9/2014	4/20/2015	7/29/2015	11/4/2015	3/28/2016	6/30/2016	9/29/2016	11/28/2016	4/10/2017	6/20/2017
Groundwater Monitoring Zone		Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,1,1-Trichloroethane	5	1.0 U	1.0 U	1.3	2.7	1.0 U	3.0	2.9	2.9	2.3	1.9	2.5	2.5	2.5	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.28 J	1.0 U	1.0 U	1.0 U	1.0	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	5	1.0 U	1.0 U	1.0 U	0.3 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trimethylbenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-B'U*anone (MEK)	50	5.0 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U*	10 U
2-Hexanone	50*	5.0 U*	5.0 U	5.0 U	5.0 U	5.0 U	10 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)		5.0 U*	5.0 U	5.0 U	5.0 U	5.0 U	10 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	50*	5.0 U	3.6 J	7.9 J	3.7 J	6.8 J	10 U	6.1 J	10 U	10.0 U	10.0 U	10 U	10 U	10 U	9.3 J	4.4 J
Benzene	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**2.9**	**1.6**
Bromodichloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	50*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.22 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.2 J
Carbon tetrachloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.25 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	50	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Acetate		5.0 U	2.5 U	2.5 U	2.5 U	2.5 U	10 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Methyl Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Tert B'U*yl Ether	10	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.8	2.2
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total VOCs		0.00	3.60	9.20	6.71	6.80	3.53	9.22	2.90	0.00	2.90	2.50	2.50	2.50	14.0	8.40
Total VOCs (w/o Acteone or Methlyene Chloride)		0.00	0.00	1.30	3.01	0.00	3.53	3.12	2.90	0.00	2.90	2.50	2.50	2.50	4.70	4.00

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID	NYSDEC GA	4009-28	4009-28	4009-28	4009-28	4009-28	4009-29S	4009-29S	4009-29S	4009-29S	4009-29S	4009-29S	4009-29S	4009-29S	4009-29S	4009-29S
Sampling Date	Standard	10/23/2017	12/28/2017	3/30/2018	6/14/2018	9/27/2018	2/20/2014	5/28/2014	8/28/2014	12/9/2014	4/20/2015	7/29/2015	11/4/2015	3/28/2016	6/30/2016	9/29/2016
Groundwater Monitoring Zone		Deep	Deep	Deep	Deep	Deep	Intermediate	Intermediate	Intermediate	Intermediate	Intermediate	Intermediate	Intermediate	Intermediate	Intermediate	Intermediate
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,1,1-Trichloroethane	5	2.5	1.0 U	2.9	2.5	3.2	**710 D**	**650**	**1000 DJ**	**480**	**830**	**850**	**760**	**800 D**	**460**	**430**
1,1,2,2-Tetrachloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	12	10 U	7.1 DJ	17 U	8.7 J	7.3 J	20 U	7.1	20 U	1.0 U
1,1,2-Trichloroethane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	0.49 J	20 U	1.0 U
1,1-Dichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**130 D**	**35**	**46 D**	**29**	**38**	**55**	**49**	**58**	**69**	**52**
1,1-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**92**	**89**	**62 D**	**33**	**37**	**130**	**84**	**45**	**33**	**27**
1,2,3-Trimethylbenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	83 U	20 U	20 U	20 U	20 U	20 U	1.0 U
1,2,4-Trichlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
1,2,4-Trimethylbenzne	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	33 U	20 U	20 U	20 U	20 U	20 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
1,2-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
1,2-Dichloropropane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
1,3-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
1,4-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
2-B'U*anone (MEK)	50	5.0 U	10 U	10 U	5.0 U	10 U	10 U	100 U	100 UD	170 U	200 U	200 U	200 U	200 U	200 U	10 U
2-Hexanone	50*	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U	50 U	50 UD	170 U	100 U	100 U	100 U	100 U	100 U	5.0 U
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U	50 U	50 UD	170 U	100 U	100 U	100 U	100 U	100 U	5.0 U
Acetone	50*	1.7 J	10 U	10 U	5.0 U	3.6 J	6.0 J	100 U	100 UD	170 U	200 U	200 U	200 U	200 U	200 U	10 U
Benzene	1	1.0 U	1.0 U	1.0 U	0.61 J	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
Bromodichloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
Bromoform	50*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
Bromomethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
Carbon disulfide		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
Carbon tetrachloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
Chlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
Chloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.9	10 U	10 UD	17 U	20 U	20 U	20 U	1.5	20 U	1.0 U
Chloroform	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.69 J	10 U	10 UD	17 U	20 U	20 U	20 U	0.49 J	20 U	1.0 U
Chloromethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
cis-1,2-Dichloroethene	5	0.35 J	1.0 U	1.0 U	0.41 J	1.0 U	**260 D**	**340**	**410 D**	**270**	**320**	**480**	**310**	**390 D**	**190**	**200**
cis-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
Dibromochloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
Dichlorodifluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.3	10 U	10 UD	17 U	20 U	20 U	20 U	1.5	20 U	1.0 U
Ethylbenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
Isopropylbenzne (Cumene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
Methyl Acetate		5.0 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	25 U	25 UD	170 U	20 U	20 U	50 U	50 U	50 U	2.5 U
Methyl Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
Methylene Chloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	**5.6 J***	20 U	20 U	20 U	0.58 J	20 U	1.0 U
Methyl Tert B'U*yl Ether	10	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
Styrene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
Tetrachloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.95 J	10 U	10 UD	17 U	20 U	20 U	20 U	0.42 J	20 U	1.0 U
Toluene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.5	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
trans-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
Trichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**300 D**	10 U	**27 D**	3.5 J	20 U	20 U	20 U	**9.2**	20 U	1.0 U
Trichlorofluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 UD	17 U	20 U	20 U	20 U	20 U	20 U	1.0 U
Vinyl chloride	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**43**	**15**	**42 D**	**16 J**	**24**	**65**	**82**	**120 D**	**78**	**95**
Xylenes, Total		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	20 U	20 UD	33 U	40 U	40 U	40 U	40 U	40 U	2.0 U
Total VOCs		4.55	0.00	2.90	3.52	6.80	1560	1129	1594	837	1257.7	1587	1285	1434	830	804
Total VOCs (w/o Acteone or Methlyene Chloride)		2.85	0.00	2.90	3.52	3.20	1554	1129	1594	832	1257.7	1587	1285	1434	830	804

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard ug/L	4009-29S 11/28/2016 Intermediate ug/L	4009-29S** 4/10/2017 Intermediate ug/L	4009-29S 6/20/2017 Intermediate ug/L	4009-29S 10/23/2017 Intermediate ug/L	4009-29S 12/28/2017 Intermediate ug/L	4009-29S 3/30/2018 Intermediate ug/L	4009-29S 6/14/2018 Intermediate ug/L	4009-29S 9/27/2018 Intermediate ug/L	4009-29I 2/20/2014 Intermediate ug/L	4009-29I 5/28/2014 Intermediate ug/L	4009-29I 8/28/2014 Intermediate ug/L	4009-29I 12/9/2014 Intermediate ug/L	4009-29I 4/20/2015 Intermediate ug/L	4009-29I 7/29/2015 Intermediate ug/L	4009-29I 11/4/2015 Intermediate ug/L
1,1,1-Trichloroethane	5	23	480	440	390	490	650	420	960	1700 D	1600	130 DJ	1100	1500	1700	1400
1,1,2,2-Tetrachloroethane	5	2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		2.0 U	5.0	5.5 J	3.9	9.0 J	5.8 J	4.3	5.0 J	21	25 U	2.0 UDJ	15 J	15 J	40 U	40 U
1,1,2-Trichloroethane	1	2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	0.86 J	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
1,1-Dichloroethane	5	50	82	52	36	76	97	58	90	83	96	21 DJ	82	100	100	90
1,1-Dichloroethene	5	3.2	32	67	26	37	51	37	74	150 D	230	6.4 DJ	92	85	240	200
1,2,3-Trimethylbenzene		2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	2.0 UDJ	200 U	40 U	40 U	40 U
1,2,4-Trichlorobenzene	5	2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
1,2,4-Trimethylbenzne	5	2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
1,2-Dibromo-3-Chloropropane	0.04	2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	2.0 UDJ	80 U	40 U	40 U	40 U
1,2-Dibromoethane (Ethylene Dibromide)	5	2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
1,2-Dichlorobenzene	3	2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
1,2-Dichloroethane	0.6	2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	0.41 J	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
1,2-Dichloropropane	1	2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
1,3,5-Trimethylbenzene (Mesitylene)	5	2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
1,3-Dichlorobenzene	3	2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
1,4-Dichlorobenzene	3	2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
2-B'U*anone (MEK)	50	20 U	10 U*	100 U	10 U	100 U	100 U	10 U	100 U	10 U	250 U	20 UDJ	400 U	400 U	400 U	400 U
2-Hexanone	50*	10 U	5.0 U	50 U	10 U	50 U	50 U	10 U*	50 U	5.0 U	130 U	10 UDJ	400 U	200 U	200 U	200 U
4-Methyl-2-pentanone (MIBK)		10 U	5.0 U	50 U	10 U	50 U	50 U	10 U*	50 U	5.0 U	130 U	10 UDJ	400 U	200 U	200 U	200 U
Acetone	50*	8.0 J	4.9 J	100 U	10 U	100 U	100 U	10 U	100 U	11	250 U	12 DJ	400 U	400 U	400 U	400 U
Benzene	1	98	2.7	10 U	0.3 J	10 U	10 U	2.0 U	10 U	0.59 J	25 U	41 DJ	40 U	40 U	40 U	40 U
Bromodichloromethane	50	2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
Bromoform	50*	2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
Bromomethane	5	2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
Carbon disulfide		2.0 U	0.23 J	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
Carbon tetrachloride	5	2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
Chlorobenzene	5	2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.6	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
Chloroethane	5	2.0 U	2.1	10 U	1.6 J	10 U	10 U	2.0	10 U	5.0	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
Chloroform	7	2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.1	25 U	1.1 DJ	40 U	40 U	40 U	40 U
Chloromethane		2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
cis-1,2-Dichloroethene	5	59	180	210	170	250	350	260	470	400 D	400	53 DJ	330	380	530	410
cis-1,3-Dichloropropene	0.4	2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
Cyclohexane		2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
Dibromochloromethane	50	2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U*	1.0 U	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
Dichlorodifluoromethane	5	2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.2	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
Ethylbenzene	5	2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
Isopropylbenzne (Cumene)	5	2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
Methyl Acetate		5.0 U	2.5 U	25 U	10 U	25 U	25 U	10 U	25 U	2.5 U	63 U	5.0 UDJ	400 U	100 U	100 U	100 U
Methyl Cyclohexane		2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
Methylene Chloride	5	2.0 U	1.0 U	7.1 J	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	1.2 DJ	14 J*	18 J	40 U	40 U
Methyl Tert B'U*yl Ether	10	2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
Styrene	5	2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
Tetrachloroethene	5	2.0 U	0.36 J	10 U	2.0 U	10 U	10 U	2.0 U	10 U	2.1	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
Toluene	5	1.5	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	3.7 DJ	40 U	40 U	40 U	40 U
trans-1,2-Dichloroethene	5	2.0 U	1.0 U	10 U	0.87 J	10 U	10 U	0.78 J	10 U	3.4	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
trans-1,3-Dichloropropene	0.4	2.0 U	1.0 U	10 U	2.0 U	10 U	10 U	2.0 U	10 U	1.0 U	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
Trichloroethene	5	2.0 U	17	27	94	110	48	19	150	450 D	460	34 DJ	360	410	550	480
Trichlorofluoromethane	5	2.0 U	1.0 U	10 U	0.37 J	10 U	10 U	2.0 U	10 U	0.94 J	25 U	2.0 UDJ	40 U	40 U	40 U	40 U
Vinyl chloride	2	2.5	130	68	32	100	120	74	100	85	85	6.6 DJ	78	92	140	110
Xylenes, Total		4.0 U	2.0 U	20 U	4.0 U	20 U	20 U	4.0 U	20 U	2.0 U	50 U	4.0 UDJ	80 U	80 U	80 U	80 U
Total VOCs		245	936	877	755	1072	1322	875	1849	2917	2871	310	2071	2600	3260	2690
Total VOCs (w/o Acteone or Methlyene Chloride)		237	931	870	755	1072	1322	875	1849	2906	2871	297	2057	2582	3260	2690

Notes:

NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard

- Concentration exceeds NYSDEC Class GA Standard

U*

J - Compound detected below the reporting limit or reported concentration is estimated

µg/L - Micrograms per Liter

B - Analyte detected in the method blank and sample

E - Estimated value

D- Result of dil'U*ed sample shown

M - Manual integrated compound

* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits

Matrix Spike (MS) or MS Duplicate is outside acceptable limits

[1]-This is a duplicate sample from 4009-12

[2]-This is a duplicate sample from 4009-27I

**-Revised results due to mislabeling 27 and 29 clusters in field.

^- PDB was compromised when sample was collected

NS - Not Sampled

NA - Not Analyzed

*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard ug/L	4009-29I 3/28/2016 Intermediate ug/L	4009-29I 6/30/2016 Intermediate ug/L	4009-29I 9/29/2016 Intermediate ug/L	4009-29I 11/28/2016 Intermediate ug/L	4009-29I** 4/10/2017 Intermediate ug/L	4009-29I 6/20/2017 Intermediate ug/L	4009-29I 10/23/2017 Intermediate ug/L	4009-29I 12/28/2017 Intermediate ug/L	4009-29I 3/30/2018 Intermediate ug/L	4009-29I 6/14/2018 Intermediate ug/L	4009-29I 9/27/2018 Intermediate ug/L	DUP-2 9/27/2018 Intermediate ug/L	4009-29D 2/20/2014 Deep ug/L	4009-29D 5/28/2014 Deep ug/L	4009-29D 8/28/2014 Deep ug/L
1,1,1-Trichloroethane	5	1400 D	1200	1.0 U	2.0 U	1000	1200	970	1100	1200	620	990	1000	1.0 U	80	1200 DJ
1,1,2,2-Tetrachloroethane	5	1.0 U	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		14	15 J	1.0 U	2.0 U	12	14 J	11	16 J	20 U	7.5	20 U	40 U	1.0 U	1.1	14
1,1,2-Trichloroethane	1	0.57 J	25 U	1.0 U	2.0 U	0.60 J	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	0.65 J
1,1-Dichloroethane	5	69	71	4.4	3.9	89	82	72	92	93	50	84	90	1.1	16	150 DJ
1,1-Dichloroethene	5	77	93	1.9	2.0 U	80	190	62	71	95	50	82	97	1.0 U	12	130 DJ
1,2,3-Trimethylbenzene		1.0 U	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1.0 U	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	1.0 U	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1.0 U	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	0.72 J
1,2-Dichloropropane	1	1.0 U	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1.0 U	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1.0 U	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
2-B'U*anone (MEK)	50	10 U	250 U	10 U	20 U	10 U*	200 U	25 U	200 U	200 U	10 U	200 U	400 U	10 U	10 U	10 U
2-Hexanone	50*	5.0 U	130 U	5.0 U	10 U	5.0 U	100 U	25 U	100 U	100 U	10 U*	100 U	200 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)		5.0 U	130 U	5.0 U	10 U	5.0 U	100 U	25 U	100 U	100 U	10 U*	100 U	200 U	5.0 U	5.0 U	5.0 U
Acetone	50*	10 U	250 U	5.6 J	6.1 J	5.2 J	200 U	25 U	200 U	200 U	10 U	200 U	400 U	6.9 J	10 U	10 U
Benzene	1	0.48 J	25 U	75	120	0.71 J	20 U	0.57 J	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	0.72 J
Bromodichloromethane	50	1.0 U	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
Bromoform	50*	1.0 U	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
Bromomethane	5	1.0 U	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
Carbon disulfide		1.0 U	25 U	0.35 J	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	1.0 U	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1.3	25 U	1.0 U	2.0 U	1.1	20 U	1.7 J	20 U	20 U	0.91 J	20 U	40 U	1.0 U	1.0 U	1.0 U
Chloroethane	5	2.7	25 U	51	29	3.9	20 U	3.6 J	20 U	20 U	2.2	20 U	40 U	1.0 U	1.4	8.8 DJ
Chloroform	7	0.77 J	25 U	1.0 U	2.0 U	0.67 J	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	0.83 J
Chloromethane		1.0 U	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	420 D	340	45	41	330	360	330	390	400	250	380	430	1.4	25	400 DJ
cis-1,3-Dichloropropene	0.4	1.0 U	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
Cyclohexane		1.0 U	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	50	1.0 U	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane	5	1.9	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.5
Ethylbenzene	5	1.0 U	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	1.0 U	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
Methyl Acetate		2.5 U	63 U	2.5 U	5.0 U	2.5 U	50 U	25 U	50 U	50 U	10 U	50 U	100 U	2.5 U	2.5 U	2.5 U
Methyl Cyclohexane		1.0 U	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	0.60 J	25 U	1.0 U	2.0 U	1.0 U	15 J	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
Methyl Tert B'U*yl Ether	10	1.0 U	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
Styrene	5	1.0 U	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5	1.8	25 U	1.0 U	2.0 U	1.4	20 U	1.8 J	20 U	20 U	1.1 J	20 U	40 U	1.0 U	1.0 U	1.0
Toluene	5	1.0 U	25 U	2.2	1.7 J	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	1.3	25 U	1.0 U	2.0 U	1.2	20 U	1.8 J	20 U	20 U	0.95 J	20 U	40 U	1.0 U	1.0 U	1.8
trans-1,3-Dichloropropene	0.4	1.0 U	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U	20 U	40 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5	450 D	370	3.5	2.0	340	390	290	410	420	200	400	410	1.8	17	400 DJ
Trichlorofluoromethane	5	0.92 J	25 U	1.0 U	2.0 U	1.0 U	20 U	5.0 U	20 U	20 U	2.0 U*	20 U	40 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2	94	85	2.0	2.0	130	110	96	120	92	63	79	79	4.7	12	170 DJ
Xylenes, Total		2.0 U	50 U	2.0 U	4.0 U	2.0 U	40 U	10 U	40 U	40 U	4.0 U	40 U	80 U	2.0 U	2.0 U	2.0 U
Total VOCs		2536	2174	191	206	1995	2361	1840	2199	2300	1246	2015	2106	15.9	165	2480
Total VOCs (w/o Acteone or Methlyene Chloride)		2536	2174	185	200	1990	2346	1840	2199	2300	1246	2015	2106	9.00	165	2480

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID	NYSDEC GA	4009-29D	4009-29D	4009-29D	4009-29D	4009-29D	4009-29D	4009-29D	4009-29D	4009-29D**	4009-29D	4009-29D	4009-29D	4009-29D	4009-29D	4009-29D
Sampling Date	Standard	12/9/2014	4/20/2015	7/29/2015	11/4/2015	3/28/2016	6/30/2016	9/29/2016	11/28/2016	4/10/2017	6/20/2017	10/23/2017	12/28/2017	3/30/2018	6/14/2018	9/27/2018
Groundwater Monitoring Zone		Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,1,1-Trichloroethane	5	**170**	**290**	**30**	**14**	**23**	**16**	**14**	**21**	**270**	**31**	**7.6**	**13**	**280**	**41**	**150**
1,1,2,2-Tetrachloroethane	5	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		2.9 J	3.6 J	1.0 U	1.0 U	0.40 J	1.0 U	1.0 U	1.0 U	4.2	1.0 U	1.0 U	1.0 U	3.5	0.67 J	5.0 U
1,1,2-Trichloroethane	1	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,1-Dichloroethane	5	**27**	**51**	**12**	4.2	**5.5**	4.0	3.7	**6.3**	**44**	**8.1**	1.8	2.9	**38**	**11**	**29**
1,1-Dichloroethene	5	**27**	**29**	**5.7**	2.0	2.0	1.3	1.1	2.8	**26**	2.0	0.37 J	0.88 J	**42**	**5.3**	**13**
1,2,3-Trimethylbenzene		29 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,2,4-Trichlorobenzene	5	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,2,4-Trimethylbenzne	5	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,2-Dibromo-3-Chloropropane	0.04	11 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,2-Dichlorobenzene	3	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,2-Dichloroethane	0.6	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,2-Dichloropropane	1	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,3-Dichlorobenzene	3	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,4-Dichlorobenzene	3	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
2-B'U*anone (MEK)	50	57 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U*	10 U	2.3 J	10 U	10 U*	5.0 U	50 U
2-Hexanone	50*	57 U	25 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	25 U
4-Methyl-2-pentanone (MIBK)		57 U	25 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	25 U
Acetone	50*	57 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U	4.5 J	3.5 J	1.3 J	10 U	10 U	5.0 U	50 U
Benzene	1	5.7 U	5.0 U	0.70 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Bromodichloromethane	50	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Bromoform	50*	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Bromomethane	5	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Carbon disulfide		5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Carbon tetrachloride	5	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Chlorobenzene	5	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Chloroethane	5	5.7 U	2.5 J	1.0 U	1.2	1.2	1.5	2.0	1.0 U	4.4	2.2	3.0	2.3	2.7	3.0	3.6 J
Chloroform	7	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Chloromethane		5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
cis-1,2-Dichloroethene	5	**150**	**210**	**37**	**8.0**	**9.9**	**5.7**	**5.4**	**9.5**	**130**	**10**	1.5	3.3	**180**	**26**	**77**
cis-1,3-Dichloropropene	0.4	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Cyclohexane		5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Dibromochloromethane	50	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Dichlorodifluoromethane	5	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Ethylbenzene	5	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Isopropylbenzne (Cumene)	5	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Methyl Acetate		57 U	13 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	5.0 U	13 U
Methyl Cyclohexane		5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Methylene Chloride	5	2.0 J*	5.0 U	1.0 U	1.0 U	0.48 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Methyl Tert B'U*yl Ether	10	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Styrene	5	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Tetrachloroethene	5	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	5.0 U
Toluene	5	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
trans-1,2-Dichloroethene	5	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.9 J	1.0 U	5.0 U
trans-1,3-Dichloropropene	0.4	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Trichloroethene	5	**26**	**20**	0.78 J	0.94 J	3.3	2.0	1.8	1.7	**61**	**7.2**	2.0	3.5	**120**	**10**	**16**
Trichlorofluoromethane	5	5.7 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Vinyl chloride	2	**34**	**55**	**7.8**	**7.2**	**8.3**	**7.5**	**6.5**	**15**	**73**	**11**	**8.4**	**9.4**	**72**	**17**	**35**
Xylenes, Total		11 U	10 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	10 U
Total VOCs		439	674	94.0	37.5	54.1	38.0	34.5	56.3	613	75.0	28.3	35.3	739	114	324
Total VOCs (w/o Acteone or Methlyene Chloride)		437	674	94.0	37.5	53.6	38.0	34.5	56.3	613	71.5	27.0	35.3	739	114	324

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID	NYSDEC GA	4009-30	4009-30	4009-30	4009-30	4009-30	4009-30	4009-30	4009-30^	4009-30^	4009-30	4009-30	4009-30	4009-30	4009-30	4009-30A
Sampling Date	Standard	4/20/2015	7/29/2015	11/4/2015	3/28/2016	6/30/2016	9/29/2016	11/28/2016	4/10/2017	6/20/2017	10/23/2017	12/28/2017	3/30/2018	6/14/2018	9/27/2018	4/20/2015
Groundwater Monitoring Zone		Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Shallow
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,1,1-Trichloroethane	5	0.98 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	0.86 J	0.82 J	0.52 J	0.91 J	0.65 J	0.52 J	0.93 J	1.3	0.8 J	0.77 J	0.66 J	0.71 J	0.61 J	1.0 U	1.0 U
1,1-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trimethylbenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-B'U*anone (MEK)	50	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U*	10 U	5.0 U	10.0 U	10.0 U*	5.0 U	10 U	10 U
2-Hexanone	50*	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U	5.0 U
Acetone	50*	7.0 J	10 U	10 U	10 U	7.3 J	4.9 J	10 U	7.2 J	5.3 J	5.0 U	10.0 U	10.0 U	5.0 U	3.5 J	6.9 J
Benzene	1	1.0 U	1.0 U	0.44 J	1.0 U	0.44 J	0.56 J	1.0	1.0 U	**1.1**	**2.5**	**6.4**	**5.3**	**4.1**	**33**	0.75 J
Bromodichloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	50*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Acetate		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U
Methyl Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	1.0 U	1.0 U	1.0 U	0.49 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Tert B'U*yl Ether	10	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U	1.0 U
Toluene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.28 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total VOCs		8.84	0.82	0.96	1.40	8.39	5.98	1.93	8.50	7.19	3.55	7.06	6.01	4.71	36.5	7.65
Total VOCs (w/o Acteone or Methlyene Chloride)		1.84	0.82	0.96	0.91	1.09	1.08	1.93	1.30	1.89	3.55	7.06	6.01	4.71	33.0	0.75

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard ug/L	4009-30A 7/29/2015 Shallow ug/L	4009-30A 11/4/2015 Shallow ug/L	4009-30A 3/28/2016 Shallow ug/L	4009-30A 6/30/2016 Shallow ug/L	4009-30A 9/29/2016 Shallow ug/L	4009-30A 11/28/2016 Shallow ug/L	4009-30A 4/10/2017 Shallow ug/L	4009-30A 6/20/2017 Shallow ug/L	4009-30A 10/23/2017 Shallow ug/L	4009-30A 12/28/2017 Shallow ug/L	4009-30A 3/30/2018 Shallow ug/L	4009-30A 6/14/2018 Shallow ug/L	4009-30A 9/27/2018 Shallow ug/L
1,1,1-Trichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	0.51 J	0.63 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trimethylbenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-B'U*anone (MEK)	50	10 U	10 U	10 U	10 U	10 U	10 U	10 U*	10 U	5.0 U	10 U	10 U*	5.0 U	10 U
2-Hexanone	50*	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U*	5.0 U
Acetone	50*	10 U	10 U	10 U	10 U	10 U	10 U	5.6 J	3.6 J	5.0 U	10 U	10 U	5.0 U	3.1 J
Benzene	1	**2.5**	0.60 J	**2.2**	0.43 J	1.0 U	1.0 U	1.0 U	1.0 U	0.23 J	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	50*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Acetate		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	5.0 U	2.5 U
Methyl Cyclohexane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Tert B'U*yl Ether	10	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*	1.0 U	1.0 U
Toluene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total VOCs		2.50	0.60	2.20	0.43	0.51	0.63	5.60	3.60	0.23	0.00	0.00	0.00	3.10
Total VOCs (w/o Acteone or Methlyene Chloride)		2.50	0.60	2.20	0.43	0.51	0.63	0.00	0.00	0.23	0.00	0.00	0.00	0.00

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-3. Summary of Groundwater Results
Remedial Site Optimization Report Third Quarter 2018
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard ug/L	Well 1-1 4/20/2015 Deep ug/L	Well 1-1 7/29/2015 Deep ug/L	Well 1-1 11/4/2015 Deep ug/L	Well 1-1 3/28/2016 Deep ug/L	Well 1-1 6/30/2016 Deep ug/L	Well 1-1 9/29/2016 Deep ug/L	Well 1-1 11/28/2016 Deep ug/L	Well 1-1^ 4/10/2017 Deep ug/L	Well 1-1 6/20/2017 Deep ug/L	Well 1-1 10/23/2017 Deep ug/L	Well 1-1 12/28/2017 Deep ug/L	Well 1-1 3/30/2018 Deep ug/L	Well 1-1 6/14/2018 Deep ug/L	Well 1-1 9/27/2018 Deep ug/L
1,1,1-Trichloroethane	5	220	240	350	250	210	310	220	NS	360	210	170	230	170	220
1,1,2,2-Tetrachloroethane	5	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		4.1	5.0 U	5.0 U	4.3 J	4.3 J	6.3	5.0 U	NS	7.1	5.7	4.4	4.0 U	4.2	4.0 U
1,1,2-Trichloroethane	1	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
1,1-Dichloroethane	5	15	18	28	22	14	22	18	NS	32	17	18	21	17	20
1,1-Dichloroethene	5	10	30	41	16	5.0 U	20	31	NS	57	13	13	16	14	18
1,2,3-Trimethylbenzene		4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
1,2,4-Trichlorobenzene	5	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
1,2,4-Trimethylbenzne	5	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
1,2-Dibromo-3-Chloropropane	0.04	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
1,2-Dichlorobenzene	3	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
1,2-Dichloroethane	0.6	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
1,2-Dichloropropane	1	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
1,3-Dichlorobenzene	3	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
1,4-Dichlorobenzene	3	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
2-B'U*anone (MEK)	50	40 U	50 U	50 U	50 U	50 U	50 U	50 U	NS	50 U	5.0 U	10 U	40 U*	5.0 U	40 U
2-Hexanone	50*	20 U	25 U	25 U	25 U	25 U	25 U	25 U	NS	25 U	5.0 U	5.0 U	20 U	5.0 U*	20 U
4-Methyl-2-pentanone (MIBK)		20 U	25 U	25 U	25 U	25 U	25 U	25 U	NS	25 U	5.0 U	5.0 U	20 U	5.0 U*	20 U
Acetone	50*	40 U	50 U	50 U	50 U	50 U	50 U	50 U	NS	50 U	5.0 U	10 U	40 U	5.0 U	40 U
Benzene	1	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
Bromodichloromethane	50	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
Bromoform	50*	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
Bromomethane	5	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
Carbon disulfide		4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
Carbon tetrachloride	5	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
Chlorobenzene	5	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
Chloroethane	5	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	0.46 J	4.0 U
Chloroform	7	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	0.27 J	1.0 U	4.0 U	1.0 U	4.0 U
Chloromethane		4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
cis-1,2-Dichloroethene	5	39	66	82	68	52	77	62	NS	96	55	59	69	56	68
cis-1,3-Dichloropropene	0.4	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
Cyclohexane		4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
Dibromochloromethane	50	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
Dichlorodifluoromethane	5	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
Ethylbenzene	5	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
Isopropylbenzne (Cumene)	5	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
Methyl Acetate		10 U	13 U	13 U	13 U	13 U	13 U	13 U	NS	13 U	5.0 U	2.5 U	10 U	5.0 U	10 U
Methyl Cyclohexane		4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
Methylene Chloride	5	4.0 U	5.0 U	5.0 U	5.9 B	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	1.8 J
Methyl Tert B'U*yl Ether	10	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
Styrene	5	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
Tetrachloroethene	5	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	0.21 J	1.0 U	4.0 U	1.0 U	4.0 U
Toluene	5	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
trans-1,2-Dichloroethene	5	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	0.28 J	1.0 U	4.0 U	0.35 J	4.0 U
trans-1,3-Dichloropropene	0.4	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U
Trichloroethene	5	41	64	81	59	56	69	66	NS	89	59	61	73	53	67
Trichlorofluoromethane	5	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	0.19 J	1.0 U	4.0 U	1.0 U	4.0 U
Vinyl chloride	2	4.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	0.17 J	1.0 U	4.0 U	0.29 J	4.0 U
Xylenes, Total		8.0 U	10 U	10 U	10 U	10 U	10 U	10 U	NS	10 U	2.0 U	2.0 U	8.0 U	2.0 U	8.0 U
Total VOCs		329	418	582	425	336	504	397	-	641	361	325	409	315	395
Total VOCs (w/o Acteone or Methlyene Chloride)		329	418	582	419	336	504	397	-	641	361	325	409	315	393

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
U*
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
B - Analyte detected in the method blank and sample
E - Estimated value
D- Result of dil'U*ed sample shown
M - Manual integrated compound
* - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits
Matrix Spike (MS) or MS Duplicate is outside acceptable limits
[1]-This is a duplicate sample from 4009-12
[2]-This is a duplicate sample from 4009-27I
**-Revised results due to mislabeling 27 and 29 clusters in field.
^- PDB was compromised when sample was collected
NS - Not Sampled
NA - Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 2-4. Summary of Town of Vestal Municipal Well Sampling Results
Remedial Site Optimization
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID Sampling Date Units	NYSDEC GA Standard ug/L	Well 1-2A Influent 7/22/2014 ug/L	Well 1-2A Influent 7/30/2014 ug/L	Well 1-2A Influent 8/18/2014 ug/L	Well 1-2A Influent 8/28/2014 ug/L	Well 1-2A Influent 9/29/2014 ug/L	Well 1-2A Influent 9/30/2014 ug/L	Well 1-2A Influent 10/21/2014 ug/L	Well 1-2A Influent 10/28/2014 ug/L	Well 1-2A Influent 11/11/2014 ug/L	Well 1-2A Influent 11/24/2014 ug/L	Well 1-2A Influent 12/9/2014 ug/L	Well 1-2A Influent 12/18/2014 ug/L	Well 1-2A Influent 1/20/2015 ug/L	Well 1-2A Influent 1/29/2015 ug/L
1,1,1-Trichloroethane	5	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
1,1,2,2-Tetrachloroethane	5	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		NA	NA	NA	1.0 U	1.0 U	NA	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U
1,1,2-Trichloroethane	1	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
1,1-Dichloroethane	5	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
1,1-Dichloroethene	5	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
1,2,3-Trimethylbenzene		NA	NA	NA	1.0 U	1.0 U	NA	1.0 U	NA	NA	1.0 U	5.0 U	NA	NA	1.0 U
1,2,4-Trichlorobenzene	5	0.5 U	NA	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
1,2,4-Trimethylbenzne	5	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	NA	NA	NA	1.0 U	1.0 U	NA	1.0 U	NA	NA	1.0 U	2.0 U	NA	NA	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	NA	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U
1,2-Dichlorobenzene	3	0.5 U	NA	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
1,2-Dichloroethane	0.6	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
1,2-Dichloropropane	1	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
1,3-Dichlorobenzene	3	0.5 U	NA	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
1,4-Dichlorobenzene	3	0.5 U	NA	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
2-Butanone (MEK)	50	NA	10 U	NA	10 U	10.0 U	NA	10 U	NA	NA	10 U	10 U	NA	NA	10 U
2-Hexanone	50*	NA	5.0 U	NA	5.0 U	10.0 U	NA	5.0 U	NA	NA	5.0 U *	10 U	NA	NA	5.0 U
4-Methyl-2-pentanone (MIBK)		NA	5.0 U	NA	5.0 U	10.0 U	NA	5.0 U	NA	NA	5.0 U	10 U	NA	NA	5.0 U
Acetone	50*	NA	10 U	NA	10 U	10 U	NA	10 U	NA	NA	10 U	10 U	NA	NA	10 U
Benzene	1	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
Bromodichloromethane	50	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	NA	1.0 U	1.0 U	NA	NA	1.0 U
Bromoform	50*	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	NA	1.0 U	1.0 U	NA	NA	1.0 U
Bromomethane	5	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
Carbon disulfide		0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	NA	1.0 U	1.0 U	NA	NA	1.0 U
Carbon tetrachloride	5	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
Chlorobenzene	5	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
Chloroethane	5	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
Chloroform	7	NA	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U
Chloromethane		0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
cis-1,2-Dichloroethene	5	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
cis-1,3-Dichloropropene	0.4	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	5 U	0.5 U	1.0 U
Cyclohexane		NA	NA	NA	1.0 U	1.0 U	NA	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U
Dibromochloromethane	50	NA	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U*	NA	NA	1.0 U *	1.0 U	NA	NA	1.0 U
Dichlorodifluoromethane	5	0.5 U	NA	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U *	1.0 U	0.5 U	0.5 U	1.0 U
Ethylbenzene	5	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
Isopropylbenzne (Cumene)	5	NA	NA	NA	1.0 U	1.0 U	NA	1.0 U	NA	NA	1.0 U	1.0 U	NA	0.5 U	1.0 U
Methyl Acetate		NA	NA	NA	2.5 U	NA U	NA	2.5 U	NA	NA	2.5 U	10 U	NA	NA	2.5 U
Methyl Cyclohexane		NA	NA	NA	1.0 U	1.0 U	NA	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U
Methylene Chloride	5	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
Methyl Tert Butyl Ether	10	NA	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	NA	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
Styrene	5	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
Tetrachloroethene	5	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
Toluene	5	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
trans-1,2-Dichloroethene	5	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
trans-1,3-Dichloropropene	0.4	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
Trichloroethene	5	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
Trichlorofluoromethane	5	0.5 U	NA	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
Vinyl chloride	2	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U
Xylenes, Total		0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	0.5 U	2.0 U	1.5 U	0.5 U	2.0 U	2.0 U	0.5 U	0.5 U	2.0 U
Total VOCs		0	0	0	0	0	0	0	0	0	0	0	0	0	0

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
µg/L - Micrograms per Liter
NA - Not Analyzed
NS - Not Sampled
U - Compound was not detected at the indicated concentration
* LCS or LCSD exceeds the control limits
** Well 1-2A was frozen and unable to be sampled

Table 2-4. Summary of Town of Vestal Municipal Well Sampling Results
Remedial Site Optimization
Vestal Water Supply Site
Site Number 7-04-009A

ARCADIS Design & Consultancy for natural and built assets

Sample ID Sampling Date Units	NYSDEC GA Standard ug/L	Well 1-2A Influent 2/25/2015** ug/L	Well 1-2A Influent 2/25/2015** ug/L	Well 1-2A Influent 3/12/2015** ug/L	Well 1-2A Influent 3/19/2015** ug/L	Well 1-2A Influent 4/9/2015 ug/L	Well 1-2A Influent 4/20/2015 ug/L	Well 1-2A Influent 5/6/2015 ug/L	Well 1-2A Influent 5/12/2015 ug/L	Well 1-2A Influent 6/9/2015 ug/L	Well 1-2A Influent 6/25/2015 ug/L	Well 1-2A Influent 7/29/2015 ug/L	Well 1-2A Influent 8/11/2015 ug/L	Well 1-2A Influent 8/28/2015 ug/L	Well 1-2A Influent 9/15/2015 ug/L
1,1,1-Trichloroethane	5	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
1,1,2,2-Tetrachloroethane	5	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		NS	NS	NS	NS	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	NA	1.0 U	NA
1,1,2-Trichloroethane	1	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
1,1-Dichloroethane	5	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
1,1-Dichloroethene	5	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
1,2,3-Trimethylbenzene		NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	0.5 U	1.0 U	NA
1,2,4-Trichlorobenzene	5	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
1,2,4-Trimethylbenzne	5	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
1,2-Dibromo-3-Chloropropane	0.04	NS	NS	NS	NS	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	0.5 U	1.0 U	NA
1,2-Dibromoethane (Ethylene Dibromide)	5	NS	NS	NS	NS	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	0.5 U	1.0 U	NA
1,2-Dichlorobenzene	3	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
1,2-Dichloroethane	0.6	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
1,2-Dichloropropane	1	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	5	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
1,3-Dichlorobenzene	3	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
1,4-Dichlorobenzene	3	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
2-Butanone (MEK)	50	NS	NS	NS	NS	NA	10 U	10 U	NA	NA	10 U	10 U	NA	10 U	NA
2-Hexanone	50*	NS	NS	NS	NS	NA	5.0 U	5.0 U	NA	NA	5.0 U	5.0 U	NA	5.0 U	NA
4-Methyl-2-pentanone (MIBK)		NS	NS	NS	NS	NA	5.0 U	5.0 U	NA	NA	5.0 U	5.0 U	NA	5.0 U	NA
Acetone	50*	NS	NS	NS	NS	NA	10 U	10 U	NA	NA	10 U	10 U	NA	10 U	NA
Benzene	1	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
Bromodichloromethane	50	NS	NS	NS	NS	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	0.5 U	1.0 U	NA
Bromoform	50*	NS	NS	NS	NS	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	0.5 U	1.0 U	NA
Bromomethane	5	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
Carbon disulfide		NS	NS	NS	NS	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	NA	1.0 U	NA
Carbon tetrachloride	5	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	NA
Chlorobenzene	5	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
Chloroethane	5	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
Chloroform	7	NS	NS	NS	NS	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	0.5 U	1.0 U	NA
Chloromethane		NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
cis-1,2-Dichloroethene	5	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
cis-1,3-Dichloropropene	0.4	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
Cyclohexane		NS	NS	NS	NS	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	NA	1.0 U	NA
Dibromochloromethane	50	NS	NS	NS	NS	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
Dichlorodifluoromethane	5	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
Ethylbenzene	5	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
Isopropylbenzne (Cumene)	5	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
Methyl Acetate		NS	NS	NS	NS	NA	2.5 U	2.5 U	NA	NA	2.5 U	2.5 U	NA	2.5 U	NA
Methyl Cyclohexane		NS	NS	NS	NS	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	NA	1.0 U	NA
Methylene Chloride	5	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
Methyl Tert Butyl Ether	10	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U
Styrene	5	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
Tetrachloroethene	5	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
Toluene	5	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
trans-1,2-Dichloroethene	5	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
trans-1,3-Dichloropropene	0.4	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
Trichloroethene	5	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
Trichlorofluoromethane	5	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
Vinyl chloride	2	NS	NS	NS	NS	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U
Xylenes, Total		NS	NS	NS	NS	0.5 U	2.0 U	2.0 U	1.5 U	0.5 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U
Total VOCs						0	0	0	0	0	0	0	0	0	0

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
µg/L - Micrograms per Liter
NA - Not Analyzed
NS - Not Sampled
U - Compound was not detected at the indicated concentration
* LCS or LCSD exceeds the control limits
** Well 1-2A was frozen and unable to be sampled

Table 2-4. Summary of Town of Vestal Municipal Well Sampling Results
Remedial Site Optimization
Vestal Water Supply Site
Site Number 7-04-009A

ARCADIS Design & Consultancy for natural and built assets

Sample ID	NYSDEC GA Standard	Well 1-2A Influent	Well 1-2A Influent	Well 1-2A Influent	Well 1-2A Influent	Well 1-2A Influent	Well 1-2A Influent	Well 1-2A Influent	Well 1-2A Influent	Well 1-2A Influent	Well 1-2A Influent	Well 1-2A Influent	Well 1-2A Influent	Well 1-2A Influent	Well 1-2A Influent
Sampling Date		9/24/2015	10/12/2015	11/4/2015	11/10/2015	12/21/2015	1/19/2016	1/27/2016	2/16/2016	2/26/2016	3/22/2016	3/28/2016	4/20/2016	4/22/2016	5/20/2016
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,1,1-Trichloroethane	5	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,1,2,2-Tetrachloroethane	5	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
1,1,2-Trichloroethane	1	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,1-Dichloroethane	5	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,1-Dichloroethene	5	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,2,3-Trimethylbenzene		1.0 U	1.0 U	1.0 U	NA	5.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
1,2,4-Trichlorobenzene	5	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,2,4-Trimethylbenzne	5	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 U	1.0 U	NA	2.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
1,2-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,2-Dichloropropane	1	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,3-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,4-Dichlorobenzene	3	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
2-Butanone (MEK)	50	10 U	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA
2-Hexanone	50*	5.0 U	5.0 U	5.0 U	NA	10.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 U	5.0 U	NA	10.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA
Acetone	50*	10 U	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA
Benzene	1	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Bromodichloromethane	50	1.0 U	1.0 U	1.0 U	NA	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Bromoform	50*	1.0 U	1.0 U	1.0 U	NA	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Bromomethane	5	1.0 U	1.0 U	1.0 U	NA	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Carbon disulfide		1.0 U	1.0 U	1.0 U	NA	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Carbon tetrachloride	5	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Chlorobenzene	5	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Chloroethane	5	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Chloroform	7	1.0 U	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
Chloromethane		1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
cis-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
cis-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Cyclohexane		1.0 U	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
Dibromochloromethane	50	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
Dichlorodifluoromethane	5	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Ethylbenzene	5	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Isopropylbenzne (Cumene)	5	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
Methyl Acetate		2.5 U	2.5 U	2.5 U	NA	10 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Methyl Cyclohexane		1.0 U	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
Methylene Chloride	5	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Methyl Tert Butyl Ether	10	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
Styrene	5	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Tetrachloroethene	5	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Toluene	5	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
trans-1,3-Dichloropropene	0.4	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Trichloroethene	5	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Trichlorofluoromethane	5	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Vinyl chloride	2	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Xylenes, Total		2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U
Total VOCs		0	0	0	0	0	0	0	0	0	0	0	0	0	0

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
µg/L - Micrograms per Liter
NA - Not Analyzed
NS - Not Sampled
U - Compound was not detected at the indicated concentration
* LCS or LCSD exceeds the control limits
** Well 1-2A was frozen and unable to be sampled

Table 2-4. Summary of Town of Vestal Municipal Well Sampling Results
Remedial Site Optimization
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID Sampling Date Units	NYSDEC GA Standard ug/L	Well 1-2A Influent 5/23/2016 ug/L	Well 1-2A Influent 6/21/2016 ug/L	Well 1-2A Influent 6/22/2016 ug/L	Well 1-2A Influent 7/20/2016 ug/L	Well 1-2A Influent 7/28/2016 ug/L	Well 1-2A Influent 8/16/2016 ug/L	Well 1-2A Influent 8/18/2016 ug/L	Well 1-2A Influent 9/6/2016 ug/L	Well 1-2A Influent 9/15/2016 ug/L	Well 1-2A Influent 10/18/2016 ug/L	Well 1-2A Influent 10/31/2016 ug/L	Well 1-2A Influent 11/8/2016 ug/L	Well 1-2A Influent 11/28/2016 ug/L	Well 1-2A Influent 12/16/2016 ug/L
1,1,1-Trichloroethane	5	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,1,2,2-Tetrachloroethane	5	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	1.0 U	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
1,1,2-Trichloroethane	1	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,1-Dichloroethane	5	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,1-Dichloroethene	5	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,2,3-Trimethylbenzene		1.0 U	1.0 U	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
1,2,4-Trichlorobenzene	5	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,2,4-Trimethylbenzne	5	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 U	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
1,2-Dichlorobenzene	3	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,2-Dichloropropane	1	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,3-Dichlorobenzene	3	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,4-Dichlorobenzene	3	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
2-Butanone (MEK)	50	10 U	10 U	NA	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA
2-Hexanone	50*	5.0 U	5.0 U	NA	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 U	NA	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA
Acetone	50*	10 U	10 U	NA	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA
Benzene	1	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Bromodichloromethane	50	1.0 U	1.0 U	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
Bromoform	50*	1.0 U	1.0 U	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
Bromomethane	5	1.0 U	1.0 U	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
Carbon disulfide		1.0 U	1.0 U	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
Carbon tetrachloride	5	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Chlorobenzene	5	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Chloroethane	5	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Chloroform	7	1.0 U	1.0 U	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
Chloromethane		1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NA
cis-1,2-Dichloroethene	5	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
cis-1,3-Dichloropropene	0.4	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Cyclohexane		1.0 U	1.0 U	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
Dibromochloromethane	50	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NA
Dichlorodifluoromethane	5	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Ethylbenzene	5	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Isopropylbenzne (Cumene)	5	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Methyl Acetate		2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Methyl Cyclohexane		1.0 U	1.0 U	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
Methylene Chloride	5	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Methyl Tert Butyl Ether	10	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Styrene	5	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Tetrachloroethene	5	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Toluene	5	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
trans-1,3-Dichloropropene	0.4	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Trichloroethene	5	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Trichlorofluoromethane	5	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Vinyl chloride	2	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Xylenes, Total		2.0 U	2.0 U	0.5 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U
Total VOCs		0	0	0	0	0	0	0	0	0	0	0	0	0	0

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
µg/L - Micrograms per Liter
NA - Not Analyzed
NS - Not Sampled
U - Compound was not detected at the indicated concentration
* LCS or LCSD exceeds the control limits
** Well 1-2A was frozen and unable to be sampled

Table 2-4. Summary of Town of Vestal Municipal Well Sampling Results
Remedial Site Optimization
Vestal Water Supply Site
Site Number 7-04-009A

ARCADIS Design & Consultancy for natural and built assets

Sample ID Sampling Date Units	NYSDEC GA Standard ug/L	Well 1-2A Influent 12/29/2016 ug/L	Well 1-2A Influent 1/13/2017 ug/L	Well 1-2A Influent 1/31/2017 ug/L	Well 1-2A Influent 2/7/2017 ug/L	Well 1-2A Influent 2/27/2017 ug/L	Well 1-2A Influent 3/7/2017 ug/L	Well 1-2A Influent 3/23/2017 ug/L	Well 1-2A Influent 4/4/2017 ug/L	Well 1-2A Influent 4/26/2017 ug/L	Well 1-2A Influent 5/19/2017 ug/L	Well 1-2A Influent 5/24/2017 ug/L	Well 1-2A Influent 6/20/2017 ug/L	Well 1-2A Influent 6/21/2017 ug/L	Well 1-2A Influent 7/19/2017 ug/L
1,1,1-Trichloroethane	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,1,2,2-Tetrachloroethane	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
1,1,2-Trichloroethane	1	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,1-Dichloroethane	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,1-Dichloroethene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,2,3-Trimethylbenzene		1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
1,2,4-Trichlorobenzene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,2,4-Trimethylbenzne	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
1,2-Dichlorobenzene	3	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,2-Dichloroethane	0.6	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,2-Dichloropropane	1	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,3-Dichlorobenzene	3	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,4-Dichlorobenzene	3	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
2-Butanone (MEK)	50	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA
2-Hexanone	50*	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA
4-Methyl-2-pentanone (MIBK)		5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA
Acetone	50*	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA
Benzene	1	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Bromodichloromethane	50	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
Bromoform	50*	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U*	NA	1.0 U*	NA	1.0 U	NA
Bromomethane	5	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
Carbon disulfide		1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
Carbon tetrachloride	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Chlorobenzene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Chloroethane	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Chloroform	7	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
Chloromethane		1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
cis-1,2-Dichloroethene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
cis-1,3-Dichloropropene	0.4	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Cyclohexane		1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
Dibromochloromethane	50	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U*	NA	1.0 U*	NA	1.0 U	NA
Dichlorodifluoromethane	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U*	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Ethylbenzene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Isopropylbenzne (Cumene)	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Methyl Acetate		2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Methyl Cyclohexane		1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
Methylene Chloride	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Methyl Tert Butyl Ether	10	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Styrene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Tetrachloroethene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Toluene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
trans-1,2-Dichloroethene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
trans-1,3-Dichloropropene	0.4	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Trichloroethene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Trichlorofluoromethane	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Vinyl chloride	2	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Xylenes, Total		2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U
Total VOCs		0	0	0	0	0	0	0	0	0	0	0	0	0	0

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
µg/L - Micrograms per Liter
NA - Not Analyzed
NS - Not Sampled
U - Compound was not detected at the indicated concentration
* LCS or LCSD exceeds the control limits
** Well 1-2A was frozen and unable to be sampled

