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New York State Department of Environmental
Conservation – Division of Environmental Remediation

Periodic Review Report

Vestal Water Supply Site
Site Number 7-04-009A

September 2021

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Acronyms and Abbreviations

1,1-DCA	1,1-dichloroethane
1,1,1-TCA	1,1,1-trichloroethane
cis-1,2-DCE	cis-1,2-dichloroethene
Arcadis	Arcadis of New York, Inc.
bgs	below ground surface
ERT	Environmental Response Team
FFS	Focused Feasibility Study
IC	Institutional Controls
µg/L	microgram per liter
MCL	maximum contaminant level
NYSDEC	New York State Department of Environmental Conservation
L&M	operation and maintenance
PCB	polychlorinated biphenyls
PDB	passive diffusion bags
PFAS	polyfluoroalkyl substances
PFOA	perfluorooctanic acid
PFOA	perfluorooctanesulfonic acid
PRR	Periodic Review Report
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RSO	remedial system optimization
SVE	soil vapor extraction
TCL	Target Compound List
TCE	trichloroethene
USEPA	United States Environmental Protection Agency
Site	Vestal Water Supply Site (NYSDEC site Number 7-04-009A) in New York State
VC	vinyl chloride
VOC	volatile organic compounds

Executive Summary

The New York State Department of Environmental Conservation (NYSDEC) issued a Work Assignment (#D009804-10) to Arcadis of New York, Inc. (Arcadis) for operation, maintenance, monitoring, and remedial system optimization (RSO) evaluation at the Vestal Water Supply Site (NYSDEC site Number 7-04-009A), located in Vestal, New York (the Site). This Periodic Review Report (PRR) documents the findings and observations associated with the monitoring program and RSO since the previous PRR (2017) and includes the period from June 2017 through June 2020.

The Vestal Water Supply Site is located along the southern bank of the Susquehanna River on Pumphouse Road in the Town of Vestal, Broome County, New York. The Town of Vestal Water Supply system originally included Wells 1-1, 1-2, and 1-3. Well 1-1 was taken offline in 1980 upon the discovery of chlorinated volatile organic compounds (VOCs) in the extracted water. The Site was subsequently placed on the National Priorities List in 1983. A Record of Decision (ROD) for the site (designated as Operable Unit 1 (OU-1)) was signed by the United States Environmental Protection Agency (USEPA) in June 1986. The remedy prescribed in the ROD included the following:

- Restoration of water supply capacity to the level that existed before the loss of Well 1-1;
- Provision of a water supply that provided a high level of public health protection by exceeding requirements for drinking water quality; and
- Hydraulic containment of the chlorinated VOC plume by pumping Well 1-1 (later Well 1-1A) and treating the water before discharge to the Susquehanna River.

Until 1980, Well 1-1 was the main source of water for Water District 1, which provides drinking water for several areas of the Town of Vestal. Currently, two production wells, Wells 1-2A (a replacement well for Well 1-2) and 1-3 function as the main source of water for Water District 1. Well 1-1A was installed as a replacement for Well 1-1 in 1993 due to the persistence of sand entering the well through the well screen. Well 1-1A was fully activated in 1995 for remedial purposes, and operated until February 2014, when it was shut down as part the RSO evaluation. The RSO subsequently determined that the continued operation of the groundwater extraction and treatment facility was not an effective remedy to site cleanup and that other measures should be utilized for the long-term protection of the Vestal Public Water Supply. A Focused Feasibility Study (FFS) (Arcadis 2015) was prepared for OU-1 upon the completion of the RSO. The FFS was submitted to the NYSDEC and, subsequently, the USEPA.

Site activities currently include monthly pre-treatment sampling for the Town of Vestal water supply wells 1-2A and 1-3 and semi-annual groundwater sampling from the new and existing monitoring wells.

1 Site Overview

1.1 Location and Features

The Vestal Water Supply Site (Site 1-1) is located north of New York State Route 17 on Pumphouse Road, Vestal, Broome County, New York, along the southern bank of the Susquehanna River (Figure 1-1). Well 1-1A is located just south of the Susquehanna River and approximately one-quarter mile northwest of the Stage Road Industrial Park and approximately one-quarter mile east of the Town of Vestal water supply wells, Well 1-2A and 1-3 (Figure 1-2).

1.2 Site History and Remediation

Until 1980, Well 1-1 was the main source of water for Water District 1, which provides drinking water for several areas of the Town of Vestal. Currently, two production wells, Wells 1-2A and 1-3 function as the main source of water for Water District 1. Based on elevated concentrations of volatile organic compounds (VOCs), Well 1-1 was taken out of service and pumped to the Susquehanna River. The site was added to the National Priorities List (NPL) in 1983 (USEPA 2016).

1.2.1 Operable Unit 1

In 1985, the New York State Department of Environmental Conservation (NYSDEC) began Remedial Investigation/Feasibility Study (RI/FS) for Operable Unit (OU) -1. Based on the results of the investigation, the United States Environmental Protection Agency (USEPA) issued a Record of Decision (ROD) for OU-1 on June 27, 1986. The remedy prescribed in the OU-1 ROD called for the following actions:

- Construction of a packed column air stripper on Well 1-1 to enable the following:
 - Restore the water supply capacity to the level that existed before the loss of Well 1-1;
 - Provide a water supply that has a high level of public health protection by exceeding requirements for drinking water quality;
 - Provide hydraulic containment of the chlorinated VOC plume; and
 - Cease untreated discharges from Well 1-1 to the Susquehanna River.
- Implement a supplemental RI/FS to investigate the extent of contamination in the suspected source areas and evaluate possible source control measures.

An air stripping facility was constructed for Well 1-1 by the USEPA in 1991 pursuant to the OU-1 ROD. Due to production problems with Well 1-1 (persistence of sand entering the well screen), Well 1-1A was installed in 1993 to replace Well 1-1.

In March 1995, the USEPA issued a Remedial Action Report that indicated the Well 1-1A and the treatment plant were fully functional and operational as a potable water supply.

In May 1995, the Town of Vestal informed the USEPA that it no longer required the water from Well 1-1A for its water supply.

The USPEA operated the treatment plant for a period of ten years. Then, in 2006, the NYSDEC assumed responsibility for the operation and maintenance (O&M) and monitoring of the OU-1 remedy.

In 2014, the NYSDEC performed a Remedial System Optimization (RSO) to evaluate the OU-1 remedy. Seven soil borings and 13 new permanent monitoring wells were installed to provide additional information to delineate the horizontal and vertical extent of groundwater contamination resulting from the source area (OU-2). In addition, the groundwater treatment facility for Well 1-1A was shut down on February 28, 2014 as part of the RSO to evaluate the impacts to groundwater quality while the treatment plant was not operating.

The data from the RSO were used to prepare a Focused Feasibility Study (FFS) for OU-1. The FFS was prepared to assess the efficiency of the OU-1 remedy and evaluate potential alternative remedial approaches. Based on the FFS, if a source area (OU-2) remedy were implemented, downgradient cleanup of groundwater (OU-1) would likely be achievable with less than five years. The FFS also indicated that if a source area remedy was not implemented, the remedial duration for OU-1 would continue significantly longer than 30 years (Arcadis of New York, Inc., [Arcadis] 2015).

The Well 1-1A treatment plant remains off-line. Quarterly groundwater monitoring was continued through 2018, and in 2019 the NYSDEC approved (March 26, 2019) semi-annual groundwater monitoring. Semi-annual groundwater monitoring is currently being performed to assess 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 VOC plume distribution and migration. In addition, since July 2014, samples have been collected monthly from Town of Vestal Wells 1-2A and 1-3 to supplement the Town's monthly influent sampling. The property nearby the treatment building continues to be mowed and maintained.

1.2.2 Operable Unit 2

A second Operable Unit, OU-2, was created for the groundwater plume source, which is located in the adjacent Stage Road Industrial Park. The source area was contaminated with chlorinated solvents (primarily trichloroethene (TCE), 1,1,1-trichloroethane (1,1,1-TCA) and their associated daughter compounds), petroleum related VOCs, and polychlorinated biphenyls (PCBs) through historical site operations. Multiple soil and groundwater investigations were completed to determine the nature and extent of contamination. The previous investigations have identified three suspected release areas at the Site. The OU-2 ROD was signed on September 28, 1990, selecting in-situ vacuum extraction as the remedy for two discrete areas of contaminated soil (Area 2 and Area 4), which are thought to be the predominant sources of contamination for Well 1-1A. A soil vapor extraction (SVE) system was operated in Area 2 from January 1997 to November 2000. In November 2000, results of the Interim Soil Sampling Program confirmed that the SVE system achieved ROD cleanup goals and the system was terminated. A SVE system also operated for approximately three years in Area 4, beginning in June 2003. However, the USEPA subsequently determined that the existing SVE system would not be able to address the remaining contamination in Area 4 (USEPA, 2016).

Between 2006 and 2010 USEPA performed additional investigations in the OU-2 source areas by drilling approximately 127 soil borings and installing 25 groundwater monitoring wells. Based on their investigations, an area of subsurface contamination remains along the south side of the building and extends beneath the building footprint. In addition, a source of petroleum-related contamination was identified in the northeast corner of the building (Lockheed Martin, 2012).

In September 2016, the USEPA issued an Amendment to the OU-2 ROD to address soil contamination remaining in Areas 3 and 4. The OU-2 ROD Amendment calls for in-situ thermal treatment of soil contaminated with VOCs in Area 3 and Area 4; excavation of and off-site disposal of soil contaminated PCBs in Area 3; and Institutional Controls (IC) to, at minimum, restrict property use to commercial/light industrial (USEPA, 2016).

There have been no additional updates during this reporting period (June 2017 through June 2021).

2 Remedy Performance, Effectiveness, and Protectiveness

The goal of the OU-1 remedy was to:

- Restore the water supply capacity to the level that existed before the loss of Well 1-1;
- Provide a water supply that exceeds requirements for drinking water quality;
- Provide hydraulic containment of the chlorinated VOC plume; and
- Prevent untreated discharges from Well 1-1 to the Susquehanna River.

The selected remedy for OU-1 was implemented in accordance with the ROD. A packed column air stripper tower was installed to treat groundwater extracted from Well 1-1 (later Well 1-1A). The system extracted and treated groundwater until 2014, when it was shut down as part of the RSO evaluation. On February 29, 2014, the groundwater treatment facility for Well 1-1A was shut down as part of the RSO to evaluate the impacts to groundwater quality while the treatment plant was not operating. Based on O&M and treatment system sample data (discussed further in Sections 4 and 5), the packed column air stripper tower became fouled with calcium carbonate and could no longer treat groundwater extracted from Well 1-1A to the applicable NYSDEC Class GA discharge standards. In addition, the yield from Well 1-1A continued to decline over time, despite routine well redevelopment.

Groundwater samples are currently collected on a semi-annual basis 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. Based on the horizontal and vertical distribution of VOCs, it appears that the long-term pumping at extraction Well 1-1 and replacement Well 1-1A has caused the plume to migrate vertically from the water table near the source area to depths greater than 100 feet below ground surface (bgs), and horizontally approximately 2,000 feet to the west toward the extraction well. However, based on data collected since 2014, the extent of the plume has generally not changed following the shutdown of the Well 1-1A treatment plant. Benzene has been observed in deep groundwater zone monitoring wells during sampling events over the past several years, and is currently being monitored, though it does not appear to be associated with the OU-1/OU-2 sites.

Pre-treatment samples have been collected from Town of Vestal Wells 1-2A and 1-3 monthly, as part of the RSO since 2014 to evaluate potential impacts to the Town's water supply wells related to the shutdown of the Well 1-1A treatment plant. As discussed below, there have been two instances of low-level VOC detections at Wells 1-2A and 1-3 during the period from June 2017 through June 2021; however, none of these detections has exceeded the NYSDEC Class GA standard for the respective compounds.

During this reporting period, low levels of acetone and or methylene chloride, both a common lab contaminant and bromoform and dibromochloromethane have been detected sporadically in the pre-treatment samples collected from Well 1-2A and 1-3. Until April 2018, VOCs associated with contamination from the source area had not been detected in any of the pre-treatment effluent samples. In April and May 2018, 1,1,1-TCA was detected at estimated concentrations of 0.29 and 0.26 microgram per liter (µg/L) in Well 1-3 pre-treatment samples. The NYSDEC Class GA Groundwater Standard for this compound is 5 µg/L. As part of the RSO contingency plan, Arcadis implemented the additional sampling of the post treatment water from Well 1-3 from May 2018 through June 2020. There have been no VOCs of concern detected at any of the three locations since the May 2018

detection (Table 2-1). The supplemental sampling is expected to continue at least until the final remedies for OU-1 and OU-2 have been implemented, the contingency post treatment sampling will resume if VOCs of concern are detected again in the pre-treatment samples.

Based on the results of the RSO, and since the Well 1-1A treatment plant is no longer operational, the remedy specified in the ROD has not been performing as it was intended as the operation of Well 1-1A resulted in horizontal and vertical migration of the VOC plume and, by itself, will not result in the achievement of groundwater standards in the foreseeable future. However, as discussed herein, semi-annual groundwater monitoring data 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 system.

3 Operation, Maintenance, and Monitoring

From 2007 to present, site operations have been performed by Arcadis on behalf of the NYSDEC. As presented in quarterly O&M Reports submitted to the NYSDEC, the Well 1-1A groundwater extraction and treatment system operated continuously from 2007 until its shutdown in February 2014, except for minor shutdowns for routine maintenance, power outages, and/or system upgrades.

The former O&M program included the operation and maintenance of the Well 1-1A treatment plant in accordance with the Final Operation and Maintenance Manual, Long-Term Response, Operable Unit 1, Vestal Well 1-1 Site, Vestal, New York, (Tetra Tech EC, Inc. 2006) (O&M Manual). The former O&M program also included monthly influent/effluent sampling and analysis of the Well 1-1A treatment system for Target Compound List (TCL) VOCs.

The only routine O&M performed at the Well 1-1A treatment plant since the last PRR (2017) and present has been general housekeeping and grounds maintenance, including mowing the grass around the treatment system buildings.

4 Remedial System Optimization (RSO)

The RSO evaluation is being conducted in accordance with the NYSDEC- and USEPA-approved Remedial System Optimization Work Plan (Arcadis 2012). The objective of the RSO is to assess the accuracy of the Conceptual Site Model (CSM) upon which the remedy is based, document the performance of the current remedy, provide a summary of progress toward the cleanup goals, and provide recommendations for improvements, if required. As part of the RSO, the Well 1-1A groundwater treatment plant was shut down on February 28, 2014 to evaluate the impacts to groundwater flow direction and quality while the treatment system was not operating. The effects, if any, of groundwater withdrawals from the Town of Vestal water supply wells 1-2A and 1-3 on the existing groundwater plume distribution and migration in the absence of Well 1-1A pumping is also being monitored. Additional groundwater monitoring wells were installed and added to the quarterly RSO monitoring program to further evaluate the horizontal and vertical distribution of VOCs in the area of the site over time. For this reporting period, the investigation includes monthly pre-treatment and post treatment (Well 1-3) sampling of the Town of Vestal water supply wells 1-2A and 1-3 and quarterly/semiannual groundwater sampling. Per the instructions of the NYSDEC project manager in June 2017 groundwater monitoring wells and Wells 1-2A and 1-3 were analyzed for 1,4-dioxane and polyfluoroalkyl substances (PFAS) and in October 2019 pre- and post-treatment samples were collected from Wells 1-2A and 1-3 and analyzed for 1,4-dioxane and PFAS.

Under the new Standby contract, groundwater monitoring wells and Wells 1-2A and 1-3 were analyzed for 1,4-dioxane and PFAS in April 2021 as part of the Semi-Annual sampling event.

The results for this reporting period are discussed in the following sections.

4.1 Groundwater Sampling

Quarterly groundwater monitoring was continued through 2018. In 2019 the NYSDEC approved (March 26, 2019) semiannual groundwater monitoring. Sampling provides information on groundwater quality, monitor potential contaminant migration in the groundwater, and assess hydrogeologic site conditions, including groundwater flow direction. Groundwater monitoring well locations are shown on Figure 1-2. The most recent sampling event, the 1st Semi-Annual 2021 sampling event, was performed in April 2021. Due to the COVID-19 pandemic and the end of the previous Standby contract, there was no activity conducted onsite by Arcadis from July through December 2020.

4.1.1 Water Level Survey

Water levels were measured to the nearest hundredth of a foot during each groundwater monitoring event. Groundwater levels were used to calculate groundwater elevations and assess groundwater flow conditions across the site. Water level data collected to date indicate that there is little change in the shallow, intermediate, and deep groundwater plume distribution since the shutdown of the Well 1-1A groundwater treatment plant. This data is presented on Table 4-1.

4.1.2 Groundwater Sampling

Monitoring wells were selected to focus on plume migration and distribution on the north side of NYS Route 17 including wells surrounding the Town of Vestal water supply wells 1-2A and 1-3 and Well 1-1. During this reporting period the following approved modifications have been implemented to the monitoring well list:

- As recommended in the 4th quarter 2016 RSO report, 2nd quarter 2017 groundwater samples were collected from a revised sample list which was approved by NYSDEC on January 26, 2017. The revised list included three additional monitoring wells, 4009-7, 4009-8, and 4009-26. These wells were added to the sample list to evaluate whether the Environmental Response Team (ERT) source area is the cause of elevated benzene concentrations noted in 2016.
- The quarterly post-RSO sampling data has demonstrated that there are minimal impacts to groundwater in several areas of the shallow groundwater that are currently included in the monitoring program. This includes several wells that have had no detections of contaminants over several years. Based on these data, the current sample list (Table 4-2) was revised and the following monitoring wells were eliminated from the sampling program: 4009-10, 4009-11A, 4009-13A, and 4009-30A. This recommendation was implemented during the second 2019 semiannual event in September 2019.

Groundwater was sampled quarterly through 2018, and then semi-annually starting in 2019 using passive diffusion bags (PDBs) in accordance with the RSO Work Plan and were submitted for analysis of TCL VOCs by USEPA Method 8260 to TestAmerica-Buffalo following chain-of-custody sample handling procedures. In 2017 samples were also collected using low-flow groundwater sampling procedures to facilitate the collection of samples to be analyzed for 1,4-dioxane and PFAS which cannot be collected using PDBs. The low-flow samples were also analyzed for VOCs to compare the PDB VOC results. Low-flow groundwater sampling procedures were also used during the April 2021 sampling event to facilitate the collection of groundwater samples for analysis of 1,4-dioxane and PFAS. VOCs were collected using the same low-flow procedures and PDBs were not used during the April 2021 event.

4.2 Groundwater Flow Evaluation

As mentioned above, Well 1-1A was shut down in February 2014 to evaluate hydraulic effects and potential water quality impacts to the Town of Vestal wells 1-2 and 1-3 in support of the remedial alternative development and analysis presented herein. In 2017 and 2018, the groundwater levels were measured quarterly, and since then semi-annually; with the most recent measurements obtained in April 2021. As indicated above, the Well 1-1A treatment plant continues to be shut down, therefore, groundwater levels are representative of static 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 4-1. Groundwater flow in the shallow and intermediate groundwater monitoring zones is generally west to northwest. Groundwater elevations for the deep monitoring zone were used to construct a groundwater elevation map for the deep monitoring well depths. Groundwater flow in the deep groundwater monitoring zone is generally north to northwest toward the Susquehanna River as shown on Figure 4-1.

Groundwater flow has generally been consistent during this reporting period and though influenced by the shutdown, the overall hydraulic gradients throughout the area and the direction of groundwater from the site to the wells and river were not significantly altered long term when Well 1-1A was shutdown. Water level data collected

to date continue to indicate that there is little change in the shallow, intermediate, and deep groundwater plume distribution since the shutdown of the Well 1-1A groundwater treatment plant. In general, hydraulic gradients are gentler in the area downgradient of the site; this is likely due to an increase in aquifer hydraulic conductivity and transmissivity in these areas, as well as the presence of wetlands adjacent to and within the discharge zone for the Susquehanna River.

4.3 VOC Plume Extent and Migration Evaluation

Groundwater analytical data has been collected on a quarterly/semi-annual frequency through this reporting period and is discussed in each groundwater sampling report. Analytical results from historical groundwater sampling events indicated that the highest concentrations of VOCs include 1,1,1-TCA, 1,1-dichloroethane (1,1-DCA), 1,1-dichloroethene (1,1-DCE), cis-1,2-dichloroethene (cis-1,2-DCE), TCE, benzene, and vinyl chloride (VC). As expected, the highest total VOC concentrations in groundwater samples collected during the RSO sampling events were from wells immediately downgradient of the OU-2 source area. The horizontal extent of the VOC plume has been influenced by decades of pumping at the extraction Wells 1-1/1-1A. However, groundwater extraction from these wells have also caused the plume to be drawn from the water table in the vicinity of the source area, to greater than 100 feet bgs approximately 2,000 feet to the west in the vicinity of Wells 1-1/1-1A. As shown on Figure 4-2, which presents the overall VOC plume extent during the April 2021 monitoring event, semi-annual 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. In addition, semi-annual monitoring continues to show that none of the wells located between the historical distribution of the VOC plume and the town well field indicate the plume is migrating toward the wells. However, as noted previously, VOCs have been detected at low levels in the Town of Vestal wells 1-2 and 1-3 to date and benzene (as discussed below) has been detected sporadically in wells near the Town of Vestal wells.

4.3.1 Groundwater Sampling Results

Groundwater results from June 2017 through the most recent sampling event, April 2021 are provided in Table 4-3 and presented on Figures 4-3 (shallow groundwater), 4-4 (intermediate groundwater), and 4-5 (deep groundwater), respectively. 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 during the April 2021 sampling event were benzene, 1,1,1-TCA, 1,1-DCA, 1,1-DCE, cis-1,2-DCE, TCE, and vinyl chloride. These results are generally consistent with the results from all previous RSO monitoring events. The low-flow groundwater analytical results that were also analyzed for TCL VOCs for comparison to the PDB results in 2017 were generally comparable as well. The low flow data and PDB data are provided in Table 4-3.

Shallow Groundwater Zone Monitoring Wells

As shown on Figure 4-3, up to seven shallow groundwater zone monitoring wells have been sampled during this reporting period of June 2017 through June 2021, and of the seven wells, VOCs have been consistently non-detect in five of the monitoring wells through March 2019, where four of them were consequently eliminated from the sample list (4009-10, 4009-11A, 4009-13A, and 4009-30A) and the fifth remaining well, 4009-16A continues to

be non-detect. Of the seven monitoring wells, only two shallow monitoring wells (4009-7 and 4009-9) contained VOC concentrations greater than their respective Class GA Standard. The highest concentrations in the shallow zone are consistently observed in monitoring wells 4009-7 and 4009, which are located near Route 17, downgradient of the source area (ECO International property) (Figure 1-2 and in Table 4-3). A summary of the shallow groundwater zone results is presented below.

During this reporting period cis-1,2-DCE and VC were the only two typical VOCs that have had fluctuating concentrations greater than the applicable Class GA Standards of 5 and 2 µg/L respectively in 4009-7.

- Cis-1,2-DCE has ranged in concentration from 55 µg/L (September 2018) to 14 µg/L (April 2020)
- VC has ranged in concentrations from not detected to 10 µg/L (December 2017).

In 2021, 1,1,1-TCA, 1,1-DCA, were both detected at concentrations slightly greater than the applicable Class GA Standard of 5 µg/L at 7.8 µg/L and 7.10 µg/L respectively in the groundwater sample collected from 4009-7. This is the first time that these two analytes have been detected at concentrations greater than the Class GA Standards since the RSO evaluation sampling started in 2014.

During this reporting period cis-1,2-DCE was the only VOC with fluctuating concentrations greater than the applicable Class GA Standards in 4009-9. Cis-1,2-DCE ranged in concentrations from 1.6 µg/L (December 2018) to 21 µg/L (October 2017/2019).

VOC concentrations in groundwater samples from wells 4009-7 and 4009-9 have generally been consistent the past ten sampling events, showing slight fluctuations (Figure 4-3).

Intermediate Groundwater Zone Monitoring Wells

The highest concentrations of VOCs are in the intermediate groundwater zone, downgradient of the source area (ECO International property) (Figure 4-4 and in Table 4-3). As shown on Figure 4-4, six intermediate groundwater zone monitoring wells have been sampled during this reporting period of June 2017 through June 2021, and of the six wells, VOCs have been consistently non-detect in monitoring well 4009-27I. Samples collected from the remaining five intermediate groundwater zone monitoring wells contained concentrations that exceeded the Class GA Standards including; 4009-8, 4009-26, 4009-27S, 4009-29S, and 4009-29I. Wells 4009-8 and 4009-26 are located on the south side of NYS Route 17, just west of the source area. Well 4009-29S is 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.

A summary of the results in the intermediate groundwater zone wells is listed below:

- The following four VOCs were detected at concentrations greater than the Class GA Standard (5 µg/L) in five intermediate wells:
 - **1,1,1-TCA:** the highest concentration was reported in March 2019 at a concentration of 4,100 µg/L (4009-8). The range of concentration during the last sampling event (April 2021) was 73 µg/L (4009-27S) to 1,200 µg/L (4009-29S)
 - **1,1-DCE:** the highest concentration was reported in October 2019 at a concentration of 210 µg/L (4009-8). The range of concentration during the last sampling event in four of the monitoring wells (April 2021) was 11 µg/L (4009-26) to 86 µg/L (4009-29S)

- **Cis-1,2-DCE:** the highest concentration was reported in March 2019 at a concentration of 950 µg/L (4009-8). The range of concentration during the last sampling event (April 2021) was 17 µg/L (4009-27S) to 340 µg/L (4009-29S)
- **TCE:** the highest concentration was reported in October 2019 at a concentration of 990 µg/L (4009-8). The range of concentration during the last sampling event (April 2021) was 15 µg/L (4009-27S) to 390 µg/L (4009-8).
- **1,1-DCA** was detected at a concentration greater than the Class GA Standard (5 µg/L) in four intermediate wells with groundwater concentrations ranging from 43 µg/L (4009-8) to 72 µg/L (4009-29S) in April 2021. The highest concentration was reported in September 2018 at a concentration of 150 µg/L (4009-8).
- **VC** was detected at a concentration greater than the Class GA Standard (2 µg/L) in three intermediate wells with groundwater concentrations ranging from 10 µg/L (4009-26) to 91 µg/L (4009-29S) in April 2021. The highest concentration was reported in October 2019 at a concentration of 140 µg/L (4009-29S).

As shown on Figure 4-4, the majority of the detected analytes in samples from monitoring well 4009-27S remaining generally stable, while concentrations in 4009-29I are also generally consistent with the range of results reported in the last ten events, with some fluctuations. VOC groundwater concentrations in the wells immediately downgradient monitoring of the source area (4009-8, 4009-26, and 4009-29S) continue to fluctuate and have shown an overall increasing trend in VOC groundwater concentrations over the last two years as shown on Figures 4-6 through 4-8. These trends will continue to be monitored during 2021.

Deep Groundwater Zone Monitoring Wells

As shown on Figure 4-5, 15 deep groundwater zone monitoring wells have been sampled during this reporting period of June 2017 through June 2021. All 15 deep wells monitor the area north of Route 17. VOCs have been consistently non-detect in three of the 15 wells (4009-13, 4009-18, and 4009-27D). Of the remaining 12 wells, benzene has been the only VOC analyte that is typically detected at a concentration greater than the Class GA Standard (1 µg/L) in eight of the deep groundwater wells. Samples collected from the remaining four deep groundwater zone monitoring wells typically contained at least five or more analytes at concentrations that exceeded the Class GA Standards during the reporting period including; 4009-11, 4009-12, 4009-29D, and Well 1-1.

A summary of the results in the deep groundwater zone wells is listed below:

- **Benzene** was detected at a concentration greater than the Class GA Standard (1 µg/L) in five deep wells with groundwater concentrations ranging from 3.4 µg/L (4009-14) to 30 µg/L (4009-16) during the April 2021 sampling event. The highest concentration of benzene was detected in monitoring well 4009-16 (42 µg/L) during this reporting period.
- **1,1,1-TCA** detected at a concentration greater than the Class GA Standard (5 µg/L) in two deep wells with groundwater concentrations of 36 µg/L (4009-29D) and 300 µg/L (4009-12) during the April 2021 event. The highest concentration was reported in June 2017 and March 2019 at a concentration of 360 µg/L (Well 1-1).
- **1,1-DCA** was detected at concentrations greater than the Class GA Standard (5 µg/L) in three deep wells during the April 2021 sampling event with groundwater concentrations ranging from 5.3 µg/L (4009-29D) to 34 µg/L (4009-12). The highest concentration during this reporting period was noted in monitoring well 4009-12 at a concentration of 50 µg/L (March 2019).

