

**PERIODIC REVIEW REPORT (PRR)**

**Former Norton/Nashua Tape Products Facility  
2600 Seventh Avenue  
Watervliet, New York**

**NYSDEC Site Identification No. 401062; Order on Consent Index  
No. CO: 4-20001205-3375 (Amended on January 10, 2019)**

February 15, 2022

Prepared for:  
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## CERTIFICATION

"For each institutional or engineering control identified for the site (Former Norton/Nashua Tape Products Facility, located at 2600 Seventh Avenue, Watervliet, New York), I certify that all of the following statements are true:

- The inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;
- The institutional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;
- Nothing has occurred that would impair the ability of the control to protect the public health and environment;
- Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;
- Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;
- If a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for their intended purpose under the document;
- Use of the site is compliant with the Environmental Easement;
- The engineering control systems are performing as designed and are effective;
- To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program and generally accepted engineering practices; and
- The information presented in this report is accurate and complete.

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, Ravi Kumar Korlipara, of Korlipara Engineering (150 Broadhollow Road, Melville, NY), am certifying as Saint-Gobain's Designated Site Representative for the site."

070038  
NYS Professional Engineer #

2/8/2022  
Date

R. Kumar  
Signature



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**February 2022**

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## LIST OF ACRONYMS

List of Abbreviations/Acronyms used in this document

AOC	Area of Concern
cis-1,2-DCE	cis-1,2-Dichloroethylene
CMO	Corrective Measures Objectives
COC	Compounds of Concern
1,1-DCE	1,1-Dichloroethylene
DOH	Department of Health
EB	Enhanced Bioremediation
EC	Engineering Controls
EFR	Enhanced Fluid Recovery
FER	Final Engineering Report
FES	Forensic Environmental Services, Inc.
HASP	Health and Safety Plan
IC	Institutional Control
ICM	Interim Corrective Measures
ISCO	In-Situ Chemical Oxidation
LEL	Lower Explosive Limit
LNAPL	Light Non-Aqueous Liquid
MFR	Modified Fenton's Reagent
MNA	Monitored Natural Attenuation
mg/L	Milligrams per liter
ng/L	nanograms per liter
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
ORP	Oxidation Reduction Potential
PAH	Polycyclic Aromatic Hydrocarbon
PCE	Tetrachloroethylene
PFAS	Perfluoroalkyl/polyfluoroalkyl substance
PID	Photoionization Detector
ppbv	Parts per Billion by Volume
ppmv	Parts per Million by Volume
PRR	Periodic Review Report
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RAO	Remedial Action Objective
SGC	Saint-Gobain Corporation
SCO	Soil Cleanup Objectives
TCE	Trichloroethylene
TICs	Tentatively Identified Compounds
µg/m³	Micrograms per cubic meter
µg/L	Micrograms per liter
µg/kg	Micrograms per kilogram
VOC	Volatile Organic Compound

## EXECUTIVE SUMMARY

Saint-Gobain Corporation (SGC) entered into an Order on Consent with the New York State Department of Environmental Conservation (NYSDEC) in June 2002 (NYSDEC Order on Consent Index No. CO: 4-20001205-3375, as amended on January 10, 2019), to investigate and remediate the Former Norton/Nashua Tape Products Facility located at 2600 Seventh Avenue in the Town of Watervliet, Albany County, New York (NYSDEC Site Identification No. 401062; USEPA identification number of NYD0668299599). The site is zoned for industrial and commercial purposes and is currently used for: 1) the warehousing of various commercial materials; 2) vehicle maintenance and parking (Durham School Services); and 3) office space.

In accordance with the August 2019 *Site Management Plan (SMP)* and August 2019 *Final Engineering Report (FER)*, which were approved by the New York State Department of Environmental Conservation (NYSDEC) on November 5, 2019 and June 23, 2020, respectively, Forensic Environmental Services, Inc. (FES), on behalf of SGC, submits this initial *Periodic Review Report (PRR)* for ongoing project activities at the site. The purpose of this *PRR* is to summarize and evaluate the remedies implemented at the site in accordance with the May 25, 2017 *Statement of Basis* and the August 2019 *SMP*. A brief description of the remedial and associated sampling activities conducted at the site through December 2021 is presented herein. Additional details on all remedial and associated sampling activities conducted at the site can be found in the *SMP* and the *FER*, as well as in the *Quarterly Progress Reports* previously submitted to the NYSDEC. Site Location, Generalized Area, and Site Layout maps are presented in Figures 1-1 through 1-3, respectively.

The principal Compound of Concern (COC) in soil and groundwater beneath the site is toluene, which is associated with the Former Tank Farm and Former Solvent Line Areas of Concern (AOCs) (see Figure 1-3). Based on the investigation and Interim Corrective Measures (ICM) previously conducted at the site, the final corrective measures selected by the NYSDEC in the May 25, 2017 *Statement of Basis* include: 1) maintenance of a site cap; 2) In-Situ Chemical Oxidation (ISCO) in conjunction with Enhanced Fluid Recovery (EFR); and 3) enhanced bioremediation (EB) via nutrient supplementation. Ongoing remedial and associated groundwater and vapor monitoring activities at the site are being conducted in accordance with the approved *SMP* and *FER*.

Remedial activities conducted and/or pilot tested at the site to date include: 1) removal of standing water and visible sediment from certain on-site storm sewer manholes (June 2009); 2) EB via oxygen, ozone, and peroxide delivery (2009 and 2010); 3) soil excavation (source removal) activities (November 2010 - March 2011); 4) ISCO injection activities (June 2009 through June 2021); 5) EB via nutrient supplementation (2013 - 2021); 6) EFR activities (July 2011 to December 2021); and 7) Monitored Natural Attenuation (MNA) in the off-site AOC. In addition, an Environmental Easement was recorded in March 2019. A comprehensive summary of the remedial activities conducted at the site through 2018 was presented in the *SMP* and *FER* and activities from 2019 through 2021 were presented in *Quarterly Progress Reports*.

Currently, ISCO injection activities at the site are being conducted on an annual basis with the most recent event conducted in June 2021. EFR activities are conducted twice per year and were most recently performed in November and December 2021. EB (nutrient dosing) activities were performed in April, October, November, and December 2021. MNA sampling is also being conducted to monitor groundwater conditions at downgradient on-site and off-site sampling

locations. Recent groundwater sampling activities conducted at the site included: April 2021 (pre-ISCO and semi-annual event); July 2021 (post-ISCO and supplemental perfluoroalkyl/polyfluoroalkyl substance (PFAS) sampling event); and October 2021 (post-ISCO and expanded annual event). In addition, the asphalt cap (engineering control) north of Building #61 (within the Environmental Easement area) was replaced during the week of November 1, 2021 (see Figure 3-2 and Appendix A).

Sampling activities conducted at the site to date have demonstrated that the dissolved-phase toluene plume has decreased in overall aerial extent and magnitude in response to site remedial activities. Institutional Controls (ICs) and Engineering Controls (ECs) specified in the Environmental Easement and SMP (approved by the NYSDEC on November 5, 2019) are functioning as designed and are protective of human health and the environment. Remedial activities, continued groundwater monitoring, and reporting activities planned for 2022 will be conducted in accordance with the NYSDEC-approved *SMP*.

## SECTION 1.0 SITE OVERVIEW

### **1.1 Site Location**

The site is located in the County of Albany, New York at 2600 Seventh Avenue and is identified as Section 32.8 Block 3 and Lot 1.1 on the Town of Colonie Tax Map #32.07. The site is situated on an approximately 22-acre area and is bounded by the Delaware and Hudson Railroad to the north, residential properties to the east and south, and other commercial/industrial facilities to the west. The boundaries of the site are more fully described in the Metes and Bounds site description presented in the August 2019 *SMP* (see Appendix A - Environmental Easement). Site Location, Generalized Area, and Site Layout maps are presented in Figures 1-1 through 1-3, respectively.

### **1.2 Nature and Extent of Contamination**

Based on the site investigation and remedial activities conducted by FES to date, the May 2017 NYSDEC *Statement of Basis* included the following COCs for the site: toluene, heptane, polycyclic aromatic hydrocarbons (PAH's), and tetrachloroethylene (PCE). Additional details on historical sampling activities were presented in the 2019 *SMP* and *FER*.

#### **Soil**

During site investigation and remedial activities conducted by FES from 2003 through 2012, over 200 soil borings were installed with over 200 soil samples collected and submitted for laboratory analysis. Based on field screening and analytical results obtained from these soil investigations, the principal COC at the site is toluene. Toluene impact at the site is greatest from the "capillary zone" just above the water table (approximate depth eight to ten feet) to four to five feet below the water table (total depth approximately 15 feet). Evidence of shallow soil impact (i.e., soils above the water table and photoionization detector (PID) readings greater than 100 parts per million by volume [ppmv]) was limited to selected borings: 1) south and east of the former tank farm; 2) immediately adjacent to, and east of, the former Solvent Lines; 3) near storm sewer lines east of the North Cut-Out in Building #61; and 4) west and north of the former East Cut-Out in Building #58. In comparison, deeper soil impact (i.e., soils below the water table and PID readings greater than 100 ppmv) was found in borings: 1) throughout the former tank farm area; 2) west and east of the former Solvent Lines; 3) across the northern half of Building #58; and 4) in the northwest corner of Building #59. Site maps depicting PID readings and laboratory analytical results are presented in Figures 2-1 and 2-2.

Tables 2-1 and 2-2 and Figure 2-2 summarize the results of all on-site soil samples that exceed the Commercial Use Soil Cleanup Objectives (SCO)s at the site after completion of remedial actions through 2012. Toluene was the only VOC to exceed the SCO in on-site soil samples (see Table 2-1 and Figure 2-20). Specifically, toluene exceeds the NYSDEC Restricted Use Commercial SCO in a total of seven soil samples at concentrations ranging from 740,000 micrograms per kilogram ( $\mu\text{g}/\text{kg}$ ) (SB-102, 9 to 10 feet) to 14,000,000  $\mu\text{g}/\text{kg}$  (MP-27, 11 to 12 feet). It should be noted that soil boring SB-102 was not included in the Environmental Easement area (see Figure 2-2). Although the toluene concentration in soil sample SB-102, 9 to 10 feet

(740,000 µg/kg) exceeded the applicable SCO, this was a saturated soil sample collected below the water table and not indicative of vadose zone conditions (Note: the toluene concentration from the vadose zone in soil sample SB-102, 4 to 5 feet was 4 J µg/kg). Furthermore, groundwater sampling results from 2004 to 2021 indicate that the dissolved-phase toluene plume has contracted significantly as a result of active remedial activities (ISCO, EFR, and enhanced bioremediation), as well as natural attenuation processes. Based on these data, the Environmental Easement, which includes a 50-foot buffer around the lateral extent of the toluene plume (see Figure 1-3), is sufficient to prevent future exposure to remaining on-site soil and groundwater contamination.

The most heavily impacted soils proximal to the former tank farm were excavated and removed from the site in 2011; however, additional soil excavation was not possible due to the presence of the existing warehouse buildings, as well as the subsurface water and storm sewer utility lines immediately north of Building #61. ISCO, EFR, and EB remedial activities were conducted in these areas through December 2021 and are planned for 2022 in order to further reduce concentrations of toluene in soil and groundwater.

### **Groundwater**

The current monitoring well array consists of 45 on-site and 11 off-site shallow (overburden) groundwater monitoring wells/small diameter monitoring points (see Figures 1-3, 2-3, and 2-4). Based on historical sampling activities, three areas of the site have exhibited elevated toluene concentrations. These include: 1) Building #58 proximal to monitoring well MP-37; 2) along the north wall of Building #61 (proximal to monitoring wells MP-24 through MP-27); and 3) proximal to monitoring well MW-27 (i.e., northeast corner of the 2011 soil excavation area) (Note: the toluene concentration in MW-27 in October 2021 decreased to 80 micrograms per liter [µg/L]).

Light Non-Aqueous Liquid (LNAPL) was previously detected in certain monitoring wells in the northern portion of the site proximal to the former tank farm area (MW-14, MW-28, and MP-25 through MP-27) at apparent product thicknesses ranging from 0.02 feet to 0.55 feet, as well as in MP-37 in October 2014 (0.16 feet to 0.20 feet) (see Table 1-1). In addition, transient detections of LNAPL were also identified in monitoring wells MP-25, MP-26, MP-27, and/or MW-28 during ISCO activities in 2017 and 2018. LNAPL was last detected at the site during the May 2018 ISCO event in monitoring well MW-28 at an estimated thickness of 0.10 to 0.20 feet. LNAPL gauging data are presented in Table 1-1.

The maximum toluene concentrations in groundwater are present along the interior and exterior portions of the northern wall of Building #61 with a maximum concentration of 350,000 µg/L observed in monitoring well MW-28 in April 2019. Figures 2-5 and 2-6 depict the historical maximum (2004) and current (October 2021) toluene distributions in groundwater, respectively. Based on current groundwater sampling data, the spatial distribution of the toluene plume, above the NYSDEC standard of 5 µg/L, remains defined and ongoing monitoring is being conducted in accordance with the approved SMP.

### **1.3 Remedial History**

Comprehensive summaries of all remedial activities conducted at the site through 2018 were presented in the 2019 *SMP* and *FER*. Figures depicting the EB areas, EFR locations, and the

most recent (2021) ISCO and EB/EFR areas are presented in Figures 1-4 through 1-8. A brief (chronological) summary of the remedial activities conducted at the site is presented below.

June 2009	Standing water and visible sediment were removed from all accessible on-site storm sewer manholes via vacuum truck.
	ISCO injection activities were conducted between the northern wall of Building #61 and the former tank farm area. Approximately 8,000 gallons of ISCO reagents (catalyst [1,600 gallons], sodium persulfate [3,200 gallons], and hydrogen peroxide [3,200 gallons]) were injected into the subsurface.
	EFR activities were also conducted at monitoring well MP-11.
2009 and 2010	Pilot testing of EB via oxygen, ozone, and peroxide delivery was conducted.
March 2011	Soil excavation (source removal) activities were conducted in the Former Tank Farm Area. A total of 1,413 tons of soil was removed from the site for disposal/treatment.
	Due to the presence of toluene in post-excavation soil sample SW-N-3 at a concentration above the NYSDEC Restricted Use (Commercial) SCO, contingent ISCO treatment measures were initiated. A mixture of activated sodium persulfate and modified Fenton's reagent (MFR; stabilized hydrogen peroxide and chelated iron catalyst) was introduced directly into the open excavation to chemically oxidize toluene in the soil and groundwater immediately beneath, and in the general vicinity of the excavation. Specifically, a total of 4,700 gallons of activated sodium persulfate, 4,700 gallons of stabilized hydrogen peroxide, and 4,700 gallons of chelated iron catalyst were pumped directly into the open excavation from March 8 - 10, 2011.
November 2012	ISCO injection activities were conducted between the northern wall of Building #61 and the former tank farm area and proximal to monitoring well MW-27. Approximately 8,800 gallons of ISCO reagents (catalyst [1,600 gallons], sodium persulfate [3,200 gallons], and hydrogen peroxide [3,200 gallons]) were injected into the subsurface.
February 2016	ISCO pilot testing activities were conducted proximal to monitoring wells MP-37 and MW-27. Approximately 8,800 gallons of ISCO reagents (catalyst [1,540 gallons], sodium persulfate [4,400 gallons], and hydrogen peroxide [2,860 gallons]) were injected into the subsurface during each event.

May 2017	ISCO injection activities were conducted in three areas of the site including: Building #58 proximal to monitoring well MP-37, as well as at interior and exterior locations proximal to the northern wall of Building #61. A total of 17,780 gallons of ISCO reagents (catalyst [3,220 gallons], sodium persulfate [8,820 gallons], and hydrogen peroxide [5,740 gallons]) were injected into the subsurface.
May 2018	ISCO injection activities were conducted in three areas of the site including: Building #58 proximal to monitoring well MP-37, as well as at interior and exterior locations proximal to the northern wall of Building #61. A total of 23,220 gallons of ISCO reagents (catalyst [4,080 gallons], sodium persulfate [11,600 gallons], and hydrogen peroxide [7,540 gallons]) were injected into the subsurface.
June 2019	ISCO injection activities were conducted in three areas of the site including: Building #58 proximal to monitoring well MP-37, as well as at interior and exterior locations proximal to the northern wall of Building #61. A total of 23,245 gallons of ISCO reagents (catalyst [4,075 gallons], sodium persulfate [11,600 gallons], and hydrogen peroxide [7,570 gallons]) were injected into the subsurface.
May/June 2020	ISCO injection activities were conducted in two areas of the site including: Building #58 proximal to monitoring well MP-37 and interior and exterior locations proximal to the northern wall of Building #61 (Note: because toluene concentrations decreased to 11 µg/L, ISCO was not conducted in the vicinity of MW-27). A total of 23,245 gallons of ISCO reagents (catalyst [3,220 gallons], sodium persulfate [9,200 gallons], and hydrogen peroxide [5,980 gallons]) were injected into the subsurface.
June 2021	ISCO injection activities were conducted in two areas of the site including: Building #58 proximal to monitoring well MP-37 and interior and exterior locations proximal to the northern wall of Building #61. A total of 20,000 gallons of ISCO reagents (catalyst [3,500 gallons], sodium persulfate [10,000 gallons], and hydrogen peroxide [6,500 gallons]) were injected into the subsurface.
2011 – 2021	EFR activities conducted at various locations across the northern half of the site. A total of EFR 38 events were conducted at up to 19 monitoring wells with approximately 57,025 gallons of groundwater removed for off-site disposal.
2013 – 2021	EB (well dosing with nitrate and/or phosphate) activities conducted (generally concurrent with EFR activities to enhance the dispersion and distribution of added nutrients).

November 2021

The northern portion of the Environmental Easement area (north of Building #61 to the northern property line was milled (excluding the portion of the 2011 excavation area) and repaved. The newly-paved area measures approximately 55 feet by 275 feet and was repaved with 3 inches of binder and 2 inches of commercial-grade asphalt.

#### **1.4 Remedial Goals and Closure Criteria**

As outlined in the May 2017 *Statement of Basis* and the August 2019 *SMP*, the site is currently zoned for commercial and industrial purposes. Specific Remedial Action Objectives/Standards at the site include: 1) Protection of Public Health Restricted Use Commercial SCOs (6 NYCRR Part 375) for on-site soil; 2) Unrestricted Use SCOs (6 NYCRR Part 375) for soil in the off-site residential areas (i.e., Alden and Craig Streets); 3) NYCRR 703 Ambient Water Quality Standards for on-site and off-site groundwater; and 4) NYSDOH Guidance for Evaluating Soil Vapor Intrusion (October 2006); 5) NYSDEC Technical Guidance for Screening Contaminated Sediments, 1999 for on-site storm and sanitary sewer sediments; and 5) NYSDEC Class C surface water (6 NYCRR Part 703) for on-site storm and sanitary sewer water.

The Corrective Measures Objectives (CMOs)/Remedial Action Objectives (RAOs) for the Site are listed in the May 2017 Final *Statement of Basis* as follows.

#### **Groundwater**

##### **CMOs/RAOs for Public Health Protection**

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of, volatiles from contaminated groundwater.

##### **CMOs/RAOs for Environmental Protection**

- Restore the groundwater aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Remove the source of groundwater or surface water contamination.

#### **Soil**

##### **CMOs/RAOs for Public Health Protection**

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

##### **CMOs/RAOs for Environmental Protection**

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

#### **Soil Vapor**

##### **CMOs/RAOs for Public Health Protection**

- Mitigate impacts to public health resulting from existing, or the

potential for, soil vapor intrusion into buildings at a site.

## 1.5 Significant Changes

Ongoing remedial and associated sampling activities at the site are being conducted in accordance with the remedies selected by the NYSDEC in the May 25, 2017 *Statement of Basis* and the procedures outlined in the August 2019 *SMP*.

While no significant changes were identified with respect to the remedial and/or sampling activities conducted at the site, some minor modifications were made to the November 2020 EFR event. Specifically, EFR was not performed on all wells exhibiting toluene concentrations above 10,000 µg/L (i.e., MP-27 and MP-29) due to logistical and scheduling issues with the disposal subcontractor.

In addition, due to the observed decrease in concentrations in monitoring well MW-27 in October 2020 and April 2021 compared to historical maximums (see Table 4-4 and Figure 2-8), ISCO was not performed in this area during the June 2021 ISCO event (Note: EB activities were conducted). Conversely, because toluene concentrations increased in well MP-29 in 2020 and 2021 (see Table 4-4 and Figure 2-14), additional ISCO injection points were added to encompass/treat this area in June 2021 (see Figure 1-7).

Finally, a review of the data validation reports for Sample Delivery Groups: 1) R1906814 (July 2019 groundwater samples); and 2) R1908888 (September 2019 groundwater samples) indicated that the analytical results for several samples (selected analytes) were rejected by the data validator due to the presence of headspace (air bubbles) in the sample vials. The presence of air bubbles in certain samples can be attributed to residual (unconsumed) ISCO reagents (i.e., hydrogen peroxide, sodium persulfate, and/or chelated iron catalyst) or residual bio-supplementation nutrients (nitrate and phosphate) present in the well at the time of sample collection. Visual effervescence was also noted in selected samples during collection.

In order to eliminate the presence of air bubbles in samples, beginning in August 2020, monitoring wells historically exhibiting elevated toluene concentrations were collected in unpreserved vials. The laboratory was also notified that the samples were unpreserved in order to comply with the reduced holding/extraction times. Based on a review of the 2020 and 2021 validated data packages, the headspace issue has been resolved and no further data rejections for monitoring well samples have been identified.

## SECTION 2.0 REMEDY EVALUATION

An evaluation of current and historical groundwater trends at the site indicates the dissolved-phase toluene plume has decreased in both aerial extent and magnitude over time as a result of EFR, ISCO, and EB activities, as well as intrinsic biological degradation.

While toluene concentrations have been variable in selected monitoring wells in response to remedial activities, as well as seasonal variations in water table elevations, concentrations have been significantly reduced in many locations. Figures 2-5 and 2-6 depict the historical maximum (2004) and current (October 2021) toluene distributions in groundwater, respectively. Plots of toluene concentrations in selected wells over time are presented in Figures 2-7 through 2-16.

A total of 30 EFR events, multiple rounds of ISCO, EB, as well as soil excavation have been conducted proximal to monitoring well MW-27 in the northern portion of the site (see Figures 1-4 through 1-7). Although variable at times and with additional influence associated with ISCO, EFR, and EB activities, toluene concentrations in MW-27 exhibit an overall decreasing trend with a historical low of 2.6 J  $\mu\text{g}/\text{L}$  observed in September 2019 (see Figure 2-8). Although the toluene concentration in MW-27 rebounded in August 2020 (41,000  $\mu\text{g}/\text{L}$ ), the current (October 2021) concentration (80  $\mu\text{g}/\text{L}$ ) is significantly below historical maximums (see Figure 2-8). EB activities will continue to be conducted in the vicinity of MW-27 in accordance with the *SMP*. Furthermore, in the event toluene concentrations increase above 10,000  $\mu\text{g}/\text{L}$ , additional EFR and ISCO activities will be conducted at MW-27, as necessary.

Toluene concentrations in monitoring wells located along the northern wall of Building #61 (MW-28, MP-24 through MP-27, and MP-29) exhibit a higher degree of variability and have persisted above 10,000  $\mu\text{g}/\text{L}$  in several locations (see Figures 2-9 through 2-14). However, monitoring wells MP-24 through MP-27 have exhibited generally decreasing trends since mid- to late-2017 in response to ISCO, EFR, and EB activities. Conversely, toluene concentrations in monitoring well MP-29 have exhibited an increasing trend subsequent to September 2018 (see Figure 2-15). These increasing concentrations in MP-29 are potentially a function of desorption of LNAPL from the soil column following ISCO injection activities. In response to the observed increase in toluene concentrations in MP-29, the ISCO injection area was expanded to encompass the well during the June 2021 event and EFR was conducted in October 2019, December 2020, and November and December 2021. In accordance with the *SMP*, ISCO, EFR, and EB will continue in all areas exhibiting toluene concentrations above 10,000  $\mu\text{g}/\text{L}$  and monitoring well MP-29 will continue to be monitored during these activities.

Due to the observed toluene concentrations in monitoring well MP-39, which is located in the Durham Bus area, in November 2017 (29,000  $\mu\text{g}/\text{L}$ ) and October 2020 (15,000  $\mu\text{g}/\text{L}$ ), EFR events were conducted on this well on February 28, 2018 and December 9, 2020 (see Figure 2-15). The toluene concentration decreased to 4,700  $\mu\text{g}/\text{L}$  in April 2021 and to a historical low of 0.67 J in October 2021. MP-39 is currently sampled on a semi-annual basis. Should groundwater quality monitoring data demonstrate that toluene concentrations exceed 10,000  $\mu\text{g}/\text{L}$  in well MP-39, additional EFR activities will be conducted at this location in accordance with the *SMP*.

With respect to monitoring well MP-37, which is located in the northern portion of Building #58 and immediately west, and at the termination point, of the former solvent lines (see Figure 1-7), multiple rounds of ISCO, a total of 37 EFR events, as well as EB activities have been conducted in the vicinity of MW-37 from December 2011 to December 2021 (see Figure 2-16). In response to these remedial activities, toluene concentrations in MP-37 have decreased from a historical maximum of 190,000 µg/L (October 2011) to a historical low of 7,500 µg/L in July 2020 and exhibit an overall decreasing trend since June 2017 (see Figure 2-16). Per the *SMP*, ISCO, EFR, and EB activities are planned for the MP-37 are in 2022 (see below).

Based on the groundwater sampling data, the spatial distribution of the toluene plume (with concentrations above the NYSDEC standard 5 µg/L), remains defined and additional remedial activities designed to address source areas and hot spots are currently being conducted in accordance with the approved SMP.

Semi-annual groundwater sampling and corrective measures (ISCO, EFR, and EB), and performance monitoring are currently being implemented to monitor groundwater quality on and off-site. Also, an Environmental Easement encompassing a 50-foot buffer zone around the lateral extent of the toluene plume has been established in the northern and central portions of the site (Figure 1-3), to provide sufficient margin of safety to prevent future exposure to remaining on-site soil and groundwater contamination.

## **SECTION 3.0**

### **INSTITUTIONAL/ENGINEERING CONTROL COMPLIANCE REPORT**

In recognition of the fact that soil and groundwater contamination remain at the site, Institutional Controls (ICs) and Engineering Controls (ECs) are required to protect human health and the environment. The March 2019 Environmental Easement and the August 2019 *SMP* outlined the procedures for the implementation and management of all IC/ECs at the site.

#### **3.1      Institutional Controls**

In accordance with the August 2019 *SMP*, the ICs for the site are as follows:

- Allows the use and development of the controlled property for commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- Requires the remedial party to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- Restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
- Requires compliance with the Department approved Site Management Plan.

The fully-executed Environmental Easement was recorded with Albany County on March 14, 2019 and a complete set of documents were included as Attachment A of the 2019 *SMP*.

#### **3.2      Engineering Controls**

Contact with residual contamination at the site is prevented by a cover system placed over the former tank farm area. In addition, the concrete slabs and building foundation elements serve as a cap in interior portions of Building #58, #59, and #61 within the Environmental Easement area (see Figure 3-1). The quality and integrity of the cover system is inspected on an annual basis in accordance with the approved *SMP*. Additional site/cap inspections are conducted during routine site visits for groundwater sampling and/or scheduled remedial activities (ISCO, EFR, EB, etc.).

As noted in the October 2019 Cap System Inspection Form (presented in the January 23, 2020 *Quarterly Project Report on Project Activities*), although no significant breaches of the cap were identified, typical asphalt weathering/cracking and several potholes/depressions were identified within the Environmental Easement area north of Building #61. As such, FES solicited bids to resurface the asphalt parking area north of the building. However, based on conversations and site walkovers with several contractors, it was determined that given the deteriorated condition of the asphalt, the most prudent course of action to ensure the long-term integrity of the cap, was to mill and repave the area with new asphalt (Note: the former excavation area, which was repaved

in 2011 subsequent to the completion of excavation and ISCO activities was not milled, but covered with 2 inches of new asphalt to allow for surface drainage).

Repaving activities within the Environmental Easement were conducted by J. Hunziker Paving, LLC of Valatie, New York during the week of November 1, 2021 (see Figure 3-2). With the exception of the former excavation area previously paved in 2011, which was observed to be in good condition, the remaining asphalt across the area was removed. The repaving process in the area consisted of: 1) installation of crushed stone aggregate (sub-base) material; 2) paving with 3 inches of Type 3 dense binder; and 3) paving with 2 inches of Type 6 commercial top coarse (asphalt). Each layer was compacted after installation to allow for water drainage away from Building #61.

### **3.3 Annual Site Inspection**

On November 9, 2021 a site inspection was conducted to evaluate the condition of the engineering controls (i.e., asphalt and concrete caps) within the designated Environmental Easement (see Figures 3-1 and 3-2). A Cap System Inspection Form including a photographic log is presented in Appendix A.

As stated above in Section 3.2, the entire area within the Environmental Easement north of Building #61 was repaved during the week of November 1, 2021. As such, the asphalt cap in the northern, exterior portion of the site (i.e., proximal to the former tank farm area) was observed to be in excellent condition. Subsequent to the completion of repaving activities, monitoring well vaults (road boxes) for wells MW-25 through MW-28 and MP-23 through MP-25 were replaced by Cascade Remediation Services on December 13, 2021.

The concrete floor inside the active warehouse area in Buildings #58, #59, and #61 (i.e., within the Environmental Easement) was also observed to be in good to excellent condition. Some minor (hairline) cracks were noted in the concrete slab in certain areas; however, no significant cracks or breaches in the concrete cap were identified. Previous ISCO injection points proximal to monitoring well MP-37 and along the northern wall of Building #61 were sealed with concrete.

Based on the November 9, 2021 Cap Inspection, the ECs at the site are functioning as designed and are protective of human health and the environment.

### **3.4 Conclusions and Recommendations**

The next scheduled site visit for routine monitoring will be conducted during the First Quarter 2022. A site walkover and Cap Inspection will be conducted to ensure that the recently-installed monitoring well road boxes are intact and that the asphalt caps are functioning as designed.

Procedures for the inspection of the cover system (see Figure 3-1) are provided in the Monitoring and Sampling Plan included in Section 4.0 of the *SMP* and include: 1) minimum annual site-wide inspections; and 2) site-wide inspections subsequent to severe weather events that may affect the ECs or monitoring wells.

Any future site redevelopment activities will maintain the existing site cover including paved surface parking areas, building slabs and foundation elements, or soil where the upper one foot of exposed surface soil meets the applicable SCOs for commercial use. The site cover will be maintained in a manner that ensures its intended function to prevent exposure to impacted soils. Examples of cover maintenance include: sealing of cracks and patching of potholes.

## **SECTION 4.0** **MONITORING PLAN COMPLIANCE REPORT**

### **4.1 Monitoring Plan Components**

The monitoring plan presented in Section 4.0 of the August 2019 *SMP* describes the approved remedial activities for the site (ISCO, EFR, enhanced bioremediation, MNA, and ICs/ECs), as well as the measures for evaluating the overall performance and effectiveness of the site remedies and includes: 1) post-remediation monitoring and sampling; 2) semi-annual groundwater sampling (including an expanded annual event); 3) sub-slab and indoor air monitoring in conjunction with ISCO activities; and 4) site-wide inspections of the ECs. Post-remediation sampling requirements are presented in the Table 4-1. Detailed sample collection and analytical procedures and protocols are provided in Appendix G (Quality Assurance Project Plan) of the *SMP*.

### **4.2 In-Situ Chemical Oxidation (ISCO) Activities (June 8 - 17, 2021)**

ISCO injection/treatment activities were conducted by ISOTEC of West Windsor, New Jersey from June 8 to 17, 2021 in two areas of the site exhibiting elevated toluene concentrations (see Figure 1-7). These included: 1) Building #58 proximal to monitoring well MP-37; and 2) along the interior and exterior north wall of Building #61 (proximal to monitoring wells MP-24 through MP-27). A total of 20,000 gallons of ISCO reagents were injected into the subsurface during the 8-day injection event at depths ranging from 6 to 15 feet including: 1) 3,500 gallons of catalyst/stabilizer; 6,500 gallons of hydrogen peroxide; and 10,000 gallons of sodium persulfate into 25 borings in the vicinity of target wells (see Table 4-2). ISCO injection locations are presented in Figure 1-7. Additional details on the June 2021 ISCO activities were presented in the *Quarterly Progress Report on Project Activities - April 1 through July 31, 2021* (FES, August 15, 2021).

Field monitoring was conducted throughout ISCO injection activities to: 1) evaluate the progress of the injection; 2) determine the approximate radius of influence around each injection point; and 3) conduct air monitoring in accordance with the site-specific Health and Safety Plan (HASP). Field monitoring parameters included: 1) depth-to-water; 2) monitoring well headspace PID, lower explosive limit (LEL), oxygen, and carbon dioxide; 3) groundwater quality parameters (temperature, conductivity, pH, oxidation reduction potential [ORP]); 4) injected reagents (iron, hydrogen peroxide, and persulfate; and 5) worker breathing zone PID monitoring.

During ISCO injection activities, elevated PID, LEL, and specific conductivity readings were observed at certain monitoring wells within and adjacent to the injection areas. Field data obtained from downgradient monitoring well MP-39, located in the Durham school bus maintenance area, exhibited a slightly elevated PID reading on June 9 (32.0 parts per million [ppm]); however, subsequent PID readings at that location were below baseline readings. Injected reagents including iron, hydrogen peroxide, and persulfate were also detected in monitoring wells within and adjacent to the injection areas. LNAPL was not observed in any monitoring well throughout injection activities.

#### **4.3 Enhanced Fluid Recovery (EFR) Activities (November and December 2021)**

EFR activities were initially scheduled for April 2021; however, when it was discovered that the waste disposal facility (Norlite) would not accept wastes with “any detectable levels” of PFAS, and PFAS were previously detected at the site in 2017 (see Section 4.6.2), the EFR work was postponed until an alternate contractor and disposal facility could be identified. Based on a review of local waste haulers and disposal facilities, Saint-Gobain elected to use Veolia Technical Solutions, LLC (Veolia) of Marlboro, Massachusetts for the EFR events and their facility Middlesex, New Jersey for final disposal of EFR fluids.

EFR activities were conducted in November and December 2021 (see Table 4-3). The delayed start of the EFR work also allowed sufficient time for the ISCO reagents injected in June 2021 to be fully consumed prior to extraction activities. In addition, because monitoring wells with elevated toluene concentrations are also targeted for EFR, and concentrations typically spike subsequent to ISCO as a result of contaminant desorption (see Figures 2-9 through 2-16), conducting the EFR activities after ISCO is also likely maximizing mass removal rates at the site.

The November 2021 EFR activities were conducted on November 10 and 11 and consisted of the following, with the EFR duration and volume of groundwater removed noted in brackets: MP-25 (~1.8 hours; 102 gallons removed); MP-26 (~2.3 hours; 78 gallons removed); MP-27 (~2.3 hours; 25 gallons removed); MP-29 (~3.0 hours; 584 gallons removed); MP-37 (~2.0 hours; 470 gallons removed); and MW-28 (~2.5 hours; 230 gallons removed). EFR extraction times were based on the dissolved-phase toluene concentrations observed in October 2021, as well as observed groundwater recovery rates. In addition, EFR wells were rotated to avoid potentially inducing movement of the toluene plume to less impacted areas of the site.

A second EFR event (also based on the October 2021 sampling results) was conducted at the site on December 8 and 9, 2021 and included the same extraction array as the November event: MP-25, MP-26, MP-27, MP-29, MP-37, MP-39, and MW-28 (Figure 1-8).

EFR durations and volumes removed during the December 2021 EFR event are as follows: MP-25 (~2.8 hours; 364 gallons removed); MP-26 (~2.8 hours; 527 gallons removed); MP-27 (~2.8 hours; 234 gallons removed); MP-29 (~2.8 hours; 822 gallons removed); MP-37 (~2.0 hours; 337 gallons removed); and MW-28 (~2.8 hours; 413 gallons removed). Additional details on the November and December 2021 EFR activities including field monitoring, estimated mass removal rates, and waste manifest documentation were presented in the *Quarterly Progress Report on Project Activities - October 1 through December 31, 2021* (FES, January 27, 2022).

#### **4.4 Enhanced Bioremediation (EB) Activities**

Field sampling of nitrate and phosphate levels and associated nutrient dosing activities were conducted in April 2021 (prior to ISCO activities) and October, November, and December 2021 (after ISCO reagents were consumed) at monitoring wells (MP-23, MP-24, MW-20, MW-26, and/or MW-37R). The locations of bio-supplementation wells are illustrated on Figure 1-8; field monitoring results and well dosing activities are summarized in Table 4-3.

Nitrate was not detected in any dosing well (pre-EFR) in April or November 2021 but was present in: 1) MP-24 and MW-26 in October 2021 (each at 2.0 milligrams per liter [mg/L]); and 2) MP-24, MW-20, MW-26, and MW-37R in December 2021 (each at 1.0 mg/L). Phosphate was detected in all dosing wells (pre-EFR) at concentrations ranging from 7.5 mg/L (MW-26, October 2021) to 30.0 mg/L (MW-26, April 2021) (see Table 4-3). Based on these data, phosphate dosing was not conducted at any well (all phosphate concentrations >0.5 mg/L). Nitrate dosing (approximately 100 - 200 grams of potassium nitrate dissolved in two gallons of potable-grade water) was conducted at all dosing wells exhibiting nitrate concentrations  $\leq$ 1.0 mg/L. No post-EFR well dosing was conducted with the exception of nitrate and phosphate in well MW-20 in December 2021 (see Table 4-3).

#### **4.5 Engineering Control Annual Inspection**

As described in Section 3-3, a site inspection was conducted on November 9, 2021 to evaluate the condition of the engineering controls (i.e., asphalt and concrete caps) within the designated Environmental Easement (see Figure 3-1). A Cap System Inspection Form is presented in Appendix A).

#### **4.6 Groundwater Monitoring**

##### **4.6.1 Volatile Organic Compounds (VOCs)**

The current monitoring well array consists of 45 on-site and 11 off-site shallow (overburden) groundwater monitoring wells/small diameter monitoring points (see Figures 1-3, 2-3, and 2-4). In accordance with the approved *SMP*, groundwater sampling activities are currently conducted on a semi-annual basis including an expanded off-site sampling event and two post-ISCO sampling events to monitor groundwater conditions subsequent to injection activities. Groundwater sampling activities in 2021 were conducted in: 1) April (pre-ISCO); and 2) July and October 2021 (Post-ISCO/Pre-EFR). The October 2021 event also included off-site sampling locations on Alden and Craig Streets. Groundwater analytical results are summarized in Table 4-4 and Figures 4-1 and 4-2.

All groundwater samples collected in 2021 were submitted to ALS Group USA, Corp. (ALS) of Rochester, New York for laboratory analysis of VOCs including heptane and included Category B laboratory deliverables. Final laboratory data packages were submitted to DataVal of Fayetteville, New York for third-party validation and subsequent to the review of the validated report, validated data were uploaded NYSDEC EQuIS database.

The most recent groundwater sampling event at the site was a post-ISCO and expanded annual event conducted in October 2021 and included on-site monitoring wells MW-12, MW-15R, MW-27, MW-28, MP-25, MP-26, MP-27, MP-29, MP-37, and MP-39 and off-site wells MP-6, MP-14, MP-17, MP-19, MP-22, MW-18, and MW-19. Analytical results are presented in Table 4-4 and Figures 4-1 and 4-2.

A total of 16 individual VOCs were present at detectable concentrations in one or more monitoring wells during the October 2021 sampling event: benzene, toluene, ethylbenzene, xylenes, chloroform, cyclohexane, methylcyclohexane, heptane, 1,2-dichloropropane, carbon disulfide, cis-1,2-DCE, 2-butanone, 2-Hexanone, 4-Methyl-2-pentanone, chloromethane and

bromodichloromethane (see Table 2-4). Toluene exceeded the applicable groundwater standard (5 µg/L) in 7 of the 10 on-site monitoring wells at concentrations ranging from 80 µg/L (MW-27) to 73,000 µg/L (MP-26). With respect to the off-site wells sampled in October 2021, toluene was not detected in any well (see Table 4-4 and Figure 4-2).