Table 2-4. Summary of Town of Vestal Municipal Well Sampling Results
Remedial Site Optimization
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID Sampling Date Units	NYSDEC GA Standard ug/L	Well 1-2A Influent 7/31/2017 ug/L	Well 1-2A Influent 8/18/2017 ug/L	Well 1-2A Influent 8/28/2017 ug/L	Well 1-2A Influent 9/15/2017 ug/L	Well 1-2A Influent 9/20/2017 ug/L	Well 1-2A Influent 10/3/2017 ug/L	Well 1-2A Influent 10/23/2017 ug/L	Well 1-2A Influent 11/10/2017 ug/L	Well 1-2A Influent 11/28/2017 ug/L	Well 1-2A Influent 12/27/2017 ug/L	Well 1-2A Influent 12/28/2017 ug/L	Well 1-2A ** Influent 1/15/2018 ug/L	Well 1-2A Influent 1/29/2018 ug/L	Well 1-2A Influent 2/20/2018 ug/L
1,1,1-Trichloroethane	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
1,1,2,2-Tetrachloroethane	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NS	1.0 U	NA
1,1,2-Trichloroethane	1	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
1,1-Dichloroethane	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
1,1-Dichloroethene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
1,2,3-Trimethylbenzene		1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NS	1.0 U	NA
1,2,4-Trichlorobenzene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
1,2,4-Trimethylbenzne	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NS	1.0 U	NA
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NS	1.0 U	NA
1,2-Dichlorobenzene	3	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
1,2-Dichloroethane	0.6	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
1,2-Dichloropropane	1	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
1,3-Dichlorobenzene	3	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
1,4-Dichlorobenzene	3	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
2-Butanone (MEK)	50	10 U*	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NS	10 U	NA
2-Hexanone	50*	5.0 U*	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NS	5.0 U	NA
4-Methyl-2-pentanone (MIBK)		5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NS	5.0 U	NA
Acetone	50*	10 U	NA	10 U	NA	10 U	NA	4.2 J	NA	10 U	NA	10 U	NS	10 U	NA
Benzene	1	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
Bromodichloromethane	50	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NS	1.0 U	NA
Bromoform	50*	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NS	1.0 U	NA
Bromomethane	5	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NS	1.0 U	NA
Carbon disulfide		1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NS	1.0 U	NA
Carbon tetrachloride	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
Chlorobenzene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
Chloroethane	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
Chloroform	7	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NS	1.0 U	NA
Chloromethane		1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NS	1.0 U	NA
cis-1,2-Dichloroethene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
cis-1,3-Dichloropropene	0.4	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
Cyclohexane		1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NS	1.0 U	NA
Dibromochloromethane	50	1.0 U	NA	1.0 U*	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NS	1.0 U	NA
Dichlorodifluoromethane	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
Ethylbenzene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
Isopropylbenzne (Cumene)	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
Methyl Acetate		2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NS	2.5 U	NA
Methyl Cyclohexane		1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NS	1.0 U	NA
Methylene Chloride	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
Methyl Tert Butyl Ether	10	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
Styrene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
Tetrachloroethene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
Toluene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
trans-1,2-Dichloroethene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
trans-1,3-Dichloropropene	0.4	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
Trichloroethene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
Trichlorofluoromethane	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
Vinyl chloride	2	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	NS	1.0 U	0.5 U
Xylenes, Total		2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	NS	2.0 U	0.5 U
Total VOCs		0	0	0	0	0	0	4.2	0	0	0	0	NS	0	0

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
µg/L - Micrograms per Liter
NA - Not Analyzed
NS - Not Sampled
U - Compound was not detected at the indicated concentration
* LCS or LCSD exceeds the control limits
** Well 1-2A was frozen and unable to be sampled

Table 2-4. Summary of Town of Vestal Municipal Well Sampling Results
Remedial Site Optimization
Vestal Water Supply Site
Site Number 7-04-009A

ARCADIS Design & Consultancy for natural and built assets

Sample ID Sampling Date Units	NYSDEC GA Standard ug/L	Well 1-2A Influent 2/26/2018 ug/L	Well 1-2A Influent 3/12/2018 ug/L	Well 1-2A Influent 3/30/2018 ug/L	Well 1-2A Influent 4/6/2018 ug/L	Well 1-2A Influent 4/24/2018 ug/L	Well 1-2A Influent 5/7/2018 ug/L	Well 1-2A Influent 5/21/2018 ug/L	Well 1-2A Influent 6/14/2018 ug/L	Well 1-2A Influent 6/19/2018 ug/L	Well 1-2A Influent 7/6/2018 ug/L	Well 1-2A Influent 7/17/2018 ug/L	Well 1-2A Influent 8/8/2018 ug/L	Well 1-2A Influent 8/27/2018 ug/L	Well 1-2A Influent 9/13/2018 ug/L
1,1,1-Trichloroethane	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U*	0.5 U	1.0 U
1,1,2,2-Tetrachloroethane	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	NA	1.0 U	NA	1.0 U	1.0 U*	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
1,1,2-Trichloroethane	1	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,1-Dichloroethane	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,1-Dichloroethene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,2,3-Trimethylbenzene		1.0 U	NA	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
1,2,4-Trichlorobenzene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,2,4-Trimethylbenzne	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	NA	1.0 U	NA	10 U	10 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
1,2-Dichlorobenzene	3	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,2-Dichloropropane	1	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,3-Dichlorobenzene	3	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,4-Dichlorobenzene	3	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
2-Butanone (MEK)	50	10 U	NA	10 U	NA	50 U	50 U	NA	10 U	NA	10 U	NA	10 U*	NA	10 U*
2-Hexanone	50*	5.0 U	NA	5.0 U	NA	10 U	10 U	NA	5.0 U*	NA	5.0 U	NA	5.0 U	NA	5.0 U
4-Methyl-2-pentanone (MIBK)		5.0 U	NA	5.0 U	NA	10 U	10 U	NA	5.0 U*	NA	5.0 U	NA	5.0 U	NA	5.0 U
Acetone	50*	10 U	NA	10 U	NA	25 U	25 U	NA	10 U	NA	10 U	NA	3.1 J	NA	10 U
Benzene	1	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Bromodichloromethane	50	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Bromoform	50*	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Bromomethane	5	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Carbon disulfide		1.0 U	NA	1.0 U	NA	1.0 U	1.0 U*	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Carbon tetrachloride	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Chlorobenzene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Chloroethane	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Chloroform	7	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Chloromethane		1.0 U	NA	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
cis-1,2-Dichloroethene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
cis-1,3-Dichloropropene	0.4	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Cyclohexane		1.0 U	NA	1.0 U	NA	5.0 U	5 U*	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Dibromochloromethane	50	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Dichlorodifluoromethane	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Ethylbenzene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Isopropylbenzne (Cumene)	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Methyl Acetate		2.5 U	NA	2.5 U	NA	10 U	10 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U
Methyl Cyclohexane		1.0 U	NA	1.0 U	NA	5.0 U	5.0 U*	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Methylene Chloride	5	1.0 U	0.5 U	1.0 U	0.5 U	5.0 U	5.0 U*	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Methyl Tert Butyl Ether	10	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Styrene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Tetrachloroethene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U*	0.5 U	1.0 U
Toluene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
trans-1,2-Dichloroethene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
trans-1,3-Dichloropropene	0.4	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Trichloroethene	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U*	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Trichlorofluoromethane	5	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Vinyl chloride	2	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Xylenes, Total		2.0 U	0.5 U	2.0 U	0.5 U	3.0 U	3.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U
Total VOCs		0	0	0	0	0	0	0	0	0	0	0	3.1	0	0

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
µg/L - Micrograms per Liter
NA - Not Analyzed
NS - Not Sampled
U - Compound was not detected at the indicated concentration
* LCS or LCSD exceeds the control limits
** Well 1-2A was frozen and unable to be sampled

Table 2-4. Summary of Town of Vestal Municipal Well Sampling Results
Remedial Site Optimization
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID Sampling Date Units	NYSDEC GA Standard ug/L	Well 1-2A Influent 9/24/2018 ug/L	Well 1-3 Influent 7/22/2014 ug/L	Well 1-3 Influent 7/30/2014 ug/L	Well 1-3 Influent 8/18/2014 ug/L	Well 1-3 Influent 8/28/2014 ug/L	Well 1-3 Influent 9/29/2014 ug/L	Well 1-3 Influent 9/30/2014 ug/L	Well 1-3 Influent 10/21/2014 ug/L	Well 1-3 Influent 10/28/2014 ug/L	Well 1-3 Influent 11/11/2014 ug/L	Well 1-3 Influent 11/24/2014 ug/L	Well 1-3 Influent 12/9/2014 ug/L	Well 1-3 Influent 12/18/2014 ug/L
1,1,1-Trichloroethane	5	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
1,1,2,2-Tetrachloroethane	5	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		NA	NA	NA	NA	1.0 U	1.0 U	NA	1.0 U	NA	NA	1.0 U	1.0 U	NA
1,1,2-Trichloroethane	1	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
1,1-Dichloroethane	5	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
1,1-Dichloroethene	5	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
1,2,3-Trimethylbenzene		NA	NA	NA	NA	1.0 U	1.0 U	NA	1.0 U	NA	NA	1.0 U	5.0 U	NA
1,2,4-Trichlorobenzene	5	0.5 U	0.5 U	NA	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
1,2,4-Trimethylbenzne	5	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
1,2-Dibromo-3-Chloropropane	0.04	NA	NA	NA	NA	1.0 U	1.0 U	NA	1.0 U	NA	NA	1.0 U	2.0 U	NA
1,2-Dibromoethane (Ethylene Dibromide)	5	NA	NA	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	NA	NA	1.0 U	1.0 U	NA
1,2-Dichlorobenzene	3	0.5 U	0.5 U	NA	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
1,2-Dichloroethane	0.6	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
1,2-Dichloropropane	1	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	5	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
1,3-Dichlorobenzene	3	0.5 U	0.5 U	NA	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
1,4-Dichlorobenzene	3	0.5 U	0.5 U	NA	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
2-Butanone (MEK)	50	NA	NA	10 U	NA	10 U	10.0 U	NA	10 U	NA	NA	10 U	10 U	NA
2-Hexanone	50*	NA	NA	5.0 U	NA	5.0 U	10.0 U	NA	5.0 U	NA	NA	5.0 U *	10 U	NA
4-Methyl-2-pentanone (MIBK)		NA	NA	5.0 U	NA	5.0 U	10.0 U	NA	5.0 U	NA	NA	5.0 U	10 U	NA
Acetone	50*	NA	NA	10 U	NA	10 U	10.0 U	NA	10 U	NA	NA	10 U	10 U	NA
Benzene	1	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Bromodichloromethane	50	NA	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	NA	1.0 U	1.0 U	NA
Bromoform	50*	NA	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	NA	1.0 U	1.0 U	NA
Bromomethane	5	NA	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Carbon disulfide		NA	0.5 U	1.0 U	0.5 U	1 U	1.0 U	0.5 U	1.0 U	0.5 U	NA	1.0 U	1.0 U	NA
Carbon tetrachloride	5	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Chlorobenzene	5	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Chloroethane	5	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Chloroform	7	NA	NA	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	NA	NA	1.0 U	1.0 U	NA
Chloromethane		NA	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
cis-1,2-Dichloroethene	5	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
cis-1,3-Dichloropropene	0.4	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	5 U
Cyclohexane		NA	NA	NA	NA	1.0 U	1.0 U	NA	1.0 U	NA	NA	1.0 U	1.0 U	NA
Dibromochloromethane	50	NA	NA	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U*	NA	NA	1.0 U *	1.0 U	NA
Dichlorodifluoromethane	5	0.5 U	0.5 U	NA	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U *	1.0 U	0.5 U
Ethylbenzene	5	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Isopropylbenzne (Cumene)	5	0.5 U	NA	NA	NA	1.0 U	1.0 U	NA	1.0 U	NA	NA	1.0 U	1.0 U	NA
Methyl Acetate		NA	NA	NA	NA	2.5 U	NA U	NA	2.5 U	NA	NA	2.5 U	10 U	NA
Methyl Cyclohexane		NA	NA	NA	NA	1.0 U	1.0 U	NA	1.0 U	NA	NA	1.0 U	1.0 U	NA
Methylene Chloride	5	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Methyl Tert Butyl Ether	10	0.5 U	NA	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	NA	0.5 U	1.0 U	1.0 U	0.5 U
Styrene	5	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Tetrachloroethene	5	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Toluene	5	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
trans-1,2-Dichloroethene	5	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
trans-1,3-Dichloropropene	0.4	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Trichloroethene	5	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Trichlorofluoromethane	5	0.5 U	0.5 U	NA	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Vinyl chloride	2	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Xylenes, Total		0.5 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	0.5 U	2.0 U	1.5 U	0.5 U	2.0 U	2.0 U	0.5 U
Total VOCs		0	0	0	0	0	0	0	0	0	0	0	0	0

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
µg/L - Micrograms per Liter
NA - Not Analyzed
NS - Not Sampled
U - Compound was not detected at the indicated concentration
* LCS or LCSD exceeds the control limits
** Well 1-2A was frozen and unable to be sampled

Table 2-4. Summary of Town of Vestal Municipal Well Sampling Results
Remedial Site Optimization
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID Sampling Date Units	NYSDEC GA Standard ug/L	Well 1-3 Influent 1/20/2015 ug/L	Well 1-3 Influent 1/29/2015 ug/L	Well 1-3 Influent 2/25/2015 ug/L	Well 1-3 Influent 2/25/2015 ug/L	Well 1-3 Influent 3/12/2015 ug/L	Well 1-3 Influent 3/19/2015 ug/L	Well 1-3 Influent 4/9/2015 ug/L	Well 1-3 Influent 4/20/2015 ug/L	Well 1-3 Influent 5/6/2015 ug/L	Well 1-3 Influent 5/12/2015 ug/L	Well 1-3 Influent 6/9/2015 ug/L	Well 1-3 Influent 6/25/2015 ug/L	Well 1-3 Influent 7/29/2015 ug/L	Well 1-3 Influent 8/11/2015 ug/L
1,1,1-Trichloroethane	5	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
1,1,2,2-Tetrachloroethane	5	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		NA	1.0 U	NS	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	NA
1,1,2-Trichloroethane	1	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
1,1-Dichloroethane	5	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
1,1-Dichloroethene	5	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
1,2,3-Trimethylbenzene		NA	1.0 U	NS	1.0 U	0.5 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	0.5 U
1,2,4-Trichlorobenzene	5	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
1,2,4-Trimethylbenzne	5	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
1,2-Dibromo-3-Chloropropane	0.04	NA	1.0 U	NS	1.0 U	0.5 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	0.5 U
1,2-Dibromoethane (Ethylene Dibromide)	5	NA	1.0 U	NS	1.0 U	0.5 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	0.5 U
1,2-Dichlorobenzene	3	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
1,2-Dichloroethane	0.6	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
1,2-Dichloropropane	1	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	5	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
1,3-Dichlorobenzene	3	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
1,4-Dichlorobenzene	3	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
2-Butanone (MEK)	50	NA	10 U	NS	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U	NA
2-Hexanone	50*	NA	5.0 U	NS	5.0 U	NA	5.0 U	NA	5.0 U	5.0 U	NA	NA	5.0 U	5.0 U	NA
4-Methyl-2-pentanone (MIBK)		NA	5.0 U	NS	5.0 U	NA	5.0 U	NA	5.0 U	5.0 U	NA	NA	5.0 U	5.0 U	NA
Acetone	50*	NA	10 U	NS	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U	NA
Benzene	1	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Bromodichloromethane	50	NA	1.0 U	NS	1.0 U	0.5 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	0.5 U
Bromoform	50*	NA	1.0 U	NS	1.0 U	0.5 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	0.5 U
Bromomethane	5	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Carbon disulfide		NA	1.0 U	NS	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	NA
Carbon tetrachloride	5	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Chlorobenzene	5	0.5 U	1.0 U	NS	1.0 U	NA	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Chloroethane	5	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Chloroform	7	NA	1.0 U	NS	1.0 U	0.5 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	0.5 U
Chloromethane		0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
cis-1,2-Dichloroethene	5	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
cis-1,3-Dichloropropene	0.4	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Cyclohexane		NA	1.0 U	NS	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	NA
Dibromochloromethane	50	NA	1.0 U	NS	1.0 U	0.5 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	0.5 U
Dichlorodifluoromethane	5	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Ethylbenzene	5	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Isopropylbenzne (Cumene)	5	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Methyl Acetate		NA	2.5 U	NS	2.5 U	NA	2.5 U	NA	2.5 U	2.5 U	NA	NA	2.5 U	2.5 U	NA
Methyl Cyclohexane		NA	1.0 U	NS	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	NA
Methylene Chloride	5	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
Methyl Tert Butyl Ether	10	0.5 U	1.0 U	NS	1.0 U	1 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U
Styrene	5	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Tetrachloroethene	5	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Toluene	5	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
trans-1,2-Dichloroethene	5	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
trans-1,3-Dichloropropene	0.4	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Trichloroethene	5	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Trichlorofluoromethane	5	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Vinyl chloride	2	0.5 U	1.0 U	NS	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U	0.5 U
Xylenes, Total		0.5 U	2.0 U	NS	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	1.5 U	0.5 U	2.0 U	2.0 U	0.5 U
Total VOCs		0	0		0	0	0	0	0	0	0	0	0	0	0

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
µg/L - Micrograms per Liter
NA - Not Analyzed
NS - Not Sampled
U - Compound was not detected at the indicated concentration
* LCS or LCSD exceeds the control limits
** Well 1-2A was frozen and unable to be sampled

Table 2-4. Summary of Town of Vestal Municipal Well Sampling Results
Remedial Site Optimization
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID Sampling Date Units	NYSDEC GA Standard ug/L	Well 1-3 Influent 8/28/2015 ug/L	Well 1-3 Influent 9/15/2015 ug/L	Well 1-3 Influent 9/24/2015 ug/L	Well 1-3 Influent 10/12/2015 ug/L	Well 1-3 Influent 11/4/2015 ug/L	Well 1-3 Influent 11/10/2015 ug/L	Well 1-3 Influent 12/21/2015 ug/L	Well 1-3 Influent 1/19/2016 ug/L	Well 1-3 Influent 1/27/2016 ug/L	Well 1-3 Influent 2/16/2016 ug/L	Well 1-3 Influent 2/26/2016 ug/L	Well 1-3 Influent 3/22/2016 ug/L	Well 1-3 Influent 3/28/2016 ug/L	Well 1-3 Influent 4/20/2016 ug/L
1,1,1-Trichloroethane	5	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,1,2,2-Tetrachloroethane	5	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	NA	1.0 U	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
1,1,2-Trichloroethane	1	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,1-Dichloroethane	5	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,1-Dichloroethene	5	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,2,3-Trimethylbenzene		1.0 U	NA	1.0 U	1.0 U	1.0 U	NA	5.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
1,2,4-Trichlorobenzene	5	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,2,4-Trimethylbenzne	5	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	NA	1.0 U	1.0 U	1.0 U	NA	2.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	NA	1.0 U	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
1,2-Dichlorobenzene	3	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,2-Dichloroethane	0.6	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,2-Dichloropropane	1	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,3-Dichlorobenzene	3	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
1,4-Dichlorobenzene	3	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
2-Butanone (MEK)	50	10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA
2-Hexanone	50*	5.0 U	NA	5.0 U	5.0 U	5.0 U	NA	10.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA
4-Methyl-2-pentanone (MIBK)		5.0 U	NA	5.0 U	5.0 U	5.0 U	NA	10.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA
Acetone	50*	10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA
Benzene	1	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Bromodichloromethane	50	1.0 U	NA	1.0 U	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
Bromoform	50*	1.0 U	NA	1.0 U	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
Bromomethane	5	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
Carbon disulfide		1.0 U	NA	1.0 U	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
Carbon tetrachloride	5	1.0 U	NA	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Chlorobenzene	5	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Chloroethane	5	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Chloroform	7	1.0 U	NA	1.0 U	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
Chloromethane		1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
cis-1,2-Dichloroethene	5	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
cis-1,3-Dichloropropene	0.4	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Cyclohexane		1.0 U	NA	1.0 U	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
Dibromochloromethane	50	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Dichlorodifluoromethane	5	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Ethylbenzene	5	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Isopropylbenzne (Cumene)	5	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Methyl Acetate		2.5 U	NA	2.5 U	2.5 U	2.5 U	NA	10 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Methyl Cyclohexane		1.0 U	NA	1.0 U	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA
Methylene Chloride	5	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Methyl Tert Butyl Ether	10	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Styrene	5	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Tetrachloroethene	5	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Toluene	5	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
trans-1,2-Dichloroethene	5	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
trans-1,3-Dichloropropene	0.4	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Trichloroethene	5	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Trichlorofluoromethane	5	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Vinyl chloride	2	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U
Xylenes, Total		2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U
Total VOCs		0	0	0	0	0	0	0	0	0	0	0	0	0	0

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
µg/L - Micrograms per Liter
NA - Not Analyzed
NS - Not Sampled
U - Compound was not detected at the indicated concentration
* LCS or LCSD exceeds the control limits
** Well 1-2A was frozen and unable to be sampled

Table 2-4. Summary of Town of Vestal Municipal Well Sampling Results
Remedial Site Optimization
Vestal Water Supply Site
Site Number 7-04-009A

ARCADIS Design & Consultancy for natural and built assets

Sample ID Sampling Date Units	NYSDEC GA Standard ug/L	Well 1-3 Influent 4/22/2016 ug/L	Well 1-3 Influent 5/20/2016 ug/L	Well 1-3 Influent 5/23/2016 ug/L	Well 1-3 Influent 6/21/2016 ug/L	Well 1-3 Influent 6/22/2016 ug/L	Well 1-3 Influent 7/20/2016 ug/L	Well 1-3 Influent 7/28/2016 ug/L	Well 1-3 Influent 8/16/2016 ug/L	Well 1-3 Influent 8/18/2016 ug/L	Well 1-3 Influent 9/6/2016 ug/L	Well 1-3 Influent 9/15/2016 ug/L	Well 1-3 Influent 10/18/2016 ug/L	Well 1-3 Influent 10/31/2016 ug/L
1,1,1-Trichloroethane	5	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,1,2,2-Tetrachloroethane	5	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
1,1,2-Trichloroethane	1	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,1-Dichloroethane	5	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,1-Dichloroethene	5	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,2,3-Trimethylbenzene		1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
1,2,4-Trichlorobenzene	5	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,2,4-Trimethylbenzne	5	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
1,2-Dichlorobenzene	3	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,2-Dichloropropane	1	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,3-Dichlorobenzene	3	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,4-Dichlorobenzene	3	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
2-Butanone (MEK)	50	10 U	NA	10 U	10 U	NA	NA	10 U	NA	10 U	NA	10 U	NA	10 U
2-Hexanone	50*	5.0 U	NA	5.0 U	5.0 U	NA	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U
4-Methyl-2-pentanone (MIBK)		5.0 U	NA	5.0 U	5.0 U	NA	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U
Acetone	50*	10 U	NA	10 U	10 U	NA	NA	10 U	NA	10 U	NA	10 U	NA	10 U
Benzene	1	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Bromodichloromethane	50	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Bromoform	50*	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Bromomethane	5	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Carbon disulfide		1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Carbon tetrachloride	5	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Chlorobenzene	5	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Chloroethane	5	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Chloroform	7	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Chloromethane		1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
cis-1,2-Dichloroethene	5	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
cis-1,3-Dichloropropene	0.4	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Cyclohexane		1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Dibromochloromethane	50	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Dichlorodifluoromethane	5	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Ethylbenzene	5	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Isopropylbenzne (Cumene)	5	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Methyl Acetate		2.5 U	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U
Methyl Cyclohexane		1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Methylene Chloride	5	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Methyl Tert Butyl Ether	10	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Styrene	5	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Tetrachloroethene	5	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Toluene	5	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
trans-1,2-Dichloroethene	5	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
trans-1,3-Dichloropropene	0.4	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Trichloroethene	5	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Trichlorofluoromethane	5	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Vinyl chloride	2	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Xylenes, Total		2.0 U	0.5 U	2.0 U	2.0 U	0.5 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U
Total VOCs		0	0	0	0	0	0	0	0	0	0	0	0	0

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
µg/L - Micrograms per Liter
NA - Not Analyzed
NS - Not Sampled
U - Compound was not detected at the indicated concentration
* LCS or LCSD exceeds the control limits
** Well 1-2A was frozen and unable to be sampled

Table 2-4. Summary of Town of Vestal Municipal Well Sampling Results
Remedial Site Optimization
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID Sampling Date Units	NYSDEC GA Standard ug/L	Well 1-3 Influent 11/8/2016 ug/L	Well 1-3 Influent 11/28/2016 ug/L	Well 1-3 Influent 12/16/2016 ug/L	Well 1-3 Influent 12/29/2016 ug/L	Well 1-3 Influent 1/13/2017 ug/L	Well 1-3 Influent 1/31/2017 ug/L	Well 1-3 Influent 2/7/2017 ug/L	Well 1-3 Influent 2/27/2017 ug/L	Well 1-3 Influent 3/7/2017 ug/L	Well 1-3 Influent 3/23/2017 ug/L	Well 1-3 Influent 4/4/2017 ug/L	Well 1-3 Influent 4/26/2017 ug/L	Well 1-3 Influent 5/19/2017 ug/L	Well 1-3 Influent 5/24/2017 ug/L
1,1,1-Trichloroethane	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,1,2,2-Tetrachloroethane	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
1,1,2-Trichloroethane	1	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,1-Dichloroethane	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,1-Dichloroethene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,2,3-Trimethylbenzene		NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
1,2,4-Trichlorobenzene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,2,4-Trimethylbenzne	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
1,2-Dichlorobenzene	3	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,2-Dichloroethane	0.6	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,2-Dichloropropane	1	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,3-Dichlorobenzene	3	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,4-Dichlorobenzene	3	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
2-Butanone (MEK)	50	NA	10 U	NA	10 U	NA	10 U	NA	10 U*	NA	10 U	NA	10 U	NA	10 U
2-Hexanone	50*	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U
4-Methyl-2-pentanone (MIBK)		NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U
Acetone	50*	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
Benzene	1	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Bromodichloromethane	50	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Bromoform	50*	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U*	NA	1.0 U*
Bromomethane	5	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Carbon disulfide		NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Carbon tetrachloride	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Chlorobenzene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Chloroethane	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Chloroform	7	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Chloromethane		0.5 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U*	NA	1.0 U	NA	1.0 U	NA	1.0 U
cis-1,2-Dichloroethene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
cis-1,3-Dichloropropene	0.4	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Cyclohexane		NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Dibromochloromethane	50	0.5 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U*	NA	1.0 U*
Dichlorodifluoromethane	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Ethylbenzene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Isopropylbenzne (Cumene)	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Methyl Acetate		NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U
Methyl Cyclohexane		NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Methylene Chloride	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Methyl Tert Butyl Ether	10	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Styrene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Tetrachloroethene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Toluene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
trans-1,2-Dichloroethene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
trans-1,3-Dichloropropene	0.4	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Trichloroethene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Trichlorofluoromethane	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Vinyl chloride	2	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U*	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Xylenes, Total		0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U
Total VOCs		0	0	0	0	0	0	0	0	0	0	0	0	0	0

Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
µg/L - Micrograms per Liter
NA - Not Analyzed
NS - Not Sampled
U - Compound was not detected at the indicated concentration
* LCS or LCSD exceeds the control limits
** Well 1-2A was frozen and unable to be sampled

Table 2-4. Summary of Town of Vestal Municipal Well Sampling Results
Remedial Site Optimization
Vestal Water Supply Site
Site Number 7-04-009A

ARCADIS Design & Consultancy for natural and built assets

Sample ID	NYSDEC GA Standard	Well 1-3 Influent	Well 1-3 Influent	Well 1-3 Influent	Well 1-3 Influent	Well 1-3 Influent	Well 1-3 Influent	Well 1-3 Influent	Well 1-3 Influent	Well 1-3 Influent	Well 1-3 Influent	Well 1-3 Influent	Well 1-3 Influent	Well 1-3 Influent
Sampling Date		6/20/2017	6/21/2017	7/19/2017	7/31/2017	8/18/2017	8/28/2017	9/15/2017	9/20/2017	10/3/2017	10/23/2017	11/10/2017	11/28/2017
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,1,1-Trichloroethane	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,1,2,2-Tetrachloroethane	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
1,1,2-Trichloroethane	1	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,1-Dichloroethane	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,1-Dichloroethene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,2,3-Trimethylbenzene		NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
1,2,4-Trichlorobenzene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,2,4-Trimethylbenzne	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
1,2-Dichlorobenzene	3	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,2-Dichloroethane	0.6	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,2-Dichloropropane	1	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,3-Dichlorobenzene	3	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
1,4-Dichlorobenzene	3	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
2-Butanone (MEK)	50	NA	10 U	NA	10 U*	NA	10 U	NA	10 U	NA	10 U	NA	10 U
2-Hexanone	50*	NA	5.0 U	NA	5.0 U*	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U
4-Methyl-2-pentanone (MIBK)		NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U
Acetone	50*	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	3.3 J	NA	1.9 J
Benzene	1	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Bromodichloromethane	50	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Bromoform	50*	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Bromomethane	5	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Carbon disulfide		NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Carbon tetrachloride	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Chlorobenzene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Chloroethane	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Chloroform	7	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Chloromethane		NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
cis-1,2-Dichloroethene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
cis-1,3-Dichloropropene	0.4	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Cyclohexane		NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Dibromochloromethane	50	NA	1.0 U	NA	1.0 U	NA	1.0 U*	NA	1.0 U	NA	1.0 U	NA	1.0 U
Dichlorodifluoromethane	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Ethylbenzene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Isopropylbenzne (Cumene)	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Methyl Acetate		NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U
Methyl Cyclohexane		NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U
Methylene Chloride	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Methyl Tert Butyl Ether	10	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Styrene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Tetrachloroethene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Toluene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
trans-1,2-Dichloroethene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
trans-1,3-Dichloropropene	0.4	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Trichloroethene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Trichlorofluoromethane	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Vinyl chloride	2	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
Xylenes, Total		0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U
Total VOCs		0	0	0	0	0	0	0	0	0	3.3	0	1.9

Notes:

NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard

- Concentration exceeds NYSDEC Class GA Standard

µg/L - Micrograms per Liter

NA - Not Analyzed

NS - Not Sampled

U - Compound was not detected at the indicated concentration

* LCS or LCSD exceeds the control limits

** Well 1-2A was frozen and unable to be sampled

Table 2-4. Summary of Town of Vestal Municipal Well Sampling Results
Remedial Site Optimization
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID Sampling Date Units	NYSDEC GA Standard ug/L	Well 1-3 Influent 12/27/2017 ug/L	Well 1-3 Influent 12/28/2017 ug/L	Well 1-3 Influent 1/15/2018 ug/L	Well 1-3 Influent 1/29/2018 ug/L	Well 1-3 Influent 2/20/2018 ug/L	Well 1-3 Influent 2/26/2018 ug/L	Well 1-3 Influent 3/12/2018 ug/L	Well 1-3 Influent 3/30/2018 ug/L	Well 1-3 Influent 4/6/2018 ug/L	Well 1-3 Influent 4/24/2018 ug/L	Well 1-3 Influent 5/7/2018 ug/L	Well 1-3 (post) Influent 5/7/2018 ug/L	Well 1-3 Influent 5/21/2018 ug/L
1,1,1-Trichloroethane	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.29 J	0.26 J	1.0 U	0.5 U
1,1,2,2-Tetrachloroethane	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U*	1.0 U*	NA
1,1,2-Trichloroethane	1	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
1,1-Dichloroethane	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
1,1-Dichloroethene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
1,2,3-Trimethylbenzene		NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U	1.0 U	NA
1,2,4-Trichlorobenzene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
1,2,4-Trimethylbenzne	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
1,2-Dibromo-3-Chloropropane	0.04	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	10 U	10 U	10 U	NA
1,2-Dibromoethane (Ethylene Dibromide)	5	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U	1.0 U	NA
1,2-Dichlorobenzene	3	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
1,2-Dichloroethane	0.6	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
1,2-Dichloropropane	1	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
1,3-Dichlorobenzene	3	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
1,4-Dichlorobenzene	3	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
2-Butanone (MEK)	50	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	50 U	50 U	50 U	NA
2-Hexanone	50*	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	10 U	10 U	10 U	NA
4-Methyl-2-pentanone (MIBK)		NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	10 U	10 U	10 U	NA
Acetone	50*	NA	10 U	NA	3.4 J	NA	10 U	NA	10 U	NA	25 U	25 U	25 U	NA
Benzene	1	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
Bromodichloromethane	50	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U	1.0 U	NA
Bromoform	50*	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U	1.0 U	NA
Bromomethane	5	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U	1.0 U	NA
Carbon disulfide		NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	1.0 UT	1.0 U*	NA
Carbon tetrachloride	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
Chlorobenzene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
Chloroethane	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
Chloroform	7	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U	1.0 U	NA
Chloromethane		NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U	1.0 U	NA
cis-1,2-Dichloroethene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
cis-1,3-Dichloropropene	0.4	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
Cyclohexane		NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	5.0 U	5.0 U*	5.0 U*	NA
Dibromochloromethane	50	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U	1.0 U	NA
Dichlorodifluoromethane	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
Ethylbenzene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
Isopropylbenzne (Cumene)	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
Methyl Acetate		NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	10 U	10 U	10 U	NA
Methyl Cyclohexane		NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	5.0 U	5.0 U*	5.0 U*	NA
Methylene Chloride	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	5.0 U	5.0 U*	5.0 U*	0.5 U
Methyl Tert Butyl Ether	10	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
Styrene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
Tetrachloroethene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
Toluene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
trans-1,2-Dichloroethene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
trans-1,3-Dichloropropene	0.4	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
Trichloroethene	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U*	1.0 U*	0.5 U
Trichlorofluoromethane	5	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
Vinyl chloride	2	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	0.5 U
Xylenes, Total		0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	3.0 U	3.0 U	3.0 U	0.5 U
Total VOCs		0	0	0	3.4	0	0	0	0	0	0.29	0.26	0	0

Notes:

NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard

- Concentration exceeds NYSDEC Class GA Standard

µg/L - Micrograms per Liter

NA - Not Analyzed

NS - Not Sampled

U - Compound was not detected at the indicated concentration

* LCS or LCSD exceeds the control limits

** Well 1-2A was frozen and unable to be sampled

Table 2-4. Summary of Town of Vestal Municipal Well Sampling Results
Remedial Site Optimization
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID Sampling Date Units	NYSDEC GA Standard ug/L	Well 1-3 Influent 6/14/2018 ug/L	Well 1-3 (post) Influent 6/14/2018 ug/L	Well 1-3 Influent 6/19/2018 ug/L	Well 1-3 Influent 7/6/2018 ug/L	Well 1-3 (post) Influent 7/6/2018 ug/L	Well 1-3 Influent 7/17/2018 ug/L	Well 1-3 Influent 8/8/2018 ug/L	Well 1-3 (post) Influent 8/8/2018 ug/L	Well 1-3 Influent 8/27/2018 ug/L	Well 1-3 Influent 9/13/2018 ug/L	Well 1-3 (post) Influent 9/13/2018 ug/L	Well 1-3 Influent 9/24/2018 ug/L
1,1,1-Trichloroethane	5	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U*	1.0 U*	0.5 U	1.0 U	1.0 U	0.5 U
1,1,2,2-Tetrachloroethane	5	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA
1,1,2-Trichloroethane	1	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
1,1-Dichloroethane	5	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
1,1-Dichloroethene	5	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
1,2,3-Trimethylbenzene		1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA
1,2,4-Trichlorobenzene	5	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
1,2,4-Trimethylbenzne	5	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA
1,2-Dichlorobenzene	3	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
1,2-Dichloropropane	1	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
1,3-Dichlorobenzene	3	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
1,4-Dichlorobenzene	3	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
2-Butanone (MEK)	50	10 U	10 U	NA	10 U	10 U	NA	10 U*	10 U*	NA	10 U*	10 U*	NA
2-Hexanone	50*	5.0 U*	5.0 U*	NA	5.0 U	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U	5.0 U	NA
4-Methyl-2-pentanone (MIBK)		5.0 U*	5.0 U*	NA	5.0 U	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U	5.0 U	NA
Acetone	50*	10 U	10 U	NA	3.3 J	10 U	NA	10.0 U	10 U	NA	10.0 U	10 U	NA
Benzene	1	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
Bromodichloromethane	50	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA
Bromoform	50*	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA
Bromomethane	5	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA
Carbon disulfide		1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA
Carbon tetrachloride	5	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
Chlorobenzene	5	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
Chloroethane	5	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
Chloroform	7	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA
Chloromethane		1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA
cis-1,2-Dichloroethene	5	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
cis-1,3-Dichloropropene	0.4	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
Cyclohexane		1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA
Dibromochloromethane	50	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA
Dichlorodifluoromethane	5	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
Ethylbenzene	5	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
Isopropylbenzne (Cumene)	5	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
Methyl Acetate		2.5 U	2.5 U	NA	2.5 U	2.5 U	NA	2.5 U	2.5 U	NA	2.5 U	2.5 U	NA
Methyl Cyclohexane		1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA
Methylene Chloride	5	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
Methyl Tert Butyl Ether	10	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
Styrene	5	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
Tetrachloroethene	5	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U*	1.0 U*	0.5 U	1.0 U	1.0 U	0.5 U
Toluene	5	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
trans-1,3-Dichloropropene	0.4	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
Trichloroethene	5	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
Trichlorofluoromethane	5	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
Vinyl chloride	2	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U
Xylenes, Total		2.0 U	2.0 U	0.5 U	2.0 U	2.0 U	0.5 U	2.0 U	2.0 U	0.5 U	2.0 U	2.0 U	0.5 U
Total VOCs		0	0	0	3.3	0	0	0	0	0	0	0	0

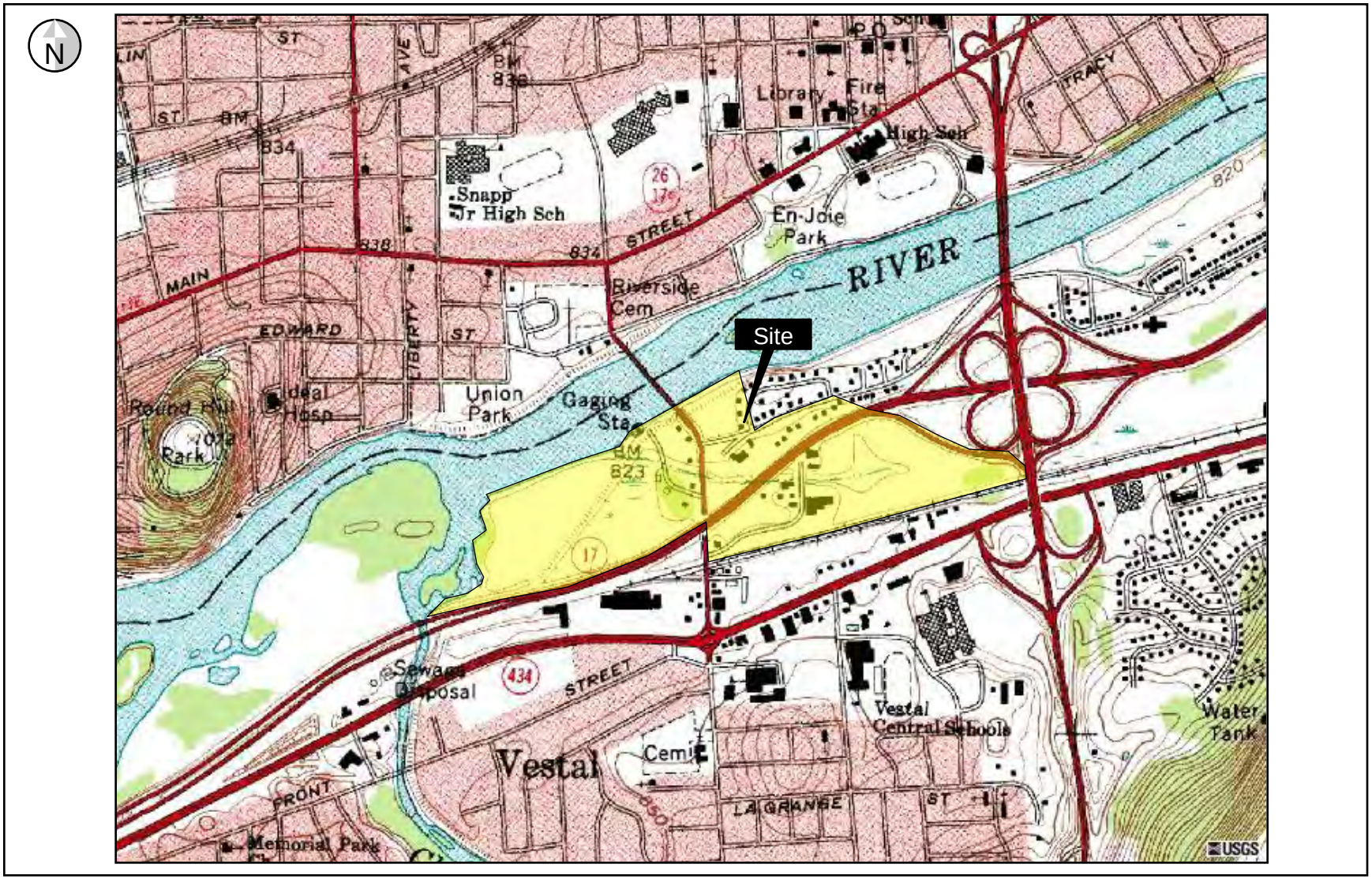
Notes:
NYSDEC GA GW Standard - New York State Department of Environmental Conservation Groundwater Standard
- Concentration exceeds NYSDEC Class GA Standard
µg/L - Micrograms per Liter
NA - Not Analyzed
NS - Not Sampled
U - Compound was not detected at the indicated concentration
* LCS or LCSD exceeds the control limits
** Well 1-2A was frozen and unable to be sampled

FIGURES

ARCADIS

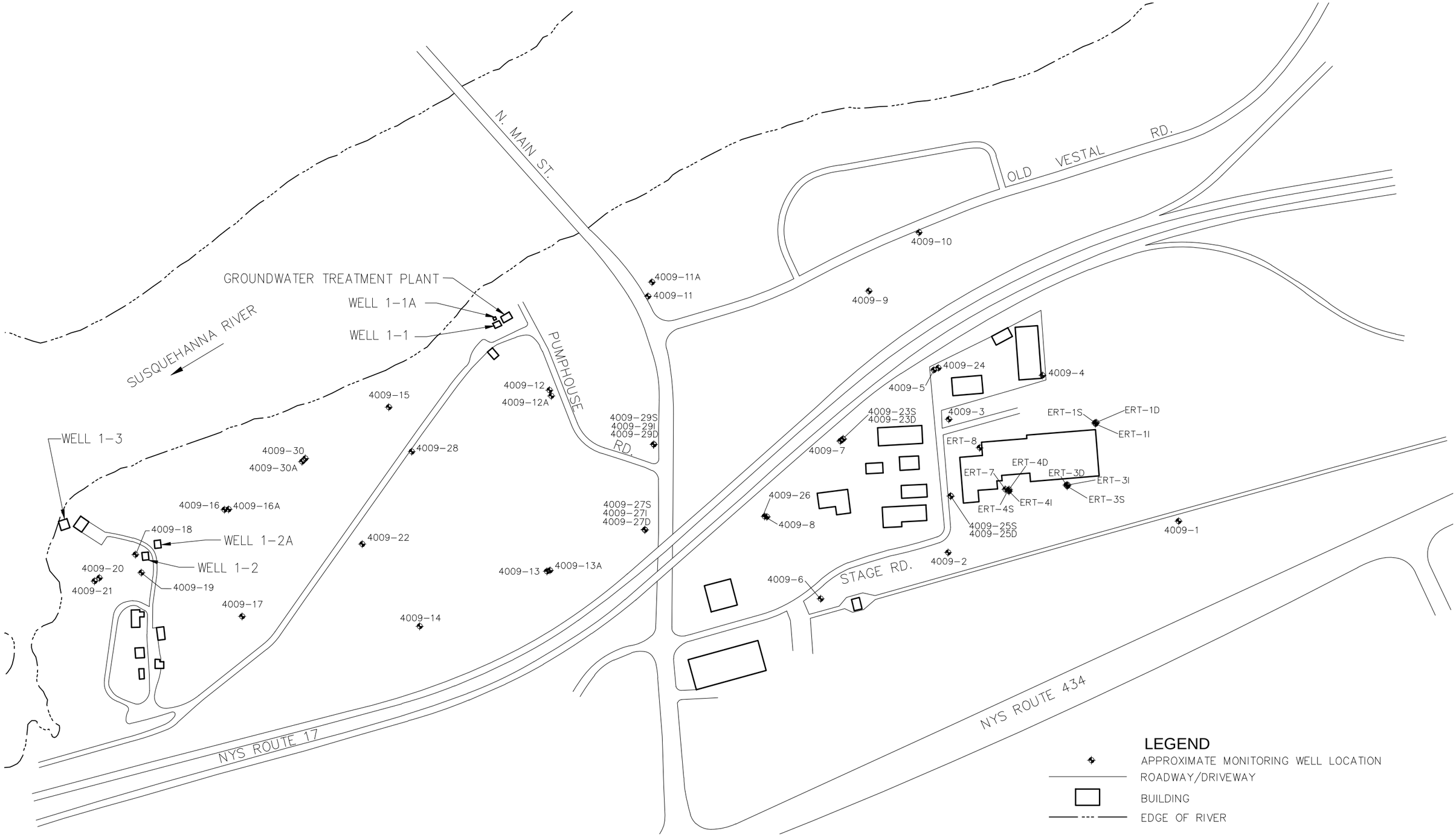
Figure 1-1
Site Location
Vestal Water Supply Site
Vestal, New York
NYSDEC Site # 7-04-009A

0 2,000 ft



Source: USGS 7.5-minute Series Topographic Quadrangle, Endicott (1988).