- **VC** was also detected at a concentration greater than the Class GA Standard (2 µg/L) in three deep wells with groundwater concentrations ranging from 2.5 µg/L (4009-11) to 47 µg/L (4009-12). The highest concentration was reported in December 2017 at a concentration of 96 µg/L (4009-12).
- **Cis-1,2-DCE and TCE** were detected at concentrations greater than the Class GA Standard (5 µg/L) in two deep wells during the April 2021 sampling event with groundwater concentrations ranging from:
 - Cis-1,2-DCE: 11 µg/L (4009-29D) to 637 µg/L (4009-12) and the highest concentration was noted in monitoring well 4009-29D at a concentration of 180 µg/L (March 2019)
 - TCE: 11 µg/L (4009-29D) to 54 µg/L (4009-12). The highest concentration was reported in March 2018 at a concentration of 120 µg/L (4009-29D).
- 1,1-DCE was detected at a concentration greater than the Class GA Standard (5 µg/L) in one deep well during the April 2021 sampling event with a groundwater concentration of 19 µg/L (4009-12). The highest concentration was noted in Well 1-1 at a concentration of 57 µg/L (June 2017) during this reporting period.

Groundwater monitoring data continue to indicate that there is little change in the deep groundwater plume distribution and migration since the shutdown of the Well 1-1A groundwater treatment plant. Total VOC concentrations were slightly higher than the most recent data at monitoring wells 4009-11 and 4009-12, and a decrease in total VOCs was noted in 4009-29D. During the April 2020 sampling event, benzene was detected in the groundwater sample collected at 4009-16 at a concentration greater than previous results and with similar results in 2021, which is located west of the Town of Vestal well field. Total VOCs detected in the remaining groundwater samples collected during the April 2021 sampling event were generally consistent with the range of results reported during the last two years.

Benzene Concentrations in Deep Wells

Benzene has been observed in deep groundwater zone monitoring wells during sampling events over the past several years. Benzene was detected in groundwater samples from five deep groundwater zone monitoring wells in April 2021 at concentrations that exceeded the Class GA Standard of 1.0 µg/L. Exceedances were observed in groundwater samples collected from monitoring wells 4009-11 (6.7 µg/L), 4009-15 (13.00 µg/L), 4009-16 (30 µg/L), 4009-21 (4.8 µg/L), and 4009-22 (3.4 µg/L) (Figure 4-9). With the exception of 4009-16, these concentrations are similar to previous sampling results (Table 4-3) and continue to fluctuate in the central portion of the study area over the past several years in groundwater samples from four of the deep groundwater zone monitoring wells 4009-14, 4009-15, 4009-21, and 4009-30. During the past four events, benzene concentrations have been either non-detect or less than the Class GA Standard in the groundwater samples collected from 4009-11 and 4009-12. During the April 2021 sampling event, the highest benzene concentration was noted in 4009-16 (30 µg/L). Similar concentrations have inconsistently been noted in the surrounding area, and will continue to be monitored.

Benzene continues to not be detected at concentrations greater than the Class GA Standard in the samples collected from the shallow and intermediate zones during this reporting period. This includes the three monitoring wells; 4009-7, 4009-8, and 4009-26 which 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 sampling events conducted from 2018 through April 2021. The distribution of benzene in the groundwater, along with the fact that benzene is not a contaminant of concern at OU-2, suggest that the presence of benzene is not associated with the OU-1/OU-2 sites.

Monitoring Wells in Vicinity of Town of Vestal Supply Wells

Concentrations of VOCs in groundwater samples from the monitoring wells in the vicinity of the Town of Vestal's water supply wells 1-2A and 1-3 (monitoring wells 4009-16A, 4009-18, 4009-19, 4009-21, 4009-30) are generally consistent with the previous sampling events with the exception of 4009-16 as noted above. During this reporting period, VOCs were not detected at concentrations greater than the Class GA Standards in samples collected from monitoring wells 4009-16A and 4009-18. Benzene was the only VOC analyte detected at concentrations greater than the Class GA Standards in 4009-19, 4009-21, and 4009-30, but has only been detected once during this reporting period at a concentration slightly greater than the Class GA Standard in monitoring well 4009-19 (1.5 µg/L September 2018).

4.3.1.1 1,4-Dioxane and PFAS Groundwater Sampling Results

At the direction of the NYSDEC, groundwater samples collected in June 2017 were also analyzed for 1,4-dioxane and PFAS. At the time of sampling, a guidance value/standard had not been established for 1,4-dioxane and concentrations ranged from non-detect (0.4 U µg/L) to 200 µg/L, though the majority of 1,4-dioxane concentrations were less than 1.0 µg/L. In August 2020, NYSDEC established a maximum contaminant level (MCL) of 1.0 µg/L for drinking water. Comparing the updated MCL to the 2017 and April 2021 data, 4009-9 was the only monitoring well in the shallow monitoring zone that contained a concentration of 1,4 dioxane (2.0 µg/L, 2021 only) in the groundwater sample that was slightly above the MCL. The following intermediate zone monitoring wells were reported with a concentration of 1,4-dioxane slightly above the MCL in the groundwater samples for 2017 and 2021 respectively;

- 4009-8 (2.8 and 2.0 µg/L)
- 4009-26 (3.7 and 2.9 µg/L)
- 4009-29S (2.4 and 6.0 µg/L), and
- 4009-29I (5.9 and 2.5 µg/L)

The following deep zone monitoring wells were reported with a concentration of 1,4-dioxane greater than the MCL in the groundwater samples for 2017 and 2021 respectively;

- 4009-11 (3.8 and 4.1 µg/L)
- 4009-12 (3.4 and 2.9 µg/L), and
- 4009-29D (200 and 150 µg/L)

In 2017 the recommend standard to use for PFAS was the U.S. EPA Health Advisory Limit (HAL) for PFAS in drinking water of 70 nanograms per liter (ng/L). During the June 2017 sampling event there were no detections of PFAS at concentrations greater than 70 ng/L in the shallow, intermediate, or deep groundwater monitoring wells. Five locations were non-detect (2.0 U ng/L) for all analyzed PFAS and the remaining 22 locations ranged in concentrations from non-detect to 15.5 ng/L. In January 2021 NYSDEC updated the NYSDEC Part 375 Remedial Program guidance titled; Sampling, Analysis, and Assessment of Per-and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs to include the following MCL and screening levels for PFAS:

- Perfluorooctanesulfonic acid (PFOS) and perfluorooctanic acid (PFOA) are considered potential contaminants of concern in surface water or groundwater when detected in any water sample at or above the MCL of 10 ng/L and is attributed to the site
- If any other individual PFAS (not including PFOA /PFOS) is detected in water at or above 100 ng/L
- Or if the total concentration of PFAS (including PFOA/PFOS) is detected in water at or above 500 ng/L, Then further assessment may be warranted.

Comparing the updated criteria to the 2017 and the April 2021 data, 4009-9 was the only monitoring well in the shallow monitoring zone that contained a concentration of PFOA and PFOS (15 and 15.5 µg/L, respectively) in the groundwater sample that was slightly above the MCL of 10 ng/L in 2017. There were no detections greater than the criteria in the shallow zone in 2021. In 2017, PFOA was detected at a concentration slightly greater than the MCL in the intermediate zone monitoring well 4009-8 (12.7 ng/L). In 2021, PFOS was the only analyte detected at a concentration slightly greater than the MCL in monitoring well 4009-8 (13.0 ng/L). In 2021, PFOA was also detected in the deep monitoring zone at concentrations equal to and slightly greater than the MCL in groundwater samples collected from wells 4009-15 (11 ng/L) and 4009-27D (10 ng/L). No other individual PFAS (excluding PFOA/PFOS) analytes were detected at concentrations greater than 100 ng/L. In 2017, the total PFAS ranged from non-detect to 37.96 ng/L (4009-9) though a shorter analytical list was analyzed for at the time. In 2021, the total PFAS ranged from non-detect to 61 ng/L (4009-7).

Groundwater results from the June 2017 and April 2021 sampling events are provided in Table 4-4. The next sampling event for 1,4-dioxane and PFAS is scheduled for the spring of 2022.

4.4 Town of Vestal Municipal Well Sampling

4.4.1 VOCs

Pre-treatment samples have been collected from Town of Vestal Wells 1-2A and 1-3 monthly, as part of the RSO since 2014 to evaluate potential impacts to the Town's water supply wells related to the shutdown of the Well 1-1A treatment plant. Samples are collected by Arcadis as well as the town of Vestal Water Superintendent, who then provides the additional data to Arcadis.

During this reporting period, low levels of acetone and or methylene chloride, both a common lab contaminant and bromoform and dibromochloromethane have been detected sporadically in the pre-treatment samples collected from Well 1-2A and 1-3.

Until April 2018, VOCs associated with contamination from the source area had not been detected in any of the pre-treatment effluent samples. In April and May 2018, 1,1,1-TCA was detected at estimated concentrations of 0.29 J and 0.26 J µg/L in Well 1-3 pre-treatment samples. The NYSDEC Class GA Groundwater Standard for this compound is 5 ug/L. As part of the RSO contingency plan, Arcadis implemented the additional sampling of the post treatment water from Well 1-3 from May 2018 through June 2020. There have been no VOCs of concern detected at any of the three locations since the May 2018 detection (Table 2-1). The supplemental sampling is expected to continue at least until the final remedies for OU-1 and OU-2 have been implemented, the contingency post treatment sampling will resume if VOCs of concern are detected again in the pre-treatment samples.

4.4.2 1,4-Dioxane and PFAS

During the June 2017 sampling event, 1,4-dioxane was detected in the pre-treatment sample collected from Well 1-2A at a concentrations of 0.39 J µg/L, which is less than the New York State established MCL for drinking water of 1.0 µg/L (Table 4-5). 1,4-Dioxane was also detected at low concentrations below the MCL in Well 1-2A in 2019 (0.72 µg/L) and 2021 (0.63 µg/L), as well as the Well 1-2A post treatment sample in 2019 at a concentration of 0.72 µg/L. 1,4-Dioxane has not been detected in Well 1-3 during any of the sampling events in 2017, 2019, or 2021.

Several PFAS analytes were detected in the sample collected from the Well 1-3 pre-treatment sample during the June 2017 sampling event including perfluorobutanesulfonic acid (PFBS), perfluorohexanesulfonic acid (PFHxS), perfluoroheptanoic acid (PFHpA), PFOA, PFOS, and perfluorononanoic acid (PFNA). Detections ranged from 0.96 J to 7.19 ng/L, with a PFAS total of 26.10 ng/L. All concentrations were less than, at the time, the U.S. EPA HAL of 70 ng/L. The 2017 detections are also all less than the current NYSDEC MCL of 10 ng/L for PFOS and PFOA which was implemented in August 2020. PFAS were not detected in the Well 1-2A pre-treatment sample in 2017 (Table 4-5).

Consistent with the June 2017 sampling event, concentrations of PFAS were not detected in the sample collected from pre-treatment Well 1-2A. Well 1-2A post was not sampled during the June 2017 event, but there were also no PFAS detections in Well 1-2A during the October 2019 event.

Several PFAS analytes were detected in the samples collected from the pre- and post-treatment samples from Well 1-3 during the October 2019 sampling event. PFHpA, PFOA, PFOS, and PFNA were detected at estimated concentrations in the pre-treatment sample and PFHpA and PFOA were detected at estimated concentrations in the post-treatment sample collected from Well 1-3. Estimated detections ranged from 0.78 to 1.84 ng/L, with a PFAS total of 3.3 and 1.18 ng/L for the pre- and post-treatment samples collected from Well 1-3 respectively. All concentrations were less than, at the time, the U.S. EPA HAL of 70 ng/L. The 2019 detections are also all less than the current NYSDEC MCL of 10 ng/L.

During the April 2021 sampling event, PFAS remain as non-detect in the pre-treatment water sample collected from Well 1-2A. Neither PFOA nor PFOS were detected in the pre-treatment sample collected from Well 1-3A during the April 2021 sampling event. Several other PFAS analytes were detected at low concentrations for a total PFAS of 6.85 ng/L. Post treatment samples were not collected during the April 2021 sampling event.

The next sampling event for 1,4-dioxane and PFAS is scheduled for the spring of 2022.

5 Conclusions and Recommendations

5.1 Conclusions

Based on the results of the RSO, and since the Well 1-1A treatment plant is no longer operational, the remedy specified in the ROD has not been performing as it was intended as the operation of Well 1-1A resulted in vertical migration of the groundwater VOC plume, likely contributed to the horizontal migration of the plume to its current extent, and, by itself, will not result in the achievement of groundwater standards in the OU-1 area within the foreseeable future. None of the wells located between the historical distribution of the VOC plume and the town well field indicate the plume is migrating toward the wells. VOCs were detected at low concentrations (less than NYSDEC Class GA standards) in the Town of Vestal wells 1-2 and 1-3 on two occasions in 2018, but have not been detected since that time. Semi-annual groundwater monitoring data 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 system with the exception of the three wells immediately downgradient of the source area in the intermediate groundwater zone where VOC concentrations continue to fluctuate and have shown an overall increasing trend in VOC groundwater concentrations over the last two years. There are a few wells that contain elevated concentrations of benzene which are being monitored. Benzene is not a contaminant of concern associated with OU-1/OU-2, and its source is not known.

1,4-Dioxane was detected at concentrations greater than the drinking water MCL in several of the monitoring wells. However, 1,4-Dioxane has not been detected at concentrations greater than the MCL in the pre-treatment samples collected from Well 1-2A and Well 1-3. In 2021 there were only a few detections in the intermediate/deep monitoring zones of PFOA and PFOS at concentrations slightly greater than the criteria. All other detections were significantly less than the applicable criteria.

The groundwater monitoring wells are in acceptable condition and allow for the continued monitoring of the horizontal and vertical extent of the groundwater VOC plume.

The implementation of the amended remedy to address the source contamination at OU-2 will likely result in the eventual attenuation of the existing OU-1 groundwater plume through natural processes. In the absence of such a remedy, it is likely that the groundwater VOC plume will persist well beyond 30 years from present and will require continued regular monitoring throughout that time to confirm that the plume is not impacting the current Town of Vestal potable water supply wells. In the event that active remediation is required for OU-1 to protect the potable water supply wells in the absence of an effective OU-2 remedy, it is likely that such a remedy would also require operation well beyond 30 years.

The completed NYSDEC IC/EC certification is provided as Appendix A.

5.2 Recommendations

Since the USEPA has recently issued an amended ROD for OU-2 and is in the process of designing the new remedy, it is recommended that RSO monitoring be continued until either the OU-2 remedy is implemented and/or monitoring data shows that resumption of an active OU-1 remedy is required based on the monitoring results. Changes to the monitoring program may be required depending on the status of the OU-2 remedy and/or

changes in plume dynamics over time. Data evaluation using the updated guidance/MCLs for PFAS and 1,4-dioxane, may warrant additional assessment. It is further recommended that the PRR submittal frequency be reevaluated upon the conclusion of the OU-2 remedial actions.

6 References

Arcadis 2012. Remedial Site Optimization Work Plan, Vestal Water Supply Site, Vestal, New York, NYSDEC Site #7-04-009A. May 2012.

Arcadis 2014. Remedial System Optimization Report – 1st Quarter 2014, Vestal Water Supply Site, Vestal, New York, NYSDEC Site #7-04-009A. August 2014.

Arcadis 2015. Focused Feasibility Study for Groundwater – Operable Unit 1, Vestal Water Supply Site, Vestal, New York, NYSDEC Site #7-04-009A. September 2015.

Arcadis 2017. 2014 – 2017 Periodic Review Report, Vestal Water Supply Site, Vestal, New York, NYSDEC Site #7-04-009A. August 2017.

Lockheed Martin, 2012. Conceptual Site Model, Vestal Chlorinated Solvent Site, Vestal, New York. WA #0-064: Technical Memorandum.

NYSDEC. 2021. Sampling, Analysis, and Assessment of Per-And Polyfluoroalkyl Substances (PFAS). January 17.

Tetra Tech EC 2006. Final Operation and Maintenance Manual, Long-Term Response, Operable Unit 1, Vestal Well 1-1 Site, Vestal, New York. 2016.

USEPA 2016. Record of Decision Amendment for the Vestal Water Supply Well 1-1 Superfund Site, Town of Vestal, Broome County, New York. September 2016.

Tables

Table 2-1.
Summary of Town of Vestal Municipal Well Sampling Results
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Units	NYSDEC GA Standard / Guidance Value 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	Well 1-2A Influent 7/31/2017 ug/L	Well 1-2A Influent 8/18/2017 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	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	0.5 U	1.0 U	0.5 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	NA	1.0 U	NA	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	0.5 U	1.0 U	0.5 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	0.5 U	1.0 U	0.5 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	0.5 U	1.0 U	0.5 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	NA	1.0 U	NA	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	0.5 U	1.0 U	0.5 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	0.5 U	1.0 U	0.5 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	1.0 U	NA	1.0 U	NA	1.0 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	NA	1.0 U	NA	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	0.5 U	1.0 U	0.5 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	0.5 U	1.0 U	0.5 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	0.5 U	1.0 U	0.5 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	0.5 U	1.0 U	0.5 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	0.5 U	1.0 U	0.5 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	0.5 U	1.0 U	0.5 U	1.0 U	0.5 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*	NA
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*	NA
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	NA
Acetone	50*	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 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	0.5 U	1.0 U	0.5 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	NA	1.0 U	NA	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*	NA	1.0 U	NA	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	NA	1.0 U	NA	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	NA	1.0 U	NA	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	0.5 U	1.0 U	0.5 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	0.5 U	1.0 U	0.5 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	0.5 U	1.0 U	0.5 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	NA	1.0 U	NA	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	NA	1.0 U	NA	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	0.5 U	1.0 U	0.5 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	0.5 U	1.0 U	0.5 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	1.0 U	NA	1.0 U	NA	1.0 U	NA
Dibromochloromethane	50	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U*	NA	1.0 U*	NA	1.0 U	NA	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	0.5 U	1.0 U	0.5 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	0.5 U	1.0 U	0.5 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	0.5 U	1.0 U	0.5 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	2.5 U	NA	2.5 U	NA	2.5 U	NA
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	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	1.0 U	0.5 U	1.0 U	0.5 U	1.0 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	0.5 U	1.0 U	0.5 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	0.5 U	1.0 U	0.5 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	0.5 U	1.0 U	0.5 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	0.5 U	1.0 U	0.5 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	0.5 U	1.0 U	0.5 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	0.5 U	1.0 U	0.5 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	0.5 U	1.0 U	0.5 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	0.5 U	1.0 U	0.5 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	0.5 U	1.0 U	0.5 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	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	0

Table 2-1.
Summary of Town of Vestal Municipal Well Sampling Results
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Units	NYSDEC GA Standard / Guidance Value 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	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
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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	5.0 U	NA	5.0 U	NA	5.0 U	NA
Acetone	50*	10 U	NA	10 U	NA	4.2 J	NA	10 U	NA	10 U	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	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	NS	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U
Total VOCs		0	0	0	0	4.2	0	0	0	0	NS	0	0	0	0	0	0

Table 2-1.
Summary of Town of Vestal Municipal Well Sampling Results
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Units	NYSDEC GA Standard / Guidance Value 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	Well 1-2A Influent 9/24/2018 ug/L	Well 1-2A Influent 10/22/2018 ug/L	Well 1-2A Influent 10/30/2018 ug/L	Well 1-2A Influent 11/12/2018 ug/L	Well 1-2A Influent 11/30/2018 ug/L	Well 1-2A Influent 12/17/2018 ug/L	Well 1-2A Influent 12/19/2018 ug/L	Well 1-2A Influent 1/7/2019 ug/L
1,1,1-Trichloroethane	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	1.0 U*	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U
1,1,2-Trichloroethane	1	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
1,1-Dichloroethane	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
1,1-Dichloroethene	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
1,2,3-Trimethylbenzene		1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	10 U	10 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U
1,2-Dichlorobenzene	3	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
1,2-Dichloropropane	1	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
2-Butanone (MEK)	50	50 U	50 U	NA	10 U	NA	10 U	NA	10 U'	NA	10 U'	NA	NA	10 U'	10 U	NA	NA	10 U	10 U
2-Hexanone	50*	10 U	10 U	NA	5.0 U'	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	NA	5.0 U	5.0 U	NA	NA	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)		10 U	10 U	NA	5.0 U'	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	NA	5.0 U	5.0 U	NA	NA	5.0 U	5.0 U
Acetone	50*	25 U	25 U	NA	10 U	NA	10 U	NA	3.1 J	NA	10 U	NA	NA	3.5 J	10 U	NA	NA	10 U	10 U
Benzene	1	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Bromodichloromethane	50*	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U
Bromoform	50*	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U
Bromomethane	5	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U
Carbon disulfide		1.0 U	1.0 U*	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U
Carbon tetrachloride	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Chlorobenzene	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Chloroethane	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Chloroform	7	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U
Chloromethane		1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	0.4**	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Cyclohexane		5.0 U	5 U*	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U
Dibromochloromethane	50	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U
Dichlorodifluoromethane	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Ethylbenzene	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Methyl Acetate		10 U	10 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	2.5 U
Methyl Cyclohexane		5.0 U	5.0 U*	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U
Methylene Chloride	5	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	0.5 U	0.5 U	1.8BT	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Methyl Tert Butyl Ether	10	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Styrene	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Tetrachloroethene	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Toluene	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4**	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Trichloroethene	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Trichlorofluoromethane	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Vinyl chloride	2	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Xylenes, Total		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	0.5 U	0.5 U	2.0 U	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U
Total VOCs		0	0	0	0	0	0	0	3.1	0	0	0	0	5.3	0	0	0	0	0

Table 2-1.
Summary of Town of Vestal Municipal Well Sampling Results
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Units	NYSDEC GA Standard / Guidance Value ug/L	Well 1-2A Influent 1/28/2019 ug/L	Well 1-2A Influent 2/11/2019 ug/L	Well 1-2A Influent 2/22/2019 ug/L	Well 1-2A Influent 3/11/2019 ug/L	Well 1-2A Influent 3/26/2019 ug/L	Well 1-2A Influent 4/11/2019 ug/L	Well 1-2A Influent 4/22/2019 ug/L	Well 1-2A Influent 5/6/2019 ug/L	Well 1-2A Influent 5/31/2019 ug/L	Well 1-2A Influent 6/7/2019 ug/L	Well 1-2A Influent 6/19/2019 ug/L	Well 1-2A Influent 7/12/2019 ug/L	Well 1-2A Influent 7/22/2019 ug/L	Well 1-2A Influent 8/12/2019 ug/L	Well 1-2A Influent 8/26/2019 ug/L	Well 1-2A Influent 9/26/2019 ug/L	Well 1-2A Influent 9/30/2019 ug/L	Well 1-2A Influent 10/10/2019 ug/L	Well 1-2A Influent 10/28/2019 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	0.5 U	1.0 U	0.5 U	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	0.5 U	1.0 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		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	NA	1.0 U	NA	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	0.5 U	1.0 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	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 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	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 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		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	NA	1.0 U	NA	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	0.5 U	1.0 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	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 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	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	NA	1.0 U	NA	1.0 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	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	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	0.5 U	1.0 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	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 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	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 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	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 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	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 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	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	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	NA	10 U	NA	10 U	NA	10 U	NA	10 U'	NA	10 U	NA	10 U'	NA	10 U	NA	10 U	NA	10 U	NA
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	NA	5.0 U	NA	5.0 U	NA
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	NA	5.0 U	NA	5.0 U'	NA
Acetone	50*	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	3.8 J	NA	10 U	NA	10 U	NA	10 U	NA	10 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	0.5 U	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*	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	NA	1.0 U	NA	1.0 U	0.5 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	NA	1.0 U	NA	1.0 U	0.78
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	NA	1.0 U	NA	1.0 U	0.5 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	NA	1.0 U	NA	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	0.5 U	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	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	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	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	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	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	NA	1.0 U	NA	1.0 U	0.5 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	NA	1.0 U	NA	1.0 U	NA	1.0 U'	0.5 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	0.5 U	1.0 U	0.5 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	0.5 U	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		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	NA	1.0 U	NA	1.0 U	NA
Dibromochloromethane	50	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U'	NA	1.0 U	NA	1.0 U	NA	1.0 U	0.66
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	0.5 U	1.0 U	0.5 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	0.5 U	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	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	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		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	NA	2.5 U	NA	2.5 U'	NA
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	NA	1.0 U	NA	1.0 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	0.44 J	0.5 U	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	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	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	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	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	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	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	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	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	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	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**	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	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	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	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	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	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	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	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		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	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	4.24	0	0	0	0	0	0	0	0	1.44

Table 2-1.
Summary of Town of Vestal Municipal Well Sampling Results
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Units	NYSDEC GA Standard / Guidance Value ug/L	Well 1-2A Influent 11/22/2019 ug/L	Well 1-2A Influent 11/25/2019 ug/L	Well 1-2A Influent 12/13/2019 ug/L	Well 1-2A Influent 12/20/2019 ug/L	Well 1-2A Influent 1/13/2020 ug/L	Well 1-2A Influent 1/28/2020 ug/L	Well 1-2A Influent 2/6/2020 ug/L	Well 1-2A Influent 2/25/2020 ug/L	Well 1-2A Influent 3/16/2020 ug/L	Well 1-2A Influent 3/23/2020 ug/L	Well 1-2A Influent 4/6/2020 ug/L	Well 1-2A Influent 4/28/2020 ug/L	Well 1-2A Influent 5/15/2020 ug/L	Well 1-2A Influent 5/29/2020 ug/L	Well 1-2A Influent 6/8/2020 ug/L	Well 1-2A Influent 6/26/2020 ug/L	Well 1-2A Influent 7/31/2020 ug/L	Well 1-2A Influent 9/25/2020 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	1.0 U	0.5 U	0.5 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	1.0 U	0.5 U	0.5 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	1.0 U	NA	NA	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	1.0 U	0.5 U	0.5 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	1.0 U	0.5 U	0.5 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	1.0 U	0.5 U	0.5 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	1.0 U	NA	NA	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	1.0 U	0.5 U	0.5 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	1.0 U	0.5 U	0.5 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	1.0 U	NA	NA	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	1.0 U	NA	NA	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	1.0 U	0.5 U	0.5 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	1.0 U	0.5 U	0.5 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	1.0 U	0.5 U	0.5 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	1.0 U	0.5 U	0.5 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	1.0 U	0.5 U	0.5 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	1.0 U	0.5 U	0.5 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	10 U'	NA	NA	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	5.0 U	NA	NA	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	5.0 U	NA	NA	NA
Acetone	50*	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	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	1.0 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	50*	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	0.5 U
Bromoform	50*	1.0 U	0.99	1.0 U	0.81	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	0.5 U
Bromomethane	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	1.0 U	0.5 U	0.5 U	0.5 U
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	1.0 U	NA	NA	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	1.0 U	0.5 U	0.5 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	1.0 U	0.5 U	0.5 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	1.0 U	0.5 U	0.5 U	0.5 U
Chloroform	7	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	0.5 U
Chloromethane		1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.36 J	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	0.5 U
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	1.0 U	0.5 U	0.5 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	1.0 U	0.5 U	0.5 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	1.0 U	NA	NA	NA
Dibromochloromethane	50	1.0 U	0.61	1.0 U	0.54	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	0.5 U
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	1.0 U	0.5 U	0.5 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	1.0 U	0.5 U	0.5 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	1.0 U	0.5 U	0.5 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	2.5 U	NA	NA	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	1.0 U	NA	NA	NA
Methylene Chloride	5	2.0 B'	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 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	1.0 U	0.5 U	0.5 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	1.0 U	0.5 U	0.5 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	1.0 U'	0.5 U	0.5 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	1.0 U	0.5 U	0.5 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	1.0 U	0.5 U	0.5 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	1.0 U	0.5 U	0.5 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	1.0 U	0.5 U	0.5 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	1.0 U	0.5 U	0.5 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	1.0 U	0.5 U	0.5 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	2.0 U	0.5 U	0.5 U	0.5 U
Total VOCs		2	1.6	0	1.35	0	0	0.36	0	0	0	0	0	0	0	0	0	0	0