The current dissolved toluene plume, based on the October 2021 groundwater sampling event, is depicted in Figure 2-6. As shown on Figure 2-6, elevated toluene concentrations in groundwater are present proximal to the former Tank Farm area (along the northern wall of Building #61), as well as in the Building #58 AOC proximal to monitoring well MP-37. However, as stated above, toluene was not detected in downgradient, on-site monitoring wells MW-12 or MW-15R or in off-site monitoring wells on Alden and Craig Streets.

#### **4.6.2 Supplemental Perfluoroalkyl/Polyfluoroalkyl Substances (PFAS) Sampling**

As stated above, the waste disposal facility (Norlite), formerly used for disposing fluids generated during EFR activities, will not accept wastes with “any detectable levels” of PFAS. Based on independent sampling conducted by the NYSDEC on June 27, 2017, selected PFAS compounds were detected in three monitoring wells at the site (MW-15R, MW-25, and MW-26). However, according to an August 11, 2017 electronic mail correspondence from the previous NYSDEC Case Manager (Alicia Barraza), “none of the individual sample results were above the guidance value of 70 parts per trillion (ppt) that would have required further action”. As such, PFAS compounds were not identified as Compounds of Concern (COCs) for the site. PFAS results are summarized in Table 4-5.

In order to characterize groundwater conditions at proposed (or potential) EFR locations, groundwater samples from the following monitoring wells were collected during the July 2021 post-ISCO sampling event and submitted to Eurofins Lancaster Laboratories for PFAS analysis: MP-25, MP-26, MP-27, MP-29, MP-37, MW-27, and MW-28. Sampling locations and analytical results are presented in Figure 4-1 and Table 4-5, respectively.

According to the *Sampling, Analysis, and Assessment of PFAS* guidance document (NYSDEC, January 2021), further assessment of PFAS should be conducted if: 1) PFOA and/or PFOS are detected at or above 10 nanograms per liter (ng/L); 2) any other individual PFAS (not PFOA or PFOS) is detected at or above 100 ng/L; or 3) the total concentration of PFAS (including PFOA and PFOS) is detected at or above 500 ng/L. During the July 2021 sampling event: 1) all detected concentrations of PFOA were below 10 ng/L (maximum concentration of 7.2 J ng/L in MP-25); 2) PFOS was detected above 10 ng/L in monitoring well MP-25 at an estimated concentration of 14 J ng/L; 3) all detected concentrations of individual PFAS were below 100 ng/L (maximum concentration of 64 ng/L [Perfluorohexanesulfonic acid] in MP-25); and 4) all detected total PFAS concentrations were well below 500 ng/L (maximum concentration of 94.2 ng/L in MP-25). Although the PFOS concentration in monitoring well MP-25 (14 J ng/L) was above the NYSDEC “screening level” of 10 ng/L, because this concentration only slightly exceeded the “screening level” and all detected PFAS concentrations in the surrounding monitoring wells were below actionable levels, no additional PFAS sampling is proposed.

#### **4.7 Vapor Intrusion Monitoring**

Vapor sampling activities in 2021 were conducted during the June ISCO activities and included samples from: 1) existing sub-slab vapor monitoring points DB-VMP-2 and DB-VMP-3; 2) indoor air proximal to DB-VMP-2; and 3) an outdoor ambient sample (see Figure 2-3). In addition, a trip blank (QA/QC sample) accompanied the samples to and from the laboratory. All air-phase samples were submitted to SGS Accutest Laboratories of Dayton, New Jersey (Accutest) for analysis of VOCs via EPA Method TO-15 plus tentatively identified compounds (TICs) and included NYSDEC CLP/Category B laboratory deliverables. A summary of the vapor analytical results is presented below. Additional details on the vapor sampling activities were presented in the *Quarterly Progress Report on Project Activities - April 1 through July 31, 2021* (FES, August 15, 2021).

A total of 14 individual VOCs were present in sub-slab VMPs DB-VMP-2 and/or DB-VMP-3 (see Table 4-6). VOC TICs were also detected in DB-VMP-2 at a total estimated concentration of 33 J parts per billion by volume (ppbv) (see Table 4-6). Toluene, which is the primary compound of concern in groundwater at the former Norton/Nashua Site, was detected in DB-VMP-2 and DB-VMP-3 at concentrations of 4.9  $\mu\text{g}/\text{m}^3$  and 5.3  $\mu\text{g}/\text{m}^3$ , respectively (see Table 4-6).

Compounds identified in the May 2017 NYSDOH Soil Vapor/Indoor Air Matrices (A, B, and C) including: cis-1,2-Dichloroethylene (cis-1,2-DCE), 1,1-Dichloroethylene (1,1-DCE), and carbon tetrachloride (Matrix A); 1,1,1-TCA and methylene chloride (Matrix B), and vinyl chloride (Matrix C) were not detected in either DB-VMP-2 or DB-VMP-3 in June 2021 (see Table 4-6). TCE (Matrix A) was detected in DB-VMP-3 at an estimated concentration of 0.81 J  $\mu\text{g}/\text{m}^3$ . PCE (Matrix B) was detected in DB-VMP-2 and DB-VMP-3 at concentrations of 14  $\mu\text{g}/\text{m}^3$  and 3.1  $\mu\text{g}/\text{m}^3$ , respectively.

With respect to the indoor air sample, which was co-located with sub-slab sample DB-VMP-2, a total of 30 individual VOCs were detected (see Table 4-6). Toluene was detected at a concentration of 562  $\mu\text{g}/\text{m}^3$ . Of the NYSDOH Matrix A, B, and C compounds, methylene chloride, PCE, and TCE were detected at concentrations of 2.9  $\mu\text{g}/\text{m}^3$ , 21  $\mu\text{g}/\text{m}^3$ , and 0.91  $\mu\text{g}/\text{m}^3$ , respectively. VOC TICs were also detected in the indoor air sample at a total estimated concentration of 498.2 ppbv (see Table 4-6).

A total of 14 individual VOCs were present in the June 2021 outdoor ambient air sample at estimated concentrations ranging from 0.41  $\mu\text{g}/\text{m}^3$  (PCE) to 51.8 J  $\mu\text{g}/\text{m}^3$  (ethanol). Two individual VOCs (acetone and methyl ethyl ketone) were detected in the trip blank sample at concentrations of 1.3  $\mu\text{g}/\text{m}^3$  and 0.53 J  $\mu\text{g}/\text{m}^3$ , respectively. Finally, VOC TICs were detected in the outdoor ambient air and trip blank samples at estimated concentrations of 14.9 J ppbv and 2.5 J ppbv, respectively (see Table 4-6).

Similar to the previous (June 2020) sampling, as well as historical sampling event results, detected VOCs (including toluene, the primary COC for the site and PCE) were higher in the indoor air compared to sub-slab samples indicating VOC sources within the warehouse/maintenance facility as opposed to the presence of a complete sub-slab to indoor air vapor intrusion exposure pathway.

Toluene concentrations in both sub-slab and indoor samples collected in June 2021 were generally consistent with the previous (June 2020) sampling results (see Table 4-6) indicating that ISCO injection activities are not causing significant mobilization/migration of vapor-phase toluene in the subsurface. Although toluene concentrations increased slightly in 2021 ( $562 \text{ }\mu\text{g}/\text{m}^3$ ), implementation of preventative measures including: 1) the use of ventilation fans in the immediate vicinity of ISCO injection points; 2) the sealing of injection drilling rods at the surface with hydrated bentonite; 3) minimizing the opening of adjacent monitoring points to prevent off-gassing into the indoor air, etc. were used to minimize exposure during ISCO injections.

Future vapor intrusion monitoring activities at the site will be conducted in accordance with the approved SMP.

#### **4.8 Comparison with Remedial Objectives**

During the 2021 groundwater sampling events, the following monitoring wells exhibited one or more VOCs above their respective NYSDEC criteria: MP-24 through MP-27, MP-29, MP-37, MP-39, MW-27, and MW-28 (see Table 4-4 and Figures 4-1 and 4-2). However, in October 2021, toluene was not detected in downgradient, on-site monitoring wells MW-12 or MW-15R (see Figure 4-1) or in any of the off-site monitoring wells on Alden and Craig Streets north of the site (see Table 4-4 and Figure 4-2). Based on these data, the spatial distribution of the dissolved-phase toluene plume (at concentrations above the NYSDEC standard  $5 \text{ }\mu\text{g}/\text{L}$ ) remains defined and has contracted significantly since 2004 as a result of site remedial activities (see Figures 2-5 and 2-6). Furthermore, both on-site and off-site groundwater monitoring is being conducted and residual contamination is being addressed by: 1) ongoing remedial activities (ISCO, EFR, and EB); and 2) Institutional and Engineering Controls (Environmental Easement and concrete and asphalt capping of impacted areas); see the *SMP* for additional details.

#### **4.9 Monitoring Deficiencies**

No monitoring deficiencies were noted during the 2021 remedial or associated sampling activities or during the completion of the Periodic Review Report.

## **SECTION 5.0** **OVERALL PRR CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Site-Wide Inspection and Maintenance of the Cover System**

The capped area at the site (see Figure 3-1), which includes: 1) the asphalt-paved area proximal to the former tank farm (currently used for school bus parking); and 2) the concrete slabs and foundation elements of Buildings #58, #59, and #61 does not require any special operation or maintenance activities. However, routine (annual) inspections and proper maintenance (i.e., repair/replacement of damaged, cracked, or breached areas) are required. The results of all inspections will be documented on Site-Wide and Cap System Inspection Forms (see Appendix H, of the *SMP* and Appendix A herein).

The Institutional (Environmental Easement) and Engineering (asphalt and concrete cap) Controls are: 1) performing as designed; 2) protective of human health and the environment; and 3) compliant with the specifications described in the *SMP*. The annual site-wide inspection conducted on November 9, 2021 subsequent to the completion of site repaving was also conducted in accordance with the August 2019 *SMP*. A copy of the Cap Inspection Form and photographic log is presented in Appendix A. Site-wide and/or cap inspections will be conducted during routine site visits in 2022 to ensure the ECs are functioning as designed.

As described in Section 3.2, the Environmental Easement area north of Building #61 was repaved in November 2021. With respect to the ISCO injection borings in Building #58 proximal to monitoring well MP-37 and along the interior (northern) wall of Building #61, subsequent to the completion of injection activities, all injection locations were sealed with hydrated bentonite and capped with concrete at the surface.

### **5.2 Monitoring and Sampling Plan**

Monitoring and sampling protocols for all applicable media (groundwater, soil vapor, indoor air, etc.) during ISCO, EFR, and EB remedial activities in 2021 were conducted in accordance with the August 2019 *SMP* with one minor exception: ISCO monitoring wells MP-24 and MW-22 were inadvertently not sampled during the October 2021 (second post-ISCO) sampling event. However, both wells were sampled during the pre-ISCO event in April 2021 and the initial post-ISCO event in July 2021 and detected concentrations were consistent between the two events (see Table 4-4). Both wells will be sampled during both post-ISCO events in 2022.

Groundwater and vapor sampling activities planned for 2022 will be conducted in accordance with the August 2019 *SMP* (see Table 4-1).

### **5.3 Remedial Activities**

Remedial activities (ISCO, EFR, and EB) conducted at the site during 2021 were performed in accordance with the procedures outlined in the August 2019 *SMP*. Planned activities for 2022 include: 1) an ISCO event, which is tentatively scheduled for June 6 – 17, 2022; 2) two EFR events during the Fourth Quarter 2022; and 3) continued EB (well dosing) activities during all site visits in 2022 (with the exception of ISCO treatment areas in June and through August 2022 to allow for ISCO reagents to be consumed).

#### **5.4 Flooding Consideration**

Overall, the site is generally flat with less than 2 feet of elevation change over the approximate impacted area (see Figures 2-1 and 2-6). Specifically, ground surface elevations range from 35.69 feet above mean sea level at monitoring well MW-26 to 37.57 feet at MP-37. Given the fact that the entire site is covered with an impermeable (asphalt or concrete) surface and sloped for proper drainage, the likelihood of flooding occurring at the site is minimal. Furthermore, the Hudson River is located over ½ mile to the east and at an elevation approximately 8 to 10 feet lower than that of the site.

#### **5.5 Green Remediation**

Green Remediation concepts associated with site activities are as follows:

- EB involves the introduction of commercial-grade, readily available materials including: potassium nitrate ( $\text{KNO}_3$ ) and plant fertilizer (Miracle-Gro) and does not involve electric or gas-powered pumps for delivery to the subsurface.
- Re-usable equipment is used whenever possible.
- The use of hydrogen peroxide during ISCO injections results in contaminant breakdown to benign green end products of oxygen, carbon, hydrogen, and water.
- During all remedial and associated sampling activities, field staff stay close to the site and car-pooling is encouraged for a lower environmental footprint.
- Subcontractors and equipment deliveries are procured from areas as close to the site as possible to minimize the environmental footprint.
- Where possible, FES schedules work at an adjacent site or sites along the route to Watervliet to maximize mobilization/demobilization time.
- A no-idling policy is adhered to for any vehicles utilized for site work.
- Chemical deliveries for ISCO are procured in bulk to reduce the environmental footprint associated with transportation.
- All liquid chemical drums/containers used during ISCO activities are recycled or reused.

## **SECTION 6.0 LIMITATIONS**

The work presented in this report was performed in a manner consistent with the level of effort and care ordinarily exercised in the field of environmental consulting and by Forensic Environmental Services, Inc. The analysis, conclusions, opinions, and recommendations are based upon a finite number of observations and data points. Moreover, it should be recognized that natural systems are complex and highly heterogeneous. Further, that studies regarding hydrogeology and environmental conditions are difficult and inexact sciences. In part, for these reasons, it is possible that conditions vary between and/or beyond that defined by the available data.

Professional judgment, based upon incomplete knowledge of the subsurface, is required in order to formulate conclusions and recommendations. To this end, all risk cannot be eliminated but rather managed in the context of the available data. Forensic Environmental Services, Inc. makes no other representation, guarantee or warranty, expressly or implied, regarding the services, communication, conclusions, or opinions provided in conjunction with the preparation of this report.

## **TABLES**

**Table 1-1**  
**Summary of Light Non-Aqueous Phase Liquid (LNAPL) Measurements**  
**Former Norton/Nashua Tape Products Facility**  
**Watervliet, New York**

<b>Well Designation</b>	<b>Top of Casing Elevation (feet)</b>	<b>Date</b>	<b>Depth to Product (feet)</b>	<b>Depth to Water (feet)</b>	<b>Apparent Product Thickness (feet)</b>	<b>Corrected Groundwater Elevation (feet)</b>
<b>MW-14</b>	35.93	6/14/2004	8.59	8.62	0.03	27.34
		6/23/2005	8.93	9.05	0.12	26.98
		2/16/2006	8.21	8.23	0.02	27.72
		8/21/2006	8.45	8.50	0.05	27.47
		12/19/2006	8.91	9.01	0.10	27.01
<b>MW-28</b>	NM	5/14/2018	NM	8.97	~0.10 - 0.20*	NM
		5/15/2018	NM	8.86	~0.10 - 0.20*	NM
		5/16/2018	NM	8.96	~0.10 - 0.20*	NM
		5/17/2018	NM	8.59	~0.10 - 0.20*	NM
		5/21/2018	NM	9.03	~0.10 - 0.20*	NM
<b>MP-25</b>	36.56	6/10/2009	8.82	9.31	0.49	27.68
		6/11/2009	8.81	9.01	0.20	27.72
		6/11/2009	8.79	8.98	0.19	27.75
		6/12/2009	8.85	9.01	0.16	27.69
		8/24/2009	8.69	8.77	0.08	27.86
		5/3/2017	8.55	8.80	0.25	27.98
		5/3/2017	8.58	8.85	0.27	27.94
		5/4/2017	8.91	9.19	0.28	27.61
<b>MP-26</b>	37.21	5/3/2017	7.50	10.00	~0.50*	NM
		5/4/2017	9.26	9.41	0.15	27.93
<b>MP-27</b>	37.20	5/3/2017	7.85	8.40	0.55	29.28
		5/3/2017	8.70	9.15	0.45	28.44
		5/4/2017	9.17	9.68	0.51	27.96
<b>MP-37</b>	37.32	10/21/2014	10.66	10.82	0.16	26.64
		10/22/2014	10.59	10.79	0.20	26.70

Notes:

1. NM = Not Measured.
2. A specific gravity of 0.87 was used to calculate corrected groundwater elevation in wells exhibiting free product.
3. "\*" = LNAPL thicknesses estimated; accurate measurements difficult due to injected reagents/subsurface reactions.

**Table 2-1**  
**Summary of Soil Exceedances - Restricted Use Commercial SCOs (On-Site) and Unrestricted Use SCOs (Off-Site)**  
**Volatile Organic Compounds**  
**Former Norton/Nashua Facility**  
**Watervliet, New York**

Sample Designation	Sampling Date	Sample Depth (feet)	Acetone ( $\mu\text{g}/\text{kg}$ )	Methylene chloride ( $\mu\text{g}/\text{kg}$ )	Toluene ( $\mu\text{g}/\text{kg}$ )	m,p-Xylene ( $\mu\text{g}/\text{kg}$ )	Heptane ( $\mu\text{g}/\text{kg}$ )	Methyl Cyclohexane ( $\mu\text{g}/\text{kg}$ )
<b>NYSDEC Restricted Use (Commercial) SCO</b>			<b>500,000</b>	<b>500,000</b>	<b>500,000</b>	<b>500,000</b>	<b>NS</b>	<b>NS</b>
<b>NYSDEC Unrestricted Use SCO</b>			<b>50</b>	<b>50</b>	<b>700</b>	<b>260</b>	<b>NS</b>	<b>NS</b>
<b>On-Site</b>								
SB-6	8/27/2003	10 - 11	<b>740 B</b>	<b>170 JB</b>	<b>5,900</b>	<b>88 J</b>	<b>840</b>	ND
SB-46	9/8/2003	9 - 10	<b>54</b>	<b>5 JB</b>	<6	<6	<12	ND
SB-50	9/9/2003	8 - 9	<b>56</b>	<b>5 JB</b>	<6	<6	<12	ND
SB-66	9/11/2003	9 - 12	<160,000	<b>30,000 JB</b>	<b>2,400,000</b>	<81000	<b>840,000</b>	ND
SB-100	9/18/2003	9 - 11	<b>26,000 B</b>	<b>8,200 JB</b>	<b>220,000</b>	<11000	<b>340,000</b>	ND
SB-102	9/18/2003	9 - 10	<b>50,000 B</b>	<b>24,000 B</b>	<b>740,000</b>	<24000	<b>1,100,000 E</b>	ND
SB-110	9/19/2003	8 - 9	<600	<b>140 JB</b>	<b>120 J</b>	<300	<600	ND
SB-112	9/19/2003	8 - 9 (RE)	<b>130 B</b>	<b>20 B</b>	<b>7 J</b>	<8	<17	ND
SB-112A	9/19/2003	20 - 25	<b>2,300 JB</b>	<b>930 JB</b>	<1,200	<1,200	<2,400	ND
SB-113 (RE)	11/24/2003	3 - 4	<b>55 B</b>	<b>4 JB</b>	<6	<6	<11	ND
SB-15	8/28/2003	6 - 7	<b>59 B</b>	<b>8 B</b>	<b>9</b>	<b>1 J</b>	<11	ND
SB-17	8/28/2003	13 - 14	<b>760 JB</b>	<b>320 JB</b>	<b>12,000</b>	<540	<b>2,200</b>	ND
SB-19	8/29/2003	13.5 - 14.5	<b>50,000 J</b>	<b>72,000 B</b>	<b>850,000</b>	<55,000	<b>70,000 J</b>	ND
SB-20	8/29/2003	11 - 12	<b>56 B</b>	<b>10 B</b>	<b>6</b>	<6	<12	ND
SB-22	9/2/2003	6.5 - 7.5	<b>61</b>	<5	<b>86</b>	<b>2 J</b>	<b>53</b>	ND
SB-22	9/2/2003	12.5 - 13.5	<b>240 JB</b>	<b>270 B</b>	<b>1,200</b>	<b>230 J</b>	<b>6,000</b>	ND
SB-25	9/2/2003	7.5 - 10	<1,200	<b>600 JB</b>	<b>250 J</b>	<b>240 J</b>	<b>23,000</b>	ND
SB-72	9/12/2003	9 - 10	<120,000	<b>75,000 B</b>	<b>1,300,000</b>	<61000	<b>120,000</b>	ND

**Table 2-1**  
**Summary of Soil Exceedances - Restricted Use Commercial SCOs (On-Site) and Unrestricted Use SCOs (Off-Site)**  
**Volatile Organic Compounds**  
**Former Norton/Nashua Facility**  
**Watervliet, New York**

Sample Designation	Sampling Date	Sample Depth (feet)	Acetone (µg/kg)	Methylene chloride (µg/kg)	Toluene (µg/kg)	m,p-Xylene (µg/kg)	Heptane (µg/kg)	Methyl Cyclohexane (µg/kg)
<b>NYSDEC Restricted Use (Commercial) SCO</b>			<b>500,000</b>	<b>500,000</b>	<b>500,000</b>	<b>500,000</b>	<b>NS</b>	<b>NS</b>
<b>NYSDEC Unrestricted Use SCO</b>			<b>50</b>	<b>50</b>	<b>700</b>	<b>260</b>	<b>NS</b>	<b>NS</b>
SB-123	11/26/2003	8.5 - 9.5	<b>640 B</b>	<b>130 JB</b>	<b>8,900</b>	<b>560</b>	<b>460 J</b>	ND
SB-125	11/26/2003	8.5 - 9.5	<b>67 B</b>	<b>4 JB</b>	<b>4 J</b>	<6	<13	ND
SB-34	9/5/2003	7 - 8	<b>99</b>	<b>19 JB</b>	<b>85</b>	<33	<b>210</b>	ND
SB-82	9/15/2003	9 - 10	<b>78 B</b>	<b>25 JB</b>	<28	<28	<57	ND
SB-83	9/15/2003	9 - 10	<b>1,400 B</b>	<b>420 JB</b>	<560	<560	<b>13,000</b>	ND
SB-129	12/1/2003	8 - 9	<12000	<6000	<b>120,000</b>	<6000	<b>39,000</b>	ND
SB-130	12/1/2003	4 - 5	<b>57</b>	<b>2 BJ</b>	<b>5 J</b>	<6	<12	ND
SB-205	8/25/2009	9.0-10.0	<23,000	<b>13,000 B</b>	<b>420,000</b>	<b>13,000</b>	<b>160,000</b>	<b>110,000</b>
MP-24	3/24/2009	12.0-12.5	<b>17,000</b>	<5,700	<b>180,000</b>	<5,700	<b>33,000</b>	<b>10,000</b>
SB-208S	8/25/2009	9.0-10.0	<2,200	<b>1,100 B</b>	<b>32,000</b>	<1,100	<b>5,800</b>	<b>3,800</b>
MP-26	3/26/2009	12-13	<240,000	<120,000	<b>2,500,000</b>	<120,000	NA	<120,000
Duplicate	3/26/2009	12-13	<230,000	<120,000	<b>2,600,000</b>	<120,000	NA	<120,000
MP-27	3/24/2009	11-12	<770,000	<390,000	<b>14,000,000</b>	<390,000	<b>1,100,000</b>	<b>1,200,000</b>

**Table 2-1**  
**Summary of Soil Exceedances - Restricted Use Commercial SCOs (On-Site) and Unrestricted Use SCOs (Off-Site)**  
**Volatile Organic Compounds**  
**Former Norton/Nashua Facility**  
**Watervliet, New York**

Sample Designation	Sampling Date	Sample Depth (feet)	Acetone ( $\mu\text{g}/\text{kg}$ )	Methylene chloride ( $\mu\text{g}/\text{kg}$ )	Toluene ( $\mu\text{g}/\text{kg}$ )	m,p-Xylene ( $\mu\text{g}/\text{kg}$ )	Heptane ( $\mu\text{g}/\text{kg}$ )	Methyl Cyclohexane ( $\mu\text{g}/\text{kg}$ )
<b>NYSDEC Restricted Use (Commercial) SCO</b>			<b>500,000</b>	<b>500,000</b>	<b>500,000</b>	<b>500,000</b>	<b>NS</b>	<b>NS</b>
<b>NYSDEC Unrestricted Use SCO</b>			<b>50</b>	<b>50</b>	<b>700</b>	<b>260</b>	<b>NS</b>	<b>NS</b>
<b>B-1</b>	11/18/2010	9.0	<5300	<2600	<b>88,000</b>	<2600	<b>39,000</b>	<b>17,000</b>
	11/18/2010	11.0	<23000	<11000	<b>340,000</b>	<11000	<b>58,000</b>	<b>24,000</b>
<b>B-2</b>	11/18/2010	8.0	<b>59</b>	<b>12 JB</b>	<b>180</b>	<b>30</b>	<b>74</b>	<b>94</b>
	11/18/2010	11.0	<100	<56	<b>1,100</b>	<56	<b>71 J</b>	<b>74</b>
<b>B-3</b>	11/18/2010	11.0	<2500	<b>1,400 B</b>	<b>23,000</b>	<1200	<2500	<1200
<b>B-5</b>	11/18/2010	5.0	<5300	<2600	<b>73,000</b>	<2600	<b>15,000</b>	<b>9,100</b>
	11/18/2010	7.0	<5900	<3000	<b>16,000</b>	<3000	<b>69,000</b>	<b>96,000</b>
	11/18/2010	11.0	<100	<56	<b>960</b>	<56	<110	<56
<b>B-6</b>	11/18/2010	11.0	<1100	<570	<b>19,000</b>	<570	<b>430 J</b>	<570
<b>MW-25</b>	5/11/2011	12.5-13.0	<15	<6.0	<b>770 EJ</b>	<6.0	<12	<6.0
<b>Post Ex 2</b>	5/11/2011	8.5-9.0	<1200	<580	<b>21,000</b>	<b>1,600</b>	<1200	<580
<b>1112-1D</b>	11/12/2012	10.0-10.5	<11000	<b>1,500 JB</b>	<b>37,000 B</b>	<b>1,300 J</b>	<11000	<b>15,000</b>
<b>1D Dup.</b>	11/12/2012	10.0-10.5	<11000	<b>1,700 JB</b>	<b>220,000 EB</b>	<b>3,800 J</b>	<11000	<b>20,000</b>
<b>Off-Site (Alden Street)</b>								
<b>SB-186</b>	12/6/2005	9.5 - 10	<500	<b>530 J</b>	<250	<250	ND	ND
<b>SB-191</b>	12/6/2005	9 - 9.5	<12,000	<b>6,300 BJ</b>	<b>230,000</b>	<12,000	ND	ND

Notes:

1. J = Estimated concentration; B = compound detected in blank; E = exceeds calibration range
2. A shaded cell indicated concentration exceeds NYSDEC Restricted Use Commercial SCO.
3. Off-site samples compared to Unrestricted Use SCOS.
4. Soil borings SB-129 and SB-130 are located off-site, but immediately adjacent to the northern property boundary (i.e., railroad tracks).

**Table 2-2**  
**Summary of Soil Exceedances (Restricted Use Commercial SCOs and Unrestricted Use SCOs)**  
**Semi-Volatile Organic Compounds**  
**Former Norton/Nashua Facility**  
**Watervliet, New York**

Sample Designation	Sampling Date	Sample Depth (feet)	Benzo(a)anthracene ( $\mu\text{g}/\text{kg}$ )	Chrysene ( $\mu\text{g}/\text{kg}$ )	Benzo(b)fluoranthene ( $\mu\text{g}/\text{kg}$ )	Benzo(k)fluoranthene ( $\mu\text{g}/\text{kg}$ )	Benzo(a)pyrene ( $\mu\text{g}/\text{kg}$ )	Indeno(1,2,3-cd)pyrene ( $\mu\text{g}/\text{kg}$ )	Dibenzo (a,h)anthracene ( $\mu\text{g}/\text{kg}$ )
<b>NYSDEC Restricted Use (Commercial) SCO</b>			<b>5,600</b>	<b>56,000</b>	<b>5,600</b>	<b>56,000</b>	<b>1,000</b>	<b>5,600</b>	<b>560</b>
<b>NYSDEC Unrestricted Use SCO</b>			<b>1,000</b>	<b>1,000</b>	<b>1,000</b>	<b>800</b>	<b>1,000</b>	<b>500</b>	<b>330</b>
<b>On-Site</b>									
SB-6	8/27/2003	9 - 10	1,200	1,200	1,000	840	1,100	890	140 J
SB-6	8/27/2003	10 - 11	880	860	860	530	1,400	790	930
SB-8	8/27/2003	9 - 10	2,500	2,400	1,800	1,700	2,100	1,500	260 J
SB-113	11/24/2003	3 - 4	3,500	3,700	3,300	2,400	3,500	3,400	790
SB-148A*	1/19/2004	20 - 25	1,800	1,900	1,200	1,400	1,800	1,400	<410
SB-20	8/29/2003	11 - 12	950	1,100	850	750	800	510	75 J
SB-26	9/3/2003	9 - 10	1,700	1,900	1,600	1,200	1,600	1,400	300 J
SB-68	9/11/2003	4 - 5	810	900	640	600	880	710	79 J
<b>Off-Site</b>									
SB-128	12/1/2003	10.5 - 11.5	<390	<390	<390	<390	<390	<390	<390
SB-129	12/1/2003	8 - 9	<400	<400	<400	<400	<400	<400	<400
SB-130	12/1/2003	4 - 5	<410	<410	<410	<410	<410	<410	<410
SB-131	12/1/2003	4.5 - 5.5	<370	<370	<370	<370	<370	<370	<370
SB-134	12/2/2003	7 - 8	<370	<370	<370	<370	<370	<370	<370
SB-135	12/2/2003	4 - 5	<400	<400	<400	<400	<400	<400	<400
SB-136	12/2/2003	8 - 9	<390	<390	<390	<390	<390	<390	<390
SB-158	1/22/2004	8 - 9	<360	<360	<360	<360	<360	<360	<360

Notes:

1. J = Estimated concentration.
2. A shaded cell indicated concentration exceeds NYSDEC Restricted Use Commercial SCO.
3. Off-site samples compared to Unrestricted Use SCOS.
4. \* SB-148A is a duplicate sample

**Table 4-1**  
**Monitoring Plan Components**  
**Former Norton/Nashua Tape Products Facility**  
**Watervliet, New York**

Event/Sampling Locations	Analytical Parameters	Schedule
<b>Remedial Activities</b>		
Site-Wide Inspection of Engineering Controls	---	Annual
In-Situ Chemical Oxidation (ISCO) Injection Activities	---	Annual
Enhanced Fluid Recovery (EFR) Events	---	Semi-Annual
Groundwater Bio-Supplementation	Nitrate/Phosphate (field kit)	Semi-Annual
<b>Groundwater and Post-Remediation Monitoring</b>		
On-Site ISCO Wells (MP-24, MP-25, MP-26, MP-27, MP-29, MP-37, MW-22, MW-27 and MW-28)	VOCs (EPA Method 8260B)	4 to 6 weeks and 8 to 10 weeks after ISCO injections
On-Site Monitoring Wells (MP-39, MW-12 and MW-15R)	VOCs (EPA Method 8260B)	Semi-Annual
Off-Site Monitoring Wells (MP-6, MP-14, MP-17, MP-19, MP-22, MW-18, and MW-19)	VOCs (EPA Method 8260B)	Annual
Sub-Slab Vapor: DB-VMP-2 (Durham Bus Area)	VOC (EPA Method TO-15)	During active ISCO remediation; When change of use occurs; or When requested by DEC/DOH
Indoor Air: DB-IA-2 (Durham Bus Area)	VOC (EPA Method TO-15)	During active ISCO remediation; When change of use occurs; or When requested by DEC/DOH

**Table 4-2**  
**Summary of In-Situ Chemical Oxidation (ISCO) Activities (June 2021)**  
**June 2021 Field Monitoring Data (Injection Data)**  
**Former Norton/Nashua**  
**Watervliet, New York**

Date	Injection Point	Screen Interval (feet)	Catalyst			Oxidizer			Persulfate			Well Head Pressure (psi)
			Injection Time (mins)	Volume (gal)	Flow Rate (gpm)	Injection Time (mins)	Volume (gal)	Flow Rate (gpm)	Injection Time (mins)	Volume (gal)	Flow Rate (gpm)	
6/8/2021	IP27-15	10-15	38	70	1.84	221	130	0.59				20
6/8/2021	IP27-09	10-15	30	70	2.33	89	130	1.46				8
6/8/2021	IP28-02	10-15	33	70	2.12	173	130	0.75				12
6/8/2021	IP28-04	10-15	31	70	2.26	39	50	1.28				5
6/8/2021	IP28-05	10-15	35	70	2.00	64	130	2.03				3
6/8/2021	IP27-12	10-15	45	70	1.56	93	130	1.40				20
6/8/2021	IP28-04	10-15				41	50	1.22				8
6/8/2021	IP28-01	10-15	20	15	0.75							
6/9/2021	IP28-01	10-15	96	55	0.57	27	15	0.56				90
6/9/2021	IP28-04	10-15				59	30	0.51				2
6/9/2021	IP27-15	7-11	46	70	1.52	146	130	0.89				16
6/9/2021	IP27-09	7-11	38	70	1.84	85	130	1.53				8
6/9/2021	IP27-12	7-11	64	70	1.09	135	130	0.96				6
6/9/2021	IP28-05	7-11	50	70	1.40	111	130	1.17				3
6/9/2021	IP28-02	7-11	102	70	0.69	161	130	0.81				5
6/9/2021	IP37-01	9-14	43	70	1.63	123	130	1.06				6
6/9/2021	IP28-04	7-11	68	70	1.03	73	65	0.89				5
6/9/2021	IP27-11	10-15	35	70	2.00	70	130	1.86				12
6/9/2021	IP28-03	10-15	44	70	1.59	89	130	1.46				5
6/9/2021	IP27-16	10-15	58	70	1.21	63	130	2.06				8
6/9/2021	IP37-04	10-15	44	70	1.59	58	130	2.24				5

**Table 4-2**  
**Summary of In-Situ Chemical Oxidation (ISCO) Activities (June 2021)**  
**June 2021 Field Monitoring Data (Injection Data)**  
**Former Norton/Nashua**  
**Watervliet, New York**

Date	Injection Point	Screen Interval (feet)	Catalyst			Oxidizer			Persulfate			Well Head Pressure (psi)
			Injection Time (mins)	Volume (gal)	Flow Rate (gpm)	Injection Time (mins)	Volume (gal)	Flow Rate (gpm)	Injection Time (mins)	Volume (gal)	Flow Rate (gpm)	
6/10/2021	IP27-16	7-11	36	70	1.94	72	130	1.81				0
6/10/2021	IP27-14	10-15	31	70	2.26	95	130	1.37				15
6/10/2021	IP28-04	7-11				89	65	0.73				5
6/10/2021	IP37-02	10-15	33	70	2.12	165	130	0.79				4
6/10/2021	IP28-03	7-11	73	70	0.96	174	130	0.75				5
6/10/2021	IP28-06	10-15	29	70	2.41	95	130	1.37				3
6/10/2021	IP27-11	7-11	27	70	2.59	77	130	1.69				6
6/10/2021	IP37-01	6-10	74	70	0.95	141	130	0.92				4
6/10/2021	IP37-03	10-15	44	70	1.59	105	130	1.24				130
6/10/2021	IP28-01	10-15				104	115	1.11				12
6/10/2021	IP28-07	10-15	43	70	1.63	144	130	0.90				0
6/10/2021	IP27-14	7-11	40	70	1.75	94	130	1.38				4
6/11/2021	IP27-10	10-15	30	70	2.33	140	130	0.93				10
6/11/2021	IP37-02	7-11	30	70	2.33	58	130	2.24				4
6/11/2021	IP37-04	7-11	34	70	2.06	70	130	1.86				0
6/11/2021	IP28-06	7-11	31	70	2.26	59	130	2.20				0
6/11/2021	IP28-07	7-11	50	70	1.40	102	130	1.27				0
6/11/2021	IP28-01	7-11	26	70	2.69	67	130	1.94				0
6/11/2021	IP37-03	7-11	34	70	2.06	66	130	1.97				0
6/11/2021	IP27-13	10-15	40	70	1.75	261	130	0.50				40
6/11/2021	IP37-06	10-15	42	70	1.67	114	130	1.14				3
6/11/2021	IP27-17	10-15	55	70	1.27	209	130	0.62				40
6/11/2021	IP37-08	10-15	34	70	2.06	60	130	2.17				0
6/11/2021	IP37-06	7-11	41	70	1.71	74	130	1.76				4
6/11/2021	IP37-08	7-11	39	70	1.79	43	65	1.51				0

**Table 4-2**  
**Summary of In-Situ Chemical Oxidation (ISCO) Activities (June 2021)**  
**June 2021 Field Monitoring Data (Injection Data)**  
**Former Norton/Nashua**  
**Watervliet, New York**

Date	Injection Point	Screen Interval (feet)	Catalyst			Oxidizer			Persulfate			Well Head Pressure (psi)
			Injection Time (mins)	Volume (gal)	Flow Rate (gpm)	Injection Time (mins)	Volume (gal)	Flow Rate (gpm)	Injection Time (mins)	Volume (gal)	Flow Rate (gpm)	
6/14/2021	IP37-08	7-11				32	65	2.03				3
6/14/2021	IP27-18	10-15	26	70	2.69	64	130	2.03				2
6/14/2021	IP37-05	10-15	61	70	1.15	111	130	1.17				2
6/14/2021	IP27-13	7-11	48	70	1.46	103	130	1.26				8
6/14/2021	IP37-08	10-15	16	23	1.44	40	45	1.13				2
6/14/2021	IP27-17	7-11	44	70	1.59	73	130	1.78				6
6/14/2021	IP37-01	9-14	12	23	1.92	37	45	1.22				18
6/14/2021	IP37-06	10-15	19	23	1.21	42	45	1.07				2
6/14/2021	IP27-18	7-11	35	70	2.00	86	130	1.51				2
6/14/2021	IP37-05	7-11	35	70	2.00	56	130	2.32				10
6/14/2021	IP37-08	7-11	13	23	1.77	30	45	1.50				2
6/14/2021	IP37-01	6-10	19	24	1.26	31	40	1.29				0
6/14/2021	IP37-06	7-11	11	24	2.18	27	40	1.48				6
6/14/2021	IP27-10	7-11	44	70	1.59	88	130	1.48				6
6/15/2021	IP27-09	10-15							80	200	2.50	2
6/15/2021	IP27-15	10-15							82	200	2.44	2
6/15/2021	IP37-05	10-15							253	200	0.79	40
6/15/2021	IP37-02	10-15							116	200	1.72	3
6/15/2021	IP27-12	10-15							85	200	2.35	0
6/15/2021	IP27-17	10-15							113	200	1.77	10
6/15/2021	IP37-01	9-14							90	200	2.22	4
6/15/2021	IP27-17	7-11							144	200	1.39	22
6/15/2021	IP27-14	10-15							105	200	1.90	5
6/15/2021	IP37-03	10-15							98	200	2.04	2
6/15/2021	IP28-01	10-15							97	200	2.06	5
6/15/2021	IP27-09	7-11							110	200	1.82	5
6/15/2021	IP37-01	6-10							122	200	1.64	4

**Table 4-2**  
**Summary of In-Situ Chemical Oxidation (ISCO) Activities (June 2021)**  
**June 2021 Field Monitoring Data (Injection Data)**  
**Former Norton/Nashua**  
**Watervliet, New York**

Date	Injection Point	Screen Interval (feet)	Catalyst			Oxidizer			Persulfate			Well Head Pressure (psi)
			Injection Time (mins)	Volume (gal)	Flow Rate (gpm)	Injection Time (mins)	Volume (gal)	Flow Rate (gpm)	Injection Time (mins)	Volume (gal)	Flow Rate (gpm)	
6/15/2021	IP27-18	10-15							83	200	2.41	0
6/15/2021	IP37-02	7-11							107	200	1.87	0
6/15/2021	IP28-02	10-15							78	200	2.56	0
6/15/2021	IP27-12	7-11							68	200	2.94	4
6/15/2021	IP27-15	7-11							50	62.5	1.25	22
6/15/2021	IP37-05	7-11							34	62.5	1.84	3
6/16/2021	IP27-15	7-11							60	137.5	2.29	0
6/16/2021	IP37-05	7-11							71	137.5	1.94	2
6/16/2021	IP37-03	7-11							83	200	2.41	2
6/16/2021	IP27-14	7-11							78	200	2.56	0
6/16/2021	IP28-04	10-15							88	200	2.27	0
6/16/2021	IP37-01	6-10							84	125	1.49	5
6/16/2021	IP27-18	7-11							75	200	2.67	0
6/16/2021	IP28-05	10-15							83	200	2.41	0
6/16/2021	IP27-13	10-15							85	200	2.35	2
6/16/2021	IP37-08	10-15							96	262.5	2.73	3
6/16/2021	IP27-10	10-15							68	200	2.94	2
6/16/2021	IP28-04	7-11							83	200	2.41	0
6/16/2021	IP37-06	10-15							166	262.5	1.58	0
6/16/2021	IP28-06	10-15							81	200	2.47	2
6/16/2021	IP37-08	7-11							117	275	2.35	2
6/16/2021	IP27-10	7-11							100	200	2.00	0
6/16/2021	IP28-01	7-11							72	200	2.78	0
6/16/2021	IP28-05	7-11							88	200	2.27	0
6/16/2021	IP37-04	10-15							78	200	2.56	

**Table 4-2**  
**Summary of In-Situ Chemical Oxidation (ISCO) Activities (June 2021)**  
**June 2021 Field Monitoring Data (Injection Data)**  
**Former Norton/Nashua**  
**Watervliet, New York**

Date	Injection Point	Screen Interval (feet)	Catalyst			Oxidizer			Persulfate			Well Head Pressure (psi)
			Injection Time (mins)	Volume (gal)	Flow Rate (gpm)	Injection Time (mins)	Volume (gal)	Flow Rate (gpm)	Injection Time (mins)	Volume (gal)	Flow Rate (gpm)	
6/17/2021	IP37-06	7-11							102	275	2.70	0
6/17/2021	IP37-04	7-11							73	200	2.74	2
6/17/2021	IP27-11	10-15							78	200	2.56	2
6/17/2021	IP27-16	10-15							80	200	2.50	2
6/17/2021	IP28-02	7-11							67	200	2.99	0
6/17/2021	IP28-06	7-11							73	200	2.74	2
6/17/2021	IP27-13	7-11							84	200	2.38	0
6/17/2021	IP28-07	10-15							87	200	2.30	0
6/17/2021	IP28-03	10-15							88	200	2.27	2
6/17/2021	IP27-11	7-11							100	200	2.00	0
6/17/2021	IP28-07	7-11							110	200	1.82	2
6/17/2021	IP28-03	7-11							106	200	1.89	0
6/17/2021	IP27-16	7-11							89	200	2.25	0
<b>Total Volume/Average Flow</b>				<b>3,500</b>	<b>1.72</b>		<b>6,500</b>	<b>1.36</b>		<b>10,000</b>	<b>2.22</b>	
<b>Total Volume Injected</b>				<b>20,000</b>								

Notes:

1. Catalyst: ISOTEC Cat-4260; Oxidizer (H<sub>2</sub>O<sub>2</sub>): 10% Concentration; Sodium Persulfate: 10% Concentration
2. gpm = gallons per minute; psi = pounds per square inch.