G:\PROJECT\00266401.0000\Reports\RSO Quarterly Reports



SOURCE: BASE MAP DIGITIZED USING AERIAL ORTHIMAGERY FROM NYS GIS CLEARINGHOUSE, DATED 2011

ARCADIS Design & Consultancy for natural and built assets

NYSDEC STANDBY CONTRACT NO. D007618-7
NYSDEC SITE NO. 7-04-009

VESTAL WATER SUPPLY
VESTAL, NEW YORK

MONITORING WELL LOCATION MAP

SCALE: AS SHOWN

MARCH 2018

FIGURE 2-1

4009-16A VOCs (ug/L)	NYSDEC GA Standard	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
Benzene	1	1.8	1.0 U	0.23 J	1.0 U	1.0 U	0.56 J	1.0 U

4009-11A VOCs (ug/L)	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
	ND	ND	ND	ND	ND	ND	ND

4009-7 VOCs (ug/L)	NYSDEC GA Standard	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
cis-1,2-Dichloroethene	5	42	41	36	53	26	38	55
Vinyl chloride	2	22	4.6	4.3	10	1.0 U	5.6	7.5

4009-10 VOCs (ug/L)	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
	ND	ND	ND	ND	ND	ND	ND

4009-9 VOCs (ug/L)	NYSDEC GA Standard	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
cis-1,2-Dichloroethene	5	8.2	10	21	11	2.6	8.2	13

4009-13A VOCs (ug/L)	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
	ND	ND	ND	ND	ND	ND	ND

4009-30A VOCs (ug/L)	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
	ND	ND	ND	ND	ND	ND	ND

GROUNDWATER TREATMENT PLANT
WELL 1-1A
WELL 1-1
WELL 1-2A
WELL 1-2
WELL 1-3
SUSQUEHANNA RIVER
MAIN ST.
PUMPHOUSE RD.
OLD VESTAL RD.
STAGE RD.
NYS ROUTE 17
4009-1
4009-2
4009-3
4009-4
4009-5
4009-6
4009-7
4009-8
4009-9
4009-10
4009-11
4009-11A
4009-12
4009-12A
4009-13
4009-13A
4009-14
4009-15
4009-16
4009-16A
4009-17
4009-18
4009-19
4009-20
4009-21
4009-22
4009-23S
4009-23D
4009-24
4009-25S
4009-25D
4009-26
4009-27S
4009-27I
4009-27D
4009-28
4009-29S
4009-29I
4009-29D
4009-30
4009-30A
ERT-1S
ERT-1D
ERT-1I
ERT-3S
ERT-3I
ERT-3D
ERT-4S
ERT-4I
ERT-4D
ERT-7
ERT-8

0 150' 300' 600'

LEGEND
- APPROXIMATE MONITORING WELL LOCATION
- ROADWAY/DRIVEWAY
- BUILDING
- EDGE OF RIVER

ND – Not detected above NYSDEC GA Standard
U – Compound was not detected at the indicated concentration
J – Indicates an estimated value.
NYSDEC GA GW Standard – New York State Department of Environmental Conservation Groundwater Standard
VOC – Volatile Organic Compounds
ug/L – micrograms per liter
– Shaded values exceed the corresponding NYSDEC GA GW Standard

SOURCE: BASE MAP DIGITIZED USING AERIAL ORTHIMAGERY FROM NYS GIS CLEARINGHOUSE, DATED 2011

USER: HAUSMANN FILENAME: G:\ACAD\PROJ\00266401.0000\FIGURES\FIGURE 2-2 VOC SHALLOW SEP 2018.DWG SAVE DATE: 10/25/2018 10:18 AM PLOT DATE: 10/25/2018 10:19 AM

ARCADIS Design & Consultancy for natural and built assets

NYSDEC STANDBY CONTRACT NO. D007618-7
NYSDEC SITE NO. 7-04-009

VESTAL WATER SUPPLY
VESTAL, NEW YORK

SUMMARY OF VOC RESULTS - SHALLOW WELLS

SCALE: AS SHOWN

OCTOBER 2018

FIGURE 2-2

4009-27S VOCs (ug/L)	NYSDEC GA Standard	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
1,1,1-Trichloroethane	5	**54**	**46**	**53**	**53**	**52**	**43**	**47**
1,1-Dichloroethene	5	**5.1**	**9.1**	4.8	4.8	4.4	4.1	4.5
cis-1,2-Dichloroethene	5	**20**	**17**	**20**	**22**	**21**	**18**	**21**
Trichloroethene	5	**22**	**24**	**22**	**27**	**26**	**20**	**25**

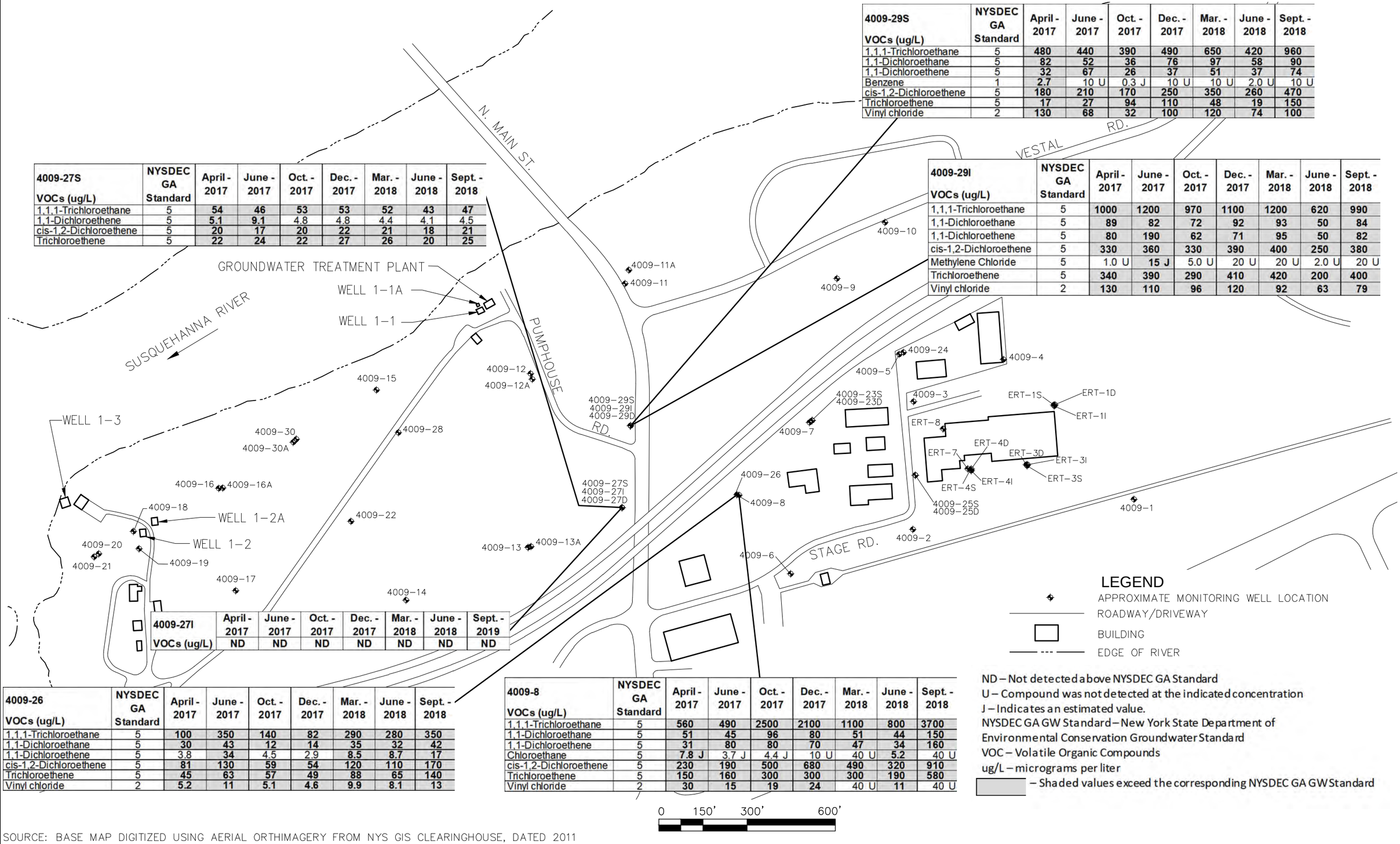
4009-29S VOCs (ug/L)	NYSDEC GA Standard	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
1,1,1-Trichloroethane	5	**480**	**440**	**390**	**490**	**650**	**420**	**960**
1,1-Dichloroethane	5	**82**	**52**	**36**	**76**	**97**	**58**	**90**
1,1-Dichloroethene	5	**32**	**67**	**26**	**37**	**51**	**37**	**74**
Benzene	1	**2.7**	10 U	0.3 J	10 U	10 U	2.0 U	10 U
cis-1,2-Dichloroethene	5	**180**	**210**	**170**	**250**	**350**	**260**	**470**
Trichloroethene	5	**17**	**27**	**94**	**110**	**48**	**19**	**150**
Vinyl chloride	2	**130**	**68**	**32**	**100**	**120**	**74**	**100**

4009-29I VOCs (ug/L)	NYSDEC GA Standard	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
1,1,1-Trichloroethane	5	**1000**	**1200**	**970**	**1100**	**1200**	**620**	**990**
1,1-Dichloroethane	5	**89**	**82**	**72**	**92**	**93**	**50**	**84**
1,1-Dichloroethene	5	**80**	**190**	**62**	**71**	**95**	**50**	**82**
cis-1,2-Dichloroethene	5	**330**	**360**	**330**	**390**	**400**	**250**	**380**
Methylene Chloride	5	1.0 U	**15 J**	5.0 U	20 U	20 U	2.0 U	20 U
Trichloroethene	5	**340**	**390**	**290**	**410**	**420**	**200**	**400**
Vinyl chloride	2	**130**	**110**	**96**	**120**	**92**	**63**	**79**

4009-27I VOCs (ug/L)	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2019
	ND	ND	ND	ND	ND	ND	ND

4009-26 VOCs (ug/L)	NYSDEC GA Standard	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
1,1,1-Trichloroethane	5	**100**	**350**	**140**	**82**	**290**	**280**	**350**
1,1-Dichloroethane	5	**30**	**43**	**12**	**14**	**35**	**32**	**42**
1,1-Dichloroethene	5	3.8	**34**	4.5	2.9	**8.5**	**8.7**	**17**
cis-1,2-Dichloroethene	5	**81**	**130**	**59**	**54**	**120**	**110**	**170**
Trichloroethene	5	**45**	**63**	**57**	**49**	**88**	**65**	**140**
Vinyl chloride	2	**5.2**	**11**	**5.1**	**4.6**	**9.9**	**8.1**	**13**

4009-8 VOCs (ug/L)	NYSDEC GA Standard	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
1,1,1-Trichloroethane	5	**560**	**490**	**2500**	**2100**	**1100**	**800**	**3700**
1,1-Dichloroethane	5	**51**	**45**	**96**	**80**	**51**	**44**	**150**
1,1-Dichloroethene	5	**31**	**80**	**80**	**70**	**47**	**34**	**160**
Chloroethane	5	**7.8 J**	3.7 J	4.4 J	10 U	40 U	**5.2**	40 U
cis-1,2-Dichloroethene	5	**230**	**190**	**500**	**680**	**490**	**320**	**910**
Trichloroethene	5	**150**	**160**	**300**	**300**	**300**	**190**	**580**
Vinyl chloride	2	**30**	**15**	**19**	**24**	40 U	**11**	40 U



LEGEND

- APPROXIMATE MONITORING WELL LOCATION
- ROADWAY/DRIVEWAY
- BUILDING
- EDGE OF RIVER

ND – Not detected above NYSDEC GA Standard
U – Compound was not detected at the indicated concentration
J – Indicates an estimated value.
NYSDEC GA GW Standard – New York State Department of Environmental Conservation Groundwater Standard
VOC – Volatile Organic Compounds
ug/L – micrograms per liter
– Shaded values exceed the corresponding NYSDEC GA GW Standard

SOURCE: BASE MAP DIGITIZED USING AERIAL ORTHIMAGERY FROM NYS GIS CLEARINGHOUSE, DATED 2011

ARCADIS Design & Consultancy for natural and built assets

NYSDEC STANDBY CONTRACT NO. D007618-7
NYSDEC SITE NO. 7-04-009

VESTAL WATER SUPPLY
VESTAL, NEW YORK

SUMMARY OF VOC SAMPLING RESULTS - INTERMEDIATE WELLS

SCALE: AS SHOWN

OCTOBER 2018

FIGURE 2-3

Well 1-1 VOCs (ug/L)	NYSDEC GA Standard	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
1,1,1-Trichloroethane	5	NS	360	210	170	230	170	220
1,1-Dichloroethane	5	NS	32	17	18	21	17	20
1,1-Dichloroethene	5	NS	57	13	13	16	14	18
cis-1,2-Dichloroethene	5	NS	96	55	59	69	56	68
Trichloroethene	5	NS	89	59	61	73	53	67

4009-11 VOCs (ug/L)	NYSDEC GA Standard	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
1,1,1-Trichloroethane	5	1.0 U	170	65	1.0 U	88	68	1.0 U
1,1-Dichloroethane	5	2.8	43.0	18	2.1	24	21	7.0
1,1-Dichloroethene	5	1.0 U	27	5.0	1.0 U	7.2	6.4	1.0 U
Benzene	1	15	1.0 U	1.0 U	6.5	1.0 U	1.0 U	8.9
cis-1,2-Dichloroethene	5	1.0 U	35	15	1.0 U	23	20	1.3
Vinyl chloride	2	1.1	37	13	1.0 U	17	19	1.7

4009-15 VOCs (ug/L)	NYSDEC GA Standard	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
Benzene	1	0.97 J	12	10	9.1	9.3	9.0	7.3

4009-16 VOCs (ug/L)	NYSDEC GA Standard	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
Benzene	1	NS	18.0	1.5	5.8	1.1	5.7	1.5

4009-12 VOCs (ug/L)	NYSDEC GA Standard	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
1,1,1-Trichloroethane	5	100	45	1.0 U	330	45	1.0 U	95
1,1-Dichloroethane	5	18	9.2	5.6	46	13	6.2	11
1,1-Dichloroethene	5	3.2	7.7	0.53 J	16	5.0	0.54 J	6.9
Benzene	1	3.6	2.8	2.5	0.51 J	2.5	1.7	0.73 J
cis-1,2-Dichloroethene	5	11	8.7	2.0	62	15	2.0	25
Trichloroethene	5	3.0	10	1.9	69	14	1.6	25
Vinyl chloride	2	5.7	22	1.3	96	38	2.6	26

4009-29D VOCs (ug/L)	NYSDEC GA Standard	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
1,1,1-Trichloroethane	5	270	31	7.6	13	280	41	150
1,1-Dichloroethane	5	44	8.1	1.8	2.9	38	11	29
1,1-Dichloroethene	5	26	2.0	0.37 J	0.88 J	42	5.3	13
cis-1,2-Dichloroethene	5	130	10	1.5	3.3	180	26	77
Trichloroethene	5	61	7.2	2.0	3.5	120	10	16
Vinyl chloride	2	73	11	8.4	9.4	72	17	35

4009-14 VOCs (ug/L)	NYSDEC GA Standard	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
Benzene	1	NS	9.2	11	12	13	11	1.6

4009-19 VOCs (ug/L)	NYSDEC GA	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
Benzene	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.5

4009-18 VOCs (ug/L)	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
	ND	ND	ND	ND	ND	ND	ND

4009-21 VOCs (ug/L)	NYSDEC GA Standard	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
Benzene	1	24	25	18	18	17	11	5.3

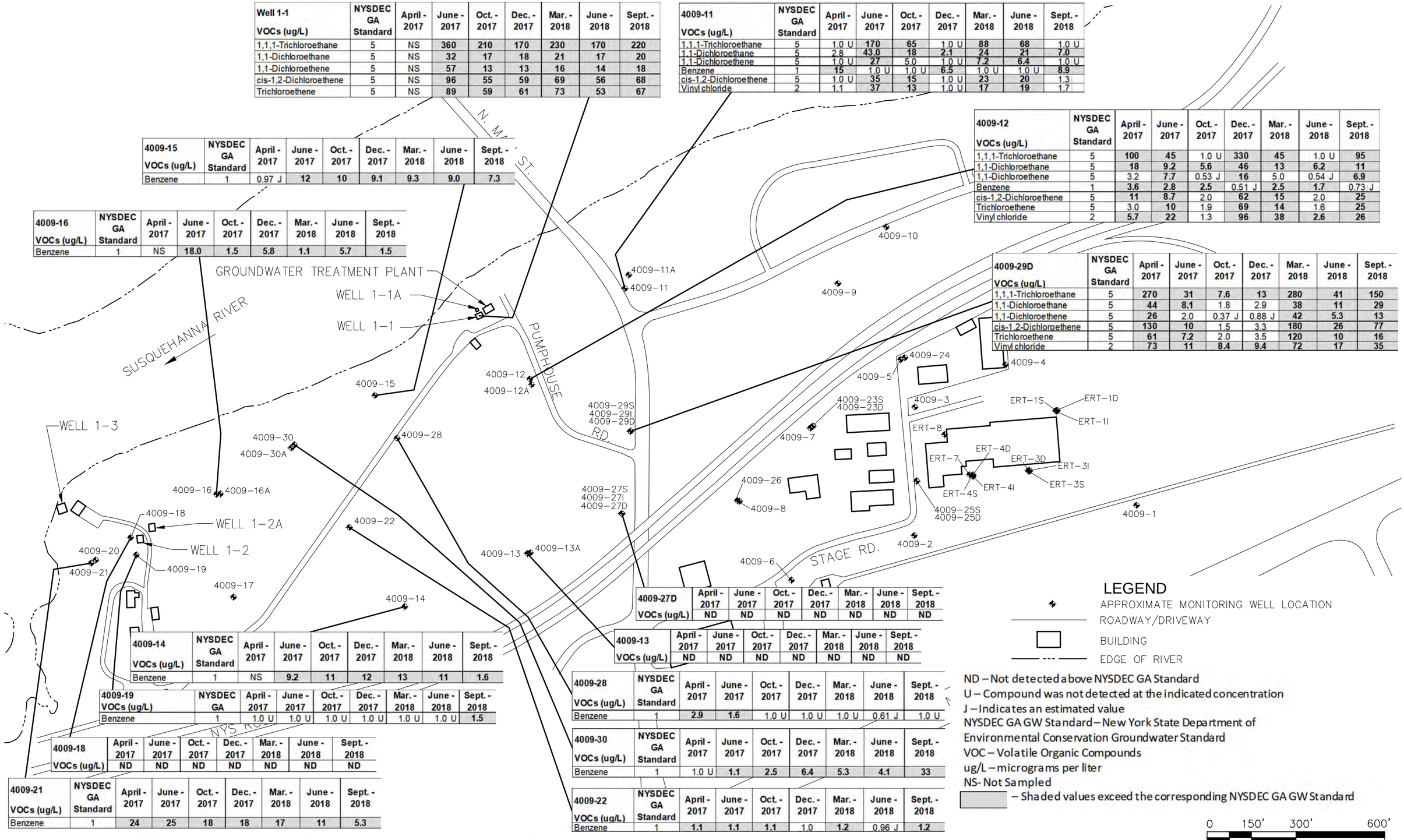
4009-27D VOCs (ug/L)	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
	ND	ND	ND	ND	ND	ND	ND

4009-13 VOCs (ug/L)	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
	ND	ND	ND	ND	ND	ND	ND

4009-28 VOCs (ug/L)	NYSDEC GA Standard	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
Benzene	1	2.9	1.6	1.0 U	1.0 U	1.0 U	0.61 J	1.0 U

4009-30 VOCs (ug/L)	NYSDEC GA Standard	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
Benzene	1	1.0 U	1.1	2.5	6.4	5.3	4.1	33

4009-22 VOCs (ug/L)	NYSDEC GA Standard	April - 2017	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018
Benzene	1	1.1	1.1	1.1	1.0	1.2	0.96 J	1.2



LEGEND

- APPROXIMATE MONITORING WELL LOCATION
- ROADWAY/DRIVEWAY
- BUILDING
- EDGE OF RIVER

ND – Not detected above NYSDEC GA Standard
U – Compound was not detected at the indicated concentration
J – Indicates an estimated value
NYSDEC GA GW Standard – New York State Department of Environmental Conservation Groundwater Standard
VOC – Volatile Organic Compounds
ug/L – micrograms per liter
NS- Not Sampled
– Shaded values exceed the corresponding NYSDEC GA GW Standard

0 150' 300' 600'

SOURCE: BASE MAP DIGITIZED USING AERIAL ORTHIMAGERY FROM NYS GIS CLEARINGHOUSE, DATED 2011

ARCADIS Design & Consultancy for natural and built assets

NYSDEC STANDBY CONTRACT NO. D007618-7
NYSDEC SITE NO. 7-04-009
VESTAL WATER SUPPLY
VESTAL, NEW YORK

SUMMARY OF VOC SAMPLING RESULTS - DEEP WELLS
SCALE: AS SHOWN

OCTOBER 2018
FIGURE 2-4

APPENDIX A

Analytical Reporting Forms (TestAmerica Laboratories, Inc. and Microbac Laboratory Services)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-138513-1
Client Project/Site: NYSDEC-Standby VESTAL

For:
ARCADIS U.S. Inc
855 Route 146
Suite 210
Clifton Park, New York 12065

Attn: Mr. Jeremy Wyckoff

Judy Stone

Authorized for release by:
7/20/2018 5:00:01 PM

Judy Stone, Senior Project Manager
(484)685-0868
judy.stone@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Analyzed for but not detected.
J	Indicates an estimated value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 480-138513-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-138513-1

Comments
No additional comments.

Receipt
The samples were received on 7/7/2018 12:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.3º C.

GC/MS VOA
Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-423461 recovered above the upper control limit for Trichlorofluoromethane. The samples associated with this CCV were non-detect for the affected analyte; therefore, the data have been reported. The following samples are impacted: WELL 1-2A 070618 (480-138513-1), WELL 1-3 070618 (480-138513-2), WELL 1-3 POST 070618 (480-138513-3) and TRIP BLANKS 070618 (480-138513-4).

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

Detection Summary

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-138513-1

Client Sample ID: WELL 1-2A 070618 — Lab Sample ID: 480-138513-1

No Detections.

Client Sample ID: WELL 1-3 070618 — Lab Sample ID: 480-138513-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.3	J	10	3.0	ug/L	1		8260C	Total/NA

Client Sample ID: WELL 1-3 POST 070618 — Lab Sample ID: 480-138513-3

No Detections.

Client Sample ID: TRIP BLANKS 070618 — Lab Sample ID: 480-138513-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	4.5	J	10	3.0	ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-138513-1

Client Sample ID: WELL 1-2A 070618
Date Collected: 07/06/18 10:40
Date Received: 07/07/18 00:30

Lab Sample ID: 480-138513-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			07/09/18 16:32	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			07/09/18 16:32	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			07/09/18 16:32	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			07/09/18 16:32	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			07/09/18 16:32	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			07/09/18 16:32	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			07/09/18 16:32	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			07/09/18 16:32	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			07/09/18 16:32	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			07/09/18 16:32	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			07/09/18 16:32	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			07/09/18 16:32	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			07/09/18 16:32	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			07/09/18 16:32	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			07/09/18 16:32	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			07/09/18 16:32	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			07/09/18 16:32	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			07/09/18 16:32	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			07/09/18 16:32	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			07/09/18 16:32	1
Acetone	10	U	10	3.0	ug/L			07/09/18 16:32	1
Benzene	1.0	U	1.0	0.41	ug/L			07/09/18 16:32	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			07/09/18 16:32	1
Bromoform	1.0	U	1.0	0.26	ug/L			07/09/18 16:32	1
Bromomethane	1.0	U	1.0	0.69	ug/L			07/09/18 16:32	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			07/09/18 16:32	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			07/09/18 16:32	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			07/09/18 16:32	1
Chloroethane	1.0	U	1.0	0.32	ug/L			07/09/18 16:32	1
Chloroform	1.0	U	1.0	0.34	ug/L			07/09/18 16:32	1
Chloromethane	1.0	U	1.0	0.35	ug/L			07/09/18 16:32	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			07/09/18 16:32	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			07/09/18 16:32	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			07/09/18 16:32	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			07/09/18 16:32	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			07/09/18 16:32	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			07/09/18 16:32	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			07/09/18 16:32	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			07/09/18 16:32	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			07/09/18 16:32	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			07/09/18 16:32	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			07/09/18 16:32	1
Styrene	1.0	U	1.0	0.73	ug/L			07/09/18 16:32	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			07/09/18 16:32	1
Toluene	1.0	U	1.0	0.51	ug/L			07/09/18 16:32	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			07/09/18 16:32	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			07/09/18 16:32	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			07/09/18 16:32	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			07/09/18 16:32	1

Client Sample ID: WELL 1-2A 070618

Lab Sample ID: 480-138513-1

Date Collected: 07/06/18 10:40

Matrix: Water

Date Received: 07/07/18 00:30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.90	ug/L			07/09/18 16:32	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			07/09/18 16:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*77 - 120*		*07/09/18 16:32*	*1*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*07/09/18 16:32*	*1*
Dibromofluoromethane (Surr)	*108*		*75 - 123*		*07/09/18 16:32*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*07/09/18 16:32*	*1*

Client Sample ID: WELL 1-3 070618

Lab Sample ID: 480-138513-2

Date Collected: 07/06/18 10:50

Matrix: Water

Date Received: 07/07/18 00:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			07/09/18 16:56	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			07/09/18 16:56	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			07/09/18 16:56	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			07/09/18 16:56	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			07/09/18 16:56	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			07/09/18 16:56	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			07/09/18 16:56	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			07/09/18 16:56	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			07/09/18 16:56	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			07/09/18 16:56	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			07/09/18 16:56	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			07/09/18 16:56	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			07/09/18 16:56	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			07/09/18 16:56	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			07/09/18 16:56	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			07/09/18 16:56	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			07/09/18 16:56	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			07/09/18 16:56	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			07/09/18 16:56	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			07/09/18 16:56	1
Acetone	**3.3**	**J**	10	3.0	ug/L			07/09/18 16:56	1
Benzene	1.0	U	1.0	0.41	ug/L			07/09/18 16:56	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			07/09/18 16:56	1
Bromoform	1.0	U	1.0	0.26	ug/L			07/09/18 16:56	1
Bromomethane	1.0	U	1.0	0.69	ug/L			07/09/18 16:56	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			07/09/18 16:56	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			07/09/18 16:56	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			07/09/18 16:56	1
Chloroethane	1.0	U	1.0	0.32	ug/L			07/09/18 16:56	1
Chloroform	1.0	U	1.0	0.34	ug/L			07/09/18 16:56	1
Chloromethane	1.0	U	1.0	0.35	ug/L			07/09/18 16:56	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			07/09/18 16:56	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			07/09/18 16:56	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			07/09/18 16:56	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			07/09/18 16:56	1

Client Sample ID: WELL 1-3 070618
Date Collected: 07/06/18 10:50
Date Received: 07/07/18 00:30

Lab Sample ID: 480-138513-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			07/09/18 16:56	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			07/09/18 16:56	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			07/09/18 16:56	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			07/09/18 16:56	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			07/09/18 16:56	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			07/09/18 16:56	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			07/09/18 16:56	1
Styrene	1.0	U	1.0	0.73	ug/L			07/09/18 16:56	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			07/09/18 16:56	1
Toluene	1.0	U	1.0	0.51	ug/L			07/09/18 16:56	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			07/09/18 16:56	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			07/09/18 16:56	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			07/09/18 16:56	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			07/09/18 16:56	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			07/09/18 16:56	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			07/09/18 16:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*77 - 120*		*07/09/18 16:56*	*1*
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*		*07/09/18 16:56*	*1*
Dibromofluoromethane (Surr)	*107*		*75 - 123*		*07/09/18 16:56*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*07/09/18 16:56*	*1*

Client Sample ID: WELL 1-3 POST 070618
Date Collected: 07/06/18 10:45
Date Received: 07/07/18 00:30

Lab Sample ID: 480-138513-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			07/09/18 17:19	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			07/09/18 17:19	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			07/09/18 17:19	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			07/09/18 17:19	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			07/09/18 17:19	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			07/09/18 17:19	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			07/09/18 17:19	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			07/09/18 17:19	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			07/09/18 17:19	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			07/09/18 17:19	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			07/09/18 17:19	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			07/09/18 17:19	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			07/09/18 17:19	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			07/09/18 17:19	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			07/09/18 17:19	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			07/09/18 17:19	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			07/09/18 17:19	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			07/09/18 17:19	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			07/09/18 17:19	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			07/09/18 17:19	1
Acetone	10	U	10	3.0	ug/L			07/09/18 17:19	1

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-138513-1

Client Sample ID: WELL 1-3 POST 070618

Lab Sample ID: 480-138513-3

Date Collected: 07/06/18 10:45

Matrix: Water

Date Received: 07/07/18 00:30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			07/09/18 17:19	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			07/09/18 17:19	1
Bromoform	1.0	U	1.0	0.26	ug/L			07/09/18 17:19	1
Bromomethane	1.0	U	1.0	0.69	ug/L			07/09/18 17:19	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			07/09/18 17:19	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			07/09/18 17:19	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			07/09/18 17:19	1
Chloroethane	1.0	U	1.0	0.32	ug/L			07/09/18 17:19	1
Chloroform	1.0	U	1.0	0.34	ug/L			07/09/18 17:19	1
Chloromethane	1.0	U	1.0	0.35	ug/L			07/09/18 17:19	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			07/09/18 17:19	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			07/09/18 17:19	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			07/09/18 17:19	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			07/09/18 17:19	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			07/09/18 17:19	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			07/09/18 17:19	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			07/09/18 17:19	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			07/09/18 17:19	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			07/09/18 17:19	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			07/09/18 17:19	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			07/09/18 17:19	1
Styrene	1.0	U	1.0	0.73	ug/L			07/09/18 17:19	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			07/09/18 17:19	1
Toluene	1.0	U	1.0	0.51	ug/L			07/09/18 17:19	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			07/09/18 17:19	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			07/09/18 17:19	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			07/09/18 17:19	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			07/09/18 17:19	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			07/09/18 17:19	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			07/09/18 17:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*77 - 120*		*07/09/18 17:19*	*1*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*		*07/09/18 17:19*	*1*
Dibromofluoromethane (Surr)	*105*		*75 - 123*		*07/09/18 17:19*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*07/09/18 17:19*	*1*

Client Sample ID: TRIP BLANKS 070618

Lab Sample ID: 480-138513-4

Date Collected: 07/06/18 00:00

Matrix: Water

Date Received: 07/07/18 00:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			07/09/18 17:43	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			07/09/18 17:43	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			07/09/18 17:43	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			07/09/18 17:43	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			07/09/18 17:43	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			07/09/18 17:43	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			07/09/18 17:43	1

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-138513-1

Client Sample ID: TRIP BLANKS 070618
Date Collected: 07/06/18 00:00
Date Received: 07/07/18 00:30

Lab Sample ID: 480-138513-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			07/09/18 17:43	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			07/09/18 17:43	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			07/09/18 17:43	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			07/09/18 17:43	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			07/09/18 17:43	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			07/09/18 17:43	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			07/09/18 17:43	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			07/09/18 17:43	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			07/09/18 17:43	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			07/09/18 17:43	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			07/09/18 17:43	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			07/09/18 17:43	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			07/09/18 17:43	1
Acetone	**4.5**	**J**	10	3.0	ug/L			07/09/18 17:43	1
Benzene	1.0	U	1.0	0.41	ug/L			07/09/18 17:43	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			07/09/18 17:43	1
Bromoform	1.0	U	1.0	0.26	ug/L			07/09/18 17:43	1
Bromomethane	1.0	U	1.0	0.69	ug/L			07/09/18 17:43	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			07/09/18 17:43	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			07/09/18 17:43	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			07/09/18 17:43	1
Chloroethane	1.0	U	1.0	0.32	ug/L			07/09/18 17:43	1
Chloroform	1.0	U	1.0	0.34	ug/L			07/09/18 17:43	1
Chloromethane	1.0	U	1.0	0.35	ug/L			07/09/18 17:43	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			07/09/18 17:43	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			07/09/18 17:43	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			07/09/18 17:43	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			07/09/18 17:43	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			07/09/18 17:43	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			07/09/18 17:43	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			07/09/18 17:43	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			07/09/18 17:43	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			07/09/18 17:43	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			07/09/18 17:43	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			07/09/18 17:43	1
Styrene	1.0	U	1.0	0.73	ug/L			07/09/18 17:43	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			07/09/18 17:43	1
Toluene	1.0	U	1.0	0.51	ug/L			07/09/18 17:43	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			07/09/18 17:43	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			07/09/18 17:43	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			07/09/18 17:43	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			07/09/18 17:43	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			07/09/18 17:43	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			07/09/18 17:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*77 - 120*		*07/09/18 17:43*	*1*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*		*07/09/18 17:43*	*1*
Dibromofluoromethane (Surr)	*108*		*75 - 123*		*07/09/18 17:43*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*07/09/18 17:43*	*1*

Surrogate Summary

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-138513-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(77-120)	(73-120)	(75-123)	(80-120)
480-138513-1	WELL 1-2A 070618	113	102	108	97
480-138513-2	WELL 1-3 070618	111	106	107	99
480-138513-3	WELL 1-3 POST 070618	108	101	105	97
480-138513-4	TRIP BLANKS 070618	112	101	108	95
LCS 480-423461/6	Lab Control Sample	107	104	105	97
MB 480-423461/8	Method Blank	108	100	102	94

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-423461/8
Matrix: Water
Analysis Batch: 423461

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			07/09/18 12:26	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			07/09/18 12:26	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			07/09/18 12:26	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			07/09/18 12:26	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			07/09/18 12:26	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			07/09/18 12:26	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			07/09/18 12:26	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			07/09/18 12:26	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			07/09/18 12:26	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			07/09/18 12:26	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			07/09/18 12:26	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			07/09/18 12:26	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			07/09/18 12:26	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			07/09/18 12:26	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			07/09/18 12:26	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			07/09/18 12:26	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			07/09/18 12:26	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			07/09/18 12:26	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			07/09/18 12:26	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			07/09/18 12:26	1
Acetone	10	U	10	3.0	ug/L			07/09/18 12:26	1
Benzene	1.0	U	1.0	0.41	ug/L			07/09/18 12:26	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			07/09/18 12:26	1
Bromoform	1.0	U	1.0	0.26	ug/L			07/09/18 12:26	1
Bromomethane	1.0	U	1.0	0.69	ug/L			07/09/18 12:26	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			07/09/18 12:26	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			07/09/18 12:26	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			07/09/18 12:26	1
Chloroethane	1.0	U	1.0	0.32	ug/L			07/09/18 12:26	1
Chloroform	1.0	U	1.0	0.34	ug/L			07/09/18 12:26	1
Chloromethane	1.0	U	1.0	0.35	ug/L			07/09/18 12:26	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			07/09/18 12:26	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			07/09/18 12:26	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			07/09/18 12:26	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			07/09/18 12:26	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			07/09/18 12:26	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			07/09/18 12:26	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			07/09/18 12:26	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			07/09/18 12:26	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			07/09/18 12:26	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			07/09/18 12:26	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			07/09/18 12:26	1
Styrene	1.0	U	1.0	0.73	ug/L			07/09/18 12:26	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			07/09/18 12:26	1
Toluene	1.0	U	1.0	0.51	ug/L			07/09/18 12:26	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			07/09/18 12:26	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			07/09/18 12:26	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			07/09/18 12:26	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-423461/8
Matrix: Water
Analysis Batch: 423461

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			07/09/18 12:26	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			07/09/18 12:26	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			07/09/18 12:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*77 - 120*		*07/09/18 12:26*	*1*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*07/09/18 12:26*	*1*
Dibromofluoromethane (Surr)	*102*		*75 - 123*		*07/09/18 12:26*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*07/09/18 12:26*	*1*

Lab Sample ID: LCS 480-423461/6
Matrix: Water
Analysis Batch: 423461

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	25.0		ug/L		100	73 - 126
1,1,2,2-Tetrachloroethane	25.0	24.0		ug/L		96	76 - 120
1,1,2-Trichloro-1,2,2-trifluoroetha ne	25.0	23.2		ug/L		93	61 - 148
1,1,2-Trichloroethane	25.0	23.5		ug/L		94	76 - 122
1,1-Dichloroethane	25.0	24.0		ug/L		96	77 - 120
1,1-Dichloroethene	25.0	21.4		ug/L		86	66 - 127
1,2,4-Trichlorobenzene	25.0	23.8		ug/L		95	79 - 122
1,2,4-Trimethylbenzene	25.0	24.4		ug/L		98	76 - 121
1,2-Dibromo-3-Chloropropane	25.0	28.3		ug/L		113	56 - 134
1,2-Dibromoethane	25.0	25.1		ug/L		100	77 - 120
1,2-Dichlorobenzene	25.0	24.4		ug/L		98	80 - 124
1,2-Dichloroethane	25.0	25.3		ug/L		101	75 - 120
1,2-Dichloropropane	25.0	24.8		ug/L		99	76 - 120
1,3,5-Trimethylbenzene	25.0	24.8		ug/L		99	77 - 121
1,3-Dichlorobenzene	25.0	24.1		ug/L		96	77 - 120
1,4-Dichlorobenzene	25.0	23.5		ug/L		94	80 - 120
2-Butanone (MEK)	125	141		ug/L		113	57 - 140
2-Hexanone	125	142		ug/L		114	65 - 127
4-Methyl-2-pentanone (MIBK)	125	138		ug/L		110	71 - 125
Acetone	125	159		ug/L		127	56 - 142
Benzene	25.0	22.7		ug/L		91	71 - 124
Bromodichloromethane	25.0	25.4		ug/L		102	80 - 122
Bromoform	25.0	27.4		ug/L		110	61 - 132
Bromomethane	25.0	23.3		ug/L		93	55 - 144
Carbon disulfide	25.0	20.6		ug/L		82	59 - 134
Carbon tetrachloride	25.0	26.1		ug/L		105	72 - 134
Chlorobenzene	25.0	24.2		ug/L		97	80 - 120
Chloroethane	25.0	24.8		ug/L		99	69 - 136
Chloroform	25.0	23.2		ug/L		93	73 - 127
Chloromethane	25.0	25.0		ug/L		100	68 - 124
cis-1,2-Dichloroethene	25.0	21.5		ug/L		86	74 - 124
cis-1,3-Dichloropropene	25.0	24.3		ug/L		97	74 - 124

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-423461/6
Matrix: Water
Analysis Batch: 423461

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyclohexane	25.0	26.1		ug/L		104	59 - 135
Dibromochloromethane	25.0	28.9		ug/L		115	75 - 125
Dichlorodifluoromethane	25.0	30.3		ug/L		121	59 - 135
Ethylbenzene	25.0	23.3		ug/L		93	77 - 123
Isopropylbenzene	25.0	23.4		ug/L		94	77 - 122
Methyl acetate	50.0	47.8		ug/L		96	74 - 133
Methyl tert-butyl ether	25.0	24.9		ug/L		100	77 - 120
Methylcyclohexane	25.0	23.0		ug/L		92	68 - 134
Methylene Chloride	25.0	21.1		ug/L		84	75 - 124
Styrene	25.0	25.1		ug/L		100	80 - 120
Tetrachloroethene	25.0	23.9		ug/L		96	74 - 122
Toluene	25.0	22.8		ug/L		91	80 - 122
trans-1,2-Dichloroethene	25.0	22.7		ug/L		91	73 - 127
trans-1,3-Dichloropropene	25.0	25.4		ug/L		101	80 - 120
Trichloroethene	25.0	23.8		ug/L		95	74 - 123
Trichlorofluoromethane	25.0	28.0		ug/L		112	62 - 150
Vinyl chloride	25.0	24.9		ug/L		100	65 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*77 - 120*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*
Dibromofluoromethane (Surr)	*105*		*75 - 123*
Toluene-d8 (Surr)	*97*		*80 - 120*

QC Association Summary

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-138513-1

GC/MS VOA

Analysis Batch: 423461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-138513-1	WELL 1-2A 070618	Total/NA	Water	8260C	
480-138513-2	WELL 1-3 070618	Total/NA	Water	8260C	
480-138513-3	WELL 1-3 POST 070618	Total/NA	Water	8260C	
480-138513-4	TRIP BLANKS 070618	Total/NA	Water	8260C	
MB 480-423461/8	Method Blank	Total/NA	Water	8260C	
LCS 480-423461/6	Lab Control Sample	Total/NA	Water	8260C	

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-138513-1

Client Sample ID: WELL 1-2A 070618

Lab Sample ID: 480-138513-1

Date Collected: 07/06/18 10:40
Matrix: Water
Date Received: 07/07/18 00:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	423461	07/09/18 16:32	AEM	TAL BUF

Client Sample ID: WELL 1-3 070618

Lab Sample ID: 480-138513-2

Date Collected: 07/06/18 10:50
Matrix: Water
Date Received: 07/07/18 00:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	423461	07/09/18 16:56	AEM	TAL BUF

Client Sample ID: WELL 1-3 POST 070618

Lab Sample ID: 480-138513-3

Date Collected: 07/06/18 10:45
Matrix: Water
Date Received: 07/07/18 00:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	423461	07/09/18 17:19	AEM	TAL BUF

Client Sample ID: TRIP BLANKS 070618

Lab Sample ID: 480-138513-4

Date Collected: 07/06/18 00:00
Matrix: Water
Date Received: 07/07/18 00:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	423461	07/09/18 17:43	AEM	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Accreditation/Certification Summary

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-138513-1

Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-18 *

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260C		Water	1,2,3-Trimethylbenzene

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-138513-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
5030C	Purge and Trap	SW846	TAL BUF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-138513-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-138513-1	WELL 1-2A 070618	Water	07/06/18 10:40	07/07/18 00:30
480-138513-2	WELL 1-3 070618	Water	07/06/18 10:50	07/07/18 00:30
480-138513-3	WELL 1-3 POST 070618	Water	07/06/18 10:45	07/07/18 00:30
480-138513-4	TRIP BLANKS 070618	Water	07/06/18 00:00	07/07/18 00:30

TestAmerica Buffalo

10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

480501 Albany

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: A. Thomas	Lab PM: Stone, Judy L	COC No: 480-115350-18034.1
Client Contact: Ms. Katie Bidwell	Phone: (518) 250-7311	E-Mail: judy.stone@testamericainc.com	Page: Page 1 of 1
Company: ARCADIS U.S. Inc		480-138513 COC	Job #:
Address: 855 Route 146 Suite 210	Due Date Requested:		
City: Clifton Park	TAT Requested (days): Standard		
State, Zip: NY, 12065			
Phone: 518-250-7300(Tel)	PO #: Project 00266401.0000		
Email: katie.bidwell@arcadis-us.com	WO #: Contract D007618		
Project Name: NYSDEC-Standby VESTAL	Project #: 48005198		
Site: Vestal Water Supply	SSOW#:		

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260C - (MOD) TCL list OLM04.2	Total Number of containers	Special Instructions/Note:
				Preservation Code:			A		
Well 1-2A 070618	07/06/18	1040	G	Water	N	N	X	3	
Well 1-3 070618	↓	1050	↓	Water	↓	↓	X	3	
Well 1-3 POST 070618	↓	1045	↓	Water	↓	↓	X	3	
Trip Blanks 070618	↓	–	–	Water	↓	↓	X	2	

7-6-2018

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For ______ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Amy Thomas	7-6-2018 1450	Arcadis	Karl Zoeller	7-6-18 1450	TA
Karl Zoeller	7-6-18 1808	TA	[illegible]	7-7-18 0030	TAB

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 0.3 #1

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 480-138513-1

Login Number: 138513

List Source: TestAmerica Buffalo

List Number: 1

Creator: Williams, Christopher S

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	ARCADIS
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-140113-1
Client Project/Site: NYSDEC-Standby VESTAL

For:
ARCADIS U.S. Inc
855 Route 146
Suite 210
Clifton Park, New York 12065

Attn: Mr. Jeremy Wyckoff

Judy Stone

Authorized for release by:
8/21/2018 4:26:13 PM

Judy Stone, Senior Project Manager
(484)685-0868
judy.stone@testamericainc.com

Table of Contents

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
U	Analyzed for but not detected.
J	Indicates an estimated value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 480-140113-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-140113-1

Receipt
The samples were received on 8/9/2018 1:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.5° C.

GC/MS VOA
Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-428936 recovered outside acceptance criteria, low biased, for Chloromethane. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported. The following samples are impacted: WELL 1-2A (08082018) (480-140113-1), WELL 1-3 (08082018) (480-140113-2), WELL 1-3 POST (08082018) (480-140113-3) and TRIP BLANKS (480-140113-4).

Method(s) 8260C: Due to the coelution of Ethyl Acetate with 2-Butanone in the full spike solution, these analytes exceeded control limits in the laboratory control sample (LCS) and/or laboratory control sample duplicate (LCSD) associated with batch 480-428936 The following samples were affected : WELL 1-2A (08082018) (480-140113-1), WELL 1-3 (08082018) (480-140113-2), WELL 1-3 POST (08082018) (480-140113-3) and TRIP BLANKS (480-140113-4).

Method(s) 8260C: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 480-428936 recovered outside control limits for the following analytes: 1,1,1-Trichloroethane and Tetrachloroethene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. The following samples are impacted: WELL 1-2A (08082018) (480-140113-1), WELL 1-3 (08082018) (480-140113-2), WELL 1-3 POST (08082018) (480-140113-3) and TRIP BLANKS (480-140113-4).

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-428936 recovered above the upper control limit for 1,1,2-Trichloro-1,2,2-trifluoroethane and 1,2,3-Trimethylbenzene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: WELL 1-2A (08082018) (480-140113-1), WELL 1-3 (08082018) (480-140113-2), WELL 1-3 POST (08082018) (480-140113-3) and TRIP BLANKS (480-140113-4).

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

Detection Summary

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-140113-1

Client Sample ID: WELL 1-2A (08082018) — Lab Sample ID: 480-140113-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.1	J	10	3.0	ug/L	1		8260C	Total/NA

Client Sample ID: WELL 1-3 (08082018) — Lab Sample ID: 480-140113-2

No Detections.

Client Sample ID: WELL 1-3 POST (08082018) — Lab Sample ID: 480-140113-3

No Detections.

Client Sample ID: TRIP BLANKS — Lab Sample ID: 480-140113-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.0	J	10	3.0	ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-140113-1

Client Sample ID: WELL 1-2A (08082018)
Date Collected: 08/08/18 12:50
Date Received: 08/09/18 01:00

Lab Sample ID: 480-140113-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U *	1.0	0.82	ug/L			08/10/18 01:20	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			08/10/18 01:20	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			08/10/18 01:20	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/10/18 01:20	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			08/10/18 01:20	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/10/18 01:20	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			08/10/18 01:20	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			08/10/18 01:20	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			08/10/18 01:20	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			08/10/18 01:20	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			08/10/18 01:20	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			08/10/18 01:20	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			08/10/18 01:20	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			08/10/18 01:20	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			08/10/18 01:20	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			08/10/18 01:20	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			08/10/18 01:20	1
2-Butanone (MEK)	10	U *	10	1.3	ug/L			08/10/18 01:20	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			08/10/18 01:20	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			08/10/18 01:20	1
Acetone	**3.1**	**J**	10	3.0	ug/L			08/10/18 01:20	1
Benzene	1.0	U	1.0	0.41	ug/L			08/10/18 01:20	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			08/10/18 01:20	1
Bromoform	1.0	U	1.0	0.26	ug/L			08/10/18 01:20	1
Bromomethane	1.0	U	1.0	0.69	ug/L			08/10/18 01:20	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			08/10/18 01:20	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			08/10/18 01:20	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			08/10/18 01:20	1
Chloroethane	1.0	U	1.0	0.32	ug/L			08/10/18 01:20	1
Chloroform	1.0	U	1.0	0.34	ug/L			08/10/18 01:20	1
Chloromethane	1.0	U	1.0	0.35	ug/L			08/10/18 01:20	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			08/10/18 01:20	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			08/10/18 01:20	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			08/10/18 01:20	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			08/10/18 01:20	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			08/10/18 01:20	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			08/10/18 01:20	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			08/10/18 01:20	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			08/10/18 01:20	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			08/10/18 01:20	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			08/10/18 01:20	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			08/10/18 01:20	1
Styrene	1.0	U	1.0	0.73	ug/L			08/10/18 01:20	1
Tetrachloroethene	1.0	U *	1.0	0.36	ug/L			08/10/18 01:20	1
Toluene	1.0	U	1.0	0.51	ug/L			08/10/18 01:20	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			08/10/18 01:20	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			08/10/18 01:20	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			08/10/18 01:20	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			08/10/18 01:20	1

Client Sample ID: WELL 1-2A (08082018) — **Lab Sample ID: 480-140113-1**
Date Collected: 08/08/18 12:50 — **Matrix: Water**
Date Received: 08/09/18 01:00

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.90	ug/L			08/10/18 01:20	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			08/10/18 01:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*77 - 120*		*08/10/18 01:20*	*1*
4-Bromofluorobenzene (Surr)	*105*		*73 - 120*		*08/10/18 01:20*	*1*
Dibromofluoromethane (Surr)	*110*		*75 - 123*		*08/10/18 01:20*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*08/10/18 01:20*	*1*

Client Sample ID: WELL 1-3 (08082018) — **Lab Sample ID: 480-140113-2**
Date Collected: 08/08/18 13:05 — **Matrix: Water**
Date Received: 08/09/18 01:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U *	1.0	0.82	ug/L			08/10/18 01:44	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			08/10/18 01:44	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			08/10/18 01:44	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/10/18 01:44	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			08/10/18 01:44	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/10/18 01:44	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			08/10/18 01:44	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			08/10/18 01:44	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			08/10/18 01:44	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			08/10/18 01:44	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			08/10/18 01:44	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			08/10/18 01:44	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			08/10/18 01:44	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			08/10/18 01:44	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			08/10/18 01:44	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			08/10/18 01:44	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			08/10/18 01:44	1
2-Butanone (MEK)	10	U *	10	1.3	ug/L			08/10/18 01:44	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			08/10/18 01:44	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			08/10/18 01:44	1
Acetone	10	U	10	3.0	ug/L			08/10/18 01:44	1
Benzene	1.0	U	1.0	0.41	ug/L			08/10/18 01:44	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			08/10/18 01:44	1
Bromoform	1.0	U	1.0	0.26	ug/L			08/10/18 01:44	1
Bromomethane	1.0	U	1.0	0.69	ug/L			08/10/18 01:44	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			08/10/18 01:44	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			08/10/18 01:44	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			08/10/18 01:44	1
Chloroethane	1.0	U	1.0	0.32	ug/L			08/10/18 01:44	1
Chloroform	1.0	U	1.0	0.34	ug/L			08/10/18 01:44	1
Chloromethane	1.0	U	1.0	0.35	ug/L			08/10/18 01:44	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			08/10/18 01:44	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			08/10/18 01:44	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			08/10/18 01:44	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			08/10/18 01:44	1

Client Sample ID: WELL 1-3 (08082018) — **Lab Sample ID: 480-140113-2**
Date Collected: 08/08/18 13:05 — **Matrix: Water**
Date Received: 08/09/18 01:00

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			08/10/18 01:44	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			08/10/18 01:44	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			08/10/18 01:44	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			08/10/18 01:44	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			08/10/18 01:44	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			08/10/18 01:44	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			08/10/18 01:44	1
Styrene	1.0	U	1.0	0.73	ug/L			08/10/18 01:44	1
Tetrachloroethene	1.0	U *	1.0	0.36	ug/L			08/10/18 01:44	1
Toluene	1.0	U	1.0	0.51	ug/L			08/10/18 01:44	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			08/10/18 01:44	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			08/10/18 01:44	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			08/10/18 01:44	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			08/10/18 01:44	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			08/10/18 01:44	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			08/10/18 01:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*77 - 120*		*08/10/18 01:44*	*1*
4-Bromofluorobenzene (Surr)	*103*		*73 - 120*		*08/10/18 01:44*	*1*
Dibromofluoromethane (Surr)	*106*		*75 - 123*		*08/10/18 01:44*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*08/10/18 01:44*	*1*

Client Sample ID: WELL 1-3 POST (08082018) — **Lab Sample ID: 480-140113-3**
Date Collected: 08/08/18 13:00 — **Matrix: Water**
Date Received: 08/09/18 01:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U *	1.0	0.82	ug/L			08/10/18 02:08	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			08/10/18 02:08	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			08/10/18 02:08	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/10/18 02:08	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			08/10/18 02:08	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/10/18 02:08	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			08/10/18 02:08	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			08/10/18 02:08	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			08/10/18 02:08	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			08/10/18 02:08	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			08/10/18 02:08	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			08/10/18 02:08	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			08/10/18 02:08	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			08/10/18 02:08	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			08/10/18 02:08	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			08/10/18 02:08	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			08/10/18 02:08	1
2-Butanone (MEK)	10	U *	10	1.3	ug/L			08/10/18 02:08	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			08/10/18 02:08	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			08/10/18 02:08	1
Acetone	10	U	10	3.0	ug/L			08/10/18 02:08	1

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-140113-1

Client Sample ID: WELL 1-3 POST (08082018)

Lab Sample ID: 480-140113-3

Date Collected: 08/08/18 13:00

Matrix: Water

Date Received: 08/09/18 01:00

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			08/10/18 02:08	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			08/10/18 02:08	1
Bromoform	1.0	U	1.0	0.26	ug/L			08/10/18 02:08	1
Bromomethane	1.0	U	1.0	0.69	ug/L			08/10/18 02:08	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			08/10/18 02:08	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			08/10/18 02:08	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			08/10/18 02:08	1
Chloroethane	1.0	U	1.0	0.32	ug/L			08/10/18 02:08	1
Chloroform	1.0	U	1.0	0.34	ug/L			08/10/18 02:08	1
Chloromethane	1.0	U	1.0	0.35	ug/L			08/10/18 02:08	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			08/10/18 02:08	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			08/10/18 02:08	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			08/10/18 02:08	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			08/10/18 02:08	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			08/10/18 02:08	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			08/10/18 02:08	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			08/10/18 02:08	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			08/10/18 02:08	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			08/10/18 02:08	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			08/10/18 02:08	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			08/10/18 02:08	1
Styrene	1.0	U	1.0	0.73	ug/L			08/10/18 02:08	1
Tetrachloroethene	1.0	U *	1.0	0.36	ug/L			08/10/18 02:08	1
Toluene	1.0	U	1.0	0.51	ug/L			08/10/18 02:08	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			08/10/18 02:08	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			08/10/18 02:08	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			08/10/18 02:08	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			08/10/18 02:08	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			08/10/18 02:08	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			08/10/18 02:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*119*		*77 - 120*		*08/10/18 02:08*	*1*
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*		*08/10/18 02:08*	*1*
Dibromofluoromethane (Surr)	*115*		*75 - 123*		*08/10/18 02:08*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*08/10/18 02:08*	*1*