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Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Units	NYSDEC GA Standard / Guidance Value ug/L	Well 1-2A Influent 10/19/2020 ug/L	Well 1-2A Influent 11/23/2020 ug/L	Well 1-2A Influent 12/15/2020 ug/L	Well 1-2A Influent 1/15/2021 ug/L	Well 1-2A Influent 1/22/2021 ug/L	Well 1-2A Influent 2/17/2021 ug/L	Well 1-2A Influent 2/16/2021 ug/L	Well 1-2A Influent 3/18/2021 ug/L	Well 1-2A Influent 3/22/2021 ug/L	Well 1-2A Influent 4/9/2021 ug/L	Well 1-2A Influent 4/28/2021 ug/L	Well 1-2A Influent 5/11/2021 ug/L	Well 1-2A Influent 5/18/2021 ug/L	Well 1-2A Influent 6/23/2021 ug/L	Well 1-2A Influent 6/15/2021 ug/L	Well 1-3 Influent 6/14/2018 ug/L	Well 1-3 (post) Effluent 6/14/2018 ug/L
1,1,1-Trichloroethane	5	0.5 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 ^{*1}	0.5 U	1.0 U	0.5 U	1.0 U ^{*1}	0.5 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	0.5 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	1.0 U ^{*1}	0.5 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		NA	NA	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	1.0 U
1,1,2-Trichloroethane	1	0.5 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	1.0 U	0.5 U	1.0 U	1.0 U
1,1-Dichloroethane	5	0.5 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	1.0 U	0.5 U	1.0 U	1.0 U
1,1-Dichloroethene	5	0.5 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}	0.5 U ^{*1}	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	1.0 U
1,2,3-Trimethylbenzene		NA	NA	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	1.0 U
1,2,4-Trichlorobenzene	5	0.5 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	1.0 U	0.5 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	0.5 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	1.0 U	0.5 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	NA	NA	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	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	NA	NA	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	1.0 U
1,2-Dichlorobenzene	3	0.5 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	1.0 U	0.5 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	0.5 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	1.0 U	0.5 U	1.0 U	1.0 U
1,2-Dichloropropane	1	0.5 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	1.0 U	0.5 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	0.5 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	1.0 U	0.5 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	0.5 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	1.0 U	0.5 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	0.5 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	1.0 U	0.5 U	1.0 U	1.0 U
2-Butanone (MEK)	50	NA	NA	NA	10 U ⁺	NA	10 U ⁺	NA	10 J ⁺	NA	10 U ⁺	NA	10 U ⁺	NA	10 U ⁺	NA	10 U	10 U
2-Hexanone	50*	NA	NA	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U ^{*1}	NA	5.0 U'	5.0 U'
4-Methyl-2-pentanone (MIBK)		NA	NA	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'	5.0 U'
Acetone	50*	NA	NA	NA	10 U	NA	10 U	NA	10 U	NA	10.0 U	NA	10 U	NA	10 U ^{*1}	NA	10 U	10 U
Benzene	1	0.5 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}	0.5 U	1.0 U	0.5 U	1.0 U ^{*1}	0.5 U	1.0 U	1.0 U
Bromodichloromethane	50*	0.5 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	1.0 U ^{*1}	0.5 U	1.0 U	1.0 U
Bromoform	50*	0.5 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	1.0 U	0.5 U	1.0 U	1.0 U
Bromomethane	5	0.5 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 ^{*1}	0.5 U	1.0 U ^{*1}	0.5 U	1.0 U	1.0 U
Carbon disulfide		NA	NA	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}	NA	1.0 U	1.0 U
Carbon tetrachloride	5	0.5 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}	0.5 U	1.0 U	0.5 U	1.0 U ^{*1}	0.5 U	1.0 U	1.0 U
Chlorobenzene	5	0.5 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	1.0 U	0.5 U	1.0 U	1.0 U
Chloroethane	5	0.5 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	1.0 U ^{*1}	0.5 U	1.0 U	1.0 U
Chloroform	7	0.5 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	1.0 U	0.5 U	1.0 U	1.0 U
Chloromethane		0.5 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	1.0 U	0.5 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	0.5 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	1.0 U ^{*1}	0.5 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	0.4**	0.5 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	1.0 U ^{*1}	0.5 U	1.0 U	1.0 U
Cyclohexane		NA	NA	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	1.0 U
Dibromochloromethane	50	0.5 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	1.0 U ^{*1}	0.5 U	1.0 U	1.0 U
Dichlorodifluoromethane	5	0.5 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	1.0 U ^{-*1}	0.5 U	1.0 U	1.0 U
Ethylbenzene	5	0.5 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	1.0 U ^{*1}	0.5 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	0.5 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	1.0 U	0.5 U	1.0 U	1.0 U
Methyl Acetate		NA	NA	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	2.5 U
Methyl Cyclohexane		NA	NA	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}	NA	1.0 U	1.0 U
Methylene Chloride	5	0.5 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	1.0 U	0.5 U	1.0 U	1.0 U
Methyl Tert Butyl Ether	10	0.5 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	1.0 U ⁺	0.5 U	1.0 U	1.0 U
Styrene	5	0.5 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	1.0 U	0.5 U	1.0 U	1.0 U
Tetrachloroethene	5	0.5 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	1.0 U	0.5 U	1.0 U	1.0 U
Toluene	5	0.5 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	1.0 U ^{*1}	0.5 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	0.5 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	1.0 U	0.5 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4**	0.5 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	1.0 U	0.5 U	1.0 U	1.0 U
Trichloroethene	5	0.5 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	1.0 U ^{*1}	0.5 U	1.0 U	1.0 U
Trichlorofluoromethane	5	0.5 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	1.0 U	0.5 U	1.0 U	1.0 U
Vinyl chloride	2	0.5 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}	0.5 U	1.0 U	0.5 U	1.0 U ^{*1}	0.2 U	1.0 U	1.0 U
Xylenes, Total		0.5 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	1.0 U	0.5 U	1.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U
Total VOCs		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 2-1.
Summary of Town of Vestal Municipal Well Sampling Results
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Units	NYSDEC GA Standard / Guidance Value ug/L	Well 1-3 Influent 6/19/2018 ug/L	Well 1-3 Influent 7/6/2018 ug/L	Well 1-3 (post) Effluent 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) Effluent 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) Effluent 9/13/2018 ug/L	Well 1-3 Influent 9/24/2018 ug/L	Well 1-3 Influent 10/22/2018 ug/L	Well 1-3 Influent 10/30/2018 ug/L	Well 1-3 (post) Effluent 10/30/2018 ug/L	Well 1-3 Influent 11/12/2018 ug/L	Well 1-3 (post) Effluent 11/12/2018 ug/L	Well 1-3 Influent 11/30/2018 ug/L	Well 1-3 Influent 12/17/2018 ug/L
1,1,1-Trichloroethane	5	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	5	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
1,1,2-Trichloroethane	1	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
1,1-Dichloroethane	5	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
1,1-Dichloroethene	5	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
1,2,3-Trimethylbenzene		NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
1,2,4-Trichlorobenzene	5	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
1,2,4-Trimethylbenzne	5	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
1,2-Dibromo-3-Chloropropane	0.04	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
1,2-Dibromoethane (Ethylene Dibromide)	5	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
1,2-Dichlorobenzene	3	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
1,2-Dichloroethane	0.6	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
1,2-Dichloropropane	1	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	5	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
1,3-Dichlorobenzene	3	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
1,4-Dichlorobenzene	3	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
2-Butanone (MEK)	50	NA	10 U	10 U	NA	10 U'	10 U'	NA	10 U'	10 U'	NA	NA	10 U'	10 U	10 U	10 U	NA	NA
2-Hexanone	50*	NA	5.0 U	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U	5.0 U	NA	NA	5.0 U	5.0 U	5.0 U	5.0 U	NA	NA
4-Methyl-2-pentanone (MIBK)		NA	5.0 U	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U	5.0 U	NA	NA	5.0 U	5.0 U	5.0 U	5.0 U	NA	NA
Acetone	50*	NA	3.3 J	10 U	NA	10.0 U	10 U	NA	10.0 U	10 U	NA	NA	10 U	3.5 J	10.0 U	10 U	NA	NA
Benzene	1	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
Bromodichloromethane	50*	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
Bromoform	50*	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
Bromomethane	5	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
Carbon disulfide		NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
Carbon tetrachloride	5	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
Chlorobenzene	5	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
Chloroethane	5	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
Chloroform	7	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
Chloromethane		NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
cis-1,2-Dichloroethene	5	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.4**	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
Cyclohexane		NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
Dibromochloromethane	50	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
Dichlorodifluoromethane	5	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
Ethylbenzene	5	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
Isopropylbenzne (Cumene)	5	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
Methyl Acetate		NA	2.5 U	2.5 U	NA	2.5 U	2.5 U	NA	2.5 U	2.5 U	NA	NA	2.5 U	2.5 U	2.5 U	2.5 U	NA	NA
Methyl Cyclohexane		NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
Methylene Chloride	5	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	0.5 U	2.7 B	2.5 B	1.0 U	1.0 U	0.5 U	0.5 U
Methyl Tert Butyl Ether	10	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
Styrene	5	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
Tetrachloroethene	5	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
Toluene	5	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	5	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.4**	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
Trichloroethene	5	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
Trichlorofluoromethane	5	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
Vinyl chloride	2	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	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.5 U
Xylenes, Total		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	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	0.5 U
Total VOCs		0	3.3	0	0	0	0	0	0	0	0	0	2.7	6	0	0	0	0

Table 2-1.
Summary of Town of Vestal Municipal Well Sampling Results
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Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Units	NYSDEC GA Standard / Guidance Value ug/L	Well 1-3 Influent 12/19/2018 ug/L	Well 1-3 (post) Effluent 12/19/2018 ug/L	Well 1-3 Influent 1/7/2019 ug/L	Well 1-3 (post) Effluent 1/7/2019 ug/L	Well 1-3 Influent 1/28/2019 ug/L	Well 1-3 Influent 2/11/2019 ug/L	Well 1-3 (post) Effluent 2/11/2019 ug/L	Well 1-3 Influent 2/22/2019 ug/L	Well 1-3 Influent 3/11/2019 ug/L	Well 1-3 (post) Effluent 3/11/2019 ug/L	Well 1-3 Influent 3/26/2019 ug/L	Well 1-3 Influent 4/11/2019 ug/L	Well 1-3 (post) Effluent 4/11/2019 ug/L	Well 1-3 Influent 4/22/2019 ug/L	Well 1-3 Influent 5/6/2019 ug/L	Well 1-3 (post) Effluent 5/6/2019 ug/L	Well 1-3 Influent 5/31/2019 ug/L
1,1,1-Trichloroethane	5	1.0 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	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	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	1.0 U	1.0 U	0.5 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	1.0 U	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	1.0 U	1.0 U	NA
1,1,2-Trichloroethane	1	1.0 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	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	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	1.0 U	1.0 U	0.5 U
1,1-Dichloroethene	5	1.0 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	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	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	1.0 U	1.0 U	NA
1,2,4-Trichlorobenzene	5	1.0 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	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	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	1.0 U	1.0 U	0.5 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 U	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	1.0 U	1.0 U	NA
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	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	1.0 U	1.0 U	NA
1,2-Dichlorobenzene	3	1.0 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	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	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	1.0 U	1.0 U	0.5 U
1,2-Dichloropropane	1	1.0 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	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	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	1.0 U	1.0 U	0.5 U
1,3-Dichlorobenzene	3	1.0 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	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	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	1.0 U	1.0 U	0.5 U
2-Butanone (MEK)	50	10 U	10 U	10 U	10 U	NA	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	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	5.0 U	5.0 U	NA
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 U	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	5.0 U	5.0 U	NA
Acetone	50*	10.0 U	10 U	10.0 U	10 U	NA	10 U	10 U	NA	10 U	10 U	NA	10 U	10 U	NA	10 U	10 U	NA
Benzene	1	1.0 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	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	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	1.0 U	1.0 U	NA
Bromoform	50*	1.0 U	1.0 U	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	1.0 U	1.0 U	NA
Bromomethane	5	1.0 U	1.0 U	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	1.0 U	1.0 U	NA
Carbon disulfide		1.0 U	1.0 U	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	1.0 U	1.0 U	NA
Carbon tetrachloride	5	1.0 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	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	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	1.0 U	1.0 U	0.5 U
Chloroethane	5	1.0 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	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	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	1.0 U	1.0 U	NA
Chloromethane		1.0 U	1.0 U	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	1.0 U	1.0 U	NA
cis-1,2-Dichloroethene	5	1.0 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	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	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	1.0 U'	1.0 U'	0.5 U
Cyclohexane		1.0 U	1.0 U	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	1.0 U	1.0 U	NA
Dibromochloromethane	50	1.0 U	1.0 U	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	1.0 U	1.0 U	NA
Dichlorodifluoromethane	5	1.0 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	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	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	1.0 U	1.0 U	0.5 U
Isopropylbenzne (Cumene)	5	1.0 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	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	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	2.5 U	2.5 U	NA
Methyl Cyclohexane		1.0 U	1.0 U	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	1.0 U	1.0 U	NA
Methylene Chloride	5	1.0 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	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	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	1.0 U	1.0 U	0.5 U
Styrene	5	1.0 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	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	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	1.0 U	1.0 U	0.5 U
Toluene	5	1.0 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	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	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	1.0 U	1.0 U	0.5 U
trans-1,3-Dichloropropene	0.4**	1.0 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	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	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	1.0 U	1.0 U	0.5 U
Trichlorofluoromethane	5	1.0 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	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	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	1.0 U	1.0 U	0.5 U
Xylenes, Total		2.0 U	2.0 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	2.0 U	2.0 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	0	0	0	0

Table 2-1.
Summary of Town of Vestal Municipal Well Sampling Results
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Units	NYSDEC GA Standard / Guidance Value ug/L	Well 1-3 Influent 6/7/2019 ug/L	Well 1-3 (post) Effluent 6/7/2019 ug/L	Well 1-3 Influent 6/19/2019 ug/L	Well 1-3 Influent 7/12/2019 ug/L	Well 1-3 (post) Effluent 7/12/2019 ug/L	Well 1-3 Influent 7/22/2019 ug/L	Well 1-3 Influent 8/12/2019 ug/L	Well 1-3 (post) Effluent 8/12/2019 ug/L	Well 1-3 Influent 8/26/2019 ug/L	Well 1-3 Influent 9/26/2019 ug/L	Well 1-3 (post) Effluent 9/26/2019 ug/L	Well 1-3 Influent 9/30/2019 ug/L	Well 1-3 (post) Effluent 10/10/2019 ug/L	Well 1-3 Influent 10/10/2019 ug/L	Well 1-3 Influent 10/28/2019 ug/L	Well 1-3 (post) Effluent 11/22/2019 ug/L	Well 1-3 Influent 11/22/2019 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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	NA	1.0 U	1.0 U
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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	NA	1.0 U	1.0 U
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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	NA	1.0 U	1.0 U
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	1.0 U	1.0 U	NA	1.0 U	1.0 U
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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	10 U	10 U	NA	10 U	10 U
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	5.0 U	5.0 U	NA	5.0 U	5.0 U
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	5.0 U'	5.0 U'	NA	5.0 U	5.0 U
Acetone	50*	4.9 J	4.9 J	NA	10 U	10 U	NA	10 U	10 U	NA	10 U	10 U	NA	10 U	10 U	NA	10 U	10 U
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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U
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	1.0 U	1.0 U	3.88	1.0 U	1.0 U
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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U
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	1.0 U	1.0 U	NA	1.0 U	1.0 U
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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U
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	1.0 U'	1.0 U'	0.5 U	1.0 U	1.0 U
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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	NA	1.0 U	1.0 U
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	1.0 U	1.0 U	0.91	1.0 U	1.0 U
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	1.0 U'	1.0 U'	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	2.5 U'	2.5 U'	NA	2.5 U	2.5 U
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	1.0 U	1.0 U	NA	1.0 U	1.0 U
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	1.0 U	1.0 U	0.5 U	1.6 B'	1.7 B'
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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	1.0 U	1.0 U	0.5 U	1.0 U	1.0 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	2.0 U	2.0 U	0.5 U	2.0 U	2.0 U
Total VOCs		0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.79	1.6	1.7

Table 2-1.
Summary of Town of Vestal Municipal Well Sampling Results
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Units	NYSDEC GA Standard / Guidance Value ug/L	Well 1-3 Influent 11/25/2019 ug/L	Well 1-3 (post) Effluent 12/13/2019 ug/L	Well 1-3 Influent 12/13/2019 ug/L	Well 1-3 Influent 12/20/2019 ug/L	Well 1-3 (post) Effluent 1/13/2020 ug/L	Well 1-3 Influent 1/13/2020 ug/L	Well 1-3 Influent 1/28/2020 ug/L	Well 1-3 (post) Effluent 2/6/2020 ug/L	Well 1-3 Influent 2/6/2020 ug/L	Well 1-3 Influent 2/25/2020 ug/L	Well 1-3 (Post) Effluent 2/25/2020 ug/L	Well 1-3 Influent 3/16/2020 ug/L	Well 1-3 (Post) Effluent 3/16/2020 ug/L	Well 1-3 Influent 3/23/2020 ug/L	Well 1-3 (Post) Effluent 3/23/2020 ug/L	Well 1-3 Influent 4/6/2020 ug/L	Well 1-3 (Post) Effluent 4/6/2020 ug/L
1,1,1-Trichloroethane	5	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	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	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	1.0 U	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U
1,1,2-Trichloroethane	1	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
1,1-Dichloroethane	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
1,1-Dichloroethene	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
1,2,3-Trimethylbenzene		NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U
1,2-Dichlorobenzene	3	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
1,2-Dichloropropane	1	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
2-Butanone (MEK)	50	NA	10 U'	10 U'	NA	10 U'	10 U'	NA	10 U'	10 U'	NA	NA	10 U	10 U	NA	NA	10 U'	10 U'
2-Hexanone	50*	NA	5.0 U	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U	5.0 U	NA	NA	5.0 U	5.0 U	NA	NA	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)		NA	5.0 U	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U	5.0 U	NA	NA	5.0 U	5.0 U	NA	NA	5.0 U	5.0 U
Acetone	50*	NA	10 U	10 U	NA	10 U	10 U	NA	10 U	10 U	NA	NA	10 U	10 U	NA	NA	10 U	10 U
Benzene	1	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Bromodichloromethane	50*	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Bromoform	50*	3.62	1.0 U	1.0 U	1.85	1.0 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	0.5 U	1.0 U	1.0 U
Bromomethane	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Carbon disulfide		NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U
Carbon tetrachloride	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Chlorobenzene	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Chloroethane	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Chloroform	7	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Chloromethane		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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	0.4**	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Cyclohexane		NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U
Dibromochloromethane	50	1.20	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Dichlorodifluoromethane	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Ethylbenzene	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Methyl Acetate		NA	2.5 U	2.5 U	NA	2.5 U	2.5 U	NA	2.5 U	2.5 U	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	2.5 U
Methyl Cyclohexane		NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U
Methylene Chloride	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Methyl Tert Butyl Ether	10	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Styrene	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Tetrachloroethene	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U'	1.0 U'
Toluene	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4**	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Trichloroethene	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Trichlorofluoromethane	5	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Vinyl chloride	2	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	0.5 U	1.0 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Xylenes, Total		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	0.5 U	2.0 U	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U
Total VOCs		4.82	0	0	1.85	0	0	0	0	0	0	0	0	0	0	0	0	0

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Sample ID Sampling Date Units	NYSDEC GA Standard / Guidance Value ug/L	Well 1-3 Influent 4/28/2020 ug/L	Well 1-3 (Post) Effluent 4/28/2020 ug/L	Well 1-3 Influent 5/15/2020 ug/L	Well 1-3 (Post) Effluent 5/15/2020 ug/L	Well 1-3 Influent 5/29/2020 ug/L	Well 1-3 (Post) Effluent 5/29/2020 ug/L	Well 1-3 Influent 6/8/2020 ug/L	Well 1-3 (Post) Effluent 6/8/2020 ug/L	Well 1-3 Influent 6/26/2020 ug/L	Well 1-3 Influent 7/31/2020 ug/L	Well 1-3 Influent 9/25/2020 ug/L	Well 1-3 Influent 10/19/2020 ug/L	Well 1-3 Influent 11/23/2020 ug/L	Well 1-3 Influent 12/15/2020 ug/L	Well 1-3 Influent 1/15/2021 ug/L	Well 1-3 Influent 1/22/2021 ug/L	Well 1-3 Influent 2/16/2021 ug/L
1,1,1-Trichloroethane	5	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	5	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	NA	NA	NA	NA	1.0 U	NA	NA
1,1,2-Trichloroethane	1	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
1,1-Dichloroethane	5	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
1,1-Dichloroethene	5	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
1,2,3-Trimethylbenzene		NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	NA	NA	NA	NA	1.0 U	NA	NA
1,2,4-Trichlorobenzene	5	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
1,2,4-Trimethylbenzne	5	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
1,2-Dibromo-3-Chloropropane	0.04	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	NA	NA	NA	NA	1.0 U	NA	NA
1,2-Dibromoethane (Ethylene Dibromide)	5	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	NA	NA	NA	NA	1.0 U	NA	NA
1,2-Dichlorobenzene	3	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
1,2-Dichloroethane	0.6	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
1,2-Dichloropropane	1	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	5	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
1,3-Dichlorobenzene	3	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
1,4-Dichlorobenzene	3	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
2-Butanone (MEK)	50	NA	NA	10 U'	10 U'	NA	NA	10 U'	10 U'	NA	NA	NA	NA	NA	NA	10 U*+	NA	NA
2-Hexanone	50*	NA	NA	5.0 U	5.0 U	NA	NA	5.0 U	5.0 U	NA	NA	NA	NA	NA	NA	5.0 U	NA	NA
4-Methyl-2-pentanone (MIBK)		NA	NA	5.0 U	5.0 U	NA	NA	5.0 U	5.0 U	NA	NA	NA	NA	NA	NA	5.0 U	NA	NA
Acetone	50*	NA	NA	10 U	10 U	NA	NA	10 U	10 U	NA	NA	NA	NA	NA	NA	10 U	NA	NA
Benzene	1	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
Bromodichloromethane	50*	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
Bromoform	50*	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
Bromomethane	5	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
Carbon disulfide		NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
Carbon tetrachloride	5	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
Chlorobenzene	5	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
Chloroethane	5	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
Chloroform	7	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
Chloromethane		0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	5	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.4**	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
Cyclohexane		NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	NA	NA	NA	NA	1.0 U	NA	NA
Dibromochloromethane	50	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
Dichlorodifluoromethane	5	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
Ethylbenzene	5	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
Isopropylbenzne (Cumene)	5	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
Methyl Acetate		NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	2.5 U	NA	NA	NA	NA	NA	NA	2.5 U	NA	NA
Methyl Cyclohexane		NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	NA	NA	NA	NA	1.0 U	NA	NA
Methylene Chloride	5	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
Methyl Tert Butyl Ether	10	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
Styrene	5	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
Tetrachloroethene	5	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
Toluene	5	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	5	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.4**	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
Trichloroethene	5	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
Trichlorofluoromethane	5	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
Vinyl chloride	2	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U
Xylenes, Total		0.5 U	0.5 U	2.0 U	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U
Total VOCs		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 2-1.
Summary of Town of Vestal Municipal Well Sampling Results
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Units	NYSDEC GA Standard / Guidance Value ug/L	Well 1-3 Influent 2/17/2021 ug/L	Well 1-3 Influent 3/18/2021 ug/L	Well 1-3 Influent 3/22/2021 ug/L	Well 1-3 Influent 4/9/2021 ug/L	Well 1-3 Influent 4/28/2021 ug/L	Well 1-3 Influent 5/11/2021 ug/L	Well 1-3 Influent 5/18/2021 ug/L	Well 1-3 Influent 6/15/2021 ug/L	Well 1-3 Influent 6/23/2021 ug/L
1,1,1-Trichloroethane	5	1.0 U	1.0 U	0.5 U	1.0 U*1	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U*1
1,1,2,2-Tetrachloroethane	5	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U*1
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	NA	1.0 U
1,1,2-Trichloroethane	1	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U
1,1-Dichloroethane	5	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U
1,1-Dichloroethene	5	1.0 U	1.0 U	0.5 U	1.0 U*1	0.5 U*1	1.0 U	0.5 U	0.5 U	1.0 U
1,2,3-Trimethylbenzene		1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	NA	1.0 U
1,2,4-Trichlorobenzene	5	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U
1,2,4-Trimethylbenzne	5	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	NA	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	NA	1.0 U
1,2-Dichlorobenzene	3	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U
1,2-Dichloropropane	1	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U
1,3-Dichlorobenzene	3	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U
1,4-Dichlorobenzene	3	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U
2-Butanone (MEK)	50	10 U*+	10 U*+	NA	10 U*+	NA	10 U*+	NA	NA	10 U*+
2-Hexanone	50*	5.0 U	5.0 U	NA	5.0 U	NA	5.0 U	NA	NA	5.0 U*1
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 U	NA	5.0 U	NA	5.0 U	NA	NA	5.0 U
Acetone	50*	10 U	10 U	NA	10 U	NA	10 U	NA	NA	10 U*1
Benzene	1	1.0 U	1.0 U	0.5 U	1.0 U*1	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U*1
Bromodichloromethane	50*	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U*1
Bromoform	50*	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U
Bromomethane	5	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U*1	0.5 U	0.5 U	1.0 U*1
Carbon disulfide		1.0 U	1.0 U	0.5 U	1.0 U	NA	1.0 U	NA	NA	1.0 U*1
Carbon tetrachloride	5	1.0 U	1.0 U	0.5 U	1.0 U*1	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U*1
Chlorobenzene	5	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U
Chloroethane	5	1.0 U	1.0 U	0.5 U	1.0 U*-	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U*1
Chloroform	7	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U
Chloromethane		1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U
cis-1,2-Dichloroethene	5	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U*1
cis-1,3-Dichloropropene	0.4**	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U*1
Cyclohexane		1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	NA	1.0 U
Dibromochloromethane	50	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U*1
Dichlorodifluoromethane	5	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U*.*1
Ethylbenzene	5	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U*1
Isopropylbenzne (Cumene)	5	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U
Methyl Acetate		2.5 U	2.5 U	NA	2.5 U	NA	2.5 U	NA	NA	2.5 U
Methyl Cyclohexane		1.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA	NA	1.0 U*1
Methylene Chloride	5	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U
Methyl Tert Butyl Ether	10	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U*+
Styrene	5	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U
Tetrachloroethene	5	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U
Toluene	5	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U*1
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U
trans-1,3-Dichloropropene	0.4**	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U
Trichloroethene	5	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U*1
Trichlorofluoromethane	5	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U
Vinyl chloride	2	1.0 U	1.0 U	0.5 U	1.0 U*1	0.5 U	1.0 U	0.5 U	0.2 U	1.0 U*1
Xylenes, Total		1.0 U	1.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	0.5 U	2.0 U
Total VOCs		0	0	0	0	0	0	0	0	0

Table 2-1.
Summary of Town of Vestal Municipal Well Sampling
Periodic Review Report 2020
Vestal Water Supply Site
Site Number 7-04-009A



Notes:
NYSDEC GA Standard / Guidance Value - New York State Department of Environmental Conservation Groundwater Standard/Guidance Value
[redacted] - Concentration exceeds NYSDEC GA Standard/Guidance Value
* - Guidance Value
** - Sum of these compounds cannot exceed 0.4 ug/L
µg/L - Micrograms per Liter
NA - Not Analyzed
NS - Not Sampled
U - Compound was not detected at the indicated concentration
J - Reported Concentration is estimated
B- The analyte was found in an associated blank, as well as in the sample
' Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits

Table 4-1.
Summary of Groundwater Elevations thorough April 2021
Periodic Review Report 2020
Vestal Water Supply Site
Site Number 7-04-009A