**Table 4-3**  
**Summary of 2021 Bio-Supplementation and Enhanced Fluid Recovery (EFR) Data**  
**Former Norton/Nashua Tape Products Facility**  
**Watervliet, New York**

Well	Pre-EFR Measurements						EFR					Post-EFR Measurements					
	Date	PID (ppm)	DTW (ft)	Nitrate (mg/L)	Phosphate (mg/L)	Nutrient Dosing	Date	vac GW (min)	vac Well (min)	Total Time EFR (Hr)	GW Extracted (gal)	Date	PID (ppm)	DTW (ft)	Nitrate (mg/L)	Phosphate (mg/L)	Nutrient Dosing
MP-23	4/19/2021	NM	NM	0.0	20.0	Y(N)	---	---	---	---	---	---	---	---	---	---	---
MP-24	4/19/2021	NM	NM	0.0	10.0	Y(N)	---	---	---	---	---	---	---	---	---	---	---
MW-20	4/19/2021	NM	NM	0.0	15.0	Y(N)	---	---	---	---	---	---	---	---	---	---	---
MW-26	4/19/2021	NM	NM	0.0	30.0	Y(N)	---	---	---	---	---	---	---	---	---	---	---
MP-24	10/21/2021	NM	NM	2.0	10.0	No	---	---	---	---	---	---	---	---	---	---	---
MW-20	10/21/2021	NM	NM	0.0	10.0	Y(N)	---	---	---	---	---	---	---	---	---	---	---
MW-26	10/21/2021	NM	NM	2.0	7.5	No	---	---	---	---	---	---	---	---	---	---	---
MW-37R	10/21/2021	NM	NM	0.0	20.0	Y(N)	---	---	---	---	---	---	---	---	---	---	---
MP-23	11/9/2021	6.5	8.94	NM	NM	NA	---	---	---	---	---	11/11/2021	0.0	9.17	NM	NM	No
MP-24	11/9/2021	0.0	8.95	0.0	15 - 20	Y(N)	---	---	---	---	---	11/11/2021	0.5	9.12	NM	15 - 20	No
MW-20	11/9/2021	59.3	9.44	0.0	15.0	Y(N)	---	---	---	---	---	11/11/2021	0.0	9.47	NM	15 - 20	No
MW-26	11/9/2021	0.0	7.90	0.0	10.0	Y(N)	---	---	---	---	---	11/11/2021	4.3	7.81	NM	NM	No
MW-37R	11/9/2021	200.0	9.4	0.0	9.0	Y(N)	---	---	---	---	---	11/10/2021	NM	NM	6.0	20	No
MP-25	11/9/2021	24.8	9.06	0.0	15 - 20	NA	11/10-11/2021	15	90	1.8	102	11/11/2021	0.7	9.31	NM	15 - 20	NA
MP-26	11/9/2021	0.0	9.58	0.0	10 - 15	NA	11/11/2021	15	120	2.3	78	11/11/2021	0.7	9.69	NM	15 - 20	NA
MP-27	11/9/2021	0.0	9.60	0.0	10 - 15	NA	11/10-11/2021	15	120	2.3	25	11/11/2021	0.1	9.81	NM	15 - 20	NA
MP-29	11/9/2021	0.0	9.62	0.0	10 - 15	NA	11/10-11/2021	30	150	3.0	584	11/11/2021	0.7	9.73	NM	15 - 20	NA
MP-37	11/9/2021	115.2	9.58	0.0	15.0	NA	11/10/2021	0	120	2.0	470	11/10/2021	NM	NM	0.0	15 - 20	NA
MW-28	11/9/2021	2.5	8.94	0.0	15 - 20	NA	11/10-11/2021	30	120	2.5	230	11/11/2021	0.5	9.15	NM	15 - 20	NA
MP-28	11/9/2021	0.0	9.62	NM	NM	NA	---	---	---	---	---	11/11/2021	0.9	9.72	NM	15 - 20	NA
MP-39	11/9/2021	NM	NM	NM	NM	NA	---	---	---	---	---	11/11/2021	NM	NM	NM	NM	NA
MP-30	11/9/2021	0.0	9.50	NM	NM	NA	---	---	---	---	---	11/11/2021	0.2	9.58	NM	15 - 20	NA
MW-21	11/9/2021	17.1	9.48	NM	NM	NA	---	---	---	---	---	11/11/2021	NM	NM	NM	NM	NA
MW-22	11/9/2021	79.3	9.14	NM	NM	NA	---	---	---	---	---	11/11/2021	0.0	9.28	NM	NM	NA
MW-27	11/9/2021	16.1	8.12	NM	NM	NA	---	---	---	---	---	11/11/2021	0.3	7.98	NM	NM	NA

**Table 4-3**  
**Summary of 2021 Bio-Supplementation and Enhanced Fluid Recovery (EFR) Data**  
**Former Norton/Nashua Tape Products Facility**  
**Watervliet, New York**

Well	Pre-EFR Measurements						EFR					Post-EFR Measurements					
	Date	PID (ppm)	DTW (ft)	Nitrate (mg/L)	Phosphate (mg/L)	Nutrient Dosing	Date	vac GW (min)	vac Well (min)	Total Time EFR (Hr)	GW Extracted (gal)	Date	PID (ppm)	DTW (ft)	Nitrate (mg/L)	Phosphate (mg/L)	Nutrient Dosing
MP-23	12/16/2021	0.2	9.11	<1	10.0	Y(N)	---	---	---	---	---	12/17/2021	0.6	9.21	>1	10 - 14	No
MP-24	12/16/2021	0.5	9.14	1.0	>8	Y(N)	---	---	---	---	---	12/17/2021	0.5	9.29	>1	10 - 14	No
MW-20	12/16/2021	0.4	9.64	1.0	>8	Y(N)	---	---	---	---	---	12/17/2021	0.7	9.63	>1	<0.5	Y (N/P)
MW-26	12/16/2021	0.3	7.58	1.0	>8	Y(N)	---	---	---	---	---	12/17/2021	4.3	7.58	1.0	10.0	No
MW-37R	12/16/2021	8.5	9.5	1.0	>8	Y(N)	---	---	---	---	---	12/17/2021	0.5	9.49	>1	10 - 14	No
MP-25	12/16/2021	0.5	9.31	1.0	10.0	NA	12/17/2021	15	150	2.8	364	12/17/2021	0.7	9.31	<1	<0.5	Y (N/P)
MP-26	12/16/2021	5.1	9.63	1.0	10.0	NA	12/17/2021	15	150	2.8	527	12/17/2021	0.7	9.72	<1	<0.5	Y (N/P)
MP-27	12/16/2021	0.7	9.64	1.0	10.0	NA	12/16/2021	15	150	2.8	234	12/17/2021	0.1	10.11	>1	10 - 14	Y (N)
MP-29	12/16/2021	1.5	9.62	<0.5	10.0	NA	12/16/2021	15	150	2.8	822	12/17/2021	0.7	9.73	<1	<0.5	Y (N/P)
MP-37	12/16/2021	4.1	9.75	<0.5	10.0	NA	12/16/2021	0	120	2.0	337	12/17/2021	2.3	9.74	<1	<0.5	Y (N/P)
MW-28	12/16/2021	0.2	9.10	<0.5	10.0	NA	12/17/2021	15	150	2.8	413	12/17/2021	0.5	9.12	<1	<0.5	Y (N/P)
MP-28	12/16/2021	0.6	9.79	<0.5	12.0	NA	---	---	---	---	---	12/17/2021	0.9	9.80	1.0	15.0	NA
MP-30	12/16/2021	0.5	9.64	NM	NM	NA	---	---	---	---	---	12/17/2021	0.8	9.72	NM	NM	NA
MP-39	12/16/2021	NM	NM	NM	NM	NA	---	---	---	---	---	12/17/2021	NM	NM	NM	NM	NA
MW-21	12/16/2021	0.5	9.62	NM	NM	NA	---	---	---	---	---	12/17/2021	0.5	9.65	NM	NM	NA
MW-22	12/16/2021	3.4	9.31	NM	NM	NA	---	---	---	---	---	12/17/2021	0.5	9.29	NM	NM	NA
MW-27	12/16/2021	0.2	8.50	<0.5	10.0	NA	---	---	---	---	---	12/17/2021	0.3	8.49	1.0	10.0	NA

Notes:

1. MP-25 = EFR Well; MP-23 = Nutrient Dosing Well
2. NA = Not Applicable; NM = Not Measured; ND = Not Detected; N = Nitrate; P = Phosphate

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Chloro-form ( $\mu\text{g/L}$ )	Cyclo-hexane ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Methyl-Cyclohexane ( $\mu\text{g/L}$ )	Methylene Chloride ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Heptane ( $\mu\text{g/L}$ )	o-Xylenes ( $\mu\text{g/L}$ )	m,p-Xylenes ( $\mu\text{g/L}$ )	Notes
<i>NYS Standard/Guidance Value</i>		50	1	7	NS	5	NS	5	5	NS	5	5	
ON-SITE MONITORING WELL/POINTS													
DGC-1	12/7/1989	<1	<1	<1	NA	<1	NA	<1	<1	<1	<1	<1	Refer to QA/QC qualifier for Heptane
	11/9/1990	<10	<5	<5	NA	<5	NA	<5	<5	<5	<5	<5	
	12/7/1993	<10	<10	<10	NA	<10	NA	<10	<10	<10	<10	<10	
	11/1/2001	<10	<5	<5	<5	<5	<5	<5	<5	ND*	<5	<5	
	2/19/2004	<10	<5	<5	<5	<5	<5	<b>3 JB</b>	<5	<10	<5	<5	
DGC-2	12/7/1989	<1	<1	<1	NA	<1	NA	<1	<1	<1	<1	<1	Styrene - 1 JB $\mu\text{g/L}$
	11/9/1990	<10	<5	<5	NA	<5	NA	<5	<5	<5	<5	<5	
	12/6/1993	<10	<10	<10	NA	<10	NA	<10	<10	<10	<10	<b>4 JB</b>	
	11/1/2001	<10	<5	<5	<5	<5	<5	<5	<5	ND*	<5	<5	
	2/19/2004	<10	<5	<5	<5	<5	<5	<b>3 JB</b>	<5	<10	<5	<5	
DGC-3	12/7/1989	<1	<1	<1	NA	<1	NA	<1	<1	<1	<1	<1	not sampled - well destroyed
	11/9/1990	<10	<5	<5	NA	<5	NA	<5	<5	<5	<5	<5	
	12/6/1993	<10	<10	<10	NA	<10	NA	<10	<10	<10	<10	<b>2 JB</b>	
	11/1/2001												
DGC-4	12/7/1989	<1	<1	<1	NA	<1	NA	<1	<1	<1	<1	<1	Refer to QA/QC qualifier for Heptane
	11/9/1990	<10	<5	<5	NA	<5	NA	<5	<5	<5	<5	<5	
	12/7/1993	<10	<10	<10	NA	<10	NA	<10	<10	<10	<10	<10	
	11/1/2001	<10	<5	<5	<5	<5	<5	<5	NS	NS	NS	NS	
	2/19/2004	<10	<5	<5	<5	<5	<5	<b>2 JB</b>	<5	<10	<5	<5	
(Dup.)	12/7/1989	<1	<1	<1	NA	<1	NA	<1	<1	<1	<1	<1	well destroyed during 2010-2011 soil excavation activities
	11/9/1990	<10	<5	<5	NA	<5	NA	7	<5	<5	<5	<5	
	12/7/1993	<10	<10	<10	NA	<10	NA	<10	<10	<10	<10	<10	
	11/1/2001	<10	<5	<5	<5	<5	<5	<5	<5	ND*	<5	<5	
	2/19/2004	<b>32</b>	<5	<5	<5	<5	<5	<b>5 JB</b>	<5	<10	<5	<5	
	2/19/2004	<10	<5	<5	<5	<5	<5	<b>3 JB</b>	<5	<10	<5	<5	
	12/8/2011	<10	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Chloro-form ( $\mu\text{g/L}$ )	Cyclo-hexane ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Methyl-Cyclohexane ( $\mu\text{g/L}$ )	Methylene Chloride ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Heptane ( $\mu\text{g/L}$ )	o-Xylenes ( $\mu\text{g/L}$ )	m,p-Xylenes ( $\mu\text{g/L}$ )	Notes
<i>NYS Standard/Guidance Value</i>		<b>50</b>	<b>1</b>	<b>7</b>	<b>NS</b>	<b>5</b>	<b>NS</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>NS</b>	<b>5</b>	<b>5</b>
DGC-6	11/9/1990	<b>BPQL</b>	<2500	<2500	NA	<2500	NA	<b>BPQL</b>	<b>35,000</b>	<2500	<2500		
	12/7/1993	<10	<10	<10	NA	<10	NA	<10	<b>180</b>	<10	<10		Carbon disulfide - 1 J $\mu\text{g/L}$
	11/1/2001	<10	<5	<5	<5	<5	<5	<5	<5	ND*	<5	<5	Refer to QA/QC qualifier for Heptane
	2/20/2004	<10	<5	<5	<5	<5	<5	<b>4 JB</b>	<5	<10	<5	<5	
	6/16/2004	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
	10/28/2004	<10	<10	<10	<10	<10	<10	<b>6 J</b>	<10	<10	<10	<10	
DGC-7	11/9/1990	<b>BPQL</b>	<500	<500	NA	<500	NA	<b>BPQL</b>	<b>6,400</b>	<500	<500		
	12/7/1993	<10	<10	<10	NA	<10	NA	<10	<b>2 J</b>	<10	<10		
	11/1/2001	<10	<5	<5	<5	<5	<5	<5	<b>150</b>	ND*	<5	<5	Refer to QA/QC qualifier for Heptane
	2/18/2004	<10	<5	<5	<5	<5	<5	<b>4 JB</b>	<5	<10	<5	<5	
	6/15/2004	<b>2 JB</b>	<5	<5	<5	<5	<5	<5	<b>1 JB</b>	<10	<5	<5	4-Methyl-2-pentanone - 1 J $\mu\text{g/L}$
	10/27/2004	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
DGC-8  (Dup.)	11/9/1990	<b>BPQL</b>	<5000	<5000	NA	<5000	NA	<b>8,000 B</b>	<b>95,000</b>	<5000	<5000		
	12/7/1993	<8300	<8300	<8300	NA	<8300	NA	<b>880 J</b>	<b>290,000</b>	<1700	<b>2,400 JB</b>		
	8/16/1995	NA	NA	NA	NA	NA	NA	<b>160,000</b>	<b>52</b>	NA	NA		
	11/1/2001	ND	ND	ND	NA	ND	NA	<b>200,000</b>	ND*	ND	<b>150 J</b>	Refer to QA/QC qualifier for Heptane	
	2/19/2004	<20000	<10000	<10000	<10000	<10000	<10000	<b>200,000</b>	<20000	<10000	<10000	<10000	
	6/15/2004	<b>2,100 JB</b>	<5000	<5000	<5000	<5000	<5000	<5000	<b>190,000</b>	<10000	<5000	<5000	
	6/15/2004	<10000	<5000	<5000	<5000	<5000	<5000	<5000	<b>110,000</b>	<10000	<5000	<5000	
well destroyed during 2010-2011 soil excavation activities													
DGC-9	12/1/1990	-	-	-	-	-	-	ND	ND	-	-		
	12/7/1993	<10	<10	<10	NA	<10	NA	<10	<b>2 J</b>	<10	<10		
	11/1/2001	<10	<5	<5	<5	<5	<5	<5	<5	ND*	<5	<5	Refer to QA/QC qualifier for Heptane
	2/19/2004	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
	6/15/2004	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
DGC-10	12/1/1990	-	-	-	-	-	-	ND	ND	-	-		
	12/6/1993	<10	<10	<10	NA	<10	NA	<10	<10	<10	<b>1 JB</b>		
	11/1/2001	<10	<5	<5	<5	<5	<5	<5	<5	ND*	<5	<5	Refer to QA/QC qualifier for Heptane
	2/19/2004	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
	6/15/2004	<10	<5	<5	<5	<5	<5	<5	<5	<b>2 J</b>	<10	<5	<5

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone (µg/L)	Benzene (µg/L)	Chloro-form (µg/L)	Cyclo-hexane (µg/L)	Ethyl-benzene (µg/L)	Methyl-Cyclohexane (µg/L)	Methylene Chloride (µg/L)	Toluene (µg/L)	Heptane (µg/L)	o-Xylenes (µg/L)	m,p-Xylenes (µg/L)	Notes
<i>NYS Standard/Guidance Value</i>		50	1	7	NS	5	NS	5	5	5	NS	5	5
MW-11	2/20/2004	<10	<5	<5	<5	<5	<5	<b>4 JB</b>	<5	<10	<5	<5	
	6/15/2004	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
	10/28/2004	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	4/8/2005	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	10/25/2005	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	5/2/2006	<10	<10	<10	<10	<10	<b>6 JB</b>	<10	<10	<10	<10	<10	
MW-12	2/19/2004	<10	<5	<5	<5	<5	<5	<b>9 B</b>	<b>6</b>	<10	<5	<5	
	6/15/2004	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
	6/23/2005	<b>10 JB</b>	<10	<10	<10	<10	<10	<10	<b>3 J</b>	<10	<10	<10	
	8/21/2006	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	3/14/2007	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	9/20/2007	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	3/27/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	8/27/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	4/8/2009	<10	<5	<5	<5	<5	<5	<5	<b>15</b>	<10	<5	<5	
	6/1/2009	<10	<5	<5	<5	<5	<5	<b>7.0 B</b>	<5	<5	<5	<5	
	6/1/2009	<10	<5	<5	<5	<5	<5	<b>7.0 B</b>	<5	<5	<5	<5	
	6/3/2014	<6	<0.5	<0.5	<2	<0.5	<1	<2	<b>19</b>	<2	<0.5	<0.5	1,2-Dichloropropane - 0.6 J µg/L
	8/27/2014	<6	<0.5	<0.5	<2	<0.5	<1	<2	<b>100</b>	<2	<0.5	<0.5	1,2-Dichloropropane - 0.5 J µg/L
(Dup.)	10/21/2014	<6	<0.5	<0.5	<2	<0.5	<1	<2	<b>110/91</b>	<2	<0.5	<0.5	1,2-Dichloropropane - 0.7 J µg/L
	12/11/2014	<6	<0.5	<0.5	<2	<0.5	<1	<2	<b>0.8 J</b>	<2	<0.5	<0.5	1,2-Dichloropropane - 0.5 J µg/L
	8/13/2015	<6	<0.5	<0.5	<2	<0.5	<1	<2	<b>2</b>	<2	<0.5	<0.5	1,2-Dichloropropane - 0.6 J µg/L
	1/6/2016	<6	<0.5	<0.5	<2	<0.5	<1	<2	<b>9</b>	<2	<0.5	<0.5	1,2-Dichloropropane - 0.7 J µg/L
	7/12/2016	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	1,2-dichloropropane - 0.7 J µg/L
	4/25/2017	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	1,2-dichloropropane - 0.7 J µg/L
	11/14/2017	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	9/12/2018	<0.7	<0.2	<0.2	<0.2	<0.4	<0.2	<0.3	<b>2</b>	<0.2	<0.4	<1	
	12/6/2018	<0.7	<0.2	<0.2	<0.2	<0.4	<0.2	<0.3	<0.2	<0.2	<0.4	<1	1,2-dichloropropane - 0.3 J µg/L
	4/30/2019	<0.7	<0.2	<0.2	<0.2	<0.4	<0.2	<0.3	<0.2	<0.2	<0.4	<1	
& Dup.	9/12/2019	<10	<5.0	<5.0	<10	<5.0	<10	<5.0	<b>28</b>	<5.0	<5.0	<5.0	Chloromethane - <5.0 µg/L
	11/20/2019	<10	<5.0	<5.0	<10	<5.0	<10	<5.0	<b>0.49 J</b>	<5.0	<5.0	<5.0	
	7/14/2020	<5.0 R	<0.20 R	<0.24R	<0.26 R	<0.20 R	<0.20 R	<0.65 R	<b>17 J</b>	<0.26 R	<0.20 R	<0.20R	
	10/12/2020	<10	<5.0	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	1,2-dichloropropane - 0.24 J µg/L
	4/20/2021	<10	<5.0	<5.0	<10	<5.0	<10	<5.0	<b>0.50 J</b>	<5.0	<5.0	<5.0	1,2-dichloropropane - 0.23 J µg/L, Carbon Disulfide - 0.57 J µg/L
	10/21/2021	<10	<5.0	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone (µg/L)	Benzene (µg/L)	Chloro-form (µg/L)	Cyclo-hexane (µg/L)	Ethyl-benzene (µg/L)	Methyl-Cyclohexane (µg/L)	Methylene Chloride (µg/L)	Toluene (µg/L)	Heptane (µg/L)	o-Xylenes (µg/L)	m,p-Xylenes (µg/L)	Notes
<i>NYS Standard/Guidance Value</i>		50	1	7	NS	5	NS	5	5	5	NS	5	
<b>MW-13</b>	2/19/2004	<b>63</b>	<5	<5	<5	<5	<5	<b>3 JB</b>	<5	<10	<5	<5	
(& Dup.)	6/15/2004	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
	3/14/2007	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	9/21/2007	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	3/27/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	8/27/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	4/8/2009	<10	<5	<5	<5	<5	<5	<5	<b>29</b>	<10	<5	<5	
	6/1/2009	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	
<b>MW-14</b>	2/18/2004	<20000	<10000	<10000	<10000	<10000	<10000	<b>8,300 JB</b>	<b>590,000 E</b>	<20000	<10000	<10000	
	10/28/2004	<1000	<1000	<1000	<1000	<b>470 J</b>	230 J	<b>430 J</b>	<b>16,000</b>	<1000	<b>1,100 J</b>	<b>3,600</b>	
	4/7/2005	<10000	<10000	<10000	<10000	<10000	<10000	<b>1,400 J</b>	<b>110,000</b>	<10000	<10000	<10000	
	5/2/2006	<5000	<5000	<5000	<5000	<5000	<5000	<b>2,600 JB</b>	<b>83,000</b>	<5000	<5000	<b>2,200 J</b>	
	3/27/2008	<500	<500	<500	<500	<500	<b>770</b>	<500	<b>9,300</b>	<500	<500	<b>270 J</b>	
	8/28/2008	<1000	<1000	<1000	<1000	<1000	<b>750 J</b>	<1000	<b>9,100</b>	<1000	<1000	<1000	
													well destroyed during 2010-2011 soil excavation activities
<b>MW-15</b>	2/19/2004	<10	<5	<5	<5	<5	<5	<b>3 JB</b>	<b>5</b>	<b>120</b>	<5	<b>1 J</b>	
	6/15/2004	<10	<5	<5	<5	<5	<5	<5	<b>3 J</b>	<10	<5	<5	
	10/28/2004	<10	<10	<10	<10	<10	<b>37</b>	<10	<b>3 J</b>	<10	<10	<10	
	4/7/2005	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	3/14/2007	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	9/20/2007	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	3/27/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	8/27/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	4/8/2009	<10	<5	<5	<5	<5	<5	<5	<b>20</b>	<10	<5	<5	
	6/1/2009	<10	<5	<5	<5	<5	<5	<5	<b>13</b>	<5	<5	<5	
	5/12/2011	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
	5/2/2012	<b>7.7 J</b>	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0	
	11/28/2012	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<b>26</b>	<10	<5.0	<5.0	
	4/17/2013	<6	<0.5	<0.8	<2	<0.8	<b>6</b>	<2	<0.7	<2	<0.8	<0.8	
	6/3/2014	<6	<0.5	<0.5	<2	<0.5	<1	<2	<b>100</b>	<2	<0.5	<0.5	
	8/28/2014	<6	<0.5	<0.5	<2	<0.5	<b>1 J</b>	<2	<b>7</b>	<2	<0.5	<0.5	

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone (µg/L)	Benzene (µg/L)	Chloro-form (µg/L)	Cyclo-hexane (µg/L)	Ethyl-benzene (µg/L)	Methyl-Cyclohexane (µg/L)	Methylene Chloride (µg/L)	Toluene (µg/L)	Heptane (µg/L)	o-Xylenes (µg/L)	m,p-Xylenes (µg/L)	Notes
NYS Standard/Guidance Value	50	1	7	NS	5	NS	5	5	5	NS	5	5	
MW-15R (Dup.) (& Dup.)	4/29/2015	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	Chloromethane - <5.0 µg/L
	4/29/2015	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	8/13/2015	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	3/15/2016	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	7/12/2016	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	4/25/2017	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	11/14/2017	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	9/12/2018	<0.7	<0.2	<0.2	<0.2	<0.4	<0.2	<0.3	<0.2	<0.2	<0.4	<1	
	12/6/2018	<0.7	<0.2	<0.2	<0.2	<0.4	<0.2	<0.3	<b>0.3 J</b>	<0.2	<0.4	<1	
	4/30/2019	<0.7	<0.2	<0.2	<0.2	<0.4	<0.2	<0.3	<0.2	<0.2	<0.4	<1	
	9/12/2019	<10	<5.0	<5.0	<10	<5.0	<10	<5.0	<b>0.67 J</b>	<5.0	<5.0	<5.0	
	11/20/2019	<10	<5.0	<5.0	<10	<5.0	<10	<5.0	<b>28</b>	<5.0	<5.0	<5.0	
	8/11/2020	<10	<5.0	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	
	10/12/2020	<10	<5.0	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	
	4/20/2021	<10	<5.0	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	
	10/21/2021	<10	<5.0	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	
MW-16	2/19/2004	<20	<10	<10	<10	<10	<b>16 B</b>	<b>190</b>	<20	<10	<10	<10	
	6/16/2004	<10	<5	<5	<5	<5	<5	<b>2 JB</b>	<10	<5	<5	<5	
	10/28/2004	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	6/23/2005	<b>59</b>	<10	<10	<10	<10	<b>2 J</b>	<b>20</b>	<10	<10	<10	<10	
	10/25/2005	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	2/16/2006	<b>14 B</b>	<10	<10	<10	<10	<b>4 JB</b>	<10	<10	<10	<10	<10	
	5/2/2006	<b>9 J</b>	<10	<10	<10	<10	<b>4 JB</b>	<10	<10	<10	<10	<10	
	8/21/2006	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
MW-17	2/19/2004	<2000	<1000	<1000	<1000	<1000	<b>720 JB</b>	<b>33,000</b>	<2000	<1000	<1000	<1000	
	6/16/2004	<2000	<1000	<1000	<1000	<1000	<1000	<b>17,000</b>	<2000	<1000	<1000	<1000	
	6/23/2005	<b>440 B</b>	<b>15 J</b>	<100	<100	<100	<b>19 J</b>	<b>1,000</b>	<100	<100	<100	<100	
	8/27/2008	<10	<b>5.2 J</b>	<10	<10	<10	<b>2.9 J</b>	<10	<b>3.7 J</b>	<10	<10	<10	
	5/10/2011	<10	<5	<5	<5	<5	<b>12</b>	<5	<b>21</b>	<10	<5	<5	
	12/8/2011	<10	<5	<5	<5	<5	<b>7.9</b>	<5	<b>2.0 J</b>	<10	<5	<5	
MW-20	5/10/2011	<10000	<5000	<5000	<5000	<5000	<5000	<b>83,000</b>	<10000	<5000	<5000	<5000	
	7/27/2011	<3400	<2500	<2500	<2500	<2500	<2500	<b>70,000</b>	<5000	<2500	<2500	<2500	
	10/19/2011	<b>230 J</b>	<250	<250	<250	<250	<250	<b>160 J</b>	<b>8,200</b>	<500	<250	<250	
	5/3/2012	<b>41 J</b>	<25	<25	<25	<25	<b>19 J</b>	<25	<b>560</b>	<50	<25	<25	
MW-21	5/10/2011	<50	<25	<25	<25	<25	<25	<b>520</b>	<50	<25	<25	<25	
	5/12/2011	<600 J	<250 J	<250 J	<250 J	<250 J	<250 J	<b>4,300 J</b>	<500 J	<250 J	<250 J	<250 J	
	11/4/2015	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Chloroform ( $\mu\text{g/L}$ )	Cyclohexane ( $\mu\text{g/L}$ )	Ethylbenzene ( $\mu\text{g/L}$ )	Methyl-Cyclohexane ( $\mu\text{g/L}$ )	Methylene Chloride ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Heptane ( $\mu\text{g/L}$ )	o-Xylenes ( $\mu\text{g/L}$ )	m,p-Xylenes ( $\mu\text{g/L}$ )	Notes
NYS Standard/Guidance Value	50	1	7	NS	5	NS	5	5	5	NS	5	5	
MW-22	5/10/2011	<10000 J	<5000 J	<5000 J	<5000 J	<5000 J	<5000 J	<5000 J	120,000 J	<10000 J	<5000 J	<5000 J	
(Dup.)	7/27/2011	<4300	<2500	<2500	<2500	<2500	<2500	<5000	63,000	<5000	<2500	<2500	
(& Dup.)	7/27/2011	<4000	<2500	<2500	<2500	<2500	<2500	<4400	59,000	<5000	<2500	<2500	
(Dup.)	10/20/2011	2,500 J	<2500	<2500	<2500	<2500	<2500	1,800 J	45,000	<5000	<2500	<2500	
(Dup.)	12/8/2011	3,400 J	<2500	<2500	<2500	<2500	<2500	2,200 JB	40,000	<5000	<2500	<2500	
(Dup.)	2/21/2012	2,100 J	<1200	<1200	<1200	<1200	<1200	1,000 JB	40,000	<2500	<1200	<1200	
(Dup.)	5/3/2012	1,900 J	<1200	<1200	<1200	<1200	<1200	<1200	35,000	<2500	<1200	<1200	
(Dup.)	7/18/2012	<2000	<1000	<1000	<1000	<1000	<1000	<1000	30,000	<2000	<1000	<1000	
(Dup.)	11/29/2012	<2500	<1200	<1200	<1200	<1200	400 J	<1200	22,000	<2500	<1200	<1200	
(Dup.)	2/6/2013	<100	<50	<50	<50	<50	<50	<50	1,500	<100	<50	<50	
(Dup.)	4/16/2013	<120	16 J	<16	<40	<16	<20	<40	20,000	<40	<16	<16	
(Dup.)	6/4/2013	<60	10 J	<8	<20	<8	<10	<20	15,000	<20	<8	<8	
(Dup.)	12/10/2013	<60	23 J	<8	<20	<8	19 J	<20	20,000	<20	<8	<8	
(Dup.)	6/3/2014	<300	<25	<100	<25	<50	<100	<100	21,000	<100	<25	<25	
(Dup.)	8/27/2014	<6	10	<0.5	3 J	3	19	<2	3,500	<2	3	0.5 J	Chlorobenzene - 0.9 J $\mu\text{g/L}$
(Dup.)	10/21/2014	<10	43	<10	<40	10 J	77 J	<40	21,000	<40	<10	13 J	
(Dup.)	3/3/2015	<6	5	<0.5	3 J	2	20	<2	4,400	3 J	<0.5	2	Chlorobenzene - 0.7 J $\mu\text{g/L}$
(Dup.)	3/3/2015	<6	5	<0.5	3 J	2	21	<2	3,600	3 J	<0.5	2	Chlorobenzene - 0.7 J $\mu\text{g/L}$
(Dup.)	4/28/2015	<6	4	<0.5	2 J	0.9 J	16	<2	3,200	<2	<0.5	1	
(Dup.)	8/13/2015	<12	7	<1	<4	2 J	21	<4	4,000	<4	<1	2	
(Dup.)	4/28/2015	<6	4	<0.5	2 J	0.9 J	16	<2	3,200	<2	<0.5	1	
(Dup.)	8/13/2015	<12	7	<1	<4	2 J	21	<4	4,000	<4	<1	2	
(Dup.)	11/4/2015	<6	6	0.7 J	3 J	2	22	<4	2,200	3 J	<1	2	Chlorobenzene - 0.7 J $\mu\text{g/L}$
(Dup.)	11/4/2015	<12	5	<1	<4	1 J	18	<4	2,700	<4	<1	1 J	
(Dup.)	1/6/2016	<6	10	<0.5	5 J	1 J	32	<2	530	<2	<0.5	1 J	
(Dup.)	3/14/2016	<12	5	<1	<4	<1	14	<4	2,300	<4	<1	1 J	
(Dup.)	5/10/2016	<30	3 J	<3	<10	<3	9 J	<10	1,600	<10	<3	<3	
(Dup.)	5/10/2016	<12	3	<1	<4	<1	9 J	<4	1,500	<4	<1	<1	

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Chloroform ( $\mu\text{g/L}$ )	Cyclohexane ( $\mu\text{g/L}$ )	Ethylbenzene ( $\mu\text{g/L}$ )	Methyl-Cyclohexane ( $\mu\text{g/L}$ )	Methylene Chloride ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Heptane ( $\mu\text{g/L}$ )	o-Xylenes ( $\mu\text{g/L}$ )	m,p-Xylenes ( $\mu\text{g/L}$ )	Notes
<i>NYS Standard/Guidance Value</i>		<b>50</b>	<b>1</b>	<b>7</b>	<b>NS</b>	<b>5</b>	<b>NS</b>	<b>5</b>	<b>5</b>	<b>NS</b>	<b>5</b>	<b>5</b>	
<b>MW-22</b>	6/13/2016	<6	<b>2</b>	<0.5	<2	<0.5	<b>8</b>	<2	<b>710</b>	<2	<0.5	<0.5	
(Cont.)	7/12/2016	<6	<b>0.7 J</b>	<0.5	<2	<0.5	<b>7</b>	<2	<b>270</b>	<2	<0.5	<0.5	
(Dup.)	7/12/2016	<6	<b>0.8 J</b>	<0.5	<2	<0.5	<b>8</b>	<2	<b>320</b>	<2	<0.5	<0.5	
(Dup.)	8/2/2016	<6	<b>8</b>	<0.5	<2	<0.5	<b>6 J</b>	<2	<b>3,200</b>	<2	<0.5	<0.5	
(Dup.)	8/2/2016	<6	<b>7</b>	<0.5	<2	<0.5	<b>6 J</b>	<2	<b>3,000</b>	<2	<0.5	<0.5	
(Dup.)	9/19/2016	<6	<b>4</b>	<0.5	<b>3 J</b>	<b>0.7 J</b>	<b>16</b>	<2	<b>810</b>	<b>3 J</b>	<b>1 J</b>	<0.5	
(Dup.)	9/19/2016	<6	<b>4</b>	<0.5	<b>3 J</b>	<b>0.6 J</b>	<b>16</b>	<2	<b>790</b>	<b>3 J</b>	<b>1 J</b>	<0.5	
(Dup.)	11/15/2016	<12	<b>6</b>	<0.5	<4	<1	<b>10 J</b>	<4	<b>1,300</b>	<4	<1	<1	
(Dup.)	11/15/2016	<12	<b>6</b>	<0.5	<4	<1	<b>8 J</b>	<4	<b>1,200</b>	<4	<1	<1	
	4/26/2017	<6	<b>1</b>	<0.5	<2	<0.5	<b>7</b>	<2	<b>45</b>	<2	<0.5	<0.5	
	11/15/2017	<30	<3	<3	<10	<3	<5	<3	<b>250</b>	<10	<3	<3	
	7/17/2018	<6	<0.5	<0.5	<2	<0.5	<b>4 J</b>	<0.5	<b>10</b>	<2	<0.5	<0.5	
	9/11/2018	<0.7	<b>0.2 J</b>	<0.2	<0.2	<0.4	<b>2 J</b>	<0.3	<0.2	<0.2	<0.4	<1	
	7/17/2019	<11 R	<b>3.4 J</b>	<1.2 R	<1.3 R	<1.0 R	<b>13 J</b>	<25 R	<b>740 J</b>	<1.3 R	<1.0 R	<b>1.5 J R</b>	
	9/12/2019	<500	<b>20 J</b>	<b>17 J</b>	<500	<250	<b>20 J</b>	<250	<b>6,200</b>	<250	<250	<250	
	11/20/2019	<500	<b>29 J</b>	<250	<500	<250	<b>27 J</b>	<250	<b>14,000 D</b>	<250	<250	<b>12 J</b>	
	7/14/2020	<5.0 R	<b>16 J</b>	<0.24 R	<b>1.8 J</b>	<b>0.80 J</b>	<b>11 J</b>	<0.65 R	<b>85 J</b>	<0.26 R	<b>0.35 J</b>	<b>1.3 J</b>	Chlorobenzene - 0.73 J $\mu\text{g/L}$
	8/10/2020	<b>5.0 J</b>	<b>7.7</b>	<5.0	<b>1.1 J</b>	<5.0	<b>5.1 J</b>	<5.0	<b>130 D</b>	<5.0	<b>0.24 J</b>	<b>0.84 J</b>	Chlorobenzene - 0.30 J $\mu\text{g/L}$
	4/19/2021	<10	<5.0	<5.0	<10	<5.0	<b>0.76 J</b>	<5.0	<b>0.29 J</b>	<5.0	<5.0	<5.0	2-butanone - 0.81 J $\mu\text{g/L}$
	7/28/2021	<10	<5.0	<5.0	<10	<5.0	<b>2.4 J</b>	<5.0	<5.0	<5.0	<5.0	<5.0	
<b>MW-23</b>	5/10/2011	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
	5/12/2011	<10 J	<5 J	<5 J	<5 J	<5 J	<5 J	<5 J	<5 J	<10 J	<5 J	<5 J	
	10/18/2011	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
<b>MW-24</b>	5/10/2011	<100	<50	<50	<50	<50	<50	<50	<b>2,200 EJ</b>	<100	<50	<50	
	11/3/2015	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
<b>MW-25</b>	7/25/2011	<6.7	<5	<b>3 J</b>	<5	<5	<5	<12	<5	<10	<5	<5	
	12/7/2011	<b>8.6 J</b>	<5	<5	<b>3.7 J</b>	<5	<b>28</b>	<5	<5	<10	<5	<5	
<b>MW-26</b>	7/25/2011	<b>8,500 B</b>	<2500	<2500	<2500	<2500	<2500	<2500	<b>2,700 B</b>	<b>59,000</b>	<5000	<2500	<2500
	12/8/2011	<2000	<1000	<1000	<1000	<1000	<1000	<1000	<b>1,200 B</b>	<b>22,000</b>	<2000	<1000	<1000
	2/23/2012	<b>630 JB</b>	<500	<500	<500	<500	<500	<500	<b>420 JB</b>	<b>7,900</b>	<1000	<500	<500
	12/9/2013	<60	<5	<8	<20	<b>19 J</b>	<10	<20	<b>6,800</b>	<20	<b>11 J</b>	<b>32 J</b>	