Client Sample ID: TRIP BLANKS

Lab Sample ID: 480-140113-4

Date Collected: 08/08/18 00:00

Matrix: Water

Date Received: 08/09/18 01:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U *	1.0	0.82	ug/L			08/10/18 02:32	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			08/10/18 02:32	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			08/10/18 02:32	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/10/18 02:32	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			08/10/18 02:32	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/10/18 02:32	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			08/10/18 02:32	1

Client Sample ID: TRIP BLANKS
Date Collected: 08/08/18 00:00
Date Received: 08/09/18 01:00

Lab Sample ID: 480-140113-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			08/10/18 02:32	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			08/10/18 02:32	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			08/10/18 02:32	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			08/10/18 02:32	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			08/10/18 02:32	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			08/10/18 02:32	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			08/10/18 02:32	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			08/10/18 02:32	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			08/10/18 02:32	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			08/10/18 02:32	1
2-Butanone (MEK)	10	U *	10	1.3	ug/L			08/10/18 02:32	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			08/10/18 02:32	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			08/10/18 02:32	1
Acetone	**3.0**	**J**	10	3.0	ug/L			08/10/18 02:32	1
Benzene	1.0	U	1.0	0.41	ug/L			08/10/18 02:32	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			08/10/18 02:32	1
Bromoform	1.0	U	1.0	0.26	ug/L			08/10/18 02:32	1
Bromomethane	1.0	U	1.0	0.69	ug/L			08/10/18 02:32	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			08/10/18 02:32	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			08/10/18 02:32	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			08/10/18 02:32	1
Chloroethane	1.0	U	1.0	0.32	ug/L			08/10/18 02:32	1
Chloroform	1.0	U	1.0	0.34	ug/L			08/10/18 02:32	1
Chloromethane	1.0	U	1.0	0.35	ug/L			08/10/18 02:32	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			08/10/18 02:32	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			08/10/18 02:32	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			08/10/18 02:32	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			08/10/18 02:32	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			08/10/18 02:32	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			08/10/18 02:32	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			08/10/18 02:32	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			08/10/18 02:32	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			08/10/18 02:32	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			08/10/18 02:32	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			08/10/18 02:32	1
Styrene	1.0	U	1.0	0.73	ug/L			08/10/18 02:32	1
Tetrachloroethene	1.0	U *	1.0	0.36	ug/L			08/10/18 02:32	1
Toluene	1.0	U	1.0	0.51	ug/L			08/10/18 02:32	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			08/10/18 02:32	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			08/10/18 02:32	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			08/10/18 02:32	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			08/10/18 02:32	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			08/10/18 02:32	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			08/10/18 02:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*77 - 120*		*08/10/18 02:32*	*1*
4-Bromofluorobenzene (Surr)	*103*		*73 - 120*		*08/10/18 02:32*	*1*
Dibromofluoromethane (Surr)	*110*		*75 - 123*		*08/10/18 02:32*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*08/10/18 02:32*	*1*

Surrogate Summary

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-140113-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(77-120)	(73-120)	(75-123)	(80-120)
480-140113-1	WELL 1-2A (08082018)	109	105	110	102
480-140113-2	WELL 1-3 (08082018)	108	103	106	100
480-140113-3	WELL 1-3 POST (08082018)	119	106	115	99
480-140113-4	TRIP BLANKS	110	103	110	100
LCS 480-428936/5	Lab Control Sample	114	103	108	99
LCSD 480-428936/6	Lab Control Sample Dup	118	105	109	102
MB 480-428936/8	Method Blank	117	104	111	102

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-428936/8
Matrix: Water
Analysis Batch: 428936

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			08/09/18 22:25	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			08/09/18 22:25	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			08/09/18 22:25	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/09/18 22:25	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			08/09/18 22:25	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/09/18 22:25	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			08/09/18 22:25	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			08/09/18 22:25	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			08/09/18 22:25	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			08/09/18 22:25	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			08/09/18 22:25	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			08/09/18 22:25	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			08/09/18 22:25	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			08/09/18 22:25	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			08/09/18 22:25	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			08/09/18 22:25	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			08/09/18 22:25	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			08/09/18 22:25	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			08/09/18 22:25	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			08/09/18 22:25	1
Acetone	10	U	10	3.0	ug/L			08/09/18 22:25	1
Benzene	1.0	U	1.0	0.41	ug/L			08/09/18 22:25	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			08/09/18 22:25	1
Bromoform	1.0	U	1.0	0.26	ug/L			08/09/18 22:25	1
Bromomethane	1.0	U	1.0	0.69	ug/L			08/09/18 22:25	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			08/09/18 22:25	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			08/09/18 22:25	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			08/09/18 22:25	1
Chloroethane	1.0	U	1.0	0.32	ug/L			08/09/18 22:25	1
Chloroform	1.0	U	1.0	0.34	ug/L			08/09/18 22:25	1
Chloromethane	1.0	U	1.0	0.35	ug/L			08/09/18 22:25	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			08/09/18 22:25	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			08/09/18 22:25	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			08/09/18 22:25	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			08/09/18 22:25	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			08/09/18 22:25	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			08/09/18 22:25	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			08/09/18 22:25	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			08/09/18 22:25	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			08/09/18 22:25	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			08/09/18 22:25	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			08/09/18 22:25	1
Styrene	1.0	U	1.0	0.73	ug/L			08/09/18 22:25	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			08/09/18 22:25	1
Toluene	1.0	U	1.0	0.51	ug/L			08/09/18 22:25	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			08/09/18 22:25	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			08/09/18 22:25	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			08/09/18 22:25	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-428936/8
Matrix: Water
Analysis Batch: 428936

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			08/09/18 22:25	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			08/09/18 22:25	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			08/09/18 22:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*117*		*77 - 120*		*08/09/18 22:25*	*1*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*		*08/09/18 22:25*	*1*
Dibromofluoromethane (Surr)	*111*		*75 - 123*		*08/09/18 22:25*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*08/09/18 22:25*	*1*

Lab Sample ID: LCS 480-428936/5
Matrix: Water
Analysis Batch: 428936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	31.9	*	ug/L		128	73 - 126
1,1,2,2-Tetrachloroethane	25.0	26.1		ug/L		104	76 - 120
1,1,2-Trichloro-1,2,2-trifluoroetha ne	25.0	30.5		ug/L		122	61 - 148
1,1,2-Trichloroethane	25.0	26.4		ug/L		105	76 - 122
1,1-Dichloroethane	25.0	28.4		ug/L		114	77 - 120
1,1-Dichloroethene	25.0	30.7		ug/L		123	66 - 127
1,2,3-Trimethylbenzene	25.0	28.4		ug/L		114	78 - 120
1,2,4-Trichlorobenzene	25.0	27.0		ug/L		108	79 - 122
1,2,4-Trimethylbenzene	25.0	27.4		ug/L		110	76 - 121
1,2-Dibromo-3-Chloropropane	25.0	29.1		ug/L		116	56 - 134
1,2-Dibromoethane	25.0	27.6		ug/L		111	77 - 120
1,2-Dichlorobenzene	25.0	26.9		ug/L		108	80 - 124
1,2-Dichloroethane	25.0	28.5		ug/L		114	75 - 120
1,2-Dichloropropane	25.0	26.4		ug/L		106	76 - 120
1,3,5-Trimethylbenzene	25.0	27.5		ug/L		110	77 - 121
1,3-Dichlorobenzene	25.0	27.2		ug/L		109	77 - 120
1,4-Dichlorobenzene	25.0	27.0		ug/L		108	80 - 120
2-Butanone (MEK)	125	228	*	ug/L		182	57 - 140
2-Hexanone	125	149		ug/L		119	65 - 127
4-Methyl-2-pentanone (MIBK)	125	144		ug/L		115	71 - 125
Acetone	125	174		ug/L		139	56 - 142
Benzene	25.0	27.0		ug/L		108	71 - 124
Bromodichloromethane	25.0	30.0		ug/L		120	80 - 122
Bromoform	25.0	30.7		ug/L		123	61 - 132
Bromomethane	25.0	21.7		ug/L		87	55 - 144
Carbon disulfide	25.0	29.7		ug/L		119	59 - 134
Carbon tetrachloride	25.0	30.9		ug/L		124	72 - 134
Chlorobenzene	25.0	28.5		ug/L		114	80 - 120
Chloroethane	25.0	23.6		ug/L		94	69 - 136
Chloroform	25.0	28.6		ug/L		114	73 - 127
Chloromethane	25.0	19.6		ug/L		78	68 - 124
cis-1,2-Dichloroethene	25.0	26.5		ug/L		106	74 - 124

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-428936/5
Matrix: Water
Analysis Batch: 428936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,3-Dichloropropene	25.0	28.8		ug/L		115	74 - 124
Cyclohexane	25.0	29.0		ug/L		116	59 - 135
Dibromochloromethane	25.0	30.9		ug/L		124	75 - 125
Dichlorodifluoromethane	25.0	16.4		ug/L		66	59 - 135
Ethylbenzene	25.0	27.9		ug/L		112	77 - 123
Isopropylbenzene	25.0	28.3		ug/L		113	77 - 122
Methyl acetate	50.0	55.3		ug/L		111	74 - 133
Methyl tert-butyl ether	25.0	26.7		ug/L		107	77 - 120
Methylcyclohexane	25.0	28.4		ug/L		114	68 - 134
Methylene Chloride	25.0	28.5		ug/L		114	75 - 124
Styrene	25.0	27.6		ug/L		110	80 - 120
Tetrachloroethene	25.0	34.6	*	ug/L		138	74 - 122
Toluene	25.0	26.3		ug/L		105	80 - 122
trans-1,2-Dichloroethene	25.0	27.2		ug/L		109	73 - 127
trans-1,3-Dichloropropene	25.0	27.3		ug/L		109	80 - 120
Trichloroethene	25.0	28.7		ug/L		115	74 - 123
Trichlorofluoromethane	25.0	24.2		ug/L		97	62 - 150
Vinyl chloride	25.0	20.3		ug/L		81	65 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*114*		*77 - 120*
4-Bromofluorobenzene (Surr)	*103*		*73 - 120*
Dibromofluoromethane (Surr)	*108*		*75 - 123*
Toluene-d8 (Surr)	*99*		*80 - 120*

Lab Sample ID: LCSD 480-428936/6
Matrix: Water
Analysis Batch: 428936

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	25.0	29.0		ug/L		116	73 - 126	10	15
1,1,2,2-Tetrachloroethane	25.0	27.2		ug/L		109	76 - 120	4	15
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	28.5		ug/L		114	61 - 148	7	20
1,1,2-Trichloroethane	25.0	26.2		ug/L		105	76 - 122	0	15
1,1-Dichloroethane	25.0	28.3		ug/L		113	77 - 120	1	20
1,1-Dichloroethene	25.0	28.9		ug/L		116	66 - 127	6	16
1,2,3-Trimethylbenzene	25.0	28.3		ug/L		113	78 - 120	0	20
1,2,4-Trichlorobenzene	25.0	26.4		ug/L		106	79 - 122	2	20
1,2,4-Trimethylbenzene	25.0	27.1		ug/L		108	76 - 121	1	20
1,2-Dibromo-3-Chloropropane	25.0	26.6		ug/L		106	56 - 134	9	15
1,2-Dibromoethane	25.0	26.3		ug/L		105	77 - 120	5	15
1,2-Dichlorobenzene	25.0	26.8		ug/L		107	80 - 124	0	20
1,2-Dichloroethane	25.0	27.2		ug/L		109	75 - 120	5	20
1,2-Dichloropropane	25.0	27.1		ug/L		108	76 - 120	2	20
1,3,5-Trimethylbenzene	25.0	26.9		ug/L		108	77 - 121	2	20
1,3-Dichlorobenzene	25.0	27.8		ug/L		111	77 - 120	2	20
1,4-Dichlorobenzene	25.0	26.5		ug/L		106	80 - 120	2	20

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 480-428936/6
Matrix: Water
Analysis Batch: 428936

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Butanone (MEK)			125	276	*	ug/L		221	57 - 140	19	20
2-Hexanone			125	147		ug/L		118	65 - 127	1	15
4-Methyl-2-pentanone (MIBK)			125	140		ug/L		112	71 - 125	3	35
Acetone			125	173		ug/L		138	56 - 142	1	15
Benzene			25.0	26.4		ug/L		105	71 - 124	2	13
Bromodichloromethane			25.0	29.3		ug/L		117	80 - 122	2	15
Bromoform			25.0	30.3		ug/L		121	61 - 132	1	15
Bromomethane			25.0	20.7		ug/L		83	55 - 144	5	15
Carbon disulfide			25.0	27.6		ug/L		110	59 - 134	7	15
Carbon tetrachloride			25.0	30.4		ug/L		121	72 - 134	2	15
Chlorobenzene			25.0	26.7		ug/L		107	80 - 120	7	25
Chloroethane			25.0	23.2		ug/L		93	69 - 136	1	15
Chloroform			25.0	27.9		ug/L		111	73 - 127	3	20
Chloromethane			25.0	19.4		ug/L		78	68 - 124	1	15
cis-1,2-Dichloroethene			25.0	26.7		ug/L		107	74 - 124	1	15
cis-1,3-Dichloropropene			25.0	27.5		ug/L		110	74 - 124	5	15
Cyclohexane			25.0	27.0		ug/L		108	59 - 135	7	20
Dibromochloromethane			25.0	31.0		ug/L		124	75 - 125	0	15
Dichlorodifluoromethane			25.0	15.9		ug/L		63	59 - 135	3	20
Ethylbenzene			25.0	26.6		ug/L		107	77 - 123	5	15
Isopropylbenzene			25.0	27.9		ug/L		112	77 - 122	1	20
Methyl acetate			50.0	55.3		ug/L		111	74 - 133	0	20
Methyl tert-butyl ether			25.0	26.3		ug/L		105	77 - 120	1	37
Methylcyclohexane			25.0	25.4		ug/L		102	68 - 134	11	20
Methylene Chloride			25.0	27.6		ug/L		110	75 - 124	3	15
Styrene			25.0	26.5		ug/L		106	80 - 120	4	20
Tetrachloroethene			25.0	34.5	*	ug/L		138	74 - 122	0	20
Toluene			25.0	26.1		ug/L		104	80 - 122	1	15
trans-1,2-Dichloroethene			25.0	27.6		ug/L		110	73 - 127	1	20
trans-1,3-Dichloropropene			25.0	27.6		ug/L		110	80 - 120	1	15
Trichloroethene			25.0	27.0		ug/L		108	74 - 123	6	16
Trichlorofluoromethane			25.0	22.7		ug/L		91	62 - 150	6	20
Vinyl chloride			25.0	20.1		ug/L		80	65 - 133	1	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*118*		*77 - 120*
4-Bromofluorobenzene (Surr)	*105*		*73 - 120*
Dibromofluoromethane (Surr)	*109*		*75 - 123*
Toluene-d8 (Surr)	*102*		*80 - 120*

QC Association Summary

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-140113-1

GC/MS VOA

Analysis Batch: 428936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140113-1	WELL 1-2A (08082018)	Total/NA	Water	8260C	
480-140113-2	WELL 1-3 (08082018)	Total/NA	Water	8260C	
480-140113-3	WELL 1-3 POST (08082018)	Total/NA	Water	8260C	
480-140113-4	TRIP BLANKS	Total/NA	Water	8260C	
MB 480-428936/8	Method Blank	Total/NA	Water	8260C	
LCS 480-428936/5	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-428936/6	Lab Control Sample Dup	Total/NA	Water	8260C	

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-140113-1

Client Sample ID: WELL 1-2A (08082018)

Lab Sample ID: 480-140113-1

Date Collected: 08/08/18 12:50
Matrix: Water
Date Received: 08/09/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	428936	08/10/18 01:20	KMN	TAL BUF

Client Sample ID: WELL 1-3 (08082018)

Lab Sample ID: 480-140113-2

Date Collected: 08/08/18 13:05
Matrix: Water
Date Received: 08/09/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	428936	08/10/18 01:44	KMN	TAL BUF

Client Sample ID: WELL 1-3 POST (08082018)

Lab Sample ID: 480-140113-3

Date Collected: 08/08/18 13:00
Matrix: Water
Date Received: 08/09/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	428936	08/10/18 02:08	KMN	TAL BUF

Client Sample ID: TRIP BLANKS

Lab Sample ID: 480-140113-4

Date Collected: 08/08/18 00:00
Matrix: Water
Date Received: 08/09/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	428936	08/10/18 02:32	KMN	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Accreditation/Certification Summary

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-140113-1

Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260C		Water	1,2,3-Trimethylbenzene

Method Summary

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-140113-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
5030C	Purge and Trap	SW846	TAL BUF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-140113-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-140113-1	WELL 1-2A (08082018)	Water	08/08/18 12:50	08/09/18 01:00
480-140113-2	WELL 1-3 (08082018)	Water	08/08/18 13:05	08/09/18 01:00
480-140113-3	WELL 1-3 POST (08082018)	Water	08/08/18 13:00	08/09/18 01:00
480-140113-4	TRIP BLANKS	Water	08/08/18 00:00	08/09/18 01:00

Chain of Custody Record

480501-Albany

Temperature on Receipt ______

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

480-140113 COC

TAL-4124 (1007)

Client: ARCADIS	Project Manager: Andy Vitolins	Date: 8/8/2018	Chain of Custody Number: 223376
Address: 855 Route 146 Suite 210	Telephone Number (Area Code)/Fax Number: (518) 250-7300	Lab Number	Page 1 of 1
City: Clifton Park; State: NY; Zip Code: 12065	Site Contact: Katie Bidwell; Lab Contact: Judy Stone	Analysis (Attach list if more space is needed): 8260C (Mod) TCL list or MOH. 24 + TMBs	
Project Name and Location (State): NYSDEC Standby VESTAL, New York	Carrier/Waybill Number		Special Instructions/ Conditions of Receipt
Contract/Purchase Order/Quote No.: 00266401.0000 / WO# Contract D007618 Project # 4800S198			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	8260C (Mod) TCL list or MOH. 24 + TMBs	Special Instructions/ Conditions of Receipt
Well 1-2A (08082018)	8/8/18	~~1150~~ 1250		X						X			X	
Well 1-3 (08082018)	8/8/18	1305		X						X			X	
Well 1-3 POST (08082018)	8/8/18	1300		X						X			X	
Trip Blanks	-	-		X						X			X	

[signature] 8-8-2018

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ______ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other Standard

QC Requirements (Specify)

1. Relinquished By: [signature] / Arcadis	Date: 8/8/2018	Time: 1550	1. Received By: [signature]	Date: 8-8-18	Time: 1550
2. Relinquished By	Date	Time	2. Received By: [signature] TAB 8-9-18 0100	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments: #1 0.5

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 480-140113-1

Login Number: 140113

List Source: TestAmerica Buffalo

List Number: 1

Creator: Williams, Christopher S

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	ARCADIS
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-142551-1
Client Project/Site: NYSDEC-Standby VESTAL

For:
ARCADIS U.S. Inc
855 Route 146
Suite 210
Clifton Park, New York 12065

Attn: Mr. Jeremy Wyckoff

Judy Stone

Authorized for release by:
10/10/2018 11:34:43 AM

Judy Stone, Senior Project Manager
(484)685-0868
judy.stone@testamericainc.com

Table of Contents

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Analyzed for but not detected.
J	Indicates an estimated value.
*	MS or MSD is outside acceptance limits.
*	LCS or LCSD is outside acceptance limits.
E	Compound concentration exceeds the upper level of the calibration range of the instrument for that specific analysis.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 480-142551-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-142551-1

Receipt
The samples were received on 9/28/2018 1:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.1° C.

GC/MS VOA
Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: 4009-29I (480-142551-1), 4009-29D (480-142551-2), DUP1 (480-142551-6), DUP2 (480-142551-7), 4009-26 (480-142551-8), 4009-8 (480-142551-12), WELL 1-1 (480-142551-13), (480-142551-A-12 MS), (480-142551-A-12 MSD), 4009-27S (480-142551-28), 4009-29S (480-142551-32), (480-142551-A-32 MS) and (480-142551-A-32 MSD). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: Due to the high concentration of 1,1,1-Trichloroethane, cis-1,2-Dichloroethene and Trichloroethene the matrix spike / matrix spike duplicate (MS/MSD) for analytical batch 480-437600 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-437800 recovered above the upper control limit for Dibromochloromethane and Methylene Chloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: DUP1 (480-142551-6), 4009-12 (480-142551-17), 4009-13 (480-142551-18), 4009-13A (480-142551-19), 4009-14 (480-142551-20), 4009-15 (480-142551-21), 4009-16 (480-142551-22), 4009-16A (480-142551-23), 4009-18 (480-142551-24), 4009-19 (480-142551-25), 4009-21 (480-142551-26), 4009-22 (480-142551-27), 4009-27S (480-142551-28), 4009-27I (480-142551-29), 4009-27D (480-142551-30), 4009-28 (480-142551-31) and 4009-29S (480-142551-32).

Method(s) 8260C: The laboratory control sample (LCS) for analytical batch 480-437800 recovered outside control limits for the following analyte: Dibromochloromethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported. The following samples are impacted: DUP1 (480-142551-6), 4009-12 (480-142551-17), 4009-13 (480-142551-18), 4009-13A (480-142551-19), 4009-14 (480-142551-20), 4009-15 (480-142551-21), 4009-16 (480-142551-22), 4009-16A (480-142551-23), 4009-18 (480-142551-24), 4009-19 (480-142551-25), 4009-21 (480-142551-26), 4009-22 (480-142551-27), 4009-27S (480-142551-28), 4009-27I (480-142551-29), 4009-27D (480-142551-30), 4009-28 (480-142551-31) and 4009-29S (480-142551-32).

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

Detection Summary

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-142551-1

Client Sample ID: 4009-29I — Lab Sample ID: 480-142551-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	990		20	16	ug/L	20		8260C	Total/NA
1,1-Dichloroethane	84		20	7.6	ug/L	20		8260C	Total/NA
1,1-Dichloroethene	82		20	5.8	ug/L	20		8260C	Total/NA
cis-1,2-Dichloroethene	380		20	16	ug/L	20		8260C	Total/NA
Trichloroethene	400		20	9.2	ug/L	20		8260C	Total/NA
Vinyl chloride	79		20	18	ug/L	20		8260C	Total/NA

Client Sample ID: 4009-29D — Lab Sample ID: 480-142551-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	150		5.0	4.1	ug/L	5		8260C	Total/NA
1,1-Dichloroethane	29		5.0	1.9	ug/L	5		8260C	Total/NA
1,1-Dichloroethene	13		5.0	1.5	ug/L	5		8260C	Total/NA
Chloroethane	3.6	J	5.0	1.6	ug/L	5		8260C	Total/NA
cis-1,2-Dichloroethene	77		5.0	4.1	ug/L	5		8260C	Total/NA
Trichloroethene	16		5.0	2.3	ug/L	5		8260C	Total/NA
Vinyl chloride	35		5.0	4.5	ug/L	5		8260C	Total/NA

Client Sample ID: 4009-30 — Lab Sample ID: 480-142551-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.5	J	10	3.0	ug/L	1		8260C	Total/NA
Benzene	33		1.0	0.41	ug/L	1		8260C	Total/NA

Client Sample ID: 4009-30A — Lab Sample ID: 480-142551-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.1	J	10	3.0	ug/L	1		8260C	Total/NA

Client Sample ID: 4009-11A — Lab Sample ID: 480-142551-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	5.0	J	10	3.0	ug/L	1		8260C	Total/NA

Client Sample ID: DUP1 — Lab Sample ID: 480-142551-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	130		5.0	4.1	ug/L	5		8260C	Total/NA
1,1-Dichloroethane	15		5.0	1.9	ug/L	5		8260C	Total/NA
1,1-Dichloroethene	11		5.0	1.5	ug/L	5		8260C	Total/NA
cis-1,2-Dichloroethene	43		5.0	4.1	ug/L	5		8260C	Total/NA
Trichloroethene	38		5.0	2.3	ug/L	5		8260C	Total/NA
Vinyl chloride	31		5.0	4.5	ug/L	5		8260C	Total/NA

Client Sample ID: DUP2 — Lab Sample ID: 480-142551-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	1000		40	33	ug/L	40		8260C	Total/NA
1,1-Dichloroethane	90		40	15	ug/L	40		8260C	Total/NA
1,1-Dichloroethene	97		40	12	ug/L	40		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: DUP2 (Continued) — Lab Sample ID: 480-142551-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	430		40	32	ug/L	40		8260C	Total/NA
Trichloroethene	410		40	18	ug/L	40		8260C	Total/NA
Vinyl chloride	79		40	36	ug/L	40		8260C	Total/NA

Client Sample ID: 4009-26 — Lab Sample ID: 480-142551-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	350		5.0	4.1	ug/L	5		8260C	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane	11		5.0	1.6	ug/L	5		8260C	Total/NA
1,1-Dichloroethane	42		5.0	1.9	ug/L	5		8260C	Total/NA
1,1-Dichloroethene	17		5.0	1.5	ug/L	5		8260C	Total/NA
Chloroethane	2.0	J	5.0	1.6	ug/L	5		8260C	Total/NA
cis-1,2-Dichloroethene	170		5.0	4.1	ug/L	5		8260C	Total/NA
Trichloroethene	140		5.0	2.3	ug/L	5		8260C	Total/NA
Vinyl chloride	13		5.0	4.5	ug/L	5		8260C	Total/NA

Client Sample ID: TRIP BLANK1 — Lab Sample ID: 480-142551-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	2.5	J	10	1.3	ug/L	1		8260C	Total/NA
Acetone	3.4	J	10	3.0	ug/L	1		8260C	Total/NA
Chloroform	1.3		1.0	0.34	ug/L	1		8260C	Total/NA

Client Sample ID: TRIP BLANK 2 — Lab Sample ID: 480-142551-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	2.4	J	10	1.3	ug/L	1		8260C	Total/NA
Chloroform	1.2		1.0	0.34	ug/L	1		8260C	Total/NA

Client Sample ID: 4009-7 — Lab Sample ID: 480-142551-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	0.62	J	1.0	0.38	ug/L	1		8260C	Total/NA
1,1-Dichloroethene	0.53	J	1.0	0.29	ug/L	1		8260C	Total/NA
Acetone	4.0	J	10	3.0	ug/L	1		8260C	Total/NA
Benzene	0.45	J	1.0	0.41	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	55		1.0	0.81	ug/L	1		8260C	Total/NA
Trichloroethene	0.97	J	1.0	0.46	ug/L	1		8260C	Total/NA
Vinyl chloride	7.5		1.0	0.90	ug/L	1		8260C	Total/NA

Client Sample ID: 4009-8 — Lab Sample ID: 480-142551-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	3700		40	33	ug/L	40		8260C	Total/NA
1,1-Dichloroethane	150		40	15	ug/L	40		8260C	Total/NA
1,1-Dichloroethene	160		40	12	ug/L	40		8260C	Total/NA
cis-1,2-Dichloroethene	910		40	32	ug/L	40		8260C	Total/NA
Trichloroethene	580		40	18	ug/L	40		8260C	Total/NA

Client Sample ID: WELL 1-1 — Lab Sample ID: 480-142551-13

This Detection Summary does not include radiochemical test results.

Client Sample ID: WELL 1-1 (Continued) — Lab Sample ID: 480-142551-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	220		4.0	3.3	ug/L	4		8260C	Total/NA
1,1-Dichloroethane	20		4.0	1.5	ug/L	4		8260C	Total/NA
1,1-Dichloroethene	18		4.0	1.2	ug/L	4		8260C	Total/NA
cis-1,2-Dichloroethene	68		4.0	3.2	ug/L	4		8260C	Total/NA
Methylene Chloride	1.8	J	4.0	1.8	ug/L	4		8260C	Total/NA
Trichloroethene	67		4.0	1.8	ug/L	4		8260C	Total/NA

Client Sample ID: 4009-9 — Lab Sample ID: 480-142551-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.6	J	10	3.0	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	13		1.0	0.81	ug/L	1		8260C	Total/NA
Trichloroethene	0.73	J	1.0	0.46	ug/L	1		8260C	Total/NA

Client Sample ID: 4009-10 — Lab Sample ID: 480-142551-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.1	J	10	3.0	ug/L	1		8260C	Total/NA
Benzene	0.51	J	1.0	0.41	ug/L	1		8260C	Total/NA

Client Sample ID: 4009-11 — Lab Sample ID: 480-142551-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	7.0		1.0	0.38	ug/L	1		8260C	Total/NA
Benzene	8.9		1.0	0.41	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	1.3		1.0	0.81	ug/L	1		8260C	Total/NA
Toluene	0.52	J	1.0	0.51	ug/L	1		8260C	Total/NA
Vinyl chloride	1.7		1.0	0.90	ug/L	1		8260C	Total/NA

Client Sample ID: 4009-12 — Lab Sample ID: 480-142551-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	95		1.0	0.82	ug/L	1		8260C	Total/NA
1,1-Dichloroethane	11		1.0	0.38	ug/L	1		8260C	Total/NA
1,1-Dichloroethene	6.9		1.0	0.29	ug/L	1		8260C	Total/NA
Acetone	4.4	J	10	3.0	ug/L	1		8260C	Total/NA
Benzene	0.73	J	1.0	0.41	ug/L	1		8260C	Total/NA
Chloroethane	0.68	J	1.0	0.32	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	25		1.0	0.81	ug/L	1		8260C	Total/NA
Trichloroethene	25		1.0	0.46	ug/L	1		8260C	Total/NA
Vinyl chloride	26		1.0	0.90	ug/L	1		8260C	Total/NA

Client Sample ID: 4009-13 — Lab Sample ID: 480-142551-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.0	J	10	3.0	ug/L	1		8260C	Total/NA
Benzene	0.44	J	1.0	0.41	ug/L	1		8260C	Total/NA

Client Sample ID: 4009-13A — Lab Sample ID: 480-142551-19

This Detection Summary does not include radiochemical test results.

Client Sample ID: 4009-13A (Continued) — Lab Sample ID: 480-142551-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.6	J	10	3.0	ug/L	1		8260C	Total/NA

Client Sample ID: 4009-14 — Lab Sample ID: 480-142551-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.8	J	10	3.0	ug/L	1		8260C	Total/NA
Benzene	1.6		1.0	0.41	ug/L	1		8260C	Total/NA

Client Sample ID: 4009-15 — Lab Sample ID: 480-142551-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	7.3	J	10	3.0	ug/L	1		8260C	Total/NA
Benzene	7.3		1.0	0.41	ug/L	1		8260C	Total/NA

Client Sample ID: 4009-16 — Lab Sample ID: 480-142551-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.1	J	10	3.0	ug/L	1		8260C	Total/NA
Benzene	1.5		1.0	0.41	ug/L	1		8260C	Total/NA

Client Sample ID: 4009-16A — Lab Sample ID: 480-142551-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.3	J	10	3.0	ug/L	1		8260C	Total/NA

Client Sample ID: 4009-18 — Lab Sample ID: 480-142551-24

No Detections.

Client Sample ID: 4009-19 — Lab Sample ID: 480-142551-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.5		1.0	0.41	ug/L	1		8260C	Total/NA

Client Sample ID: 4009-21 — Lab Sample ID: 480-142551-26

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5.3		1.0	0.41	ug/L	1		8260C	Total/NA

Client Sample ID: 4009-22 — Lab Sample ID: 480-142551-27

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.4	J	10	3.0	ug/L	1		8260C	Total/NA
Benzene	1.2		1.0	0.41	ug/L	1		8260C	Total/NA
Toluene	0.65	J	1.0	0.51	ug/L	1		8260C	Total/NA

Client Sample ID: 4009-27S — Lab Sample ID: 480-142551-28

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	47		2.0	1.6	ug/L	2		8260C	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane	1.5	J	2.0	0.62	ug/L	2		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 4009-27S (Continued) — Lab Sample ID: 480-142551-28

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	2.2		2.0	0.76	ug/L	2		8260C	Total/NA
1,1-Dichloroethene	4.5		2.0	0.58	ug/L	2		8260C	Total/NA
cis-1,2-Dichloroethene	21		2.0	1.6	ug/L	2		8260C	Total/NA
Trichloroethene	25		2.0	0.92	ug/L	2		8260C	Total/NA

Client Sample ID: 4009-27I — Lab Sample ID: 480-142551-29

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	4.6	J	10	3.0	ug/L	1		8260C	Total/NA
Trichloroethene	1.7		1.0	0.46	ug/L	1		8260C	Total/NA

Client Sample ID: 4009-27D — Lab Sample ID: 480-142551-30

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.6	J	10	3.0	ug/L	1		8260C	Total/NA

Client Sample ID: 4009-28 — Lab Sample ID: 480-142551-31

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	3.2		1.0	0.82	ug/L	1		8260C	Total/NA
Acetone	3.6	J	10	3.0	ug/L	1		8260C	Total/NA

Client Sample ID: 4009-29S — Lab Sample ID: 480-142551-32

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	960		10	8.2	ug/L	10		8260C	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	J	10	3.1	ug/L	10		8260C	Total/NA
1,1-Dichloroethane	90		10	3.8	ug/L	10		8260C	Total/NA
1,1-Dichloroethene	74		10	2.9	ug/L	10		8260C	Total/NA
cis-1,2-Dichloroethene	470		10	8.1	ug/L	10		8260C	Total/NA
Trichloroethene	150		10	4.6	ug/L	10		8260C	Total/NA
Vinyl chloride	100		10	9.0	ug/L	10		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-142551-1

Client Sample ID: 4009-29I
Date Collected: 09/27/18 10:25
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**990**		20	16	ug/L			10/04/18 11:40	20
1,1,2,2-Tetrachloroethane	20	U	20	4.2	ug/L			10/04/18 11:40	20
1,1,2-Trichloro-1,2,2-trifluoroethane	20	U	20	6.2	ug/L			10/04/18 11:40	20
1,1,2-Trichloroethane	20	U	20	4.6	ug/L			10/04/18 11:40	20
1,1-Dichloroethane	**84**		20	7.6	ug/L			10/04/18 11:40	20
1,1-Dichloroethene	**82**		20	5.8	ug/L			10/04/18 11:40	20
1,2,3-Trimethylbenzene	20	U	20	5.2	ug/L			10/04/18 11:40	20
1,2,4-Trichlorobenzene	20	U	20	8.2	ug/L			10/04/18 11:40	20
1,2,4-Trimethylbenzene	20	U	20	15	ug/L			10/04/18 11:40	20
1,2-Dibromo-3-Chloropropane	20	U	20	7.8	ug/L			10/04/18 11:40	20
1,2-Dibromoethane	20	U	20	15	ug/L			10/04/18 11:40	20
1,2-Dichlorobenzene	20	U	20	16	ug/L			10/04/18 11:40	20
1,2-Dichloroethane	20	U	20	4.2	ug/L			10/04/18 11:40	20
1,2-Dichloropropane	20	U	20	14	ug/L			10/04/18 11:40	20
1,3,5-Trimethylbenzene	20	U	20	15	ug/L			10/04/18 11:40	20
1,3-Dichlorobenzene	20	U	20	16	ug/L			10/04/18 11:40	20
1,4-Dichlorobenzene	20	U	20	17	ug/L			10/04/18 11:40	20
2-Butanone (MEK)	200	U	200	26	ug/L			10/04/18 11:40	20
2-Hexanone	100	U	100	25	ug/L			10/04/18 11:40	20
4-Methyl-2-pentanone (MIBK)	100	U	100	42	ug/L			10/04/18 11:40	20
Acetone	200	U	200	60	ug/L			10/04/18 11:40	20
Benzene	20	U	20	8.2	ug/L			10/04/18 11:40	20
Bromodichloromethane	20	U	20	7.8	ug/L			10/04/18 11:40	20
Bromoform	20	U	20	5.2	ug/L			10/04/18 11:40	20
Bromomethane	20	U	20	14	ug/L			10/04/18 11:40	20
Carbon disulfide	20	U	20	3.8	ug/L			10/04/18 11:40	20
Carbon tetrachloride	20	U	20	5.4	ug/L			10/04/18 11:40	20
Chlorobenzene	20	U	20	15	ug/L			10/04/18 11:40	20
Chloroethane	20	U	20	6.4	ug/L			10/04/18 11:40	20
Chloroform	20	U	20	6.8	ug/L			10/04/18 11:40	20
Chloromethane	20	U	20	7.0	ug/L			10/04/18 11:40	20
cis-1,2-Dichloroethene	**380**		20	16	ug/L			10/04/18 11:40	20
cis-1,3-Dichloropropene	20	U	20	7.2	ug/L			10/04/18 11:40	20
Cyclohexane	20	U	20	3.6	ug/L			10/04/18 11:40	20
Dibromochloromethane	20	U	20	6.4	ug/L			10/04/18 11:40	20
Dichlorodifluoromethane	20	U	20	14	ug/L			10/04/18 11:40	20
Ethylbenzene	20	U	20	15	ug/L			10/04/18 11:40	20
Isopropylbenzene	20	U	20	16	ug/L			10/04/18 11:40	20
Methyl acetate	50	U	50	26	ug/L			10/04/18 11:40	20
Methyl tert-butyl ether	20	U	20	3.2	ug/L			10/04/18 11:40	20
Methylcyclohexane	20	U	20	3.2	ug/L			10/04/18 11:40	20
Methylene Chloride	20	U	20	8.8	ug/L			10/04/18 11:40	20
Styrene	20	U	20	15	ug/L			10/04/18 11:40	20
Tetrachloroethene	20	U	20	7.2	ug/L			10/04/18 11:40	20
Toluene	20	U	20	10	ug/L			10/04/18 11:40	20
trans-1,2-Dichloroethene	20	U	20	18	ug/L			10/04/18 11:40	20
trans-1,3-Dichloropropene	20	U	20	7.4	ug/L			10/04/18 11:40	20
Trichloroethene	**400**		20	9.2	ug/L			10/04/18 11:40	20
Trichlorofluoromethane	20	U	20	18	ug/L			10/04/18 11:40	20

Client Sample ID: 4009-29I — **Lab Sample ID: 480-142551-1**
Date Collected: 09/27/18 10:25 — **Matrix: Water**
Date Received: 09/28/18 01:30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	**79**		20	18	ug/L			10/04/18 11:40	20
Xylenes, Total	40	U	40	13	ug/L			10/04/18 11:40	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*77 - 120*		*10/04/18 11:40*	*20*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*10/04/18 11:40*	*20*
Dibromofluoromethane (Surr)	*110*		*75 - 123*		*10/04/18 11:40*	*20*
Toluene-d8 (Surr)	*104*		*80 - 120*		*10/04/18 11:40*	*20*

Client Sample ID: 4009-29D — **Lab Sample ID: 480-142551-2**
Date Collected: 09/27/18 10:30 — **Matrix: Water**
Date Received: 09/28/18 01:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**150**		5.0	4.1	ug/L			10/04/18 12:06	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1.1	ug/L			10/04/18 12:06	5
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	1.6	ug/L			10/04/18 12:06	5
1,1,2-Trichloroethane	5.0	U	5.0	1.2	ug/L			10/04/18 12:06	5
1,1-Dichloroethane	**29**		5.0	1.9	ug/L			10/04/18 12:06	5
1,1-Dichloroethene	**13**		5.0	1.5	ug/L			10/04/18 12:06	5
1,2,3-Trimethylbenzene	5.0	U	5.0	1.3	ug/L			10/04/18 12:06	5
1,2,4-Trichlorobenzene	5.0	U	5.0	2.1	ug/L			10/04/18 12:06	5
1,2,4-Trimethylbenzene	5.0	U	5.0	3.8	ug/L			10/04/18 12:06	5
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	2.0	ug/L			10/04/18 12:06	5
1,2-Dibromoethane	5.0	U	5.0	3.7	ug/L			10/04/18 12:06	5
1,2-Dichlorobenzene	5.0	U	5.0	4.0	ug/L			10/04/18 12:06	5
1,2-Dichloroethane	5.0	U	5.0	1.1	ug/L			10/04/18 12:06	5
1,2-Dichloropropane	5.0	U	5.0	3.6	ug/L			10/04/18 12:06	5
1,3,5-Trimethylbenzene	5.0	U	5.0	3.9	ug/L			10/04/18 12:06	5
1,3-Dichlorobenzene	5.0	U	5.0	3.9	ug/L			10/04/18 12:06	5
1,4-Dichlorobenzene	5.0	U	5.0	4.2	ug/L			10/04/18 12:06	5
2-Butanone (MEK)	50	U	50	6.6	ug/L			10/04/18 12:06	5
2-Hexanone	25	U	25	6.2	ug/L			10/04/18 12:06	5
4-Methyl-2-pentanone (MIBK)	25	U	25	11	ug/L			10/04/18 12:06	5
Acetone	50	U	50	15	ug/L			10/04/18 12:06	5
Benzene	5.0	U	5.0	2.1	ug/L			10/04/18 12:06	5
Bromodichloromethane	5.0	U	5.0	2.0	ug/L			10/04/18 12:06	5
Bromoform	5.0	U	5.0	1.3	ug/L			10/04/18 12:06	5
Bromomethane	5.0	U	5.0	3.5	ug/L			10/04/18 12:06	5
Carbon disulfide	5.0	U	5.0	0.95	ug/L			10/04/18 12:06	5
Carbon tetrachloride	5.0	U	5.0	1.4	ug/L			10/04/18 12:06	5
Chlorobenzene	5.0	U	5.0	3.8	ug/L			10/04/18 12:06	5
Chloroethane	**3.6**	**J**	5.0	1.6	ug/L			10/04/18 12:06	5
Chloroform	5.0	U	5.0	1.7	ug/L			10/04/18 12:06	5
Chloromethane	5.0	U	5.0	1.8	ug/L			10/04/18 12:06	5
cis-1,2-Dichloroethene	**77**		5.0	4.1	ug/L			10/04/18 12:06	5
cis-1,3-Dichloropropene	5.0	U	5.0	1.8	ug/L			10/04/18 12:06	5
Cyclohexane	5.0	U	5.0	0.90	ug/L			10/04/18 12:06	5
Dibromochloromethane	5.0	U	5.0	1.6	ug/L			10/04/18 12:06	5

Client Sample ID: 4009-29D
Date Collected: 09/27/18 10:30
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	5.0	U	5.0	3.4	ug/L			10/04/18 12:06	5
Ethylbenzene	5.0	U	5.0	3.7	ug/L			10/04/18 12:06	5
Isopropylbenzene	5.0	U	5.0	4.0	ug/L			10/04/18 12:06	5
Methyl acetate	13	U	13	6.5	ug/L			10/04/18 12:06	5
Methyl tert-butyl ether	5.0	U	5.0	0.80	ug/L			10/04/18 12:06	5
Methylcyclohexane	5.0	U	5.0	0.80	ug/L			10/04/18 12:06	5
Methylene Chloride	5.0	U	5.0	2.2	ug/L			10/04/18 12:06	5
Styrene	5.0	U	5.0	3.7	ug/L			10/04/18 12:06	5
Tetrachloroethene	5.0	U	5.0	1.8	ug/L			10/04/18 12:06	5
Toluene	5.0	U	5.0	2.6	ug/L			10/04/18 12:06	5
trans-1,2-Dichloroethene	5.0	U	5.0	4.5	ug/L			10/04/18 12:06	5
trans-1,3-Dichloropropene	5.0	U	5.0	1.9	ug/L			10/04/18 12:06	5
Trichloroethene	**16**		5.0	2.3	ug/L			10/04/18 12:06	5
Trichlorofluoromethane	5.0	U	5.0	4.4	ug/L			10/04/18 12:06	5
Vinyl chloride	**35**		5.0	4.5	ug/L			10/04/18 12:06	5
Xylenes, Total	10	U	10	3.3	ug/L			10/04/18 12:06	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*77 - 120*		*10/04/18 12:06*	*5*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*10/04/18 12:06*	*5*
Dibromofluoromethane (Surr)	*109*		*75 - 123*		*10/04/18 12:06*	*5*
Toluene-d8 (Surr)	*105*		*80 - 120*		*10/04/18 12:06*	*5*

Client Sample ID: 4009-30
Date Collected: 09/27/18 09:35
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			10/04/18 12:33	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			10/04/18 12:33	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			10/04/18 12:33	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			10/04/18 12:33	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			10/04/18 12:33	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			10/04/18 12:33	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			10/04/18 12:33	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			10/04/18 12:33	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			10/04/18 12:33	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			10/04/18 12:33	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			10/04/18 12:33	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			10/04/18 12:33	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			10/04/18 12:33	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			10/04/18 12:33	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			10/04/18 12:33	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			10/04/18 12:33	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			10/04/18 12:33	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			10/04/18 12:33	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			10/04/18 12:33	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			10/04/18 12:33	1
Acetone	**3.5**	**J**	10	3.0	ug/L			10/04/18 12:33	1

Client Sample ID: 4009-30
Date Collected: 09/27/18 09:35
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	33		1.0	0.41	ug/L			10/04/18 12:33	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			10/04/18 12:33	1
Bromoform	1.0	U	1.0	0.26	ug/L			10/04/18 12:33	1
Bromomethane	1.0	U	1.0	0.69	ug/L			10/04/18 12:33	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			10/04/18 12:33	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			10/04/18 12:33	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			10/04/18 12:33	1
Chloroethane	1.0	U	1.0	0.32	ug/L			10/04/18 12:33	1
Chloroform	1.0	U	1.0	0.34	ug/L			10/04/18 12:33	1
Chloromethane	1.0	U	1.0	0.35	ug/L			10/04/18 12:33	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			10/04/18 12:33	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			10/04/18 12:33	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			10/04/18 12:33	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			10/04/18 12:33	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			10/04/18 12:33	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			10/04/18 12:33	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			10/04/18 12:33	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			10/04/18 12:33	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/04/18 12:33	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			10/04/18 12:33	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			10/04/18 12:33	1
Styrene	1.0	U	1.0	0.73	ug/L			10/04/18 12:33	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			10/04/18 12:33	1
Toluene	1.0	U	1.0	0.51	ug/L			10/04/18 12:33	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			10/04/18 12:33	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			10/04/18 12:33	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			10/04/18 12:33	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			10/04/18 12:33	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			10/04/18 12:33	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			10/04/18 12:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*77 - 120*		*10/04/18 12:33*	*1*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*10/04/18 12:33*	*1*
Dibromofluoromethane (Surr)	*110*		*75 - 123*		*10/04/18 12:33*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*10/04/18 12:33*	*1*

Client Sample ID: 4009-30A
Date Collected: 09/27/18 09:40
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			10/04/18 13:00	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			10/04/18 13:00	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			10/04/18 13:00	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			10/04/18 13:00	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			10/04/18 13:00	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			10/04/18 13:00	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			10/04/18 13:00	1

Client Sample ID: 4009-30A
Date Collected: 09/27/18 09:40
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			10/04/18 13:00	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			10/04/18 13:00	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			10/04/18 13:00	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			10/04/18 13:00	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			10/04/18 13:00	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			10/04/18 13:00	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			10/04/18 13:00	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			10/04/18 13:00	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			10/04/18 13:00	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			10/04/18 13:00	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			10/04/18 13:00	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			10/04/18 13:00	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			10/04/18 13:00	1
Acetone	**3.1**	**J**	10	3.0	ug/L			10/04/18 13:00	1
Benzene	1.0	U	1.0	0.41	ug/L			10/04/18 13:00	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			10/04/18 13:00	1
Bromoform	1.0	U	1.0	0.26	ug/L			10/04/18 13:00	1
Bromomethane	1.0	U	1.0	0.69	ug/L			10/04/18 13:00	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			10/04/18 13:00	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			10/04/18 13:00	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			10/04/18 13:00	1
Chloroethane	1.0	U	1.0	0.32	ug/L			10/04/18 13:00	1
Chloroform	1.0	U	1.0	0.34	ug/L			10/04/18 13:00	1
Chloromethane	1.0	U	1.0	0.35	ug/L			10/04/18 13:00	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			10/04/18 13:00	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			10/04/18 13:00	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			10/04/18 13:00	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			10/04/18 13:00	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			10/04/18 13:00	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			10/04/18 13:00	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			10/04/18 13:00	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			10/04/18 13:00	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/04/18 13:00	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			10/04/18 13:00	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			10/04/18 13:00	1
Styrene	1.0	U	1.0	0.73	ug/L			10/04/18 13:00	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			10/04/18 13:00	1
Toluene	1.0	U	1.0	0.51	ug/L			10/04/18 13:00	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			10/04/18 13:00	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			10/04/18 13:00	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			10/04/18 13:00	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			10/04/18 13:00	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			10/04/18 13:00	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			10/04/18 13:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*77 - 120*		*10/04/18 13:00*	*1*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*10/04/18 13:00*	*1*
Dibromofluoromethane (Surr)	*104*		*75 - 123*		*10/04/18 13:00*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*10/04/18 13:00*	*1*

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-142551-1

Client Sample ID: 4009-11A
Date Collected: 09/27/18 11:45
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-5
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			10/04/18 13:27	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			10/04/18 13:27	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			10/04/18 13:27	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			10/04/18 13:27	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			10/04/18 13:27	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			10/04/18 13:27	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			10/04/18 13:27	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			10/04/18 13:27	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			10/04/18 13:27	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			10/04/18 13:27	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			10/04/18 13:27	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			10/04/18 13:27	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			10/04/18 13:27	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			10/04/18 13:27	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			10/04/18 13:27	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			10/04/18 13:27	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			10/04/18 13:27	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			10/04/18 13:27	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			10/04/18 13:27	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			10/04/18 13:27	1
Acetone	**5.0**	**J**	10	3.0	ug/L			10/04/18 13:27	1
Benzene	1.0	U	1.0	0.41	ug/L			10/04/18 13:27	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			10/04/18 13:27	1
Bromoform	1.0	U	1.0	0.26	ug/L			10/04/18 13:27	1
Bromomethane	1.0	U	1.0	0.69	ug/L			10/04/18 13:27	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			10/04/18 13:27	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			10/04/18 13:27	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			10/04/18 13:27	1
Chloroethane	1.0	U	1.0	0.32	ug/L			10/04/18 13:27	1
Chloroform	1.0	U	1.0	0.34	ug/L			10/04/18 13:27	1
Chloromethane	1.0	U	1.0	0.35	ug/L			10/04/18 13:27	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			10/04/18 13:27	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			10/04/18 13:27	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			10/04/18 13:27	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			10/04/18 13:27	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			10/04/18 13:27	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			10/04/18 13:27	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			10/04/18 13:27	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			10/04/18 13:27	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/04/18 13:27	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			10/04/18 13:27	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			10/04/18 13:27	1
Styrene	1.0	U	1.0	0.73	ug/L			10/04/18 13:27	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			10/04/18 13:27	1
Toluene	1.0	U	1.0	0.51	ug/L			10/04/18 13:27	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			10/04/18 13:27	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			10/04/18 13:27	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			10/04/18 13:27	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			10/04/18 13:27	1