WELL I.D.	Top of Riser (ft AMSL)	4/10/2017			6/6/2017			10/5/2017			10/5/2017			12/12/2017		
		DTW (fbgs)	DTP (fbgs)	GW ELEV (famsl)	DTW (fbgs)	DTP (fbgs)	GW ELEV (famsl)	D*W (fbgs)	D*P (fbgs)	GW ELEV (famsl)	DTW (fbgs)	DTP (fbgs)	GW ELEV (famsl)	DTW (fbgs)	DTP (fbgs)	GW ELEV (famsl)
4009-7	824.27	5.33	NP	818.94	16.22	NP	808.05	20.89	NP	803.38	20.89	NP	803.38	19.29	NP	804.98
4009-8	824.52	8.94	NP	815.58	17.04	NP	807.48	21.79	NP	802.73	21.79	NP	802.73	20.06	NP	804.46
4009-9	825.05	8.85	NP	816.20	18.16	NP	806.89	22.79	NP	802.26	22.79	NP	802.26	21.12	NP	803.93
4009-10	831.31	15.13	NP	816.18	24.32	NP	806.99	28.66	NP	802.65	28.66	NP	802.65	27.23	NP	804.08
4009-11	830.06	17.43	NP	812.63	23.93	NP	806.13	29.19	NP	800.87	29.19	NP	800.87	26.89	NP	803.17
4009-11A	830.80	11.4	NP	819.40	13.59	NP	817.21	15.26	NP	815.54	15.26	NP	815.54	17.15	NP	813.65
4009-12	823.34	9.25	NP	814.09	16.16	NP	807.18	21.8	NP	801.54	21.80	NP	801.54	19.58	NP	803.76
4009-13	816.28	2.23	NP	814.05	8.84	NP	807.44	14.44	NP	801.84	14.44	NP	801.84	12.35	NP	803.93
4009-13A	816.17	1.24	NP	814.93	9.02	NP	807.15	13.88	NP	802.29	13.88	NP	802.29	12.02	NP	804.15
4009-14	820.71	6.85	NP	813.86	14.02	NP	806.69	18.94	NP	801.77	18.94	NP	801.77	16.82	NP	803.89
4009-15	826.54	12.59	NP	813.95	19.31	NP	807.23	25.03	NP	801.51	25.03	NP	801.51	22.81	NP	803.73
4009-16	826.72	13.08	NP	813.64	24.04	NP	802.68	25.23	NP	801.49	25.23	NP	801.49	22.94	NP	803.78
4009-16A	826.84	12.85	NP	813.99	19.97	NP	806.87	25.29	NP	801.55	25.29	NP	801.55	22.91	NP	803.93
4009-18	834.78	20.99	NP	813.79	27.95	NP	806.83	33.1	NP	801.68	33.10	NP	801.68	30.93	NP	803.85
4009-19	824.94	11.2	NP	813.74	18.16	NP	806.78	23.33	NP	801.61	23.33	NP	801.61	21.13	NP	803.81
4009-21	825.02 **	11.55	NP	813.47	18.41	NP	806.61	23.46	NP	801.56	23.46	NP	801.56	21.3	NP	803.72
4009-22	817.40	2.21	NP	815.19	9.41	NP	807.99	11.56	NP	805.84	11.56	NP	805.84	11.78	NP	805.62
4009-26	824.31	5.72	NP	818.59	16.85	NP	807.46	21.48	NP	802.83	21.48	NP	802.83	19.73	NP	804.58
4009-27S	826.19	11.31	NP	814.88	18.9	NP	807.29	24.21	NP	801.98	24.21	NP	801.98	22.12	NP	804.07
4009-27I	826.03	11.58	NP	814.45	18.75	NP	807.28	24.1	NP	801.93	24.10	NP	801.93	22.01	NP	804.02
4009-27D	825.87	11.54	NP	814.33	18.52	NP	807.35	23.42	NP	802.45	23.92	NP	801.95	21.84	NP	804.03
4009-28	821.59	7.35	NP	814.24	14.52	NP	807.07	20.13	NP	801.46	20.13	NP	801.46	17.92	NP	803.67
4009-29S	825.77	11.39	NP	814.38	18.51	NP	807.26	23.45	NP	802.32	23.95	NP	801.82	21.84	NP	803.93
4009-29I	825.68	11.44	NP	814.24	18.48	NP	807.20	24.14	NP	801.54	24.14	NP	801.54	21.91	NP	803.77
4009-29D	825.67	12.29	NP	813.38	18.39	NP	807.28	24.08	NP	801.59	24.08	NP	801.59	21.89	NP	803.78
4009-30	827.50 **	12.29	NP	815.21	20.86	NP	806.64	25.98	NP	801.52	25.98	NP	801.52	23.74	NP	803.76
4009-30A	826.69 **	12.83	NP	813.86	19.83	NP	806.86	25.23	NP	801.46	25.23	NP	801.46	23.05	NP	803.64

Table 4-1.
Summary of Groundwater Elevations Through April 2021
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



WELL I.D.	Top of Riser (ft AMSL)	3/16/2018			5/31/2018			9/13/2018			12/5/2018		
		DTW (fbgs)	DTP (fbgs)	GW ELEV (famsl)	DTW (fbgs)	DTP (fbgs)	GW ELEV (famsl)	DTW (fbgs)	DTP (fbgs)	GW ELEV (famsl)	DTW (fbgs)	DTP (fbgs)	GW ELEV (famsl)
4009-7	824.27	17.27	NP	807.00	17.64	NP	806.63	17.07	NP	807.20	12.07	NP	812.20
4009-8	824.52	16.81	NP	807.71	18.36	NP	806.16	17.78	NP	806.74	12.39	NP	812.13
4009-9	825.05	18.09	NP	806.96	19.57	NP	805.48	19.23	NP	805.82	13.05	NP	812.00
4009-10	831.31	26.41	NP	804.90	25.65	NP	805.66	25.48	NP	805.83	19.33	NP	811.98
4009-11	830.06	24.55	NP	805.51	26.65	NP	803.41	24.39	NP	805.67	18.79	NP	811.27
4009-11A	830.80	13.91	NP	816.89	14.54	NP	816.26	13.58	NP	817.22	11.82	NP	818.98
4009-12	823.34	17.23	NP	806.11	18.57	NP	804.77	16.95	NP	806.39	11.37	NP	811.97
4009-13	816.28	8.86	NP	807.42	11.44	NP	804.84	9.75	NP	806.53	4.24	NP	812.04
4009-13A	816.17	9.24	NP	806.93	10.74	NP	805.43	9.44	NP	806.73	4.14	NP	812.03
4009-14	820.71	14.51	NP	806.20	16.87	NP	803.84	14.19	NP	806.52	8.60	NP	812.11
4009-15	826.54	20.49	NP	806.05	22.08	NP	804.46	20.21	NP	806.33	14.54	NP	812.00
4009-16	826.72	20.72	NP	806.00	22.23	NP	804.49	20.41	NP	806.31	14.73	NP	811.99
4009-16A	826.84	20.84	NP	806.00	21.81	NP	805.03	20.24	NP	806.60	14.80	NP	812.04
4009-18	834.78	28.89	NP	805.89	30.27	NP	804.51	28.53	NP	806.25	22.44	NP	812.34
4009-19	824.94	19.05	NP	805.89	20.43	NP	804.51	18.79	NP	806.15	13.05	NP	811.89
4009-21	825.02 **	19.53	NP	805.49	20.63	NP	804.39	20.58	NP	804.44	13.24	NP	811.78
4009-22	817.40	9.93	NP	807.47	10.51	NP	806.89	9.70	NP	807.70	6.10	NP	811.30
4009-26	824.31	16.60	NP	807.71	18.09	NP	806.22	17.39	NP	806.92	12.13	NP	812.18
4009-27S	826.19	19.46	NP	806.73	20.98	NP	805.21	19.54	NP	806.65	14.18	NP	812.01
4009-27I	826.03	19.47	NP	806.56	20.96	NP	805.07	19.48	NP	806.55	14.05	NP	811.98
4009-27D	825.87	19.26	NP	806.61	20.81	NP	805.06	19.30	NP	806.57	13.92	NP	811.95
4009-28	821.59	15.56	NP	806.03	17.16	NP	804.43	15.83	NP	805.76	9.45	NP	812.14
4009-29S	825.77	19.32	NP	806.45	20.83	NP	804.94	19.28	NP	806.49	13.79	NP	811.98
4009-29I	825.68	19.29	NP	806.39	21.04	NP	804.64	19.30	NP	806.38	13.71	NP	811.97
4009-29D	825.67	19.46	NP	806.21	21.01	NP	804.66	19.26	NP	806.41	13.71	NP	811.96
4009-30	827.50 **	21.56	NP	805.94	30.02	NP	797.48	21.15	NP	806.35	15.43	NP	812.07
4009-30A	826.69 **	20.73	NP	805.96	22.16	NP	804.53	20.29	NP	806.40	14.76	NP	811.93

Table 4-1.
Summary of Groundwater Elevations thorough April 2021
Periodic Review Report 2020
Vestal Water Supply Site
Site Number 7-04-009A



WELL I.D.	Top of Riser (ft AMSL)	3/25/2019			9/26/2019			3/16/2020			4/7/2021		
		DTW (fbgs)	DTP (fbgs)	GW ELEV (famsl)	DTW (fbgs)	DTP (fbgs)	GW ELEV (famsl)	DTW (fbgs)	DTP (fbgs)	GW ELEV (famsl)	DTW (fbgs)	DTP (fbgs)	GW ELEV (famsl)
4009-7	824.27	19.14	NP	805.13	20.89	NP	803.38	15.28	NP	808.99	16.24	NP	808.03
4009-8	824.52	18.91	NP	805.61	21.80	NP	802.72	15.77	NP	808.75	16.84	NP	807.68
4009-9	825.05	19.41	NP	805.64	22.90	NP	802.15	16.70	NP	808.35	18.08	NP	806.97
4009-10	831.31	25.96	NP	805.35	NM	NM	NM	NM	NM	NM	NM	NM	NM
4009-11	830.06	26.17	NP	803.89	29.23	NP	800.83	23.05	NP	807.01	24.81	NP	805.25
4009-11A	830.80	14.43	NP	816.37	NM	NM	NM	NM	NM	NM	NM	NM	NM
4009-12	823.34	18.55	NP	804.79	21.88	NP	801.46	15.84	NP	807.50	17.24	NP	806.10
4009-13	816.28	11.58	NP	804.70	14.43	NP	801.85	8.73	NP	807.55	10.02	NP	806.26
4009-13A	816.17	11.08	NP	805.09	NM	NM	NM	NM	NM	NM	NM	NM	NM
4009-14	820.71	16.06	NP	804.65	18.96	NP	801.75	13.19	NP	807.52	14.53	NP	806.18
4009-15	826.54	22.24	NP	804.30	25.01	NP	801.53	19.19	NP	807.35	20.75	NP	805.79
4009-16	826.72	22.29	NP	804.43	25.20	NP	801.52	19.47	NP	807.25	20.94	NP	805.78
4009-16A	826.84	22.05	NP	804.79	25.13	NP	801.71	19.57	NP	807.27	20.91	NP	805.93
4009-18	834.78	30.21	NP	804.57	33.42	NP	801.36	27.78	NP	807.00	28.98	NP	805.80
4009-19	824.94	20.42	NP	804.52	23.83	NP	801.11	17.85	NP	807.09	19.20	NP	805.74
4009-21	825.02 **	20.64	NP	804.38	25.03	NP	799.99	18.19	NP	806.83	19.41	NP	805.61
4009-22	817.40	8.70	NP	808.70	10.39	NP	807.01	8.81	NP	808.59	9.48	NP	807.92
4009-26	824.31	18.64	NP	805.67	21.52	NP	802.79	15.43	NP	808.88	16.68	NP	807.63
4009-27S	826.19	21.22	NP	804.97	24.29	NP	801.90	18.14	NP	808.05	19.60	NP	806.59
4009-27I	826.03	21.14	NP	804.89	24.12	NP	801.91	18.11	NP	807.92	19.60	NP	806.43
4009-27D	825.87	20.98	NP	804.89	23.95	NP	801.92	17.98	NP	807.89	19.42	NP	806.45
4009-28	821.59	17.16	NP	804.43	20.12	NP	801.47	14.19	NP	807.40	15.81	NP	805.78
4009-29S	825.77	20.97	NP	804.80	23.99	NP	801.78	17.94	NP	807.83	19.52	NP	806.25
4009-29I	825.68	21.10	NP	804.58	24.15	NP	801.53	18.23	NP	807.45	19.64	NP	806.04
4009-29D	825.67	21.08	NP	804.59	24.14	NP	801.53	18.11	NP	807.56	19.66	NP	806.01
4009-30	827.50 **	23.05	NP	804.45	26.21	NP	801.29	20.51	NP	806.99	21.88	NP	805.62
4009-30A	826.69 **	22.12	NP	804.57	NM	NM	NM	NM	NM	NM	26.53	NP	800.16

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.

Table 4-2.
Summary of the Groundwater Monitoring Locations
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Well I.D.	2021 Semiannual Monitoring Locations
4009-7	X
4009-8	X
4009-9	X
4009-11	X
4009-12	X
4009-13	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
WELL 1-1	X

Table 4-3.
Summary of Groundwater Sampling Results Through April 2021
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard / Guidance Value 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	4009-7 12/19/2018 Shallow ug/L	4009-7 3/25/2019 Shallow ug/L	4009-7 10/10/2019 Shallow ug/L	4009-7 4/6/2020 Shallow ug/L	4009-7 4/13/2021 Shallow 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
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	7.8	560	490	2500
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	10 U	10 U	10 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	0.6 J	5.1 J	10 U	16
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	10 U	10 U	10 U
1,1-Dichloroethane	5	1.1	0.59 J	0.44 J	0.63 J	0.47 J	0.59 J	0.62 J	0.47 J	0.43 J	0.56 J	0.38 J	7.10	51	45	96
1,1-Dichloroethene	5	0.44 J	0.38 J	0.39 J	0.67 J	1.0 U	0.41 J	0.53 J	1.0 U	1.0 U	0.52 J	1.0 U	1.6	31	80	80
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	10 U	10 U	10 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	10 U	10 U	10 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	10 U	10 U	10 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	10 U	10 U	10 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	10 U	10 U	10 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	10 U	10 U	10 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	10 U	10 U	10 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	10 U	10 U	10 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	10 U	10 U	10 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	10 U	10 U	10 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	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	50 U	50 U	50 U
Acetone	50*	3.4 J	4.7 J	1.4 J	10 U	10 U	5.0 U	4.0 J	10 U	4.1 J	6.1 J	3.7 J	3.7 J	100 U	100 U	50 U
Benzene	1	1.0 U	1.0 U	0.28 J	0.43 J	1.0 U	1.0 U	0.45 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 U	10 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	10 U	10 U	10 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	10 U	10 U	10 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	10 U	10 U	10 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	10 U	10 U	10 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	10 U	10 U	10 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	10 U	10 U	10 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	7.8 J	3.7 J	4.4 J
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	10 U	10 U	10 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	10 U	10 U	10 U
cis-1,2-Dichloroethene	5	42	41	36	53	26	38	55	36	23	31	14	48	230	190	500
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	10 U	10 U	10 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	10 U	10 U	10 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	10 U	10 U	10 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	10 U	10 U	10 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	10 U	10 U	10 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	10 U	10 U	10 U
Methyl Acetate		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	25 U	25 U	50 U
2-Butanone (MEK)	50	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*+	100 U*	100 U	50 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	50 U	50 U	50 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	10 U	10 U	10 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	10 U	10 U	10 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	10 U	10 U	10 U
Methyl Tert Butyl 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	10 U	10 U	10 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	10 U	10 U	3.3 J
Toluene	5	1.0 U	1.0 U	0.29 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	10 U	10 U	10 U
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	0.29 J	1.0 U	1.0 U	0.28 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 U	10 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	10 U	10 U	10 U
Trichloroethene	5	0.93 J	1.2	0.76 J	1.1	1.0 U	0.72 J	0.97 J	1.0 U	1.0 U	1.0 U	1.0 U	2.1	150	160	300
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	10 U	10 U	10 U
Vinyl chloride	2	22	4.6	4.3	10	1.0 U	5.6	7.5	6.2	0.9 J	5.7	1.0 U	29 *1	30	15	19
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	20 U	20 U	20 U
Total VOCs		69.9	52.5	44.2	65.8	26.5	45.6	69.1	42.7	28.4	43.9	18.1	99.9	1065	984	3519
Total VOCs (w/o Acteone or Methlyene Chloride)		66.5	47.8	42.8	65.8	26.5	45.6	65.1	42.7	24.3	43.9	14.4	96.2	1065	984	3519

Table 4-3.
Summary of Groundwater Sampling Results Through April 2021
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard / Guidance Value 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	4009-8 12/19/2018 Intermediate ug/L	4009-8 3/25/2019 Intermediate ug/L	4009-8 10/10/2019 Intermediate ug/L	4009-8 4/6/2020 Intermediate ug/L	4009-8 4/6/2020 Intermediate ug/L	4009-8 4/13/2021 Intermediate ug/L	4009-9 4/10/2017 Shallow ug/L	4009-9 6/20/2017 Shallow ug/L	4009-9 6/26/2017 Shallow ug/L	4009-9 10/23/2017 Shallow ug/L
1,1,1-Trichloroethane	5	2100	1100	800	3700	2000	4100	3300	1500	1500	560	1.0 U	1.0 U	1.0 U	0.43 J
1,1,2,2-Tetrachloroethane	5	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		13	40 U	6.7	40 U	40 U	19 J	80 U	50 U	50 U	10	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	80	51	44	150	96	130	92	57	57	43	1.0 U	1.0 U	1.0 U	0.40 J
1,1-Dichloroethene	5	70	47	34	160	110	120	210	95	95	32	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trimethylbenzene		10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	50*	50 U	200 U	10 U'	200 U	200 U	200 U	400 U	250 U	250 U	40 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	50*	100 U	400 U	10 U	400 U	400 U	400 U	800 U	500 U	500 U	80 U	3.5 J	3.1 J	10 U	2.2 J
Benzene	1	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	0.15 J
Bromodichloromethane	50*	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	50*	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	5	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U*1	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide		10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U*1	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U*1	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	5	10 U	40 U	5.2	40 U	40 U	40 U	80 U	50 U	50 U	5.0 J	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	7	10 U	40 U	0.66 J	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane		10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U*1	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	680	490	320	910	700	950	670	510	510	200	8.2	10	12	21
cis-1,3-Dichloropropene	0.4**	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane		10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	50	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane	5	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	5	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Acetate		10 U	100 U	10 U	100 U	100 U	100 U	200 U	130 U	130 U	20 U	2.5 U	2.5 U	2.5 U	5.0 U
2-Butanone (MEK)	50	100 U	400 U'	10 U	400 U	400 U	400 U'	800 U	500 U	500 U	80 U*+	10 U*	10 U	10 U	5.0 U
4-Methyl-2-pentanone (MIBK)		50 U	200 U	10 U'	200 U	200 U	200 U	400 U	250 U	250 U	40 U	5.0 U	5.0 U	5.0 U	5.0 U
Methyl Cyclohexane		10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	5	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Tert Butyl Ether	10	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	0.43 J	1.0 U
Tetrachloroethene	5	10 U	40 U	1.6 J	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	5	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	10 U	40 U	1.2 J	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4**	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5	300	300	190	580	330	95	990	390	390	390	0.97 J	1.0 U	1.0 U	1.3
Trichlorofluoromethane	5	10 U	40 U	2.0 U	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2	24	40 U	11	40 U	40 U	40 U	80 U	50 U	50 U	8.0 U*1	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total		20 U	80 U	4.0 U	80 U	80 U	80 U	160 U	100 U	100 U	16 U	2.0 U	2.0 U	2.0 U	1.0 U
Total VOCs		3267	1988	1414	5500	3236	5414	5262	2552.0	2552.0	1240	12.7	13.1	12.43	25.5
Total VOCs (w/o Acteone or Methylene Chloride)		3267	1988	1414	5500	3236	5414	5262	2552.0	2552.0	1240	9.17	10.0	12.43	23.3

Table 4-3.
Summary of Groundwater Sampling Results Through April 2021
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard / Guidance Value ug/L	4009-9 12/28/2017 Shallow ug/L	4009-9 3/30/2018 Shallow ug/L	4009-9 6/14/2018 Shallow ug/L	4009-9 9/27/2018 Shallow ug/L	4009-9 12/19/2018 Shallow ug/L	4009-9 3/25/2019 Shallow ug/L	4009-9 10/10/2019 Shallow ug/L	4009-9 4/6/2020 Shallow ug/L	4009-9 4/13/2021 Shallow ug/L	4009-10 4/10/2017 Shallow ug/L	4009-10 6/20/2017 Shallow ug/L	4009-10 6/26/2017 Shallow ug/L	4009-10 10/23/2017 Shallow ug/L	4009-10 12/28/2017 Shallow ug/L	4009-10 3/30/2018 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	0.41 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	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 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	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 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
Acetone	50*	10 U	10 U	5.0 U	3.6 J	5.2 J	10 U	10 U	3.7 J	10.0 U	3.4 J	10 U	10 U	3.1 J	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	1.0 U	1.0 U	1.0 U	1.0 U	0.45 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	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	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	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	0.43 J	1.2 J	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	11	2.6	8.2	13	1.6	5.6	21	5.6	13.0	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	5.0 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	2.5 U	5.0 U	2.5 U
2-Butanone (MEK)	50	10 U	10 U'	5.0 U	10 U	10 U	10 U'	10 U	1.0 U	10.0 U**	10 U*	10 U	10 U	5.0 U	10 U	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	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 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
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
Methyl Tert Butyl 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
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	0.32 J	0.73 J	1.0 U	0.5 J	1.0 U	0.68 J	1.2	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	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	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	2.60	8.77	17.33	6.80	6.09	21.0	10.41	15.4	3.40	0.00	0.0	3.96	0.00	0.00
Total VOCs (w/o Acteone or Methlyene Chloride)		11.0	2.60	8.77	13.73	1.60	6.09	21.0	6.71	15.4	0.00	0.00	0.0	0.86	0.00	0.00

Table 4-3.
Summary of Groundwater Sampling Results Through April 2021
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard / Guidance Value ug/L	4009-10 6/14/2018 Shallow ug/L	4009-10 9/27/2018 Shallow ug/L	4009-10 12/19/2018 Shallow ug/L	4009-10 3/25/2019 Shallow ug/L	4009-11 4/10/2017 Deep ug/L	4009-11 6/20/2017 Deep ug/L	4009-11 6/26/2017 Deep ug/L	4009-11 10/23/2017 Deep ug/L	4009-11 12/28/2017 Deep ug/L	4009-11 3/30/2018 Deep ug/L	4009-11 6/14/2018 Deep ug/L	4009-11 9/27/2018 Deep ug/L	4009-11 12/19/2018 Deep ug/L	4009-11 3/25/2019 Deep ug/L	4009-11 10/10/2019 Deep ug/L
1,1,1-Trichloroethane	5	0.31 J	1.0 U	1.0 U	1.0 U	1.0 U	170	1.0 U	65	1.0 U	88	68	1.0 U	170	71	51
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	2.0 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	2.9	1.0 U	1.4	1.0 U	1.0 U	1.2	1.0 U	1.6	2.0 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	2.0 U	1.0 U
1,1-Dichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	2.8	43	3.1	18	2.1	24	21	7.0	49	30	15
1,1-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	27	1.0 U	5.0	1.0 U	7.2	6.4	1.0 U	17	5.5	5.5
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	2.0 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	2.0 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	2.0 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	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 U	2.0 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	2.0 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.21 J	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
1,2-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	2.0 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	2.0 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	2.0 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	2.0 U	1.0 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	10 U	5.0 U
Acetone	50*	5.0 U	3.1 J	4.8 J	3.5 J	3.7 J	3.6 J	76	5.0 U	4.5 J	10 U	5.0 U	10 U	10 U	8.4 J	10 U
Benzene	1	1.0 U	0.51 J	0.61 J	0.60 J	15	1.0 U	13	1.0 U	6.5	1.0 U	1.0 U	8.9	1.0 U	2.0 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	2.0 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	2.0 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	2.0 U	1.0 U
Carbon disulfide		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.76 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 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	2.0 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	2.0 U	1.0 U
Chloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.8	1.0 U	0.9 J	1.0 U	1.3	1.2	1.0 U	1.7	1.0 J	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	2.0 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	2.0 U	1.0 U
cis-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	35	1.0 U	15	1.0 U	23	20	1.3	48	19	16
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	2.0 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	2.0 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	2.0 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	2.0 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	2.0 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	2.0 U	1.0 U
Methyl Acetate		5.0 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	5.0 U	2.5 U
2-Butanone (MEK)	50	5.0 U	10 U	10 U	10 U	10 U*	10 U	4.8 J	5.0 U	10 U	10 U	5.0 U	10 U	10 U	20 U	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	10 U	5.0 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	2.0 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	2.0 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	2.0 U	1.0 U
Methyl Tert Butyl 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	2.0 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	2.0 U	1.0 U
Toluene	5	1.0 U	1.0 U	1.0 U	1.0 U	0.85 J	1.0 U	0.80 J	1.0 U	1.0 U	1.0 U	1.0 U	0.52 J	1.0 U	2.0 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	2.0 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	2.0 U	1.0 U
Trichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1	1.0 U	0.5 J	1.0 U	1.6	1.1	1.0 U	4.7	2.5	2.2
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	2.0 U	1.0 U
Vinyl chloride	2	1.0 U	1.0 U	1.0 U	1.0 U	1.1	37	1.4	13	1.0 U	17	19	1.7	38	18	11
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	4.0 U	2.0 U
Total VOCs		0.31	3.61	5.41	4.10	23.5	322	99.9	119	13.1	162	138	19.4	330	155	101
Total VOCs (w/o Acteone or Methlyene Chloride)		0.31	0.51	0.61	0.60	19.8	318	23.86	119	8.60	162	138	19.4	330	147	101

Table 4-3.
Summary of Groundwater Sampling Results Through April 2021
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard / Guidance Value ug/L	4009-11 4/6/2020 Deep ug/L	4009-11 4/14/2021 Deep ug/L	4009-11A 3/30/2018 Shallow ug/L	4009-11A 6/14/2018 Shallow ug/L	4009-11A 9/27/2018 Shallow ug/L	4009-11A 12/19/2018 Shallow ug/L	4009-11A 3/25/2019 Shallow ug/L	4009-12 4/10/2017 Deep ug/L	DUP-02 ¹ 4/10/2017 Deep ug/L	4009-12 6/20/2017 Deep ug/L	DUP-01 6/20/2017 Deep ug/L	4009-12 6/23/2017 Deep ug/L	4009-12 10/23/2017 Deep ug/L	DUP-01 10/23/2017 Deep ug/L	4009-12 12/28/2017 Deep ug/L
1,1,1-Trichloroethane	5	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	100	110	45	220	430	1.0 U	1.0 U	330
1,1,2,2-Tetrachloroethane	5	2.0 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	2 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		3.0	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.9 J	1.6 J	1.0 J	2.8	7.1 J	1.0 U	1.0 U	5.4
1,1,2-Trichloroethane	1	2.0 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	2 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	49	8.1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	18	17	9.2	20	30	5.6	5.7	46
1,1-Dichloroethene	5	19	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.2	2.6	7.7	8.0	75	0.53 J	0.49 J	16
1,2,3-Trimethylbenzene		2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
2-Hexanone	50*	2.0 U	5.0 U	5.0 U	5.0 U'	5.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U	5.0 U	50 U	5.0 U	5.0 U	5.0 U
Acetone	50*	6.3 J	160	10 U	5.0 U	5.0 J	5.9 J	3.4 J	5.5 J	20 U	20 U	3.3 J	100 U	3.3 J	5.0 U	10 U
Benzene	1	2.0 U	6.7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.6	3.3	2.8	2.1	10 U	2.5	2.2	0.51 J
Bromodichloromethane	50*	2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
Bromoform	50*	2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
Bromomethane	5	2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
Carbon disulfide		2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
Chloroethane	5	1.7 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1	2.0 U	2.0 U	1.2	10 U	1.0 U	1.0 U	4.9
Chloroform	7	2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
Chloromethane		2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	52	1.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	11	11	8.7	29	110	2.0	2.3	62
cis-1,3-Dichloropropene	0.4**	2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
Cyclohexane		2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	50	2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane	5	2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	5	2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	2.0 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	2.0 U	1.0 U	10 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	5.0 U	5.0 U	2.5 U	25 U	5.0 U	5.0 U	2.5 U
2-Butanone (MEK)	50	20 U	6.2 J	10 U'	5.0 U	10 U	10 U	10 U'	10 U*	20 U*	20 U	10.0 U	100 U	5.0 U	5.0 U	10 U
4-Methyl-2-pentanone (MIBK)		10 U	5.0 U	5.0 U	5.0 U'	5.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U	5.0 U	50 U	5.0 U	5.0 U	5.0 U
Methyl Cyclohexane		2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2.0 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 J	1.0 U	10 U	1.0 U	1.0 U	1.0 U
Styrene	5	2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
Methyl Tert Butyl Ether	10	2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5	2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
Toluene	5	2.0 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	2.0 U	1.0 U	10 U	0.26 J	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4**	2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5	7.9	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0	3.3	10	30	100	1.9	1.8	69
Trichlorofluoromethane	5	2.0 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	2.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2	40	2.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.7	5.7	22	56	10 U	1.3	1.6	96
Xylenes, Total		4.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	4.0 U	4.0 U	2.0 U	20 U	2.0 U	2.0 U	2.0 U
Total VOCs		338.9	345.1	0.00	0.00	5.00	5.90	3.40	153	144	107	372	752.1	17.4	14.1	630
Total VOCs (w/o Acteone or Methylene Chloride)		332.6	185.10	0.00	0.00	0.00	0.00	0.00	148	144	106	369.1	752.1	14.1	14.1	630