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Chloroform ( $\mu\text{g/L}$ )	Cyclohexane ( $\mu\text{g/L}$ )	Ethylbenzene ( $\mu\text{g/L}$ )	Methyl-Cyclohexane ( $\mu\text{g/L}$ )	Methylene Chloride ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Heptane ( $\mu\text{g/L}$ )	o-Xylenes ( $\mu\text{g/L}$ )	m,p-Xylenes ( $\mu\text{g/L}$ )	Notes
NYS Standard/Guidance Value	50	1	7	NS	5	NS	5	5	5	NS	5	5	
MW-27	7/25/2011	<31000	<10000	<b>6,200 J</b>	<10000	<10000	<10000	<10000	<b>260,000</b>	<20000	<10000	<10000	
	10/19/2011	<b>11,000 J</b>	<10000	<10000	<10000	<10000	<10000	<b>7,300 J</b>	<b>160,000</b>	<20000	<10000	<10000	
	12/8/2011	<b>14,000 J</b>	<10000	<10000	<10000	<10000	<10000	<b>8,800 JB</b>	<b>210,000</b>	<20000	<10000	<10000	
	2/23/2012	<b>8,800 JB</b>	<10000	<10000	<10000	<10000	<10000	<b>6,600 JB</b>	<b>180,000</b>	<20000	<10000	<10000	
	5/4/2012	<b>6,400 JB</b>	<5000	<5000	<5000	<5000	<5000	<b>6,000</b>	<b>100,000</b>	<10000	<5000	<5000	
	7/18/2012	<10000	<5000	<5000	<5000	<5000	<5000	<5000	<b>110,000</b>	<10000	<5000	<5000	2-Butanone - 2,700 J $\mu\text{g/L}$
	2/5/2013	<5000	<2500	<2500	<2500	<2500	<2500	<2500	<b>67,000</b>	<5000	<2500	<2500	
	4/17/2013	<300	<b>37 J</b>	<40	<100	<b>50 J</b>	<b>99 J</b>	<100	<b>95,000</b>	<100	<b>42 J</b>	<b>140 J</b>	
	6/5/2013	<300	<b>100 J</b>	<40	<100	<b>69 J</b>	<b>74 J</b>	<100	<b>110,000</b>	<100	<b>64 J</b>	<b>210 J</b>	
	12/10/2013	<300	<b>31 J</b>	<40	<100	<b>87 J</b>	<b>140 J</b>	<100	<b>110,000</b>	<100	<b>82 J</b>	<b>240 J</b>	
	6/3/2014	<600	<50	<50	<200	<b>110</b>	<b>100 J</b>	<200	<b>150,000</b>	<200	<b>90 J</b>	<50	
	8/27/2014	<300	<b>28 J</b>	<25	<100	<b>130</b>	<b>150 J</b>	<100	<b>140,000</b>	<100	<b>110</b>	<b>360</b>	
	10/21/2014	<300	<b>34 J</b>	<25	<100	<b>92</b>	<b>110 J</b>	<100	<b>150,000</b>	<100	<b>78</b>	<b>270</b>	
	12/10/2014	<300	<25	<25	<100	<b>99</b>	<b>310</b>	<100	<b>48,000</b>	<100	<b>84</b>	<b>320</b>	
	12/10/2014	<300	<25	<25	<100	<b>100</b>	<b>300</b>	<100	<b>52,000</b>	<100	<b>85</b>	<b>320</b>	
	3/3/2015												well not accessible due to snow/ice cover
	4/29/2015	<300	<25	<25	<100	<b>57</b>	<b>53 J</b>	<100	<b>110,000</b>	<100	<b>39 J</b>	<b>150</b>	
	8/13/2015	<300	<25	<25	<100	<b>72</b>	<b>130 J</b>	<100	<b>70,000</b>	<100	<b>56</b>	<b>200</b>	
	11/4/2015	<3000	<250	<250	<1000	<250	<500	<1000	<b>110,000</b>	<1000	<250	<250	
	1/6/2016	<300	<25	<25	<100	<25	<b>120 J</b>	<100	<b>67,000</b>	<100	<b>46 J</b>	<b>220</b>	Ethylbenzene - 120 $\mu\text{g/L}$

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Chloro-form ( $\mu\text{g/L}$ )	Cyclo-hexane ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Methyl-Cyclohexane ( $\mu\text{g/L}$ )	Methylene Chloride ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Heptane ( $\mu\text{g/L}$ )	o-Xylenes ( $\mu\text{g/L}$ )	m,p-Xylenes ( $\mu\text{g/L}$ )	Notes
<i>NYS Standard/Guidance Value</i>	<i>50</i>	<i>1</i>	<i>7</i>	<i>NS</i>	<i>5</i>	<i>NS</i>	<i>5</i>	<i>5</i>	<i>NS</i>	<i>5</i>	<i>5</i>	<i>5</i>	
<b>MW-27</b>	3/15/2016	<b>350</b>	<b>57</b>	<5	<b>95</b>	<b>120</b>	<b>350</b>	<20	<b>110,000</b>	<20	<b>110</b>	<b>450</b>	2-Butanone - 69 J $\mu\text{g/L}$ ; carbon disulfide - 24 J $\mu\text{g/L}$ ; chloromethane - 12 J $\mu\text{g/L}$
(Cont.)	4/14/2016	<600	<50	<50	<200	<50	<100	<200	<b>35,000</b>	<200	<50	<b>120</b>	
	5/10/2016	<120	<b>19 J</b>	<10	<b>42 J</b>	<b>33</b>	<40	<b>91 J</b>	<b>11,000</b>	<40	<b>28</b>	<b>110</b>	
	6/13/2016	<60	<b>17</b>	<5	<b>68</b>	<b>52</b>	<b>130</b>	<20	<b>19,000</b>	<b>26 J</b>	<b>48</b>	<b>190</b>	
	7/12/2016	<120	<10	<10	<40	<b>15 J</b>	<b>33 J</b>	<40	<b>9,900</b>	<40	<10	<b>41</b>	
	8/2/2016	<120	<b>11 J</b>	<10	<10	<b>70</b>	<b>150</b>	<40	<b>32,000</b>	<b>47 J</b>	<b>61</b>	<b>220</b>	
	9/19/2016	<6	<b>5</b>	<0.5	<b>14</b>	<b>12</b>	<b>43</b>	<2	<b>900</b>	<b>8</b>	<b>33</b>	<b>8</b>	
	11/14/2016	<6	<b>3</b>	<0.5	<2	<b>7</b>	<b>21</b>	<2	<b>550</b>	<b>19</b>	<b>10</b>	<b>3</b>	
	4/25/2017	<300	<25	<25	<100	<b>57</b>	<50	<100	<b>40,000</b>	<100	<b>44 J</b>	<b>150</b>	
	11/14/2017	<120	<10	<10	<40	<b>43</b>	<b>34 J</b>	<10	<b>38,000</b>	<40	<b>36</b>	<b>120</b>	
	11/14/2017	<120	<10	<10	<40	<b>42</b>	<b>38 J</b>	<10	<b>38,000</b>	<40	<b>34</b>	<b>120</b>	
	2/27/2018	<b>17 J</b>	<b>6</b>	<1	<b>46</b>	<b>63</b>	<b>170</b>	<1	<b>13,000</b>	<b>33</b>	<b>42</b>	<b>150</b>	cis-1,2-DCE - 1 J $\mu\text{g/L}$
	7/16/2018	<60	<b>8 J</b>	<5	<b>29 J</b>	<b>34</b>	<b>96</b>	<5	<b>8,100</b>	<20	<b>16</b>	<b>76</b>	
	7/16/2018	<60	<b>8 J</b>	<5	<b>34 J</b>	<b>42</b>	<b>99</b>	<5	<b>7,700</b>	<b>34 J</b>	<b>21</b>	<b>90</b>	
	9/12/2018	<14	<b>9 J</b>	<4	<b>29 J</b>	<b>63</b>	<b>49 J</b>	<6	<b>25,000</b>	<4	<b>37</b>	<b>140</b>	
	4/30/2019	<b>8 J</b>	<b>2</b>	<0.2	<b>14</b>	<b>9</b>	<b>43</b>	<0.3	<b>1,200</b>	<b>5 J</b>	<b>2</b>	<b>13</b>	2-butanone - 7 J $\mu\text{g/L}$
	7/18/2019	<b>620 JR</b>	<b>62 J</b>	<1,000 R	<2,000 R	<1,000 R	<b>84 J</b>	<1,000 R	<b>25,000 J</b>	<1,000 R	<1,000 R	<1,000 R	4-methyl-2-pentanone - 180 J $\mu\text{g/L}$
	9/12/2019	<10	<5.0	<5.0	<10	<5.0	<b>1.7 J</b>	<5.0	<b>2.6 J</b>	<5.0	<5.0	<5.0	
	11/20/2019	<10	<b>0.37 J</b>	<5.0	<10	<5.0	<10	<5.0	<b>490 D</b>	<5.0	<5.0	<b>0.38 J</b>	
	7/14/2020	<5.0	<0.20	<0.24	<0.26	<0.20	<0.20	<0.65	<b>11</b>	<0.26	<0.20	<0.20	
	8/10/2020	<2,500	<1,300	<b>290 J</b>	<2,500	<1,300	<2,500	<1,300	<b>41,000</b>	<1,300	<1,300	<1,300	4-methyl-2-pentanone - 160 J $\mu\text{g/L}$
	10/12/2020	<10	<b>1.7 J</b>	<5.0	<b>0.92 J</b>	<b>1.6 J</b>	<b>1.8 J</b>	<5.0	<b>140</b>	<5.0	<b>1.1 J</b>	<b>2.1 J</b>	Carbon disulfide - <10.0 $\mu\text{g/L}$ ; cis-1,2-DCE - 0.37 J $\mu\text{g/L}$
	4/20/2021	<50	<b>5.6 J</b>	<25	<b>19 J</b>	<b>12 J</b>	<b>18 J</b>	<25	<b>1,700 D</b>	<25	<b>12 J</b>	<b>22 J</b>	Carbon disulfide - 13 J $\mu\text{g/L}$
	7/28/2021	<10	<b>2.0 J</b>	<5.0	<b>6.4 J</b>	<b>1.4 J</b>	<b>22</b>	<5.0	<b>20</b>	<b>0.79 J</b>	<5.0	<5.0	Carbon disulfide - 3.3 J $\mu\text{g/L}$ ; cis-1,2-DCE - 0.38 J $\mu\text{g/L}$
	10/22/2021	<10	<b>3.0 J</b>	<5.0	<b>6.7 J</b>	<b>2.5 J</b>	<b>14</b>	<5.0	<b>80</b>	<b>1.9 J</b>	<b>1.9 J</b>	<b>5.1</b>	cis-1,2-DCE - 0.43 J $\mu\text{g/L}$ ; 2-butanone - 2.1 J $\mu\text{g/L}$ ; Carbon Disulfide - 0.53 J $\mu\text{g/L}$

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone (µg/L)	Benzene (µg/L)	Chloroform (µg/L)	Cyclohexane (µg/L)	Ethylbenzene (µg/L)	Methyl-Cyclohexane (µg/L)	Methylene Chloride (µg/L)	Toluene (µg/L)	Heptane (µg/L)	o-Xylenes (µg/L)	m,p-Xylenes (µg/L)	Notes
NYS Standard/Guidance Value	50	1	7	NS	5	NS	5	5	5	5	5	5	
MW-28 (Dup.)	6/13/2016	<60	28	<5	<20	33	300	<20	35,000	40 J	20	89	
	6/13/2016	<60	27	<5	<20	28	310	<20	29,000	41 J	17	74	
	7/13/2016	<120	20 J	<10	<40	15 J	120	<40	24,000	<40	37	<10	
	9/19/2016	<300	<25	<25	<100	<25	170 J	<100	28,000	<100	65	<25	
	11/14/2016	<120	27	<10	<40	27	94 J	<40	47,000	<40	69	16 J	
	4/25/2017	<120	14 J	<10	<40	<10	<20	<40	12,000	<40	<10	11 J	
	6/20/2017	<600	97 J	<50	<200	<50	170 J	<200	110,000	<200	<50	70 J	
	7/20/2017	<600	57 J	<50	<200	<50	120 J	<200	100,000	<200	<50	58 J	
	11/15/2017	<60	25	<5	<20	26	54	<5	21,000	<20	7 J	36	
	2/27/2018	<300	26 J	<25	<100	<25	59 J	<25	23,000	<100	<25	28 J	
	7/16/2018	790	190	16	<20	45	77	<5	230,000	<20	22	89	2-butanone - 98 J µg/L; carbon disulfide - 50 µg/L; chlorobenzene - 9 J µg/L; chloromethane - 56 µg/L; 4-methyl-2-pentanone - 65 J µg/L;
	9/11/2018	520	130	11	55	69	360	<3	160,000	<2	35	150	2-butanone - 49 J µg/L; carbon disulfide - 51 µg/L; chlorobenzene - 11 µg/L; chloromethane - 5 J µg/L; 4-methyl-2-pentanone - 110 µg/L;
	4/30/2019	<350	170 J	<100	<100	<200	290 J	<150	350,000 E	<100	<200	<500	
	7/18/2019	<5,000 R	120 J	<2,500 R	<5,000 R	<2,500 R	260 J	<2,500 R	180,000 DJ	<2,500 R	<2,500 R	<2,500 R	4-methyl-2-pentanone - 110 JR µg/L
	9/12/2019	<25,000 R	<13,000 R	1,100 J	<25,000 R	<13,000 R	<25,000 R	<13,000 R	340,000	<13,000 R	<13,000 R	<13,000 R	Dichloromethane - 1,900 JR µg/L
	11/20/2019	<25,000	<13,000	<13,000	<25,000	<13,000	<25,000	<13,000	300,000	<13,000	<13,000	<13,000	
	7/13/2020	<5,000 R	<200 R	<240 R	<260 R	<200 R	<200 R	<650 R	120,000 J	<260 R	<200 R	<200 R	
	8/10/2020	<10,000	<5,000	<5,000	<10,000	<5,000	420 J	<5,000	150,000	<5,000	<5,000	250 J	
	10/12/2020	<10,000	<5,000	<5,000	<10,000	<5,000	990 J	<5,000	120,000	<5,000	<5,000	250 J	
	10/12/2020	<5,000	<2,500	<2,500	<5,000	100 J	1,100 J	<2,500	130,000 D	140 J	<2,500	220 J	
	4/20/2021	<1,000	<500	52 J	<1,000	<500	100 J	<500	18,000	<500	<500	29 J	
	7/28/2021	<1,000	<500	36 J	<1,000	35 J	440 J	<500	29,000 D	<500	<500	<500	
	7/28/2021	<1,000	<500	77 J	<1,000	34 J	460 J	<500	35,000 D	<500	<500	<500	Bromodichloromethane - 28 J µg/L
	10/22/2021	<2,000	<1,000	180 J	<2,000	46 J	410 J	<500	19,000	56 J	<1,000	92 J	Bromodichloromethane - 54 J µg/L

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Chloroform ( $\mu\text{g/L}$ )	Cyclohexane ( $\mu\text{g/L}$ )	Ethylbenzene ( $\mu\text{g/L}$ )	Methyl-Cyclohexane ( $\mu\text{g/L}$ )	Methylene Chloride ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Heptane ( $\mu\text{g/L}$ )	o-Xylenes ( $\mu\text{g/L}$ )	m,p-Xylenes ( $\mu\text{g/L}$ )	Notes
<i>NYS Standard/Guidance Value</i>		<b>50</b>	<b>1</b>	<b>7</b>	<b>NS</b>	<b>5</b>	<b>NS</b>	<b>5</b>	<b>5</b>	<b>NS</b>	<b>5</b>	<b>5</b>	
MW-37R	5/3/2012	<b>18 J</b>	<10	<10	<10	<10	<b>5.4 J</b>	<10	<b>250</b>	<20	<10	<10	Sample collected after well development.
	7/17/2012	<20	<10	<10	<10	<10	<10	<10	<b>390</b>	<20	<10	<10	
	7/18/2012	<50	<25	<25	<25	<25	<25	<25	<b>640</b>	<50	<25	<25	
	11/29/2012	<100	<50	<50	<50	<50	<50	<50	<b>1,900</b>	<100	<50	<50	
MP-1	2/18/2004	<b>5,000</b>	<1000	<1000	<1000	<1000	<1000	<b>610 JB</b>	<b>35,000</b>	<2000	<1000	<1000	Chlorobenzene - 150 J $\mu\text{g/L}$
	4/7/2005	<b>94 J</b>	<100	<100	<b>78 J</b>	<100	<b>78 J</b>	<100	<b>1,300</b>	<100	<100	<100	
	6/23/2005	<b>7,000</b>	<2000	<2000	<2000	<2000	<2000	<b>600 J</b>	<b>36,000</b>	<2000	<2000	<4000	
	2/16/2006	<10	<10	<10	<10	<10	<b>39 J</b>	<b>3 JB</b>	<b>8 J</b>	<10	<10	<10	
(Dup.)	2/16/2006	<b>18 B</b>	<10	<10	<10	<10	<b>38 J</b>	<b>4 JB</b>	<b>8 J</b>	<10	<10	<10	Chlorobenzene - 150 J $\mu\text{g/L}$
	5/2/2006	<b>450 J</b>	<500	<500	<500	<500	<500	<b>330 JB</b>	<b>5,600</b>	<500	<500	<500	
	5/2/2006	<500	<500	<500	<500	<500	<500	<b>320 JB</b>	<b>5,400</b>	<500	<500	<500	
	3/14/2007	<100	<100	<100	<b>56 J</b>	<100	<b>120</b>	<b>320 JB</b>	<b>1,100</b>	<b>71 J</b>	<100	<100	
(Dup.)	9/21/2007	<20	<20	<20	<20	<20	<20	<20	<b>50</b>	<20	<20	<20	2-Butanone - 14 $\mu\text{g/L}$
	11/5/2015	<6	<0.5	<0.5	<2	<b>0.5 J</b>	<b>21</b>	<2	<b>190</b>	<2	<0.5	<b>0.8 J</b>	
	MP-2	2/18/2004	<200	<100	<100	<100	<100	<b>67 JB</b>	<b>2,200</b>	<200	<100	<100	DIL
	DIL	6/23/2005	<b>12 J</b>	<b>5 J</b>	<20	<20	<b>8 J</b>	<b>470 E</b>	<b>5 J</b>	<b>13</b>	<20	<20	<b>4 J</b>
	DIL	6/23/2005	<b>51 B</b>	<50	<50	<50	<50	<b>350</b>	<b>10 J</b>	<b>12 J</b>	<50	<50	<50
	DIL	10/25/2005	<500	<500	<500	<500	<500	<b>330 J</b>	<b>1,000</b>	<b>4,600</b>	<500	<500	<500
	DIL	6/2/2009	<100	<50	<50	<50	<50	<b>310</b>	<b>77</b>	<b>1,200</b>	<50	<50	<50
	DIL	8/26/2009	<20	<10	<10	<b>32</b>	<b>6.9 J</b>	<b>280</b>	<10	<b>330</b>	<10	<10	<10
	DIL	5/12/2011	<10	<5	<5	<5	<5	<5	<5	<b>70</b>	<10	<5	<5
	DIL	10/19/2011	<b>16</b>	<5	<5	<5	<5	<5	<5	<b>58</b>	<10	<5	<5
MP-3	5/2/2012	<b>15 J</b>	<10	<10	<10	<10	<b>5.5 J</b>	<10	<b>260</b>	<20	<10	<10	well destroyed during 2010-2011 soil excavation activities
	MP-3	2/18/2004	<25000	<12000	<12000	<12000	<12000	<b>6,500 JB</b>	<b>410,000</b>	<25000	<12000	<12000	
	MP-3	6/1/2009	<2000	<1000	<1000	<1000	<1000	<1000	<b>39,000</b>	<1000	<1000	<1000	
	MP-3	8/25/2009	<1000	<500	<500	<500	<500	<500	<b>15,000</b>	<500	<500	<500	
MP-4	2/19/2004	<100	<50	<50	<50	<50	<50	<b>89 B</b>	<b>1,700</b>	<100	<50	<50	well destroyed during 2010-2011 soil excavation activities
	MP-4												
MP-6	10/22/2021	<10	<5	<5	<10	<5	<b>0.25 J</b>	<5	<5	<5	<5	<5	

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Chloro-form ( $\mu\text{g/L}$ )	Cyclo-hexane ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Methyl-Cyclohexane ( $\mu\text{g/L}$ )	Methylene Chloride ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Heptane ( $\mu\text{g/L}$ )	o-Xylenes ( $\mu\text{g/L}$ )	m,p-Xylenes ( $\mu\text{g/L}$ )	Notes
<i>NYS Standard/Guidance Value</i>		<b>50</b>	<b>1</b>	<b>7</b>	<b>NS</b>	<b>5</b>	<b>NS</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>NS</b>	<b>5</b>	
MP-8	2/19/2004	<10	<5	<5	<5	<5	<5	<b>9 B</b>	<5	<10	<5	<5	
MP-9	2/19/2004	<10	<5	<5	<5	<5	<5	<b>7 B</b>	<b>12</b>	<b>72</b>	<5	<b>2 J</b>	
	6/15/2004	<10	<5	<5	<5	<5	<5		<b>5 JB</b>	<10	<5	<5	
	10/28/2004	<10	<10	<10	<10	<10	<10		<10	<10	<10	<10	
	4/8/2005	<10	<10	<10	<10	<10	<10		<10	<10	<10	<10	
	6/23/2005	<b>37</b>	<10	<10	<10	<10	<10	<b>2 J</b>	<10	<10	<10	<10	
MP-10	2/20/2004	<10	<b>4 J</b>	<5	<5	<5	<5	<b>7 B</b>	<b>400 E</b>	<b>6 J</b>	<5	<b>3 J</b>	
MP-10 RE	2/20/2004	<2000	<1000	<1000	<1000	<1000	<1000	<b>780 JB</b>	<b>1,700 D</b>	<2000	<1000	<1000	
	6/16/2004	<b>45 JB</b>	<50	<50	<50	<50	<50		<b>910</b>	<b>34 J</b>	<50	<50	
	4/8/2005	<10	<10	<10	<10	<10	<10		<b>21</b>	<10	<10	<10	
	10/25/2005	<10	<10	<10	<10	<10	<10	<b>13</b>	<b>10 J</b>	<10	<10	<10	
	2/16/2006	<10	<10	<10	<10	<10	<10	<b>4 JB</b>	<10	<10	<10	<10	
	5/2/2006	<10	<10	<10	<10	<10	<10	<b>5 JB</b>	<b>9 J</b>	<10	<10	<10	
	8/21/2006	<10	<10	<10	<10	<10	<b>8 J</b>	<10	<b>31</b>	<10	<10	<10	
	3/14/2007	<10	<10	<10	<10	<10	<10		<b>6 J</b>	<10	<10	<10	
	8/27/2008	<10	<10	<10	<10	<10	<10		<10	<10	<10	<10	
	5/10/2011	<10	<5	<5	<5	<5	<5		<5	<10	<5	<5	
	5/2/2012	<b>4.7 J</b>	<5.0	<5.0	<5.0	<5.0	<b>2.2 J</b>	<5.0	<b>2.9 J</b>	<10	<5.0	<5.0	
	11/28/2012	<10	<5.0	<5.0	<5.0	<5.0	<b>1.6 J</b>	<5.0	<5.0	<10	<5.0	<5.0	
(Dup.)	11/28/2012	<10 J	<5.0 J	<5.0 J	<5.0 J	<5.0 J	<b>5.6 J</b>	<5.0 J	<5.0 J	<10 J	<5.0 J	<5.0 J	
	4/16/2013	<6	<0.5	<0.8	<2	<0.8	<b>2 J</b>	<2	<0.7	<2	<0.8	<0.8	

2-Butanone - 38  $\mu\text{g/L}$

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Chloroform ( $\mu\text{g/L}$ )	Cyclohexane ( $\mu\text{g/L}$ )	Ethylbenzene ( $\mu\text{g/L}$ )	Methyl-Cyclohexane ( $\mu\text{g/L}$ )	Methylene Chloride ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Heptane ( $\mu\text{g/L}$ )	o-Xylenes ( $\mu\text{g/L}$ )	m,p-Xylenes ( $\mu\text{g/L}$ )	Notes
NYS Standard/Guidance Value		50	1	7	NS	5	NS	5	5	5	NS	5	
MP-11	2/20/2004	<10000	<5000	<5000	<5000	<5000	<5000	4,700 JB	150,000	<10000	<5000	<5000	
	6/23/2005	<10000	<10000	<10000	<10000	<10000	<10000	2,300 J	150,000	<10000	<10000	<10000	
	10/25/2005	<5000	<5000	<5000	<5000	<5000	<5000	2,700 J	60,000	<5000	<5000	<5000	
	2/16/2006	<b>16,000 B</b>	<10000	<10000	<10000	<10000	<10000	<b>4,300 JB</b>	<b>190,000</b>	<10000	<10000	<10000	
	3/14/2007	<5000	<5000	<5000	<5000	<5000	<5000	<5000	97,000	<5000	<5000	<5000	
	9/20/2007	<10000	<10000	<10000	<10000	<10000	<10000	<10000	<b>180,000</b>	<10000	<10000	<10000	
	4/8/2009	<10000	<5000	<5000	<5000	<5000	<5000	<5000	<b>100,000</b>	<10000	<5000	<5000	
	8/25/2009	<2500	<1200	<1200	<1200	<1200	<1200	<1200	<b>27,000</b>	<1200	<1200	<1200	
	11/3/2009	<5000	<2500	<2500	<2500	<2500	<2500	<2500	<b>71,000</b>	<5000	<2500	<2500	
	2/17/2010	<2000	<1000	<1000	<1000	<1000	<1000	<b>2,700</b>	<b>35,000</b>	<2000	<1000	<1000	
	5/10/2011	<10000 J	<500 J	<500 J	<500 J	<500 J	<500 J	<500 J	<b>17,000 J</b>	<1000 J	<500 J	<500 J	
	5/12/2011	<710	<500	<500	<500	<500	<500	<500	<b>24,000 EJ</b>	<1000	<500	<500	
	12/8/2011	<b>830 J</b>	<500	<500	<500	<500	<500	<b>410 JB</b>	<b>12,000</b>	<1000	<500	<500	
(Dup.)	2/22/2012	<b>420 JB</b>	<500	<500	<500	<500	<500	<b>110 JB</b>	<b>13,000</b>	<1000	<500	<500	
(Dup.)	5/2/2012	<b>320 J</b>	<250	<250	<250	<250	<250	<250	<b>6,800</b>	<500	<250	<250	
	5/2/2012	<b>690 B</b>	<250	<250	<b>140 J</b>	<250	<250	<b>140 J</b>	<b>8,600</b>	<500	<250	<250	
	2/6/2013	<500	<250	<250	<250	<250	<250	<250	<b>5,000</b>	<500	<250	<250	
	2/6/2013	<100	<50	<50	<50	<50	<50	<50	<b>1,600</b>	<100	<50	<50	
	4/16/2013	<30	<3	<4	<10	<b>5 J</b>	<b>6 J</b>	<10	<b>6,000</b>	<10	<4	<b>7 J</b>	
	11/3/2015	<6	<0.5	<0.5	<2	<0.5	<b>5 J</b>	<2	<b>36</b>	<2	<0.5	<b>1</b>	Chlorobenzene - 0.8 J $\mu\text{g/L}$
MP-12	2/20/2004	<10	<5	<5	<5	<5	<5	<b>4 JB</b>	<b>160</b>	<10	<5	<5	
	2/16/2006	<b>32 B</b>	<10	<10	<10	<10	<10	<b>3 JB</b>	<10	<10	<10	<10	
	2/18/2010	<10	<5	<5	<5	<5	<5	<b>3.4 J</b>	<5	<10	<5	<5	
	10/18/2011	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
MP-23	6/2/2009	<200	<100	<100	<100	<100	<100	<b>100</b>	<b>3,700</b>	<100	<100	<100	
	8/25/2009	<200	<100	<100	<100	<100	<100	<100	<b>2,800</b>	<100	<100	<100	
	2/18/2010	<500	<250	<250	<250	<250	<250	<250	<b>7,400</b>	<500	<250	<250	
	5/11/2011	<50	<25	<25	<25	<25	<25	<25	<b>1,100 EJ</b>	<50	<25	<25	
	7/17/2012	<200	<100	<100	<100	<100	<100	<100	<b>3,700</b>	<200	<100	<100	
	2/5/2013	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<b>24</b>	<10	<5.0	<5.0	
	11/4/2015	<6	<b>2</b>	<0.5	<2	<b>0.9 J</b>	<b>3 J</b>	<2	<b>450</b>	<2	<0.5	<b>1</b>	

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Chloroform ( $\mu\text{g/L}$ )	Cyclohexane ( $\mu\text{g/L}$ )	Ethylbenzene ( $\mu\text{g/L}$ )	Methyl-Cyclohexane ( $\mu\text{g/L}$ )	Methylene Chloride ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Heptane ( $\mu\text{g/L}$ )	o-Xylenes ( $\mu\text{g/L}$ )	m,p-Xylenes ( $\mu\text{g/L}$ )	Notes
NYS Standard/Guidance Value		50	1	7	NS	5	NS	5	5	NS	5	5	
MP-24	4/8/2009	<10000	<5000	<5000	<5000	<5000	<5000	96,000	<10000	<5000	<5000	<5000	
	8/25/2009	<2500	<1200	<1200	<1200	<1200	<1200	46,000	<1200	<1200	<1200	<1200	
	11/3/2009	<5000	<2500	<2500	<2500	<2500	<2500	67,000	<5000	<2500	<2500	<2500	
	2/18/2010	<5000	<2500	<2500	<2500	<2500	<2500	42,000	<5000	<2500	<2500	<2500	
	5/11/2011	<200	<100	<100	<100	<100	<100	2,300	<200	<100	<100	<100	
	7/18/2012	<100	<50	<50	<50	<50	<50	1,000	<100	<50	<50	<50	
	7/18/2012	<100	<50	<50	<50	<50	<50	860	<100	<50	<50	<50	
	2/5/2013	<50	<25	<25	<25	<25	<25	590	<50	<25	<25	<25	
	4/25/2017	<6	1	<0.5	<2	<0.5	<1	<2	90	<2	<0.5	0.9 J	
	6/20/2017	<600	58 J	<50	<200	<50	<100	<200	80,000	<200	<50	130	
	7/20/2017	<120	26	<10	<40	22	28 J	<40	26,000	<40	13 J	69	
	11/15/2017	<60	21	<5	<20	10	<10	<5	12,000	<20	6 J	25	Chlorobenzene - 5 J $\mu\text{g/L}$
	2/27/2018	<60	9 J	<5	<20	<5	<10	<5	3,900	<20	<5	7 J	
	7/16/2018	<300	<25	<25	<100	<25	<50	<25	17,000	<100	<25	46 J	
	9/12/2018	8 J	20	<0.2	10	38	33	<0.3	3,800 E	<0.2	24	86	2-butane - 2 J $\mu\text{g/L}$ ; carbon disulfide - 0.8 $\mu\text{g/L}$ ; chlorobenzene - 11 $\mu\text{g/L}$ ; 1,2-dichlorobenzene - 0.9 J; isopropylbenzene - 1 J $\mu\text{g/L}$ ; 4-methyl-2-pentanone - 4 J $\mu\text{g/L}$
	7/17/2019	88 BJR	17 J	<130 R	<250 R	21 J	25 J	<130 R	11,000 DJ	<130 R	19 J	61 J	2-butane - 22 JR $\mu\text{g/L}$ ; 4-methyl-2-pentanone - 140 J $\mu\text{g/L}$ ; carbon disulfide - 34 J $\mu\text{g/L}$ ; chlorobenzene - 5.8 J $\mu\text{g/L}$
	9/12/2019	<100	9.4 J	2.4 J	<100	7.1 J	19 J	<50	1,100	<50	3.1 J	15 J	4-methyl-2-pentanone - 30 J $\mu\text{g/L}$ ; carbon disulfide - 3.3 J $\mu\text{g/L}$ ; chlorobenzene - 2.3 J $\mu\text{g/L}$
	11/20/2019	<100	8.3 J	<50	<100	14 J	7.9 J	<50	3,700 D	<50	7.8 J	23 J	Chlorobenzene - 2.4 J $\mu\text{g/L}$
	7/13/2020	<130 R	<5.0 R	7.9 J	<6.5 R	<5.0 R	12 J	<17 R	3,700 J	<6.5 R	<5.0 R	8.4 J	
	8/10/2020	<250	22 J	11 J	<250	30 J	18 J	<130	9,500	<130	18 J	47 J	4-methyl-2-pentanone - 16 J $\mu\text{g/L}$
	4/20/2021	<50	4.2 J	<25	<50	1.9 J	<50	<25	880	<25	2.0 J	5.1 J	4-methyl-2-pentanone - 1.1 J $\mu\text{g/L}$
	7/28/2021	<50	3.0 J	<25	<50	2.1 J	<500	<25	870	<25	<25	<25	

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone (µg/L)	Benzene (µg/L)	Chloroform (µg/L)	Cyclohexane (µg/L)	Ethylbenzene (µg/L)	Methyl-Cyclohexane (µg/L)	Methylene Chloride (µg/L)	Toluene (µg/L)	Heptane (µg/L)	o-Xylenes (µg/L)	m,p-Xylenes (µg/L)	Notes
NYS Standard/Guidance Value	50	1	7	NS	5	NS	5	5	5	NS	5	5	
MP-25	6/2/2009	<10000	<5000	<5000	<5000	<5000	6,000	150,000	<5000	<5000	<5000	<5000	
	2/18/2010	<500	<250	<250	<250	<250	<250	7,100	<500	<250	<250	<250	
	5/10/2011	<1000	<500	<500	<500	<500	<500	11,000	<1000	<500	<500	<500	
	5/4/2012	<b>3,300 JB</b>	<2500	<2500	<2500	<2500	<2500	<b>2,600</b>	79,000	<5000	<2500	<2500	
	7/17/2012	<5000	<2500	<2500	<2500	<2500	<2500	<2500	66,000	<5000	<2500	<2500	
	2/5/2013	<10000	<5000	<5000	<5000	<5000	<5000	<5000	130,000	<10000	<5000	<5000	
	4/17/2013	<600	<b>78 J</b>	<80	<200	<80	<b>440 J</b>	<200	160,000	<200	<80	<b>110 J</b>	
	6/5/2013	<120	<b>51 J</b>	<40	<100	<b>47 J</b>	<b>190 J</b>	<200	120,000	<100	<40	<b>74 J</b>	
	12/10/2013	<300	<b>41 J</b>	<40	<100	<b>70 J</b>	<b>510</b>	<100	98,000	<100	<40	<b>87 J</b>	
	6/3/2014	<600	<b>60 J</b>	<50	<200	<b>73 J</b>	<b>670</b>	<200	79,000	<200	<b>91 J</b>	<50	
	8/27/2014	<120	<b>60</b>	<10	<b>44 J</b>	<b>51</b>	<b>570</b>	<40	<b>54,000</b>	<40	<b>11 J</b>	<b>65</b>	
	8/27/2014	<120	<b>65</b>	<10	<b>48 J</b>	<b>57</b>	<b>630</b>	<40	<b>58,000</b>	<40	<b>12 J</b>	<b>73</b>	
	10/21/2014	<600	<b>80 J</b>	<50	<200	<b>79 J</b>	<b>650</b>	<200	<b>100,000</b>	<200	<50	<b>98 J</b>	
(Dup.)	12/10/2014	<3000	<250	<250	<1000	<250	<500	<1000	<b>170,000</b>	<1000	<250	<250	
	3/3/2015								well not accessible due to snow/ice cover				
	4/28/2015	<120	<b>28</b>	<10	<40	<40	<b>230</b>	<40	<b>92,000</b>	<40	<10	<b>57</b>	
	8/13/2015	<60	<b>39</b>	<5	67	65	<b>550</b>	<20	<b>110,000</b>	<20	17	<b>96</b>	
	11/4/2015	<120	<b>19 J</b>	<10	<40	<b>29</b>	<b>300</b>	<40	<b>46,000</b>	<40	<10	<b>40</b>	
	1/6/2016	<300	<b>30 J</b>	<25	<100	<b>48 J</b>	<b>370</b>	<100	<b>73,000</b>	<100	<25	<b>62</b>	
	3/15/2016	<600	<50	<50	<200	<50	<b>110 J</b>	<200	<b>69,000</b>	<200	<50	<50	
	5/10/2016	<1200	<100	<100	<200	<100	<b>240 J</b>	<400	<b>150,000</b>	<200	<100	<100	
	6/13/2016	<600	<50	<50	<200	<50	<b>540</b>	<200	<b>95,000</b>	<200	<50	<b>62 J</b>	
	7/13/2016	<60	<b>28</b>	<5	<b>28 J</b>	<b>33</b>	<b>330</b>	<20	<b>53,000</b>	<20	<b>7 J</b>	<b>47</b>	
	9/19/2016	<60	<b>42</b>	<5	<b>54</b>	<b>52</b>	<b>530</b>	<20	<b>86,000</b>	<20	<b>74</b>	<b>13</b>	
	11/14/2016	<120	<b>35</b>	<10	<40	<b>38</b>	<b>180</b>	<40	<b>67,000</b>	<40	<b>48</b>	<10	
	4/25/2017	<120	<10	<10	<40	<b>11 J</b>	<b>190</b>	<40	<b>8,000</b>	<40	<10	<b>14 J</b>	
	6/20/2017	<1,200	<b>160 J</b>	<100	<400	<100	<b>230 J</b>	<400	<b>140,000</b>	<400	<100	<100	Chloromethane 210 µg/L
	7/20/2017	<b>1,400 J</b>	<b>160</b>	<50	<200	<b>78 J</b>	<b>240 J</b>	<200	<b>200,000</b>	<200	<50	<b>100</b>	Chloromethane 160 µg/L
	11/15/2017	<b>650 J</b>	<b>140</b>	<50	<200	<b>110</b>	<b>140 J</b>	<50	<b>100,000</b>	<200	<50	<b>140</b>	