Client Sample ID: 4009-11A

Lab Sample ID: 480-142551-5

Date Collected: 09/27/18 11:45

Matrix: Water

Date Received: 09/28/18 01:30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.90	ug/L			10/04/18 13:27	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			10/04/18 13:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*77 - 120*		*10/04/18 13:27*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*10/04/18 13:27*	*1*
Dibromofluoromethane (Surr)	*106*		*75 - 123*		*10/04/18 13:27*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*10/04/18 13:27*	*1*

Client Sample ID: DUP1

Lab Sample ID: 480-142551-6

Date Collected: 09/27/18 00:00

Matrix: Water

Date Received: 09/28/18 01:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**130**		5.0	4.1	ug/L			10/04/18 22:45	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1.1	ug/L			10/04/18 22:45	5
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	1.6	ug/L			10/04/18 22:45	5
1,1,2-Trichloroethane	5.0	U	5.0	1.2	ug/L			10/04/18 22:45	5
1,1-Dichloroethane	**15**		5.0	1.9	ug/L			10/04/18 22:45	5
1,1-Dichloroethene	**11**		5.0	1.5	ug/L			10/04/18 22:45	5
1,2,3-Trimethylbenzene	5.0	U	5.0	1.3	ug/L			10/04/18 22:45	5
1,2,4-Trichlorobenzene	5.0	U	5.0	2.1	ug/L			10/04/18 22:45	5
1,2,4-Trimethylbenzene	5.0	U	5.0	3.8	ug/L			10/04/18 22:45	5
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	2.0	ug/L			10/04/18 22:45	5
1,2-Dibromoethane	5.0	U	5.0	3.7	ug/L			10/04/18 22:45	5
1,2-Dichlorobenzene	5.0	U	5.0	4.0	ug/L			10/04/18 22:45	5
1,2-Dichloroethane	5.0	U	5.0	1.1	ug/L			10/04/18 22:45	5
1,2-Dichloropropane	5.0	U	5.0	3.6	ug/L			10/04/18 22:45	5
1,3,5-Trimethylbenzene	5.0	U	5.0	3.9	ug/L			10/04/18 22:45	5
1,3-Dichlorobenzene	5.0	U	5.0	3.9	ug/L			10/04/18 22:45	5
1,4-Dichlorobenzene	5.0	U	5.0	4.2	ug/L			10/04/18 22:45	5
2-Butanone (MEK)	50	U	50	6.6	ug/L			10/04/18 22:45	5
2-Hexanone	25	U	25	6.2	ug/L			10/04/18 22:45	5
4-Methyl-2-pentanone (MIBK)	25	U	25	11	ug/L			10/04/18 22:45	5
Acetone	50	U	50	15	ug/L			10/04/18 22:45	5
Benzene	5.0	U	5.0	2.1	ug/L			10/04/18 22:45	5
Bromodichloromethane	5.0	U	5.0	2.0	ug/L			10/04/18 22:45	5
Bromoform	5.0	U	5.0	1.3	ug/L			10/04/18 22:45	5
Bromomethane	5.0	U	5.0	3.5	ug/L			10/04/18 22:45	5
Carbon disulfide	5.0	U	5.0	0.95	ug/L			10/04/18 22:45	5
Carbon tetrachloride	5.0	U	5.0	1.4	ug/L			10/04/18 22:45	5
Chlorobenzene	5.0	U	5.0	3.8	ug/L			10/04/18 22:45	5
Chloroethane	5.0	U	5.0	1.6	ug/L			10/04/18 22:45	5
Chloroform	5.0	U	5.0	1.7	ug/L			10/04/18 22:45	5
Chloromethane	5.0	U	5.0	1.8	ug/L			10/04/18 22:45	5
cis-1,2-Dichloroethene	**43**		5.0	4.1	ug/L			10/04/18 22:45	5
cis-1,3-Dichloropropene	5.0	U	5.0	1.8	ug/L			10/04/18 22:45	5
Cyclohexane	5.0	U	5.0	0.90	ug/L			10/04/18 22:45	5
Dibromochloromethane	5.0	U *	5.0	1.6	ug/L			10/04/18 22:45	5

Client Sample ID: DUP1 — **Lab Sample ID: 480-142551-6**
Date Collected: 09/27/18 00:00 — **Matrix: Water**
Date Received: 09/28/18 01:30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	5.0	U	5.0	3.4	ug/L			10/04/18 22:45	5
Ethylbenzene	5.0	U	5.0	3.7	ug/L			10/04/18 22:45	5
Isopropylbenzene	5.0	U	5.0	4.0	ug/L			10/04/18 22:45	5
Methyl acetate	13	U	13	6.5	ug/L			10/04/18 22:45	5
Methyl tert-butyl ether	5.0	U	5.0	0.80	ug/L			10/04/18 22:45	5
Methylcyclohexane	5.0	U	5.0	0.80	ug/L			10/04/18 22:45	5
Methylene Chloride	5.0	U	5.0	2.2	ug/L			10/04/18 22:45	5
Styrene	5.0	U	5.0	3.7	ug/L			10/04/18 22:45	5
Tetrachloroethene	5.0	U	5.0	1.8	ug/L			10/04/18 22:45	5
Toluene	5.0	U	5.0	2.6	ug/L			10/04/18 22:45	5
trans-1,2-Dichloroethene	5.0	U	5.0	4.5	ug/L			10/04/18 22:45	5
trans-1,3-Dichloropropene	5.0	U	5.0	1.9	ug/L			10/04/18 22:45	5
Trichloroethene	**38**		5.0	2.3	ug/L			10/04/18 22:45	5
Trichlorofluoromethane	5.0	U	5.0	4.4	ug/L			10/04/18 22:45	5
Vinyl chloride	**31**		5.0	4.5	ug/L			10/04/18 22:45	5
Xylenes, Total	10	U	10	3.3	ug/L			10/04/18 22:45	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*77 - 120*		*10/04/18 22:45*	*5*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*10/04/18 22:45*	*5*
Dibromofluoromethane (Surr)	*111*		*75 - 123*		*10/04/18 22:45*	*5*
Toluene-d8 (Surr)	*104*		*80 - 120*		*10/04/18 22:45*	*5*

Client Sample ID: DUP2 — **Lab Sample ID: 480-142551-7**
Date Collected: 09/27/18 00:00 — **Matrix: Water**
Date Received: 09/28/18 01:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**1000**		40	33	ug/L			10/04/18 14:21	40
1,1,2,2-Tetrachloroethane	40	U	40	8.4	ug/L			10/04/18 14:21	40
1,1,2-Trichloro-1,2,2-trifluoroethane	40	U	40	12	ug/L			10/04/18 14:21	40
1,1,2-Trichloroethane	40	U	40	9.2	ug/L			10/04/18 14:21	40
1,1-Dichloroethane	**90**		40	15	ug/L			10/04/18 14:21	40
1,1-Dichloroethene	**97**		40	12	ug/L			10/04/18 14:21	40
1,2,3-Trimethylbenzene	40	U	40	10	ug/L			10/04/18 14:21	40
1,2,4-Trichlorobenzene	40	U	40	16	ug/L			10/04/18 14:21	40
1,2,4-Trimethylbenzene	40	U	40	30	ug/L			10/04/18 14:21	40
1,2-Dibromo-3-Chloropropane	40	U	40	16	ug/L			10/04/18 14:21	40
1,2-Dibromoethane	40	U	40	29	ug/L			10/04/18 14:21	40
1,2-Dichlorobenzene	40	U	40	32	ug/L			10/04/18 14:21	40
1,2-Dichloroethane	40	U	40	8.4	ug/L			10/04/18 14:21	40
1,2-Dichloropropane	40	U	40	29	ug/L			10/04/18 14:21	40
1,3,5-Trimethylbenzene	40	U	40	31	ug/L			10/04/18 14:21	40
1,3-Dichlorobenzene	40	U	40	31	ug/L			10/04/18 14:21	40
1,4-Dichlorobenzene	40	U	40	34	ug/L			10/04/18 14:21	40
2-Butanone (MEK)	400	U	400	53	ug/L			10/04/18 14:21	40
2-Hexanone	200	U	200	50	ug/L			10/04/18 14:21	40
4-Methyl-2-pentanone (MIBK)	200	U	200	84	ug/L			10/04/18 14:21	40
Acetone	400	U	400	120	ug/L			10/04/18 14:21	40

Client Sample ID: DUP2
Date Collected: 09/27/18 00:00
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-7
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	40	U	40	16	ug/L			10/04/18 14:21	40
Bromodichloromethane	40	U	40	16	ug/L			10/04/18 14:21	40
Bromoform	40	U	40	10	ug/L			10/04/18 14:21	40
Bromomethane	40	U	40	28	ug/L			10/04/18 14:21	40
Carbon disulfide	40	U	40	7.6	ug/L			10/04/18 14:21	40
Carbon tetrachloride	40	U	40	11	ug/L			10/04/18 14:21	40
Chlorobenzene	40	U	40	30	ug/L			10/04/18 14:21	40
Chloroethane	40	U	40	13	ug/L			10/04/18 14:21	40
Chloroform	40	U	40	14	ug/L			10/04/18 14:21	40
Chloromethane	40	U	40	14	ug/L			10/04/18 14:21	40
cis-1,2-Dichloroethene	**430**		40	32	ug/L			10/04/18 14:21	40
cis-1,3-Dichloropropene	40	U	40	14	ug/L			10/04/18 14:21	40
Cyclohexane	40	U	40	7.2	ug/L			10/04/18 14:21	40
Dibromochloromethane	40	U	40	13	ug/L			10/04/18 14:21	40
Dichlorodifluoromethane	40	U	40	27	ug/L			10/04/18 14:21	40
Ethylbenzene	40	U	40	30	ug/L			10/04/18 14:21	40
Isopropylbenzene	40	U	40	32	ug/L			10/04/18 14:21	40
Methyl acetate	100	U	100	52	ug/L			10/04/18 14:21	40
Methyl tert-butyl ether	40	U	40	6.4	ug/L			10/04/18 14:21	40
Methylcyclohexane	40	U	40	6.4	ug/L			10/04/18 14:21	40
Methylene Chloride	40	U	40	18	ug/L			10/04/18 14:21	40
Styrene	40	U	40	29	ug/L			10/04/18 14:21	40
Tetrachloroethene	40	U	40	14	ug/L			10/04/18 14:21	40
Toluene	40	U	40	20	ug/L			10/04/18 14:21	40
trans-1,2-Dichloroethene	40	U	40	36	ug/L			10/04/18 14:21	40
trans-1,3-Dichloropropene	40	U	40	15	ug/L			10/04/18 14:21	40
Trichloroethene	**410**		40	18	ug/L			10/04/18 14:21	40
Trichlorofluoromethane	40	U	40	35	ug/L			10/04/18 14:21	40
Vinyl chloride	**79**		40	36	ug/L			10/04/18 14:21	40
Xylenes, Total	80	U	80	26	ug/L			10/04/18 14:21	40

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*77 - 120*		*10/04/18 14:21*	*40*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*		*10/04/18 14:21*	*40*
Dibromofluoromethane (Surr)	*114*		*75 - 123*		*10/04/18 14:21*	*40*
Toluene-d8 (Surr)	*102*		*80 - 120*		*10/04/18 14:21*	*40*

Client Sample ID: 4009-26
Date Collected: 09/27/18 12:00
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-8
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**350**		5.0	4.1	ug/L			10/04/18 14:47	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1.1	ug/L			10/04/18 14:47	5
1,1,2-Trichloro-1,2,2-trifluoroethane	**11**		5.0	1.6	ug/L			10/04/18 14:47	5
1,1,2-Trichloroethane	5.0	U	5.0	1.2	ug/L			10/04/18 14:47	5
1,1-Dichloroethane	**42**		5.0	1.9	ug/L			10/04/18 14:47	5
1,1-Dichloroethene	**17**		5.0	1.5	ug/L			10/04/18 14:47	5

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-142551-1

Client Sample ID: 4009-26
Date Collected: 09/27/18 12:00
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-8
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trimethylbenzene	5.0	U	5.0	1.3	ug/L			10/04/18 14:47	5
1,2,4-Trichlorobenzene	5.0	U	5.0	2.1	ug/L			10/04/18 14:47	5
1,2,4-Trimethylbenzene	5.0	U	5.0	3.8	ug/L			10/04/18 14:47	5
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	2.0	ug/L			10/04/18 14:47	5
1,2-Dibromoethane	5.0	U	5.0	3.7	ug/L			10/04/18 14:47	5
1,2-Dichlorobenzene	5.0	U	5.0	4.0	ug/L			10/04/18 14:47	5
1,2-Dichloroethane	5.0	U	5.0	1.1	ug/L			10/04/18 14:47	5
1,2-Dichloropropane	5.0	U	5.0	3.6	ug/L			10/04/18 14:47	5
1,3,5-Trimethylbenzene	5.0	U	5.0	3.9	ug/L			10/04/18 14:47	5
1,3-Dichlorobenzene	5.0	U	5.0	3.9	ug/L			10/04/18 14:47	5
1,4-Dichlorobenzene	5.0	U	5.0	4.2	ug/L			10/04/18 14:47	5
2-Butanone (MEK)	50	U	50	6.6	ug/L			10/04/18 14:47	5
2-Hexanone	25	U	25	6.2	ug/L			10/04/18 14:47	5
4-Methyl-2-pentanone (MIBK)	25	U	25	11	ug/L			10/04/18 14:47	5
Acetone	50	U	50	15	ug/L			10/04/18 14:47	5
Benzene	5.0	U	5.0	2.1	ug/L			10/04/18 14:47	5
Bromodichloromethane	5.0	U	5.0	2.0	ug/L			10/04/18 14:47	5
Bromoform	5.0	U	5.0	1.3	ug/L			10/04/18 14:47	5
Bromomethane	5.0	U	5.0	3.5	ug/L			10/04/18 14:47	5
Carbon disulfide	5.0	U	5.0	0.95	ug/L			10/04/18 14:47	5
Carbon tetrachloride	5.0	U	5.0	1.4	ug/L			10/04/18 14:47	5
Chlorobenzene	5.0	U	5.0	3.8	ug/L			10/04/18 14:47	5
Chloroethane	**2.0**	**J**	5.0	1.6	ug/L			10/04/18 14:47	5
Chloroform	5.0	U	5.0	1.7	ug/L			10/04/18 14:47	5
Chloromethane	5.0	U	5.0	1.8	ug/L			10/04/18 14:47	5
cis-1,2-Dichloroethene	**170**		5.0	4.1	ug/L			10/04/18 14:47	5
cis-1,3-Dichloropropene	5.0	U	5.0	1.8	ug/L			10/04/18 14:47	5
Cyclohexane	5.0	U	5.0	0.90	ug/L			10/04/18 14:47	5
Dibromochloromethane	5.0	U	5.0	1.6	ug/L			10/04/18 14:47	5
Dichlorodifluoromethane	5.0	U	5.0	3.4	ug/L			10/04/18 14:47	5
Ethylbenzene	5.0	U	5.0	3.7	ug/L			10/04/18 14:47	5
Isopropylbenzene	5.0	U	5.0	4.0	ug/L			10/04/18 14:47	5
Methyl acetate	13	U	13	6.5	ug/L			10/04/18 14:47	5
Methyl tert-butyl ether	5.0	U	5.0	0.80	ug/L			10/04/18 14:47	5
Methylcyclohexane	5.0	U	5.0	0.80	ug/L			10/04/18 14:47	5
Methylene Chloride	5.0	U	5.0	2.2	ug/L			10/04/18 14:47	5
Styrene	5.0	U	5.0	3.7	ug/L			10/04/18 14:47	5
Tetrachloroethene	5.0	U	5.0	1.8	ug/L			10/04/18 14:47	5
Toluene	5.0	U	5.0	2.6	ug/L			10/04/18 14:47	5
trans-1,2-Dichloroethene	5.0	U	5.0	4.5	ug/L			10/04/18 14:47	5
trans-1,3-Dichloropropene	5.0	U	5.0	1.9	ug/L			10/04/18 14:47	5
Trichloroethene	**140**		5.0	2.3	ug/L			10/04/18 14:47	5
Trichlorofluoromethane	5.0	U	5.0	4.4	ug/L			10/04/18 14:47	5
Vinyl chloride	**13**		5.0	4.5	ug/L			10/04/18 14:47	5
Xylenes, Total	10	U	10	3.3	ug/L			10/04/18 14:47	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*77 - 120*		*10/04/18 14:47*	*5*
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*		*10/04/18 14:47*	*5*
Dibromofluoromethane (Surr)	*114*		*75 - 123*		*10/04/18 14:47*	*5*

Client Sample ID: 4009-26
Date Collected: 09/27/18 12:00
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-8
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	104		80 - 120		10/04/18 14:47	5

Client Sample ID: TRIP BLANK1
Date Collected: 09/27/18 00:00
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-9
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			10/04/18 15:15	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			10/04/18 15:15	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			10/04/18 15:15	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			10/04/18 15:15	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			10/04/18 15:15	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			10/04/18 15:15	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			10/04/18 15:15	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			10/04/18 15:15	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			10/04/18 15:15	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			10/04/18 15:15	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			10/04/18 15:15	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			10/04/18 15:15	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			10/04/18 15:15	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			10/04/18 15:15	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			10/04/18 15:15	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			10/04/18 15:15	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			10/04/18 15:15	1
2-Butanone (MEK)	**2.5**	**J**	10	1.3	ug/L			10/04/18 15:15	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			10/04/18 15:15	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			10/04/18 15:15	1
Acetone	**3.4**	**J**	10	3.0	ug/L			10/04/18 15:15	1
Benzene	1.0	U	1.0	0.41	ug/L			10/04/18 15:15	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			10/04/18 15:15	1
Bromoform	1.0	U	1.0	0.26	ug/L			10/04/18 15:15	1
Bromomethane	1.0	U	1.0	0.69	ug/L			10/04/18 15:15	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			10/04/18 15:15	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			10/04/18 15:15	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			10/04/18 15:15	1
Chloroethane	1.0	U	1.0	0.32	ug/L			10/04/18 15:15	1
Chloroform	**1.3**		1.0	0.34	ug/L			10/04/18 15:15	1
Chloromethane	1.0	U	1.0	0.35	ug/L			10/04/18 15:15	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			10/04/18 15:15	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			10/04/18 15:15	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			10/04/18 15:15	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			10/04/18 15:15	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			10/04/18 15:15	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			10/04/18 15:15	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			10/04/18 15:15	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			10/04/18 15:15	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/04/18 15:15	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			10/04/18 15:15	1

Client Sample ID: TRIP BLANK1

Lab Sample ID: 480-142551-9

Date Collected: 09/27/18 00:00

Matrix: Water

Date Received: 09/28/18 01:30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	1.0	U	1.0	0.44	ug/L			10/04/18 15:15	1
Styrene	1.0	U	1.0	0.73	ug/L			10/04/18 15:15	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			10/04/18 15:15	1
Toluene	1.0	U	1.0	0.51	ug/L			10/04/18 15:15	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			10/04/18 15:15	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			10/04/18 15:15	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			10/04/18 15:15	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			10/04/18 15:15	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			10/04/18 15:15	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			10/04/18 15:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*77 - 120*		*10/04/18 15:15*	*1*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*10/04/18 15:15*	*1*
Dibromofluoromethane (Surr)	*108*		*75 - 123*		*10/04/18 15:15*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*10/04/18 15:15*	*1*

Client Sample ID: TRIP BLANK 2

Lab Sample ID: 480-142551-10

Date Collected: 09/27/18 00:00

Matrix: Water

Date Received: 09/28/18 01:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			10/04/18 15:42	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			10/04/18 15:42	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			10/04/18 15:42	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			10/04/18 15:42	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			10/04/18 15:42	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			10/04/18 15:42	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			10/04/18 15:42	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			10/04/18 15:42	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			10/04/18 15:42	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			10/04/18 15:42	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			10/04/18 15:42	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			10/04/18 15:42	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			10/04/18 15:42	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			10/04/18 15:42	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			10/04/18 15:42	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			10/04/18 15:42	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			10/04/18 15:42	1
2-Butanone (MEK)	**2.4**	**J**	10	1.3	ug/L			10/04/18 15:42	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			10/04/18 15:42	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			10/04/18 15:42	1
Acetone	10	U	10	3.0	ug/L			10/04/18 15:42	1
Benzene	1.0	U	1.0	0.41	ug/L			10/04/18 15:42	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			10/04/18 15:42	1
Bromoform	1.0	U	1.0	0.26	ug/L			10/04/18 15:42	1
Bromomethane	1.0	U	1.0	0.69	ug/L			10/04/18 15:42	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			10/04/18 15:42	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			10/04/18 15:42	1

Client Sample ID: TRIP BLANK 2 — **Lab Sample ID: 480-142551-10**
Date Collected: 09/27/18 00:00 — **Matrix: Water**
Date Received: 09/28/18 01:30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	1.0	U	1.0	0.75	ug/L			10/04/18 15:42	1
Chloroethane	1.0	U	1.0	0.32	ug/L			10/04/18 15:42	1
Chloroform	**1.2**		1.0	0.34	ug/L			10/04/18 15:42	1
Chloromethane	1.0	U	1.0	0.35	ug/L			10/04/18 15:42	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			10/04/18 15:42	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			10/04/18 15:42	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			10/04/18 15:42	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			10/04/18 15:42	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			10/04/18 15:42	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			10/04/18 15:42	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			10/04/18 15:42	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			10/04/18 15:42	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/04/18 15:42	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			10/04/18 15:42	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			10/04/18 15:42	1
Styrene	1.0	U	1.0	0.73	ug/L			10/04/18 15:42	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			10/04/18 15:42	1
Toluene	1.0	U	1.0	0.51	ug/L			10/04/18 15:42	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			10/04/18 15:42	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			10/04/18 15:42	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			10/04/18 15:42	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			10/04/18 15:42	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			10/04/18 15:42	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			10/04/18 15:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*77 - 120*		*10/04/18 15:42*	*1*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*		*10/04/18 15:42*	*1*
Dibromofluoromethane (Surr)	*107*		*75 - 123*		*10/04/18 15:42*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*10/04/18 15:42*	*1*

Client Sample ID: 4009-7 — **Lab Sample ID: 480-142551-11**
Date Collected: 09/27/18 12:10 — **Matrix: Water**
Date Received: 09/28/18 01:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			10/04/18 16:09	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			10/04/18 16:09	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			10/04/18 16:09	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			10/04/18 16:09	1
1,1-Dichloroethane	**0.62**	**J**	1.0	0.38	ug/L			10/04/18 16:09	1
1,1-Dichloroethene	**0.53**	**J**	1.0	0.29	ug/L			10/04/18 16:09	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			10/04/18 16:09	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			10/04/18 16:09	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			10/04/18 16:09	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			10/04/18 16:09	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			10/04/18 16:09	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			10/04/18 16:09	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			10/04/18 16:09	1

Client Sample ID: 4009-7
Date Collected: 09/27/18 12:10
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-11
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			10/04/18 16:09	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			10/04/18 16:09	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			10/04/18 16:09	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			10/04/18 16:09	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			10/04/18 16:09	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			10/04/18 16:09	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			10/04/18 16:09	1
Acetone	**4.0**	**J**	10	3.0	ug/L			10/04/18 16:09	1
Benzene	**0.45**	**J**	1.0	0.41	ug/L			10/04/18 16:09	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			10/04/18 16:09	1
Bromoform	1.0	U	1.0	0.26	ug/L			10/04/18 16:09	1
Bromomethane	1.0	U	1.0	0.69	ug/L			10/04/18 16:09	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			10/04/18 16:09	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			10/04/18 16:09	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			10/04/18 16:09	1
Chloroethane	1.0	U	1.0	0.32	ug/L			10/04/18 16:09	1
Chloroform	1.0	U	1.0	0.34	ug/L			10/04/18 16:09	1
Chloromethane	1.0	U	1.0	0.35	ug/L			10/04/18 16:09	1
cis-1,2-Dichloroethene	**55**		1.0	0.81	ug/L			10/04/18 16:09	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			10/04/18 16:09	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			10/04/18 16:09	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			10/04/18 16:09	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			10/04/18 16:09	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			10/04/18 16:09	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			10/04/18 16:09	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			10/04/18 16:09	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/04/18 16:09	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			10/04/18 16:09	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			10/04/18 16:09	1
Styrene	1.0	U	1.0	0.73	ug/L			10/04/18 16:09	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			10/04/18 16:09	1
Toluene	1.0	U	1.0	0.51	ug/L			10/04/18 16:09	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			10/04/18 16:09	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			10/04/18 16:09	1
Trichloroethene	**0.97**	**J**	1.0	0.46	ug/L			10/04/18 16:09	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			10/04/18 16:09	1
Vinyl chloride	**7.5**		1.0	0.90	ug/L			10/04/18 16:09	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			10/04/18 16:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*77 - 120*		*10/04/18 16:09*	*1*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*10/04/18 16:09*	*1*
Dibromofluoromethane (Surr)	*111*		*75 - 123*		*10/04/18 16:09*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*		*10/04/18 16:09*	*1*

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-142551-1

Client Sample ID: 4009-8
Date Collected: 09/27/18 12:05
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-12
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**3700**		40	33	ug/L			10/04/18 16:36	40
1,1,2,2-Tetrachloroethane	40	U	40	8.4	ug/L			10/04/18 16:36	40
1,1,2-Trichloro-1,2,2-trifluoroethane	40	U	40	12	ug/L			10/04/18 16:36	40
1,1,2-Trichloroethane	40	U	40	9.2	ug/L			10/04/18 16:36	40
1,1-Dichloroethane	**150**		40	15	ug/L			10/04/18 16:36	40
1,1-Dichloroethene	**160**		40	12	ug/L			10/04/18 16:36	40
1,2,3-Trimethylbenzene	40	U	40	10	ug/L			10/04/18 16:36	40
1,2,4-Trichlorobenzene	40	U	40	16	ug/L			10/04/18 16:36	40
1,2,4-Trimethylbenzene	40	U	40	30	ug/L			10/04/18 16:36	40
1,2-Dibromo-3-Chloropropane	40	U	40	16	ug/L			10/04/18 16:36	40
1,2-Dibromoethane	40	U	40	29	ug/L			10/04/18 16:36	40
1,2-Dichlorobenzene	40	U	40	32	ug/L			10/04/18 16:36	40
1,2-Dichloroethane	40	U	40	8.4	ug/L			10/04/18 16:36	40
1,2-Dichloropropane	40	U	40	29	ug/L			10/04/18 16:36	40
1,3,5-Trimethylbenzene	40	U	40	31	ug/L			10/04/18 16:36	40
1,3-Dichlorobenzene	40	U	40	31	ug/L			10/04/18 16:36	40
1,4-Dichlorobenzene	40	U	40	34	ug/L			10/04/18 16:36	40
2-Butanone (MEK)	400	U	400	53	ug/L			10/04/18 16:36	40
2-Hexanone	200	U	200	50	ug/L			10/04/18 16:36	40
4-Methyl-2-pentanone (MIBK)	200	U	200	84	ug/L			10/04/18 16:36	40
Acetone	400	U	400	120	ug/L			10/04/18 16:36	40
Benzene	40	U	40	16	ug/L			10/04/18 16:36	40
Bromodichloromethane	40	U	40	16	ug/L			10/04/18 16:36	40
Bromoform	40	U	40	10	ug/L			10/04/18 16:36	40
Bromomethane	40	U	40	28	ug/L			10/04/18 16:36	40
Carbon disulfide	40	U	40	7.6	ug/L			10/04/18 16:36	40
Carbon tetrachloride	40	U	40	11	ug/L			10/04/18 16:36	40
Chlorobenzene	40	U	40	30	ug/L			10/04/18 16:36	40
Chloroethane	40	U	40	13	ug/L			10/04/18 16:36	40
Chloroform	40	U	40	14	ug/L			10/04/18 16:36	40
Chloromethane	40	U	40	14	ug/L			10/04/18 16:36	40
cis-1,2-Dichloroethene	**910**		40	32	ug/L			10/04/18 16:36	40
cis-1,3-Dichloropropene	40	U	40	14	ug/L			10/04/18 16:36	40
Cyclohexane	40	U	40	7.2	ug/L			10/04/18 16:36	40
Dibromochloromethane	40	U	40	13	ug/L			10/04/18 16:36	40
Dichlorodifluoromethane	40	U	40	27	ug/L			10/04/18 16:36	40
Ethylbenzene	40	U	40	30	ug/L			10/04/18 16:36	40
Isopropylbenzene	40	U	40	32	ug/L			10/04/18 16:36	40
Methyl acetate	100	U	100	52	ug/L			10/04/18 16:36	40
Methyl tert-butyl ether	40	U	40	6.4	ug/L			10/04/18 16:36	40
Methylcyclohexane	40	U	40	6.4	ug/L			10/04/18 16:36	40
Methylene Chloride	40	U	40	18	ug/L			10/04/18 16:36	40
Styrene	40	U	40	29	ug/L			10/04/18 16:36	40
Tetrachloroethene	40	U	40	14	ug/L			10/04/18 16:36	40
Toluene	40	U	40	20	ug/L			10/04/18 16:36	40
trans-1,2-Dichloroethene	40	U	40	36	ug/L			10/04/18 16:36	40
trans-1,3-Dichloropropene	40	U	40	15	ug/L			10/04/18 16:36	40
Trichloroethene	**580**		40	18	ug/L			10/04/18 16:36	40
Trichlorofluoromethane	40	U	40	35	ug/L			10/04/18 16:36	40

Client Sample ID: 4009-8
Date Collected: 09/27/18 12:05
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-12
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	40	U	40	36	ug/L			10/04/18 16:36	40
Xylenes, Total	80	U	80	26	ug/L			10/04/18 16:36	40

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*77 - 120*		*10/04/18 16:36*	*40*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*		*10/04/18 16:36*	*40*
Dibromofluoromethane (Surr)	*112*		*75 - 123*		*10/04/18 16:36*	*40*
Toluene-d8 (Surr)	*106*		*80 - 120*		*10/04/18 16:36*	*40*

Client Sample ID: WELL 1-1
Date Collected: 09/27/18 08:25
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-13
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**220**		4.0	3.3	ug/L			10/04/18 17:03	4
1,1,2,2-Tetrachloroethane	4.0	U	4.0	0.84	ug/L			10/04/18 17:03	4
1,1,2-Trichloro-1,2,2-trifluoroethane	4.0	U	4.0	1.2	ug/L			10/04/18 17:03	4
1,1,2-Trichloroethane	4.0	U	4.0	0.92	ug/L			10/04/18 17:03	4
1,1-Dichloroethane	**20**		4.0	1.5	ug/L			10/04/18 17:03	4
1,1-Dichloroethene	**18**		4.0	1.2	ug/L			10/04/18 17:03	4
1,2,3-Trimethylbenzene	4.0	U	4.0	1.0	ug/L			10/04/18 17:03	4
1,2,4-Trichlorobenzene	4.0	U	4.0	1.6	ug/L			10/04/18 17:03	4
1,2,4-Trimethylbenzene	4.0	U	4.0	3.0	ug/L			10/04/18 17:03	4
1,2-Dibromo-3-Chloropropane	4.0	U	4.0	1.6	ug/L			10/04/18 17:03	4
1,2-Dibromoethane	4.0	U	4.0	2.9	ug/L			10/04/18 17:03	4
1,2-Dichlorobenzene	4.0	U	4.0	3.2	ug/L			10/04/18 17:03	4
1,2-Dichloroethane	4.0	U	4.0	0.84	ug/L			10/04/18 17:03	4
1,2-Dichloropropane	4.0	U	4.0	2.9	ug/L			10/04/18 17:03	4
1,3,5-Trimethylbenzene	4.0	U	4.0	3.1	ug/L			10/04/18 17:03	4
1,3-Dichlorobenzene	4.0	U	4.0	3.1	ug/L			10/04/18 17:03	4
1,4-Dichlorobenzene	4.0	U	4.0	3.4	ug/L			10/04/18 17:03	4
2-Butanone (MEK)	40	U	40	5.3	ug/L			10/04/18 17:03	4
2-Hexanone	20	U	20	5.0	ug/L			10/04/18 17:03	4
4-Methyl-2-pentanone (MIBK)	20	U	20	8.4	ug/L			10/04/18 17:03	4
Acetone	40	U	40	12	ug/L			10/04/18 17:03	4
Benzene	4.0	U	4.0	1.6	ug/L			10/04/18 17:03	4
Bromodichloromethane	4.0	U	4.0	1.6	ug/L			10/04/18 17:03	4
Bromoform	4.0	U	4.0	1.0	ug/L			10/04/18 17:03	4
Bromomethane	4.0	U	4.0	2.8	ug/L			10/04/18 17:03	4
Carbon disulfide	4.0	U	4.0	0.76	ug/L			10/04/18 17:03	4
Carbon tetrachloride	4.0	U	4.0	1.1	ug/L			10/04/18 17:03	4
Chlorobenzene	4.0	U	4.0	3.0	ug/L			10/04/18 17:03	4
Chloroethane	4.0	U	4.0	1.3	ug/L			10/04/18 17:03	4
Chloroform	4.0	U	4.0	1.4	ug/L			10/04/18 17:03	4
Chloromethane	4.0	U	4.0	1.4	ug/L			10/04/18 17:03	4
cis-1,2-Dichloroethene	**68**		4.0	3.2	ug/L			10/04/18 17:03	4
cis-1,3-Dichloropropene	4.0	U	4.0	1.4	ug/L			10/04/18 17:03	4
Cyclohexane	4.0	U	4.0	0.72	ug/L			10/04/18 17:03	4
Dibromochloromethane	4.0	U	4.0	1.3	ug/L			10/04/18 17:03	4

Client Sample ID: WELL 1-1
Date Collected: 09/27/18 08:25
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-13
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	4.0	U	4.0	2.7	ug/L			10/04/18 17:03	4
Ethylbenzene	4.0	U	4.0	3.0	ug/L			10/04/18 17:03	4
Isopropylbenzene	4.0	U	4.0	3.2	ug/L			10/04/18 17:03	4
Methyl acetate	10	U	10	5.2	ug/L			10/04/18 17:03	4
Methyl tert-butyl ether	4.0	U	4.0	0.64	ug/L			10/04/18 17:03	4
Methylcyclohexane	4.0	U	4.0	0.64	ug/L			10/04/18 17:03	4
Methylene Chloride	**1.8**	**J**	4.0	1.8	ug/L			10/04/18 17:03	4
Styrene	4.0	U	4.0	2.9	ug/L			10/04/18 17:03	4
Tetrachloroethene	4.0	U	4.0	1.4	ug/L			10/04/18 17:03	4
Toluene	4.0	U	4.0	2.0	ug/L			10/04/18 17:03	4
trans-1,2-Dichloroethene	4.0	U	4.0	3.6	ug/L			10/04/18 17:03	4
trans-1,3-Dichloropropene	4.0	U	4.0	1.5	ug/L			10/04/18 17:03	4
Trichloroethene	**67**		4.0	1.8	ug/L			10/04/18 17:03	4
Trichlorofluoromethane	4.0	U	4.0	3.5	ug/L			10/04/18 17:03	4
Vinyl chloride	4.0	U	4.0	3.6	ug/L			10/04/18 17:03	4
Xylenes, Total	8.0	U	8.0	2.6	ug/L			10/04/18 17:03	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*77 - 120*		*10/04/18 17:03*	*4*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*10/04/18 17:03*	*4*
Dibromofluoromethane (Surr)	*115*		*75 - 123*		*10/04/18 17:03*	*4*
Toluene-d8 (Surr)	*102*		*80 - 120*		*10/04/18 17:03*	*4*

Client Sample ID: 4009-9
Date Collected: 09/27/18 11:35
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-14
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			10/04/18 17:30	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			10/04/18 17:30	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			10/04/18 17:30	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			10/04/18 17:30	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			10/04/18 17:30	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			10/04/18 17:30	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			10/04/18 17:30	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			10/04/18 17:30	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			10/04/18 17:30	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			10/04/18 17:30	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			10/04/18 17:30	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			10/04/18 17:30	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			10/04/18 17:30	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			10/04/18 17:30	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			10/04/18 17:30	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			10/04/18 17:30	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			10/04/18 17:30	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			10/04/18 17:30	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			10/04/18 17:30	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			10/04/18 17:30	1
Acetone	**3.6**	**J**	10	3.0	ug/L			10/04/18 17:30	1

Client Sample ID: 4009-9

Date Collected: 09/27/18 11:35
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-14

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			10/04/18 17:30	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			10/04/18 17:30	1
Bromoform	1.0	U	1.0	0.26	ug/L			10/04/18 17:30	1
Bromomethane	1.0	U	1.0	0.69	ug/L			10/04/18 17:30	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			10/04/18 17:30	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			10/04/18 17:30	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			10/04/18 17:30	1
Chloroethane	1.0	U	1.0	0.32	ug/L			10/04/18 17:30	1
Chloroform	1.0	U	1.0	0.34	ug/L			10/04/18 17:30	1
Chloromethane	1.0	U	1.0	0.35	ug/L			10/04/18 17:30	1
cis-1,2-Dichloroethene	**13**		1.0	0.81	ug/L			10/04/18 17:30	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			10/04/18 17:30	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			10/04/18 17:30	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			10/04/18 17:30	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			10/04/18 17:30	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			10/04/18 17:30	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			10/04/18 17:30	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			10/04/18 17:30	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/04/18 17:30	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			10/04/18 17:30	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			10/04/18 17:30	1
Styrene	1.0	U	1.0	0.73	ug/L			10/04/18 17:30	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			10/04/18 17:30	1
Toluene	1.0	U	1.0	0.51	ug/L			10/04/18 17:30	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			10/04/18 17:30	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			10/04/18 17:30	1
Trichloroethene	**0.73**	**J**	1.0	0.46	ug/L			10/04/18 17:30	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			10/04/18 17:30	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			10/04/18 17:30	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			10/04/18 17:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*77 - 120*		*10/04/18 17:30*	*1*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*		*10/04/18 17:30*	*1*
Dibromofluoromethane (Surr)	*113*		*75 - 123*		*10/04/18 17:30*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*10/04/18 17:30*	*1*

Client Sample ID: 4009-10

Date Collected: 09/27/18 11:40
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-15

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			10/04/18 17:56	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			10/04/18 17:56	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			10/04/18 17:56	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			10/04/18 17:56	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			10/04/18 17:56	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			10/04/18 17:56	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			10/04/18 17:56	1

Client Sample ID: 4009-10
Date Collected: 09/27/18 11:40
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-15
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			10/04/18 17:56	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			10/04/18 17:56	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			10/04/18 17:56	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			10/04/18 17:56	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			10/04/18 17:56	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			10/04/18 17:56	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			10/04/18 17:56	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			10/04/18 17:56	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			10/04/18 17:56	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			10/04/18 17:56	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			10/04/18 17:56	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			10/04/18 17:56	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			10/04/18 17:56	1
Acetone	**3.1**	**J**	10	3.0	ug/L			10/04/18 17:56	1
Benzene	**0.51**	**J**	1.0	0.41	ug/L			10/04/18 17:56	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			10/04/18 17:56	1
Bromoform	1.0	U	1.0	0.26	ug/L			10/04/18 17:56	1
Bromomethane	1.0	U	1.0	0.69	ug/L			10/04/18 17:56	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			10/04/18 17:56	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			10/04/18 17:56	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			10/04/18 17:56	1
Chloroethane	1.0	U	1.0	0.32	ug/L			10/04/18 17:56	1
Chloroform	1.0	U	1.0	0.34	ug/L			10/04/18 17:56	1
Chloromethane	1.0	U	1.0	0.35	ug/L			10/04/18 17:56	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			10/04/18 17:56	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			10/04/18 17:56	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			10/04/18 17:56	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			10/04/18 17:56	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			10/04/18 17:56	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			10/04/18 17:56	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			10/04/18 17:56	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			10/04/18 17:56	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/04/18 17:56	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			10/04/18 17:56	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			10/04/18 17:56	1
Styrene	1.0	U	1.0	0.73	ug/L			10/04/18 17:56	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			10/04/18 17:56	1
Toluene	1.0	U	1.0	0.51	ug/L			10/04/18 17:56	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			10/04/18 17:56	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			10/04/18 17:56	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			10/04/18 17:56	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			10/04/18 17:56	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			10/04/18 17:56	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			10/04/18 17:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*77 - 120*		*10/04/18 17:56*	*1*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*10/04/18 17:56*	*1*
Dibromofluoromethane (Surr)	*111*		*75 - 123*		*10/04/18 17:56*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*		*10/04/18 17:56*	*1*

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-142551-1

Client Sample ID: 4009-11
Date Collected: 09/27/18 11:50
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-16
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			10/04/18 18:24	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			10/04/18 18:24	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			10/04/18 18:24	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			10/04/18 18:24	1
1,1-Dichloroethane	**7.0**		1.0	0.38	ug/L			10/04/18 18:24	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			10/04/18 18:24	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			10/04/18 18:24	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			10/04/18 18:24	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			10/04/18 18:24	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			10/04/18 18:24	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			10/04/18 18:24	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			10/04/18 18:24	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			10/04/18 18:24	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			10/04/18 18:24	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			10/04/18 18:24	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			10/04/18 18:24	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			10/04/18 18:24	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			10/04/18 18:24	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			10/04/18 18:24	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			10/04/18 18:24	1
Acetone	10	U	10	3.0	ug/L			10/04/18 18:24	1
Benzene	**8.9**		1.0	0.41	ug/L			10/04/18 18:24	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			10/04/18 18:24	1
Bromoform	1.0	U	1.0	0.26	ug/L			10/04/18 18:24	1
Bromomethane	1.0	U	1.0	0.69	ug/L			10/04/18 18:24	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			10/04/18 18:24	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			10/04/18 18:24	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			10/04/18 18:24	1
Chloroethane	1.0	U	1.0	0.32	ug/L			10/04/18 18:24	1
Chloroform	1.0	U	1.0	0.34	ug/L			10/04/18 18:24	1
Chloromethane	1.0	U	1.0	0.35	ug/L			10/04/18 18:24	1
cis-1,2-Dichloroethene	**1.3**		1.0	0.81	ug/L			10/04/18 18:24	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			10/04/18 18:24	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			10/04/18 18:24	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			10/04/18 18:24	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			10/04/18 18:24	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			10/04/18 18:24	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			10/04/18 18:24	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			10/04/18 18:24	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/04/18 18:24	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			10/04/18 18:24	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			10/04/18 18:24	1
Styrene	1.0	U	1.0	0.73	ug/L			10/04/18 18:24	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			10/04/18 18:24	1
Toluene	**0.52**	**J**	1.0	0.51	ug/L			10/04/18 18:24	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			10/04/18 18:24	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			10/04/18 18:24	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			10/04/18 18:24	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			10/04/18 18:24	1

Client Sample ID: 4009-11

Date Collected: 09/27/18 11:50
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-16

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	**1.7**		1.0	0.90	ug/L			10/04/18 18:24	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			10/04/18 18:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*77 - 120*		*10/04/18 18:24*	*1*
4-Bromofluorobenzene (Surr)	*103*		*73 - 120*		*10/04/18 18:24*	*1*
Dibromofluoromethane (Surr)	*104*		*75 - 123*		*10/04/18 18:24*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*10/04/18 18:24*	*1*

Client Sample ID: 4009-12

Date Collected: 09/27/18 10:10
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-17

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**95**		1.0	0.82	ug/L			10/04/18 23:13	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			10/04/18 23:13	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			10/04/18 23:13	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			10/04/18 23:13	1
1,1-Dichloroethane	**11**		1.0	0.38	ug/L			10/04/18 23:13	1
1,1-Dichloroethene	**6.9**		1.0	0.29	ug/L			10/04/18 23:13	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			10/04/18 23:13	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			10/04/18 23:13	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			10/04/18 23:13	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			10/04/18 23:13	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			10/04/18 23:13	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			10/04/18 23:13	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			10/04/18 23:13	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			10/04/18 23:13	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			10/04/18 23:13	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			10/04/18 23:13	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			10/04/18 23:13	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			10/04/18 23:13	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			10/04/18 23:13	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			10/04/18 23:13	1
Acetone	**4.4**	**J**	10	3.0	ug/L			10/04/18 23:13	1
Benzene	**0.73**	**J**	1.0	0.41	ug/L			10/04/18 23:13	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			10/04/18 23:13	1
Bromoform	1.0	U	1.0	0.26	ug/L			10/04/18 23:13	1
Bromomethane	1.0	U	1.0	0.69	ug/L			10/04/18 23:13	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			10/04/18 23:13	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			10/04/18 23:13	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			10/04/18 23:13	1
Chloroethane	**0.68**	**J**	1.0	0.32	ug/L			10/04/18 23:13	1
Chloroform	1.0	U	1.0	0.34	ug/L			10/04/18 23:13	1
Chloromethane	1.0	U	1.0	0.35	ug/L			10/04/18 23:13	1
cis-1,2-Dichloroethene	**25**		1.0	0.81	ug/L			10/04/18 23:13	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			10/04/18 23:13	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			10/04/18 23:13	1
Dibromochloromethane	1.0	U *	1.0	0.32	ug/L			10/04/18 23:13	1

Client Sample ID: 4009-12
Date Collected: 09/27/18 10:10
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-17
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			10/04/18 23:13	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			10/04/18 23:13	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			10/04/18 23:13	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			10/04/18 23:13	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/04/18 23:13	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			10/04/18 23:13	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			10/04/18 23:13	1
Styrene	1.0	U	1.0	0.73	ug/L			10/04/18 23:13	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			10/04/18 23:13	1
Toluene	1.0	U	1.0	0.51	ug/L			10/04/18 23:13	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			10/04/18 23:13	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			10/04/18 23:13	1
Trichloroethene	**25**		1.0	0.46	ug/L			10/04/18 23:13	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			10/04/18 23:13	1
Vinyl chloride	**26**		1.0	0.90	ug/L			10/04/18 23:13	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			10/04/18 23:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*77 - 120*		*10/04/18 23:13*	*1*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*10/04/18 23:13*	*1*
Dibromofluoromethane (Surr)	*111*		*75 - 123*		*10/04/18 23:13*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*10/04/18 23:13*	*1*

Client Sample ID: 4009-13
Date Collected: 09/27/18 10:55
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-18
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			10/04/18 23:39	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			10/04/18 23:39	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			10/04/18 23:39	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			10/04/18 23:39	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			10/04/18 23:39	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			10/04/18 23:39	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			10/04/18 23:39	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			10/04/18 23:39	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			10/04/18 23:39	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			10/04/18 23:39	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			10/04/18 23:39	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			10/04/18 23:39	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			10/04/18 23:39	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			10/04/18 23:39	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			10/04/18 23:39	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			10/04/18 23:39	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			10/04/18 23:39	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			10/04/18 23:39	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			10/04/18 23:39	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			10/04/18 23:39	1
Acetone	**3.0**	**J**	10	3.0	ug/L			10/04/18 23:39	1

Client Sample ID: 4009-13

Date Collected: 09/27/18 10:55
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-18

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.44**	**J**	1.0	0.41	ug/L			10/04/18 23:39	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			10/04/18 23:39	1
Bromoform	1.0	U	1.0	0.26	ug/L			10/04/18 23:39	1
Bromomethane	1.0	U	1.0	0.69	ug/L			10/04/18 23:39	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			10/04/18 23:39	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			10/04/18 23:39	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			10/04/18 23:39	1
Chloroethane	1.0	U	1.0	0.32	ug/L			10/04/18 23:39	1
Chloroform	1.0	U	1.0	0.34	ug/L			10/04/18 23:39	1
Chloromethane	1.0	U	1.0	0.35	ug/L			10/04/18 23:39	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			10/04/18 23:39	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			10/04/18 23:39	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			10/04/18 23:39	1
Dibromochloromethane	1.0	U *	1.0	0.32	ug/L			10/04/18 23:39	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			10/04/18 23:39	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			10/04/18 23:39	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			10/04/18 23:39	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			10/04/18 23:39	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/04/18 23:39	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			10/04/18 23:39	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			10/04/18 23:39	1
Styrene	1.0	U	1.0	0.73	ug/L			10/04/18 23:39	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			10/04/18 23:39	1
Toluene	1.0	U	1.0	0.51	ug/L			10/04/18 23:39	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			10/04/18 23:39	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			10/04/18 23:39	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			10/04/18 23:39	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			10/04/18 23:39	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			10/04/18 23:39	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			10/04/18 23:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*77 - 120*		*10/04/18 23:39*	*1*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*10/04/18 23:39*	*1*
Dibromofluoromethane (Surr)	*111*		*75 - 123*		*10/04/18 23:39*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*10/04/18 23:39*	*1*

Client Sample ID: 4009-13A

Date Collected: 09/27/18 11:00
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-19

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			10/05/18 00:07	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			10/05/18 00:07	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			10/05/18 00:07	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			10/05/18 00:07	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			10/05/18 00:07	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			10/05/18 00:07	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			10/05/18 00:07	1