Table 4-3.
Summary of Groundwater Sampling Results Through April 2021
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard / Guidance Value ug/L	DUP-1 12/28/2017 Deep ug/L	4009-12 3/30/2018 Deep ug/L	DUP-1 3/30/2018 Deep ug/L	4009-12 6/14/2018 Deep ug/L	4009-12 9/27/2018 Deep ug/L	4009-12 12/19/2018 Deep ug/L	4009-12 3/25/2019 Deep ug/L	4009-12 10/10/2019 Deep ug/L	DUP-1 10/10/2019 Deep ug/L	4009-12 4/6/2020 Deep ug/L	DUP-1 4/6/2020 Deep ug/L	4009-12 4/8/2021 Deep ug/L	4009-13 4/26/2017 Deep ug/L	4009-13 6/20/2017 Deep ug/L
1,1,1-Trichloroethane	5	310	45	58	1.0 U	95	80	280	1.0 U	1.0 U	230	280 D	300 F1	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		6.6	1.0 U	1.0 U	1.0 U	1.0 U	0.76 J	4.8	1.0 U	1.0 U	4.0 U	3.5	4.7 J	1.0 U	1.0 U
1,1,2-Trichloroethane	1	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.3 J	1.0 U	1.0 U	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	52	13	14	6.2	11	12	50	0.64 J	0.73 J	46	49	34	1.0 U	1.0 U
1,1-Dichloroethene	5	14	5.0	5.2	0.54 J	6.9	3.9	15	1.0 U	1.0 U	9.6	8.4	19	1.0 U	1.0 U
1,2,3-Trimethylbenzene		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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
2-Hexanone	50*	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	20 U	5.0 U	25 U	5.0 U	5.0 U
Acetone	50*	20 U	10 U	10 U	5.0 U	4.4 J	5.2 J	3.0 J	3.6 J	10 U	40 U	10 U	50 U	10 U	4.2 J
Benzene	1	2.0 U	2.5	2.5	1.7	0.73 J	1.0 U	0.4 J	1.0 U	1.0 U	4.0 U	0.49 J	5.0 U	0.41 J	1.0 U
Bromodichloromethane	50*	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Bromoform	50*	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	4.0 U	1.0 U	5.0 U	1.0 U*	1.0 U
Bromomethane	5	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Carbon disulfide		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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Chlorobenzene	5	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Chloroethane	5	6.6	0.88 J	0.95 J	1.0 U	0.68 J	0.32 J	5.0	1.0 U	1.0 U	3.8 J	6.6	3.2 J	1.0 U	1.0 U
Chloroform	7	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Chloromethane		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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	65	15	17	2.0	25	14	55	1.0 U	1.0 U	22	23	63	1.0 U	1.0 U
cis-1,3-Dichloropropene	0.4**	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Cyclohexane		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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Dibromochloromethane	50	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Dichlorodifluoromethane	5	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Ethylbenzene	5	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	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	4.0 U	1.0 U	5.0 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	2.5 U	10 U	2.5 U	13 U	2.5 U	2.5 U
2-Butanone (MEK)	50	20 U	10 U	10 U	5.0 U	10 U	10 U	10 U'	10 U	10 U	40 U	10 U	50 U*+F1	10 U	10 U
4-Methyl-2-pentanone (MIBK)		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	20 U	5.0 U	25 U	5.0 U	5.0 U
Methyl Cyclohexane		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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Methylene Chloride	5	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Styrene	5	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Methyl Tert Butyl Ether	10	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Tetrachloroethene	5	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Toluene	5	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4**	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Trichloroethene	5	69	14	16	1.6	25	13	51	1.0 U	1.0 U	23	23	54	1.0 U	1.0 U
Trichlorofluoromethane	5	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	4.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Vinyl chloride	2	120	38	40	2.6	26	34	81	1.0 U	1.0 U	80	89	47	1.0 U	1.0 U
Xylenes, Total		4.0 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	8.0 U	2.0 U	10 U	2.0 U	2.0 U
Total VOCs		629	133	154	14.6	195	163	546	4.24	0.73	414.4	483.0	524.9	0.41	4.20
Total VOCs (w/o Acteone or Methylene Chloride)		629	133	154	14.6	190	158	543	0.64	0.73	414.4	483.0	524.9	0.41	0.00

Table 4-3.
Summary of Groundwater Sampling Results Through April 2021
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard / Guidance Value ug/L	4009-13 6/26/2017 Deep ug/L	4009-13 10/23/2017 Deep ug/L	4009-13 12/28/2017 Deep ug/L	4009-13 3/30/2018 Deep ug/L	4009-13 6/14/2018 Deep ug/L	4009-13 9/27/2018 Deep ug/L	4009-13 12/19/2018 Deep ug/L	4009-13 3/25/2019 Deep ug/L	4009-13 10/10/2019 Deep ug/L	4009-13 4/6/2020 Deep ug/L	4009-13 4/12/2021 Deep ug/L	4009-13A 4/26/2017 Shallow ug/L	4009-13A 6/20/2017 Shallow ug/L	4009-13A 6/26/2017 Shallow ug/L	4009-13A 10/23/2017 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	1.0 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-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
Acetone	50*	10 U	3.4 J	10 U	10 U	5.0 U	3.0 J	5.2 J	10 U	3.9 J	10 U	10 U	3.0 J	4.1 J	10 U	2.6 J
Benzene	1	1.0 U	0.2 J	1.0 U	1.0 U	1.0 U	0.44 J	0.76 J	0.57 J	0.47 J	0.42 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	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	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	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	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	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	2.5 U	2.5 U	5.0 U
2-Butanone (MEK)	50	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	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 U	5.0 U	5.0 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
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
Methyl Tert Butyl 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
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	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		0.0	3.60	0.00	0.00	0.00	3.44	5.96	0.57	4.37	0.42	0.00	3.00	4.10	0.0	2.60
Total VOCs (w/o Acteone or Methlyene Chloride)		0.0	0.20	0.00	0.00	0.00	0.44	0.76	0.57	0.47	0.42	0.00	0.00	0.00	0.0	0.00

Table 4-3.
Summary of Groundwater Sampling Results Through April 2021
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard / Guidance Value 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	4009-13A 12/19/2018 Shallow ug/L	4009-13A 3/25/2019 Shallow ug/L	4009-14^ 4/10/2017 Deep ug/L	4009-14 6/20/2017 Deep ug/L	4009-14 6/23/2017 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	4009-14 6/14/2018 Deep ug/L	4009-14 9/27/2018 Deep ug/L	4009-14 12/19/2018 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	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
1,1,2,2-Tetrachloroethane	5	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	1.0 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	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
1,1,2-Trichloroethane	1	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	1.0 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	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
1,1-Dichloroethene	5	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	1.0 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	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
1,2,4-Trichlorobenzene	5	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	1.0 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	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
1,2-Dibromo-3-Chloropropane	0.04	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	1.0 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	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
1,2-Dichlorobenzene	3	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	1.0 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	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
1,2-Dichloropropane	1	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	1.0 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	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
1,3-Dichlorobenzene	3	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	1.0 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	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
2-Hexanone	50*	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	5.0 U	5.0 U'	5.0 U	5.0 U
Acetone	50*	10 U	10 U	5.0 U	3.6 J	4.2 J	10 U	NS	3.4 J	10 U	3.3 J	10 U	10 U	5.0 U	3.8 J	4.8 J
Benzene	1	1.0 U	1.0 U	0.90 J	1.0 U	1.0 U	1.0 U	NS	9.2	2.5	11	12	13	11	1.6	1.5
Bromodichloromethane	50*	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	1.0 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	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
Bromomethane	5	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	1.0 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	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
Carbon tetrachloride	5	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	1.0 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	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
Chloroethane	5	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	1.0 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	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
Chloromethane		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	1.0 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	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
cis-1,3-Dichloropropene	0.4**	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	1.0 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	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
Dibromochloromethane	50	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	1.0 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	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
Ethylbenzene	5	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	1.0 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	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
Methyl Acetate		2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	2.5 U	NS	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-Butanone (MEK)	50	10 U	10 U'	5.0 U	10 U	10 U	10 U'	NS	10.0 U	10 U*	5.0 U	10 U	10 U	5.0 U	10 U	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	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
Methyl Cyclohexane		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	1.0 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	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
Styrene	5	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	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Tert Butyl Ether	10	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	1.0 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	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
Toluene	5	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	0.31 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	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
trans-1,3-Dichloropropene	0.4**	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	1.0 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	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
Trichlorofluoromethane	5	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	1.0 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	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
Xylenes, Total		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	2.0 U	2.0 U	2.0 U	2.0 U
Total VOCs		0.00	0.00	0.90	3.60	4.20	0.00	-	12.6	2.5	14.6	12.0	13.0	11.0	5.40	6.30
Total VOCs (w/o Acteone or Methlyene Chloride)		0.00	0.00	0.90	0.00	0.00	0.00	-	9.2	2.5	11.3	12.0	13.0	11.0	1.60	1.50

Table 4-3.
Summary of Groundwater Sampling Results Through April 2021
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard / Guidance Value ug/L	4009-14 3/25/2019 Deep ug/L	4009-14 10/10/2019 Deep ug/L	4009-14 4/6/2020 Deep ug/L	4009-14 4/12/2021 Deep ug/L	4009-15 3/30/2018 Deep ug/L	4009-15 6/14/2018 Deep ug/L	4009-15 9/27/2018 Deep ug/L	4009-15 12/19/2018 Deep ug/L	4009-15 3/25/2019 Deep ug/L	4009-15 10/10/2019 Deep ug/L	4009-15 4/6/2020 Deep ug/L	4009-15 4/9/2021 Deep ug/L	4009-16 3/30/2018*** Deep ug/L	4009-16 6/14/2018 Deep ug/L	4009-16 9/27/2018 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	1.0 U	1.0 U	8.0 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	8.0 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	8.0 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	8.0 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	8.0 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	8.0 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	8.0 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	8.0 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	8.0 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	8.0 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	8.0 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	8.0 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	8.0 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	8.0 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	8.0 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	8.0 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	8.0 U	1.0 U	1.0 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	40.0 U	5.0 U	5.0 U
Acetone	50*	10 U	10 U	10 U	10 U	4.4 J	5.0 U	7.3 J	5.6 J	6.9 J	4.9 J	8.3 J	190.0	10 U	5.0 U	3.1 J
Benzene	1	1.7	1.3	1.1	1.0 U	9.3	9.0	7.3	8.7	8.8	9.2	9.0	13.0	1.1	5.7	1.5
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	8.0 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	8.0 U	1.0 U	1.0 U
Bromomethane	5	1.0 U	1.0 U	1.0 U	1.0 U*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	8.0 U	1.0 U	1.0 U
Carbon disulfide		1.0 U	1.0 U	1.0 U	1.0 U*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	8.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	1.0 U	1.0 U	1.0 U	1.0 U*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	8.0 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	8.0 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	8.0 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	8.0 U	1.0 U	1.0 U
Chloromethane		1.0 U	1.0 U	1.0 U	1.0 U*1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UT	1.0 U	8.0 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	8.0 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	8.0 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	8.0 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	8.0 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 UT	1.0 U	8.0 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	8.0 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	8.0 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	2.5 U	2.5 U	2.5 UT	2.5 U	20 U	2.5 U	2.5 U
2-Butanone (MEK)	50	10 U	10 U	10 U	10 U*+	10 U	5.0 U	10 U	10 U	10 U	10 U	10 U	10 U	80 U*+	10 U	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 UT	5.0 U	40 U	5.0 U	5.0 U	5.0 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	8.0 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	8.0 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	8.0 U	1.0 U	1.0 U
Methyl Tert Butyl 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	8.0 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	8.0 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	8.0 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	8.0 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	8.0 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	8.0 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	8.0 U	1.0 U	1.0 U
Vinyl chloride	2	1.0 U	1.0 U	1.0 U	1.0 U*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	8.0 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	16.0 U	2.0 U	2.0 U	2.0 U
Total VOCs		1.70	1.30	1.1	0.0	13.7	9.00	14.6	14.3	15.7	14.1	17.3	203.0	1.10	5.70	4.60
Total VOCs (w/o Acteone or Methlyene Chloride)		1.70	1.30	1.1	0.0	9.30	9.00	7.30	8.70	8.80	9.20	9	13	1.10	5.70	1.50

Table 4-3.
Summary of Groundwater Sampling Results Through April 2021
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard / Guidance Value ug/L	4009-16 12/19/2018 Deep ug/L	4009-16 3/25/2019 Deep ug/L	4009-16 10/10/2019 Deep ug/L	4009-16 4/6/2020 Deep ug/L	4009-16 4/9/2021 Deep ug/L	4009-16A 3/30/2018 Shallow ug/L	4009-16A 6/14/2018 Shallow ug/L	4009-16A 9/27/2018 Shallow ug/L	4009-16A 12/19/2018 Shallow ug/L	4009-16A 3/25/2019 Shallow ug/L	4009-16A 10/10/2019 Shallow ug/L	4009-16A 4/6/2020 Shallow ug/L	4009-16A 4/12/2021 Shallow ug/L	4009-18 3/30/2018 Deep ug/L	4009-18 6/14/2018 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	1.0 U	1.0 U	1.0 U	0.88 J	0.57 J
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-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
Acetone	50*	10 U	3.0 J	10 U	4.7 J	160	10 U	5.0 U	3.3 J	10 U	3.0 J	8.3 J	10 U	10 U	10 U	5.0 U
Benzene	1	7.3	2.1	4.2	42	30	1.0 U	0.56 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
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	0.44 J	0.4 J	1.0 U	1.0 U	0.53 J	1.0 U	1.0 U
Chloromethane		1.0 U	1.0 U	1.0 UT	1.0 U	1.0 U	1.0 U	1.0 U	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 UT	1.0 U	1.0 U	1.0 U	1.0 U	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 UT	2.5 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	5.0 U
2-Butanone (MEK)	50	10 U	10 U	10 U	10 U	3.3 J**	10 U	5.0 U	10 U	10 U	10 U	10 U	10 UT	10 U	10 U	5.0 U
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 U	5.0 UT	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
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
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
Methyl Tert Butyl 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
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 UT	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		7.30	5.10	4.20	46.70	193.3	0.00	0.56	3.30	0.44	3.36	8.30	0.00	0.53	0.88	0.57
Total VOCs (w/o Acteone or Methylene Chloride)		7.30	2.10	4.20	42.00	33.3	0.00	0.56	0.00	0.44	0.36	0.00	0.00	0.53	0.88	0.57

Table 4-3.
Summary of Groundwater Sampling Results Through April 2021
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard / Guidance Value ug/L	4009-18 9/27/2018 Deep ug/L	4009-18 12/19/2018 Deep ug/L	4009-18 3/25/2019 Deep ug/L	4009-18 10/10/2019 Deep ug/L	4009-18 4/6/2020 Deep ug/L	4009-18 4/9/2021 Deep ug/L	4009-19 3/30/2018 Deep ug/L	4009-19 6/14/2018 Deep ug/L	4009-19 9/27/2018 Deep ug/L	4009-19 12/19/2018 Deep ug/L	4009-19 3/25/2019 Deep ug/L	4009-19 10/10/2019 Deep ug/L	4009-19 4/6/2020 Deep ug/L	4009-19 4/9/2021 Deep ug/L	DUP-2 4/9/2021 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	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
1,1-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-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
Acetone	50*	5.0 U	10 U	8.5 U	3.3 J	10.0 U	10.0 U	10 U	5.0 U	10 U	10 U	10 U	4.4 J	10 U	10 U	10 U
Benzene	1	10 U	1.0 U	2.7 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.5	0.50 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	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		1.0 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	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2-Butanone (MEK)	50	10 U	10 U	10 U	10 UT	10 U	10 U*+	10 U	5.0 U	10 U	10 U	10 U	10 UT	10 U	10 U*+	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 U	5.0 U
Methyl Cyclohexane		2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	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
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
Methyl Tert Butyl 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
Tetrachloroethene	5	1.0 U	1.0 U	1.0 U	1.0 UT	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UT	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	0.00	3.30	0.00	0.44	0.00	0.26	1.50	0.50	0.00	4.40	0.00	0.00	0.00
Total VOCs (w/o Acteone or Methlyene Chloride)		0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.26	1.50	0.50	0.00	0.00	0.00	0.00	0.00

Table 4-3.
Summary of Groundwater Sampling Results Through April 2021
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard / Guidance Value ug/L	4009-21 3/30/2018 Deep ug/L	4009-21 6/14/2018 Deep ug/L	4009-21 9/27/2018 Deep ug/L	4009-21 12/19/2018 Deep ug/L	4009-21 3/25/2019 Deep ug/L	4009-21 10/10/2019 Deep ug/L	4009-21 4/6/2020 Deep ug/L	4009-21 4/9/2021 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	4009-22 12/19/2018 Deep ug/L	4009-22 3/25/2019 Deep ug/L	4009-22 10/10/2019 Deep ug/L	4009-22 5/15/2020 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-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	1.5 J
Acetone	50*	10 U	5.0 U	10 U	10 U	10 U	5.3 J	10.0 U	10.0 U	10 U	5.0 U	3.4 J	10 U	3.5 J	3.2 J	10 U
Benzene	1	17	11	5.3	11	7.3	3.7	7.7	4.8	1.2	0.96 J	1.2	0.96 J	1.1	1.2	0.97 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 UT	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UT	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 UT	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UT	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	5.0 U	2.5 U	2.5 U	2.5 U	2.5 UT	2.5 U	2.5 U	2.5 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 UT	2.5 U
2-Butanone (MEK)	50	10 U	5.0 U	10 U	10 U	10 U'	10 U	10 U	10 U**	10 U	5.0 U	10 U	10 U	10 U'	10 U	10 U'
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 U'	5.0 U	5.0 U	5.0 U	5.0 UT	5.0 U	5.0 U	5.0 U	5.0 U'	5.0 U	5.0 U	5.0 U	5.0 UT	5.0 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
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
Methyl Tert Butyl 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
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	0.72 J	0.55 J	0.65 J	1.0 U	0.66 J	0.67 J	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		17.0	11.0	5.30	11.0	7.30	9.00	7.70	4.80	1.92	1.51	5.25	0.96	5.26	5.07	2.47
Total VOCs (w/o Acteone or Methlyene Chloride)		17.0	11.0	5.30	11.0	7.30	3.70	7.70	4.80	1.92	1.51	1.85	0.96	1.76	1.87	2.47

Table 4-3.
Summary of Groundwater Sampling Results Through April 2021
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard / Guidance Value ug/L	4009-22 4/12/2021 Deep 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	4009-26 12/19/2018 Intermediate ug/L	4009-26 3/25/2019 Intermediate ug/L	4009-26 10/10/2019 Intermediate ug/L	4009-26 4/6/2020 Intermediate ug/L	4009-26 4/13/2021 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	4009-27S 12/19/2018 Intermediate ug/L	4009-27S 3/25/2019 Intermediate ug/L
1,1,1-Trichloroethane	5	2.0 U	290	280	350	530	2300	350	880	210	52	43	47	43	52
1,1,2,2-Tetrachloroethane	5	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		2.0 U	8.8	8.4	11	12	22	14	21	10	2.4	2.6	1.5 J	2.3	2.8
1,1,2-Trichloroethane	1	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	2.0 U	35	32	42	45	79	20	69	44	2.2	1.9	2.2	1.9	2.1
1,1-Dichloroethene	5	2.0 U	8.5	8.7	17	16	66	16	50	11	4.4	4.1	4.5	4.2	4.1
1,2,3-Trimethylbenzene		2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	10 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
2-Hexanone	50*	10.0 U	10 U	5.0 U'	25 U	25 U	50 U	50 U	50 U	25 U	10 U	5.0 U'	10 U	5.0 U	5.0 U
Acetone	50*	13 J	20 U	5.0 U	50 U	50 U	100 U	100 U	100 U	50 U	20 U	5.0 U	20 U	6.3 J	3.0 J
Benzene	1	3.4	2.0 U	0.53 J	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
Bromodichloromethane	50*	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
Bromoform	50*	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
Bromomethane	5	2.0 U*1	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
Carbon disulfide		2.0 U*1	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	2.0 U*1	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
Chlorobenzene	5	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
Chloroethane	5	2.0 U	0.91 J	2.3	2.0 J	5.0 U	5.1 J	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
Chloroform	7	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
Chloromethane		2.0 U*1	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 UT	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	2.0 U	120	110	170	190	360	100	300	150	21	18	21	18	19
cis-1,3-Dichloropropene	0.4**	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
Cyclohexane		2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
Dibromochloromethane	50	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U'	1.0 U	1.0 U
Dichlorodifluoromethane	5	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 UT	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
Ethylbenzene	5	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
Methyl Acetate		5.0 U	5.0 U	5.0 U	13 U	13 U	25 U	25 UT	25 U	13 U	5.0 U	5.0 U	5.0 U	2.5 U	2.5 U
2-Butanone (MEK)	50	20 U*+	20 U'	5.0 U	50 U	50 U	10 U'	100 U	100 U	25 UF1	20 U	5.0 U	20 U	10 U	10 U'
4-Methyl-2-pentanone (MIBK)		10.0 U	10 U	5.0 U'	25 U	25 U	50 U	50 UT	50 U	25 U	10 U	5.0 U'	10 U	5.0 U	5.0 U
Methyl Cyclohexane		2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
Methylene Chloride	5	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	7.0	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
Styrene	5	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
Methyl Tert Butyl Ether	10	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
Tetrachloroethene	5	2.0 U	1.3 J'	1.2	5.0 U	1.8 J	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
Toluene	5	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	2.0 U	2.0 U	0.74 J	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4**	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
Trichloroethene	5	2.0 U	88	65	140	120	400	140	230	150	26	20	25	21	20
Trichlorofluoromethane	5	2.0 U	2.0 U	1.0 U	5.0 U	5.0 U	10 U	10 U	10 U	5.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
Vinyl chloride	2	2.0 U*1	9.9	8.1	13	13	15	10 U	14	10	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U
Xylenes, Total		4.0 U	4.0 U	2.0 U	10 U	10 U	20 U	20 U	20 U	10 U	4.0 U	2.0 U	4.0 U	2.0 U	2.0 U
Total VOCs		16.40	562	517	745	928	3247	640	1564	592	108	89.6	101	96.7	103
Total VOCs (w/o Acteone or Methylene Chloride)		3.40	562	517	745	928	3247	640	1564	585	108	89.6	101	90.4	100

Table 4-3.
Summary of Groundwater Sampling Results Through April 2021
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Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard / Guidance Value ug/L	4009-27S 10/10/2019 Intermediate ug/L	4009-27S 4/6/2020 Intermediate ug/L	4009-27S 4/8/2021 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	4009-27I 12/19/2018 Intermediate ug/L	4009-27I 3/25/2019 Intermediate ug/L	4009-27I 10/10/2019 Intermediate ug/L	4009-27I 4/6/2020 Intermediate ug/L	4009-27I 4/8/2021 Intermediate ug/L	4009-27D 3/30/2018 Deep ug/L	4009-27D 6/14/2018 Deep ug/L	4009-27D 9/27/2018 Deep ug/L
1,1,1-Trichloroethane	5	60	54	73 *1	1.0 U	0.61 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*1	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	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	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		2.6	2.2	2.2	1.0 U	0.42 J	1.0 U	1.0 U	0.44 J	1.0 U	1.0 U	0.32 J	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1	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	1.0 U	1.0 U
1,1-Dichloroethane	5	2.4	2.4	2.8	1.0 U	1.0 U	1.0 U	1.0 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	4.8	5.5	4.5 *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	1.0 U	1.0 U	1.0 U
1,2,3-Trimethylbenzene		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	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	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	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	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	1.0 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	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	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	1.0 U	1.0 U
1,2-Dichlorobenzene	3	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	1.0 U	1.0 U
1,2-Dichloroethane	0.6	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	1.0 U	1.0 U
1,2-Dichloropropane	1	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	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	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	1.0 U	1.0 U
1,3-Dichlorobenzene	3	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	1.0 U	1.0 U
1,4-Dichlorobenzene	3	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	1.0 U	1.0 U
2-Hexanone	50*	5.0 U	5.0 U	10.0 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	20 U	10 U	5.0 U	4.6 J	10 U	10 U	3.5 J	10.0 U	10.0 U	10 U	5.0 U	3.6 J
Benzene	1	1.0 U	1.0 U	2.0 U*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	1.0 U	1.0 U	1.0 U
Bromodichloromethane	50*	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	1.0 U	1.0 U
Bromoform	50*	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	1.0 U	1.0 U
Bromomethane	5	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	1.0 U	1.0 U
Carbon disulfide		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	1.0 U	1.0 U
Carbon tetrachloride	5	1.0 U	1.0 U	2.0 U*1	1.0 U*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
Chlorobenzene	5	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	1.0 U	1.0 U
Chloroethane	5	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	1.0 U	1.0 U
Chloroform	7	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	1.0 U	1.0 U
Chloromethane		1.0 UT	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	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	21	19	17	1.0 U	1.0 U	1.0 U	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	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
Cyclohexane		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	1.0 U	1.0 U
Dibromochloromethane	50	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	1.0 U	1.0 U'
Dichlorodifluoromethane	5	1.0 UT	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	1.0 U	1.0 U
Ethylbenzene	5	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	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	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	1.0 U	1.0 U
Methyl Acetate		2.5 UT	2.5 U	5.0 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	5.0 U	2.5 U
2-Butanone (MEK)	50	10 U	50 U	20 U	10 U*+	5.0 U	10 U	10 U	10 U'	10 UT	10 U	10 U	10 U	5.0 U	10 U
4-Methyl-2-pentanone (MIBK)		5.0 UT	5.0 U	10.0 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
Methyl Cyclohexane		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	1.0 U	1.0 U
Methylene Chloride	5	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	1.0 U	1.0 U
Styrene	5	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	1.0 U	1.0 U
Methyl Tert Butyl Ether	10	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	1.0 U	1.0 U
Tetrachloroethene	5	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 UT	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	5	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	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	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	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4**	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	1.0 U	1.0 U
Trichloroethene	5	20	17	15	1.6	1.4	1.7	2.2	1.9	0.80 J	2.5	2.2	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	5	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	1.0 U	1.0 U
Vinyl chloride	2	1.0 U	1.0 U	2.0 *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
Xylenes, Total		2.0 U	2.0 U	4.0 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		111	100	115	1.60	2.43	6.30	2.20	2.34	4.30	2.50	2.52	0.00	0.00	3.60
Total VOCs (w/o Acteone or Methlyene Chloride)		111	100	115	1.60	2.43	1.70	2.20	2.34	0.80	2.50	2.52	0.00	0.00	0.00