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone (µg/L)	Benzene (µg/L)	Chloro-form (µg/L)	Cyclo-hexane (µg/L)	Ethyl-benzene (µg/L)	Methyl-Cyclohexane (µg/L)	Methylene Chloride (µg/L)	Toluene (µg/L)	Heptane (µg/L)	o-Xylenes (µg/L)	m,p-Xylenes (µg/L)	Notes
NYS Standard/Guidance Value	50	1	7	NS	5	NS	5	5	5	5	5	5	
MP-25 (Cont.) (Dup.)	2/27/2018	<300	91	<25	<100	71	250 J	<25	170,000	<100	<25	96	
	2/27/2018	<b>300 J</b>	87	<25	<100	71	240 J	<25	180,000	<100	<25	94	
	7/16/2018	<b>280</b>	63	<3	<10	30	47	<3	140,000	<10	6	41	2-butanol - 31 J µg/L; carbon disulfide - 32 µg/L; chlorobenzene - 3 J µg/L; chloromethane - 5 µg/L; 4-methyl-2-pentanone - 60 µg/L
	9/11/2018	<b>910 J</b>	160	<20	35 J	96 J	250 J	<30	160,000	<20	<40	130 J	2-butanol - 71 J µg/L; carbon disulfide - 46 µg/L
	4/30/2019	<b>260</b>	160	<b>10 J</b>	43 J	<b>68</b>	430	<15	170,000	<10	<20	<b>100 J</b>	4-methyl-2-pentanone - 240 J ug/L Chlorobenzene - 11 J ug/L
	7/18/2019	<b>620 JR</b>	<b>110 J</b>	<1,000 R	<2,000	<1,000 R	<b>330 J</b>	<1,000 R	<b>53,000 D</b>	<1,000 R	<1,000 R	<b>40 J</b>	4-methyl-2-pentanone - 130 J µg/L; carbon disulfide - 130 J µg/L
	9/12/2019	<10,000 R	<b>410 J</b>	<b>1,800 J</b>	<10,000 R	<5,000 R	<b>710 J</b>	<5,000 R	<b>170,000 J</b>	<5,000 R	<5,000 R	<5,000 R	Dichloromethane - 460 JR µg/L
	11/20/2019	<5,000	<b>200 J</b>	<2,500	<5,000	<2,500	<b>400 J</b>	<2,500	<b>140,000 D</b>	<2,500	<2,500	<2,500	4-methyl-2-pentanone - 170 J µg/L
	7/13/2020	<2,500 R	<100 R	<b>780 J</b>	<130 R	<100 R	<b>200 J</b>	<330 R	<b>60,000 J</b>	<130 R	<100 R	<100 R	Bromodichloromethane - 170 J µg/L
	8/10/2020	<5,000	<2,500	<b>600 J</b>	<5,000	<2,500	<b>300 J</b>	<2,500	<b>59,000</b>	<2,500	<2,500	<2,500	Bromodichloromethane - 170 J µg/L
	10/12/2020	<1,000	<b>200 J</b>	<500	<b>39 J</b>	<b>48 J</b>	400 J	<500	<b>110,000 DJ</b>	<500	<500	<b>79 J</b>	2-butanol - <1,000 µg/L; 4-methyl-2-pentanone - 110 J µg/L; carbon disulfide - <1,000 µg/L
	4/20/2021	<10,000	<5,000	<b>250 J</b>	<10,000	<5,000	<b>290 J</b>	<5,000	<b>100,000</b>	<5,000	<5,000	<5,000	
	7/28/2021	<1,000	<b>99 J</b>	<b>110 J</b>	<1,000	<500	<b>210 J</b>	<500	<b>66,000 D</b>	<5,000	<5,000	<5,000	Bromodichloromethane - 28 J µg/L; carbon disulfide - 78 J µg/L
	10/22/2021	<5,000	<2,500	<b>300 J</b>	<5,000	<2,500	<b>200 J</b>	<2,500	<b>57,000</b>	<2,500	<2,500	<2,500	
MP-26	6/2/2009	<500	<250	<250	<250	<250	<250	<250	<b>8,800</b>	<250	<250	<250	
	8/25/2009	<1000	<500	<500	<500	<500	<500	<500	<b>12,000</b>	<500	<500	<500	
	2/18/2010	<5000	<2500	<2500	<2500	<2500	<2500	<2500	<b>64,000</b>	<5000	<2500	<2500	
	10/19/2011	<b>470 J</b>	<500	<500	<500	<500	<500	<b>280 J</b>	<b>13,000</b>	<1000	<500	<500	
	12/8/2011	<b>730 J</b>	<500	<500	<500	<500	<500	<b>450 JB</b>	<b>14,000</b>	<1000	<500	<500	
	2/22/2012	<b>480 JB</b>	<500	<500	<500	<500	<500	<b>210 JB</b>	<b>13,000</b>	<1000	<500	<500	
	5/3/2012	<1000	<500	<500	<500	<500	<500	<500	<b>13,000</b>	<1000	<500	<500	
	7/17/2012	<1000	<500	<500	<500	<500	<500	<500	<b>10,000</b>	<1000	<500	<500	
	2/5/2013	<4000	<2000	<2000	<2000	<2000	<2000	<2000	<b>69,000</b>	<4000	<2000	<2000	
	4/18/2013	<120	<b>20 J</b>	<16	<40	<16	<20	<40	<b>33,000</b>	<40	<16	<16	
	6/6/2013	<30	<b>3 J</b>	<4	<10	<4	<5	<10	<b>3,600</b>	<10	<4	<4	
	12/10/2013	<300	<b>30 J</b>	<40	<100	<40	<50	<100	<b>64,000</b>	<100	<40	<40	
	6/3/2014	<600	<50	<50	<200	<50	<100	<200	<b>41,000</b>	<200	<50	<50	
	8/28/2014	<300	<25	<25	<100	<25	<50	<100	<b>17,000</b>	<100	<25	<25	
	10/21/2014	<60	<b>6 J</b>	<5	<20	<5	<10	<20	<b>12,000</b>	<20	<5	<5	
	12/10/2014	<120	<b>10 J</b>	<10	<40	<10	<20	<40	<b>23,000</b>	<40	<10	<10	
	3/3/2015	<6	<b>17</b>	<0.5	<b>2 J</b>	<b>8</b>	<b>26</b>	<2	<b>29,000</b>	<b>3 J</b>	<b>4</b>	<b>16</b>	Chlorobenzene - 2 µg/L
	4/28/2015	<300	<25	<25	<100	<25	<50	<100	<b>23,000</b>	<100	<25	<25	
	8/13/2015	<60	<b>8 J</b>	<5	<20	<5	<10	<20	<b>13,000</b>	<20	<20	<b>8 J</b>	
	11/4/2015	<60	<b>6 J</b>	<5	<20	<5	<10	<20	<b>12,000</b>	<20	<10	<b>9 J</b>	

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone (µg/L)	Benzene (µg/L)	Chloro-form (µg/L)	Cyclo-hexane (µg/L)	Ethyl-benzene (µg/L)	Methyl-Cyclohexane (µg/L)	Methylene Chloride (µg/L)	Toluene (µg/L)	Heptane (µg/L)	o-Xylenes (µg/L)	m,p-Xylenes (µg/L)	Notes
NYS Standard/Guidance Value	50	1	7	NS	5	NS	5	5	5	NS	5	5	
MP-26 (Cont.)	1/6/2016	<120	<b>10 J</b>	<10	<40	<b>11 J</b>	<20	<40	<b>17,000</b>	<40	<10	<b>19 J</b>	
	3/15/2016	<300	<25	<25	<100	<25	<50	<100	<b>14,000</b>	<100	<25	<25	
	5/10/2016	<120	<b>18 J</b>	<10	<40	<b>10 J</b>	<40	<20	<b>25,000</b>	<40	<10	<b>21</b>	
	6/14/2016	<60	<b>8 J</b>	<5	<20	<5	<10	<20	<b>18,000</b>	<20	<5	<b>9 J</b>	
	7/13/2016	<120	<10	<10	<40	<10	<40	<40	<b>12,000</b>	<40	<10	<10	
	9/20/2016	<300	<25	<25	<100	<25	<50	<100	<b>16,000</b>	<100	<25	<25	
	4/26/2017	<60	<5	<5	<20	<5	<10	<20	<b>8,100</b>	<20	<5	<5	
	6/20/2017	<1,200	<b>190 J</b>	<100	<400	<100	<200	<400	<b>210,000</b>	<400	<100	<100	
	7/20/2017	<600	<b>150</b>	<50	<200	<60	<100	<200	<b>250,000</b>	<200	<50	<b>81 J</b>	
	11/15/2017	<600	<b>94 J</b>	<50	<200	<50	<b>110 J</b>	<50	<b>150,000</b>	<200	<50	<b>72 J</b>	
Duplicate	2/27/2018	<b>93</b>	<b>78</b>	<1	<b>8 J</b>	<b>38</b>	<b>100</b>	<1	<b>130,000</b>	<b>25</b>	<b>16</b>	<b>70</b>	2-butanol - 7 J µg/L; carbon disulfide - 12 µg/L; chlorobenzene - 18 µg/L; 4-methyl-2-pentanone - 71 µg/L
	7/17/2018	<b>770</b>	<b>170</b>	<5	<20	<b>26</b>	<b>18 J</b>	<5	<b>140,000</b>	<20	<b>13</b>	<b>52</b>	2-butanol - 34 J µg/L; carbon disulfide - 38 J µg/L; chlorobenzene - 16 µg/L; 4-methyl-2-pentanone - 340 µg/L
	9/11/2018	<b>460 J</b>	<b>130</b>	<20	<20	<b>51 J</b>	<b>37 J</b>	<30	<b>210,000</b>	<20	<40	<100	Carbon disulfide - 36 J µg/L; chlorobenzene - 24 µg/L; 4-methyl-2-pentanone - 440 µg/L
	4/30/2019	<180	<50	<50	<50	<100	<50	<75	<b>100,000</b>	<50	<100	<250	
	4/30/2019	<180	<50	<50	<50	<100	<50	<75	<b>99,000</b>	<50	<100	<250	
	7/17/2019	<5,000 R	<2,500 R	<2,500 R	<5,000 R	<5,000 R	<b>120 J</b>	<2,500 R	<b>86,000 J</b>	<2,500 R	<2,500 R	<2,500 R	4-Methyl-2-pentanone - 180 J µg/L
	9/12/2019	<10,000 R	<5,000 R	<b>1,800 J</b>	<10,000 R	<5,000 R	<5,000 R	<5,000 R	<b>150,000 DJ</b>	<5,000 R	<5,000 R	<5,000 R	4-Methyl-2-pentanone - 470 J µg/L; Bromodichloromethane - 500 J µg/L
	11/20/2019	<20,000	<10,000	<10,000	<20,000	<10,000	<20,000	<10,000	<b>110,000</b>	<10,000	<10,000	<10,000	
	7/13/2020	<2,500 R	<100 R	<b>520 J</b>	<130 R	<100 R	<100 R	<330 R	<b>79,000 J</b>	<130 R	<100 R	<100 R	Bromodichloromethane - 140 J µg/L
	8/11/2020	<5,000	<b>120 J</b>	<b>670 J</b>	<5,000	<2,500	<b>130 J</b>	<2,500	<b>130,000 D</b>	<2,500	<2,500	<b>120 J</b>	4-Methyl-2-pentanone - 360 J µg/L
	10/13/2020	<10,000	<5,000	<5,000	<10,000	<5,000	<10,000	<5,000	<b>84,000</b>	<5,000	<5,000	<5,000	
	4/21/2021	<5,000	<2,500	<b>260 J</b>	<5,000	<2,500	<5,000	<2,500	<b>62,000</b>	<2,500	<2,500	<2,500	
	7/28/2021	<5,000	<b>170 J</b>	<b>490 J</b>	<5,000	<2,500	<5,000	<2,500	<b>130,000 D</b>	<2,500	<2,500	<2,500	
	10/21/2021	<5,000	<2,500	<b>320 J</b>	<5,000	<2,500	<5,000	<2,500	<b>73,000</b>	<2,500	<2,500	<2,500	Bromodichloromethane - 130 J µg/L

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Chloroform ( $\mu\text{g/L}$ )	Cyclohexane ( $\mu\text{g/L}$ )	Ethylbenzene ( $\mu\text{g/L}$ )	Methyl-Cyclohexane ( $\mu\text{g/L}$ )	Methylene Chloride ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Heptane ( $\mu\text{g/L}$ )	o-Xylenes ( $\mu\text{g/L}$ )	m,p-Xylenes ( $\mu\text{g/L}$ )	Notes
NYS Standard/Guidance Value	50	1	7	NS	5	NS	5	5	5	5	5	5	
MP-27	6/2/2009	<10000	<5000	<5000	<5000	<5000	6,100	130,000	<5000	<5000	<5000	<5000	
	8/25/2009	<5000	<2500	<2500	<2500	<2500	<2500	50,000	<2500	<2500	<2500	<2500	
	2/18/2010	<1000	<500	<500	<500	<500	400 J	13,000	<1000	<500	<500	<500	
	7/19/2012	<20	<10	<10	<10	<10	<10	260	<20	<10	<10	<10	
	2/5/2013	<2000	<1000	<1000	<1000	<1000	<1000	41,000 EJ	<2000	<1000	<1000	<1000	
	4/18/2013	<300	34 J	<40	<100	<40	150 J	<100	67,000	<100	<40	<40	
	6/6/2013	<120	22 J	<16	<40	<16	44 J	<40	31,000	<40	<16	<16	
(Dup.)	12/10/2013	<120	<10	<16	<40	<16	57 J	<40	12,000	<40	<16	<16	
	12/10/2013	<60	10 J	<8	<20	<8	58	<20	12,000	<20	<8	9 J	
	6/3/2014	<15	15	<1	14	9	97	<5	33,000	<13	13	2 J	Chlorobenzene - 2 J $\mu\text{g/L}$
	8/28/2014	<300	<25	<25	<25	<25	<50	<100	18,000	<100	<25	<25	
	10/21/2014	<60	<5	<5	<20	<5	17 J	<20	8,500	<20	<5	<5	
	12/10/2014	<120	11 J	<10	<40	11 J	67 J	<40	33,000	<40	<10	15 J	
	3/3/2015	<6	4	<0.5	5	4	58	<2	9,400	4 J	1	6	Chlorobenzene - 1 J $\mu\text{g/L}$
	4/28/2015	<300	<25	<25	<100	<25	54 J	<100	28,000	<100	<25	<25	
	8/13/2015	<60	6 J	<5	<20	7 J	54	<20	14,000	<20	<20	10 J	
	11/4/2015	<60	<5	<5	<20	<5	50 J	<20	5,500	<20	<20	7 J	
	1/6/2016	<30	3 J	<3	12 J	7	59	<10	5,200	<10	<3	9	
	3/15/2016	<60	<5	<5	<20	7 J	69	<20	11,000	<20	<5	10	
	3/15/2016	<120	<10	<10	<40	<10	50 J	<40	12,000	<40	<10	<10	
	5/10/2016	<120	<10	<10	<40	<10	79 J	<40	11,000	<40	<10	12 J	
	6/13/2016	<12	4	<1	6 J	6	55	<4	7,500	<4	1 J	9	
	7/13/2016	<30	<3	<3	<10	3 J	23 J	<10	4,200	<10	<3	4 J	
	9/20/2016	<6	6	<0.5	6	9	77	<2	10,000	5	14	2	
	4/26/2017	<120	<10	<10	<40	<10	52 J	<40	9,400	<40	<10	<10	
	6/20/2017	1,400 J	150	<50	<200	<50	180 J	<200	88,000	<200	<50	<50	Chloromethane 60 J $\mu\text{g/L}$
	7/19/2017	1,500 J	150	<50	<200	<50	100 J	<200	120,000	<200	<50	<50	
	11/15/2017	<600	180	<50	<200	<50	<100	<50	150,000	<200	<50	55 J	4-methyl-2-pentanone - 410 J $\mu\text{g/L}$

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone (µg/L)	Benzene (µg/L)	Chloro-form (µg/L)	Cyclo-hexane (µg/L)	Ethyl-benzene (µg/L)	Methyl-Cyclohexane (µg/L)	Methylene Chloride (µg/L)	Toluene (µg/L)	Heptane (µg/L)	o-Xylenes (µg/L)	m,p-Xylenes (µg/L)	Notes
<i>NYS Standard/Guidance Value</i>		50	1	7	NS	5	NS	5	5	5	NS	5	
MP-27 (Cont.)	2/27/2018	<b>650 J</b>	<b>160</b>	<25	<100	<b>44 J</b>	<b>87 J</b>	<25	<b>280,000</b>	<100	<25	<b>61</b>	4-methyl-2-pentanone - 500 µg/L
	7/17/2018	<b>1,700</b>	<b>160</b>	<25	<100	<25	<50	<25	<b>32,000</b>	<100	<25	<25	
	9/11/2018	<b>1,200 J</b>	<b>190</b>	<20	<20	<40	<b>68 J</b>	<30	<b>99,000</b>	<20	<40	<100	2-butanone - 78 J µg/L; carbon disulfide - 33 J µg/L; chlorobenzene - 25 J µg/L; 4-methyl-2-pentanone - 450 J µg/L
	4/30/2019	<350	<b>120 J</b>	<100	<100	<200	<100	<150	<b>310,000</b>	<100	<200	<500	4-methyl-2-pentanone - 250 J ug/L
	7/17/2019	<500 R	<b>12 J</b>	<250 R	<b>53 J R</b>	<b>42 J</b>	<b>120 J</b>	<250 R	<b>15,000 DJ</b>	<250 R	<b>34 J</b>	<b>110 J</b>	Carbon Disulfide - 22 J µg/L;
	9/12/2019	<10,000 R	<5,000 R	<b>1,500 J</b>	<10,000 R	<5,000 R	<b>240 J</b>	<5,000 R	<b>120,000 J</b>	<5,000 R	<5,000 R	<5,000 R	4-methyl-2-pentanone - 310 J ug/L; Dichloromethane - 480 JR µg/L
	11/20/2019	<10,000	<5,000	<5,000	<10,000	<5,000	<10,000	<5,000	<b>200,000 D</b>	<5,000	<5,000	<5,000	4-methyl-2-pentanone - 410 J ug/L
	7/13/2020	<500 R	<b>62 J</b>	<b>110 J</b>	<26 R	<20 R	<b>43 J</b>	<65 R	<b>36,000 DJ</b>	<26 R	<20 R	<20 R	2-butanone - 87 J µg/L; 4-methyl-2-pentanone - 120 J µg/L; Bromodichloromethane - 21 J µg/L
	8/11/2020	<10	<b>7.7 J</b>	<5.0	<b>29</b>	<b>34</b>	<b>46</b>	<5.0	<b>14,000 D</b>	<b>1.0 J</b>	<b>28</b>	<b>85</b>	2-butanone - 2.1 J µg/L; Carbon Disulfide - 0.60 J µg/L; Chlorobenzene - 0.49 J µg/L; isopropylbenzene - 0.57 J µg/L; cis-1,2-DCE - 0.58 J µg/L
	10/13/2020	<1,000	<b>60 J</b>	<500	<1,000	<500	<b>22 J</b>	<500	<b>66,000 D</b>	<500	<500	<b>32 J</b>	4-methyl-2-pentanone - 190 J ug/L
	4/21/2021	<2,500	<1,300	<b>200 J</b>	<2,500	<1,300	<b>90 J</b>	<1,300	<b>47,000</b>	<1,300	<1,300	<1,300	4-methyl-2-pentanone - 74 J ug/L; Bromodichloromethane - 53 J µg/L
	7/28/2021	<2,500	<1,300	<b>290 J</b>	<2,500	<1,300	<b>67 J</b>	<1,300	<b>47,000</b>	<1,300	<1,300	<1,300	4-methyl-2-pentanone - 56 J ug/L; Bromodichloromethane - 64 J µg/L
	10/21/2021	<2,000	<1,000	<b>180 J</b>	<2,000	<1,000	<2,000	<1,000	<b>20,000</b>	<1,000	<1,000	<1,000	Bromodichloromethane - 57 J µg/L
MP-28	6/2/2009	<1000	<500	<500	<500	<500	<500	<500	<b>12,000</b>	<500	<500	<500	
	8/25/2009	<10	<5	<5	<5	<5	<5	<5	<b>100</b>	<5	<5	<5	
	2/18/2010	<50	<25	<25	<25	<25	<25	<25	<b>480</b>	<50	<25	<25	
	7/19/2012	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<b>170</b>	<10	<5.0	<5.0	
	2/5/2013	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<b>41</b>	<10	<5.0	<5.0	

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone (µg/L)	Benzene (µg/L)	Chloroform (µg/L)	Cyclohexane (µg/L)	Ethylbenzene (µg/L)	Methyl-Cyclohexane (µg/L)	Methylene Chloride (µg/L)	Toluene (µg/L)	Heptane (µg/L)	o-Xylenes (µg/L)	m,p-Xylenes (µg/L)	Notes
NYS Standard/Guidance Value	50	1	7	NS	5	NS	5	5	5	NS	5	5	
MP-29	6/2/2009	<50	<25	<25	<25	<25	<25	<25	690	<25	<25	<25	
	8/25/2009	<500	<250	<250	<250	<250	<250	<250	6,000	<250	<250	<250	
	2/18/2010	<500	<250	<250	<250	<250	<250	130 J	5,600	<500	<250	<250	
	7/18/2012	<1000	<500	<500	<500	<500	<500	<500	15,000	<1000	<500	<500	
	2/5/2013	<250	<120	<120	<120	<120	<120	<120	2,300	<250	<120	<120	
	11/3/2015	<120	<10	<10	<40	84	68 J	<40	42,000	<40	120	360	
	3/15/2016	<120	<10	<10	<40	<10	<20	<40	26,000	<40	<10	<10	
	5/10/2016	<120	<10	<10	<40	<10	26 J	<40	10,000	<40	<10	<10	
	6/13/2016	<12	2 J	<1	<4	3	16	<4	5,200	<4	<1	4	
	7/12/2016	<120	<10	<10	<40	<10	<40	<40	11,000	<40	<10	<10	
	9/20/2016	<30	<3	<3	<10	<3	30	<10	7,400	12 J	3 J	<3	
	11/15/2016	<120	<10	<10	<40	<10	<40	<40	11,000	<40	<10	<10	
	4/26/2017	<6	<0.5	<0.5	<2	<0.5	<1	<2	16	<2	<0.5	<0.5	
	6/19/2017	<120	<10	<10	<40	<10	<20	<40	10,000	<40	<10	<10	
	7/19/2017	<60	<5	<5	<20	<5	<10	<20	7,100	<20	<5	<5	
	7/19/2017	<60	<5	<5	<20	<5	<10	<20	6,500	<20	<5	<5	
	11/15/2017	<30	<3	<3	<10	<3	<5	<3	3,000	<10	<3	<3	
	7/17/2018	56	<1	<1	<4	<1	<2	<1	870	<4	<1	<1	
	9/11/2018	2 J	5	<0.2	<0.2	<0.4	0.5 J	<0.3	37	<0.2	<0.4	<1	Carbon disulfide - 0.3 J µg/L; chlorobenzene - 0.6 J µg/L; 4-methyl-2-pentanone - 1 J µg/L
	4/30/2019	<0.7	0.2 J	0.4 J	1 J	0.7 J	7	<0.3	940	3 J	<0.4	<1	Chlorobenzene - 0.5 J ug/L
	7/17/2019	52 BJR	<50 R	<50 R	<100 R	<50 R	13 J	<50 R	3,600 DJ	<50 R	<50 R	<50 R	
	9/12/2019	<1,000	<500	110 J	<1,000	<500	31 J	<500	12,000	<500	<500	<500	
	7/13/2020	<130 R	<5.0 R	<6.0 R	<6.5 R	<5.0 R	21 J	<17 R	14,000 DJ	<6.5 R	<5.0 R	7.6 J	
	8/10/2020	<1,000	<500	100 J	<1,000	<500	37 J	<500	17,000	29 J	<500	22 J	Bromodichloromethane - 28 J µg/L
	10/13/2020	<1,000	<500	<500	<1,000	<500	36 J	<500	16,000	<500	<500	<500	
	4/20/2021	<2,500	<1,300	210 J	<2,500	<1,300	59 J	<1,300	32,000	<1,300	<1,300	<1,300	Bromodichloromethane - 62 J µg/L
	7/28/2021	<2,500	<1,300	210 J	<2,500	<1,300	90 J	<1,300	42,000	<1,300	<1,300	<1,300	
	10/21/2021	<1,000	<500	93 J	<1,000	<500	42 J	<500	49,000 D	32 J	<500	24 J	Bromodichloromethane - 28 J µg/L

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Chloroform ( $\mu\text{g/L}$ )	Cyclohexane ( $\mu\text{g/L}$ )	Ethylbenzene ( $\mu\text{g/L}$ )	Methyl-Cyclohexane ( $\mu\text{g/L}$ )	Methylene Chloride ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Heptane ( $\mu\text{g/L}$ )	o-Xylenes ( $\mu\text{g/L}$ )	m,p-Xylenes ( $\mu\text{g/L}$ )	Notes
<i>NYS Standard/Guidance Value</i>		<b>50</b>	<b>1</b>	<b>7</b>	<b>NS</b>	<b>5</b>	<b>NS</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>NS</b>	<b>5</b>	
MP-30	4/8/2009	<1000	<500	<500	<500	<500	<500	<b>19,000</b>	<1000	<500	<500	<500	
(Dup.)	8/25/2009	<200	<100	<100	<100	<100	<100	<b>2,300</b>	<100	<100	<100	<100	
(Dup.)	2/18/2010	<1000	<500	<500	<500	<500	<500	<b>14,000</b>	<1000	<500	<500	<500	
(Dup.)	2/18/2010	<2000	<1000	<1000	<1000	<1000	<1000	<b>18,000</b>	<2000	<1000	<1000	<1000	
(Dup.)	5/10/2011	<200 J	<100 J	<100 J	<100 J	<100 J	<100 J	<b>4,200 DJ</b>	<200 J	<100 J	<100 J	<100 J	
(Dup.)	5/10/2011	<250	<120	<120	<120	<120	<120	<b>4,400</b>	<250	<120	<120	<120	
(Dup.)	5/12/2011	<1100 J	<500 J	<500 J	<500 J	<500 J	<500 J	<b>17,000 J</b>	<1000 J	<500 J	<500 J	<500 J	
(Dup.)	12/8/2011	<b>590 J</b>	<500	<500	<500	<500	<500	<b>410 JB</b>	<b>9,900</b>	<1000	<500	<500	
(Dup.)	5/2/2012	<1000	<500	<500	<500	<500	<500	<b>11,000</b>	<1000	<500	<500	<500	
(Dup.)	11/29/2012	<1000	<500	<500	<500	<500	<500	<b>11,000</b>	<1000	<500	<500	<500	
(Dup.)	2/6/2013	<250	<120	<120	<120	<120	<120	<b>2,500</b>	<250	<120	<120	<120	
(Dup.)	4/16/2013	<60	<b>8 J</b>	<8	<20	<8	<10	<b>8,900</b>	<20	<8	<8	<8	
(Dup.)	11/4/2015	<12	<b>7</b>	<1	<4	<1	<2	<b>1,600</b>	<4	<1	<b>1 J</b>		
MP-31	6/2/2009	<10	<5	<5	<5	<5	<b>4.4 J</b>	<b>5.6</b>	<5	<5	<5	<5	
MP-31	2/17/2010	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
MP-32	6/2/2009	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	
MP-32	2/17/2010	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
MP-33	4/8/2009	<20	<10	<10	<10	<10	<10	<b>350</b>	<b>22</b>	<10	<10		
MP-33	8/24/2009	<10	<5	<5	<5	<5	<5	<b>8.8</b>	<5	<5	<5	<5	
MP-33	2/17/2010	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
MP-34	5/11/2011	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
MP-34	7/25/2011	<5.4	<5	<5	<5	<5	<5	<6.3	<5	<10	<5	<5	
MP-35	5/11/2011	<500	<250	<250	<250	<250	<250	<b>7,400</b>	<b>300 J</b>	<250	<250		
MP-35	7/17/2012	<10	<5.0	<5.0	<5.0	<b>3.3 J</b>	<b>110</b>	<5.0	<b>4.2 J</b>	<b>130</b>	<5.0	<b>4.6 J</b>	
MP-36	10/19/2011	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
MP-36	2/21/2012	<b>5.9 JB</b>	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0	
(Dup.)	2/21/2012	<b>8.2 JB</b>	<5.0	<5.0	<5.0	<5.0	<5.0	<b>4.8 JB</b>	<5.0	<10	<5.0	<5.0	

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Chloroform ( $\mu\text{g/L}$ )	Cyclohexane ( $\mu\text{g/L}$ )	Ethylbenzene ( $\mu\text{g/L}$ )	MethylCyclohexane ( $\mu\text{g/L}$ )	Methylene Chloride ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Heptane ( $\mu\text{g/L}$ )	o-Xylenes ( $\mu\text{g/L}$ )	m,p-Xylenes ( $\mu\text{g/L}$ )	Notes
NYS Standard/Guidance Value	50	1	7	NS	5	NS	5	5	5	NS	5	5	
MP-37 (Dup.)	10/19/2011	<b>4,900 J</b>	<5000	<5000	<5000	<5000	<5000	<b>3,100 J</b>	<b>190,000</b>	<10000	<5000	<5000	Chlorobenzene - 1 J $\mu\text{g/L}$  Carbon disulfide - 15 J $\mu\text{g/L}$ ; chlorobenzene - 8 J $\mu\text{g/L}$ ; chloromethane - 5 J $\mu\text{g/L}$
	12/8/2011	<10000	<5000	<5000	<5000	<5000	<5000	<b>3,900 JB</b>	<b>170,000</b>	<10000	<5000	<5000	
	12/8/2011	<10000	<5000	<5000	<5000	<5000	<5000	<b>5,100 B</b>	<b>160,000</b>	<10000	<5000	<5000	
	2/21/2012	<b>3,000 JB</b>	<2500	<2500	<2500	<2500	<2500	<b>1,800 B</b>	<b>96,000</b>	<10000	<2500	<2500	
	5/3/2012	<b>4,000 J</b>	<2500	<2500	<2500	<2500	<2500	<2500	<b>56,000</b>	<5000	<2500	<2500	
	7/18/2012	<5000	<2500	<2500	<2500	<2500	<2500	<2500	<b>54,000</b>	<5000	<2500	<2500	
	11/29/2012	<5000	<2500	<2500	<2500	<2500	<2500	<2500	<b>80,000</b>	<5000	<2500	<2500	
	2/6/2013	<10000	<5000	<5000	<5000	<5000	<5000	<5000	<b>110,000</b>	<10000	<5000	<5000	
	4/16/2013	<120	<b>22 J</b>	<16	<40	<16	<b>22 J</b>	<40	<b>33,000</b>	<b>49 J</b>	<16	<16	
	6/4/2013	<120	<b>23 J</b>	<16	<40	<16	<b>26 J</b>	<40	<b>40,000</b>	<b>51 J</b>	<16	<16	
	12/10/2013	<300	<b>89 J</b>	<40	<100	<40	<b>50 J</b>	<100	<b>110,000</b>	<b>120 J</b>	<40	<40	
	6/2/2014	<1200	<b>120 J</b>	<100	<400	<100	<200	<400	<b>110,000</b>	<400	<100	<100	
	8/27/2014	<120	<b>68</b>	<10	<40	<b>15 J</b>	<b>84 J</b>	<40	<b>91,000</b>	<b>200</b>	<10	<b>22</b>	
	12/10/2014	<600	<b>81 J</b>	<50	<200	<50	<100	<200	<b>130,000</b>	<200	<50	<50	
	3/3/2015	<6	<b>13</b>	<0.5	<b>6</b>	<b>6</b>	<b>30</b>	<2	<b>13,000</b>	<b>67</b>	2	<b>9</b>	
	4/28/2015	<600	<50	<50	<200	<50	<100	<200	<b>70,000</b>	<200	<50	<50	
	8/13/2015	<60	<b>49</b>	<5	<20	<b>14</b>	<b>54</b>	<20	<b>61,000</b>	<b>98</b>	<5	<b>19</b>	
	11/4/2015	<120	<b>69</b>	<10	<40	<b>14 J</b>	<b>58 J</b>	<40	<b>79,000</b>	<b>130</b>	<10	<b>20</b>	
	1/6/2016	<120	<b>69</b>	<10	<40	<b>17 J</b>	<b>74 J</b>	<40	<b>68,000</b>	<40	<10	<b>22</b>	
	3/14/2016	<b>150 J</b>	<b>78</b>	<5	<20	<b>25</b>	<b>91</b>	<20	<b>120,000</b>	<20	<b>8 J</b>	<b>40</b>	
	4/14/2016	<600	<b>64 J</b>	<50	<200	<50	<100	<200	<b>100,000</b>	<b>210 J</b>	<50	<50	
	5/10/2016	<1200	<100	<100	<200	<100	<200	<400	<b>100,000</b>	<200	<100	<100	
	6/13/2016	<600	<50	<50	<200	<50	<100	<200	<b>57,000</b>	<200	<50	<50	
	7/12/2016	<b>150 J</b>	<b>24</b>	<10	<40	<10	<b>29 J</b>	<40	<b>31,000</b>	<40	<10	<10	
	8/2/2016	<300	<b>46 J</b>	<25	<100	<25	<50	<100	<b>71,000</b>	<100	<25	<25	
	9/19/2016	<300	<b>35 J</b>	<25	<100	<25	<b>68 J</b>	<100	<b>57,000</b>	<b>150 J</b>	<b>27 J</b>	<25	
	11/14/2016	<120	<b>34</b>	<10	<40	<b>14 J</b>	<b>35 J</b>	<40	<b>59,000</b>	<b>70 J</b>	<b>21</b>	<10	

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Chloroform ( $\mu\text{g/L}$ )	Cyclohexane ( $\mu\text{g/L}$ )	Ethylbenzene ( $\mu\text{g/L}$ )	Methyl-Cyclohexane ( $\mu\text{g/L}$ )	Methylene Chloride ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Heptane ( $\mu\text{g/L}$ )	o-Xylenes ( $\mu\text{g/L}$ )	m,p-Xylenes ( $\mu\text{g/L}$ )	Notes
<i>NYS Standard/Guidance Value</i>		<b>50</b>	<b>1</b>	<b>7</b>	<b>NS</b>	<b>5</b>	<b>NS</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>NS</b>	<b>5</b>	
MP-37 (Cont.)	4/26/2017	<300	<b>60</b>	<25	<100	<25	<50	<100	<b>73,000</b>	<100	<25	<25	
	6/19/2017	<1,200	<b>120 J</b>	<100	<400	<100	<200	<400	<b>180,000</b>	<400	<100	<100	
	7/19/2017	<600	<b>75 J</b>	<50	<200	<50	<100	<200	<b>150,000</b>	<b>220 J</b>	<50	<50	
	11/15/2017	<120	<b>27</b>	<10	<40	<b>13 J</b>	<b>41 J</b>	<10	<b>43,000</b>	<40	<10	<b>19 J</b>	
	2/27/2018	<300	<b>30 J</b>	<25	<100	<25	<50	<25	<b>60,000</b>	<100	<25	<25	
	7/17/2018	<300	<25	<25	<100	<25	<50	<25	<b>41,000</b>	<100	<25	<25	
	9/11/2018	<70	<b>29 J</b>	<20	<b>23 J</b>	<40	<b>57 J</b>	<30	<b>57,000</b>	<20	<40	<100	
	9/11/2018	<70	<b>28 J</b>	<20	<20	<40	<b>67 J</b>	<30	<b>57,000</b>	<20	<40	<100	
	4/30/2019	<70	<b>23 J</b>	<20	<20	<40	<20	<30	<b>30,000</b>	<20	<40	<100	
	7/17/2019	<110 R	<b>25 J</b>	<12 R	<b>82 J R</b>	<b>18 J</b>	<b>93 J</b>	<250 R	<b>19,000 DJ</b>	<b>120 J</b>	<10 R	<b>34 J</b>	
	7/17/2019	<110 R	<b>26 J</b>	<12 R	<b>95 J R</b>	<b>17 J</b>	<b>110 J</b>	<250 R	<b>18,000 DJ</b>	<b>140 J</b>	<10 R	<b>33 J</b>	
	9/12/2019	<2,500	<1,300	<b>460 J</b>	<2,500	<1,300	<2,500	<1,300	<b>24,000</b>	<b>81 J</b>	<1,300	<1,300	Bromodichloromethane - 120 J $\mu\text{g/L}$
	11/20/2019	<1,000	<b>23 J</b>	<500	<1,000	<500	<b>50 J</b>	<500	<b>19,000 D</b>	<b>44 J</b>	<500	<500	
	11/20/2019	<2,000	<1,000	<1,000	<1,000	<1,000	<1,000	<2,000	<1,000	<b>18,000</b>	<1,000	<1,000	
	7/13/2020	<250 R	<10 R	<12 R	<b>39 J</b>	<10 R	<b>50 J</b>	<33 R	<b>7,500 J</b>	<b>80 J</b>	<10 R	<b>12 J</b>	
	7/13/2020	<250 R	<10 R	<12 R	<b>47 J</b>	<10 R	<b>48 J</b>	<33 R	<b>7,400 J</b>	<b>85 J</b>	<10 R	<10 R	
	8/10/2020	<500	<b>27 J</b>	<250	<500	<b>17 J</b>	<b>61 J</b>	<250	<b>54,000 D</b>	<b>110 J</b>	<250	<b>28 J</b>	
	8/10/2020	<500	<b>32 J</b>	<b>18 J</b>	<b>75 J</b>	<b>15 J</b>	<b>75 J</b>	<250	<b>55,000 D</b>	<b>140 J</b>	<250	<b>33 J</b>	
	10/13/2020	<1,000	<500	<500	<b>53 J</b>	<500	<b>42 J</b>	<500	<b>17,000</b>	<b>66 J</b>	<500	<500	
	4/19/2021	<1,000	<500	<b>110 J</b>	<1,000	<500	<1,000	<500	<b>11,000</b>	<500	<500	<500	Bromodichloromethane - 32 J $\mu\text{g/L}$
	4/19/2021	<1,000	<500	<b>100 J</b>	<1,000	<500	<1,000	<500	<b>12,000</b>	<b>34 J</b>	<500	<500	Bromodichloromethane - 26 J $\mu\text{g/L}$
	7/28/2021	<1,000	<b>20 J</b>	<b>91 J</b>	<b>91 J</b>	<500	<b>110 J</b>	<500	<b>20,000 D</b>	<b>180 J</b>	<500	<500	Bromodichloromethane - 25 J $\mu\text{g/L}$
	10/21/2021	<1,000	<500	<b>60 J</b>	<1,000	<500	<1,000	<500	<b>12,000</b>	<b>28 J</b>	<500	<500	
	10/21/2021	<1,000	<500	<b>120 J</b>	<1,000	<500	<1,000	<500	<b>15,000</b>	<500	<500	<500	Bromodichloromethane - 37 J $\mu\text{g/L}$
MP-38	10/20/2011	<b>24 J</b>	<25	<25	<b>13 J</b>	<25	<b>60</b>	<b>15 J</b>	<b>500</b>	<50	<25	<25	