Client Sample ID: 4009-13A
Date Collected: 09/27/18 11:00
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-19
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			10/05/18 00:07	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			10/05/18 00:07	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			10/05/18 00:07	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			10/05/18 00:07	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			10/05/18 00:07	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			10/05/18 00:07	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			10/05/18 00:07	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			10/05/18 00:07	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			10/05/18 00:07	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			10/05/18 00:07	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			10/05/18 00:07	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			10/05/18 00:07	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			10/05/18 00:07	1
Acetone	**3.6**	**J**	10	3.0	ug/L			10/05/18 00:07	1
Benzene	1.0	U	1.0	0.41	ug/L			10/05/18 00:07	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			10/05/18 00:07	1
Bromoform	1.0	U	1.0	0.26	ug/L			10/05/18 00:07	1
Bromomethane	1.0	U	1.0	0.69	ug/L			10/05/18 00:07	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			10/05/18 00:07	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			10/05/18 00:07	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			10/05/18 00:07	1
Chloroethane	1.0	U	1.0	0.32	ug/L			10/05/18 00:07	1
Chloroform	1.0	U	1.0	0.34	ug/L			10/05/18 00:07	1
Chloromethane	1.0	U	1.0	0.35	ug/L			10/05/18 00:07	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			10/05/18 00:07	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			10/05/18 00:07	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			10/05/18 00:07	1
Dibromochloromethane	1.0	U *	1.0	0.32	ug/L			10/05/18 00:07	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			10/05/18 00:07	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			10/05/18 00:07	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			10/05/18 00:07	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			10/05/18 00:07	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/05/18 00:07	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			10/05/18 00:07	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			10/05/18 00:07	1
Styrene	1.0	U	1.0	0.73	ug/L			10/05/18 00:07	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			10/05/18 00:07	1
Toluene	1.0	U	1.0	0.51	ug/L			10/05/18 00:07	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			10/05/18 00:07	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			10/05/18 00:07	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			10/05/18 00:07	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			10/05/18 00:07	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			10/05/18 00:07	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			10/05/18 00:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*77 - 120*		*10/05/18 00:07*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*10/05/18 00:07*	*1*
Dibromofluoromethane (Surr)	*104*		*75 - 123*		*10/05/18 00:07*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*10/05/18 00:07*	*1*

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-142551-1

Client Sample ID: 4009-14
Date Collected: 09/27/18 08:50
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-20
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			10/05/18 00:34	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			10/05/18 00:34	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			10/05/18 00:34	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			10/05/18 00:34	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			10/05/18 00:34	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			10/05/18 00:34	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			10/05/18 00:34	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			10/05/18 00:34	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			10/05/18 00:34	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			10/05/18 00:34	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			10/05/18 00:34	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			10/05/18 00:34	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			10/05/18 00:34	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			10/05/18 00:34	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			10/05/18 00:34	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			10/05/18 00:34	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			10/05/18 00:34	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			10/05/18 00:34	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			10/05/18 00:34	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			10/05/18 00:34	1
Acetone	**3.8**	**J**	10	3.0	ug/L			10/05/18 00:34	1
Benzene	**1.6**		1.0	0.41	ug/L			10/05/18 00:34	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			10/05/18 00:34	1
Bromoform	1.0	U	1.0	0.26	ug/L			10/05/18 00:34	1
Bromomethane	1.0	U	1.0	0.69	ug/L			10/05/18 00:34	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			10/05/18 00:34	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			10/05/18 00:34	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			10/05/18 00:34	1
Chloroethane	1.0	U	1.0	0.32	ug/L			10/05/18 00:34	1
Chloroform	1.0	U	1.0	0.34	ug/L			10/05/18 00:34	1
Chloromethane	1.0	U	1.0	0.35	ug/L			10/05/18 00:34	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			10/05/18 00:34	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			10/05/18 00:34	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			10/05/18 00:34	1
Dibromochloromethane	1.0	U *	1.0	0.32	ug/L			10/05/18 00:34	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			10/05/18 00:34	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			10/05/18 00:34	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			10/05/18 00:34	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			10/05/18 00:34	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/05/18 00:34	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			10/05/18 00:34	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			10/05/18 00:34	1
Styrene	1.0	U	1.0	0.73	ug/L			10/05/18 00:34	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			10/05/18 00:34	1
Toluene	1.0	U	1.0	0.51	ug/L			10/05/18 00:34	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			10/05/18 00:34	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			10/05/18 00:34	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			10/05/18 00:34	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			10/05/18 00:34	1

Client Sample ID: 4009-14

Date Collected: 09/27/18 08:50
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-20

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.90	ug/L			10/05/18 00:34	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			10/05/18 00:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*77 - 120*		*10/05/18 00:34*	*1*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*10/05/18 00:34*	*1*
Dibromofluoromethane (Surr)	*112*		*75 - 123*		*10/05/18 00:34*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*10/05/18 00:34*	*1*

Client Sample ID: 4009-15

Date Collected: 09/27/18 09:50
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-21

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			10/05/18 01:00	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			10/05/18 01:00	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			10/05/18 01:00	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			10/05/18 01:00	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			10/05/18 01:00	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			10/05/18 01:00	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			10/05/18 01:00	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			10/05/18 01:00	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			10/05/18 01:00	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			10/05/18 01:00	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			10/05/18 01:00	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			10/05/18 01:00	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			10/05/18 01:00	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			10/05/18 01:00	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			10/05/18 01:00	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			10/05/18 01:00	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			10/05/18 01:00	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			10/05/18 01:00	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			10/05/18 01:00	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			10/05/18 01:00	1
Acetone	**7.3**	**J**	10	3.0	ug/L			10/05/18 01:00	1
Benzene	**7.3**		1.0	0.41	ug/L			10/05/18 01:00	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			10/05/18 01:00	1
Bromoform	1.0	U	1.0	0.26	ug/L			10/05/18 01:00	1
Bromomethane	1.0	U	1.0	0.69	ug/L			10/05/18 01:00	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			10/05/18 01:00	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			10/05/18 01:00	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			10/05/18 01:00	1
Chloroethane	1.0	U	1.0	0.32	ug/L			10/05/18 01:00	1
Chloroform	1.0	U	1.0	0.34	ug/L			10/05/18 01:00	1
Chloromethane	1.0	U	1.0	0.35	ug/L			10/05/18 01:00	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			10/05/18 01:00	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			10/05/18 01:00	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			10/05/18 01:00	1
Dibromochloromethane	1.0	U *	1.0	0.32	ug/L			10/05/18 01:00	1

Client Sample ID: 4009-15 — **Lab Sample ID: 480-142551-21**
Date Collected: 09/27/18 09:50 — **Matrix: Water**
Date Received: 09/28/18 01:30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			10/05/18 01:00	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			10/05/18 01:00	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			10/05/18 01:00	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			10/05/18 01:00	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/05/18 01:00	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			10/05/18 01:00	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			10/05/18 01:00	1
Styrene	1.0	U	1.0	0.73	ug/L			10/05/18 01:00	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			10/05/18 01:00	1
Toluene	1.0	U	1.0	0.51	ug/L			10/05/18 01:00	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			10/05/18 01:00	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			10/05/18 01:00	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			10/05/18 01:00	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			10/05/18 01:00	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			10/05/18 01:00	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			10/05/18 01:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*77 - 120*		*10/05/18 01:00*	*1*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*		*10/05/18 01:00*	*1*
Dibromofluoromethane (Surr)	*109*		*75 - 123*		*10/05/18 01:00*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*10/05/18 01:00*	*1*

Client Sample ID: 4009-16 — **Lab Sample ID: 480-142551-22**
Date Collected: 09/27/18 09:25 — **Matrix: Water**
Date Received: 09/28/18 01:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			10/05/18 01:27	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			10/05/18 01:27	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			10/05/18 01:27	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			10/05/18 01:27	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			10/05/18 01:27	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			10/05/18 01:27	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			10/05/18 01:27	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			10/05/18 01:27	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			10/05/18 01:27	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			10/05/18 01:27	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			10/05/18 01:27	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			10/05/18 01:27	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			10/05/18 01:27	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			10/05/18 01:27	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			10/05/18 01:27	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			10/05/18 01:27	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			10/05/18 01:27	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			10/05/18 01:27	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			10/05/18 01:27	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			10/05/18 01:27	1
Acetone	**3.1**	**J**	10	3.0	ug/L			10/05/18 01:27	1

Client Sample ID: 4009-16

Date Collected: 09/27/18 09:25
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-22

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.5		1.0	0.41	ug/L			10/05/18 01:27	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			10/05/18 01:27	1
Bromoform	1.0	U	1.0	0.26	ug/L			10/05/18 01:27	1
Bromomethane	1.0	U	1.0	0.69	ug/L			10/05/18 01:27	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			10/05/18 01:27	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			10/05/18 01:27	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			10/05/18 01:27	1
Chloroethane	1.0	U	1.0	0.32	ug/L			10/05/18 01:27	1
Chloroform	1.0	U	1.0	0.34	ug/L			10/05/18 01:27	1
Chloromethane	1.0	U	1.0	0.35	ug/L			10/05/18 01:27	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			10/05/18 01:27	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			10/05/18 01:27	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			10/05/18 01:27	1
Dibromochloromethane	1.0	U *	1.0	0.32	ug/L			10/05/18 01:27	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			10/05/18 01:27	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			10/05/18 01:27	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			10/05/18 01:27	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			10/05/18 01:27	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/05/18 01:27	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			10/05/18 01:27	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			10/05/18 01:27	1
Styrene	1.0	U	1.0	0.73	ug/L			10/05/18 01:27	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			10/05/18 01:27	1
Toluene	1.0	U	1.0	0.51	ug/L			10/05/18 01:27	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			10/05/18 01:27	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			10/05/18 01:27	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			10/05/18 01:27	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			10/05/18 01:27	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			10/05/18 01:27	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			10/05/18 01:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*77 - 120*		*10/05/18 01:27*	*1*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*		*10/05/18 01:27*	*1*
Dibromofluoromethane (Surr)	*107*		*75 - 123*		*10/05/18 01:27*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*10/05/18 01:27*	*1*

Client Sample ID: 4009-16A

Date Collected: 09/27/18 09:30
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-23

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			10/05/18 01:54	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			10/05/18 01:54	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			10/05/18 01:54	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			10/05/18 01:54	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			10/05/18 01:54	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			10/05/18 01:54	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			10/05/18 01:54	1

Client Sample ID: 4009-16A
Date Collected: 09/27/18 09:30
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-23
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			10/05/18 01:54	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			10/05/18 01:54	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			10/05/18 01:54	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			10/05/18 01:54	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			10/05/18 01:54	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			10/05/18 01:54	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			10/05/18 01:54	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			10/05/18 01:54	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			10/05/18 01:54	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			10/05/18 01:54	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			10/05/18 01:54	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			10/05/18 01:54	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			10/05/18 01:54	1
Acetone	**3.3**	**J**	10	3.0	ug/L			10/05/18 01:54	1
Benzene	1.0	U	1.0	0.41	ug/L			10/05/18 01:54	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			10/05/18 01:54	1
Bromoform	1.0	U	1.0	0.26	ug/L			10/05/18 01:54	1
Bromomethane	1.0	U	1.0	0.69	ug/L			10/05/18 01:54	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			10/05/18 01:54	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			10/05/18 01:54	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			10/05/18 01:54	1
Chloroethane	1.0	U	1.0	0.32	ug/L			10/05/18 01:54	1
Chloroform	1.0	U	1.0	0.34	ug/L			10/05/18 01:54	1
Chloromethane	1.0	U	1.0	0.35	ug/L			10/05/18 01:54	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			10/05/18 01:54	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			10/05/18 01:54	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			10/05/18 01:54	1
Dibromochloromethane	1.0	U *	1.0	0.32	ug/L			10/05/18 01:54	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			10/05/18 01:54	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			10/05/18 01:54	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			10/05/18 01:54	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			10/05/18 01:54	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/05/18 01:54	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			10/05/18 01:54	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			10/05/18 01:54	1
Styrene	1.0	U	1.0	0.73	ug/L			10/05/18 01:54	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			10/05/18 01:54	1
Toluene	1.0	U	1.0	0.51	ug/L			10/05/18 01:54	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			10/05/18 01:54	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			10/05/18 01:54	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			10/05/18 01:54	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			10/05/18 01:54	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			10/05/18 01:54	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			10/05/18 01:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*77 - 120*		*10/05/18 01:54*	*1*
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*		*10/05/18 01:54*	*1*
Dibromofluoromethane (Surr)	*107*		*75 - 123*		*10/05/18 01:54*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*10/05/18 01:54*	*1*

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-142551-1

Client Sample ID: 4009-18
Date Collected: 09/27/18 09:00
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-24
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			10/05/18 02:21	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			10/05/18 02:21	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			10/05/18 02:21	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			10/05/18 02:21	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			10/05/18 02:21	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			10/05/18 02:21	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			10/05/18 02:21	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			10/05/18 02:21	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			10/05/18 02:21	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			10/05/18 02:21	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			10/05/18 02:21	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			10/05/18 02:21	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			10/05/18 02:21	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			10/05/18 02:21	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			10/05/18 02:21	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			10/05/18 02:21	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			10/05/18 02:21	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			10/05/18 02:21	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			10/05/18 02:21	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			10/05/18 02:21	1
Acetone	10	U	10	3.0	ug/L			10/05/18 02:21	1
Benzene	1.0	U	1.0	0.41	ug/L			10/05/18 02:21	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			10/05/18 02:21	1
Bromoform	1.0	U	1.0	0.26	ug/L			10/05/18 02:21	1
Bromomethane	1.0	U	1.0	0.69	ug/L			10/05/18 02:21	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			10/05/18 02:21	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			10/05/18 02:21	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			10/05/18 02:21	1
Chloroethane	1.0	U	1.0	0.32	ug/L			10/05/18 02:21	1
Chloroform	1.0	U	1.0	0.34	ug/L			10/05/18 02:21	1
Chloromethane	1.0	U	1.0	0.35	ug/L			10/05/18 02:21	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			10/05/18 02:21	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			10/05/18 02:21	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			10/05/18 02:21	1
Dibromochloromethane	1.0	U *	1.0	0.32	ug/L			10/05/18 02:21	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			10/05/18 02:21	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			10/05/18 02:21	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			10/05/18 02:21	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			10/05/18 02:21	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/05/18 02:21	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			10/05/18 02:21	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			10/05/18 02:21	1
Styrene	1.0	U	1.0	0.73	ug/L			10/05/18 02:21	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			10/05/18 02:21	1
Toluene	1.0	U	1.0	0.51	ug/L			10/05/18 02:21	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			10/05/18 02:21	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			10/05/18 02:21	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			10/05/18 02:21	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			10/05/18 02:21	1

Client Sample ID: 4009-18
Date Collected: 09/27/18 09:00
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-24
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.90	ug/L			10/05/18 02:21	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			10/05/18 02:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*77 - 120*		*10/05/18 02:21*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*10/05/18 02:21*	*1*
Dibromofluoromethane (Surr)	*104*		*75 - 123*		*10/05/18 02:21*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*10/05/18 02:21*	*1*

Client Sample ID: 4009-19
Date Collected: 09/27/18 09:15
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-25
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			10/05/18 02:48	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			10/05/18 02:48	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			10/05/18 02:48	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			10/05/18 02:48	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			10/05/18 02:48	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			10/05/18 02:48	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			10/05/18 02:48	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			10/05/18 02:48	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			10/05/18 02:48	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			10/05/18 02:48	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			10/05/18 02:48	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			10/05/18 02:48	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			10/05/18 02:48	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			10/05/18 02:48	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			10/05/18 02:48	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			10/05/18 02:48	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			10/05/18 02:48	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			10/05/18 02:48	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			10/05/18 02:48	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			10/05/18 02:48	1
Acetone	10	U	10	3.0	ug/L			10/05/18 02:48	1
Benzene	**1.5**		1.0	0.41	ug/L			10/05/18 02:48	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			10/05/18 02:48	1
Bromoform	1.0	U	1.0	0.26	ug/L			10/05/18 02:48	1
Bromomethane	1.0	U	1.0	0.69	ug/L			10/05/18 02:48	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			10/05/18 02:48	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			10/05/18 02:48	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			10/05/18 02:48	1
Chloroethane	1.0	U	1.0	0.32	ug/L			10/05/18 02:48	1
Chloroform	1.0	U	1.0	0.34	ug/L			10/05/18 02:48	1
Chloromethane	1.0	U	1.0	0.35	ug/L			10/05/18 02:48	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			10/05/18 02:48	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			10/05/18 02:48	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			10/05/18 02:48	1
Dibromochloromethane	1.0	U *	1.0	0.32	ug/L			10/05/18 02:48	1

Client Sample ID: 4009-19
Date Collected: 09/27/18 09:15
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-25
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			10/05/18 02:48	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			10/05/18 02:48	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			10/05/18 02:48	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			10/05/18 02:48	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/05/18 02:48	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			10/05/18 02:48	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			10/05/18 02:48	1
Styrene	1.0	U	1.0	0.73	ug/L			10/05/18 02:48	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			10/05/18 02:48	1
Toluene	1.0	U	1.0	0.51	ug/L			10/05/18 02:48	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			10/05/18 02:48	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			10/05/18 02:48	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			10/05/18 02:48	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			10/05/18 02:48	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			10/05/18 02:48	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			10/05/18 02:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*77 - 120*		*10/05/18 02:48*	*1*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*10/05/18 02:48*	*1*
Dibromofluoromethane (Surr)	*105*		*75 - 123*		*10/05/18 02:48*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*10/05/18 02:48*	*1*

Client Sample ID: 4009-21
Date Collected: 09/27/18 09:10
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-26
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			10/05/18 03:15	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			10/05/18 03:15	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			10/05/18 03:15	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			10/05/18 03:15	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			10/05/18 03:15	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			10/05/18 03:15	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			10/05/18 03:15	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			10/05/18 03:15	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			10/05/18 03:15	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			10/05/18 03:15	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			10/05/18 03:15	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			10/05/18 03:15	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			10/05/18 03:15	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			10/05/18 03:15	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			10/05/18 03:15	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			10/05/18 03:15	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			10/05/18 03:15	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			10/05/18 03:15	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			10/05/18 03:15	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			10/05/18 03:15	1
Acetone	10	U	10	3.0	ug/L			10/05/18 03:15	1

Client Sample ID: 4009-21
Date Collected: 09/27/18 09:10
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-26
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	5.3		1.0	0.41	ug/L			10/05/18 03:15	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			10/05/18 03:15	1
Bromoform	1.0	U	1.0	0.26	ug/L			10/05/18 03:15	1
Bromomethane	1.0	U	1.0	0.69	ug/L			10/05/18 03:15	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			10/05/18 03:15	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			10/05/18 03:15	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			10/05/18 03:15	1
Chloroethane	1.0	U	1.0	0.32	ug/L			10/05/18 03:15	1
Chloroform	1.0	U	1.0	0.34	ug/L			10/05/18 03:15	1
Chloromethane	1.0	U	1.0	0.35	ug/L			10/05/18 03:15	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			10/05/18 03:15	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			10/05/18 03:15	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			10/05/18 03:15	1
Dibromochloromethane	1.0	U *	1.0	0.32	ug/L			10/05/18 03:15	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			10/05/18 03:15	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			10/05/18 03:15	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			10/05/18 03:15	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			10/05/18 03:15	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/05/18 03:15	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			10/05/18 03:15	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			10/05/18 03:15	1
Styrene	1.0	U	1.0	0.73	ug/L			10/05/18 03:15	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			10/05/18 03:15	1
Toluene	1.0	U	1.0	0.51	ug/L			10/05/18 03:15	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			10/05/18 03:15	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			10/05/18 03:15	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			10/05/18 03:15	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			10/05/18 03:15	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			10/05/18 03:15	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			10/05/18 03:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*77 - 120*		*10/05/18 03:15*	*1*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*10/05/18 03:15*	*1*
Dibromofluoromethane (Surr)	*109*		*75 - 123*		*10/05/18 03:15*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*10/05/18 03:15*	*1*

Client Sample ID: 4009-22
Date Collected: 09/27/18 08:45
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-27
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			10/05/18 03:42	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			10/05/18 03:42	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			10/05/18 03:42	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			10/05/18 03:42	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			10/05/18 03:42	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			10/05/18 03:42	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			10/05/18 03:42	1

Client Sample ID: 4009-22
Date Collected: 09/27/18 08:45
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-27
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			10/05/18 03:42	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			10/05/18 03:42	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			10/05/18 03:42	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			10/05/18 03:42	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			10/05/18 03:42	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			10/05/18 03:42	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			10/05/18 03:42	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			10/05/18 03:42	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			10/05/18 03:42	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			10/05/18 03:42	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			10/05/18 03:42	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			10/05/18 03:42	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			10/05/18 03:42	1
Acetone	**3.4**	**J**	10	3.0	ug/L			10/05/18 03:42	1
Benzene	**1.2**		1.0	0.41	ug/L			10/05/18 03:42	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			10/05/18 03:42	1
Bromoform	1.0	U	1.0	0.26	ug/L			10/05/18 03:42	1
Bromomethane	1.0	U	1.0	0.69	ug/L			10/05/18 03:42	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			10/05/18 03:42	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			10/05/18 03:42	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			10/05/18 03:42	1
Chloroethane	1.0	U	1.0	0.32	ug/L			10/05/18 03:42	1
Chloroform	1.0	U	1.0	0.34	ug/L			10/05/18 03:42	1
Chloromethane	1.0	U	1.0	0.35	ug/L			10/05/18 03:42	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			10/05/18 03:42	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			10/05/18 03:42	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			10/05/18 03:42	1
Dibromochloromethane	1.0	U *	1.0	0.32	ug/L			10/05/18 03:42	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			10/05/18 03:42	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			10/05/18 03:42	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			10/05/18 03:42	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			10/05/18 03:42	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/05/18 03:42	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			10/05/18 03:42	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			10/05/18 03:42	1
Styrene	1.0	U	1.0	0.73	ug/L			10/05/18 03:42	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			10/05/18 03:42	1
Toluene	**0.65**	**J**	1.0	0.51	ug/L			10/05/18 03:42	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			10/05/18 03:42	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			10/05/18 03:42	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			10/05/18 03:42	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			10/05/18 03:42	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			10/05/18 03:42	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			10/05/18 03:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*77 - 120*		*10/05/18 03:42*	*1*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*10/05/18 03:42*	*1*
Dibromofluoromethane (Surr)	*110*		*75 - 123*		*10/05/18 03:42*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*10/05/18 03:42*	*1*

Client Sample ID: 4009-27S
Date Collected: 09/27/18 10:40
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-28
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**47**		2.0	1.6	ug/L			10/05/18 04:09	2
1,1,2,2-Tetrachloroethane	2.0	U	2.0	0.42	ug/L			10/05/18 04:09	2
1,1,2-Trichloro-1,2,2-trifluoroethane	**1.5**	**J**	2.0	0.62	ug/L			10/05/18 04:09	2
1,1,2-Trichloroethane	2.0	U	2.0	0.46	ug/L			10/05/18 04:09	2
1,1-Dichloroethane	**2.2**		2.0	0.76	ug/L			10/05/18 04:09	2
1,1-Dichloroethene	**4.5**		2.0	0.58	ug/L			10/05/18 04:09	2
1,2,3-Trimethylbenzene	2.0	U	2.0	0.52	ug/L			10/05/18 04:09	2
1,2,4-Trichlorobenzene	2.0	U	2.0	0.82	ug/L			10/05/18 04:09	2
1,2,4-Trimethylbenzene	2.0	U	2.0	1.5	ug/L			10/05/18 04:09	2
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.78	ug/L			10/05/18 04:09	2
1,2-Dibromoethane	2.0	U	2.0	1.5	ug/L			10/05/18 04:09	2
1,2-Dichlorobenzene	2.0	U	2.0	1.6	ug/L			10/05/18 04:09	2
1,2-Dichloroethane	2.0	U	2.0	0.42	ug/L			10/05/18 04:09	2
1,2-Dichloropropane	2.0	U	2.0	1.4	ug/L			10/05/18 04:09	2
1,3,5-Trimethylbenzene	2.0	U	2.0	1.5	ug/L			10/05/18 04:09	2
1,3-Dichlorobenzene	2.0	U	2.0	1.6	ug/L			10/05/18 04:09	2
1,4-Dichlorobenzene	2.0	U	2.0	1.7	ug/L			10/05/18 04:09	2
2-Butanone (MEK)	20	U	20	2.6	ug/L			10/05/18 04:09	2
2-Hexanone	10	U	10	2.5	ug/L			10/05/18 04:09	2
4-Methyl-2-pentanone (MIBK)	10	U	10	4.2	ug/L			10/05/18 04:09	2
Acetone	20	U	20	6.0	ug/L			10/05/18 04:09	2
Benzene	2.0	U	2.0	0.82	ug/L			10/05/18 04:09	2
Bromodichloromethane	2.0	U	2.0	0.78	ug/L			10/05/18 04:09	2
Bromoform	2.0	U	2.0	0.52	ug/L			10/05/18 04:09	2
Bromomethane	2.0	U	2.0	1.4	ug/L			10/05/18 04:09	2
Carbon disulfide	2.0	U	2.0	0.38	ug/L			10/05/18 04:09	2
Carbon tetrachloride	2.0	U	2.0	0.54	ug/L			10/05/18 04:09	2
Chlorobenzene	2.0	U	2.0	1.5	ug/L			10/05/18 04:09	2
Chloroethane	2.0	U	2.0	0.64	ug/L			10/05/18 04:09	2
Chloroform	2.0	U	2.0	0.68	ug/L			10/05/18 04:09	2
Chloromethane	2.0	U	2.0	0.70	ug/L			10/05/18 04:09	2
cis-1,2-Dichloroethene	**21**		2.0	1.6	ug/L			10/05/18 04:09	2
cis-1,3-Dichloropropene	2.0	U	2.0	0.72	ug/L			10/05/18 04:09	2
Cyclohexane	2.0	U	2.0	0.36	ug/L			10/05/18 04:09	2
Dibromochloromethane	2.0	U *	2.0	0.64	ug/L			10/05/18 04:09	2
Dichlorodifluoromethane	2.0	U	2.0	1.4	ug/L			10/05/18 04:09	2
Ethylbenzene	2.0	U	2.0	1.5	ug/L			10/05/18 04:09	2
Isopropylbenzene	2.0	U	2.0	1.6	ug/L			10/05/18 04:09	2
Methyl acetate	5.0	U	5.0	2.6	ug/L			10/05/18 04:09	2
Methyl tert-butyl ether	2.0	U	2.0	0.32	ug/L			10/05/18 04:09	2
Methylcyclohexane	2.0	U	2.0	0.32	ug/L			10/05/18 04:09	2
Methylene Chloride	2.0	U	2.0	0.88	ug/L			10/05/18 04:09	2
Styrene	2.0	U	2.0	1.5	ug/L			10/05/18 04:09	2
Tetrachloroethene	2.0	U	2.0	0.72	ug/L			10/05/18 04:09	2
Toluene	2.0	U	2.0	1.0	ug/L			10/05/18 04:09	2
trans-1,2-Dichloroethene	2.0	U	2.0	1.8	ug/L			10/05/18 04:09	2
trans-1,3-Dichloropropene	2.0	U	2.0	0.74	ug/L			10/05/18 04:09	2
Trichloroethene	**25**		2.0	0.92	ug/L			10/05/18 04:09	2

Client Sample ID: 4009-27S — **Lab Sample ID: 480-142551-28**
Date Collected: 09/27/18 10:40 — **Matrix: Water**
Date Received: 09/28/18 01:30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	2.0	U	2.0	1.8	ug/L			10/05/18 04:09	2
Vinyl chloride	2.0	U	2.0	1.8	ug/L			10/05/18 04:09	2
Xylenes, Total	4.0	U	4.0	1.3	ug/L			10/05/18 04:09	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*77 - 120*		*10/05/18 04:09*	*2*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*		*10/05/18 04:09*	*2*
Dibromofluoromethane (Surr)	*111*		*75 - 123*		*10/05/18 04:09*	*2*
Toluene-d8 (Surr)	*103*		*80 - 120*		*10/05/18 04:09*	*2*

Client Sample ID: 4009-27I — **Lab Sample ID: 480-142551-29**
Date Collected: 09/27/18 10:45 — **Matrix: Water**
Date Received: 09/28/18 01:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			10/05/18 04:36	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			10/05/18 04:36	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			10/05/18 04:36	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			10/05/18 04:36	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			10/05/18 04:36	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			10/05/18 04:36	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			10/05/18 04:36	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			10/05/18 04:36	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			10/05/18 04:36	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			10/05/18 04:36	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			10/05/18 04:36	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			10/05/18 04:36	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			10/05/18 04:36	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			10/05/18 04:36	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			10/05/18 04:36	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			10/05/18 04:36	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			10/05/18 04:36	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			10/05/18 04:36	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			10/05/18 04:36	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			10/05/18 04:36	1
Acetone	**4.6**	**J**	10	3.0	ug/L			10/05/18 04:36	1
Benzene	1.0	U	1.0	0.41	ug/L			10/05/18 04:36	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			10/05/18 04:36	1
Bromoform	1.0	U	1.0	0.26	ug/L			10/05/18 04:36	1
Bromomethane	1.0	U	1.0	0.69	ug/L			10/05/18 04:36	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			10/05/18 04:36	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			10/05/18 04:36	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			10/05/18 04:36	1
Chloroethane	1.0	U	1.0	0.32	ug/L			10/05/18 04:36	1
Chloroform	1.0	U	1.0	0.34	ug/L			10/05/18 04:36	1
Chloromethane	1.0	U	1.0	0.35	ug/L			10/05/18 04:36	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			10/05/18 04:36	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			10/05/18 04:36	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			10/05/18 04:36	1

Client Sample ID: 4009-27I — **Lab Sample ID: 480-142551-29**
Date Collected: 09/27/18 10:45 — **Matrix: Water**
Date Received: 09/28/18 01:30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	1.0	U *	1.0	0.32	ug/L			10/05/18 04:36	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			10/05/18 04:36	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			10/05/18 04:36	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			10/05/18 04:36	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			10/05/18 04:36	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/05/18 04:36	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			10/05/18 04:36	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			10/05/18 04:36	1
Styrene	1.0	U	1.0	0.73	ug/L			10/05/18 04:36	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			10/05/18 04:36	1
Toluene	1.0	U	1.0	0.51	ug/L			10/05/18 04:36	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			10/05/18 04:36	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			10/05/18 04:36	1
Trichloroethene	**1.7**		1.0	0.46	ug/L			10/05/18 04:36	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			10/05/18 04:36	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			10/05/18 04:36	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			10/05/18 04:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*77 - 120*		*10/05/18 04:36*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*10/05/18 04:36*	*1*
Dibromofluoromethane (Surr)	*109*		*75 - 123*		*10/05/18 04:36*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*10/05/18 04:36*	*1*

Client Sample ID: 4009-27D — **Lab Sample ID: 480-142551-30**
Date Collected: 09/27/18 10:50 — **Matrix: Water**
Date Received: 09/28/18 01:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			10/05/18 05:03	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			10/05/18 05:03	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			10/05/18 05:03	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			10/05/18 05:03	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			10/05/18 05:03	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			10/05/18 05:03	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			10/05/18 05:03	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			10/05/18 05:03	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			10/05/18 05:03	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			10/05/18 05:03	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			10/05/18 05:03	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			10/05/18 05:03	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			10/05/18 05:03	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			10/05/18 05:03	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			10/05/18 05:03	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			10/05/18 05:03	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			10/05/18 05:03	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			10/05/18 05:03	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			10/05/18 05:03	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			10/05/18 05:03	1

Client Sample ID: 4009-27D
Date Collected: 09/27/18 10:50
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-30
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.6	J	10	3.0	ug/L			10/05/18 05:03	1
Benzene	1.0	U	1.0	0.41	ug/L			10/05/18 05:03	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			10/05/18 05:03	1
Bromoform	1.0	U	1.0	0.26	ug/L			10/05/18 05:03	1
Bromomethane	1.0	U	1.0	0.69	ug/L			10/05/18 05:03	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			10/05/18 05:03	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			10/05/18 05:03	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			10/05/18 05:03	1
Chloroethane	1.0	U	1.0	0.32	ug/L			10/05/18 05:03	1
Chloroform	1.0	U	1.0	0.34	ug/L			10/05/18 05:03	1
Chloromethane	1.0	U	1.0	0.35	ug/L			10/05/18 05:03	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			10/05/18 05:03	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			10/05/18 05:03	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			10/05/18 05:03	1
Dibromochloromethane	1.0	U *	1.0	0.32	ug/L			10/05/18 05:03	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			10/05/18 05:03	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			10/05/18 05:03	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			10/05/18 05:03	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			10/05/18 05:03	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/05/18 05:03	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			10/05/18 05:03	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			10/05/18 05:03	1
Styrene	1.0	U	1.0	0.73	ug/L			10/05/18 05:03	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			10/05/18 05:03	1
Toluene	1.0	U	1.0	0.51	ug/L			10/05/18 05:03	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			10/05/18 05:03	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			10/05/18 05:03	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			10/05/18 05:03	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			10/05/18 05:03	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			10/05/18 05:03	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			10/05/18 05:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*77 - 120*		*10/05/18 05:03*	*1*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*10/05/18 05:03*	*1*
Dibromofluoromethane (Surr)	*108*		*75 - 123*		*10/05/18 05:03*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*10/05/18 05:03*	*1*

Client Sample ID: 4009-28
Date Collected: 09/27/18 08:35
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-31
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	3.2		1.0	0.82	ug/L			10/05/18 05:29	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			10/05/18 05:29	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			10/05/18 05:29	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			10/05/18 05:29	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			10/05/18 05:29	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			10/05/18 05:29	1

Client Sample ID: 4009-28
Date Collected: 09/27/18 08:35
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-31
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			10/05/18 05:29	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			10/05/18 05:29	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			10/05/18 05:29	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			10/05/18 05:29	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			10/05/18 05:29	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			10/05/18 05:29	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			10/05/18 05:29	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			10/05/18 05:29	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			10/05/18 05:29	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			10/05/18 05:29	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			10/05/18 05:29	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			10/05/18 05:29	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			10/05/18 05:29	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			10/05/18 05:29	1
Acetone	**3.6**	**J**	10	3.0	ug/L			10/05/18 05:29	1
Benzene	1.0	U	1.0	0.41	ug/L			10/05/18 05:29	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			10/05/18 05:29	1
Bromoform	1.0	U	1.0	0.26	ug/L			10/05/18 05:29	1
Bromomethane	1.0	U	1.0	0.69	ug/L			10/05/18 05:29	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			10/05/18 05:29	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			10/05/18 05:29	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			10/05/18 05:29	1
Chloroethane	1.0	U	1.0	0.32	ug/L			10/05/18 05:29	1
Chloroform	1.0	U	1.0	0.34	ug/L			10/05/18 05:29	1
Chloromethane	1.0	U	1.0	0.35	ug/L			10/05/18 05:29	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			10/05/18 05:29	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			10/05/18 05:29	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			10/05/18 05:29	1
Dibromochloromethane	1.0	U *	1.0	0.32	ug/L			10/05/18 05:29	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			10/05/18 05:29	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			10/05/18 05:29	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			10/05/18 05:29	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			10/05/18 05:29	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/05/18 05:29	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			10/05/18 05:29	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			10/05/18 05:29	1
Styrene	1.0	U	1.0	0.73	ug/L			10/05/18 05:29	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			10/05/18 05:29	1
Toluene	1.0	U	1.0	0.51	ug/L			10/05/18 05:29	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			10/05/18 05:29	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			10/05/18 05:29	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			10/05/18 05:29	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			10/05/18 05:29	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			10/05/18 05:29	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			10/05/18 05:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*77 - 120*		*10/05/18 05:29*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*10/05/18 05:29*	*1*
Dibromofluoromethane (Surr)	*113*		*75 - 123*		*10/05/18 05:29*	*1*

Client Sample ID: 4009-28

Date Collected: 09/27/18 08:35
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-31

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	*102*		*80 - 120*		*10/05/18 05:29*	*1*

Client Sample ID: 4009-29S

Date Collected: 09/27/18 10:20
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-32

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**960**		10	8.2	ug/L			10/05/18 05:56	10
1,1,2,2-Tetrachloroethane	10	U	10	2.1	ug/L			10/05/18 05:56	10
1,1,2-Trichloro-1,2,2-trifluoroethane	**5.0**	**J**	10	3.1	ug/L			10/05/18 05:56	10
1,1,2-Trichloroethane	10	U	10	2.3	ug/L			10/05/18 05:56	10
1,1-Dichloroethane	**90**		10	3.8	ug/L			10/05/18 05:56	10
1,1-Dichloroethene	**74**		10	2.9	ug/L			10/05/18 05:56	10
1,2,3-Trimethylbenzene	10	U	10	2.6	ug/L			10/05/18 05:56	10
1,2,4-Trichlorobenzene	10	U	10	4.1	ug/L			10/05/18 05:56	10
1,2,4-Trimethylbenzene	10	U	10	7.5	ug/L			10/05/18 05:56	10
1,2-Dibromo-3-Chloropropane	10	U	10	3.9	ug/L			10/05/18 05:56	10
1,2-Dibromoethane	10	U	10	7.3	ug/L			10/05/18 05:56	10
1,2-Dichlorobenzene	10	U	10	7.9	ug/L			10/05/18 05:56	10
1,2-Dichloroethane	10	U	10	2.1	ug/L			10/05/18 05:56	10
1,2-Dichloropropane	10	U	10	7.2	ug/L			10/05/18 05:56	10
1,3,5-Trimethylbenzene	10	U	10	7.7	ug/L			10/05/18 05:56	10
1,3-Dichlorobenzene	10	U	10	7.8	ug/L			10/05/18 05:56	10
1,4-Dichlorobenzene	10	U	10	8.4	ug/L			10/05/18 05:56	10
2-Butanone (MEK)	100	U	100	13	ug/L			10/05/18 05:56	10
2-Hexanone	50	U	50	12	ug/L			10/05/18 05:56	10
4-Methyl-2-pentanone (MIBK)	50	U	50	21	ug/L			10/05/18 05:56	10
Acetone	100	U	100	30	ug/L			10/05/18 05:56	10
Benzene	10	U	10	4.1	ug/L			10/05/18 05:56	10
Bromodichloromethane	10	U	10	3.9	ug/L			10/05/18 05:56	10
Bromoform	10	U	10	2.6	ug/L			10/05/18 05:56	10
Bromomethane	10	U	10	6.9	ug/L			10/05/18 05:56	10
Carbon disulfide	10	U	10	1.9	ug/L			10/05/18 05:56	10
Carbon tetrachloride	10	U	10	2.7	ug/L			10/05/18 05:56	10
Chlorobenzene	10	U	10	7.5	ug/L			10/05/18 05:56	10
Chloroethane	10	U	10	3.2	ug/L			10/05/18 05:56	10
Chloroform	10	U	10	3.4	ug/L			10/05/18 05:56	10
Chloromethane	10	U	10	3.5	ug/L			10/05/18 05:56	10
cis-1,2-Dichloroethene	**470**		10	8.1	ug/L			10/05/18 05:56	10
cis-1,3-Dichloropropene	10	U	10	3.6	ug/L			10/05/18 05:56	10
Cyclohexane	10	U	10	1.8	ug/L			10/05/18 05:56	10
Dibromochloromethane	10	U *	10	3.2	ug/L			10/05/18 05:56	10
Dichlorodifluoromethane	10	U	10	6.8	ug/L			10/05/18 05:56	10
Ethylbenzene	10	U	10	7.4	ug/L			10/05/18 05:56	10
Isopropylbenzene	10	U	10	7.9	ug/L			10/05/18 05:56	10
Methyl acetate	25	U	25	13	ug/L			10/05/18 05:56	10
Methyl tert-butyl ether	10	U	10	1.6	ug/L			10/05/18 05:56	10

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-142551-1

Client Sample ID: 4009-29S
Date Collected: 09/27/18 10:20
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-32
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	10	U	10	1.6	ug/L			10/05/18 05:56	10
Methylene Chloride	10	U	10	4.4	ug/L			10/05/18 05:56	10
Styrene	10	U	10	7.3	ug/L			10/05/18 05:56	10
Tetrachloroethene	10	U	10	3.6	ug/L			10/05/18 05:56	10
Toluene	10	U	10	5.1	ug/L			10/05/18 05:56	10
trans-1,2-Dichloroethene	10	U	10	9.0	ug/L			10/05/18 05:56	10
trans-1,3-Dichloropropene	10	U	10	3.7	ug/L			10/05/18 05:56	10
Trichloroethene	**150**		10	4.6	ug/L			10/05/18 05:56	10
Trichlorofluoromethane	10	U	10	8.8	ug/L			10/05/18 05:56	10
Vinyl chloride	**100**		10	9.0	ug/L			10/05/18 05:56	10
Xylenes, Total	20	U	20	6.6	ug/L			10/05/18 05:56	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*77 - 120*		*10/05/18 05:56*	*10*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*		*10/05/18 05:56*	*10*
Dibromofluoromethane (Surr)	*113*		*75 - 123*		*10/05/18 05:56*	*10*
Toluene-d8 (Surr)	*107*		*80 - 120*		*10/05/18 05:56*	*10*

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-142551-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(77-120)	(73-120)	(75-123)	(80-120)
480-142551-1	4009-29I	108	99	110	104
480-142551-2	4009-29D	103	102	109	105
480-142551-3	4009-30	108	100	110	102
480-142551-4	4009-30A	108	100	104	103
480-142551-5	4009-11A	104	98	106	103
480-142551-6	DUP1	108	100	111	104
480-142551-7	DUP2	110	101	114	102
480-142551-8	4009-26	107	97	114	104
480-142551-9	TRIP BLANK1	104	102	108	105
480-142551-10	TRIP BLANK 2	106	101	107	104
480-142551-11	4009-7	110	100	111	107
480-142551-12	4009-8	104	101	112	106
480-142551-12 MS	4009-8	111	100	110	105
480-142551-12 MSD	4009-8	105	103	105	107
480-142551-13	WELL 1-1	112	99	115	102
480-142551-14	4009-9	110	96	113	100
480-142551-15	4009-10	111	100	111	106
480-142551-16	4009-11	102	103	104	103
480-142551-17	4009-12	103	100	111	105
480-142551-18	4009-13	105	100	111	101
480-142551-19	4009-13A	103	98	104	101
480-142551-20	4009-14	106	99	112	101
480-142551-21	4009-15	104	96	109	101
480-142551-22	4009-16	103	101	107	105
480-142551-23	4009-16A	111	97	107	100
480-142551-24	4009-18	100	98	104	103
480-142551-25	4009-19	105	100	105	101
480-142551-26	4009-21	108	100	109	102
480-142551-27	4009-22	107	102	110	105
480-142551-28	4009-27S	110	96	111	103
480-142551-29	4009-27I	109	98	109	104
480-142551-30	4009-27D	107	102	108	104
480-142551-31	4009-28	108	98	113	102
480-142551-32	4009-29S	102	101	113	107
480-142551-32 MS	4009-29S	105	103	106	101
480-142551-32 MSD	4009-29S	108	105	104	106
LCS 480-437600/5	Lab Control Sample	110	101	106	103
LCS 480-437800/5	Lab Control Sample	107	104	106	105
MB 480-437600/7	Method Blank	108	100	107	104
MB 480-437800/7	Method Blank	104	101	104	105

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-437600/7
Matrix: Water
Analysis Batch: 437600

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			10/04/18 11:05	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			10/04/18 11:05	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			10/04/18 11:05	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			10/04/18 11:05	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			10/04/18 11:05	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			10/04/18 11:05	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			10/04/18 11:05	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			10/04/18 11:05	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			10/04/18 11:05	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			10/04/18 11:05	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			10/04/18 11:05	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			10/04/18 11:05	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			10/04/18 11:05	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			10/04/18 11:05	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			10/04/18 11:05	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			10/04/18 11:05	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			10/04/18 11:05	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			10/04/18 11:05	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			10/04/18 11:05	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			10/04/18 11:05	1
Acetone	10	U	10	3.0	ug/L			10/04/18 11:05	1
Benzene	1.0	U	1.0	0.41	ug/L			10/04/18 11:05	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			10/04/18 11:05	1
Bromoform	1.0	U	1.0	0.26	ug/L			10/04/18 11:05	1
Bromomethane	1.0	U	1.0	0.69	ug/L			10/04/18 11:05	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			10/04/18 11:05	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			10/04/18 11:05	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			10/04/18 11:05	1
Chloroethane	1.0	U	1.0	0.32	ug/L			10/04/18 11:05	1
Chloroform	1.0	U	1.0	0.34	ug/L			10/04/18 11:05	1
Chloromethane	1.0	U	1.0	0.35	ug/L			10/04/18 11:05	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			10/04/18 11:05	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			10/04/18 11:05	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			10/04/18 11:05	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			10/04/18 11:05	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			10/04/18 11:05	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			10/04/18 11:05	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			10/04/18 11:05	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			10/04/18 11:05	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/04/18 11:05	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			10/04/18 11:05	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			10/04/18 11:05	1
Styrene	1.0	U	1.0	0.73	ug/L			10/04/18 11:05	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			10/04/18 11:05	1
Toluene	1.0	U	1.0	0.51	ug/L			10/04/18 11:05	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			10/04/18 11:05	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			10/04/18 11:05	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			10/04/18 11:05	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-437600/7
Matrix: Water
Analysis Batch: 437600

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			10/04/18 11:05	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			10/04/18 11:05	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			10/04/18 11:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*77 - 120*		*10/04/18 11:05*	*1*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*10/04/18 11:05*	*1*
Dibromofluoromethane (Surr)	*107*		*75 - 123*		*10/04/18 11:05*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*10/04/18 11:05*	*1*

Lab Sample ID: LCS 480-437600/5
Matrix: Water
Analysis Batch: 437600

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	26.0		ug/L		104	73 - 126
1,1,2,2-Tetrachloroethane	25.0	23.5		ug/L		94	76 - 120
1,1,2-Trichloro-1,2,2-trifluoroetha ne	25.0	24.7		ug/L		99	61 - 148
1,1,2-Trichloroethane	25.0	23.1		ug/L		92	76 - 122
1,1-Dichloroethane	25.0	25.5		ug/L		102	77 - 120
1,1-Dichloroethene	25.0	25.8		ug/L		103	66 - 127
1,2,3-Trimethylbenzene	25.0	26.4		ug/L		106	78 - 120
1,2,4-Trichlorobenzene	25.0	21.2		ug/L		85	79 - 122
1,2,4-Trimethylbenzene	25.0	23.7		ug/L		95	76 - 121
1,2-Dibromo-3-Chloropropane	25.0	21.6		ug/L		86	56 - 134
1,2-Dibromoethane	25.0	24.5		ug/L		98	77 - 120
1,2-Dichlorobenzene	25.0	23.1		ug/L		93	80 - 124
1,2-Dichloroethane	25.0	23.0		ug/L		92	75 - 120
1,2-Dichloropropane	25.0	26.4		ug/L		106	76 - 120
1,3,5-Trimethylbenzene	25.0	24.2		ug/L		97	77 - 121
1,3-Dichlorobenzene	25.0	23.5		ug/L		94	77 - 120
1,4-Dichlorobenzene	25.0	23.2		ug/L		93	80 - 120
2-Butanone (MEK)	125	121		ug/L		97	57 - 140
2-Hexanone	125	119		ug/L		96	65 - 127
4-Methyl-2-pentanone (MIBK)	125	117		ug/L		94	71 - 125
Acetone	125	126		ug/L		100	56 - 142
Benzene	25.0	24.2		ug/L		97	71 - 124
Bromodichloromethane	25.0	24.2		ug/L		97	80 - 122
Bromoform	25.0	25.0		ug/L		100	61 - 132
Bromomethane	25.0	30.1		ug/L		120	55 - 144
Carbon disulfide	25.0	25.1		ug/L		100	59 - 134
Carbon tetrachloride	25.0	27.4		ug/L		110	72 - 134
Chlorobenzene	25.0	24.4		ug/L		98	80 - 120
Chloroethane	25.0	25.2		ug/L		101	69 - 136
Chloroform	25.0	24.2		ug/L		97	73 - 127
Chloromethane	25.0	20.8		ug/L		83	68 - 124
cis-1,2-Dichloroethene	25.0	26.3		ug/L		105	74 - 124

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-437600/5
Matrix: Water
Analysis Batch: 437600

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,3-Dichloropropene	25.0	25.9		ug/L		104	74 - 124
Cyclohexane	25.0	23.1		ug/L		92	59 - 135
Dibromochloromethane	25.0	27.1		ug/L		108	75 - 125
Dichlorodifluoromethane	25.0	21.9		ug/L		87	59 - 135
Ethylbenzene	25.0	24.2		ug/L		97	77 - 123
Isopropylbenzene	25.0	22.9		ug/L		91	77 - 122
Methyl acetate	50.0	41.9		ug/L		84	74 - 133
Methyl tert-butyl ether	25.0	26.1		ug/L		105	77 - 120
Methylcyclohexane	25.0	24.6		ug/L		99	68 - 134
Methylene Chloride	25.0	25.0		ug/L		100	75 - 124
Styrene	25.0	23.4		ug/L		94	80 - 120
Tetrachloroethene	25.0	25.0		ug/L		100	74 - 122
Toluene	25.0	24.5		ug/L		98	80 - 122
trans-1,2-Dichloroethene	25.0	25.2		ug/L		101	73 - 127
trans-1,3-Dichloropropene	25.0	24.1		ug/L		96	80 - 120
Trichloroethene	25.0	25.4		ug/L		101	74 - 123
Trichlorofluoromethane	25.0	28.6		ug/L		114	62 - 150
Vinyl chloride	25.0	25.9		ug/L		104	65 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*110*		*77 - 120*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*
Dibromofluoromethane (Surr)	*106*		*75 - 123*
Toluene-d8 (Surr)	*103*		*80 - 120*

Lab Sample ID: 480-142551-12 MS
Matrix: Water
Analysis Batch: 437600

Client Sample ID: 4009-8
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	3700		1000	1110	*	ug/L		-258	73 - 126
1,1,2,2-Tetrachloroethane	40	U	1000	956		ug/L		96	76 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	40	U	1000	917		ug/L		92	61 - 148
1,1,2-Trichloroethane	40	U	1000	932		ug/L		93	76 - 122
1,1-Dichloroethane	150		1000	1000		ug/L		85	77 - 120
1,1-Dichloroethene	160		1000	1030		ug/L		87	66 - 127
1,2,3-Trimethylbenzene	40	U	1000	1040		ug/L		104	78 - 120
1,2,4-Trichlorobenzene	40	U	1000	860		ug/L		86	79 - 122
1,2,4-Trimethylbenzene	40	U	1000	905		ug/L		91	76 - 121
1,2-Dibromo-3-Chloropropane	40	U	1000	962		ug/L		96	56 - 134
1,2-Dibromoethane	40	U	1000	958		ug/L		96	77 - 120
1,2-Dichlorobenzene	40	U	1000	940		ug/L		94	80 - 124
1,2-Dichloroethane	40	U	1000	936		ug/L		94	75 - 120
1,2-Dichloropropane	40	U	1000	1010		ug/L		101	76 - 120
1,3,5-Trimethylbenzene	40	U	1000	933		ug/L		93	77 - 121
1,3-Dichlorobenzene	40	U	1000	910		ug/L		91	77 - 120
1,4-Dichlorobenzene	40	U	1000	931		ug/L		93	78 - 124