Table 4-3.
Summary of Groundwater Sampling Results Through April 2021
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard / Guidance Value ug/L	4009-27D 12/19/2018 Deep ug/L	4009-27D 3/25/2019 Deep ug/L	4009-27D 10/10/2019 Deep ug/L	4009-27D 4/6/2020 Deep ug/L	4009-27D 4/8/2021 Deep ug/L	4009-28 3/30/2018 Deep ug/L	4009-28 6/14/2018 Deep ug/L	4009-28 9/27/2018 Deep ug/L	4009-28 12/19/2018 Deep ug/L	4009-28 3/25/2019 Deep ug/L	4009-28 10/10/2019 Deep ug/L	4009-28 4/6/2020 Deep ug/L	4009-28 4/8/2021 Deep ug/L	DUP-1 4/8/2021 Deep ug/L	4009-29S 3/30/2018 Intermediate ug/L
1,1,1-Trichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*1	2.9	2.5	3.2	2.5	3.4	1.0 U	2.7	1.0 U*1	1.0 U*1	650
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	10 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	5.8 J
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	10 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	97
1,1-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*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	1.0 U*1	51
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	10 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	10 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	10 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	10 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	10 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	10 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	10 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	10 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	10 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	10 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	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	50 U
Acetone	50*	5.0 J	10 U	3.7 J	10.0 U	10.0 U	10 U	5.0 U	3.6 J	10 U	10 U	10 U	10 U	5.0 J	4.0 J	100 U
Benzene	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*1	1.0 U	0.61 J	1.0 U	1.0 U	1.0 U	2.4	1.0 U	0.93 J*1	0.96 J*1	10 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	10 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	10 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	10 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	0.26 J	1.0 U	1.0 U	1.0 U	10 U
Carbon tetrachloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*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	1.0 U*1	10 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	10 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*-	10 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	10 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	10 U
cis-1,2-Dichloroethene	5	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	1.0 U	1.0 U	350
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	10 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	10 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	10 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	10 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	10 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	10 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	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	25 U
2-Butanone (MEK)	50	10 U	10 U'	10 UT	10 U	10 U	10 U	5.0 U	10 U	10 U	10 U'	10 UT	10 U	10 U*+	10 U*+	100 U
4-Methyl-2-pentanone (MIBK)		5.0 U	5.0 U	5.0 U	5.0 U	10.0 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	50 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	10 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	10 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	10 U
Methyl Tert Butyl Ether	10	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	1.0 U	1.0 U	10 U
Tetrachloroethene	5	1.0 U	1.0 U	1.0 UT	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 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	1.1	1.0 U	1.0 U	1.0 U	10 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	10 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	10 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	48
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	10 U
Vinyl chloride	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*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	1.0 U*1	120
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	20 U
Total VOCs		5.00	0.00	3.70	0.00	0.26	2.90	3.52	6.80	2.50	3.40	3.76	2.70	5.93	4.96	1322
Total VOCs (w/o Acteone or Methlyene Chloride)		0.00	0.00	0.00	0.00	0.26	2.90	3.52	3.20	2.50	3.40	3.76	2.70	0.93	0.96	1322

Table 4-3.
Summary of Groundwater Sampling Results Through April 2021
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard / Guidance Value ug/L	4009-29S 6/14/2018 Intermediate ug/L	4009-29S 9/27/2018 Intermediate ug/L	4009-29S 12/19/2018 Intermediate ug/L	4009-29S 3/25/2019 Intermediate ug/L	4009-29S 10/10/2019 Intermediate ug/L	4009-29S 4/6/2020 Intermediate ug/L	4009-29S 4/8/2021 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	4009-29I 12/19/2018 Intermediate ug/L	4009-29I 3/25/2019 Intermediate ug/L	DUP-2 3/25/2019 Intermediate ug/L	4009-29I 10/10/2019 Intermediate ug/L
1,1,1-Trichloroethane	5	420	960	1000	1600	1700	1300	1200 *1	1200	620	990	950	850	930	1200
1,1,2,2-Tetrachloroethane	5	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		4.3	5.0 J	10 U	11 J	20 U	12 J	9.6 J	20 U	7.5	20 U	20 U	20 U	10 J	20 U
1,1,2-Trichloroethane	1	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
1,1-Dichloroethane	5	58	90	95	110	100	81	72	93	50	84	72	70	73	91
1,1-Dichloroethene	5	37	74	85	100	110	100	86 *1	95	50	82	79	65	69	86
1,2,3-Trimethylbenzene		2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
1,2,4-Trichlorobenzene	5	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
1,2,4-Trimethylbenzne	5	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
1,2-Dibromo-3-Chloropropane	0.04	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
1,2-Dibromoethane (Ethylene Dibromide)	5	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
1,2-Dichlorobenzene	3	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
1,2-Dichloroethane	0.6	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
1,2-Dichloropropane	1	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
1,3,5-Trimethylbenzene (Mesitylene)	5	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
1,3-Dichlorobenzene	3	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
1,4-Dichlorobenzene	3	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
2-Hexanone	50*	10 U	50 U	50 U	100 U	100 U	100 U	100 U	100 U	10 U	100 U	100 U	100 U	100 U	100 U
Acetone	50*	10 U	100 U	100 U	200 U	200 U	200 U	200 U	200 U	10 U	200 U	200 U	200 U	200 U	200 U
Benzene	1	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U*1	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
Bromodichloromethane	50*	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
Bromoform	50*	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
Bromomethane	5	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
Carbon disulfide		2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
Carbon tetrachloride	5	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U*1	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
Chlorobenzene	5	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	0.91 J	20 U	20 U	20 U	20 U	20 U
Chloroethane	5	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U*	20 U	2.2	20 U	20 U	20 U	20 U	20 U
Chloroform	7	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
Chloromethane		2.0 U	10 U	10 U	20 U	20 UT	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
cis-1,2-Dichloroethene	5	260	470	430	590	550	480	340	400	250	380	350	290	310	320
cis-1,3-Dichloropropene	0.4**	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
Cyclohexane		2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
Dibromochloromethane	50	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
Dichlorodifluoromethane	5	2.0 U	10 U	10 U	20 U	20 UT	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
Ethylbenzene	5	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
Isopropylbenzne (Cumene)	5	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
Methyl Acetate		10 U	25 U	25 U	50 U	50 UT	50 U	50 U	50 U	10 U	50 U	50 U	50 U	50 U	50 U
2-Butanone (MEK)	50	10 U	100 U	100 U	200 U	200 U	200 U	200 U*+	200 U	10 U	200 U	200 U	200 U	200 U	200 UT
4-Methyl-2-pentanone (MIBK)		10 U	50 U	50 U	100 U	100 UT	100 U	100 U	100 U	10 U	100 U	100 U	100 U	100 U	100 U
Methyl Cyclohexane		2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
Methylene Chloride	5	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
Styrene	5	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
Methyl Tert Butyl Ether	10	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
Tetrachloroethene	5	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	1.1 J	20 U	20 U	20 U	20 U	20 U
Toluene	5	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
trans-1,2-Dichloroethene	5	0.78 J	10 U	10 U	20 U	20 U	20 U	20 U	20 U	0.95 J	20 U	20 U	20 U	20 U	20 U
trans-1,3-Dichloropropene	0.4**	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
Trichloroethene	5	19	150	220	210	380	250	270	420	200	400	330	340	350	340
Trichlorofluoromethane	5	2.0 U	10 U	10 U	20 U	20 U	20 U	20 U	20 U	2.0 U	20 U	20 U	20 U	20 U	20 U
Vinyl chloride	2	74	100	120	130	140	88	91 *1	92	63	79	68	57	61	81
Xylenes, Total		4.0 U	20 U	20 U	40 U	40 U	40 U	40 U	40 U	4.0 U	40 U	40 U	40 U	40 U	40 U
Total VOCs		875	1849	1950	2751	2980	2311	2069	2300	1246	2015	1849	1672	1793	2118
Total VOCs (w/o Acteone or Methlyene Chloride)		875	1849	1950	2751	2980	2311	2069	2300	1246	2015	1849	1672	1793	2118

Table 4-3.
Summary of Groundwater Sampling Results Through April 2021
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard / Guidance Value ug/L	DUP-2 10/10/2019 Intermediate ug/L	4009-29I 4/6/2020 Intermediate ug/L	DUP-2 4/6/2020 Intermediate ug/L	4009-29I 4/8/2021 Intermediate ug/L	4009-29D 6/14/2018 Deep ug/L	4009-29D 9/27/2018 Deep ug/L	4009-29D 12/19/2018 Deep ug/L	4009-29D 3/25/2019 Deep ug/L	4009-29D 10/10/2019 Deep ug/L	4009-29D 4/6/2020 Deep ug/L	4009-29D 4/8/2021 Deep ug/L	4009-30 3/30/2018 Deep ug/L	4009-30 6/14/2018 Deep ug/L	4009-30 9/27/2018 Deep ug/L
1,1,1-Trichloroethane	5	1100	810	810	930 *1	41	150	56	100	210	17	36 *1	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		9.6 J	20 U	20 U	20 U	0.67 J	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	0.39 J	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	82	65	69	52	11	29	14	15	18	3.7 J	5.3	0.71 J	0.61 J	1.0 U
1,1-Dichloroethene	5	68	70	66	58 *1	5.3	13	3.7	5.0	32	1.6 J	3.2 *1	1.0 U	1.0 U	1.0 U
1,2,3-Trimethylbenzene		20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzne	5	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	0.04	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	5	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene (Mesitylene)	5	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	50*	100 U	100 U	100 U	100 U	5.0 U'	25 U	5.0 U	5.0 U	20 U	20 U	5.0 U	5.0 U	5.0 U'	5.0 U
Acetone	50*	200 U	200 U	200 U	200 U	5.0 U	50 U	3.9 J	10 U	40 U	40 U	10 U	10.0 U	5.0 U	3.5 J
Benzene	1	20 U	20 U	20 U	20 U*1	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U*1	5.3	4.1	33
Bromodichloromethane	50*	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	50*	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	5	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide		20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	20 U	20 U	20 U	20 U*1	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U*1	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	5	20 U	20 U	20 U	20 U*	3.0	3.6 J	2.9	3.0	4.2	3.3 J	6.0 *	1.0 U	1.0 U	1.0 U
Chloroform	7	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane		20 UT	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	320	290	310	230	26	77	20	29	93	3.8 J	11	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	0.4**	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane		20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	50	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane	5	20 UT	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	5	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzne (Cumene)	5	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Acetate		50 UT	50 U	50 U	50 U	5.0 U	13 U	2.5 U	2.5 U	10.0 U	10.0 U	2.5 U	2.5 U	5.0 U	2.5 U
2-Butanone (MEK)	50	200 U	200 U	200 U	200 U*+	5.0 U	50 U	10 U	10 U'	40.0 U	40.0 U	10.0 U*+	10.0 U'	5.0 U	10 U
4-Methyl-2-pentanone (MIBK)		100 UT	100 U	100 U	100 U	5.0 U'	25 U	5.0 U	5.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U'	5.0 U
Methyl Cyclohexane		20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	5	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Tert Butyl Ether	10	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.2	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U'	1.0 U	1.0 U
Toluene	5	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4**	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5	340	230	230	230	10	16	12	12	100	5.3	11	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	5	20 U	20 U	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2	77	53	62	44 *1	17	35	15	22	42	11	15 *1	1.0 U	1.0 U	1.0 U
Xylenes, Total		40 U	40 U	40 U	40 U	2.0 U	10 U	2.0 U	2.0 U	8.0 U	8.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total VOCs		1997	1518	1547	1544	114	324	128	186	499	45.7	89.1	6.01	4.71	36.5
Total VOCs (w/o Acteone or Methylene Chloride)		1997	1518	1547	1544	114	324	124	186	499	45.7	89.1	6.01	4.71	33.0

Table 4-3.
Summary of Groundwater Sampling Results Through April 2021
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard / Guidance Value ug/L	4009-30 12/19/2018 Deep ug/L	4009-30 3/25/2019 Deep ug/L	4009-30 10/10/2019 Deep ug/L	4009-30 4/6/2020 Deep ug/L	4009-30 4/12/2021 Deep 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	4009-30A 12/19/2018 Shallow ug/L	4009-30A 3/25/2019 Shallow 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	Well 1-1 12/19/2018 Deep ug/L
1,1,1-Trichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	2.0	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	230	170	220	220
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	4.0 U	1.0 U	4.0 U	4.0 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	4.0 U	4.2	4.0 U	3.2 J
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	4.0 U	1.0 U	4.0 U	4.0 U
1,1-Dichloroethane	5	1.1	0.98 J	0.73 J	0.75 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	21	17	20	25
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	16	14	18	18
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	4.0 U	1.0 U	4.0 U	4.0 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	4.0 U	1.0 U	4.0 U	4.0 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	4.0 U	1.0 U	4.0 U	4.0 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	4.0 U	1.0 U	4.0 U	4.0 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	4.0 U	1.0 U	4.0 U	4.0 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	4.0 U	1.0 U	4.0 U	4.0 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	4.0 U	1.0 U	4.0 U	4.0 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	4.0 U	1.0 U	4.0 U	4.0 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	4.0 U	1.0 U	4.0 U	4.0 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	4.0 U	1.0 U	4.0 U	4.0 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	4.0 U	1.0 U	4.0 U	4.0 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	20 U	5.0 U'	20 U	20 U
Acetone	50*	10 U	10 U	10 U	10 U	10 U	10 U	5.0 U	3.1 J	10 U	10 U	40 U	5.0 U	40 U	40 U
Benzene	1	0.87 J	1.2	4.5	1.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U	4.0 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	4.0 U	1.0 U	4.0 U	4.0 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	4.0 U	1.0 U	4.0 U	4.0 U
Bromomethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U	4.0 U
Carbon disulfide		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U	4.0 U
Carbon tetrachloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U	4.0 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	4.0 U	1.0 U	4.0 U	4.0 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	4.0 U	0.46 J	4.0 U	4.0 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	4.0 U	1.0 U	4.0 U	4.0 U
Chloromethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	1.0 U	4.0 U	4.0 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	69	56	68	78
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	4.0 U	1.0 U	4.0 U	4.0 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	4.0 U	1.0 U	4.0 U	4.0 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	4.0 U	1.0 U	4.0 U	4.0 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	4.0 U	1.0 U	4.0 U	4.0 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	4.0 U	1.0 U	4.0 U	4.0 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	4.0 U	1.0 U	4.0 U	4.0 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	2.5 U	10 U	5.0 U	10 U	10 U
2-Butanone (MEK)	50	10 U	10 U'	10 UT	10 U	10 U*+	10 U'	5.0 U	10 U	10 U	10 U'	40 U'	5.0 U	40 U	40 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	20 U	5.0 U'	20 U	20 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	4.0 U	1.0 U	4.0 U	4.0 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	4.0 U	1.0 U	1.8 J	4.0 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	4.0 U	1.0 U	4.0 U	4.0 U
Methyl Tert Butyl 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	4.0 U	1.0 U	4.0 U	4.0 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	4.0 U	1.0 U	4.0 U	4.0 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	4.0 U	1.0 U	4.0 U	4.0 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	4.0 U	0.35 J	4.0 U	4.0 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	4.0 U	1.0 U	4.0 U	4.0 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	73	53	67	67
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	4.0 U	1.0 U	4.0 U	4.0 U
Vinyl chloride	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U*1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	0.29 J	4.0 U	4.0 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	8.0 U	2.0 U	8.0 U	8.0 U
Total VOCs		1.97	2.18	5.23	2.35	2.00	0.00	0.00	3.10	0.00	0.00	409	315	395	411
Total VOCs (w/o Acteone or Methylene Chloride)		1.97	2.18	5.23	2.35	2.00	0.00	0.00	0.00	0.00	0.00	409	315	393	411

Table 4-3.
Summary of Groundwater Sampling Results Through April 2021
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Groundwater Monitoring Zone Units	NYSDEC GA Standard / Guidance Value ug/L	Well 1-1 3/25/2019 Deep ug/L	Well 1-1 10/10/2019 Deep ug/L	Well 1-1 4/6/2020 Deep ug/L	Well 1-1 4/8/2021 Deep ug/L
1,1,1-Trichloroethane	5	360	250	230	NS
1,1,2,2-Tetrachloroethane	5	4.0 U	5.0 U	5.0 U	NS
1,1,2-Trichloro-1,2,2-Trifluoroethane		4.0 U	3.7 J	5.0 U	NS
1,1,2-Trichloroethane	1	4.0 U	5.0 U	5.0 U	NS
1,1-Dichloroethane	5	36	21	29	NS
1,1-Dichloroethene	5	25	18	20	NS
1,2,3-Trimethylbenzene		4.0 U	5.0 U	5.0 U	NS
1,2,4-Trichlorobenzene	5	4.0 U	5.0 U	5.0 U	NS
1,2,4-Trimethylbenzne	5	4.0 U	5.0 U	5.0 U	NS
1,2-Dibromo-3-Chloropropane	0.04	4.0 U	5.0 U	5.0 U	NS
1,2-Dibromoethane (Ethylene Dibromide)	5	4.0 U	5.0 U	5.0 U	NS
1,2-Dichlorobenzene	3	4.0 U	5.0 U	5.0 U	NS
1,2-Dichloroethane	0.6	4.0 U	5.0 U	5.0 U	NS
1,2-Dichloropropane	1	4.0 U	5.0 U	5.0 U	NS
1,3,5-Trimethylbenzene (Mesitylene)	5	4.0 U	5.0 U	5.0 U	NS
1,3-Dichlorobenzene	3	4.0 U	5.0 U	5.0 U	NS
1,4-Dichlorobenzene	3	4.0 U	5.0 U	5.0 U	NS
2-Hexanone	50*	20 U	25 U	25 U	NS
Acetone	50*	40 U	50 U	50 U	NS
Benzene	1	4.0 U	5.0 U	5.0 U	NS
Bromodichloromethane	50*	4.0 U	5.0 U	5.0 U	NS
Bromoform	50*	4.0 U	5.0 U	5.0 U	NS
Bromomethane	5	4.0 U	5.0 U	5.0 U	NS
Carbon disulfide		4.0 U	5.0 U	5.0 U	NS
Carbon tetrachloride	5	4.0 U	5.0 U	5.0 U	NS
Chlorobenzene	5	4.0 U	5.0 U	5.0 U	NS
Chloroethane	5	4.0 U	5.0 U	5.0 U	NS
Chloroform	7	4.0 U	5.0 U	5.0 U	NS
Chloromethane		4.0 U	5.0 UT	5.0 U	NS
cis-1,2-Dichloroethene	5	100	73	87	NS
cis-1,3-Dichloropropene	0.4**	4.0 U	5.0 U	5.0 U	NS
Cyclohexane		4.0 U	5.0 U	5.0 U	NS
Dibromochloromethane	50	4.0 U	5.0 U	5.0 U	NS
Dichlorodifluoromethane	5	4.0 U	5.0 UT	5.0 U	NS
Ethylbenzene	5	4.0 U	5.0 U	5.0 U	NS
Isopropylbenzne (Cumene)	5	4.0 U	5.0 U	5.0 U	NS
Methyl Acetate		10 U	13 UT	13 U	NS
2-Butanone (MEK)	50	40 U'	50 U	50 U	NS
4-Methyl-2-pentanone (MIBK)		20 U	25 UT	25 U	NS
Methyl Cyclohexane		4.0 U	5.0 U	5.0 U	NS
Methylene Chloride	5	4.0 U	5.0 U	5.0 U	NS
Styrene	5	4.0 U	5.0 U	5.0 U	NS
Methyl Tert Butyl Ether	10	4.0 U	5.0 U	5.0 U	NS
Tetrachloroethene	5	4.0 U	5.0 U	5.0 U	NS
Toluene	5	4.0 U	5.0 U	5.0 U	NS
trans-1,2-Dichloroethene	5	4.0 U	5.0 U	5.0 U	NS
trans-1,3-Dichloropropene	0.4**	4.0 U	5.0 U	5.0 U	NS
Trichloroethene	5	89	71	64	NS
Trichlorofluoromethane	5	4.0 U	5.0 U	5.0 U	NS
Vinyl chloride	2	4.0 U	5.0 U	5.0 U	NS
Xylenes, Total		8.0 U	10 U	10 U	NS
Total VOCs		610	437	430	NA
Total VOCs (w/o Acteone or Methlyene Chloride)		610	437	430	NA



Notes:
NYSDEC GA Standard / Guidance Value - New York State Department of Environmental Conservation Groundwater Standard/Guidance Value
[redacted] - Concentration exceeds NYSDEC GA Standard/Guidance Value
* - Guidance Value
** - Sum of these compounds cannot exceed 0.4 ug/L
U- Compound analyzed for but not detected
J - Compound detected below the reporting limit or reported concentration is estimated
µg/L - Micrograms per Liter
D- Result of diluted sample shown
' - Laboratory control sample (LCS) or LCS Duplicate is outside acceptable limits Matrix Spike (MS) or MS Duplicate is outside acceptable limits
DUP-1 a duplicate sample from monitoring well 4009-12
DUP-2 is a duplicate sample from monitoring well 4009-29I
NS - Not Sampled
NA- Not Analyzed
*** - 4009-16 was sampled via low flow on this date

Table 4-4.
Summary of PFAS and 1, 4- Dioxane Groundwater Sampling Results
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Groundwater Monitoring Zone Units	NY State Established Criteria*	4009-7 6/28/2017 Shallow	4009-7 4/13/2021 Shallow	4009-8 6/28/2017 Intermediate	4009-8 4/13/2021 Intermediate	4009-9 6/26/2017 Shallow	4009-9 4/13/2021 Shallow	4009-10 6/26/2017 Shallow	4009-11 6/26/2017 Deep	4009-11 4/14/2021 Deep	4009-11A 6/26/2017 Shallow	4009-12 6/23/2017 Deep	4009-12 4/8/2021 Deep	4009-13 6/25/2017 Deep	4009-13 4/12/2021 Deep
1,4 Dioxane (µg/L)	1.0	0.73	0.65	2.8	2.0 E	0.4 U	2.0 E	0.4 U	3.8	4.1	0.4 U	3.4	2.9 E	0.4 U	0.19 U
Perfluorobutanoic acid (PFBA)	100	NA	40 B	NA	6.6 JH	NA	4.3 U	NA	NA	5.3 J	NA	NA	4.8	NA	4.2 U
Perfluoropentanoic acid (PFPeA)	100	NA	0.44 J	NA	2.9	NA	2.0	NA	NA	2.7 J	NA	NA	3.0	NA	1.3 J
Perfluorohexanoic acid (PFHxA)	100	NA	3.1 JH	NA	2.5 JH	NA	1.8 JH	NA	NA	2.1 U	NA	NA	2.2 JH	NA	1.7 U
Perfluoroheptanoic acid (PFHpA)	100	2.0 U	2.6 JH	1.68 J	2.3 JH	1.49 J	1.7 U	1.3 J	0.81 J	2.1 U	2.0 U	2.51	1.9	2.0 U	1.7 U
Perfluorooctanoic acid (PFOA)	10	9.75	5.1 B	12.7	7.3 B	15	3.4 JH	6.32	2.94	2.3	8.59	6.76	6.5	1.21 J	2.6 JH
Perfluorononanoic acid (PFNA)	100	6.18	2.5 JH	1.06 J	1.6 U	2.73	1.7 U	2.0 U	3.83	1.3 J	2.0 U	2.0 U	0.36 J	2.0 U	1.7 U
Perfluorodecanoic acid (PFDA)	100	NA	1.7 U	NA	1.6 U	NA	1.7 U	NA	NA	0.92 J	NA	NA	1.6 U	NA	1.7 U
Perfluoroundecanoic acid (PFUnA)	100	NA	1.7 U	NA	1.6 U	NA	1.7 U	NA	NA	2.8 U	NA	NA	1.6 U	NA	1.7 U
Perfluorododecanoic acid (PFDoA)	100	NA	1.7 U	NA	1.6 U	NA	1.7 U	NA	NA	2.1 U	NA	NA	1.6 U	NA	1.7 U
Perfluorotridecanoic acid (PFTriA)	100	NA	1.7 U	NA	1.6 U	NA	1.7 U	NA	NA	2.1 U	NA	NA	1.6 U	NA	1.7 U
Perfluorotetradecanoic acid (PFTeA)	100	NA	1.7 U	NA	1.6 U	NA	1.7 U	NA	NA	2.1 U	NA	NA	1.6 U	NA	1.7 U
Perfluorobutanesulfonic acid (PFBS)	100	10.2	1.9 JH	3.22	3.3 JH	1.23 J	1.8 JH	4.85	2.0 U	2.1 U	2.0 U	2.26	2.8	2.0 U	1.7 U
Perfluorohexanesulfonic acid (PFHxS)	100	2.0 U	1.7 U	5.02	2.9 JH	2.01	1.7 U	17.9	26	1 J	2.88	3.16	3.1	6.38	1.7 U
Perfluoroheptanesulfonic Acid (PFHpS)	100	NA	1.7 U	NA	1.6 U	NA	1.7 U	NA	NA	2.1 U	NA	NA	1.6 U	NA	1.7 U
Perfluorooctanesulfonic acid (PFOS)	10	7.02	5.6 JH	9.51	13 B	15.5	3.3 JH	6.19	2.0 U	0.86 J	6.8	2.0 U	2.1	1.81 J	3.8 JH
Perfluorodecanesulfonic acid (PFDS)	100	NA	1.7 U	NA	1.6 U	NA	1.7 U	NA	NA	2.1 U	NA	NA	1.6 U	NA	1.7 U
Perfluorooctanesulfonamide (PFOSA)	100	NA	1.7 U	NA	1.6 U	NA	1.7 U	NA	NA	2.1 U	NA	NA	1.6 U	NA	1.7 U
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	100	NA	4.3 U	NA	4.1 U	NA	4.3 U	NA	NA	5.2 UJ	NA	NA	4 U	NA	4.2 U
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	100	NA	4.3 U	NA	4.1 U	NA	4.3 U	NA	NA	5.2 U	NA	NA	4 U	NA	4.2 U
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	100	NA	4.3 U	NA	4.1 U	NA	4.3 U	NA	NA	2.3 J	NA	NA	4 U	NA	4.2 U
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	100	NA	1.7 U	NA	1.6 U	NA	1.7 U	NA	NA	0.51 J	NA	NA	1.6 U	NA	1.7 U
Total PFAS (including PFOA and PFOS)	500	33.15	61	33.19	42.8	37.96	10.3	36.6	33.58	14.9	18.3	14.7	26.8	9.4	7.7

Table 4-4.
Summary of PFAS and 1, 4- Dioxane Groundwater Sampling Results
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Groundwater Monitoring Zone Units	NY State Established Criteria*	4009-13A 6/25/2017 Shallow	4009-14 6/23/2017 Deep	4009-14 4/12/2021 Deep	4009-15 6/23/2017 Deep	4009-15 4/9/2021 Deep	4009-16 6/21/2017 Deep	4009-16 4/9/2021 Deep	4009-16A 6/21/2017 Shallow	4009-16A 4/12/2021 Shallow	4009-18 6/21/2017 Deep	4009-18 4/9/2021 Deep	4009-19 6/22/2017 Deep	4009-19 4/9/2021 Deep	DUP-2 4/9/2021 Deep
1,4 Dioxane (µg/L)	1.0	0.4 U	0.4 U	0.19 U	0.4 U	0.19 U	0.91	0.69	0.4 U	0.19 U	0.40 U	0.36	0.85	0.88	0.89
Perfluorobutanoic acid (PFBA)	100	NA	NA	4 U	NA	11 J	NA	1.1 J	NA	4.3 U	NA	1.3 J	NA	4.2 U	4.3 U
Perfluoropentanoic acid (PFPeA)	100	NA	NA	1.7	NA	4.6	NA	0.67 J	NA	2.7	NA	1.9	NA	1.7 U	1.7 U
Perfluorohexanoic acid (PFHxA)	100	NA	NA	1.7 JH	NA	4.1 JH	NA	1.8 U	NA	2 JH	NA	1.9 U	NA	1.7 U	1.7 U
Perfluoroheptanoic acid (PFHpA)	100	2.52	2.0 U	1.6 U	2.0 U	3.3	2.0 U	1.8 U	2.67	1.7 JH	2.0 U	2.0	2.0 U	1.7 U	1.7 U
Perfluorooctanoic acid (PFOA)	10	5.63	2.0 U	3.0 JH	2.0 U	11	6.22	1.9	8.88	4.2 JH	2.25	2.0	2.0 U	1.7 U	1.7 U
Perfluorononanoic acid (PFNA)	100	2.0 U	2.0 U	1.6 U	2.0 U	1.7	3.05	1.8	3.65	2.3 JH	10.7	5.3	2.0 U	0.23 J	1.7 U
Perfluorodecanoic acid (PFDA)	100	NA	NA	1.6 U	NA	0.29 J	NA	0.28 J	NA	1.7 U	NA	0.54 J	NA	1.7 U	1.7 U
Perfluoroundecanoic acid (PFUnA)	100	NA	NA	1.6 U	NA	0.37 J	NA	0.44 J	NA	1.7 U	NA	1.9 U	NA	1.7 U	1.7 U
Perfluorododecanoic acid (PFDoA)	100	NA	NA	1.6 U	NA	1.7 U	NA	1.8 U	NA	1.7 U	NA	1.9 U	NA	1.7 U	1.7 U
Perfluorotridecanoic acid (PFTriA)	100	NA	NA	1.6 U	NA	1.7 U	NA	1.8 U	NA	1.7 U	NA	1.9 U	NA	1.7 U	1.7 U
Perfluorotetradecanoic acid (PFTeA)	100	NA	NA	1.6 U	NA	1.7 U	NA	1.8 U	NA	1.7 U	NA	1.9 U	NA	1.7 U	1.7 U
Perfluorobutanesulfonic acid (PFBS)	100	12.9	2.0 U	3 JH	2.0 U	1.7 U	2.0 U	1.8 U	2.43	3.1 JH	2.0 U	1.9 U	2.0 U	1.7 U	1.7 U
Perfluorohexanesulfonic acid (PFHxS)	100	2.02	6.79	1.6 U	2.0 U	0.74 J	5.01	0.36 J	4.28	2.3 JH	1.11 J	0.82 J	2.0 U	1.7 U	1.7 U
Perfluoroheptanesulfonic Acid (PFHpS)	100	NA	NA	1.6 U	NA	1.7 U	NA	1.8 U	NA	1.7 U	NA	1.9 U	NA	1.7 U	1.7 U
Perfluorooctanesulfonic acid (PFOS)	10	2.0 U	2.0 U	5.9 JH	2.0 U	1.7	2.0 U	0.9 J	9.18	9.5 B	2.28	1.4 J	2.0 U	1.7 U	1.7 U
Perfluorodecanesulfonic acid (PFDS)	100	NA	NA	1.6 U	NA	1.7 U	NA	1.8 U	NA	1.7 U	NA	1.9 U	NA	1.7 U	1.7 U
Perfluorooctanesulfonamide (PFOSA)	100	NA	NA	1.6 U	NA	1.7 UJ	NA	1.8 U	NA	1.7 U	NA	1.9 U	NA	1.7 U	1.7 U
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	100	NA	NA	4.0 U	NA	4.2 U	NA	4.5 UJ	NA	4.3 U	NA	4.7 U	NA	4.2 U	4.3 U
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	100	NA	NA	4.0 U	NA	4.2 U	NA	4.5 U	NA	4.3 U	NA	4.7 U	NA	4.2 U	4.3 U
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	100	NA	NA	4.0 U	NA	3.2 J	NA	3.6 J	NA	4.3 U	NA	4.7 U	NA	4.2 U	4.3 U
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	100	NA	NA	1.6 U	NA	1.7 UJ	NA	1.8 UJ	NA	1.7 U	NA	1.9 U	NA	1.7 U	1.7 U
Total PFAS (including PFOA and PFOS)	500	23.1	6.8	13.6	0.0	42.0	14.28	11.05	31.09	27.8	16.34	15.26	0.0	0.23	0.0