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Chloro-form ( $\mu\text{g/L}$ )	Cyclo-hexane ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Methyl-Cyclohexane ( $\mu\text{g/L}$ )	Methylene Chloride ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Heptane ( $\mu\text{g/L}$ )	o-Xylenes ( $\mu\text{g/L}$ )	m,p-Xylenes ( $\mu\text{g/L}$ )	Notes
	<i>NYS Standard/Guidance Value</i>	<b>50</b>	<b>1</b>	<b>7</b>	<b>NS</b>	<b>5</b>	<b>NS</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>NS</b>	<b>5</b>	
MP-39	10/18/2011	<b>52 J</b>	<50	<50	<50	<50	<b>60</b>	<b>1,700</b>	<100	<50	<50	<50	
	11/4/2015	<6	<b>4</b>	<0.5	<2	<0.5	<b>3 J</b>	<2	<b>750</b>	<2	<0.5	0.5 J	
	11/14/2017	<120	<b>46</b>	<10	<40	<10	<20	<10	<b>29,000</b>	<40	<10	<10	
	2/27/2018	<12	<b>7</b>	<1	<4	<1	<b>3 J</b>	<1	<b>1,100</b>	<4	<1	<1	
	9/11/2018	<b>1 J</b>	<b>5</b>	<0.2	<0.2	<b>0.5 J</b>	<b>4 J</b>	<0.3	<b>1,600</b>	<0.2	<0.4	<1	
	12/6/2018	<b>21</b>	<b>6</b>	<0.2	<b>0.9 J</b>	<b>0.5 J</b>	<b>2 J</b>	<0.3	<b>740</b>	<0.2	<0.4	<1	Methyl acetate - 0.6 J $\mu\text{g/L}$
	4/30/2019	<b>12 J</b>	<b>7</b>	<b>0.2 J</b>	<b>1 J</b>	<b>0.5 J</b>	<b>2 J</b>	<0.3	<b>1,100</b>	<b>1 J</b>	<0.4	<1	Methyl acetate - 0.6 J $\mu\text{g/L}$
(Dup.)	9/12/2019	<50	<b>2.6 J</b>	<b>1.3 J</b>	<50	<25	<b>3.3 J</b>	<25	<b>600</b>	<25	<25	<25	
	9/12/2019	<50	<b>2.3 J</b>	<25	<50	<25	<b>2.6 J</b>	<25	<b>540</b>	<25	<25	<25	
	11/20/2019	<b>8.7 BJ</b>	<b>4.2 J</b>	<10	<20	<10	<b>4.2 J</b>	<10	<b>240</b>	<10	<10	<b>0.52 J</b>	
	7/13/2020	<130 R	<b>17 J</b>	<6.0 R	<6.5 R	<5.0 R	<5.0 R	<17 R	<b>3,500 J</b>	<6.5 R	<5.0 R	<5.0 R	4-Methyl-2-pentanone - 2.3 J $\mu\text{g/L}$ ; carbon disulfide - <20 $\mu\text{g/L}$
	10/13/2020	<20	<b>34</b>	<10	<b>18 J</b>	<b>2.1 J</b>	<b>19 J</b>	<10	<b>15,000 D</b>	<b>23</b>	<b>1.5 J</b>	<b>4.3 J</b>	4-Methyl-2-pentanone - 1.4 J $\mu\text{g/L}$ ; carbon disulfide - 5.8 J $\mu\text{g/L}$
	4/20/2021	<20	<b>39</b>	<10	<b>6.1 J</b>	<b>1.6 J</b>	<b>11 J</b>	<10	<b>4,700 D</b>	<b>3.3 J</b>	<b>0.62 J</b>	<b>2.2 J</b>	
	10/21/2021	<10	<5.0	<5.0	<10	<5.0	<10	<5.0	<b>0.67 J</b>	<5.0	<5.0	<5.0	
MP-40	7/17/2012	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0	
	6/3/2014	<6	<0.5	<0.5	<2	<0.8	<1	<2	<0.5	<2	<0.5	<0.5	
IS-1	8/24/2009	<10	<5	<5	<5	<5	<5	<b>5.1</b>	<b>4.4 J</b>	<5	<5	<5	
	2/18/2010	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5.0	
IS-2	8/24/2009	<50	<25	<25	<25	<25	<25	<25	<b>900</b>	<25	<25	<25	cis-1,3-Dichloropropene - 8.9 J $\mu\text{g/L}$
	2/17/2010	<500	<250	<250	<250	<250	<250	<250	<b>5,500</b>	<500	<250	<250	

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone (µg/L)	Benzene (µg/L)	Chloro-form (µg/L)	Cyclo-hexane (µg/L)	Ethyl-benzene (µg/L)	Methyl-Cyclohexane (µg/L)	Methylene Chloride (µg/L)	Toluene (µg/L)	Heptane (µg/L)	o-Xylenes (µg/L)	m,p-Xylenes (µg/L)	Notes
<i>NYS Standard/Guidance Value</i>	<i>50</i>	<i>1</i>	<i>7</i>	<i>NS</i>	<i>5</i>	<i>NS</i>	<i>5</i>	<i>5</i>	<i>5</i>	<i>NS</i>	<i>5</i>	<i>5</i>	
<b>OFF-SITE MONITORING WELL/POINTS</b>													
MW-18	5/3/2006	<50	<50	<50	<50	<50	<50	<b>21 JB</b>	<b>580</b>	<50	<50	<50	
	8/22/2006	<50	<50	<50	<50	<50	<50		<b>590</b>	<50	<50	<50	
	12/20/2006	<10	<10	<10	<10	<10	<10	<b>4 JB</b>	<10	<10	<10	<10	
	3/14/2007	<100	<100	<100	<100	<100	<100		<b>1,400</b>	<100	<100	<100	
	5/23/2007	<100	<100	<100	<100	<100	<100		<b>580</b>	<100	<100	<100	
	9/21/2007	<10	<10	<10	<10	<10	<10		<10	<10	<10	<10	
	12/11/2007	<10	<10	<10	<10	<10	<10		<10	<10	<10	<10	
	3/27/2008	<200	<200	<200	<200	<200	<200		<b>1,900</b>	<200	<200	<200	
	6/25/2008	<10	<10	<10	<10	<10	<10		<10	<10	<10	<10	
	8/26/2008	<10	<10	<10	<10	<10	<10		<10	<10	<10	<10	
	12/16/2008	<10	<10	<10	<10	<10	<10		<10	<10	<10	<10	
	4/7/2009	<10	<5	<5	<5	<5	<5		<5	<10	<5	<5	
	6/8/2009	<10	<5	<5	<5	<5	<5		<5	<5	<5	<5	
	11/4/2009	<10	<5	<5	<5	<5	<5		<5	<10	<5	<5	
	2/19/2010	<10	<5	<5	<5	<5	<5		<5	<10	<5	<5	
	5/9/2011	<20	<10	<10	<10	<10	<10		<b>290</b>	<20	<10	<10	
	7/27/2011	<8.3	<5	<5	<5	<5	<7.3		<5	<10	<5	<5	
	5/3/2012	<b>6.8 J</b>	<5.0	<5.0	<5.0	<5.0	<5.0		<5.0	<10	<5.0	<5.0	
	11/28/2012	<10	<5.0	<5.0	<5.0	<5.0	<5.0		<5.0	<10	<5.0	<5.0	
	4/18/2013	<6	<0.5	<0.8	<2	<0.8	<1		<2	<0.7	<2	<0.8	<0.8
	6/2/2014	<6	<0.5	<0.5	<2	<0.8	<1		<2	<0.5	<2	<0.5	<0.5
	12/9/2014	<6	<0.5	<0.5	<2	<0.5	<1		<2	<0.5	<2	<0.5	<0.5
	8/12/2015	<6	<0.5	<0.5	<2	<0.5	<1		<2	<0.5	<2	<0.5	<0.5
	1/7/2016	<6	<0.5	<0.5	<2	<0.5	<1		<2	<0.5	<2	<0.5	<0.5
	7/12/2016	<6	<0.5	<0.5	<2	<0.5	<1		<2	<0.5	<2	<0.5	<0.5
	4/24/2017	<6	<0.5	<0.5	<2	<0.5	<1		<2	<0.5	<2	<0.5	<0.5
	11/14/2017	<6	<0.5	<0.5	<2	<0.5	<1		<2	<0.5	<2	<0.5	<0.5
	9/12/2018	<0.7	<0.2	<0.2	<0.2	<0.4	<0.2		<0.3	<0.2	<0.2	<0.4	<1
	9/11/2019	<10	<5.0	<5.0	<10	<5.0	<b>2.2 J</b>		<5.0	<5.0	<5.0	<5.0	<5.0
	10/13/2020	<10	<5.0	<5.0	<10	<5.0	<10		<5.0	<5.0	<5.0	<5.0	<5.0
	10/20/2021	<10	<5	<5	<10	<5	<10		<5	<5	<5	<5	

Chloromethane - 620 E µg/L

Chloromethane - <5.0 µg/L

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Chloro-form ( $\mu\text{g/L}$ )	Cyclo-hexane ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Methyl-Cyclohexane ( $\mu\text{g/L}$ )	Methylene Chloride ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Heptane ( $\mu\text{g/L}$ )	o-Xylenes ( $\mu\text{g/L}$ )	m,p-Xylenes ( $\mu\text{g/L}$ )	Notes
<i>NYS Standard/Guidance Value</i>		<b>50</b>	<b>1</b>	<b>7</b>	<b>NS</b>	<b>5</b>	<b>NS</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>NS</b>	<b>5</b>	
<b>MW-19</b>	5/3/2006	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	8/22/2006	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	12/20/2006	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	3/14/2007	<10	<10	<10	<10	<10	<10	<10	<b>6 J</b>	<10	<10	<10	
	5/23/2007	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	9/21/2007	<10	<10	<10	<10	<10	<10	<10	<b>18</b>	<10	<10	<10	
	12/11/2007	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	3/28/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	3/28/2008	<10	<10	<10	<10	<10	<10	<10	<b>7.9 J</b>	<10	<10	<10	
	6/25/2008	<10	<10	<10	<10	<10	<10	<b>5.1 J</b>	<10	<10	<10	<10	
	8/26/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	12/16/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	4/7/2009	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
	6/8/2009	<b>11</b>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	
	11/4/2009	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
	2/19/2010	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
	5/9/2011	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
	5/3/2012	<10	<5.0	<5.0	<5.0	<5.0	<b>3.9 J</b>	<5.0	<b>3.2 J</b>	<10	<5.0	<5.0	
	11/28/2012	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0	
	4/18/2013	<6	<0.5	<0.8	<2	<0.8	<1	<2	<0.7	<2	<0.8	<0.8	
	6/2/2014	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	12/9/2014	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	8/12/2015	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	1/7/2016	<6	<0.5	<0.5	<2	<0.5	<1	<2	<b>0.8 J</b>	<2	<0.5	<0.5	
	7/12/2016	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	4/24/2017	<6	<0.5	<0.5	<2	<0.5	<1	<2	<b>14</b>	<2	<0.5	<0.5	
	11/14/2017	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	9/12/2018	<0.7	<0.2	<0.2	<0.2	<0.4	<0.2	<0.3	<0.2	<0.2	<0.4	<1	
	9/11/2019	<10	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<b>0.54 J</b>	<5.0	<5.0	<b>0.27 J</b>	
	10/13/2020	<10	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<b>0.85 J</b>	<5.0	<5.0	<5.0	
	10/20/2021	<10	<5	<5	<10	<5	<10	<5	<5	<5	<5	<5	
<b>MP-5</b>	2/18/2004	<10	<5	<b>1 J</b>	<5	<5	<5	<b>4 JB</b>	<b>44</b>	<10	<5	<5	
	6/14/2004	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
	10/27/2004	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	4/7/2005	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	8/27/2008	<10	<10	<10	<10	<10	2.0 J	<10	<10	<10	<10	<10	
	12/16/2008	<10	<10	<10	<b>3.1 J</b>	<10	<b>4.5 J</b>	<10	<10	<10	<10	<10	

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Chloroform ( $\mu\text{g/L}$ )	Cyclohexane ( $\mu\text{g/L}$ )	Ethylbenzene ( $\mu\text{g/L}$ )	Methyl-Cyclohexane ( $\mu\text{g/L}$ )	Methylene Chloride ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Heptane ( $\mu\text{g/L}$ )	o-Xylenes ( $\mu\text{g/L}$ )	m,p-Xylenes ( $\mu\text{g/L}$ )	Notes
<i>NYS Standard/Guidance Value</i>		50	1	7	NS	5	NS	5	5	5	NS	5	
<b>MP-6</b> (& Dup.)	6/14/2004	<b>410 JB</b>	<500	<500	<500	<500	<500	<500	<b>9,100</b>	<1000	<500	<500	
	10/27/2004	<10	<10	<10	<10	<10	<10	<10	<b>120/150</b>	<10	<10	<10	
	4/7/2005	<10	<10	<10	<10	<10	<10	<10	<b>6 J</b>	<10	<10	<10	
	6/23/2005	<500	<500	<500	<500	<500	<500	<500	<b>7,900</b>	<500	<500	<500	
	10/25/2005	<10	<10	<10	<10	<10	<10	<10	<b>4 JB</b>	<b>6 J</b>	<10	<10	
	10/25/2005	<10	<10	<10	<10	<10	<10	<10	<b>4 J</b>	<10	<10	<10	
	5/2/2006	<10	<b>3 J</b>	<10	<10	<10	<10	<10	<b>5 JB</b>	<b>150</b>	<10	<10	<10
	8/22/2006	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	12/20/2006	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	5/23/2007	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	9/20/2007	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	12/11/2007	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	3/26/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	6/25/2008	<500	<500	<500	<500	<500	<500	<500	<b>5,600</b>	<500	<500	<500	
	8/27/2008	<100	<100	<100	<100	<100	<100	<100	<b>1,600</b>	<100	<100	<100	
	8/27/2008	<100	<100	<100	<b>23 J</b>	<100	<100	<100	<b>1,200</b>	<100	<100	<100	
	12/16/2008	<10	<10	<10	<b>32</b>	<10	<b>8.6 J</b>	<10	<10	<10	<10	<10	
	4/7/2009	<10	<5	<5	<b>62</b>	<5	<b>25</b>	<5	<5	<10	<5	<5	
	6/1/2009	<100	<50	<50	<b>100</b>	<50	<b>120</b>	<b>88 B</b>	<b>1,800</b>	<50	<50	<50	
	11/4/2009	<10	<5	<5	<b>95</b>	<5	<b>110</b>	<5	<5	<10	<5	<5	
<b>MP-6</b> (cont.)	2/17/2010	<10	<5	<5	<5	<5	<5	<5	<b>2.7 J</b>	<10	<5	<5	
	5/12/2011	<10	<5	<5	<b>46</b>	<5	<b>160</b>	<5	<5	<10	<5	<5	
	10/18/2011	<10	<5	<5	<b>63</b>	<5	<b>190</b>	<5	<5	<10	<5	<5	
	5/2/2012	<b>28 JB</b>	<25	<25	<b>67</b>	<25	<b>540</b>	<25	<25	<50	<25	<25	
	11/27/2012	<100	<50	<50	<b>90 J</b>	<50	<b>1,400 J</b>	<50	<50	<100	<50	<50	
	4/17/2013	<6	<0.5	<0.8	<b>51</b>	<0.8	<b>570</b>	<2	<b>0.8 J</b>	<2	<0.8	<0.8	
	6/4/2014	<6	<0.5	<0.8	<b>26/26</b>	<0.8	<b>330/360</b>	<2	<0.5	<2	<0.8	<0.5	
	12/9/2014	<6	<0.5	<0.5	<b>35</b>	<0.5	<b>410</b>	<2	<0.5	<2	<0.5	<0.5	
	8/12/2015	<6	<0.5	<0.5	<b>24</b>	<0.5	<b>390</b>	<2	<0.5	<2	<0.5	<0.5	1,2-Dichloropropane - 10 $\mu\text{g/L}$
	1/6/2016	<6	<0.5	<0.5	<b>15</b>	<0.5	<b>370</b>	<2	<0.5	<2	<0.5	<0.5	
	1/6/2016	<6	<0.5	<0.5	<b>24</b>	<0.5	<b>360</b>	<2	<0.5	<2	<0.5	<0.5	
	7/12/2016	<6	<0.5	<0.5	<b>12</b>	<0.5	<b>260</b>	<2	<0.5	<2	<0.5	<0.5	
	4/24/2017	<6	<0.5	<0.5	<b>5</b>	<0.5	<b>110</b>	<2	<0.5	<2	<0.5	<0.5	
	11/14/2017	<6	<0.5	<0.5	<b>5 J</b>	<0.5	<b>130</b>	<2	<0.5	<2	<0.5	<0.5	
	9/12/2018	<0.7	<0.2	<0.2	<b>0.9 J</b>	<0.4	<b>27</b>	<0.3	<0.2	<0.2	<0.4	<1	
	9/11/2019	<10	<5.0	<5.0	<10	<5.0	<b>0.72 J</b>	<5.0	<5.0	<5.0	<5.0	<5.0	
	10/13/2020	<10	<5.0	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	Chloromethane - <5.0 $\mu\text{g/L}$
	10/22/2021	<10	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<b>0.25 J</b>	<5.0	<5.0	<5.0	

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Chloro-form ( $\mu\text{g/L}$ )	Cyclo-hexane ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Methyl-Cyclohexane ( $\mu\text{g/L}$ )	Methylene Chloride ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Heptane ( $\mu\text{g/L}$ )	o-Xylenes ( $\mu\text{g/L}$ )	m,p-Xylenes ( $\mu\text{g/L}$ )	Notes
<i>NYS Standard/Guidance Value</i>		<b>50</b>	<b>1</b>	<b>7</b>	<b>NS</b>	<b>5</b>	<b>NS</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>NS</b>	<b>5</b>	
MP-7	2/18/2004	<10	<5	<b>2 J</b>	<b>2 J</b>	<5	<b>2 J</b>	<b>5 B</b>	<b>4 J</b>	<10	<5	<5	
	6/14/2004	<10	<5	<5	<5	<5	<5	<5	<b>3 JB</b>	<10	<5	<5	
	10/27/2004	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	4/7/2005	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
													well abandoned in December 2008
MP-13	9/9/2004	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
	10/25/2005	<10	<10	<10	<10	<10	<b>4 JB</b>	<10	<10	<10	<10	<10	
													well abandoned in December 2008
MP-14 (& Dup.) (& Dup.)	9/9/2004	<b>76</b>	<5.0	<5.0	<5.0	<5.0	<5.0	<b>850</b>	<5.0	<5.0	<5.0	<5.0	
	4/7/2005	<10	<10	<10	<10	<10	<10	<b>46/48</b>	<10	<10	<10	<10	
	6/23/2005	<10	<10	<10	<10	<10	<10	<b>110/170</b>	<10	<10	<10	<10	
	10/25/2005	<10	<10	<10	<b>6 J</b>	<10	<10	<10	<b>7 J</b>	<10	<10	<10	
	5/3/2006	<10	<10	<10	<10	<10	<10	<b>5 JB</b>	<10	<10	<10	<10	
	8/22/2006	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	12/19/2006	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	5/23/2007	<10	<10	<10	<10	<10	<10	<10	<b>4 J</b>	<10	<10	<10	
	9/20/2007	<100	<100	<100	<100	<100	<100	<b>870</b>	<100	<100	<100	<100	
	12/11/2007	<100	<100	<100	<100	<100	<100	<b>1,400</b>	<100	<100	<100	<100	
	3/27/2008	<200	<200	<200	<200	<200	<200	<b>3,100</b>	<200	<200	<200	<200	
	6/25/2008	<10	<10	<10	<10	<10	<10	<b>10</b>	<10	<10	<10	<10	
	8/26/2008	<10	<10	<10	<10	<10	<10	<b>140</b>	<10	<10	<10	<10	
	12/17/2008	<10	<10	<10	<10	<10	<10	<b>38/48</b>	<10	<10	<10	<10	
	4/7/2009	<10	<5	<5	<5	<5	<5	<b>67/68</b>	<10	<5	<5	<5	
	6/1/2009	<10	<5	<5	<5	<5	<5	<b>14</b>	<5	<5	<5	<5	
	11/3/2009	<10	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5	
(Dup.)	11/3/2009	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
(cont.)	2/17/2010	<b>8.2 J</b>	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone (µg/L)	Benzene (µg/L)	Chloro-form (µg/L)	Cyclo-hexane (µg/L)	Ethyl-benzene (µg/L)	Methyl-Cyclohexane (µg/L)	Methylene Chloride (µg/L)	Toluene (µg/L)	Heptane (µg/L)	o-Xylenes (µg/L)	m,p-Xylenes (µg/L)	Notes
NYS Standard/Guidance Value	50	1	7	NS	5	NS	5	5	5	NS	5	5	
MP-14 (cont.) (& Dup.)	5/9/2011	<10	<5	<5	<5	12	<5	85	<10	<5	<5	<5	Chloromethane - <5.0 µg/L
	4/17/2013	<6	<0.5	<0.8	<2	<0.8	10	<2	180	<2	<0.8	<0.8	
	6/4/2013	<6	<0.5	<0.8	3 J/3 J	<0.8	5 J/4 J	<2	23/21	<2	<0.8	<0.8	
	12/9/2013	<6	<0.5	<0.8	<2	<0.8	22	<2	8	<2	<0.8	<0.8	
	6/4/2014	<6	<0.5	<0.5	<2	<0.5	9	<2	5	<2	<0.5	<0.5	
	12/9/2014	<6	<0.5	<0.5	<2	<0.5	7	<2	1	<2	<0.5	<0.5	
	8/12/2015	<6	<0.5	<0.5	<2	<0.5	2 J	<2	<0.5	<2	<0.5	<0.5	
	1/6/2016	<6	<0.5	<0.5	<2	<0.5	12	<2	1	<2	<0.5	<0.5	
	7/12/2016	<6	<0.5	<0.5	<2	<0.5	17	<2	0.8 J	<2	<0.5	<0.5	
	4/24/2017	<6	<0.5	<0.5	<2	<0.5	7	<2	9	<2	<0.5	<0.5	
	11/14/2017	<6	<0.5	<0.5	<2	<0.5	9	<2	<0.5	<2	<0.5	<0.5	
	9/12/2018	<0.7	<0.2	<0.2	0.4 J	<0.4	7	<0.3	<0.2	<0.2	<0.4	<1	
	9/11/2019	<10	<5.0	<5.0	<10	<5.0	8.4 J	<5.0	1.1 J	<5.0	<5.0	0.26 J	
	10/13/2020	<10	<5.0	<5.0	<10	<5.0	6.3 J	<5.0	0.22 J	<5.0	<5.0	<5.0	
	10/21/2021	<10	<5	<5	<10	<5	1.4 J	<5	<5	<5	<5	<5	
MP-15 (Dup.)	9/9/2004	12	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
	9/9/2004	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
	12/17/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
MP-16	9/9/2004	13	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
	5/23/2007	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	9/20/2007	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	12/11/2007	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	6/25/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	8/26/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	4/7/2009	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
	6/8/2009	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
MP-17	9/7/2004	<2500	<1200	<1200	<1200	<1200	<1200	10,000	<2500	<1200	<1200	<1200	
	10/27/2004	<250	<250	<250	<250	<250	<250	4,800	<250	<250	<250	<250	
	4/7/2005	<10	<10	<10	<10	<10	12	<10	1,400 E	<10	<10	<10	
	4/7/2005	<200	<200	<200	<200	<200	<200	<200	1,400 D	<200	<200	<200	
	6/23/2005	<100	<100	<100	<100	<100	<100	<100	1,200	<100	<100	<100	
	10/25/2005	<200	<200	<200	<200	<200	<200	340	1,900	<200	<200	<200	
	5/3/2006	<10	<10	<10	<10	<10	<10	160	<10	<10	<10	<10	
	12/19/2006	<10	<10	<10	<10	<10	6 J	<10	180	<10	<10	<10	
	3/14/2007	<10	<10	<10	<10	<10	<10	<10	78	<10	<10	<10	
	5/23/2007	<200	<200	<200	<200	<200	<200	<200	2,200	<200	<200	<200	
	9/20/2007	<10	<10	<10	<10	<10	<10	<10	330/540 E	<10	<10	<10	

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone (µg/L)	Benzene (µg/L)	Chloro-form (µg/L)	Cyclo-hexane (µg/L)	Ethyl-benzene (µg/L)	Methyl-Cyclohexane (µg/L)	Methylene Chloride (µg/L)	Toluene (µg/L)	Heptane (µg/L)	o-Xylenes (µg/L)	m,p-Xylenes (µg/L)	Notes
NYS Standard/Guidance Value	50	1	7	NS	5	NS	5	5	5	NS	5	5	
MP-17 (Cont.) (& Dup.)	12/11/2007	<20	<20	<20	<20	<20	<20	220	<20	<20	<20	<20	
	3/27/2008	<20	<20	<20	<20	<20	<20	240	<20	<20	<20	<20	
	6/25/2008	<10	<10	<10	<10	<10	<10	8.3 J/8.4	<10	<10	<10	<10	
	8/26/2008	<10	<10	<10	<10	<10	<10	4.3 J	<10	<10	<10	<10	
	12/17/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	4/7/2009	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
	6/8/2009	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	
	11/4/2009	<10	<5	<5	<5	<5	<5	8.5	<10	<5	<5	<5	
	2/17/2010	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	Chloromethane - 680 E µg/L
	5/9/2011	<10 J	<5 J	<5 J	<5 J	<5 J	<5 J	4.7 J	<10 J	<5 J	<5 J	<5 J	
	10/18/2011	<10	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5	
	5/2/2012	5.9 J	<5.0	<5.0	<5.0	<5.0	2.7	<5.0	3.0 J	<10	<5.0	<5.0	
	11/28/2012	<10	<5.0	<5.0	<5.0	<5.0	1.9 J	<5.0	<5.0	<10	<5.0	<5.0	
	4/18/2013	<6	<0.5	<0.8	<2	<0.8	1 J	<2	<0.7	<2	<0.8	<0.8	
MP-17 (cont.)	6/2/2014	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	12/9/2014	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	8/12/2015	<6	<0.5	<0.5	<2	<0.5	3 J	<2	<0.5	<2	<0.5	<0.5	
	1/6/2016	<6	<0.5	<0.5	<2	<0.5	1 J	<2	<0.5	<2	<0.5	<0.5	
	7/12/2016	<6	<0.5	<0.5	<2	<0.5	4 J	<2	<0.5	<2	<0.5	<0.5	
	4/24/2017	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	11/14/2017	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	9/12/2018	<0.7	<0.2	<0.2	<0.2	<0.4	<0.2	<0.3	<0.2	<0.2	<0.4	<1	
	9/11/2019	<10	<5.0	<5.0	<10	<5.0	0.58 J	<5.0	1.7 J	<5.0	<5.0	0.41 J	
	10/13/2020	<10	<5.0	<5.0	<10	<5.0	1.6 J	<5.0	<5.0	<5.0	<5.0	<5.0	
	10/21/2021	<10	<5	<5	<10	<5	<10	<5	<5	<5	<5	<5	Chloromethane - <5.0 µg/L
MP-18	10/27/2004	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	4/7/2005	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	6/23/2005	<10	<10	<10	<10	<10	4 J	<10	<10	<10	<10	<10	
	10/25/2005	<10	<10	<10	<10	<10	7 J	<10	<10	<10	<10	<10	
	5/3/2006	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	8/21/2006	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	12/19/2006	17	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	2-Butanone - 10 µg/L; methyl acetate - 7 J µg/L
	5/23/2007	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	9/20/2007	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	3/27/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	6/25/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	8/26/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	5/2/2012	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0	
	11/28/2012	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0	
	4/17/2013	<6	<0.5	<0.8	<2	<0.8	<1	<2	<0.7	<2	<0.8	<0.8	

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone (µg/L)	Benzene (µg/L)	Chloro-form (µg/L)	Cyclo-hexane (µg/L)	Ethyl-benzene (µg/L)	Methyl-Cyclohexane (µg/L)	Methylene Chloride (µg/L)	Toluene (µg/L)	Heptane (µg/L)	o-Xylenes (µg/L)	m,p-Xylenes (µg/L)	Notes	
<i>NYS Standard/Guidance Value</i>		50	1	7	NS	5	NS	5	5	5	NS	5		
MP-19	6/23/2005	13	<10	<10	<10	<10	<10	4 J	<10	<10	<10	<10		
	5/3/2006	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		
	6/2/2014	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5		
	12/9/2014	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5		
	8/12/2015	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5		
	1/7/2016	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5		
	7/12/2016	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5		
	4/24/2017	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5		
	11/14/2017	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5		
	9/12/2018	<0.7	<0.2	<0.2	<0.2	<0.4	<0.2	<0.3	<0.2	<0.2	<0.4	<1		
	9/11/2019	<10	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0		
	10/13/2020	<10	<5.0	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	Chloromethane - <5.0 µg/L	
	10/20/2021	<10	<5	<5	<10	<5	<10	<5	<5	<5	<5	<5		
MP-20	10/27/2004	10	<10	12	<10	<10	<10	<10	<10	<10	<10	<10	Bromodichloromethane - 3 J µg/L	
					well abandoned in December 2008									
MP-21	10/27/2004	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		
					well abandoned in December 2008									
MP-22	11/15/2004	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		
(& Dup.)	4/7/2005	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		
(& Dup.)	6/23/2005	<10	<10	<10	<10	<10	4 J	<10	<10	<10	<10	<10		
(& Dup.)	10/25/2005	<10	<10	<10	<10	<10	7 J	<10	<10	<10	<10	<10		
(& Dup.)	5/2/2006	<10	<10	<10	<10	<10	5 JB	10 J	<10	<10	<10	<10		
(cont.)	8/21/2006	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		
(& Dup.)	12/19/2006	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		
(& Dup.)	3/14/2007	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		
(& Dup.)	5/23/2007	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		
(& Dup.)	9/21/2007	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		
(& Dup.)	12/11/2007	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		
(cont.)	3/26/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		
(& Dup.)	6/25/2008	<10	<10	<10	<10	<10	<10	<10	58	<10	<10	<10		
(cont.)	8/28/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		
(& Dup.)	12/17/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		
(cont.)	4/7/2009	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5		
(cont.)	6/8/2009	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
(cont.)	11/4/2009	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5		

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Chloroform ( $\mu\text{g/L}$ )	Cyclohexane ( $\mu\text{g/L}$ )	Ethylbenzene ( $\mu\text{g/L}$ )	Methyl-Cyclohexane ( $\mu\text{g/L}$ )	Methylene Chloride ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Heptane ( $\mu\text{g/L}$ )	o-Xylenes ( $\mu\text{g/L}$ )	m,p-Xylenes ( $\mu\text{g/L}$ )	Notes
<i>NYS Standard/Guidance Value</i>		<b>50</b>	<b>1</b>	<b>7</b>	<b>NS</b>	<b>5</b>	<b>NS</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>NS</b>	<b>5</b>	
<b>MP-22</b> (cont.)	2/19/2010	<10	<5	<b>4.5 J</b>	<5	<5	<5	<5	<5	<10	<5	<5	
	5/9/2011	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
	5/3/2012	<b>6.1 J</b>	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0	
	11/28/2012	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0	
	4/17/2013	<6	<0.5	<0.8	<2	<0.8	<1	<2	<0.7	<2	<0.8	<0.8	
	6/4/2014	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	12/8/2014	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	8/12/2015	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	3/15/2016	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	7/12/2016	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	4/24/2017	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	11/14/2017	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	9/12/2018	<0.7	<0.2	<0.2	<0.2	<0.4	<0.2	<0.3	<0.2	<0.2	<0.4	<1	
	9/11/2019	<10	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
	10/13/2020	<10	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
	<b>10/20/2021</b>	<10	<5	<5	<10	<5	<10	<5	<5	<5	<5	<5	
<b>32 Craig St.1</b>	10/26/2005	<10	<10	<10	<10	<10	<b>6 J</b>	<10	<10	<10	<10	<10	
<b>32 Craig St.2</b>	10/26/2005	<10	<10	<10	<10	<10	<b>5 J</b>	<10	<10	<10	<10	<10	
													<b>Chloromethane - &lt;5.0 <math>\mu\text{g/L}</math></b>

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone (µg/L)	Benzene (µg/L)	Chloro-form (µg/L)	Cyclo-hexane (µg/L)	Ethyl-benzene (µg/L)	Methyl-Cyclohexane (µg/L)	Methylene Chloride (µg/L)	Toluene (µg/L)	Heptane (µg/L)	o-Xylenes (µg/L)	m,p-Xylenes (µg/L)	Notes
<i>NYS Standard/Guidance Value</i>	<i>50</i>	<i>1</i>	<i>7</i>	<i>NS</i>	<i>5</i>	<i>NS</i>	<i>5</i>	<i>NS</i>	<i>5</i>	<i>NS</i>	<i>5</i>	<i>5</i>	
<b>QA/QC SAMPLES</b>													
<b>TB</b>	12/7/1993	<10	<10	<10	NA	<10	NA	<10	<10	<10	1 JB		
	2/18/2004	<10	<5	<5	<5	<5	<5	5 JB	<5	<10	<5	<5	
	2/20/2004	<10	<5	<5	<5	<5	<5	10 B	<5	<10	<5	<5	
	6/16/2004	<b>19 B</b>	<5	<5	<5	<5	<5	8	<5	<10	<5	<5	
	9/7/2004	<b>14 B</b>	<5	<5	<5	<5	<5	<b>6 J</b>	<5	<5	<5	<5	
	9/9/2004	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	
	10/26/2004	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	10/28/2004	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	11/15/2004	<b>19</b>	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	4/8/2005	<b>9 JB</b>	<10	<10	<10	<10	<10	<b>2 JB</b>	<10	<10	<10	<10	
	6/23/2005	<b>16</b>	<10	<10	<10	<10	<10	<b>4 J</b>	<10	<10	<10	<10	
	10/25/2005	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	5/2/2006	<b>14</b>	<10	<10	<10	<10	<10	<b>7 JB</b>	<10	<10	<10	<10	
	5/3/2006	<b>11</b>	<10	<10	<10	<10	<10	<b>6 JB</b>	<10	<10	<10	<10	
	8/21/2006	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	12/19/2006	<10	<10	<10	<10	<10	<10	<b>6 JB</b>	<10	<10	<10	<10	
	3/14/2007	<10	<10	<10	<10	<10	<10	<b>6 JB</b>	<10	<10	<10	<10	
	5/23/2007	<b>8 JB</b>	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	9/21/2007	<b>14</b>	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	12/11/2007	<b>9.2 J</b>	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	3/28/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	6/25/2008	<10	<10	<b>8.4 J</b>	<10	<10	<10	<10	<10	<10	<10	<10	
	8/26/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	12/16/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
	4/7/2009	<b>9.9 J</b>	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
	6/1/2009	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	
(cont.)	6/8/2009	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone (µg/L)	Benzene (µg/L)	Chloro-form (µg/L)	Cyclo-hexane (µg/L)	Ethyl-benzene (µg/L)	Methyl-Cyclohexane (µg/L)	Methylene Chloride (µg/L)	Toluene (µg/L)	Heptane (µg/L)	o-Xylenes (µg/L)	m,p-Xylenes (µg/L)	Notes
<i>NYS Standard/Guidance Value</i>		<b>50</b>	<b>1</b>	<b>7</b>	<b>NS</b>	<b>5</b>	<b>NS</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>NS</b>	<b>5</b>	
TB (cont.)	8/25/2009	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	
	11/4/2009	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
	2/19/2010	<10	<5	<b>2.9 J</b>	<5	<5	<5	<b>4 J</b>	<5	<10	<5	<5	
	5/9/2011	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
	5/11/2011	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
	7/25/2011	<b>7.9 JB</b>	<5	<5	<5	<5	<5	<b>7.4 B</b>	<5	<10	<5	<5	
	10/18/2011	<b>5.8 J</b>	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
	12/8/2011	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	
	2/23/2012	<b>12 B</b>	<5	<5	<5	<5	<5	<b>1.6 JB</b>	<5	<10	<5	<5	
	5/2/2012	<b>7.2 J</b>	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0	
	5/4/2012	<b>7.3 J</b>	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0	
	7/17/2012	<b>7.5 JB</b>	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0	
	11/29/2012	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0	
	2/6/2013	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0	
	4/17/2013	<6	<0.5	<0.8	<2	<0.8	<1	<2	<0.7	<2	<0.8	<0.8	
	4/18/2013	<6	<0.5	<0.8	<2	<0.8	<1	<2	<0.7	<2	<0.8	<0.8	
	6/5/2013	<6	<0.5	<0.8	<2	<0.8	<1	<2	<0.7	<2	<0.8	<0.8	
	6/6/2013	<6	<0.5	<0.8	<2	<0.8	<1	<2	<0.7	<2	<0.8	<0.8	
	12/10/2013	<6	<0.5	<0.8	<2	<0.8	<1	<2	<0.7	<2	<0.8	<0.8	
	6/4/2014	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	8/28/2014	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	11/4/2015	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Chloroform ( $\mu\text{g/L}$ )	Cyclohexane ( $\mu\text{g/L}$ )	Ethylbenzene ( $\mu\text{g/L}$ )	Methyl-Cyclohexane ( $\mu\text{g/L}$ )	Methylene Chloride ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Heptane ( $\mu\text{g/L}$ )	o-Xylenes ( $\mu\text{g/L}$ )	m,p-Xylenes ( $\mu\text{g/L}$ )	Notes
<i>NYS Standard/Guidance Value</i>		<b>50</b>	<b>1</b>	<b>7</b>	<b>NS</b>	<b>5</b>	<b>NS</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>NS</b>	<b>5</b>	
TB (cont.)	1/7/2016	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	3/14/2016	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	5/10/2016	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	6/13/2016	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	7/7/2016	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	8/2/2016	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	11/14/2016	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	4/25/2017	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	6/20/2017	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	7/20/2017	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	11/9/2017	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	2/22/2018	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	7/16/2018	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	9/6/2018	<0.7	<0.2	<0.2	<0.2	<0.4	<0.2	<0.3	<0.2	<0.2	<0.4	<1	
	12/5/2018	<0.7	<0.2	<0.2	<0.2	<0.4	<0.2	<0.3	<0.2	<0.2	<0.4	<1	
	4/30/2019	<0.7	<0.2	<0.2	<0.2	<0.4	<0.2	<0.3	<0.2	<0.2	<0.4	<1	
	7/17/2019	<b>2.2 BJ</b>	<5.0 R	<5.0 R	<10 R	<5.0 R	<10 R	<5.0 R	<5.0 R	<5.0 R	<5.0 R	<5.0 R	PCE - 0.25 J $\mu\text{g/L}$
	9/12/2019	<b>2.2 J</b>	<5.0 R	<5.0 R	<10 R	<5.0 R	<10 R	<5.0 R	<5.0 R	<5.0 R	<5.0 R	<5.0 R	
	11/20/2019	<10	<5.0	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	
	7/14/2020	<5.0 R	<0.20R	<0.24 R	<0.26 R	<0.20 R	<0.20 R	<0.65 R	<0.20 R	<0.26 R	<0.20 R	<0.20 R	
	8/10/2020	<10 R	<5.0 R	<5.0 R	<10 R	<5.0 R	<10 R	<5.0 R	<5.0 R	<5.0 R	<5.0 R	<5.0 R	
	10/12/2020	<b>7.0 J</b>	<5.0	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	2-Butanone - 3.1 J $\mu\text{g/L}$ ; 2-hexanone - 0.31 J $\mu\text{g/L}$ ; chloromethane - 0.36 BJ $\mu\text{g/L}$
	4/19/2021	<10	<5.0	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	
	7/28/2021	<10	<5.0	<5.0	<10	<5.0	<10	<5.0	<b>0.54 J</b>	<5.0	<5.0	<b>0.23 J</b>	2-Butanone - 3.9 J $\mu\text{g/L}$ ; 2-hexanone - 0.57 J $\mu\text{g/L}$
	10/22/2021	<10	<5.0	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	2-Butanone (MEK) - 4.4 J $\mu\text{g/L}$ ; 4-Methyl-2-pentanone - 0.28 J $\mu\text{g/L}$ ; Chloromethane - 0.29 J $\mu\text{g/L}$
	10/22/2021	<b>5.5 J</b>	<5.0	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	2-Butanone (MEK) - 5.0 J $\mu\text{g/L}$ ; 4-Methyl-2-pentanone - 0.23 J $\mu\text{g/L}$ ; 2-Hexanone - 0.25 J $\mu\text{g/L}$

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Chloroform ( $\mu\text{g/L}$ )	Cyclohexane ( $\mu\text{g/L}$ )	Ethylbenzene ( $\mu\text{g/L}$ )	MethylCyclohexane ( $\mu\text{g/L}$ )	Methylene Chloride ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Heptane ( $\mu\text{g/L}$ )	o-Xylenes ( $\mu\text{g/L}$ )	m,p-Xylenes ( $\mu\text{g/L}$ )	Notes	
<i>NYS Standard/Guidance Value</i>		<b>50</b>	<b>1</b>	<b>7</b>	<b>NS</b>	<b>5</b>	<b>NS</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>		
<b>FB</b>	2/20/2004	<10	<5	<5	<5	<5	<5	<b>10 B</b>	<5	<10	<5	<5		
	6/15/2004	<10	<5	<5	<5	<5	<5	<b>3 JB</b>	<10	<5	<5	<5		
	9/9/2004	<10	<5.0	<b>12</b>	<5.0	<5.0	<5.0	<5.0	<b>2 J</b>	<5.0	<5.0	<5.0		
	10/27/2004	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		
	11/15/2004	<b>15</b>	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		
	4/8/2005	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		
	6/23/2005	<b>16</b>	<10	<10	<10	<10	<10	<b>5 JB</b>	<10	<10	<10	<10		
	10/25/2005	<10	<10	<10	<10	<10	<10	<b>6 J</b>	<10	<10	<10	<10		
	5/2/2006	<b>9 J</b>	<10	<10	<10	<10	<10	<b>5 JB</b>	<10	<10	<10	<10	Chlorobenzene - 7 J $\mu\text{g/L}$	
	5/3/2006	<10	<10	<10	<10	<10	<10	<b>3 J</b>	<10	<10	<10	<10	Chlorobenzene - 5 J $\mu\text{g/L}$	
	8/21/2006	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		
	12/19/2006	<10	<10	<10	<10	<10	<10	<b>6 JB</b>	<10	<10	<10	<10		
	3/14/2007	<10	<10	<10	<10	<10	<10	<b>6 JB</b>	<10	<10	<10	<10		
	5/23/2007	<b>7 JB</b>	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		
	9/21/2007	<b>8 J</b>	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		
	12/11/2007	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		
	3/26/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		
	6/25/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		
	8/26/2008	<b>8.3 JB</b>	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		
	12/16/2008	<10	<10	<10	<10	<10	<10	<b>2.4 J</b>	<10	<10	<10	<10		
	4/7/2009	<b>16</b>	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5		
	6/1/2009	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
	6/8/2009	<10	<5	<5	<5	<5	<5	<b>5.1 B</b>	<5	<5	<5	<5		
	11/4/2009	<10	<5	<5	<5	<5	<5	<b>5.4</b>	<5	<10	<5	<5		
	2/19/2010	<b>13</b>	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5		
	5/9/2011	<10	<5	<5	<5	<5	<5	<6.3	<5	<10	<5	<5		
	7/27/2011	<b>8.2 JB</b>	<5	<5	<5	<5	<5	<b>8.1 B</b>	<5	<10	<5	<5		
	10/18/2011	<10	<5	<5	<5	<5	<5	<b>2.2 J</b>	<5	<10	<5	<5		
	12/8/2011	<10	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5		
	2/21/2012	<b>6.6 JB</b>	<5	<5	<5	<5	<5	<b>1.4 JB</b>	<5	<10	<5	<5		
	5/2/2012	<b>5.1 JB</b>	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<b>3.4 J</b>	<5.0	<10	<5.0	<5.0	
	7/17/2012	<b>9.9 JB</b>	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<b>2.1 J</b>	<5.0	<10	<5.0	<5.0	2-Butanone - 19 $\mu\text{g/L}$