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 480-142551-12 MS
Matrix: Water
Analysis Batch: 437600

Client Sample ID: 4009-8
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Butanone (MEK)	400	U	5000	4040		ug/L		81	57 - 140
2-Hexanone	200	U	5000	4760		ug/L		95	65 - 127
4-Methyl-2-pentanone (MIBK)	200	U	5000	4770		ug/L		95	71 - 125
Acetone	400	U	5000	4060		ug/L		81	56 - 142
Benzene	40	U	1000	934		ug/L		93	71 - 124
Bromodichloromethane	40	U	1000	984		ug/L		98	80 - 122
Bromoform	40	U	1000	1040		ug/L		104	61 - 132
Bromomethane	40	U	1000	1200		ug/L		120	55 - 144
Carbon disulfide	40	U	1000	1030		ug/L		103	59 - 134
Carbon tetrachloride	40	U	1000	1060		ug/L		106	72 - 134
Chlorobenzene	40	U	1000	960		ug/L		96	80 - 120
Chloroethane	40	U	1000	999		ug/L		100	69 - 136
Chloroform	40	U	1000	945		ug/L		94	73 - 127
Chloromethane	40	U	1000	888		ug/L		89	68 - 124
cis-1,2-Dichloroethene	910		1000	1070	*	ug/L		16	74 - 124
cis-1,3-Dichloropropene	40	U	1000	982		ug/L		98	74 - 124
Cyclohexane	40	U	1000	890		ug/L		89	59 - 135
Dibromochloromethane	40	U	1000	1180		ug/L		118	75 - 125
Dichlorodifluoromethane	40	U	1000	969		ug/L		97	59 - 135
Ethylbenzene	40	U	1000	920		ug/L		92	77 - 123
Isopropylbenzene	40	U	1000	871		ug/L		87	77 - 122
Methyl acetate	100	U	2000	1890		ug/L		94	74 - 133
Methyl tert-butyl ether	40	U	1000	1040		ug/L		104	77 - 120
Methylcyclohexane	40	U	1000	909		ug/L		91	68 - 134
Methylene Chloride	40	U	1000	1020		ug/L		102	75 - 124
Styrene	40	U	1000	923		ug/L		92	80 - 120
Tetrachloroethene	40	U	1000	945		ug/L		95	74 - 122
Toluene	40	U	1000	946		ug/L		95	80 - 122
trans-1,2-Dichloroethene	40	U	1000	992		ug/L		99	73 - 127
trans-1,3-Dichloropropene	40	U	1000	943		ug/L		94	80 - 120
Trichloroethene	580		1000	1030	*	ug/L		45	74 - 123
Trichlorofluoromethane	40	U	1000	1100		ug/L		110	62 - 150
Vinyl chloride	40	U	1000	1070		ug/L		107	65 - 133

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*111*		*77 - 120*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*
Dibromofluoromethane (Surr)	*110*		*75 - 123*
Toluene-d8 (Surr)	*105*		*80 - 120*

Lab Sample ID: 480-142551-12 MSD
Matrix: Water
Analysis Batch: 437600

Client Sample ID: 4009-8
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	3700		1000	1140	*	ug/L		-255	73 - 126	3	15
1,1,2,2-Tetrachloroethane	40	U	1000	968		ug/L		97	76 - 120	1	15

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 480-142551-12 MSD
Matrix: Water
Analysis Batch: 437600

Client Sample ID: 4009-8
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,2-Trichloro-1,2,2-trifluoroethane	40	U	1000	935		ug/L		94	61 - 148	2	20
1,1,2-Trichloroethane	40	U	1000	994		ug/L		99	76 - 122	6	15
1,1-Dichloroethane	150		1000	989		ug/L		84	77 - 120	1	20
1,1-Dichloroethene	160		1000	1040		ug/L		89	66 - 127	1	16
1,2,3-Trimethylbenzene	40	U	1000	1090		ug/L		109	78 - 120	4	20
1,2,4-Trichlorobenzene	40	U	1000	872		ug/L		87	79 - 122	1	20
1,2,4-Trimethylbenzene	40	U	1000	953		ug/L		95	76 - 121	5	20
1,2-Dibromo-3-Chloropropane	40	U	1000	942		ug/L		94	56 - 134	2	15
1,2-Dibromoethane	40	U	1000	1030		ug/L		103	77 - 120	7	15
1,2-Dichlorobenzene	40	U	1000	973		ug/L		97	80 - 124	4	20
1,2-Dichloroethane	40	U	1000	916		ug/L		92	75 - 120	2	20
1,2-Dichloropropane	40	U	1000	979		ug/L		98	76 - 120	3	20
1,3,5-Trimethylbenzene	40	U	1000	966		ug/L		97	77 - 121	4	20
1,3-Dichlorobenzene	40	U	1000	959		ug/L		96	77 - 120	5	20
1,4-Dichlorobenzene	40	U	1000	958		ug/L		96	78 - 124	3	20
2-Butanone (MEK)	400	U	5000	4420		ug/L		88	57 - 140	9	20
2-Hexanone	200	U	5000	4360		ug/L		87	65 - 127	9	15
4-Methyl-2-pentanone (MIBK)	200	U	5000	4730		ug/L		95	71 - 125	1	35
Acetone	400	U	5000	3770		ug/L		75	56 - 142	8	15
Benzene	40	U	1000	922		ug/L		92	71 - 124	1	13
Bromodichloromethane	40	U	1000	936		ug/L		94	80 - 122	5	15
Bromoform	40	U	1000	1130		ug/L		113	61 - 132	8	15
Bromomethane	40	U	1000	1080		ug/L		108	55 - 144	10	15
Carbon disulfide	40	U	1000	1020		ug/L		102	59 - 134	1	15
Carbon tetrachloride	40	U	1000	1060		ug/L		106	72 - 134	0	15
Chlorobenzene	40	U	1000	1030		ug/L		103	80 - 120	7	25
Chloroethane	40	U	1000	970		ug/L		97	69 - 136	3	15
Chloroform	40	U	1000	946		ug/L		95	73 - 127	0	20
Chloromethane	40	U	1000	852		ug/L		85	68 - 124	4	15
cis-1,2-Dichloroethene	910		1000	1020	*	ug/L		11	74 - 124	4	15
cis-1,3-Dichloropropene	40	U	1000	995		ug/L		99	74 - 124	1	15
Cyclohexane	40	U	1000	895		ug/L		90	59 - 135	1	20
Dibromochloromethane	40	U	1000	1260	*	ug/L		126	75 - 125	7	15
Dichlorodifluoromethane	40	U	1000	978		ug/L		98	59 - 135	1	20
Ethylbenzene	40	U	1000	976		ug/L		98	77 - 123	6	15
Isopropylbenzene	40	U	1000	927		ug/L		93	77 - 122	6	20
Methyl acetate	100	U	2000	1730		ug/L		86	74 - 133	9	20
Methyl tert-butyl ether	40	U	1000	995		ug/L		100	77 - 120	4	37
Methylcyclohexane	40	U	1000	904		ug/L		90	68 - 134	1	20
Methylene Chloride	40	U	1000	994		ug/L		99	75 - 124	3	15
Styrene	40	U	1000	980		ug/L		98	80 - 120	6	20
Tetrachloroethene	40	U	1000	1020		ug/L		102	74 - 122	7	20
Toluene	40	U	1000	1000		ug/L		100	80 - 122	6	15
trans-1,2-Dichloroethene	40	U	1000	965		ug/L		96	73 - 127	3	20
trans-1,3-Dichloropropene	40	U	1000	1010		ug/L		101	80 - 120	7	15
Trichloroethene	580		1000	1030	*	ug/L		45	74 - 123	0	16
Trichlorofluoromethane	40	U	1000	1080		ug/L		108	62 - 150	1	20

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 480-142551-12 MSD
Matrix: Water
Analysis Batch: 437600

Client Sample ID: 4009-8
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vinyl chloride	40	U	1000	1040		ug/L		104	65 - 133	3	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*77 - 120*
4-Bromofluorobenzene (Surr)	*103*		*73 - 120*
Dibromofluoromethane (Surr)	*105*		*75 - 123*
Toluene-d8 (Surr)	*107*		*80 - 120*

Lab Sample ID: MB 480-437800/7
Matrix: Water
Analysis Batch: 437800

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			10/04/18 22:07	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			10/04/18 22:07	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			10/04/18 22:07	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			10/04/18 22:07	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			10/04/18 22:07	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			10/04/18 22:07	1
1,2,3-Trimethylbenzene	1.0	U	1.0	0.26	ug/L			10/04/18 22:07	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			10/04/18 22:07	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.75	ug/L			10/04/18 22:07	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			10/04/18 22:07	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			10/04/18 22:07	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			10/04/18 22:07	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			10/04/18 22:07	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			10/04/18 22:07	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.77	ug/L			10/04/18 22:07	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			10/04/18 22:07	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			10/04/18 22:07	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			10/04/18 22:07	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			10/04/18 22:07	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			10/04/18 22:07	1
Acetone	10	U	10	3.0	ug/L			10/04/18 22:07	1
Benzene	1.0	U	1.0	0.41	ug/L			10/04/18 22:07	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			10/04/18 22:07	1
Bromoform	1.0	U	1.0	0.26	ug/L			10/04/18 22:07	1
Bromomethane	1.0	U	1.0	0.69	ug/L			10/04/18 22:07	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			10/04/18 22:07	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			10/04/18 22:07	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			10/04/18 22:07	1
Chloroethane	1.0	U	1.0	0.32	ug/L			10/04/18 22:07	1
Chloroform	1.0	U	1.0	0.34	ug/L			10/04/18 22:07	1
Chloromethane	1.0	U	1.0	0.35	ug/L			10/04/18 22:07	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			10/04/18 22:07	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			10/04/18 22:07	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			10/04/18 22:07	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			10/04/18 22:07	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-437800/7
Matrix: Water
Analysis Batch: 437800

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			10/04/18 22:07	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			10/04/18 22:07	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			10/04/18 22:07	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			10/04/18 22:07	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/04/18 22:07	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			10/04/18 22:07	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			10/04/18 22:07	1
Styrene	1.0	U	1.0	0.73	ug/L			10/04/18 22:07	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			10/04/18 22:07	1
Toluene	1.0	U	1.0	0.51	ug/L			10/04/18 22:07	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			10/04/18 22:07	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			10/04/18 22:07	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			10/04/18 22:07	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			10/04/18 22:07	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			10/04/18 22:07	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			10/04/18 22:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*77 - 120*		*10/04/18 22:07*	*1*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*		*10/04/18 22:07*	*1*
Dibromofluoromethane (Surr)	*104*		*75 - 123*		*10/04/18 22:07*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*10/04/18 22:07*	*1*

Lab Sample ID: LCS 480-437800/5
Matrix: Water
Analysis Batch: 437800

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	26.9		ug/L		107	73 - 126
1,1,2,2-Tetrachloroethane	25.0	26.2		ug/L		105	76 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	23.5		ug/L		94	61 - 148
1,1,2-Trichloroethane	25.0	27.1		ug/L		108	76 - 122
1,1-Dichloroethane	25.0	26.8		ug/L		107	77 - 120
1,1-Dichloroethene	25.0	25.9		ug/L		103	66 - 127
1,2,3-Trimethylbenzene	25.0	28.0		ug/L		112	78 - 120
1,2,4-Trichlorobenzene	25.0	23.7		ug/L		95	79 - 122
1,2,4-Trimethylbenzene	25.0	25.0		ug/L		100	76 - 121
1,2-Dibromo-3-Chloropropane	25.0	24.1		ug/L		96	56 - 134
1,2-Dibromoethane	25.0	27.3		ug/L		109	77 - 120
1,2-Dichlorobenzene	25.0	25.4		ug/L		102	80 - 124
1,2-Dichloroethane	25.0	24.4		ug/L		98	75 - 120
1,2-Dichloropropane	25.0	27.2		ug/L		109	76 - 120
1,3,5-Trimethylbenzene	25.0	26.1		ug/L		105	77 - 121
1,3-Dichlorobenzene	25.0	25.6		ug/L		102	77 - 120
1,4-Dichlorobenzene	25.0	25.5		ug/L		102	80 - 120
2-Butanone (MEK)	125	142		ug/L		114	57 - 140
2-Hexanone	125	141		ug/L		113	65 - 127

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-437800/5
Matrix: Water
Analysis Batch: 437800

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Methyl-2-pentanone (MIBK)	125	134		ug/L		107	71 - 125
Acetone	125	151		ug/L		121	56 - 142
Benzene	25.0	24.7		ug/L		99	71 - 124
Bromodichloromethane	25.0	25.8		ug/L		103	80 - 122
Bromoform	25.0	27.9		ug/L		111	61 - 132
Bromomethane	25.0	28.6		ug/L		114	55 - 144
Carbon disulfide	25.0	25.1		ug/L		101	59 - 134
Carbon tetrachloride	25.0	27.5		ug/L		110	72 - 134
Chlorobenzene	25.0	27.0		ug/L		108	80 - 120
Chloroethane	25.0	25.1		ug/L		100	69 - 136
Chloroform	25.0	25.5		ug/L		102	73 - 127
Chloromethane	25.0	20.9		ug/L		84	68 - 124
cis-1,2-Dichloroethene	25.0	27.7		ug/L		111	74 - 124
cis-1,3-Dichloropropene	25.0	26.6		ug/L		106	74 - 124
Cyclohexane	25.0	21.7		ug/L		87	59 - 135
Dibromochloromethane	25.0	32.2	*	ug/L		129	75 - 125
Dichlorodifluoromethane	25.0	20.2		ug/L		81	59 - 135
Ethylbenzene	25.0	25.9		ug/L		103	77 - 123
Isopropylbenzene	25.0	24.1		ug/L		96	77 - 122
Methyl acetate	50.0	47.0		ug/L		94	74 - 133
Methyl tert-butyl ether	25.0	27.9		ug/L		112	77 - 120
Methylcyclohexane	25.0	23.2		ug/L		93	68 - 134
Methylene Chloride	25.0	28.7		ug/L		115	75 - 124
Styrene	25.0	26.1		ug/L		104	80 - 120
Tetrachloroethene	25.0	27.8		ug/L		111	74 - 122
Toluene	25.0	26.3		ug/L		105	80 - 122
trans-1,2-Dichloroethene	25.0	25.9		ug/L		104	73 - 127
trans-1,3-Dichloropropene	25.0	26.8		ug/L		107	80 - 120
Trichloroethene	25.0	25.3		ug/L		101	74 - 123
Trichlorofluoromethane	25.0	24.8		ug/L		99	62 - 150
Vinyl chloride	25.0	23.8		ug/L		95	65 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*77 - 120*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*
Dibromofluoromethane (Surr)	*106*		*75 - 123*
Toluene-d8 (Surr)	*105*		*80 - 120*

Lab Sample ID: 480-142551-32 MS
Matrix: Water
Analysis Batch: 437800

Client Sample ID: 4009-29S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	960		250	1140	E	ug/L		74	73 - 126
1,1,2,2-Tetrachloroethane	10	U	250	254		ug/L		102	76 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	J	250	253		ug/L		99	61 - 148
1,1,2-Trichloroethane	10	U	250	255		ug/L		102	76 - 122

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 480-142551-32 MS
Matrix: Water
Analysis Batch: 437800

Client Sample ID: 4009-29S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	90		250	340		ug/L		100	77 - 120
1,1-Dichloroethene	74		250	344		ug/L		108	66 - 127
1,2,3-Trimethylbenzene	10	U	250	267		ug/L		107	78 - 120
1,2,4-Trichlorobenzene	10	U	250	229		ug/L		92	79 - 122
1,2,4-Trimethylbenzene	10	U	250	253		ug/L		101	76 - 121
1,2-Dibromo-3-Chloropropane	10	U	250	244		ug/L		98	56 - 134
1,2-Dibromoethane	10	U	250	261		ug/L		105	77 - 120
1,2-Dichlorobenzene	10	U	250	254		ug/L		102	80 - 124
1,2-Dichloroethane	10	U	250	237		ug/L		95	75 - 120
1,2-Dichloropropane	10	U	250	271		ug/L		108	76 - 120
1,3,5-Trimethylbenzene	10	U	250	263		ug/L		105	77 - 121
1,3-Dichlorobenzene	10	U	250	256		ug/L		102	77 - 120
1,4-Dichlorobenzene	10	U	250	251		ug/L		100	78 - 124
2-Butanone (MEK)	100	U	1250	1270		ug/L		101	57 - 140
2-Hexanone	50	U	1250	1240		ug/L		99	65 - 127
4-Methyl-2-pentanone (MIBK)	50	U	1250	1250		ug/L		100	71 - 125
Acetone	100	U	1250	1060		ug/L		84	56 - 142
Benzene	10	U	250	259		ug/L		103	71 - 124
Bromodichloromethane	10	U	250	248		ug/L		99	80 - 122
Bromoform	10	U	250	271		ug/L		108	61 - 132
Bromomethane	10	U	250	298		ug/L		119	55 - 144
Carbon disulfide	10	U	250	243		ug/L		97	59 - 134
Carbon tetrachloride	10	U	250	311		ug/L		124	72 - 134
Chlorobenzene	10	U	250	267		ug/L		107	80 - 120
Chloroethane	10	U	250	270		ug/L		108	69 - 136
Chloroform	10	U	250	259		ug/L		103	73 - 127
Chloromethane	10	U	250	229		ug/L		92	68 - 124
cis-1,2-Dichloroethene	470		250	680		ug/L		83	74 - 124
cis-1,3-Dichloropropene	10	U	250	259		ug/L		103	74 - 124
Cyclohexane	10	U	250	250		ug/L		100	59 - 135
Dibromochloromethane	10	U *	250	309		ug/L		124	75 - 125
Dichlorodifluoromethane	10	U	250	225		ug/L		90	59 - 135
Ethylbenzene	10	U	250	259		ug/L		104	77 - 123
Isopropylbenzene	10	U	250	250		ug/L		100	77 - 122
Methyl acetate	25	U	500	453		ug/L		91	74 - 133
Methyl tert-butyl ether	10	U	250	259		ug/L		104	77 - 120
Methylcyclohexane	10	U	250	250		ug/L		100	68 - 134
Methylene Chloride	10	U	250	259		ug/L		104	75 - 124
Styrene	10	U	250	259		ug/L		104	80 - 120
Tetrachloroethene	10	U	250	257		ug/L		103	74 - 122
Toluene	10	U	250	262		ug/L		105	80 - 122
trans-1,2-Dichloroethene	10	U	250	264		ug/L		106	73 - 127
trans-1,3-Dichloropropene	10	U	250	254		ug/L		102	80 - 120
Trichloroethene	150		250	400		ug/L		99	74 - 123
Trichlorofluoromethane	10	U	250	281		ug/L		113	62 - 150
Vinyl chloride	100		250	354		ug/L		101	65 - 133

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 480-142551-32 MS
Matrix: Water
Analysis Batch: 437800

Client Sample ID: 4009-29S
Prep Type: Total/NA

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*77 - 120*
4-Bromofluorobenzene (Surr)	*103*		*73 - 120*
Dibromofluoromethane (Surr)	*106*		*75 - 123*
Toluene-d8 (Surr)	*101*		*80 - 120*

Lab Sample ID: 480-142551-32 MSD
Matrix: Water
Analysis Batch: 437800

Client Sample ID: 4009-29S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	960		250	1110	E *	ug/L		62	73 - 126	3	15
1,1,2,2-Tetrachloroethane	10	U	250	263		ug/L		105	76 - 120	3	15
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	J	250	265		ug/L		104	61 - 148	5	20
1,1,2-Trichloroethane	10	U	250	261		ug/L		104	76 - 122	2	15
1,1-Dichloroethane	90		250	352		ug/L		105	77 - 120	3	20
1,1-Dichloroethene	74		250	340		ug/L		106	66 - 127	1	16
1,2,3-Trimethylbenzene	10	U	250	279		ug/L		112	78 - 120	5	20
1,2,4-Trichlorobenzene	10	U	250	234		ug/L		94	79 - 122	2	20
1,2,4-Trimethylbenzene	10	U	250	257		ug/L		103	76 - 121	2	20
1,2-Dibromo-3-Chloropropane	10	U	250	251		ug/L		100	56 - 134	3	15
1,2-Dibromoethane	10	U	250	278		ug/L		111	77 - 120	6	15
1,2-Dichlorobenzene	10	U	250	258		ug/L		103	80 - 124	1	20
1,2-Dichloroethane	10	U	250	240		ug/L		96	75 - 120	1	20
1,2-Dichloropropane	10	U	250	271		ug/L		109	76 - 120	0	20
1,3,5-Trimethylbenzene	10	U	250	266		ug/L		106	77 - 121	1	20
1,3-Dichlorobenzene	10	U	250	260		ug/L		104	77 - 120	2	20
1,4-Dichlorobenzene	10	U	250	251		ug/L		101	78 - 124	0	20
2-Butanone (MEK)	100	U	1250	1240		ug/L		99	57 - 140	2	20
2-Hexanone	50	U	1250	1300		ug/L		104	65 - 127	5	15
4-Methyl-2-pentanone (MIBK)	50	U	1250	1300		ug/L		104	71 - 125	4	35
Acetone	100	U	1250	1050		ug/L		84	56 - 142	0	15
Benzene	10	U	250	253		ug/L		101	71 - 124	2	13
Bromodichloromethane	10	U	250	252		ug/L		101	80 - 122	2	15
Bromoform	10	U	250	280		ug/L		112	61 - 132	3	15
Bromomethane	10	U	250	298		ug/L		119	55 - 144	0	15
Carbon disulfide	10	U	250	241		ug/L		96	59 - 134	1	15
Carbon tetrachloride	10	U	250	293		ug/L		117	72 - 134	6	15
Chlorobenzene	10	U	250	271		ug/L		108	80 - 120	2	25
Chloroethane	10	U	250	259		ug/L		103	69 - 136	4	15
Chloroform	10	U	250	249		ug/L		100	73 - 127	4	20
Chloromethane	10	U	250	222		ug/L		89	68 - 124	3	15
cis-1,2-Dichloroethene	470		250	654	*	ug/L		72	74 - 124	4	15
cis-1,3-Dichloropropene	10	U	250	254		ug/L		102	74 - 124	2	15
Cyclohexane	10	U	250	238		ug/L		95	59 - 135	5	20
Dibromochloromethane	10	U *	250	314	*	ug/L		126	75 - 125	1	15
Dichlorodifluoromethane	10	U	250	228		ug/L		91	59 - 135	1	20
Ethylbenzene	10	U	250	263		ug/L		105	77 - 123	1	15

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 480-142551-32 MSD
Matrix: Water
Analysis Batch: 437800

Client Sample ID: 4009-29S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Isopropylbenzene	10	U	250	255		ug/L		102	77 - 122	2	20
Methyl acetate	25	U	500	448		ug/L		90	74 - 133	1	20
Methyl tert-butyl ether	10	U	250	269		ug/L		108	77 - 120	4	37
Methylcyclohexane	10	U	250	250		ug/L		100	68 - 134	0	20
Methylene Chloride	10	U	250	262		ug/L		105	75 - 124	1	15
Styrene	10	U	250	263		ug/L		105	80 - 120	2	20
Tetrachloroethene	10	U	250	265		ug/L		106	74 - 122	3	20
Toluene	10	U	250	270		ug/L		108	80 - 122	3	15
trans-1,2-Dichloroethene	10	U	250	269		ug/L		108	73 - 127	2	20
trans-1,3-Dichloropropene	10	U	250	257		ug/L		103	80 - 120	1	15
Trichloroethene	150		250	381		ug/L		91	74 - 123	5	16
Trichlorofluoromethane	10	U	250	277		ug/L		111	62 - 150	1	20
Vinyl chloride	100		250	346		ug/L		98	65 - 133	2	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*108*		*77 - 120*
4-Bromofluorobenzene (Surr)	*105*		*73 - 120*
Dibromofluoromethane (Surr)	*104*		*75 - 123*
Toluene-d8 (Surr)	*106*		*80 - 120*

GC/MS VOA

Analysis Batch: 437600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142551-1	4009-29I	Total/NA	Water	8260C	
480-142551-2	4009-29D	Total/NA	Water	8260C	
480-142551-3	4009-30	Total/NA	Water	8260C	
480-142551-4	4009-30A	Total/NA	Water	8260C	
480-142551-5	4009-11A	Total/NA	Water	8260C	
480-142551-7	DUP2	Total/NA	Water	8260C	
480-142551-8	4009-26	Total/NA	Water	8260C	
480-142551-9	TRIP BLANK1	Total/NA	Water	8260C	
480-142551-10	TRIP BLANK 2	Total/NA	Water	8260C	
480-142551-11	4009-7	Total/NA	Water	8260C	
480-142551-12	4009-8	Total/NA	Water	8260C	
480-142551-13	WELL 1-1	Total/NA	Water	8260C	
480-142551-14	4009-9	Total/NA	Water	8260C	
480-142551-15	4009-10	Total/NA	Water	8260C	
480-142551-16	4009-11	Total/NA	Water	8260C	
MB 480-437600/7	Method Blank	Total/NA	Water	8260C	
LCS 480-437600/5	Lab Control Sample	Total/NA	Water	8260C	
480-142551-12 MS	4009-8	Total/NA	Water	8260C	
480-142551-12 MSD	4009-8	Total/NA	Water	8260C	

Analysis Batch: 437800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142551-6	DUP1	Total/NA	Water	8260C	
480-142551-17	4009-12	Total/NA	Water	8260C	
480-142551-18	4009-13	Total/NA	Water	8260C	
480-142551-19	4009-13A	Total/NA	Water	8260C	
480-142551-20	4009-14	Total/NA	Water	8260C	
480-142551-21	4009-15	Total/NA	Water	8260C	
480-142551-22	4009-16	Total/NA	Water	8260C	
480-142551-23	4009-16A	Total/NA	Water	8260C	
480-142551-24	4009-18	Total/NA	Water	8260C	
480-142551-25	4009-19	Total/NA	Water	8260C	
480-142551-26	4009-21	Total/NA	Water	8260C	
480-142551-27	4009-22	Total/NA	Water	8260C	
480-142551-28	4009-27S	Total/NA	Water	8260C	
480-142551-29	4009-27I	Total/NA	Water	8260C	
480-142551-30	4009-27D	Total/NA	Water	8260C	
480-142551-31	4009-28	Total/NA	Water	8260C	
480-142551-32	4009-29S	Total/NA	Water	8260C	
MB 480-437800/7	Method Blank	Total/NA	Water	8260C	
LCS 480-437800/5	Lab Control Sample	Total/NA	Water	8260C	
480-142551-32 MS	4009-29S	Total/NA	Water	8260C	
480-142551-32 MSD	4009-29S	Total/NA	Water	8260C	

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-142551-1

Client Sample ID: 4009-29I — Lab Sample ID: 480-142551-1

Date Collected: 09/27/18 10:25 — **Matrix: Water**
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		20	437600	10/04/18 11:40	NMC	TAL BUF

Client Sample ID: 4009-29D — Lab Sample ID: 480-142551-2

Date Collected: 09/27/18 10:30 — **Matrix: Water**
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		5	437600	10/04/18 12:06	NMC	TAL BUF

Client Sample ID: 4009-30 — Lab Sample ID: 480-142551-3

Date Collected: 09/27/18 09:35 — **Matrix: Water**
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437600	10/04/18 12:33	NMC	TAL BUF

Client Sample ID: 4009-30A — Lab Sample ID: 480-142551-4

Date Collected: 09/27/18 09:40 — **Matrix: Water**
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437600	10/04/18 13:00	NMC	TAL BUF

Client Sample ID: 4009-11A — Lab Sample ID: 480-142551-5

Date Collected: 09/27/18 11:45 — **Matrix: Water**
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437600	10/04/18 13:27	NMC	TAL BUF

Client Sample ID: DUP1 — Lab Sample ID: 480-142551-6

Date Collected: 09/27/18 00:00 — **Matrix: Water**
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		5	437800	10/04/18 22:45	RJF	TAL BUF

Client Sample ID: DUP2 — **Lab Sample ID: 480-142551-7**
Date Collected: 09/27/18 00:00 — **Matrix: Water**
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		40	437600	10/04/18 14:21	NMC	TAL BUF

Client Sample ID: 4009-26 — **Lab Sample ID: 480-142551-8**
Date Collected: 09/27/18 12:00 — **Matrix: Water**
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		5	437600	10/04/18 14:47	NMC	TAL BUF

Client Sample ID: TRIP BLANK1 — **Lab Sample ID: 480-142551-9**
Date Collected: 09/27/18 00:00 — **Matrix: Water**
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437600	10/04/18 15:15	NMC	TAL BUF

Client Sample ID: TRIP BLANK 2 — **Lab Sample ID: 480-142551-10**
Date Collected: 09/27/18 00:00 — **Matrix: Water**
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437600	10/04/18 15:42	NMC	TAL BUF

Client Sample ID: 4009-7 — **Lab Sample ID: 480-142551-11**
Date Collected: 09/27/18 12:10 — **Matrix: Water**
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437600	10/04/18 16:09	NMC	TAL BUF

Client Sample ID: 4009-8 — **Lab Sample ID: 480-142551-12**
Date Collected: 09/27/18 12:05 — **Matrix: Water**
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		40	437600	10/04/18 16:36	NMC	TAL BUF

Client Sample ID: WELL 1-1 — **Lab Sample ID: 480-142551-13**
Date Collected: 09/27/18 08:25 — **Matrix: Water**
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		4	437600	10/04/18 17:03	NMC	TAL BUF

Client Sample ID: 4009-9 — **Lab Sample ID: 480-142551-14**
Date Collected: 09/27/18 11:35 — **Matrix: Water**
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437600	10/04/18 17:30	NMC	TAL BUF

Client Sample ID: 4009-10 — **Lab Sample ID: 480-142551-15**
Date Collected: 09/27/18 11:40 — **Matrix: Water**
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437600	10/04/18 17:56	NMC	TAL BUF

Client Sample ID: 4009-11 — **Lab Sample ID: 480-142551-16**
Date Collected: 09/27/18 11:50 — **Matrix: Water**
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437600	10/04/18 18:24	NMC	TAL BUF

Client Sample ID: 4009-12 — **Lab Sample ID: 480-142551-17**
Date Collected: 09/27/18 10:10 — **Matrix: Water**
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437800	10/04/18 23:13	RJF	TAL BUF

Client Sample ID: 4009-13 — **Lab Sample ID: 480-142551-18**
Date Collected: 09/27/18 10:55 — **Matrix: Water**
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437800	10/04/18 23:39	RJF	TAL BUF

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-142551-1

Client Sample ID: 4009-13A
Lab Sample ID: 480-142551-19
Date Collected: 09/27/18 11:00
Matrix: Water
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437800	10/05/18 00:07	RJF	TAL BUF

Client Sample ID: 4009-14
Lab Sample ID: 480-142551-20
Date Collected: 09/27/18 08:50
Matrix: Water
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437800	10/05/18 00:34	RJF	TAL BUF

Client Sample ID: 4009-15
Lab Sample ID: 480-142551-21
Date Collected: 09/27/18 09:50
Matrix: Water
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437800	10/05/18 01:00	RJF	TAL BUF

Client Sample ID: 4009-16
Lab Sample ID: 480-142551-22
Date Collected: 09/27/18 09:25
Matrix: Water
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437800	10/05/18 01:27	RJF	TAL BUF

Client Sample ID: 4009-16A
Lab Sample ID: 480-142551-23
Date Collected: 09/27/18 09:30
Matrix: Water
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437800	10/05/18 01:54	RJF	TAL BUF

Client Sample ID: 4009-18
Lab Sample ID: 480-142551-24
Date Collected: 09/27/18 09:00
Matrix: Water
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437800	10/05/18 02:21	RJF	TAL BUF

Client Sample ID: 4009-19 — **Lab Sample ID: 480-142551-25**
Date Collected: 09/27/18 09:15 — **Matrix: Water**
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437800	10/05/18 02:48	RJF	TAL BUF

Client Sample ID: 4009-21 — **Lab Sample ID: 480-142551-26**
Date Collected: 09/27/18 09:10 — **Matrix: Water**
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437800	10/05/18 03:15	RJF	TAL BUF

Client Sample ID: 4009-22 — **Lab Sample ID: 480-142551-27**
Date Collected: 09/27/18 08:45 — **Matrix: Water**
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437800	10/05/18 03:42	RJF	TAL BUF

Client Sample ID: 4009-27S — **Lab Sample ID: 480-142551-28**
Date Collected: 09/27/18 10:40 — **Matrix: Water**
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2	437800	10/05/18 04:09	RJF	TAL BUF

Client Sample ID: 4009-27I — **Lab Sample ID: 480-142551-29**
Date Collected: 09/27/18 10:45 — **Matrix: Water**
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437800	10/05/18 04:36	RJF	TAL BUF

Client Sample ID: 4009-27D — **Lab Sample ID: 480-142551-30**
Date Collected: 09/27/18 10:50 — **Matrix: Water**
Date Received: 09/28/18 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437800	10/05/18 05:03	RJF	TAL BUF

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-142551-1

Client Sample ID: 4009-28

Date Collected: 09/27/18 08:35
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-31

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437800	10/05/18 05:29	RJF	TAL BUF

Client Sample ID: 4009-29S

Date Collected: 09/27/18 10:20
Date Received: 09/28/18 01:30

Lab Sample ID: 480-142551-32

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		10	437800	10/05/18 05:56	RJF	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Accreditation/Certification Summary

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-142551-1

Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260C		Water	1,2,3-Trimethylbenzene

Method Summary

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-142551-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
5030C	Purge and Trap	SW846	TAL BUF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: ARCADIS U.S. Inc
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-142551-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-142551-1	4009-29I	Water	09/27/18 10:25	09/28/18 01:30
480-142551-2	4009-29D	Water	09/27/18 10:30	09/28/18 01:30
480-142551-3	4009-30	Water	09/27/18 09:35	09/28/18 01:30
480-142551-4	4009-30A	Water	09/27/18 09:40	09/28/18 01:30
480-142551-5	4009-11A	Water	09/27/18 11:45	09/28/18 01:30
480-142551-6	DUP1	Water	09/27/18 00:00	09/28/18 01:30
480-142551-7	DUP2	Water	09/27/18 00:00	09/28/18 01:30
480-142551-8	4009-26	Water	09/27/18 12:00	09/28/18 01:30
480-142551-9	TRIP BLANK1	Water	09/27/18 00:00	09/28/18 01:30
480-142551-10	TRIP BLANK 2	Water	09/27/18 00:00	09/28/18 01:30
480-142551-11	4009-7	Water	09/27/18 12:10	09/28/18 01:30
480-142551-12	4009-8	Water	09/27/18 12:05	09/28/18 01:30
480-142551-13	WELL 1-1	Water	09/27/18 08:25	09/28/18 01:30
480-142551-14	4009-9	Water	09/27/18 11:35	09/28/18 01:30
480-142551-15	4009-10	Water	09/27/18 11:40	09/28/18 01:30
480-142551-16	4009-11	Water	09/27/18 11:50	09/28/18 01:30
480-142551-17	4009-12	Water	09/27/18 10:10	09/28/18 01:30
480-142551-18	4009-13	Water	09/27/18 10:55	09/28/18 01:30
480-142551-19	4009-13A	Water	09/27/18 11:00	09/28/18 01:30
480-142551-20	4009-14	Water	09/27/18 08:50	09/28/18 01:30
480-142551-21	4009-15	Water	09/27/18 09:50	09/28/18 01:30
480-142551-22	4009-16	Water	09/27/18 09:25	09/28/18 01:30
480-142551-23	4009-16A	Water	09/27/18 09:30	09/28/18 01:30
480-142551-24	4009-18	Water	09/27/18 09:00	09/28/18 01:30
480-142551-25	4009-19	Water	09/27/18 09:15	09/28/18 01:30
480-142551-26	4009-21	Water	09/27/18 09:10	09/28/18 01:30
480-142551-27	4009-22	Water	09/27/18 08:45	09/28/18 01:30
480-142551-28	4009-27S	Water	09/27/18 10:40	09/28/18 01:30
480-142551-29	4009-27I	Water	09/27/18 10:45	09/28/18 01:30
480-142551-30	4009-27D	Water	09/27/18 10:50	09/28/18 01:30
480-142551-31	4009-28	Water	09/27/18 08:35	09/28/18 01:30
480-142551-32	4009-29S	Water	09/27/18 10:20	09/28/18 01:30

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRO

480-142551 COC

Client Information	Sampler: Arbuckle Thomas	Lab PM: Stone, Judy L	Carrier Tracking No(s):	COC No: 480-117976-27171.3
Client Contact: Ms. Katie Bidwell	Phone: (518) 250-7311	E-Mail: judy.stone@testamericainc.com		Page: Page 3 of 3
Company: ARCADIS U.S. Inc				Job #:
Address: 855 Route 146 Suite 210	Due Date Requested:			
City: Clifton Park	TAT Requested (days): Standard			
State, Zip: NY, 12065				
Phone: 518-250-7300(Tel)	PO #: Project 00266401.0000			
Email: katie.bidwell@arcadis-us.com	WO #: Contract D007618			
Project Name: NYSDEC-Standby VESTAL	Project #: 48005198			
Site: Vestal Water Supply	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260C - (MOD) TCL list VOA w/TMBs	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
4009-29I	9-27-18	1025	G	Water	X		X	3	
4009-29D		1030		Water				1	
4009-30		0935		Water					
4009-30A		0940		Water					
4009-11A		1145		Water					
DUP1		—		Water				2	
DUP2		—		Water				2	
4009-26		1200		Water				3	
TripBlank 1	—	—		Water	N	N	X	2	Trip Blank set per cooler
Trip Blank 2	—	—		Water	N	N	X	2	
		9-27	2hrs	Water					

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	9-27-2018 1500	Arcadis		9-27-18 1500	TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	9-27-18 1800	TA		9/28/18 0130	TAB
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.1°C #4

Ver: 08/04/2016

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Aubrey Thomas	Lab PM: Stone, Judy L	Carrier Tracking No(s):	COC No: 480-117976-27171.1
Client Contact: Ms. Katie Bidwell	Phone: (518) 250-7311	E-Mail: judy.stone@testamericainc.com		Page: Page 1 of 3
Company: ARCADIS U.S. Inc				Job #:
Address: 855 Route 146 Suite 210	Due Date Requested:			
City: Clifton Park	TAT Requested (days): Standard			
State, Zip: NY, 12065				
Phone: 518-250-7300(Tel)	PO #: Project 00266401.0000			
Email: katie.bidwell@arcadis-us.com	WO #: Contract D007618			
Project Name: NYSDEC-Standby VESTAL	Project #: 48005198			
Site: Vestal Water Supply	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260C - (MOD) TCL list VOA w/TMBs	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
4009-7	9-27-18	1210	G	Water	N	N	X	3	
4009-8		1205		Water					
~~Well 1-2A~~ Well 1-1		0825		Water					
4009-9		1135		Water					
4009-10		1140		Water					
4009-11		1150		Water					
4009-12		1010		Water					
4009-13		1055		Water					
4009-13A		1100		Water					
4009-14		0850		Water					
4009-15		0950		Water					

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Aubrey Thomas	9-27-2018 1500	Arcadis	Karl Lasher	9-27-18 1500	TA
2	Karl Lasher	9-27-18 1800	TA		9/28/18 0130	YOG
3						

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 1.1°C #4

Ver: 08/04/2016

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Aubrey Thomas	Lab PM: Stone, Judy L	Carrier Tracking No(s):	COC No: 480-117976-27171.2
Client Contact: Ms. Katie Bidwell	Phone: (518) 250-7311	E-Mail: judy.stone@testamericainc.com		Page: Page 2 of # 3
Company: ARCADIS U.S. Inc				Job #:

Address: 855 Route 146 Suite 210	Due Date Requested:	Analysis Requested	Preservation Codes:
City: Clifton Park	TAT Requested (days): Standard		A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: NY, 12065			
Phone: 518-250-7300(Tel)	PO #: Project 00266401.0000		
Email: katie.bidwell@arcadis-us.com	WO #: Contract D007618		
Project Name: NYSDEC-Standby VESTAL	Project #: 48005198		Other:
Site: Vestal Water Supply	SSOW#:		

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260C - (MOD) TCL list VOA w/TMBs	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
4009-16	9-27-18	0925	G	Water	N	N	X	3	
4009-16A		0930		Water					
4009-18		0900		Water					
4009-19		0915		Water					
4009-21		0910		Water					
4009-22		0845		Water					
4009-27S		1040		Water					
4009-27I		1045		Water					
4009-27D		1050		Water					
4009-28		0835		Water					
4009-29S		1020		Water					

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	9-27-2018 1500	Arcadis	[signature]	9-27-18 1500	TA
Relinquished by: [signature]	Date/Time: 9-27-18 1800	Company: TA	Received by: [signature]	Date/Time: 9/28/18 0830	Company: TAB
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.1°C #3 #4 VM 9/28/18

Ver: 08/04/2016

10/10/2018

Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 480-142551-1

Login Number: 142551

List Source: TestAmerica Buffalo

List Number: 1

Creator: Harper, Marcus D

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	ARCADIS
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

MICROBAC®

Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J8G1425

Town of Vestal

Scott Groats
701 Vestal Parkway West
Vestal, NY 13850-1363

Project Name: Town of Vestal Monthly/Quarterly

Project / PO Number: N/A
Received: 07/17/2018
Reported: 07/26/2018

Analytical Testing Parameters

Client Sample ID: 1-2A Raw
Sample Matrix: Drinking Water
Lab Sample ID: J8G1425-01
Collected By: Julian Motola
Collection Date: 07/17/2018 8:41

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 524.2/EPA 524.2, Rv 4.1								
Benzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
Bromobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
Bromochloromethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
n-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
tert-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
sec-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
Carbon tetrachloride	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
Chlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
Chloroethane (Ethyl chloride)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
2-Chlorotoluene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
4-Chlorotoluene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
Dibromomethane (Methylene bromide)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
1,2-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
1,4-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
1,3-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
Dichlorodifluoromethane (Freon-12)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
1,1-Dichloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
1,2-Dichloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
1,1-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
cis-1,2-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
trans-1,2-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
2,2-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
1,2-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
1,3-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
cis-1,3-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
trans-1,3-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
1,1-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
Ethylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
Hexachlorobutadiene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
Isopropylbenzene (Cumene)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
4-Isopropyltoluene (p-Isopropyltoluene)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
Methyl bromide (Bromomethane)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
Methyl tert-butyl ether (MTBE)	<0.500	10 NYVOA	0.500	ug/L			07/23/18 1936	RJH
Methyl chloride (Chloromethane)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
Methylene chloride (Dichloromethane)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
Naphthalene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH

CERTIFICATE OF ANALYSIS

J8G1425

Client Sample ID:	1-2A Raw		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola
Lab Sample ID:	J8G1425-01	**Collection Date:**	07/17/2018 8:41

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
n-Propylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
Styrene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
1,1,2,2-Tetrachloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
1,1,1,2-Tetrachloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
Tetrachloroethene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
Toluene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
1,2,4-Trichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
1,2,3-Trichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
1,1,2-Trichloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
1,1,1-Trichloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
Trichloroethene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
Trichlorofluoromethane (Freon 11)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
1,2,3-Trichloropropane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
1,3,5-Trimethylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
1,2,4-Trimethylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
Vinyl chloride	<0.500	2 NYVOA	0.500	ug/L			07/23/18 1936	RJH
m,p-Xylene	<1.00	5 NYVOA	1.00	ug/L	Y		07/23/18 1936	RJH
o-Xylene	<0.500	5 NYVOA	0.500	ug/L	Y		07/23/18 1936	RJH
Xylenes (total)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 1936	RJH
Surrogate: 4-Bromofluorobenzene	87.4	Limit: 70-130		% Rec			07/23/18 1936	RJH
Surrogate: 1,2-Dichlorobenzene-d4	80.4	Limit: 70-130		% Rec			07/23/18 1936	RJH

CERTIFICATE OF ANALYSIS

J8G1425

Client Sample ID:	1-2A Finished		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola
Lab Sample ID:	J8G1425-02	**Collection Date:**	07/17/2018 8:43

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 524.2/EPA 524.2, Rv 4.1								
Benzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
Bromobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
Bromochloromethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
n-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
tert-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
sec-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
Carbon tetrachloride	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
Chlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
Chloroethane (Ethyl chloride)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
2-Chlorotoluene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
4-Chlorotoluene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
Dibromomethane (Methylene bromide)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
1,2-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
1,4-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
1,3-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
Dichlorodifluoromethane (Freon-12)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
1,1-Dichloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
1,2-Dichloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
1,1-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
cis-1,2-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
trans-1,2-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
2,2-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
1,2-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
1,3-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
cis-1,3-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
trans-1,3-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
1,1-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
Ethylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
Hexachlorobutadiene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
Isopropylbenzene (Cumene)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
4-Isopropyltoluene (p-Isopropyltoluene)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
Methyl bromide (Bromomethane)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
Methyl tert-butyl ether (MTBE)	<0.500	10 NYVOA	0.500	ug/L			07/23/18 2004	RJH
Methyl chloride (Chloromethane)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
Methylene chloride (Dichloromethane)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
Naphthalene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
n-Propylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
Styrene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
1,1,2,2-Tetrachloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
1,1,1,2-Tetrachloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
Tetrachloroethene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
Toluene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
1,2,4-Trichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH

CERTIFICATE OF ANALYSIS

J8G1425

Client Sample ID:	1-2A Finished		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola
Lab Sample ID:	J8G1425-02	**Collection Date:**	07/17/2018 8:43

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
1,2,3-Trichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
1,1,2-Trichloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
1,1,1-Trichloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
Trichloroethene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
Trichlorofluoromethane (Freon 11)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
1,2,3-Trichloropropane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
1,3,5-Trimethylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
1,2,4-Trimethylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
Vinyl chloride	<0.500	2 NYVOA	0.500	ug/L			07/23/18 2004	RJH
m,p-Xylene	<1.00	5 NYVOA	1.00	ug/L	Y		07/23/18 2004	RJH
o-Xylene	<0.500	5 NYVOA	0.500	ug/L	Y		07/23/18 2004	RJH
Xylenes (total)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2004	RJH
Surrogate: 4-Bromofluorobenzene	86.2	Limit: 70-130		% Rec			07/23/18 2004	RJH
Surrogate: 1,2-Dichlorobenzene-d4	79.0	Limit: 70-130		% Rec			07/23/18 2004	RJH

CERTIFICATE OF ANALYSIS

J8G1425

Client Sample ID:	1-3 Raw		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola
Lab Sample ID:	J8G1425-03	**Collection Date:**	07/17/2018 8:35

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 524.2/EPA 524.2, Rv 4.1								
Benzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
Bromobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
Bromochloromethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
n-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
tert-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
sec-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
Carbon tetrachloride	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
Chlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
Chloroethane (Ethyl chloride)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
2-Chlorotoluene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
4-Chlorotoluene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
Dibromomethane (Methylene bromide)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
1,2-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
1,4-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
1,3-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
Dichlorodifluoromethane (Freon-12)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
1,1-Dichloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
1,2-Dichloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
1,1-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
cis-1,2-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
trans-1,2-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
2,2-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
1,2-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
1,3-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
cis-1,3-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
trans-1,3-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
1,1-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
Ethylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
Hexachlorobutadiene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
Isopropylbenzene (Cumene)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
4-Isopropyltoluene (p-Isopropyltoluene)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
Methyl bromide (Bromomethane)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
Methyl tert-butyl ether (MTBE)	<0.500	10 NYVOA	0.500	ug/L			07/23/18 2031	RJH
Methyl chloride (Chloromethane)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
Methylene chloride (Dichloromethane)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
Naphthalene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
n-Propylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
Styrene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
1,1,2,2-Tetrachloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
1,1,1,2-Tetrachloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
Tetrachloroethene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
Toluene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
1,2,4-Trichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH

CERTIFICATE OF ANALYSIS

J8G1425

Client Sample ID:	1-3 Raw		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola
Lab Sample ID:	J8G1425-03	**Collection Date:**	07/17/2018 8:35

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
1,2,3-Trichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
1,1,2-Trichloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
1,1,1-Trichloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
Trichloroethene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
Trichlorofluoromethane (Freon 11)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
1,2,3-Trichloropropane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
1,3,5-Trimethylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
1,2,4-Trimethylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
Vinyl chloride	<0.500	2 NYVOA	0.500	ug/L			07/23/18 2031	RJH
m,p-Xylene	<1.00	5 NYVOA	1.00	ug/L	Y		07/23/18 2031	RJH
o-Xylene	<0.500	5 NYVOA	0.500	ug/L	Y		07/23/18 2031	RJH
Xylenes (total)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2031	RJH
Surrogate: 4-Bromofluorobenzene	84.2	Limit: 70-130		% Rec			07/23/18 2031	RJH
Surrogate: 1,2-Dichlorobenzene-d4	77.8	Limit: 70-130		% Rec			07/23/18 2031	RJH

CERTIFICATE OF ANALYSIS

J8G1425

Client Sample ID:	1-3 Finished		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola
Lab Sample ID:	J8G1425-04	**Collection Date:**	07/17/2018 8:37

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 524.2/EPA 524.2, Rv 4.1								
Benzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
Bromobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
Bromochloromethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
n-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
tert-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
sec-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
Carbon tetrachloride	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
Chlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
Chloroethane (Ethyl chloride)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
2-Chlorotoluene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
4-Chlorotoluene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
Dibromomethane (Methylene bromide)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
1,2-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
1,4-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
1,3-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
Dichlorodifluoromethane (Freon-12)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
1,1-Dichloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
1,2-Dichloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
1,1-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
cis-1,2-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
trans-1,2-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
2,2-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
1,2-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
1,3-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
cis-1,3-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
trans-1,3-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
1,1-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
Ethylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
Hexachlorobutadiene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
Isopropylbenzene (Cumene)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
4-Isopropyltoluene (p-Isopropyltoluene)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
Methyl bromide (Bromomethane)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
Methyl tert-butyl ether (MTBE)	<0.500	10 NYVOA	0.500	ug/L			07/23/18 2059	RJH
Methyl chloride (Chloromethane)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
Methylene chloride (Dichloromethane)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
Naphthalene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
n-Propylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
Styrene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
1,1,2,2-Tetrachloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
1,1,1,2-Tetrachloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
Tetrachloroethene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
Toluene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
1,2,4-Trichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH

CERTIFICATE OF ANALYSIS

J8G1425

Client Sample ID:	1-3 Finished		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola
Lab Sample ID:	J8G1425-04	**Collection Date:**	07/17/2018 8:37

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
1,2,3-Trichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
1,1,2-Trichloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
1,1,1-Trichloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
Trichloroethene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
Trichlorofluoromethane (Freon 11)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
1,2,3-Trichloropropane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
1,3,5-Trimethylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
1,2,4-Trimethylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
Vinyl chloride	<0.500	2 NYVOA	0.500	ug/L			07/23/18 2059	RJH
m,p-Xylene	<1.00	5 NYVOA	1.00	ug/L	Y		07/23/18 2059	RJH
o-Xylene	<0.500	5 NYVOA	0.500	ug/L	Y		07/23/18 2059	RJH
Xylenes (total)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2059	RJH
Surrogate: 4-Bromofluorobenzene	85.2	Limit: 70-130		% Rec			07/23/18 2059	RJH
Surrogate: 1,2-Dichlorobenzene-d4	78.8	Limit: 70-130		% Rec			07/23/18 2059	RJH

CERTIFICATE OF ANALYSIS

J8G1425

Client Sample ID:	Trip Blank		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola
Lab Sample ID:	J8G1425-07	**Collection Date:**	07/16/2018 17:15

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 524.2/EPA 524.2, Rv 4.1								
Benzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
Bromobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
Bromochloromethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
n-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
tert-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
sec-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
Carbon tetrachloride	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
Chlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
Chloroethane (Ethyl chloride)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
2-Chlorotoluene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
4-Chlorotoluene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
Dibromomethane (Methylene bromide)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
1,2-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
1,4-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
1,3-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
Dichlorodifluoromethane (Freon-12)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
1,1-Dichloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
1,2-Dichloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
1,1-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
cis-1,2-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
trans-1,2-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
2,2-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
1,2-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
1,3-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
cis-1,3-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
trans-1,3-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
1,1-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
Ethylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
Hexachlorobutadiene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
Isopropylbenzene (Cumene)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
4-Isopropyltoluene (p-Isopropyltoluene)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
Methyl bromide (Bromomethane)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
Methyl tert-butyl ether (MTBE)	<0.500	10 NYVOA	0.500	ug/L			07/23/18 2220	RJH
Methyl chloride (Chloromethane)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
Methylene chloride (Dichloromethane)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
Naphthalene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
n-Propylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
Styrene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
1,1,2,2-Tetrachloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
1,1,1,2-Tetrachloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
Tetrachloroethene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
Toluene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
1,2,4-Trichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH

MICROBAC®

Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J8G1425

Client Sample ID:	Trip Blank		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola
Lab Sample ID:	J8G1425-07	**Collection Date:**	07/16/2018 17:15

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
1,2,3-Trichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
1,1,2-Trichloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
1,1,1-Trichloroethane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
Trichloroethene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
Trichlorofluoromethane (Freon 11)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
1,2,3-Trichloropropane	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
1,3,5-Trimethylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
1,2,4-Trimethylbenzene	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
Vinyl chloride	<0.500	2 NYVOA	0.500	ug/L			07/23/18 2220	RJH
m,p-Xylene	<1.00	5 NYVOA	1.00	ug/L	Y		07/23/18 2220	RJH
o-Xylene	<0.500	5 NYVOA	0.500	ug/L	Y		07/23/18 2220	RJH
Xylenes (total)	<0.500	5 NYVOA	0.500	ug/L			07/23/18 2220	RJH
Surrogate: 4-Bromofluorobenzene	82.6	Limit: 70-130		% Rec			07/23/18 2220	RJH
Surrogate: 1,2-Dichlorobenzene-d4	76.8	Limit: 70-130		% Rec			07/23/18 2220	RJH

*Results in **bold** have exceeded a limit defined for this project. Limits are provided for reference but as regulatory limits change frequently, Microbac Laboratories, Inc. advises the recipient of this report to confirm such limits and units of concentration with the appropriate Federal, state or local authorities before acting on the data.*

Definitions

MCL:	US EPA Maximum Contaminant Level
NYVOA:	New York DOH Part 5 Public Water System MCLs
RL:	Reporting Limit
Y:	This analyte is not on the laboratory's current scope of accreditation.