Table 4-4.
Summary of PFAS and 1, 4- Dioxane Groundwater Sampling Results
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Groundwater Monitoring Zone Units	NY State Established Criteria*	4009-21 6/21/2017 Deep	4009-21 4/9/2021 Deep	4009-22 6/23/2017 Deep	4009-22 4/12/2021 Deep	4009-26 6/28/2017 Intermediate	4009-26 4/13/2021 Intermediate	4009-27S 6/27/2017 Intermediate	4009-27S 4/8/2021 Intermediate	4009-27I 6/27/2017 Intermediate	4009-27I 4/8/2021 Intermediate	4009-27D 6/27/2017 Deep	4009-27D 4/8/2021 Deep
1,4 Dioxane (µg/L)	1.0	0.78	0.99	0.78	0.80	3.7	2.9 E	0.73	0.82	0.21 J	0.19 U	0.4 U	0.19 U
Perfluorobutanoic acid (PFBA)	100	NA	4.6 U	NA	4.4 U	NA	6.3 JH	NA	3.9 J	NA	6.5	NA	14
Perfluoropentanoic acid (PFPeA)	100	NA	0.69 J	NA	1.1 J	NA	1.8	NA	3.8	NA	4.1	NA	1.5 J
Perfluorohexanoic acid (PFHxA)	100	NA	1.8 U	NA	1.7 U	NA	1.6 U	NA	2.4 JH	NA	2.2 JH	NA	1.7 U
Perfluoroheptanoic acid (PFHpA)	100	2.0 U	1.8 U	2.0 U	1.7 U	2.0 U	1.7 JH	1.63 J	1.7 U	2.0 U	1.8 U	2.0 U	1.7 U
Perfluorooctanoic acid (PFOA)	10	2.0 U	1.8 U	2.0 U	1.7 U	9.62	6.8 B	3.4	4.3	3.79	5.5	2.0 U	10
Perfluorononanoic acid (PFNA)	100	2.0 U	0.27 J	3.57	1.7 U	1.14 J	1.6 U	2.0 U	1.7 U	2.0 U	0.35 J	2.0 U	0.94 J
Perfluorodecanoic acid (PFDA)	100	NA	1.8 U	NA	1.7 U	NA	1.6 U	NA	1.7 U	NA	1.8 U	NA	1.7 U
Perfluoroundecanoic acid (PFUnA)	100	NA	1.8 U	NA	1.7 U	NA	1.6 U	NA	1.7 U	NA	1.8 U	NA	1.7 U
Perfluorododecanoic acid (PFDoA)	100	NA	1.8 U	NA	1.7 U	NA	1.6 U	NA	1.7 U	NA	1.8 U	NA	1.7 U
Perfluorotridecanoic acid (PFTriA)	100	NA	1.8 U	NA	1.7 U	NA	1.6 U	NA	1.7 U	NA	1.8 U	NA	1.7 U
Perfluorotetradecanoic acid (PFTeA)	100	NA	1.8 U	NA	1.7 U	NA	1.6 U	NA	1.7 U	NA	1.8 U	NA	1.7 U
Perfluorobutanesulfonic acid (PFBS)	100	2.0 U	1.8 U	2.0 U	1.7 U	3.36	3.7 JH	1.87 J	2.1	2.18	3.4	4.5	9.8
Perfluorohexanesulfonic acid (PFHxS)	100	2.0 U	0.49 J	2.09	1.7 U	4.37	4.1 JH	1.12 J	1.7 U	1.86 J	2.2 JH	3.14	7.1 B
Perfluoroheptanesulfonic Acid (PFHpS)	100	NA	1.8 U	NA	1.7 U	NA	1.6 U	NA	1.7 U	NA	1.8 U	NA	1.7 U
Perfluorooctanesulfonic acid (PFOS)	10	2.0 U	0.37 J	2.0 U	1.7 U	8.44	8.5 JH	2.0 U	0.66 J	2.0 U	0.66 J	2.0 U	1.3 J
Perfluorodecanesulfonic acid (PFDS)	100	NA	1.8 U	NA	1.7 U	NA	1.6 U	NA	1.7 U	NA	1.8 U	NA	1.7 U
Perfluorooctanesulfonamide (PFOSA)	100	NA	1.8 U	NA	1.7 U	NA	1.6 U	NA	1.7 U	NA	1.8 U	NA	1.7 U
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	100	NA	4.6 U	NA	4.4 U	NA	4.1 U	NA	4.3 U	NA	4.5 U	NA	4.1 U
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	100	NA	2.4 J	NA	4.4 U	NA	4.1 U	NA	4.3 U	NA	4.5 U	NA	4.1 U
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	100	NA	1.1 J	NA	2.0 J	NA	4.1 U	NA	4.3 U	NA	4.5 U	NA	4.1 U
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	100	NA	1.8 U	NA	1.7 U	NA	1.6 U	NA	1.7 U	NA	1.8 U	NA	1.7 U
Total PFAS (including PFOA and PFOS)	500	0.0	5.3	5.66	3.10	26.93	32.9	4.3	17.2	7.8	24.9	7.7	44.6

Table 4-4.
Summary of PFAS and 1, 4- Dioxane Groundwater Sampling Results
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A



Sample ID Sampling Date Groundwater Monitoring Zone Units	NY State Established Criteria*	4009-28 6/23/2017 Deep	4009-28 4/8/2021 Deep	DUP-1 4/8/2021 Deep	4009-29S 6/27/2017 Intermediate	4009-29S 4/8/2021 Intermediate	4009-29I 6/27/2017 Intermediate	4009-29I 4/8/2021 Intermediate	4009-29D 6/27/2017 Deep	4009-29D 4/8/2021 Deep	4009-30 6/22/2017 Deep	4009-30 4/12/2021 Deep	4009-30A 6/22/2017 Shallow
1,4 Dioxane (µg/L)	1.0	0.61	0.18 J	0.32 JL	2.40	6.0 E	5.9	2.5 E	200	150 E	0.4 U	0.12 J	0.4 U
Perfluorobutanoic acid (PFBA)	100	NA	3.8 J	3.8 JL	NA	4.9	NA	4.7	NA	2.9 J	NA	4.2 U	NA
Perfluoropentanoic acid (PFPeA)	100	NA	3.7	3.5 JL	NA	2.9	NA	3.5	NA	0.58 J	NA	1.7 U	NA
Perfluorohexanoic acid (PFHxA)	100	NA	3 JH	3.2 JL	NA	2.6 JH	NA	2.8 JH	NA	1.6 U	NA	1.7 U	NA
Perfluoroheptanoic acid (PFHpA)	100	2.0 U	3 B	2.9 BJL	1.62 J	1.8 JH	1.81 J	2 JH	2.0 U	1.6 U	2.0 U	1.7 U	2.54
Perfluorooctanoic acid (PFOA)	10	2.0 U	5.5	5.5 JL	6.28	7.9	8.48	7.5	2.0 U	1.6 U	2.0 U	1.7 U	8.59
Perfluorononanoic acid (PFNA)	100	2.0 U	2.8	2.8 JL	2.0 U	0.62 J	0.69 J	0.6 J	2.0 U	1.6 U	2.0 U	1.7 U	1.52 J
Perfluorodecanoic acid (PFDA)	100	NA	0.94 J	0.97 JL	NA	1.6 U	NA	1.7 U	NA	1.6 U	NA	1.7 U	NA
Perfluoroundecanoic acid (PFUnA)	100	NA	0.42 J	0.55 JL	NA	1.6 U	NA	1.7 U	NA	1.6 U	NA	1.7 U	NA
Perfluorododecanoic acid (PFDoA)	100	NA	0.43 J	1.8 UJL	NA	1.6 U	NA	1.7 U	NA	1.6 U	NA	1.7 U	NA
Perfluorotridecanoic acid (PFTriA)	100	NA	1.7 U	1.8 UJL	NA	1.6 U	NA	1.7 U	NA	1.6 U	NA	1.7 U	NA
Perfluorotetradecanoic acid (PFTeA)	100	NA	1.7 U	1.8 UJL	NA	1.6 U	NA	1.7 U	NA	1.6 U	NA	1.7 U	NA
Perfluorobutanesulfonic acid (PFBS)	100	2.0 U	1.7 U	0.33 UJL	2.57	2.3	2.5	2.2	2.0 U	1.6 U	2.0 U	1.7 U	1.75 J
Perfluorohexanesulfonic acid (PFHxS)	100	2.0 U	1.7 U	1.8 UJL	2.63	3.1 JH	3.51	3.3 B	2.0 U	1.6 U	0.9 J	1.7 U	3.65
Perfluoroheptanesulfonic Acid (PFHpS)	100	NA	1.7 U	0.21 UJL	NA	0.39 J	NA	0.29 J	NA	1.6 U	NA	1.7 U	NA
Perfluorooctanesulfonic acid (PFOS)	10	2.0 U	1.2 J	1.2 UJL	2.73	9.1	7.26	6.3	2.0 U	1.6 U	2.0 U	1.7 U	7.43
Perfluorodecanesulfonic acid (PFDS)	100	NA	1.7 U	1.8 UJL	NA	1.6 U	NA	1.7 U	NA	1.6 U	NA	1.7 U	NA
Perfluorooctanesulfonamide (PFOSA)	100	NA	1.7 U	1.8 UJL	NA	1.6 U	NA	1.7 U	NA	1.6 U	NA	1.7 U	NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	100	NA	4.3 U	4.4 UJL	NA	4.1 U	NA	4.3 U	NA	4.1 U	NA	4.2 U	NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	100	NA	4.3 U	4.4 UJL	NA	4.1 U	NA	4.3 U	NA	4.1 U	NA	4.2 U	NA
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	100	NA	1.6 J	1.4 UJL	NA	4.1 U	NA	4.3 U	NA	4.1 U	NA	4.2 U	NA
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	100	NA	1.7 UJ	1.8 UJL	NA	1.6 U	NA	1.7 U	NA	1.6 U	NA	1.7 U	NA
Total PFAS (including PFOA and PFOS)	500	0.0	28.1	23.2	15.8	35.6	24.25	31.0	0.0	3.5	0.9	0.0	25.48

Notes
*NYSDEC Part 375 Remedial Program, maximum contaminant level for 1,4-dioxane in drinking water, established August 2020
*NYSDEC Part 375 Remedial Program, MCL for PFOA and PFOS and PFAS screening levels, established January 2021
- Concentration exceeds Criteria
U - Compound was not detected at the indicated concentration
J - Reported concentration is estimated
JL - Reported concentration is estimated with a low bias
I - Value is EMPC (estimated maximum possible concentration)
µg/L - Micrograms per Liter
ng/L - Nanograms/Liter
-- No Guidance Value
Unless otherwise noted, sample results are in ng/L
NA - Not Analyzed
B - Compound was found in the blank and sample
JH - Reported concentration is estimated biased high
E - Results exceeded the calibration range

Table 4-5.
Summary of PFAS and 1, 4- Dioxane Town of Vestal Municipal Well Sampling Results
Periodic Review Report 2021
Vestal Water Supply Site
Site Number 7-04-009A

Sample ID Sampling Date Units	NY State Established Criteria*	Well 1-2A 6/21/2017	Well 1-2A 10/10/2019	WELL 1-2A POST 10/10/2019	Well 1-2A 4/9/2021	Well 1-3 6/21/2017	Well 1-3 10/10/2019	Well 1-3 POST 10/10/2019	DUP-1 10/10/2019	Well 1-3 4/9/2021
1,4 Dioxane (µg/L)	1.0	0.39 J	0.70	0.72	0.63	0.4 U	0.20 U	0.20 U	0.20 U	0.19 U
Perfluorobutanoic acid (PFBA)	100	NA	NA	NA	4.3 U	NA	NA	NA	NA	1.3 J
Perfluoropentanoic acid (PFPeA)	100	NA	NA	NA	1.7 UJ	NA	NA	NA	NA	1.9 J
Perfluorohexanoic acid (PFHxA)	100	NA	NA	NA	1.7 U	NA	NA	NA	NA	1.2 J
Perfluoroheptanoic acid (PFHpA)	100	2.00 U	2.00 U	2.00 U	1.7 U	5.29	0.89 J	0.83 J	0.85 J	1.7 J
Perfluorooctanoic acid (PFOA)	10	2.00 U	2.00 U	2.00 U	1.7 U	4.79	1.43 J	1.18 J	1.33 J	1.7 U
Perfluorononanoic acid (PFNA)	100	2.00 U	2.00 U	2.00 U	1.7 U	4.8	0.78 J	2.00 U	2.00 U	0.75 J
Perfluorodecanoic acid (PFDA)	100	NA	NA	NA	1.7 U	NA	NA	NA	NA	1.7 U
Perfluoroundecanoic acid (PFUnA)	100	NA	NA	NA	1.7 U	NA	NA	NA	NA	1.7 U
Perfluorododecanoic acid (PFDoA)	100	NA	NA	NA	1.7 U	NA	NA	NA	NA	1.7 U
Perfluorotridecanoic acid (PFTriA)	100	NA	NA	NA	1.7 U	NA	NA	NA	NA	1.7 U
Perfluorotetradecanoic acid (PFTeA)	100	NA	NA	NA	1.7 U	NA	NA	NA	NA	1.7 U
Perfluorobutanesulfonic acid (PFBS)	100	2.00 U	2.00 U	2.00 U	1.7 U	0.96 J	2.00 U	2.00 U	2.00 U	1.7 U
Perfluorohexanesulfonic acid (PFHxS)	100	2.00 U	2.00 U	2.00 U	1.7 U	3.07	2.00 U	2.00 U	2.00 U	1.7 U
Perfluoroheptanesulfonic Acid (PFHpS)	100	NA	NA	NA	1.7 U	NA	NA	NA	NA	1.7 U
Perfluorooctanesulfonic acid (PFOS)	10	2.00 U	2.00 UJ	2.00 U	1.7 U	7.19	1.84 J	2.00 U	2.00 U	1.7 U
Perfluorodecanesulfonic acid (PFDS)	100	NA	NA	NA	1.7 U	NA	NA	NA	NA	1.7 U
Perfluorooctanesulfonamide (PFOSA)	100	NA	NA	NA	1.7 U	NA	NA	NA	NA	1.7 U
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	100	NA	NA	NA	4.3 U	NA	NA	NA	NA	4.4 U
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	100	NA	NA	NA	4.3 U	NA	NA	NA	NA	4.4 U
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	100	NA	NA	NA	4.3 U	NA	NA	NA	NA	4.4 U
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	100	NA	NA	NA	1.7 U	NA	NA	NA	NA	1.7 U
Total PFOS + PFOA	500	0.0	0.0	0.0	0.0	11.22	8.1	1.18	1.33	6.85

Notes:

*NYSDEC Part 375 Remedial Program, maximum contaminant level for 1,4-dioxane in drinking water, established August 2020

*NYSDEC Part 375 Remedial Program, MCL for PFOA and PFOS and PFAS screening levels, established January 2021

DUP-1 Sampled from Well 1-3 POST

U - Compound was not detected at the indicated concentration

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

µg/L - micrograms per Liter

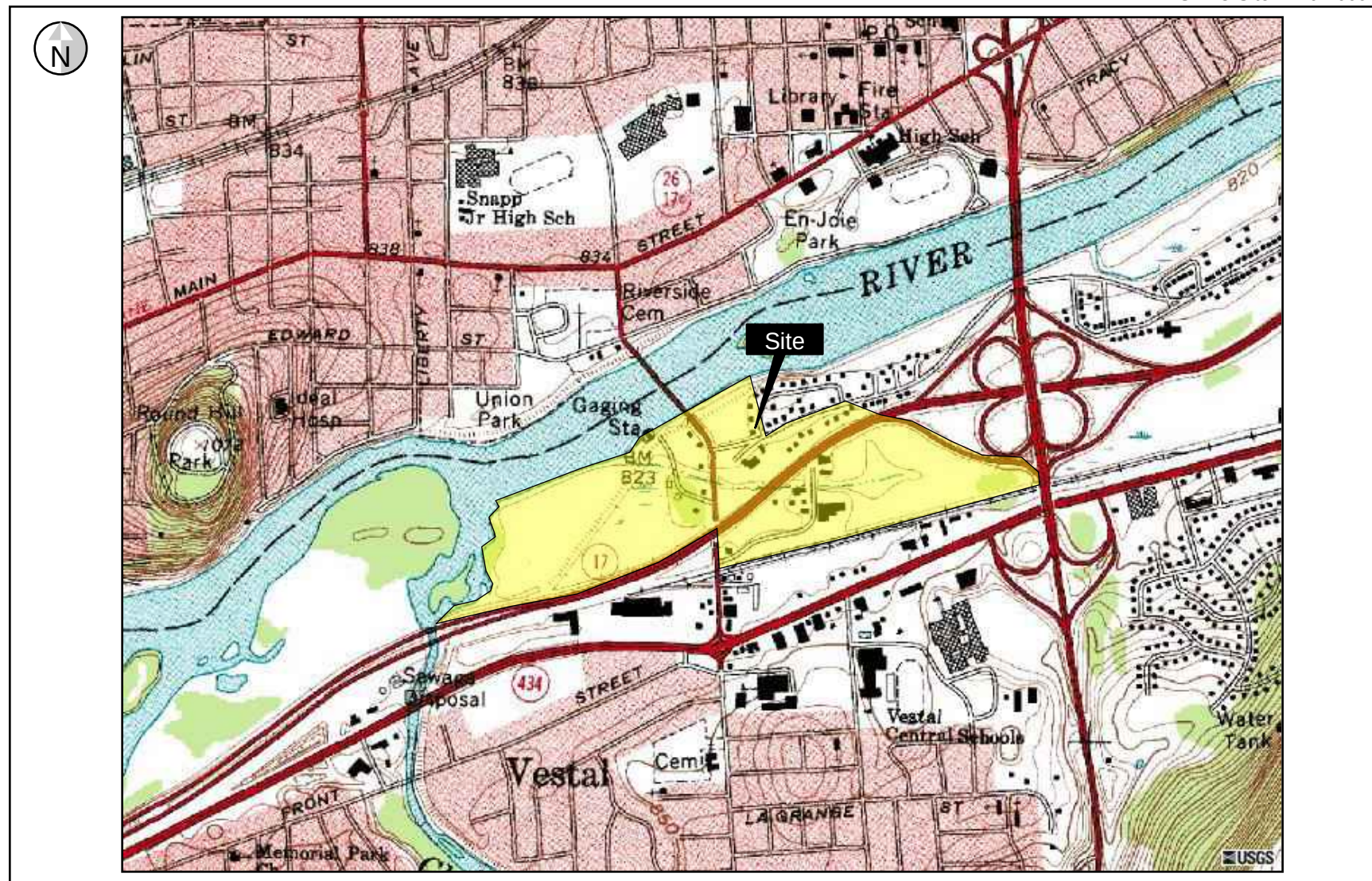
ng/L - nanograms/Liter

-- No Guidance Value

Unless otherwise noted, sample results are in ng/L.

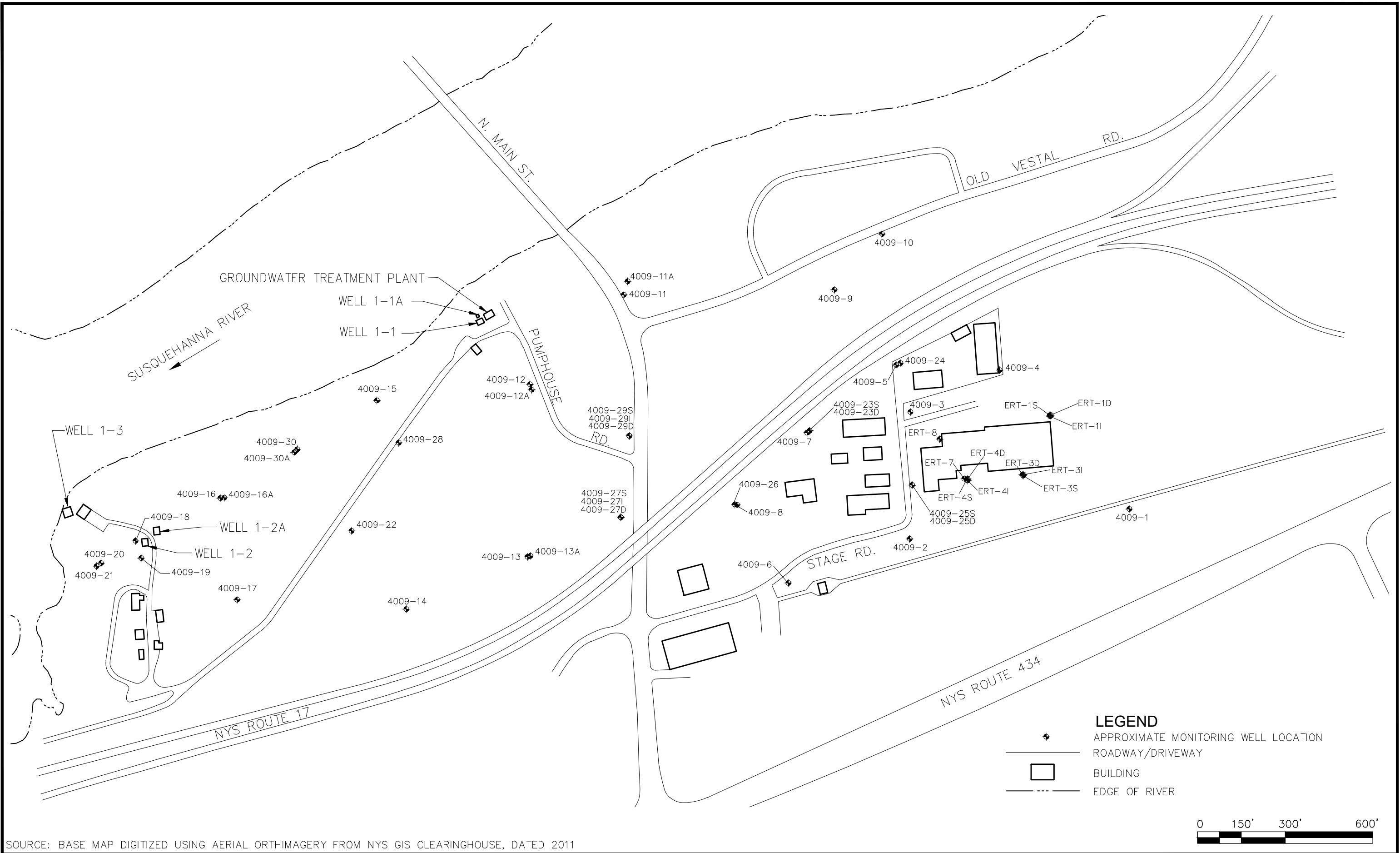
NA- Not analyzed

Figures



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

USER: HAUSMANN FILENAME: G:\ACAD\PROJ\00266401.0000\FIGURES\FIGURE 2-1 MW LOCATION MAP.DWG SAVE DATE: 4/11/2018 6:51 AM PLOT DATE: 4/11/2018 6:52 AM



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



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

SITE MAP & MONITORING WELL LOCATIONS

SCALE: AS SHOWN

JUNE 2020

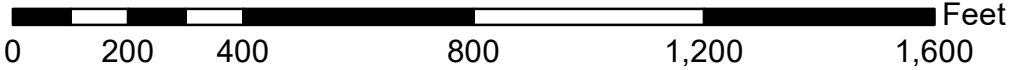
FIGURE 1-2



Legend

- Monitoring Well
- Pumping/Extraction Well
- Supply Well
- Groundwater Contour (ft amsl)

4009-14 Well ID
807.52 Groundwater Elevation (ft amsl)



NYSDEC STANDBY CONTRACT NO. D007618-7 NYSDEC SITE NO. 7-04-009 VESTAL WATER SUPPLY VESTAL, NEW YORK	
DEEP POTENTIOMETRIC SURFACE APRIL 7, 2021	
	FIGURE 4-1



Legend

- Monitoring Well
- Pumping/Extraction Well
- Supply Well

Total VOC Concentration (ug/L)	
	50 - 100 ug/L
	100 - 500 ug/L
	500 - 1,000 ug/L
	1,000 - 2,552 ug/L

ND = Not Detected above the laboratory reporting limit.