Project Requested Certification(s)

Microbac Laboratories, Inc., New York Division
NY Lab ID No.: 10795 — New York State Department of Health

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included.

Reviewed and Approved By:

Renee Lantz
Customer Relationship Specialist
Reported: 07/26/2018 16:44

Microbac Laboratories, Inc., New York Division

Chain of Custody

J8G1425

TAT 7 days

Town of Vestal

Scott Groats
701 Vestal Parkway West
Vestal, NY 13850-1363
Phone: (607) 748-1514

Project Name: Town of Vestal Monthly/Quarterly

Project / PO Number: N/A
Tenatively Scheduled: 7/10/2018
Field Route ID: NY-Route 1 Bing

Client Sample ID: 1-2A Raw
Lab Sample ID: J8G1425-01
Matrix: Drinking Water
Type: Grab

Sampled Date & Time: 7/17/18 08:41

Analysis	Method	Field Results/Comments	Hold Time
524.2 VOC NY	EPA 524.2, Rv 4.1		14.00 days
		Container(s)	Designator
		V-40ml Clear vial, HCL	A
		V-40ml Clear vial, HCL	B

Client Sample ID: 1-2A Finished
Lab Sample ID: J8G1425-02
Matrix: Drinking Water
Type: Grab

Sampled Date & Time: 7/17/18 08:43

Analysis	Method	Field Results/Comments	Hold Time
524.2 VOC NY	EPA 524.2, Rv 4.1		14.00 days
		Container(s)	Designator
		V-40ml Clear Vial, Ascorbic Acid, HCL	A
		V-40ml Clear Vial, Ascorbic Acid, HCL	B

Client Sample ID: 1-3 Raw
Lab Sample ID: J8G1425-03
Matrix: Drinking Water
Type: Grab

Sampled Date & Time: 7/17/18 08:35

Analysis	Method	Field Results/Comments	Hold Time
524.2 VOC NY	EPA 524.2, Rv 4.1		14.00 days
		Container(s)	Designator
		V-40ml Clear vial, HCL	A
		V-40ml Clear vial, HCL	B

Client Sample ID: 1-3 Finished
Lab Sample ID: J8G1425-04
Matrix: Drinking Water
Type: Grab

Sampled Date & Time: 7/17/18 08:37

Microbac Laboratories, Inc., New York Division

Chain of Custody

J8G1425

Town of Vestal

Scott Groats
701 Vestal Parkway West
Vestal, NY 13850-1363
Phone: (607) 748-1514

Project Name: Town of Vestal Monthly/Quarterly

Project / PO Number: N/A
Tentatively Scheduled: 7/10/2018
Field Route ID: NY-Route 1 Bing

Analysis	Method	Field Results/Comments	Hold Time
524.2 VOC NY	EPA 524.2, Rv 4.1		14.00 days
		Container(s)	Designator
		V-40ml Clear Vial, Ascorbic Acid, HCL	A
		V-40ml Clear Vial, Ascorbic Acid, HCL	B

Client Sample ID: 4-2 Raw
Lab Sample ID: J8G1425-05
Matrix: Drinking Water
Type: Grab

Sampled Date & Time: 7/17/18 09:08

Analysis	Method	Field Results/Comments	Hold Time
524.2 VOC NY	EPA 524.2, Rv 4.1		14.00 days
		Container(s)	Designator
		V-40ml Clear vial, HCL	A
		V-40ml Clear vial, HCL	B

Client Sample ID: 4-2 Finished
Lab Sample ID: J8G1425-06
Matrix: Drinking Water
Type: Grab

Sampled Date & Time: 7/17/18 09:18

Analysis	Method	Field Results/Comments	Hold Time
524.2 VOC NY	EPA 524.2, Rv 4.1		14.00 days
		Container(s)	Designator
		V-40ml Clear Vial, Ascorbic Acid, HCL	A
		V-40ml Clear Vial, Ascorbic Acid, HCL	B

Client Sample ID: Trip Blank
Lab Sample ID: J8G1425-07
Matrix: Drinking Water
Type: Trip Blank

Sampled Date & Time: 7/16/18 17:15

Analysis	Method	Field Results/Comments	Hold Time
524.2 VOC NY	EPA 524.2, Rv 4.1		14.00 days
		Container(s)	Designator
		V-40ml Clear vial, HCL	A

Microbac Laboratories, Inc., New York Division

Chain of Custody

J8G1425

Town of Vestal

Scott Groats
701 Vestal Parkway West
Vestal, NY 13850-1363
Phone: (607) 748-1514

Project Name: Town of Vestal Monthly/Quarterly

Project / PO Number: N/A
Tenatively Scheduled: 7/10/2018
Field Route ID: NY-Route 1 Bing

Sampled/Relinquished by:	Date/Time: 7/17/18 15:40	Received by:
Printed Name: ~~Bethany Robinson~~		Printed Name: Kayla Conway
Relinquished by:	Date/Time:	Received by:
Printed Name:		Printed Name:
Relinquished by:	Date/Time:	Received by:
Printed Name:		Printed Name:

As Received at Laboratory: On Ice: (Yes) / No Temp 2.4 °C Total Bottles: 13

Microbac Laboratories may be unable to perform a portion of the requested testing in which case we will subcontract the analysis to an appropriately accredited laboratory. By signing this document you are acknowledging that you have been informed by Microbac that testing could be subcontracted and agree with this arrangement.

Notes:

MICROBAC®

Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J8H2278

Town of Vestal

Scott Groats
701 Vestal Parkway West
Vestal, NY 13850-1363

Project Name: Town of Vestal Monthly/Quarterly

Project / PO Number: N/A
Received: 08/27/2018
Reported: 09/04/2018

Analytical Testing Parameters

Client Sample ID: 1-2A Raw
Sample Matrix: Drinking Water
Lab Sample ID: J8H2278-01
Collected By: Julian Motola
Collection Date: 08/27/2018 10:20

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 524.2/EPA 524.2, Rv 4.1								
Benzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
Bromobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
Bromochloromethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
n-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
tert-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
sec-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
Carbon tetrachloride	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
Chlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
Chloroethane (Ethyl chloride)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
2-Chlorotoluene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
4-Chlorotoluene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
Dibromomethane (Methylene bromide)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
1,2-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
1,4-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
1,3-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
Dichlorodifluoromethane (Freon-12)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
1,1-Dichloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
1,2-Dichloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
1,1-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
cis-1,2-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
trans-1,2-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
2,2-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
1,2-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
1,3-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
cis-1,3-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
trans-1,3-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
1,1-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
Ethylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
Hexachlorobutadiene	<0.500	5 NYVOA	0.500	ug/L	Q2		09/01/18 0546	RJH
Isopropylbenzene (Cumene)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
4-Isopropyltoluene (p-Isopropyltoluene)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
Methyl bromide (Bromomethane)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
Methyl tert-butyl ether (MTBE)	<0.500	10 NYVOA	0.500	ug/L			09/01/18 0546	RJH
Methyl chloride (Chloromethane)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
Methylene chloride (Dichloromethane)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
Naphthalene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH

CERTIFICATE OF ANALYSIS

J8H2278

Client Sample ID:	1-2A Raw		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola
Lab Sample ID:	J8H2278-01	**Collection Date:**	08/27/2018 10:20

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
n-Propylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
Styrene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
1,1,2,2-Tetrachloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
1,1,1,2-Tetrachloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
Tetrachloroethene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
Toluene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
1,2,4-Trichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
1,2,3-Trichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
1,1,2-Trichloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
1,1,1-Trichloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
Trichloroethene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
Trichlorofluoromethane (Freon 11)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
1,2,3-Trichloropropane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
1,3,5-Trimethylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
1,2,4-Trimethylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
Vinyl chloride	<0.500	2 NYVOA	0.500	ug/L			09/01/18 0546	RJH
m,p-Xylene	<1.00	5 NYVOA	1.00	ug/L	Y		09/01/18 0546	RJH
o-Xylene	<0.500	5 NYVOA	0.500	ug/L	Y		09/01/18 0546	RJH
Xylenes (total)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0546	RJH
Surrogate: 4-Bromofluorobenzene	79.2	Limit: 70-130		% Rec			09/01/18 0546	RJH
Surrogate: 1,2-Dichlorobenzene-d4	79.4	Limit: 70-130		% Rec			09/01/18 0546	RJH

CERTIFICATE OF ANALYSIS

J8H2278

Client Sample ID:	1-2A Finished		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola
Lab Sample ID:	J8H2278-02	**Collection Date:**	08/27/2018 10:23

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 524.2/EPA 524.2, Rv 4.1								
Benzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
Bromobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
Bromochloromethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
n-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
tert-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
sec-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
Carbon tetrachloride	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
Chlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
Chloroethane (Ethyl chloride)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
2-Chlorotoluene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
4-Chlorotoluene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
Dibromomethane (Methylene bromide)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
1,2-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
1,4-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
1,3-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
Dichlorodifluoromethane (Freon-12)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
1,1-Dichloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
1,2-Dichloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
1,1-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
cis-1,2-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
trans-1,2-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
2,2-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
1,2-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
1,3-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
cis-1,3-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
trans-1,3-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
1,1-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
Ethylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
Hexachlorobutadiene	<0.500	5 NYVOA	0.500	ug/L	Q2		09/01/18 0614	RJH
Isopropylbenzene (Cumene)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
4-Isopropyltoluene (p-Isopropyltoluene)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
Methyl bromide (Bromomethane)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
Methyl tert-butyl ether (MTBE)	<0.500	10 NYVOA	0.500	ug/L			09/01/18 0614	RJH
Methyl chloride (Chloromethane)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
Methylene chloride (Dichloromethane)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
Naphthalene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
n-Propylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
Styrene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
1,1,2,2-Tetrachloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
1,1,1,2-Tetrachloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
Tetrachloroethene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
Toluene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
1,2,4-Trichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH

CERTIFICATE OF ANALYSIS

J8H2278

Client Sample ID:	1-2A Finished		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola
Lab Sample ID:	J8H2278-02	**Collection Date:**	08/27/2018 10:23

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
1,2,3-Trichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
1,1,2-Trichloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
1,1,1-Trichloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
Trichloroethene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
Trichlorofluoromethane (Freon 11)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
1,2,3-Trichloropropane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
1,3,5-Trimethylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
1,2,4-Trimethylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
Vinyl chloride	<0.500	2 NYVOA	0.500	ug/L			09/01/18 0614	RJH
m,p-Xylene	<1.00	5 NYVOA	1.00	ug/L	Y		09/01/18 0614	RJH
o-Xylene	<0.500	5 NYVOA	0.500	ug/L	Y		09/01/18 0614	RJH
Xylenes (total)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0614	RJH
Surrogate: 4-Bromofluorobenzene	76.8	Limit: 70-130		% Rec			09/01/18 0614	RJH
Surrogate: 1,2-Dichlorobenzene-d4	77.6	Limit: 70-130		% Rec			09/01/18 0614	RJH

CERTIFICATE OF ANALYSIS

J8H2278

Client Sample ID:	1-3 Raw		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola
Lab Sample ID:	J8H2278-03	**Collection Date:**	08/27/2018 11:24

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 524.2/EPA 524.2, Rv 4.1								
Benzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
Bromobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
Bromochloromethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
n-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
tert-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
sec-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
Carbon tetrachloride	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
Chlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
Chloroethane (Ethyl chloride)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
2-Chlorotoluene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
4-Chlorotoluene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
Dibromomethane (Methylene bromide)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
1,2-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
1,4-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
1,3-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
Dichlorodifluoromethane (Freon-12)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
1,1-Dichloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
1,2-Dichloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
1,1-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
cis-1,2-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
trans-1,2-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
2,2-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
1,2-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
1,3-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
cis-1,3-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
trans-1,3-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
1,1-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
Ethylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
Hexachlorobutadiene	<0.500	5 NYVOA	0.500	ug/L	Q2		09/01/18 0641	RJH
Isopropylbenzene (Cumene)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
4-Isopropyltoluene (p-Isopropyltoluene)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
Methyl bromide (Bromomethane)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
Methyl tert-butyl ether (MTBE)	<0.500	10 NYVOA	0.500	ug/L			09/01/18 0641	RJH
Methyl chloride (Chloromethane)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
Methylene chloride (Dichloromethane)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
Naphthalene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
n-Propylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
Styrene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
1,1,2,2-Tetrachloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
1,1,1,2-Tetrachloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
Tetrachloroethene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
Toluene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
1,2,4-Trichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH

CERTIFICATE OF ANALYSIS

J8H2278

Client Sample ID:	1-3 Raw		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola
Lab Sample ID:	J8H2278-03	**Collection Date:**	08/27/2018 11:24

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
1,2,3-Trichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
1,1,2-Trichloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
1,1,1-Trichloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
Trichloroethene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
Trichlorofluoromethane (Freon 11)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
1,2,3-Trichloropropane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
1,3,5-Trimethylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
1,2,4-Trimethylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
Vinyl chloride	<0.500	2 NYVOA	0.500	ug/L			09/01/18 0641	RJH
m,p-Xylene	<1.00	5 NYVOA	1.00	ug/L	Y		09/01/18 0641	RJH
o-Xylene	<0.500	5 NYVOA	0.500	ug/L	Y		09/01/18 0641	RJH
Xylenes (total)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0641	RJH
Surrogate: 4-Bromofluorobenzene	74.8	Limit: 70-130		% Rec			09/01/18 0641	RJH
Surrogate: 1,2-Dichlorobenzene-d4	78.2	Limit: 70-130		% Rec			09/01/18 0641	RJH

CERTIFICATE OF ANALYSIS

J8H2278

Client Sample ID:	1-3 Finished		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola
Lab Sample ID:	J8H2278-04	**Collection Date:**	08/27/2018 10:32

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 524.2/EPA 524.2, Rv 4.1								
Benzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
Bromobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
Bromochloromethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
n-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
tert-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
sec-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
Carbon tetrachloride	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
Chlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
Chloroethane (Ethyl chloride)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
2-Chlorotoluene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
4-Chlorotoluene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
Dibromomethane (Methylene bromide)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
1,2-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
1,4-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
1,3-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
Dichlorodifluoromethane (Freon-12)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
1,1-Dichloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
1,2-Dichloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
1,1-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
cis-1,2-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
trans-1,2-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
2,2-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
1,2-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
1,3-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
cis-1,3-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
trans-1,3-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
1,1-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
Ethylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
Hexachlorobutadiene	<0.500	5 NYVOA	0.500	ug/L	Q2		09/01/18 0708	RJH
Isopropylbenzene (Cumene)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
4-Isopropyltoluene (p-Isopropyltoluene)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
Methyl bromide (Bromomethane)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
Methyl tert-butyl ether (MTBE)	<0.500	10 NYVOA	0.500	ug/L			09/01/18 0708	RJH
Methyl chloride (Chloromethane)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
Methylene chloride (Dichloromethane)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
Naphthalene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
n-Propylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
Styrene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
1,1,2,2-Tetrachloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
1,1,1,2-Tetrachloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
Tetrachloroethene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
Toluene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
1,2,4-Trichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH

CERTIFICATE OF ANALYSIS

J8H2278

Client Sample ID:	1-3 Finished		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola
Lab Sample ID:	J8H2278-04	**Collection Date:**	08/27/2018 10:32

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
1,2,3-Trichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
1,1,2-Trichloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
1,1,1-Trichloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
Trichloroethene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
Trichlorofluoromethane (Freon 11)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
1,2,3-Trichloropropane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
1,3,5-Trimethylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
1,2,4-Trimethylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
Vinyl chloride	<0.500	2 NYVOA	0.500	ug/L			09/01/18 0708	RJH
m,p-Xylene	<1.00	5 NYVOA	1.00	ug/L	Y		09/01/18 0708	RJH
o-Xylene	<0.500	5 NYVOA	0.500	ug/L	Y		09/01/18 0708	RJH
Xylenes (total)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0708	RJH
Surrogate: 4-Bromofluorobenzene	72.6	Limit: 70-130		% Rec			09/01/18 0708	RJH
Surrogate: 1,2-Dichlorobenzene-d4	75.4	Limit: 70-130		% Rec			09/01/18 0708	RJH

CERTIFICATE OF ANALYSIS

J8H2278

Client Sample ID:	Trip Blank		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola
Lab Sample ID:	J8H2278-07	**Collection Date:**	08/24/2018 13:30

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 524.2/EPA 524.2, Rv 4.1								
Benzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
Bromobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
Bromochloromethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
n-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
tert-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
sec-Butylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
Carbon tetrachloride	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
Chlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
Chloroethane (Ethyl chloride)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
2-Chlorotoluene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
4-Chlorotoluene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
Dibromomethane (Methylene bromide)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
1,2-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
1,4-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
1,3-Dichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
Dichlorodifluoromethane (Freon-12)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
1,1-Dichloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
1,2-Dichloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
1,1-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
cis-1,2-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
trans-1,2-Dichloroethene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
2,2-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
1,2-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
1,3-Dichloropropane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
cis-1,3-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
trans-1,3-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
1,1-Dichloropropene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
Ethylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
Hexachlorobutadiene	<0.500	5 NYVOA	0.500	ug/L	Q2		09/01/18 0830	RJH
Isopropylbenzene (Cumene)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
4-Isopropyltoluene (p-Isopropyltoluene)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
Methyl bromide (Bromomethane)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
Methyl tert-butyl ether (MTBE)	<0.500	10 NYVOA	0.500	ug/L			09/01/18 0830	RJH
Methyl chloride (Chloromethane)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
Methylene chloride (Dichloromethane)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
Naphthalene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
n-Propylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
Styrene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
1,1,2,2-Tetrachloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
1,1,1,2-Tetrachloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
Tetrachloroethene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
Toluene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
1,2,4-Trichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH

MICROBAC®

Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J8H2278

Client Sample ID:	Trip Blank		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola
Lab Sample ID:	J8H2278-07	**Collection Date:**	08/24/2018 13:30

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
1,2,3-Trichlorobenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
1,1,2-Trichloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
1,1,1-Trichloroethane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
Trichloroethene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
Trichlorofluoromethane (Freon 11)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
1,2,3-Trichloropropane	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
1,3,5-Trimethylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
1,2,4-Trimethylbenzene	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
Vinyl chloride	<0.500	2 NYVOA	0.500	ug/L			09/01/18 0830	RJH
m,p-Xylene	<1.00	5 NYVOA	1.00	ug/L	Y		09/01/18 0830	RJH
o-Xylene	<0.500	5 NYVOA	0.500	ug/L	Y		09/01/18 0830	RJH
Xylenes (total)	<0.500	5 NYVOA	0.500	ug/L			09/01/18 0830	RJH
Surrogate: 4-Bromofluorobenzene	73.0	Limit: 70-130		% Rec			09/01/18 0830	RJH
Surrogate: 1,2-Dichlorobenzene-d4	77.2	Limit: 70-130		% Rec			09/01/18 0830	RJH

*Results in **bold** have exceeded a limit defined for this project. Limits are provided for reference but as regulatory limits change frequently, Microbac Laboratories, Inc. advises the recipient of this report to confirm such limits and units of concentration with the appropriate Federal, state or local authorities before acting on the data.*

Definitions

MCL:	US EPA Maximum Contaminant Level
NYVOA:	New York DOH Part 5 Public Water System MCLs
Q2:	LCS recovery is above acceptance limits. Results may be bias high.
RL:	Reporting Limit
Y:	This analyte is not on the laboratory's current scope of accreditation.

Project Requested Certification(s)

Microbac Laboratories, Inc., New York Division
NY Lab ID No.: 10795 — New York State Department of Health

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included.

Reviewed and Approved By:

Renee Lantz
Customer Relationship Specialist
Reported: 09/04/2018 14:59

Microbac Laboratories, Inc., New York Division

Chain of Custody

J8H2278

TAT 7 days

Town of Vestal

Scott Groats
701 Vestal Parkway West
Vestal, NY 13850-1363
Phone: (607) 748-1514

Project Name: Town of Vestal Monthly/Quarterly

Project / PO Number: N/A
Tenatively Scheduled: 8/14/2018
Field Route ID: NY-Route 1 Bing

Client Sample ID: 1-2A Raw
Lab Sample ID: J8H2278-01
Matrix: Drinking Water
Type: Grab

Sampled Date & Time: 8/27/18 10:20

Analysis	Method	Field Results/Comments	Hold Time
524.2 VOC NY	EPA 524.2, Rv 4.1		14.00 days
		Container(s)	Designator
		V-40ml Clear vial, HCL	A
		V-40ml Clear vial, HCL	B

Client Sample ID: 1-2A Finished
Lab Sample ID: J8H2278-02
Matrix: Drinking Water
Type: Grab

Sampled Date & Time: 8/27/18 10:23

Analysis	Method	Field Results/Comments	Hold Time
524.2 VOC NY	EPA 524.2, Rv 4.1		14.00 days
		Container(s)	Designator
		V-40ml Clear Vial, Ascorbic Acid, HCL	A
		V-40ml Clear Vial, Ascorbic Acid, HCL	B

Client Sample ID: 1-3 Raw
Lab Sample ID: J8H2278-03
Matrix: Drinking Water
Type: Grab

Sampled Date & Time: 8/27/18 10:29

Analysis	Method	Field Results/Comments	Hold Time
524.2 VOC NY	EPA 524.2, Rv 4.1		14.00 days
		Container(s)	Designator
		V-40ml Clear vial, HCL	A
		V-40ml Clear vial, HCL	B

Client Sample ID: 1-3 Finished
Lab Sample ID: J8H2278-04
Matrix: Drinking Water
Type: Grab

Sampled Date & Time: 8/27/18 10:32

Microbac Laboratories, Inc., New York Division

Chain of Custody

J8H2278

Town of Vestal

Scott Groats
701 Vestal Parkway West
Vestal, NY 13850-1363
Phone: (607) 748-1514

Project Name: Town of Vestal Monthly/Quarterly

Project / PO Number: N/A
Tenatively Scheduled: 8/14/2018
Field Route ID: NY-Route 1 Bing

Analysis	Method	Field Results/Comments	Hold Time
524.2 VOC NY	EPA 524.2, Rv 4.1		14.00 days
		Container(s)	Designator
		V-40ml Clear Vial, Ascorbic Acid, HCL	A
		V-40ml Clear Vial, Ascorbic Acid, HCL	B

Client Sample ID: 4-2 Raw
Lab Sample ID: J8H2278-05
Matrix: Drinking Water
Type: Grab

Sampled Date & Time: 8/27/18 10:46

Analysis	Method	Field Results/Comments	Hold Time
524.2 VOC NY	EPA 524.2, Rv 4.1		14.00 days
		Container(s)	Designator
		V-40ml Clear vial, HCL	A
		V-40ml Clear vial, HCL	B

Client Sample ID: 4-2 Finished
Lab Sample ID: J8H2278-06
Matrix: Drinking Water
Type: Grab

Sampled Date & Time: 8/27/18 10:50

Analysis	Method	Field Results/Comments	Hold Time
524.2 VOC NY	EPA 524.2, Rv 4.1		14.00 days
		Container(s)	Designator
		V-40ml Clear Vial, Ascorbic Acid, HCL	A
		V-40ml Clear Vial, Ascorbic Acid, HCL	B

Client Sample ID: Trip Blank
Lab Sample ID: J8H2278-07
Matrix: Drinking Water
Type: Trip Blank

Sampled Date & Time: 8/24/18 13:30

Analysis	Method	Field Results/Comments	Hold Time
524.2 VOC NY	EPA 524.2, Rv 4.1		14.00 days
		Container(s)	Designator
		V-40ml Clear vial, HCL	A

Microbac Laboratories, Inc., New York Division

Chain of Custody

J8H2278

Town of Vestal

Scott Groats
701 Vestal Parkway West
Vestal, NY 13850-1363
Phone: (607) 748-1514

Project Name: Town of Vestal Monthly/Quarterly

Project / PO Number: N/A
Tenatively Scheduled: 8/14/2018
Field Route ID: NY-Route 1 Bing

Sampled/Relinquished by:	Date/Time: 8/27/18 1545	Received by:
Printed Name: ~~Bethany Robinson~~		Printed Name: Kayla Conway
Relinquished by:	Date/Time:	Received by:
Printed Name:		Printed Name:
Relinquished by:	Date/Time:	Received by:
Printed Name:		Printed Name:

As Received at Laboratory: On Ice: (Yes) / No Temp 2.1 °C Total Bottles: 13

Microbac Laboratories may be unable to perform a portion of the requested testing in which case we will subcontract the analysis to an appropriately accredited laboratory. By signing this document you are acknowledging that you have been informed by Microbac that testing could be subcontracted and agree with this arrangement.

Notes:

MICROBAC®

Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J8I1522

Town of Vestal

Scott Groats
701 Vestal Parkway West
Vestal, NY 13850-1363

Project Name: Town of Vestal Monthly/Quarterly

Project / PO Number: N/A
Received: 09/24/2018
Reported: 10/08/2018

Analytical Testing Parameters

Client Sample ID:	1-2A Raw		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola-Lab
Lab Sample ID:	J8I1522-01	**Collection Date:**	09/24/2018 10:02

Analyses Subcontracted to: Microbac Laboratories, Inc. - Dayville

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 524.2, Rv 4.1								
Benzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
Bromobenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
Bromochloromethane	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
Bromodichloromethane	<0.50		0.50	ug/L			10/02/18 1708	RSD
Bromoform	<0.50		0.50	ug/L			10/02/18 1708	RSD
Bromomethane	<0.50		0.50	ug/L			10/02/18 1708	RSD
tert-Butylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
sec-Butylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
n-Butylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
Carbon tetrachloride	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
Chlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
Chloroethane (Ethyl chloride)	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
Chloroform	<0.50		0.50	ug/L			10/02/18 1708	RSD
Chloromethane	<0.50		0.50	ug/L			10/02/18 1708	RSD
2-Chlorotoluene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
4-Chlorotoluene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
Dibromochloromethane	<0.50		0.50	ug/L			10/02/18 1708	RSD
Dibromomethane (Methylene bromide)	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
1,4-Dichlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
1,2-Dichlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
1,3-Dichlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
Dichlorodifluoromethane (Freon-12)	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
1,2-Dichloroethane	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
1,1-Dichloroethane	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
trans-1,2-Dichloroethene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
cis-1,2-Dichloroethene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
1,1-Dichloroethene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
1,3-Dichloropropane	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
2,2-Dichloropropane	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
1,2-Dichloropropane	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
1,1-Dichloropropene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
trans-1,3-Dichloropropene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
cis-1,3-Dichloropropene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
Ethylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
Hexachlorobutadiene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD

CERTIFICATE OF ANALYSIS

J8I1522

Client Sample ID:	1-2A Raw		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola-Lab
Lab Sample ID:	J8I1522-01	**Collection Date:**	09/24/2018 10:02

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Isopropylbenzene (Cumene)	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
4-Isopropyltoluene (p-Isopropyltoluene)	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
Methyl tert-butyl ether (MTBE)	<0.50	10 NYVOA	0.50	ug/L			10/02/18 1708	RSD
Methylene chloride (Dichloromethane)	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
Naphthalene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
n-Propylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
Styrene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
1,1,1,2-Tetrachloroethane	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
1,1,2,2-Tetrachloroethane	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
Tetrachloroethene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
Toluene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
1,2,4-Trichlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
1,2,3-Trichlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
1,1,1-Trichloroethane	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
1,1,2-Trichloroethane	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
Trichloroethene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
Trichlorofluoromethane (Freon 11)	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
1,2,3-Trichloropropane	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
1,2,4-Trimethylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
1,3,5-Trimethylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
Vinyl chloride	<0.50	2 NYVOA	0.50	ug/L			10/02/18 1708	RSD
m,p-Xylene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
o-Xylene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
Xylenes (total)	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1708	RSD
Surrogate: 4-Bromofluorobenzene	86.7	Limit: 70-130		% Rec			10/02/18 1708	RSD
Surrogate: 1,2-Dichlorobenzene-d4	84.2	Limit: 70-130		% Rec			10/02/18 1708	RSD

CERTIFICATE OF ANALYSIS

J8I1522

Client Sample ID:	1-2A Finished		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola-Lab
Lab Sample ID:	J8I1522-02	**Collection Date:**	09/24/2018 10:05

Analyses Subcontracted to: Microbac Laboratories, Inc. - Dayville

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 524.2, Rv 4.1								
Benzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
Bromobenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
Bromochloromethane	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
Bromodichloromethane	<0.50		0.50	ug/L			10/02/18 1732	RSD
Bromoform	<0.50		0.50	ug/L			10/02/18 1732	RSD
Bromomethane	<0.50		0.50	ug/L			10/02/18 1732	RSD
tert-Butylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
sec-Butylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
n-Butylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
Carbon tetrachloride	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
Chlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
Chloroethane (Ethyl chloride)	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
Chloroform	<0.50		0.50	ug/L			10/02/18 1732	RSD
Chloromethane	<0.50		0.50	ug/L			10/02/18 1732	RSD
2-Chlorotoluene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
4-Chlorotoluene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
Dibromochloromethane	<0.50		0.50	ug/L			10/02/18 1732	RSD
Dibromomethane (Methylene bromide)	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
1,4-Dichlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
1,2-Dichlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
1,3-Dichlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
Dichlorodifluoromethane (Freon-12)	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
1,2-Dichloroethane	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
1,1-Dichloroethane	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
trans-1,2-Dichloroethene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
cis-1,2-Dichloroethene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
1,1-Dichloroethene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
1,3-Dichloropropane	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
2,2-Dichloropropane	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
1,2-Dichloropropane	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
1,1-Dichloropropene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
trans-1,3-Dichloropropene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
cis-1,3-Dichloropropene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
Ethylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
Hexachlorobutadiene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
Isopropylbenzene (Cumene)	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
4-Isopropyltoluene (p-Isopropyltoluene)	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
Methyl tert-butyl ether (MTBE)	<0.50	10 NYVOA	0.50	ug/L			10/02/18 1732	RSD
Methylene chloride (Dichloromethane)	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
Naphthalene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
n-Propylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD

CERTIFICATE OF ANALYSIS

J8I1522

Client Sample ID:	1-2A Finished		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola-Lab
Lab Sample ID:	J8I1522-02	**Collection Date:**	09/24/2018 10:05

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Styrene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
1,1,1,2-Tetrachloroethane	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
1,1,2,2-Tetrachloroethane	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
Tetrachloroethene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
Toluene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
1,2,4-Trichlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
1,2,3-Trichlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
1,1,1-Trichloroethane	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
1,1,2-Trichloroethane	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
Trichloroethene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
Trichlorofluoromethane (Freon 11)	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
1,2,3-Trichloropropane	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
1,2,4-Trimethylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
1,3,5-Trimethylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
Vinyl chloride	<0.50	2 NYVOA	0.50	ug/L			10/02/18 1732	RSD
m,p-Xylene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
o-Xylene	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
Xylenes (total)	<0.50	5 NYVOA	0.50	ug/L			10/02/18 1732	RSD
Surrogate: 4-Bromofluorobenzene	85.2	Limit: 70-130		% Rec			10/02/18 1732	RSD
Surrogate: 1,2-Dichlorobenzene-d4	79.1	Limit: 70-130		% Rec			10/02/18 1732	RSD

Client Sample ID:	1-3 Raw		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola-Lab
Lab Sample ID:	J8I1522-03	**Collection Date:**	09/24/2018 10:10

Analyses Subcontracted to: Microbac Laboratories, Inc. - Dayville

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 524.2, Rv 4.1								
Benzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
Bromobenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
Bromochloromethane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
Bromodichloromethane	<0.50		0.50	ug/L			10/04/18 1032	RSD
Bromoform	<0.50		0.50	ug/L			10/04/18 1032	RSD
Bromomethane	<0.50		0.50	ug/L			10/04/18 1032	RSD
tert-Butylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
sec-Butylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
n-Butylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
Carbon tetrachloride	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
Chlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
Chloroethane (Ethyl chloride)	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
Chloroform	<0.50		0.50	ug/L			10/04/18 1032	RSD
Chloromethane	<0.50		0.50	ug/L			10/04/18 1032	RSD
2-Chlorotoluene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
4-Chlorotoluene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
Dibromochloromethane	<0.50		0.50	ug/L			10/04/18 1032	RSD
Dibromomethane (Methylene bromide)	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
1,4-Dichlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
1,2-Dichlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
1,3-Dichlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
Dichlorodifluoromethane (Freon-12)	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
1,2-Dichloroethane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
1,1-Dichloroethane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
trans-1,2-Dichloroethene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
cis-1,2-Dichloroethene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
1,1-Dichloroethene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
1,3-Dichloropropane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
2,2-Dichloropropane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
1,2-Dichloropropane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
1,1-Dichloropropene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
trans-1,3-Dichloropropene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
cis-1,3-Dichloropropene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
Ethylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
Hexachlorobutadiene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
Isopropylbenzene (Cumene)	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
4-Isopropyltoluene (p-Isopropyltoluene)	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
Methyl tert-butyl ether (MTBE)	<0.50	10 NYVOA	0.50	ug/L			10/04/18 1032	RSD
Methylene chloride (Dichloromethane)	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
Naphthalene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
n-Propylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD

CERTIFICATE OF ANALYSIS

J8I1522

Client Sample ID:	1-3 Raw		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola-Lab
Lab Sample ID:	J8I1522-03	**Collection Date:**	09/24/2018 10:10

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Styrene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
1,1,1,2-Tetrachloroethane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
1,1,2,2-Tetrachloroethane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
Tetrachloroethene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
Toluene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
1,2,4-Trichlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
1,2,3-Trichlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
1,1,1-Trichloroethane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
1,1,2-Trichloroethane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
Trichloroethene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
Trichlorofluoromethane (Freon 11)	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
1,2,3-Trichloropropane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
1,2,4-Trimethylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
1,3,5-Trimethylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
Vinyl chloride	<0.50	2 NYVOA	0.50	ug/L			10/04/18 1032	RSD
m,p-Xylene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
o-Xylene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
Xylenes (total)	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1032	RSD
Surrogate: 4-Bromofluorobenzene	86.1	Limit: 70-130		% Rec			10/04/18 1032	RSD
Surrogate: 1,2-Dichlorobenzene-d4	83.0	Limit: 70-130		% Rec			10/04/18 1032	RSD

Client Sample ID:	1-3 Finished		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola-Lab
Lab Sample ID:	J8I1522-04	**Collection Date:**	09/24/2018 10:13

Analyses Subcontracted to: Microbac Laboratories, Inc. - Dayville

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 524.2, Rv 4.1								
Benzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
Bromobenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
Bromochloromethane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
Bromodichloromethane	<0.50		0.50	ug/L			10/04/18 1056	RSD
Bromoform	<0.50		0.50	ug/L			10/04/18 1056	RSD
Bromomethane	<0.50		0.50	ug/L			10/04/18 1056	RSD
tert-Butylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
sec-Butylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
n-Butylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
Carbon tetrachloride	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
Chlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
Chloroethane (Ethyl chloride)	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
Chloroform	<0.50		0.50	ug/L			10/04/18 1056	RSD
Chloromethane	<0.50		0.50	ug/L			10/04/18 1056	RSD
2-Chlorotoluene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
4-Chlorotoluene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
Dibromochloromethane	<0.50		0.50	ug/L			10/04/18 1056	RSD
Dibromomethane (Methylene bromide)	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
1,4-Dichlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
1,2-Dichlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
1,3-Dichlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
Dichlorodifluoromethane (Freon-12)	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
1,2-Dichloroethane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
1,1-Dichloroethane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
trans-1,2-Dichloroethene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
cis-1,2-Dichloroethene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
1,1-Dichloroethene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
1,3-Dichloropropane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
2,2-Dichloropropane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
1,2-Dichloropropane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
1,1-Dichloropropene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
trans-1,3-Dichloropropene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
cis-1,3-Dichloropropene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
Ethylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
Hexachlorobutadiene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
Isopropylbenzene (Cumene)	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
4-Isopropyltoluene (p-Isopropyltoluene)	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
Methyl tert-butyl ether (MTBE)	<0.50	10 NYVOA	0.50	ug/L			10/04/18 1056	RSD
Methylene chloride (Dichloromethane)	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
Naphthalene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
n-Propylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD

CERTIFICATE OF ANALYSIS

J8I1522

Client Sample ID:	1-3 Finished		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola-Lab
Lab Sample ID:	J8I1522-04	**Collection Date:**	09/24/2018 10:13

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Styrene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
1,1,1,2-Tetrachloroethane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
1,1,2,2-Tetrachloroethane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
Tetrachloroethene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
Toluene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
1,2,4-Trichlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
1,2,3-Trichlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
1,1,1-Trichloroethane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
1,1,2-Trichloroethane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
Trichloroethene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
Trichlorofluoromethane (Freon 11)	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
1,2,3-Trichloropropane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
1,2,4-Trimethylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
1,3,5-Trimethylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
Vinyl chloride	<0.50	2 NYVOA	0.50	ug/L			10/04/18 1056	RSD
m,p-Xylene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
o-Xylene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
Xylenes (total)	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1056	RSD
Surrogate: 4-Bromofluorobenzene	88.3	Limit: 70-130		% Rec			10/04/18 1056	RSD
Surrogate: 1,2-Dichlorobenzene-d4	83.0	Limit: 70-130		% Rec			10/04/18 1056	RSD

Client Sample ID:	Trip Blank		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola-Lab
Lab Sample ID:	J8I1522-07	**Collection Date:**	09/24/2018 8:15

Analyses Subcontracted to: Microbac Laboratories, Inc. - Dayville

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 524.2, Rv 4.1								
Benzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
Bromobenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
Bromochloromethane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
Bromodichloromethane	<0.50		0.50	ug/L			10/04/18 1207	RSD
Bromoform	<0.50		0.50	ug/L			10/04/18 1207	RSD
Bromomethane	<0.50		0.50	ug/L			10/04/18 1207	RSD
tert-Butylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
sec-Butylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
n-Butylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
Carbon tetrachloride	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
Chlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
Chloroethane (Ethyl chloride)	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
Chloroform	<0.50		0.50	ug/L			10/04/18 1207	RSD
Chloromethane	<0.50		0.50	ug/L			10/04/18 1207	RSD
2-Chlorotoluene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
4-Chlorotoluene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
Dibromochloromethane	<0.50		0.50	ug/L			10/04/18 1207	RSD
Dibromomethane (Methylene bromide)	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
1,4-Dichlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
1,2-Dichlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
1,3-Dichlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
Dichlorodifluoromethane (Freon-12)	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
1,2-Dichloroethane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
1,1-Dichloroethane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
trans-1,2-Dichloroethene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
cis-1,2-Dichloroethene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
1,1-Dichloroethene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
1,3-Dichloropropane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
2,2-Dichloropropane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
1,2-Dichloropropane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
1,1-Dichloropropene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
trans-1,3-Dichloropropene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
cis-1,3-Dichloropropene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
Ethylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
Hexachlorobutadiene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
Isopropylbenzene (Cumene)	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
4-Isopropyltoluene (p-Isopropyltoluene)	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
Methyl tert-butyl ether (MTBE)	<0.50	10 NYVOA	0.50	ug/L			10/04/18 1207	RSD
Methylene chloride (Dichloromethane)	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
Naphthalene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
n-Propylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD

MICROBAC®

Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J8I1522

Client Sample ID:	Trip Blank		
Sample Matrix:	Drinking Water	**Collected By:**	Julian Motola-Lab
Lab Sample ID:	J8I1522-07	**Collection Date:**	09/24/2018 8:15

Volatile Organic Compounds - GC/MS	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Styrene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
1,1,1,2-Tetrachloroethane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
1,1,2,2-Tetrachloroethane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
Tetrachloroethene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
Toluene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
1,2,4-Trichlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
1,2,3-Trichlorobenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
1,1,1-Trichloroethane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
1,1,2-Trichloroethane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
Trichloroethene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
Trichlorofluoromethane (Freon 11)	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
1,2,3-Trichloropropane	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
1,2,4-Trimethylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
1,3,5-Trimethylbenzene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
Vinyl chloride	<0.50	2 NYVOA	0.50	ug/L			10/04/18 1207	RSD
m,p-Xylene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
o-Xylene	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
Xylenes (total)	<0.50	5 NYVOA	0.50	ug/L			10/04/18 1207	RSD
Surrogate: 4-Bromofluorobenzene	88.5	Limit: 70-130		% Rec			10/04/18 1207	RSD
Surrogate: 1,2-Dichlorobenzene-d4	86.2	Limit: 70-130		% Rec			10/04/18 1207	RSD

*Results in **bold** have exceeded a limit defined for this project. Limits are provided for reference but as regulatory limits change frequently, Microbac Laboratories, Inc. advises the recipient of this report to confirm such limits and units of concentration with the appropriate Federal, state or local authorities before acting on the data.*

Definitions

MCL: US EPA Maximum Contaminant Level
NYVOA: New York DOH Part 5 Public Water System MCLs
RL: Reporting Limit

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville
11549 — New York State Department of Health
Microbac Laboratories, Inc., New York Division
NY Lab ID No.: 10795 — New York State Department of Health

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included.

Reviewed and Approved By:

Renee Lantz
Customer Relationship Specialist
Reported: 10/08/2018 16:44

Microbac Laboratories, Inc., New York Division

Chain of Custody

J8I1522

TAT 7 days

Town of Vestal

Scott Groats
701 Vestal Parkway West
Vestal, NY 13850-1363
Phone: (607) 748-1514

Project Name: Town of Vestal Monthly/Quarterly

Project / PO Number: N/A
Tenatively Scheduled: 9/11/2018
Field Route ID: NY-Route 1 Bing

Client Sample ID: 1-2A Raw
Lab Sample ID: J8I1522-01
Matrix: Drinking Water
Type: Grab

Sampled Date & Time: 9/24/18 10:02

Analysis	Method	Field Results/Comments	Hold Time
524.2 VOC NY	EPA 524.2, Rv 4.1	Container(s) V-40ml Clear vial, HCL V-40ml Clear vial, HCL	14.00 days Designator A B

Client Sample ID: 1-2A Finished
Lab Sample ID: J8I1522-02
Matrix: Drinking Water
Type: Grab

Sampled Date & Time: 9/24/18 10:05

Analysis	Method	Field Results/Comments	Hold Time
524.2 VOC NY	EPA 524.2, Rv 4.1	Container(s) V-40ml Clear Vial, Ascorbic Acid, HCL V-40ml Clear Vial, Ascorbic Acid, HCL	14.00 days Designator A B

Client Sample ID: 1-3 Raw
Lab Sample ID: J8I1522-03
Matrix: Drinking Water
Type: Grab

Sampled Date & Time: 9/24/18 10:10

Analysis	Method	Field Results/Comments	Hold Time
524.2 VOC NY	EPA 524.2, Rv 4.1	Container(s) V-40ml Clear vial, HCL V-40ml Clear vial, HCL	14.00 days Designator A B

Client Sample ID: 1-3 Finished
Lab Sample ID: J8I1522-04
Matrix: Drinking Water
Type: Grab

Sampled Date & Time: 9/24/18 10:13

Microbac Laboratories, Inc., New York Division

Chain of Custody

J8I1522

Town of Vestal

Project Name: Town of Vestal Monthly/Quarterly

Scott Groats
701 Vestal Parkway West
Vestal, NY 13850-1363
Phone: (607) 748-1514

Project / PO Number: N/A
Tenatively Scheduled: 9/11/2018
Field Route ID: NY-Route 1 Bing

Analysis	Method	Field Results/Comments	Hold Time
524.2 VOC NY	EPA 524.2, Rv 4.1		14.00 days
		Container(s)	Designator
		V-40ml Clear Vial, Ascorbic Acid, HCL	A
		V-40ml Clear Vial, Ascorbic Acid, HCL	B

Client Sample ID: 4-2 Raw
Lab Sample ID: J8I1522-05
Matrix: Drinking Water
Type: Grab

Sampled Date & Time: 9/24/18 10:28

Analysis	Method	Field Results/Comments	Hold Time
524.2 VOC NY	EPA 524.2, Rv 4.1		14.00 days
		Container(s)	Designator
		V-40ml Clear vial, HCL	A
		V-40ml Clear vial, HCL	B

Client Sample ID: 4-2 Finished
Lab Sample ID: J8I1522-06
Matrix: Drinking Water
Type: Grab

Sampled Date & Time: 9/24/18 10:31

Analysis	Method	Field Results/Comments	Hold Time
524.2 VOC NY	EPA 524.2, Rv 4.1		14.00 days
		Container(s)	Designator
		V-40ml Clear Vial, Ascorbic Acid, HCL	A
		V-40ml Clear Vial, Ascorbic Acid, HCL	B

Client Sample ID: Trip Blank
Lab Sample ID: J8I1522-07
Matrix: Drinking Water
Type: Trip Blank

Sampled Date & Time: 9/24/18 8:15

Analysis	Method	Field Results/Comments	Hold Time
524.2 VOC NY	EPA 524.2, Rv 4.1		14.00 days
		Container(s)	Designator
		V-40ml Clear vial, HCL	A

Microbac Laboratories, Inc., New York Division

Chain of Custody

J8I1522

Town of Vestal

Scott Groats
701 Vestal Parkway West
Vestal, NY 13850-1363
Phone: (607) 748-1514

Project Name: Town of Vestal Monthly/Quarterly

Project / PO Number: N/A
Tenatively Scheduled: 9/11/2018
Field Route ID: NY-Route 1 Bing

Sampled/Relinquished by:	Date/Time: 9/24/18 1415	Received by:
Printed Name: ~~Bethany Robinson~~ J. Mateo		Printed Name:
Relinquished by:	Date/Time:	Received by:
Printed Name:		Printed Name:
Relinquished by:	Date/Time:	Received by:
Printed Name:		Printed Name:

As Received at Laboratory: On Ice: (Yes) / No Temp 1.4 °C Total Bottles: 13

Microbac Laboratories may be unable to perform a portion of the requested testing in which case we will subcontract the analysis to an appropriately accredited laboratory. By signing this document you are acknowledging that you have been informed by Microbac that testing could be subcontracted and agree with this arrangement.

Notes:

Arcadis CE, Inc.

855 Route 146

Suite 210

Clifton Park, New York 12065

Tel 518 250 7300

Fax 518 250 7301

www.arcadis.com