0 200 400 800 1,200 1,600 Feet



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

TOTAL VOC CONCENTRATIONS
ALL WELLS
APRIL 2021



FIGURE
4-2



 ARCADIS Design & Consultancy for natural and built assets	NYSDEC STANDBY CONTRACT NO. D007618 NYSDEC SITE NO. 7-04-009 VESTAL WATER SUPPLY VESTAL, NEW YORK
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NYSDEC STANDBY CONTRACT NO. D007618-7
NYSDEC SITE NO. 7-04-009
VESTAL WATER SUPPLY
VESTAL, NEW YORK

GROUNDWATER VOC RESULTS - SHALLOW WELLS

SCALE: AS SHOWN

APRIL 2021

FIGURE 4-3

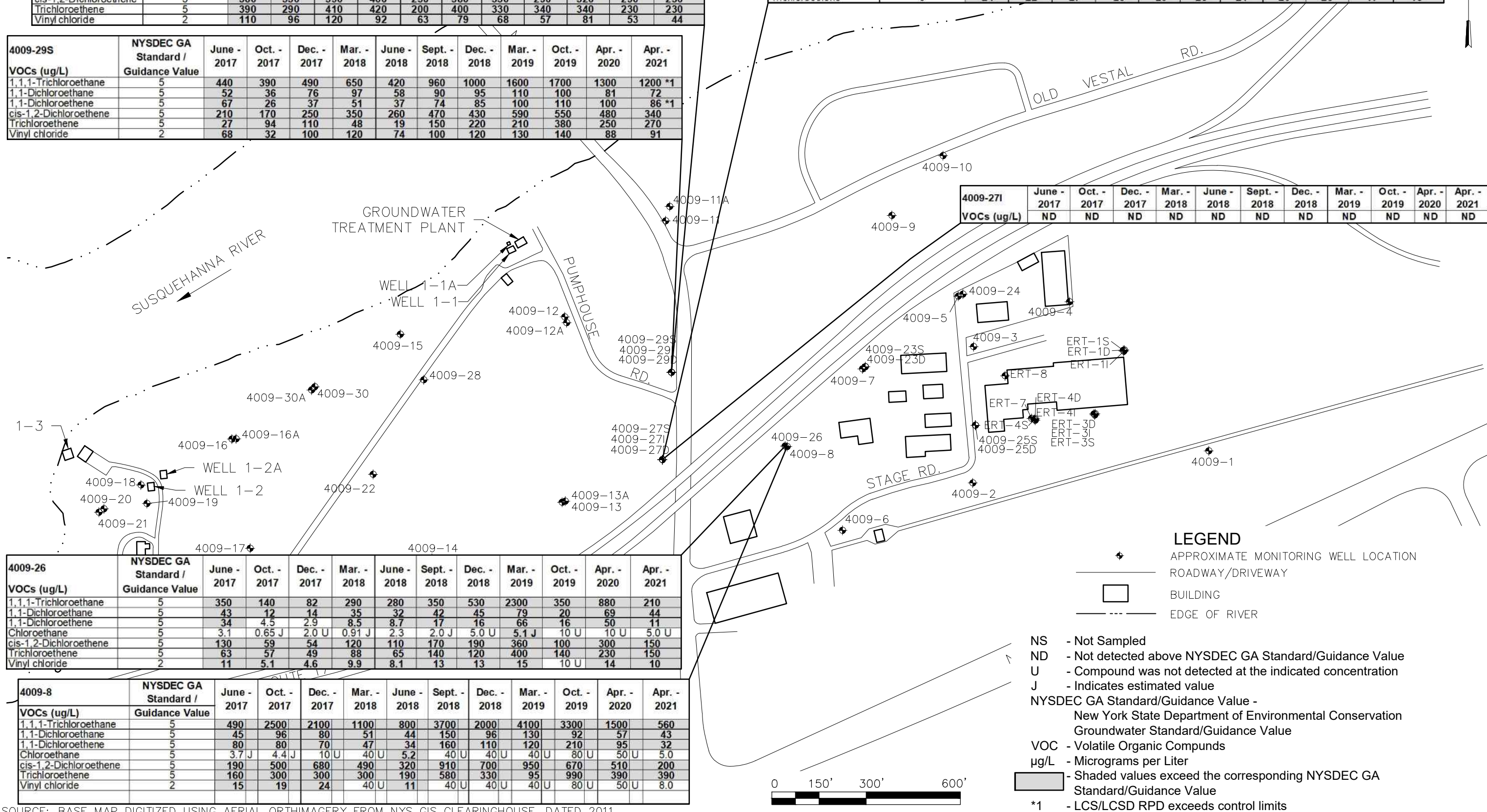
4009-291 VOCs (ug/L)	NYSDEC GA Standard / Guidance Value	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018	Dec. - 2018	Mar. - 2019	Oct. - 2019	Apr. - 2020	Apr. - 2021
1,1,1-Trichloroethane	5	1200	970	1100	1200	620	990	950	850	1200	810	930 *1
1,1-Dichloroethane	5	82	72	92	93	50	84	72	70	91	65	69
1,1-Dichloroethene	5	190	62	71	95	50	82	79	65	86	70	66
cis-1,2-Dichloroethene	5	360	330	390	400	250	380	350	290	320	290	230
Trichloroethene	5	390	290	410	420	200	400	330	340	340	230	230
Vinyl chloride	2	110	96	120	92	63	79	68	57	81	53	44

4009-29S	NYSDEC GA Standard / Guidance Value	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018	Dec. - 2018	Mar. - 2019	Oct. - 2019	Apr. - 2020	Apr. - 2021
VOCs (ug/L)												
1,1,1-Trichloroethane	5	440	390	490	650	420	960	1000	1600	1700	1300	1200 *1
1,1-Dichloroethane	5	52	36	76	97	58	90	95	110	100	81	72
1,1-Dichloroethene	5	67	26	37	51	37	74	85	100	110	100	86 *1
cis-1,2-Dichloroethene	5	210	170	250	350	260	470	430	590	550	480	340
Trichloroethene	5	27	94	110	48	19	150	220	210	380	250	270
Vinyl chloride	2	68	32	100	120	74	100	120	130	140	88	91

4009-26 VOCs (ug/L)	NYSDEC GA Standard / Guidance Value	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018	Dec. - 2018	Mar. - 2019	Oct. - 2019	Apr. - 2020	Apr. - 2021
1,1,1-Trichloroethane	5	350	140	82	290	280	350	530	2300	350	880	210
1,1-Dichloroethane	5	43	12	14	35	32	42	45	79	20	69	44
1,1-Dichloroethene	5	34	4.5	2.9	8.5	8.7	17	16	66	16	50	11
Chloroethane	5	3.1	0.65 J	2.0 U	0.91 J	2.3	2.0 J	5.0 U	5.1 J	10 U	10 U	5.0 U
cis-1,2-Dichloroethene	5	130	59	54	120	110	170	190	360	100	300	150
Trichloroethene	5	63	57	49	88	65	140	120	400	140	230	150
Vinyl chloride	2	11	5.1	4.6	9.9	8.1	13	13	15	10 U	14	10

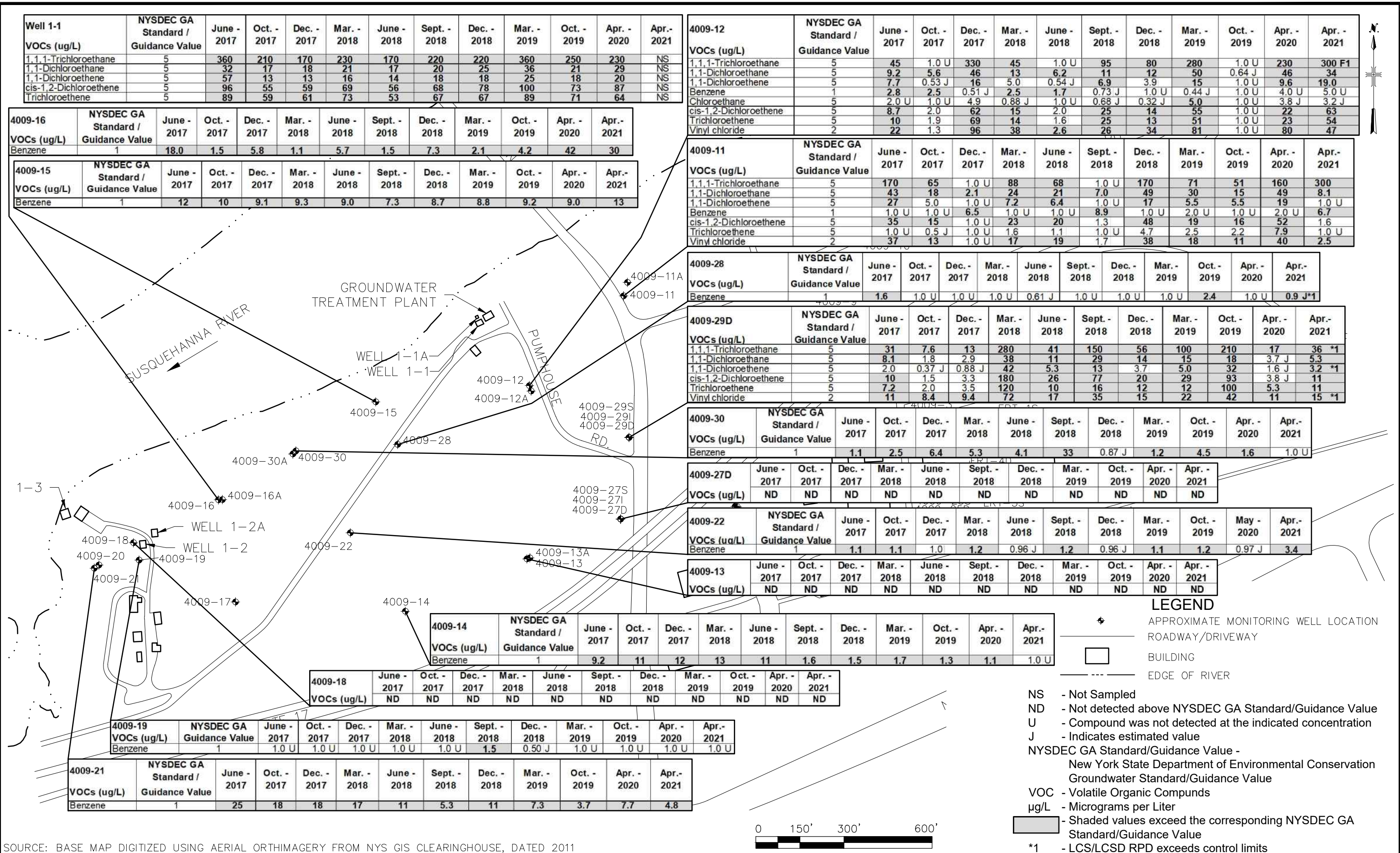
4009-8	NYSDEC GA Standard /	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018	Dec. - 2018	Mar. - 2019	Oct. - 2019	Apr. - 2020	Apr. - 2021
VOCs (ug/L)	Guidance Value											
1,1,1-Trichloroethane	5	490	2500	2100	1100	800	3700	2000	4100	3300	1500	560
1,1-Dichloroethane	5	45	96	80	51	44	150	96	130	92	57	43
1,1-Dichloroethene	5	80	80	70	47	34	160	110	120	210	95	32
Chloroethane	5	3.7 J	4.4 J	10 U	40 U	5.2	40 U	40 U	40 U	80 U	50 U	5.0
cis-1, 2-Dichloroethene	5	190	500	680	490	320	910	700	950	670	510	200
Trichloroethene	5	160	300	300	300	190	580	330	95	990	390	390
Vinyl chloride	2	15	19	24	40 U	11	40 U	40 U	40 U	80 U	50 U	8.0

4009-27S VOCs (ug/L)	NYSDEC GA Standard / Guidance Value	June - 2017	Oct. - 2017	Dec. - 2017	Mar. - 2018	June - 2018	Sept. - 2018	Dec. - 2018	Mar. - 2019	Oct. - 2019	Apr. - 2020	Apr. - 2021
1,1,1-Trichloroethane	5	46	53	53	52	43	47	43	52	60	54	73 *1
1,1-Dichloroethene	5	9.1	4.8	4.8	4.4	4.1	4.5	4.2	4.1	4.8	5.5	2.8
cis-1,2-Dichloroethene	5	17	20	22	21	18	21	18	19	21	19	17
Trichloroethene	5	24	22	27	26	20	25	21	20	20	17	15

[illegible]

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

CITY: SYRACUSE NY DIV/GROUP: ENV/CAD DE: E. KRAHMER PIC: PM: TM: TR: LVR/Option="OFF"=REF- C:\Users\krahmer\OneDrive - ARCADIS\BIM 360 Docs\Temp\Delete\Veal\Figure 4-5 VOC DEEP 2017-2021.dwg LAYOUT: BLANK PAGES: 24 OF 24 PLOTTED: 8/13/2021 10:05 AM BY: KRAHMER, ERIC



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

Figure 4-6
Vestal Water Supply Site
Site No. 7-04-009A
VOC Concentrations in Monitoring Well 4009-8

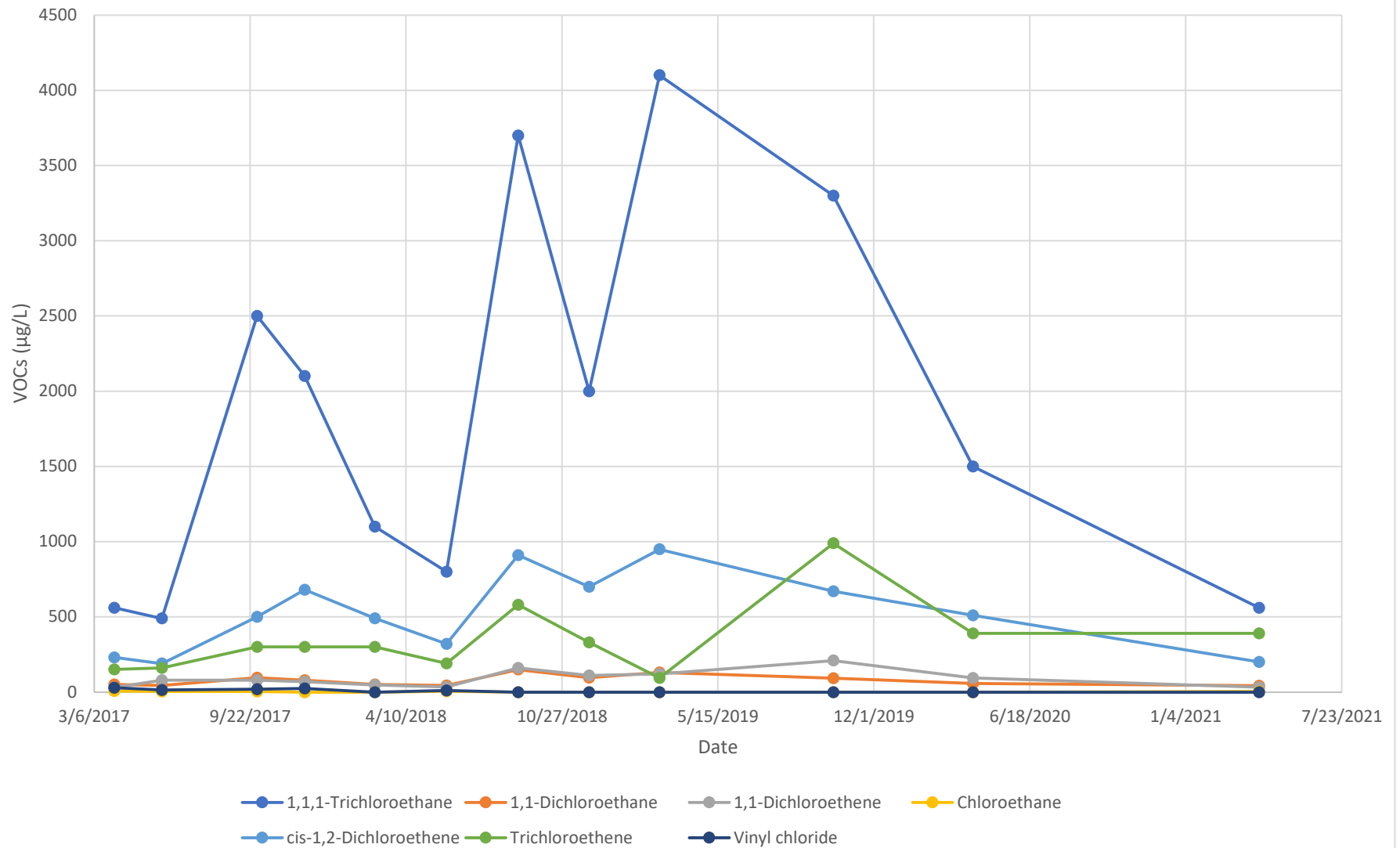


Figure 4-7
Vestal Water Supply Site
Site No. 7-04-009A
VOC Concentrations in Monitoring Well 4009-26

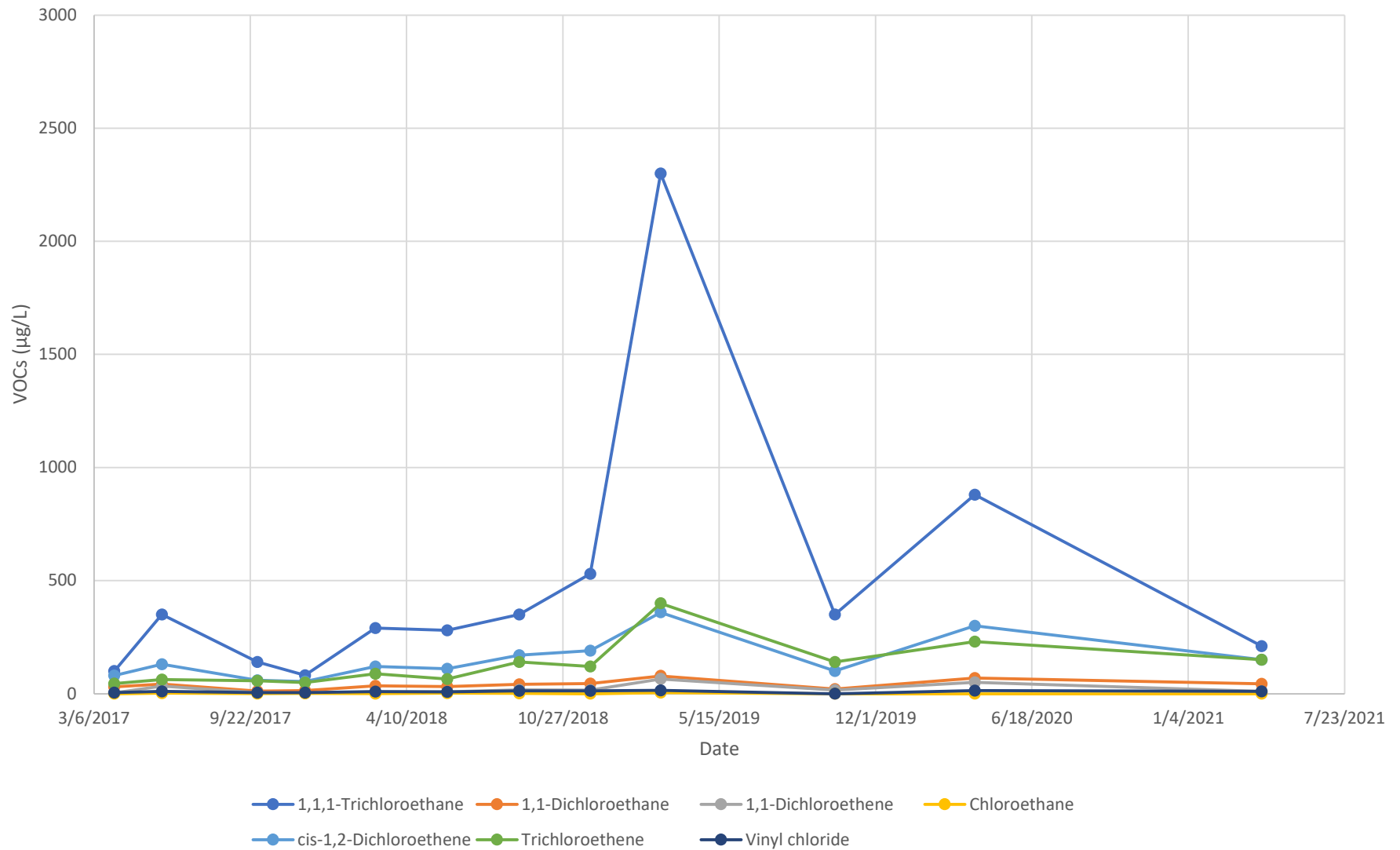
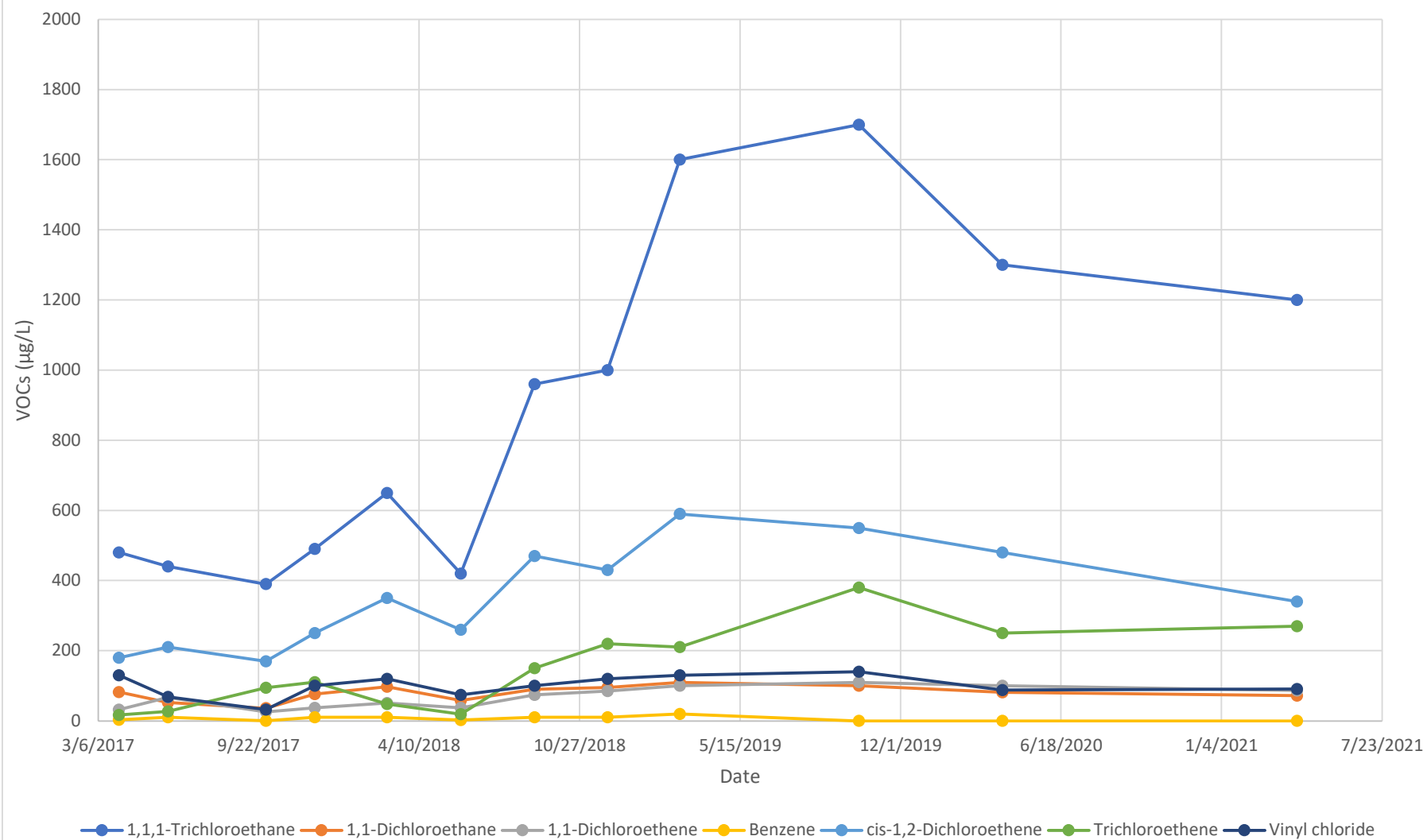
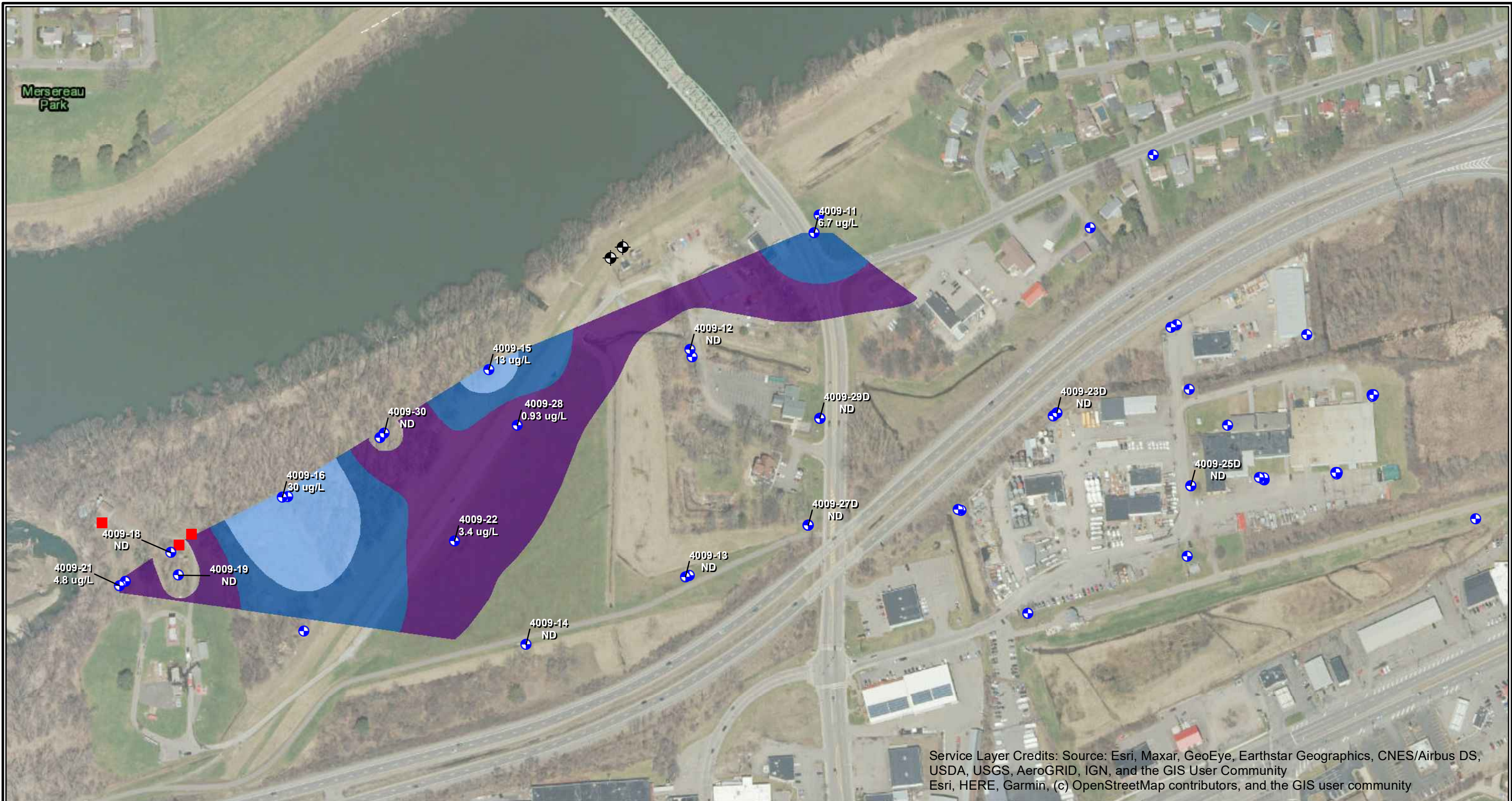


Figure 4-8
 Vestal Water Supply Site
 Site No. 7-04-009A
 VOC Concentrations in Monitoring Well 4009-29S



Project: AY000376.0002
City: Clifton Park
File Location: T:\ENV\NYSDEC\CliftonPark\DeepBenzene.mxd
Last saved date: July 02, 2021 11:35 AM



Legend

- Monitoring Well
- Pumping/Extraction Well
- Supply Well

Benzene Concentration (ug/L)	
1.0 - 5.0 ug/L	
5.0 - 10 ug/L	
10 - 30 ug/L	

ND = Not Detected above the laboratory reporting limit.

0 200 400 800 1,200 1,600 Feet



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

**BENZENE CONCENTRATIONS
IN DEEP WELLS
APRIL 2021**

 **ARCADIS**

FIGURE
4-9

Appendix A

IC/EC Certification Form



Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form



Site No. **704009A** **Site Details** **Box 1**

Site Name Vestal Water Supply (Site 1-1)

Site Address: 200 STAGE ROAD Zip Code: 13850
City/Town: Vestal
County: Broome
Site Acreage: 225.0

Reporting Period: June 1, 2017 to June 30, 2021

- | | YES | NO |
|--|-------------------------------------|-------------------------------------|
| 1. Is the information above correct? | ☒ | ☐ |
| If NO, include handwritten above or on a separate sheet. | | |
| 2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period? | ☐ | ☒ |
| 3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))? | ☐ | ☒ |
| 4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period? | ☐ | ☒ |
| If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form. | | |
| 5. Is the site currently undergoing development? | ☐ | ☒ |

- | | Box 2 | |
|---|-------------------------------------|-------------------------------------|
| | YES | NO |
| 6. Is the current site use consistent with the use(s) listed below? | ☒ | ☐ |
| 7. Are all ICs/ECs in place and functioning as designed? | ☐ | ☒ |

**IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

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Clifton Park
New York 12065
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