**Table 4-4**  
**Groundwater Analytical Data Summary - Volatile Organic Compounds (VOCs)**  
**Former Norton/Nashua - Watervliet, New York**

Sample Designation	Sampling Date	Acetone ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Chloroform ( $\mu\text{g/L}$ )	Cyclohexane ( $\mu\text{g/L}$ )	Ethylbenzene ( $\mu\text{g/L}$ )	Methyl-Cyclohexane ( $\mu\text{g/L}$ )	Methylene Chloride ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Heptane ( $\mu\text{g/L}$ )	o-Xylenes ( $\mu\text{g/L}$ )	m,p-Xylenes ( $\mu\text{g/L}$ )	Notes
<i>NYS Standard/Guidance Value</i>		<b>50</b>	<b>1</b>	<b>7</b>	<b>NS</b>	<b>5</b>	<b>NS</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>NS</b>	<b>5</b>	
<b>FB (cont.)</b>	2/6/2013	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0	
	6/6/2013	<6	<0.5	<0.8	<2	<0.8	<1	<2	<0.7	<2	<0.8	<0.8	
	12/10/2013	<6	<0.5	<0.8	<2	<0.8	<1	<2	<0.7	<2	<0.8	<0.8	cis-1,2-dichloroethene - 1 J $\mu\text{g/L}$
	6/4/2014	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	8/27/2014	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	11/5/2015	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	1/7/2016	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	3/15/2016	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	5/10/2016	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	6/14/2016	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	7/13/2016	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	9/20/2016	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	11/15/2016	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	4/20/2017	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	6/20/2017	<6	<0.5	<0.5	<b>15</b>	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	7/20/2017	<6	<0.5	<0.5	<b>12</b>	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	11/15/2017	<6	<0.5	<0.5	<b>3 J</b>	<0.5	<1	<b>0.5 J</b>	<0.5	<2	<0.5	<0.5	
	7/12/2018	<6	<0.5	<0.5	<2	<0.5	<1	<2	<0.5	<2	<0.5	<0.5	
	9/13/2018	<b>1 J</b>	<0.2	<0.2	<0.2	<0.4	<0.2	<b>0.8 J</b>	<b>0.8 J</b>	<0.2	<0.4	<1	
	12/5/2018	<0.7	<0.2	<0.2	<0.2	<0.4	<0.2	<b>0.3 J</b>	<0.2	<0.2	<0.4	<1	
	4/30/2019	<0.7	<0.2	<b>0.4 J</b>	<0.2	<0.4	<0.2	<0.3	<0.2	<0.2	<0.4	<1	
	7/18/2019	<b>10 BJ</b>	<5.0 R	<5.0 R	<10 R	<5.0 R	<5.0 R	<5.0 R	<b>0.58 J</b>	<5.0 R	<5.0 R	<b>0.26 J</b>	2-butanone - 0.85 J $\mu\text{g/L}$
	9/12/2019	<b>2.7 BJ</b>	<5.0	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	2-butanone - 0.84 J $\mu\text{g/L}$ ; PCE - 0.35 J $\mu\text{g/L}$
	7/14/2020	<5.0	<0.20	<0.24	<0.26	<0.20	<0.20	<0.65	<0.20	<0.26	<0.20	<0.20	
	8/10/2020	<10 R	<5.0 R	<5.0 R	<10 R	<5.0 R	<10 R	<5.0 R	<5.0 R	<5.0 R	<5.0 R	<5.0 R	
	10/13/2020	<10	<5.0	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	2-Butanone - 3.8 J $\mu\text{g/L}$ ; 2-hexanone - 0.41 J $\mu\text{g/L}$ ; chloromethane - 0.35 BJ $\mu\text{g/L}$
	4/20/2021	<10	<5.0	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	2-Butanone - 3.5 J $\mu\text{g/L}$ ; 2-hexanone - 0.42 J $\mu\text{g/L}$ ; methyl acetate - 0.36 J $\mu\text{g/L}$
	7/28/2021	<10	<5.0	<5.0	<10	<5.0	<10	<5.0	<b>0.79 J</b>	<5.0	<b>0.20 J</b>	<b>0.36 J</b>	2-Butanone (MEK) - 4.2 J
	10/22/2021	<10	<5.0	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	

**NOTES:**

$\mu\text{g/L}$  = micrograms per liter; Dup. = duplicate sample; FB = field blank; TB = trip blank; NA = not analyzed for the indicated parameter;

ND = not detected; B = detected in the laboratory blank; DIL/D = laboratory diluted sample; E = laboratory estimated concentration;

J = estimated concentration, detected below the quantitation limit; < ("less than") = analyte concentration below the laboratory detection

limit; BPQL = compound reported present below the practical quantitation limit, "-" = analytical data/report not available for review; R = data rejected due to headspace

VOCs analyzed via EPA Method 8260 plus heptane (and tentatively identified compounds [TICs] in selected previous samples).

Only detected analytes are tabulated above. For a complete list of analytes, see the original laboratory reports.

**Table 4-5**  
**Summary of Groundwater Analytical Results (Perfluoroalkyl/Polyfluoroalkyl Substances [PFAS] Compounds)**  
**Former Norton/Nashua Tape Products Facility**  
**Watervliet, New York**

Analysis Name	Units	MONITORING WELL SAMPLES												QAQC SAMPLES		NYSDEC Screening Level <sup>(1)</sup>
		MP-25	MP-26	MP-27	MP-29	MP-37	MW-15R	MW-15R (Dup.)	MW-25	MW-26	MW-27	MW-28	MW-28 (Dup.)	FB	TB	
		7/28/2021	7/28/2021	7/28/2021	7/28/2021	6/27/2017	6/27/2017	6/27/2017	6/27/2017	7/28/2021	7/28/2021	7/28/2021	7/28/2021	7/28/2021	7/28/2021	7/28/2021
Perfluorooctanoic acid (PFOA)	ng/l	<b>7.2 J</b>	<20	<b>6.6 J</b>	<20	2.4	<b>49</b>	22	<b>1.2 J</b>	3.7	<b>3.2</b>	<b>6.1 J</b>	<b>5.2 J</b>	<1.7	<1.9	10
Perfluorooctanesulfonic acid (PFOS)	ng/l	<b>14 JI</b>	<b>8.2 JI</b>	<b>6.7 JI</b>	<20	<b>2.8 IJ</b>	<b>11</b>	<b>10</b>	<b>13</b>	<b>29</b>	<b>8.4 J</b>	<b>6.6 JI</b>	<b>7.9 JI</b>	<1.7	<1.9	10
10:2 FTS	ng/l	<50	<50	<50	<50	<4.8	NA	NA	NA	NA	<4.9	<50	<50	<4.4	<4.6	
4:2 Fluorotelomer sulfonic acid	ng/l	<20	<20 J	<20	<20	<1.9 J	NA	NA	NA	NA	<2.0	<20	<20	<1.7	<1.9	
6:2 Fluorotelomer sulfonic acid	ng/l	<50	<50	<50	<50	<4.8	NA	NA	NA	NA	<4.9	<50	<50	<4.4	<4.6	
8:2 Fluorotelomer sulfonic acid	ng/l	<30	<30	<30	<30	<2.9	NA	NA	NA	NA	<2.9	<30	<30	<2.6	<2.8	
NEtFOSAA	ng/l	<30	<30	<30	<30	<2.9 J	NA	NA	NA	NA	<2.9	<30	<30	<2.6	<2.8	
NMeFOSAA	ng/l	<20	<20	<20	<20	<1.9 J	NA	NA	NA	NA	<2.0	<20	<20	<1.7	<1.9	
Perfluorobutanesulfonic acid	ng/l	<20	<20	<20	<20	<b>1.4 J</b>	<b>18</b>	<b>19</b>	<b>4.1</b>	<b>1.7 J</b>	<b>1.1 J</b>	<20	<20	<1.7	<1.9	
Perfluorobutanoic acid	ng/l	<50	<50	<50	<50	<4.8 J	<b>14 B</b>	<b>13 B</b>	<1.9	<2.0	<4.9	<50	<50	<4.4	<4.6	
Perfluorodecanesulfonic acid	ng/l	<20	<20	<20	<20	<1.9	<1.9	<2.0	<1.9	<2.0	<2.0	<20	<20	<1.7	<1.9	
Perfluorodecanoic acid	ng/l	<20	<20	<20	<20	<1.9 J	<1.9	<2.0	<b>0.53 J</b>	<b>1.4 J</b>	<2.0	<20	<20	<1.7	<1.9	
Perfluorododecanesulfonic acid (PFDoS)	ng/l	<30	<30	<30	<30	<2.9	NA	NA	NA	NA	<2.9	<30	<30	<2.6	<2.8	
Perfluorododecanoic acid	ng/l	<20	<20	<20	<20	<1.9 J	<1.9	<2.0	<1.9	<2.0	<2.0	<20	<20	<1.7	<1.9	
Perfluoroheptanesulfonic acid	ng/l	<20	<20	<20	<20	<1.9	<1.9	<b>0.88 J</b>	<1.9	<2.0	<2.0	<20	<20	<1.7	<1.9	
Perfluoroheptanoic acid	ng/l	<20	<20	<20	<20	<b>0.49 J</b>	<b>15</b>	<b>15</b>	<1.9	<b>1.3 J</b>	<b>1.0 J</b>	<20	<20	<1.7	<1.9	
Perfluorohexadecanoic acid	ng/l	<30	<30	<30	<30	<2.9	NA	NA	NA	NA	<2.9 J	<30	<30	<2.6	<2.8	
Perfluorohexanesulfonic acid	ng/l	<b>64 I</b>	<b>33 I</b>	<20	<20	<b>1.3 JI</b>	<b>57</b>	<b>63</b>	<b>1.0 J</b>	<b>1.3 J</b>	<b>1.4 J</b>	<b>10 JI</b>	<20	<1.7	<1.9	
Perfluorohexanoic acid	ng/l	<b>9.0 JI</b>	<b>6.5 J</b>	<b>5.8 J</b>	<20	<1.9 J	<b>17</b>	<b>17</b>	<1.9	<2.0	<b>2.9 J</b>	<b>5.9 JI</b>	<b>6.0 J</b>	<1.7	<1.9	
Perfluorononanesulfonic acid	ng/l	<20	<20	<20	<20	<1.9	NA	NA	NA	NA	<2.0	<20	<20	<1.7	<1.9	
Perfluorononanoic acid (PFNA)	ng/l	<20	<20	<20	<20	<1.9 J	<1.9	<2.0	<b>1.9</b>	<b>1.9 J</b>	<b>0.49 J</b>	<20	<20	<1.7	<1.9	
Perfluoroctadecanoic acid	ng/l	<30	<30	<30	<30	<2.9	NA	NA	NA	NA	<2.9	<30	<30	<2.6	<2.8	
Perfluoropentanesulfonic acid	ng/l	<20	<20	<20	<20	<1.9	NA	NA	NA	NA	<2.0	<20	<20	<1.7	<1.9	
Perfluoropentanoic acid	ng/l	<20	<20	<b>12 J</b>	<20	<1.9	<b>13</b>	<b>14</b>	<1.9	<2.0	<b>4.9 J</b>	<20	<b>5.8 J</b>	<1.7	<1.9	
Perfluorotetradecanoic acid	ng/l	<20	<20	<20	<20	<1.9	<b>1.8 JB</b>	<b>0.70 JB</b>	<b>2.4 B</b>	<b>2.1 B</b>	<2.0	<20	<20	<1.7	<1.9	
Perfluorotridecanoic acid	ng/l	<20 J	<20	<20	<20	<1.9 J	<1.9	<2.0	<1.9	<2.0	<2.0	<20 J	<20	<1.7	<1.9	
Perfluoroundecanoic acid	ng/l	<20	<20	<20	<20	<1.9 J	<1.9	<2.0	<1.9	<2.0	<2.0	<20	<20	<1.7	<1.9	
Total PFAS Compounds	ng/l	<b>94.2</b>	<b>47.7</b>	<b>31.1</b>	ND	<b>8.4</b>	<b>195.8</b>	<b>174.6</b>	<b>24.1</b>	<b>42.4</b>	<b>23.4</b>	<b>28.6</b>	<b>24.9</b>	ND	ND	<b>500</b>

Notes:

1. Ambient Water Quality Standards (AWQS) have not been established. Screening Levels based on values presented in the *Sampling, Analysis, and Assessment of PFAS* (NYSDEC, January 2021).
2. ng/L = nanograms per liter; J = Estimated concentration; I = Value is EMPC (estimated maximum possible concentration).
3. A shaded result indicates concentration exceeds NYSDEC Screening Level. 2017 samples collected by NYSDEC.

**Table 4-6**  
**Summary of Vapor Analytical Data**  
**2021 In-Situ Chemical Oxidation (ISCO) Activities**  
**Former Norton/Nashua Facility**  
**Watervliet, New York**

Sample ID: Date Sampled:	Indoor Air 6/9/2021	DB-VMP-2 6/9/2021	DB-VMP-3 6/9/2021	Outdoor Ambient 6/9/2021	Trip Blank 6/9/2021
Trichloroethene (TCE)	<b>0.91</b>	ND (0.41)	<b>0.81 J</b>	ND (0.10)	ND (0.10)
cis-1,2-Dichloroethylene (cis-1,2-DCE)	ND (0.048)	ND (0.19)	ND (0.19)	ND (0.048)	ND (0.048)
1,1-Dichloroethylene (1,1-DCE)	ND (0.067)	ND (0.27)	ND (0.27)	ND (0.067)	ND (0.067)
Carbon Tetrachloride	ND (0.15)	ND (0.59)	ND (0.59)	ND (0.15)	ND (0.15)
Tetrachloroethylene (PCE)	<b>21</b>	<b>14</b>	<b>3.1</b>	<b>0.41</b>	ND (0.21)
1,1,1-Trichloroethane (1,1,1-TCA)	ND (0.18)	ND (0.71)	ND (0.71)	ND (0.18)	ND (0.18)
Methylene chloride	<b>2.9</b>	ND (0.20)	ND (0.20)	<b>0.94</b>	ND (0.052)
Vinyl Chloride	ND (0.056)	ND (0.23)	ND (0.23)	ND (0.056)	ND (0.056)
Acetone	<b>106 J</b>	ND (1.1)	ND (7.1)	ND (12)	<b>1.3</b>
1,3-Butadiene	ND (0.10)	ND (0.40)	ND (0.40)	ND (0.10)	ND (0.10)
Benzene	<b>2.3</b>	ND (0.15)	ND (0.15)	ND (0.038)	ND (0.038)
Bromodichloromethane	ND (0.18)	ND (0.74)	ND (0.74)	ND (0.18)	ND (0.18)
Carbon disulfide	<b>1.4</b>	<b>1.2 J</b>	ND (0.29)	<b>4.4</b>	ND (0.075)
Chloroform	<b>1.3</b>	ND (0.39)	ND (0.39)	ND (0.098)	ND (0.098)
Chloromethane	<b>2.1</b>	ND (0.13)	ND (0.13)	<b>1.6</b>	ND (0.031)
Cyclohexane	<b>10</b>	<b>1.8 J</b>	ND (0.30)	ND (0.076)	ND (0.076)
1,1-Dichloroethane	ND (0.049)	ND (0.19)	ND (0.19)	ND (0.049)	ND (0.049)
1,2-Dichloroethane	ND (0.085)	ND (0.34)	ND (0.34)	ND (0.085)	ND (0.085)
Dichlorodifluoromethane	<b>2.5</b>	<b>2.3 J</b>	<b>2.5 J</b>	<b>2.6</b>	ND (0.084)
trans-1,2-DCE	ND (0.029)	ND (0.11)	ND (0.11)	ND (0.029)	ND (0.029)
m-Dichlorobenzene	ND (0.11)	ND (0.46)	ND (0.46)	ND (0.11)	ND (0.11)
p-Dichlorobenzene	<b>1.5</b>	ND (0.42)	ND (0.42)	ND (0.11)	ND (0.11)
Ethanol	<b>277 J</b>	<b>35.0 J</b>	<b>51.8 J</b>	<b>51.8 J</b>	ND (0.41 J)
Ethylbenzene	<b>9.6</b>	ND (0.26)	ND (0.26)	ND (0.065)	ND (0.065)
Ethyl Acetate	ND (0.14)	ND (0.54)	<b>4.0</b>	<b>3.5</b>	ND (0.14)
4-Ethyltoluene	<b>0.84 J</b>	ND (0.59)	ND (0.59)	ND (0.15)	ND (0.15)
Heptane	<b>471</b>	<b>5.7</b>	ND (0.29)	<b>0.61 J</b>	ND (0.074)
Hexachlorobutadiene	ND (0.49)	ND (1.9)	ND (1.9)	ND (0.49)	ND (0.49)
Hexane	<b>8.8</b>	ND (0.15)	ND (0.15)	ND (0.039)	ND (0.039)
2-Hexanone	ND (0.15)	ND (0.61)	ND (0.61)	ND (0.15)	ND (0.15)
Isopropyl alcohol	<b>124</b>	<b>2.9 J</b>	ND (0.64 J)	<b>1.8 J</b>	ND (0.16 J)
Methyl ethyl ketone	<b>395</b>	<b>4.7 J</b>	ND (4.7)	ND (2.6)	<b>0.53 J</b>
Methyl Isobutyl Ketone	ND (0.15)	ND (0.57)	ND (0.57)	ND (0.15)	ND (0.15)
Methylmethacrylate	<b>1.8</b>	ND (0.53)	ND (0.53)	ND (0.14)	ND (0.14)
Propylene	ND (0.027)	ND (0.11)	ND (0.11)	ND (0.027)	ND (0.027)
Styrene	<b>26</b>	ND (0.32)	ND (0.32)	<b>1.2</b>	ND (0.081)

**Table 4-6**  
**Summary of Vapor Analytical Data**  
**2021 In-Situ Chemical Oxidation (ISCO) Activities**  
**Former Norton/Nashua Facility**  
**Watervliet, New York**

Sample ID: Date Sampled:	Indoor Air 6/9/2021	DB-VMP-2 6/9/2021	DB-VMP-3 6/9/2021	Outdoor Ambient 6/9/2021	Trip Blank 6/9/2021
1,2,4-Trimethylbenzene	<b>4.1</b>	ND (0.64)	ND (0.64)	ND (0.16)	ND (0.16)
1,3,5-Trimethylbenzene	<b>1.4</b>	ND (0.64)	ND (0.64)	ND (0.17)	ND (0.17)
2,2,4-Trimethylpentane	<b>3.1</b>	ND (0.41)	ND (0.41)	ND (0.10)	ND (0.10)
Tertiary Butyl Alcohol	<b>21</b>	<b>3.0</b>	ND (0.17)	<b>1.0</b>	ND (0.042)
Tetrahydrofuran	<b>1.2</b>	ND (0.59)	ND (0.59)	ND (0.15)	ND (0.15)
Toluene	<b>562</b>	<b>4.9</b>	<b>5.3</b>	<b>3.4</b>	ND (0.053)
Trichlorofluoromethane	<b>8.4</b>	<b>6.7</b>	<b>3.0 J</b>	<b>1.3</b>	ND (0.16)
Vinyl Acetate	<b>7.7</b>	<b>3.5</b>	ND (0.49)	<b>3.1</b>	ND (0.12)
m,p-Xylene	<b>23</b>	ND (0.61)	ND (0.61)	ND (0.15)	ND (0.15)
o-Xylene	<b>9.6</b>	ND (0.30)	ND (0.30)	ND (0.074)	ND (0.074)
Xylenes (total)	<b>32</b>	ND (0.30)	ND (0.30)	ND (0.074)	ND (0.074)
Total VOC TICs	<b>498.2 J</b>	<b>33 J</b>	ND	<b>14.9 J</b>	<b>2.5 J</b>

Notes:

1. All samples were analyzed for VOCs via EPA Method TO-15 plus TICs. Only detected analytes are listed above.
2. All results presented in micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) except total volatile organic compound (VOC) tentatively identified compounds (TICs), which are presented in parts per billion by volume (ppbv).
3. J = estimated concentration, compound detected below the quantitation limit;  
ND = not detected (laboratory detection limit); VMP = vapor monitoring point.
4. All results reflect validated data.

## **FIGURES**

N  
E



FORENSIC ENVIRONMENTAL  
SERVICES, INC.

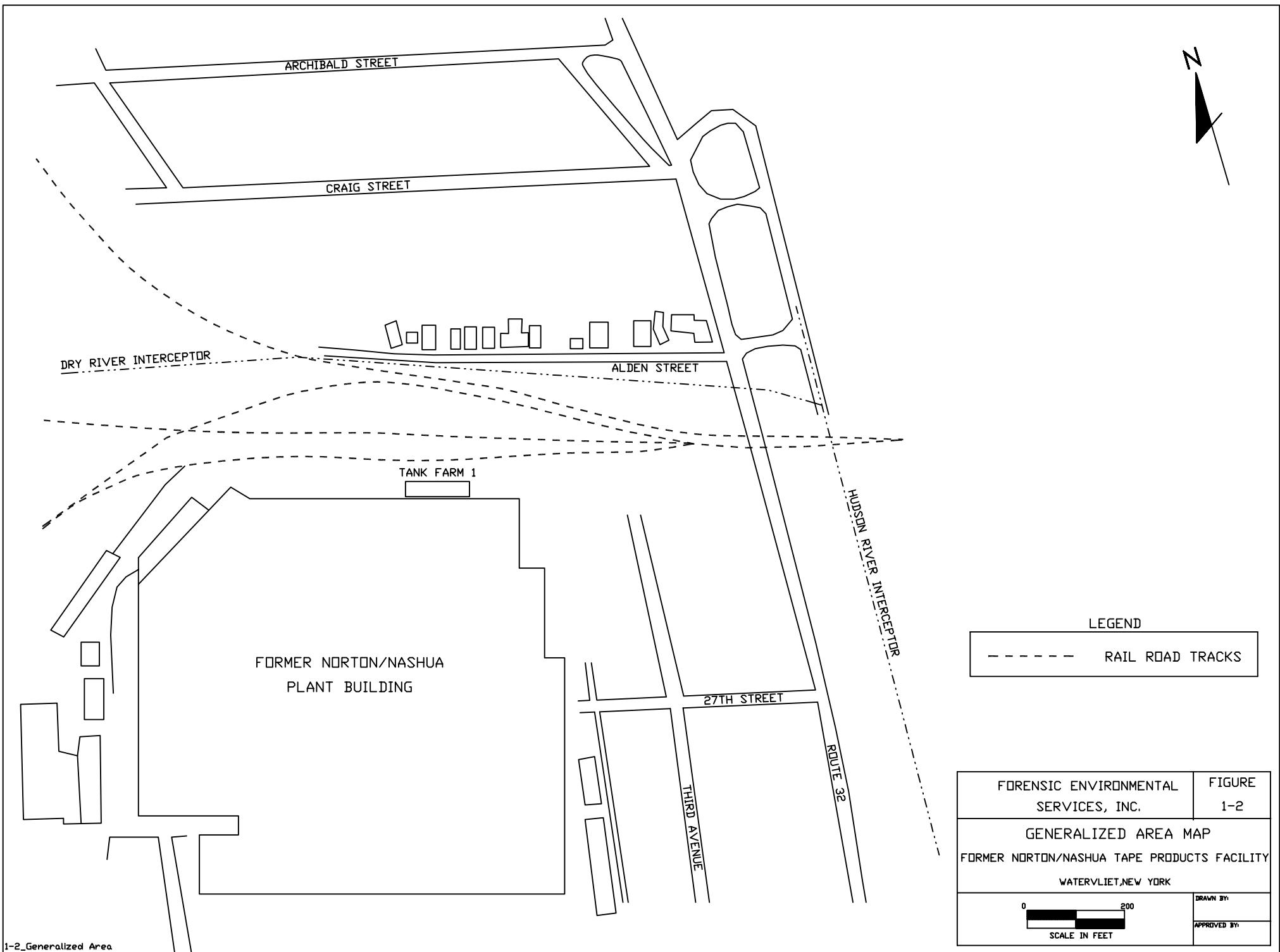
FIGURE  
1-1

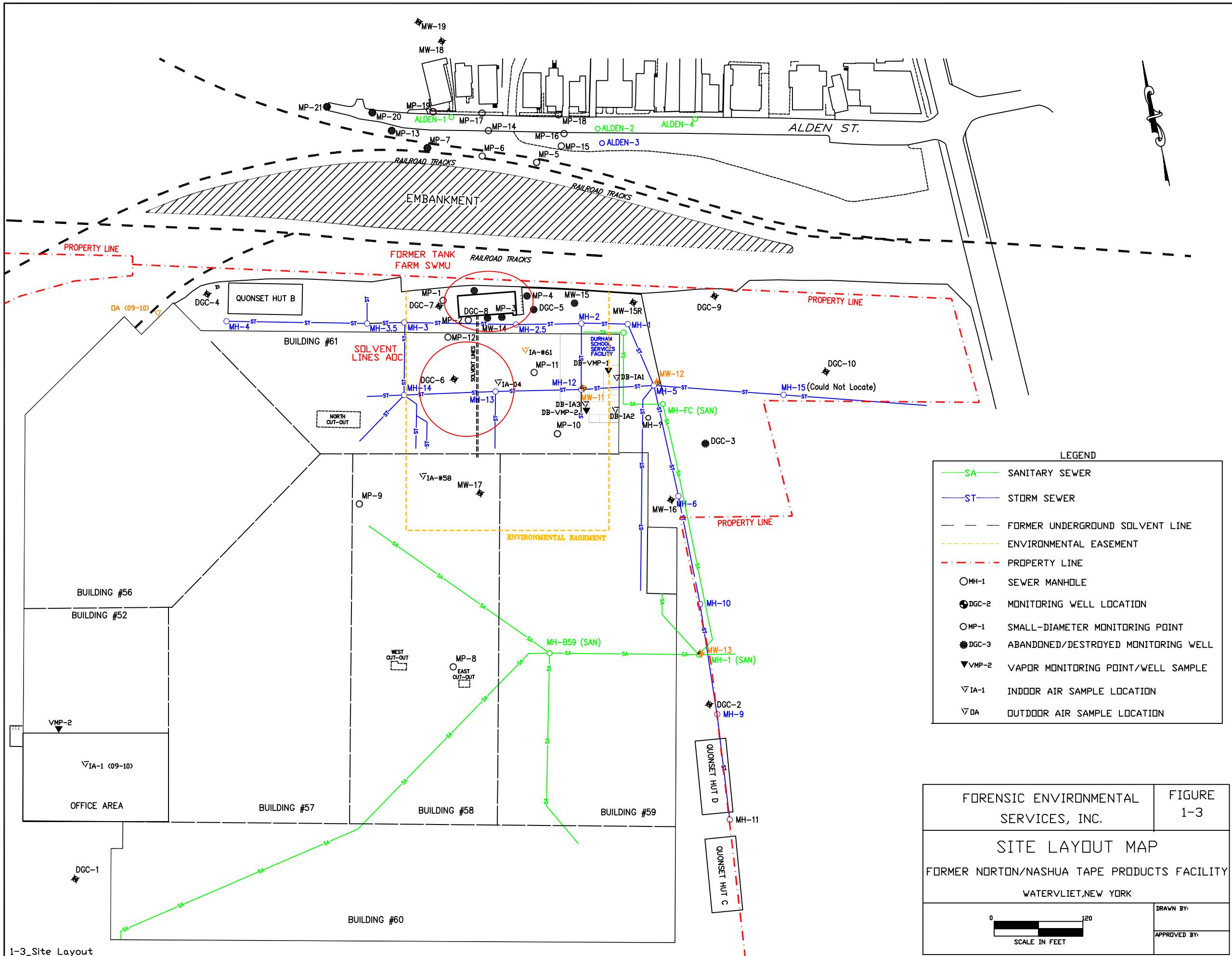
SITE LOCATION MAP  
FORMER NORTON/NASHUA TAPE PRODUCTS FACILITY  
WATERVLIET, NEW YORK

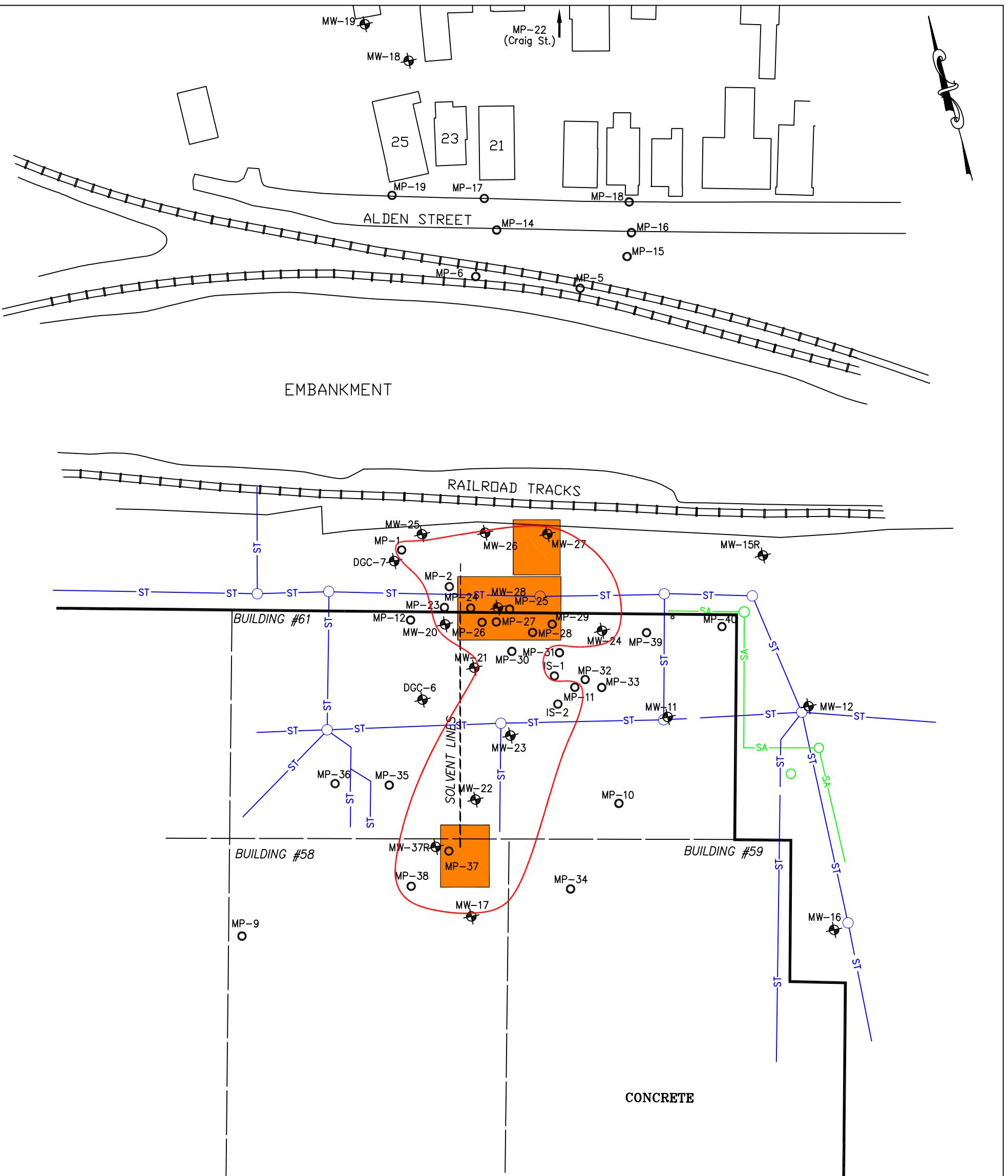
0 1540  
SCALE IN FEET

DRAWN BY:  
APPROVED BY:

DERIVED FROM THE TROY SOUTH QUADRANGLE  
COMPILED BY THE U.S. GEOLOGICAL SURVEY.



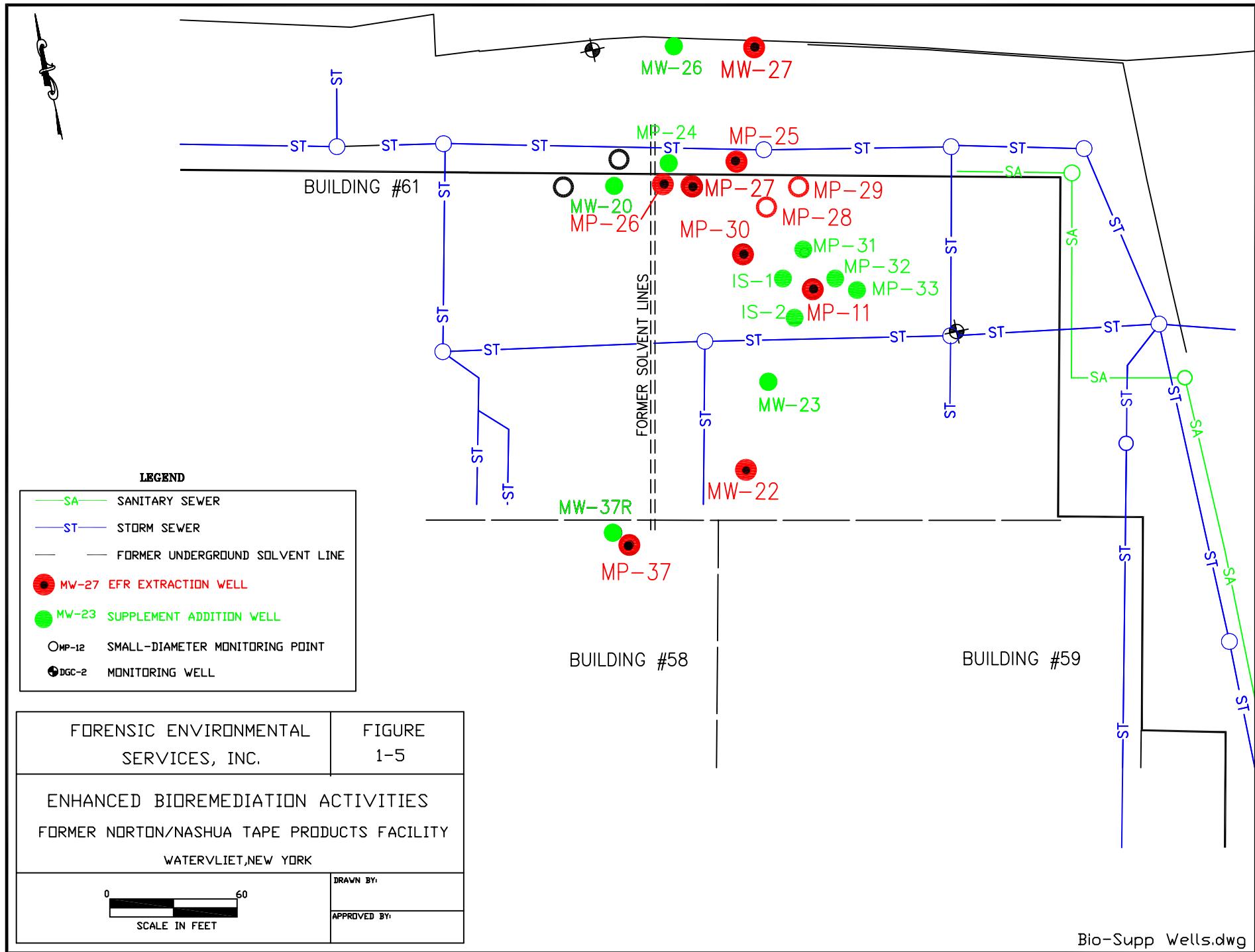


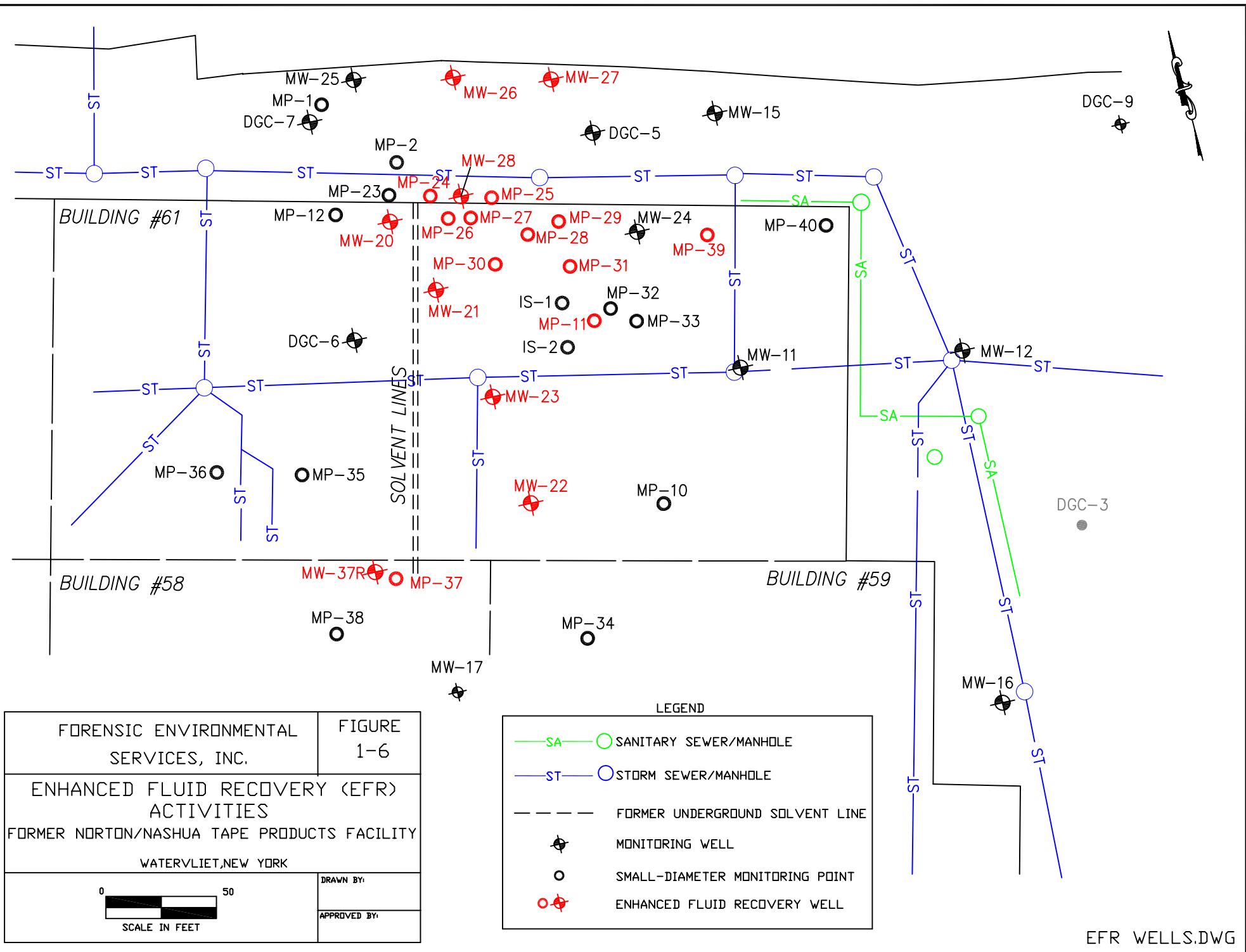


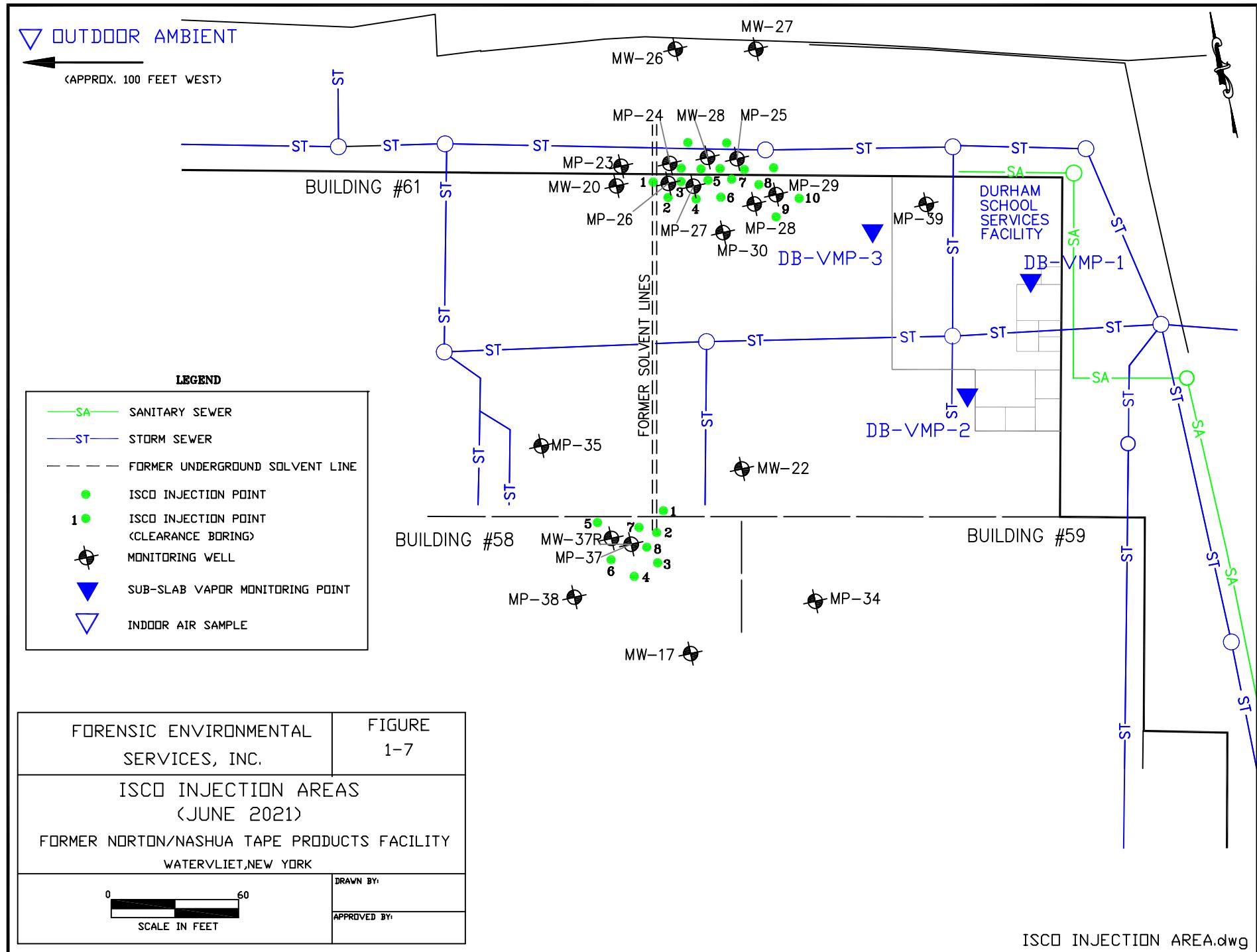
FORENSIC ENVIRONMENTAL SERVICES, INC.	FIGURE 1-4
ISCO, EFR, AND EB TREATMENT AREAS	
FORMER NORTON/NASHUA TAPE PRODUCTS FACILITY	
WATERVLIET, NEW YORK	
0 SCALE IN FEET	DRAWN BY: B.J.M. 1/15/2022
	APPROVED BY:

**LEGEND**

- SA SANITARY SEWER/MANHOLE
- ST STORM SEWER/MANHOLE
- FORMER UNDERGROUND SOLVENT LINE
- MONITORING WELL
- SMALL-DIAMETER MONITORING POINT
- ISCO/EFR TREATMENT AREAS  
(DISSOLVED TOLUENE >10,000 µg/L)
- APPROXIMATE EXTENT OF TOLUENE PLUME (<5 µg/L)







# FORENSIC ENVIRONMENT, SERVICES, INC.

## FIGURE 1-7

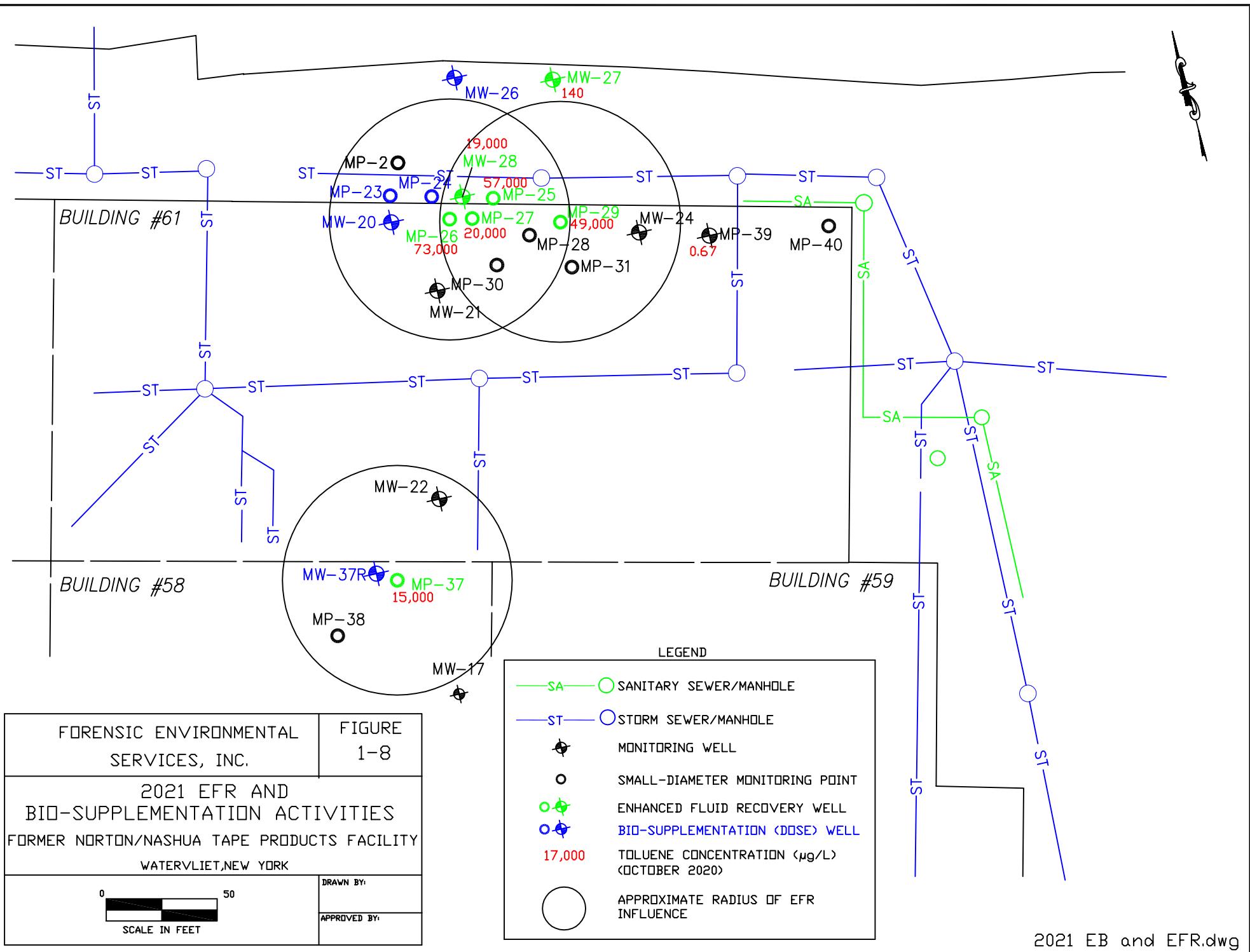
ISCO INJECTION AREAS  
(JUNE 2021)

FORMER NORTON/NASHUA TAPE PRODUCTS FACILITY  
WATERVLIET, NEW YORK

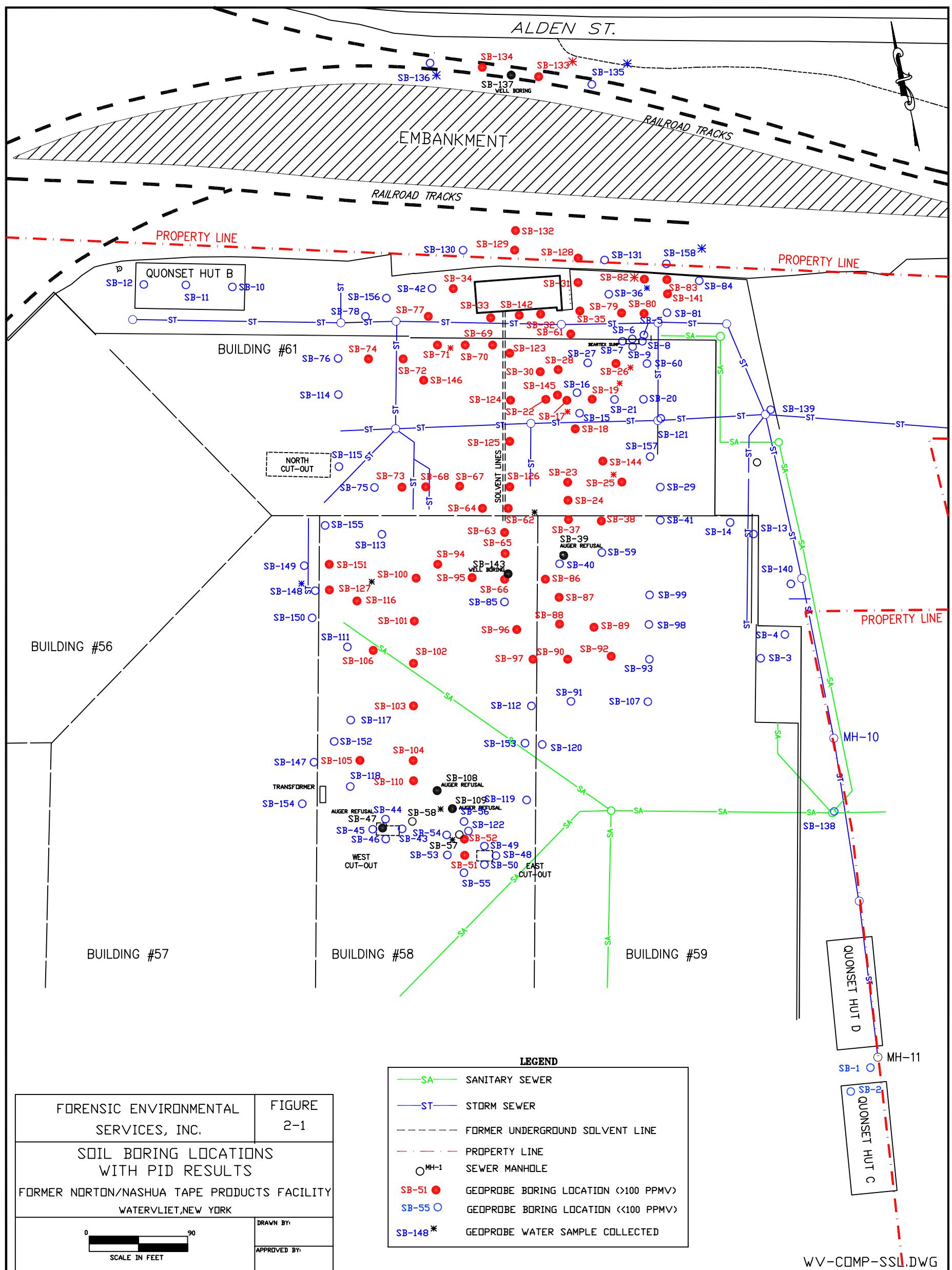
A horizontal scale bar with a dashed line extending from the zero mark.

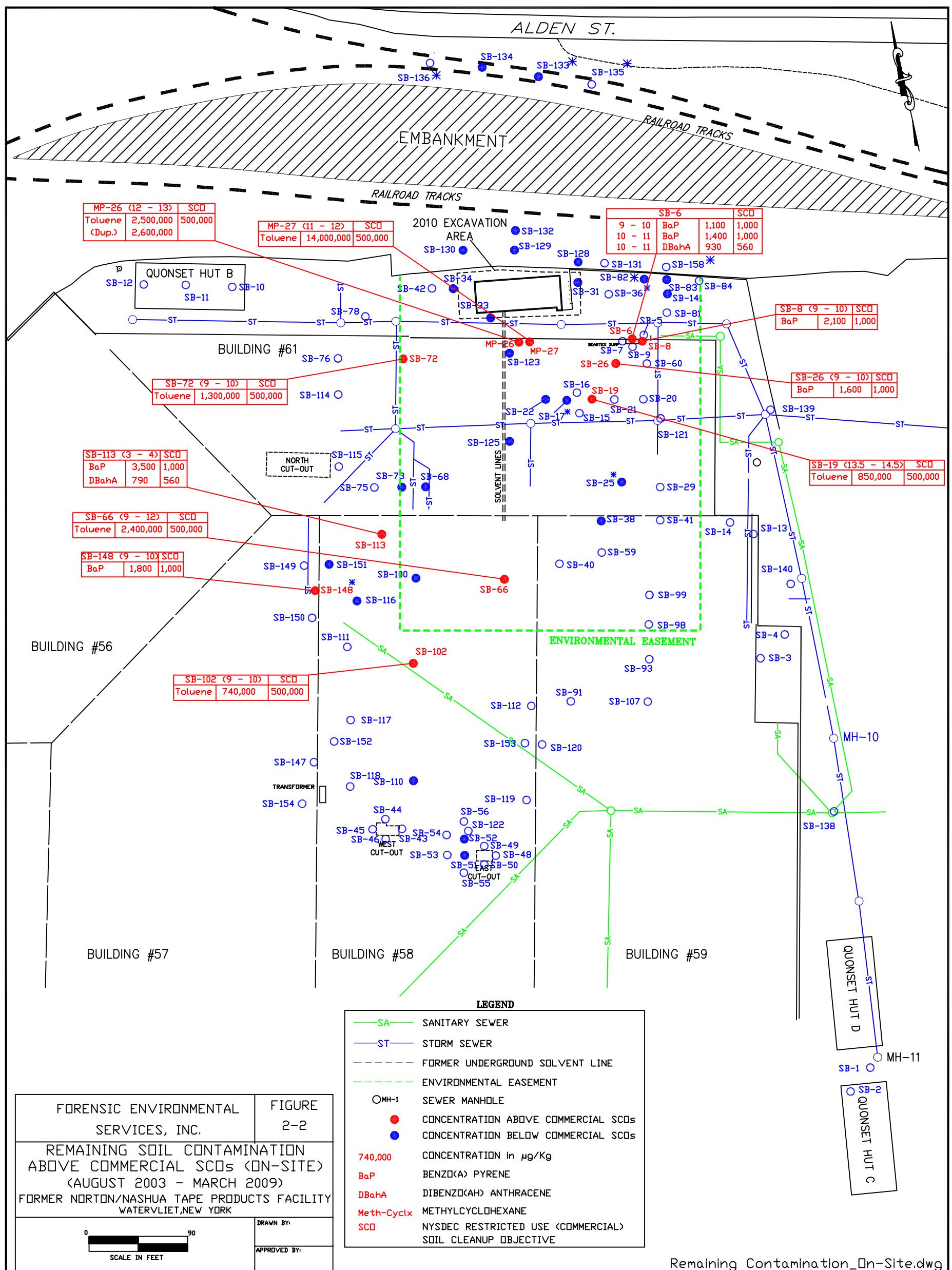
DRAWN BY

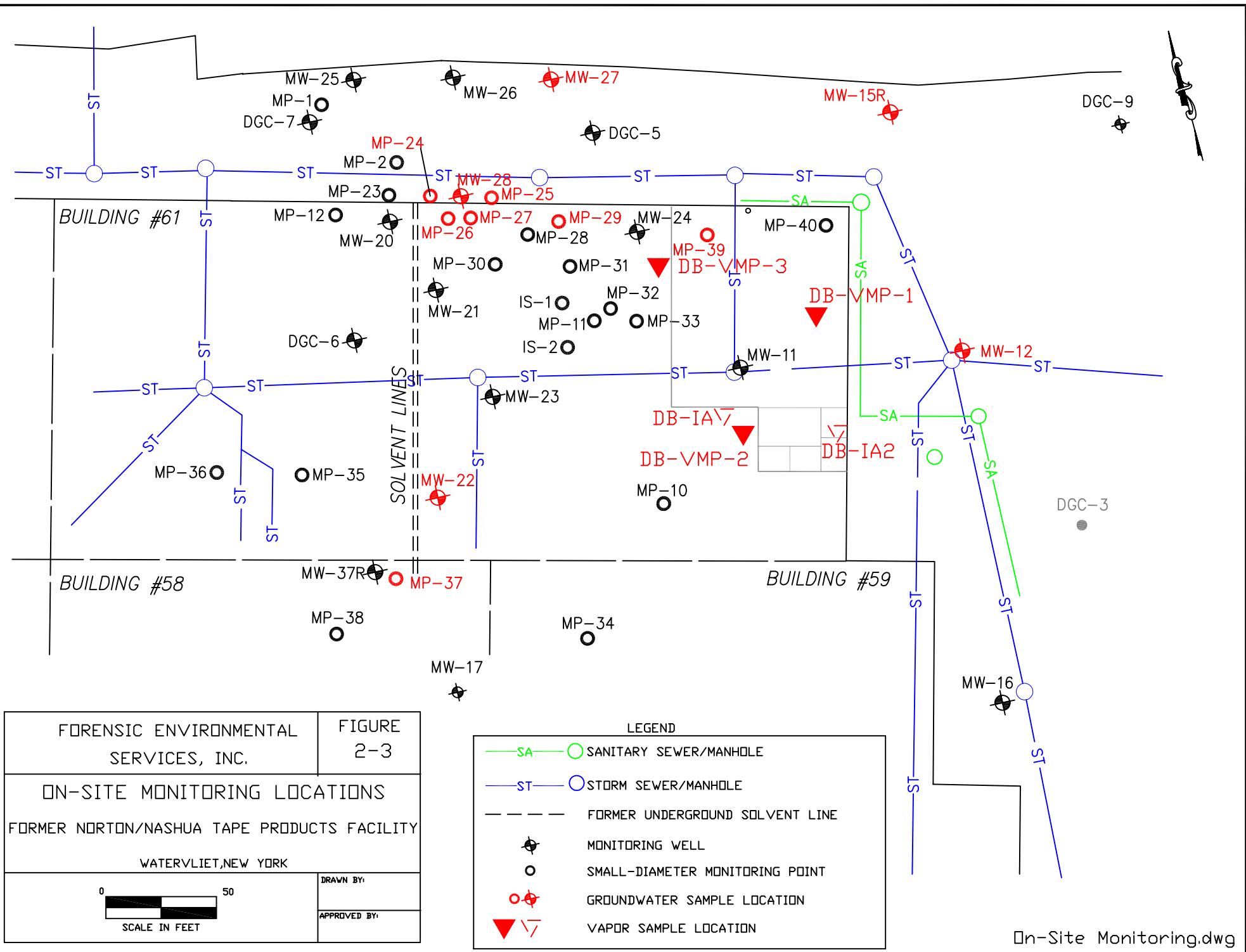
ISCO INJECTION AREA.dwg



2021 EB and EFR.dwg



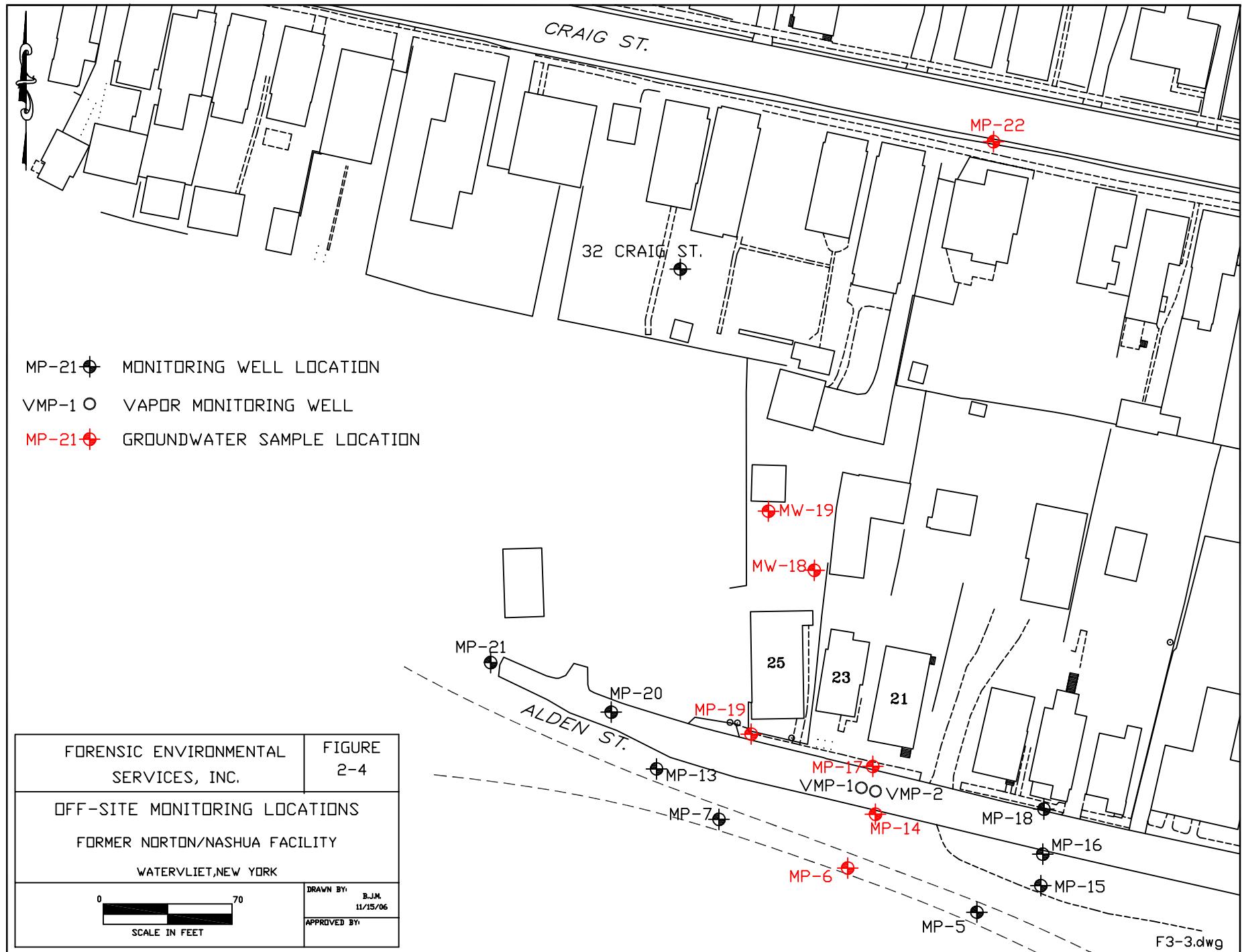


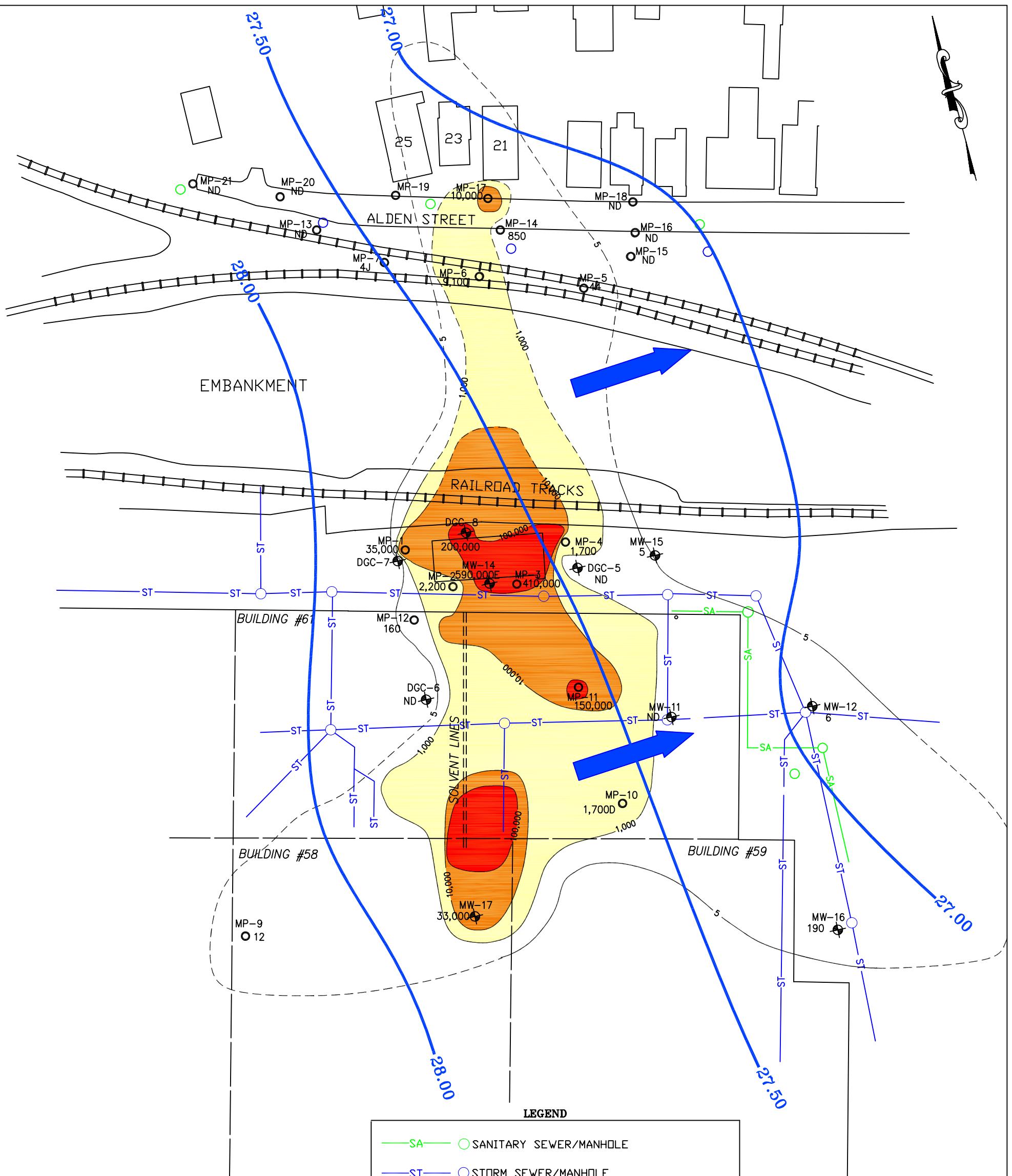


FORENSIC ENVIRONMENTAL SERVICES, INC.	FIGURE 2-3
ON-SITE MONITORING LOCATIONS	
FORMER NORTON/NASHUA TAPE PRODUCTS FACILITY	
WATERVLIET, NEW YORK	
0	50
SCALE IN FEET	
DRAWN BY:	APPROVED BY:

LEGEND

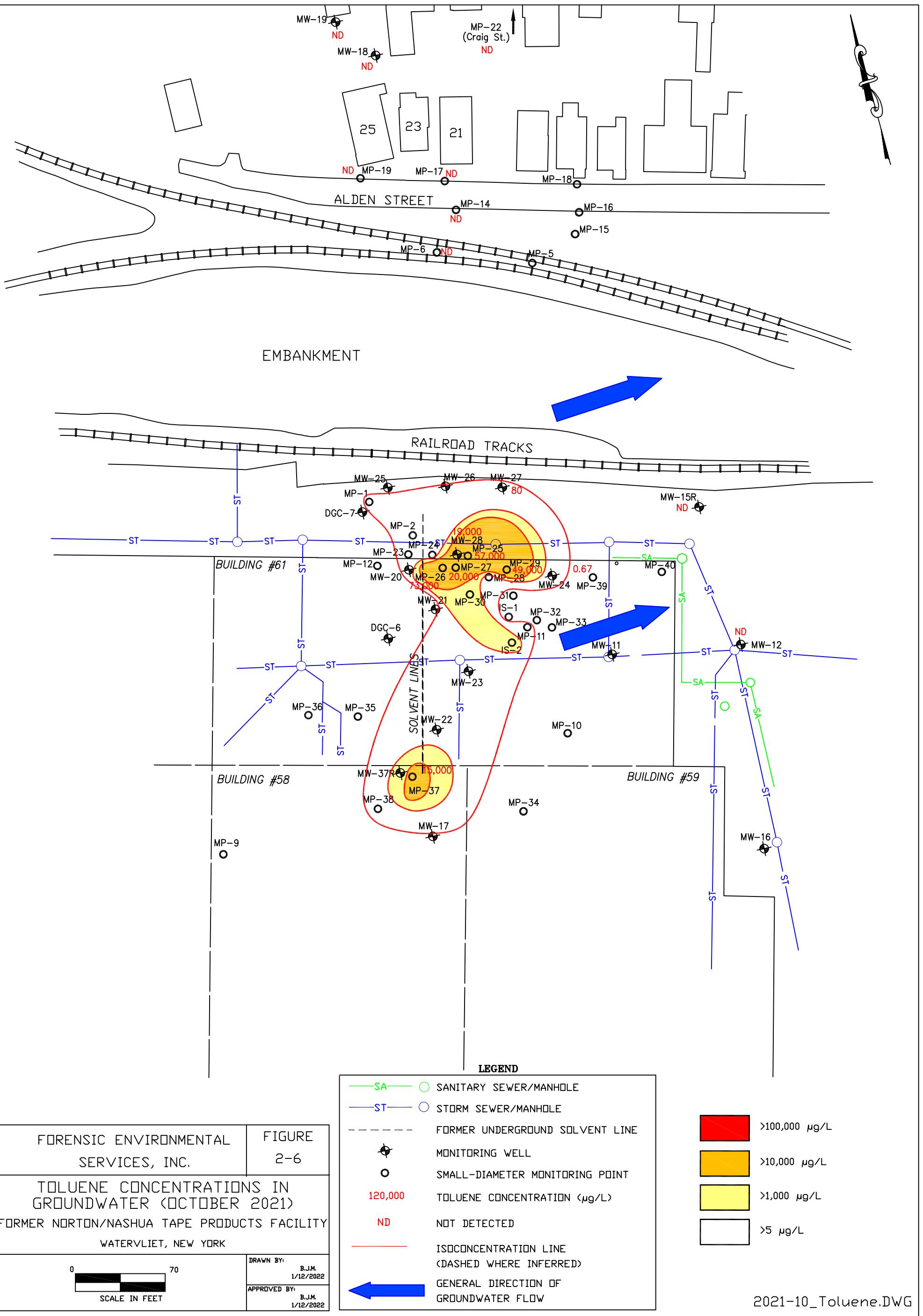
- SA — SANITARY SEWER/MANHOLE
- ST — STORM SEWER/MANHOLE
- — — FORMER UNDERGROUND SOLVENT LINE
- MONITORING WELL
- SMALL-DIAMETER MONITORING POINT
- GROUNDWATER SAMPLE LOCATION
- ▼ VAPOR SAMPLE LOCATION



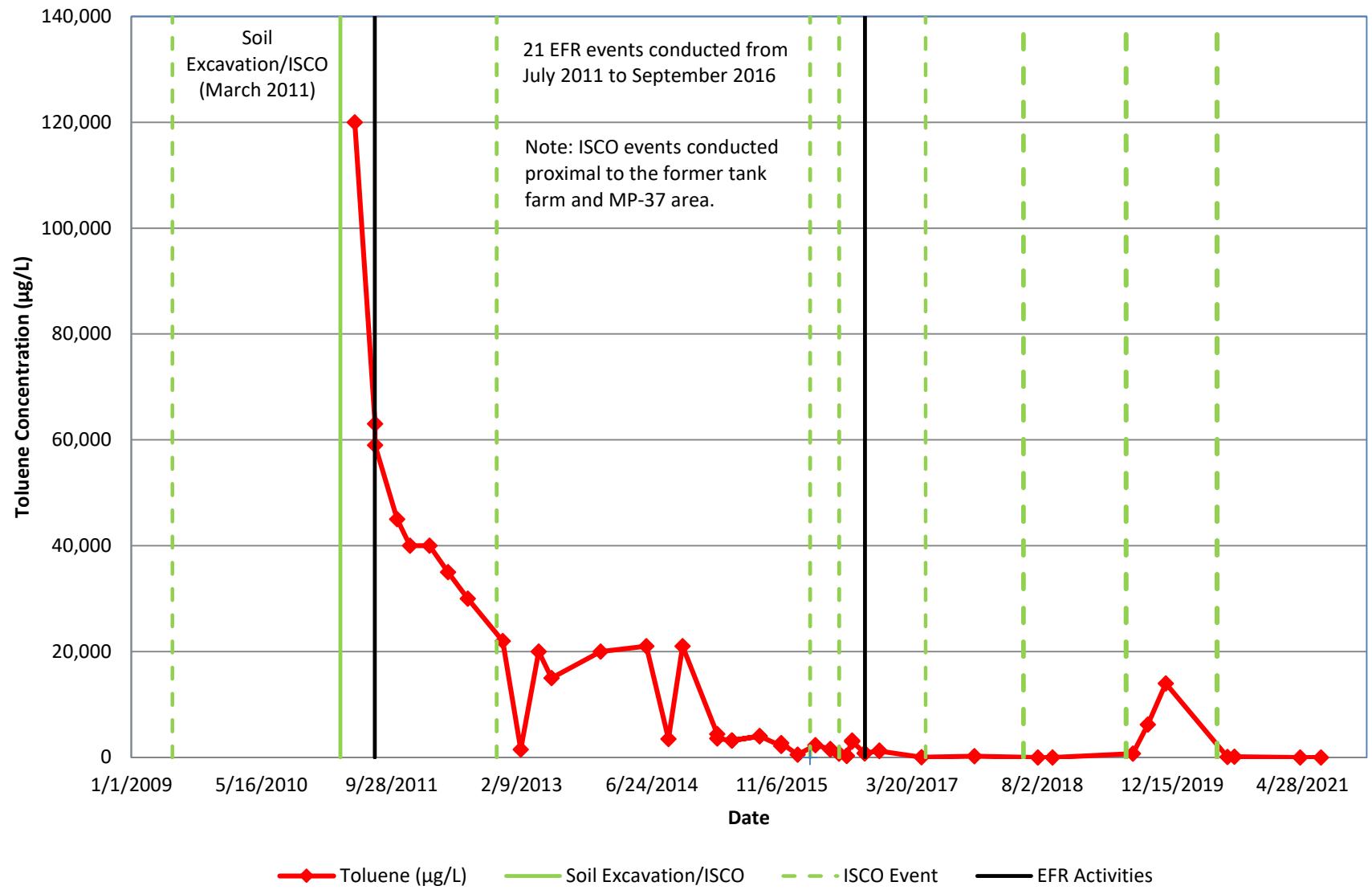


FORENSIC ENVIRONMENTAL SERVICES, INC.	FIGURE 2-5
MAXIMUM TOLUENE CONCENTRATIONS 2004	
FORMER NORTON/NASHUA TAPE PRODUCTS FACILITY	
WATERVLIET, NEW YORK	
0  70	DRAWN BY:  APPROVED BY:
SCALE IN FEET	

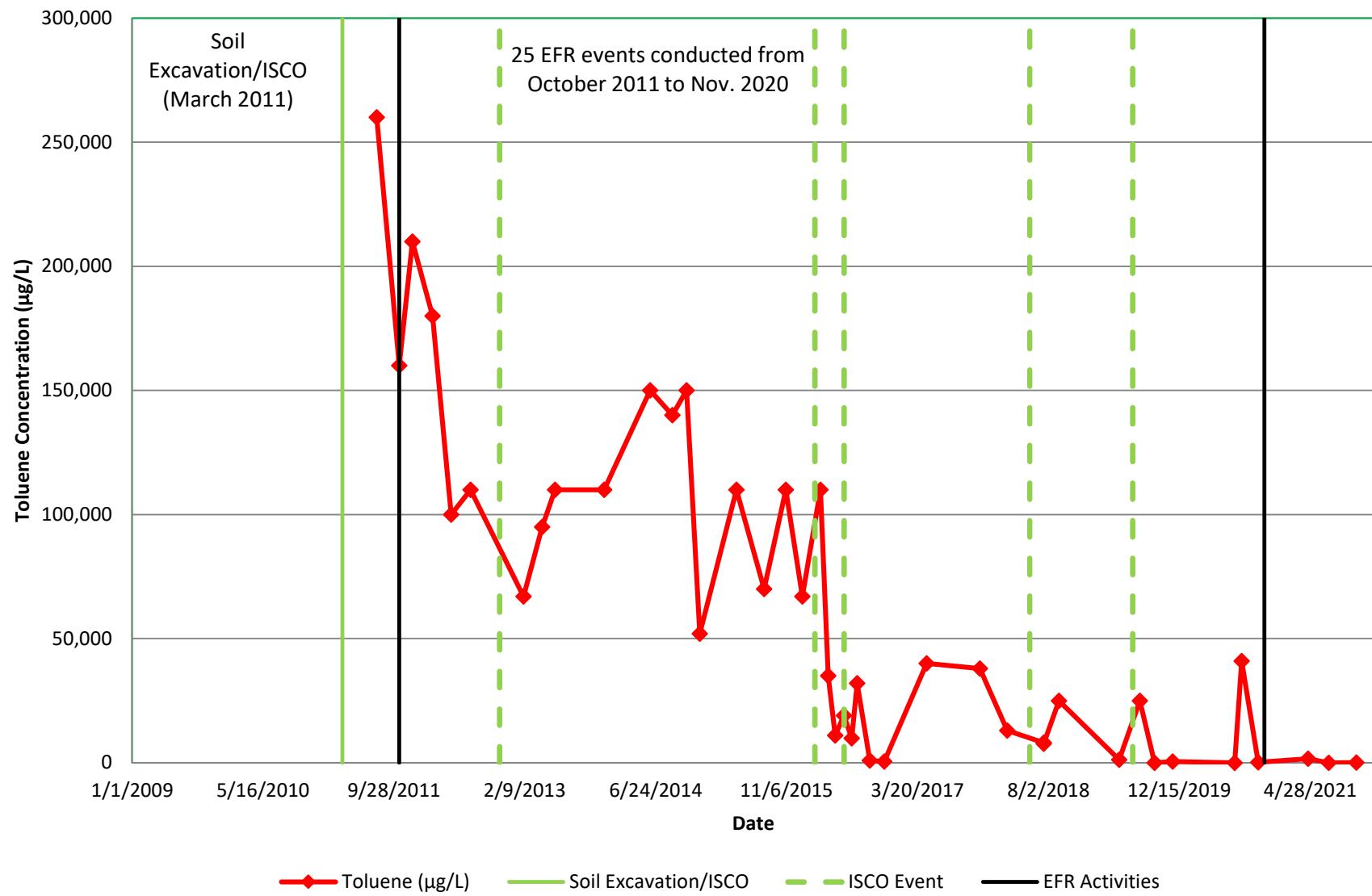
2004\_Max (with GW)



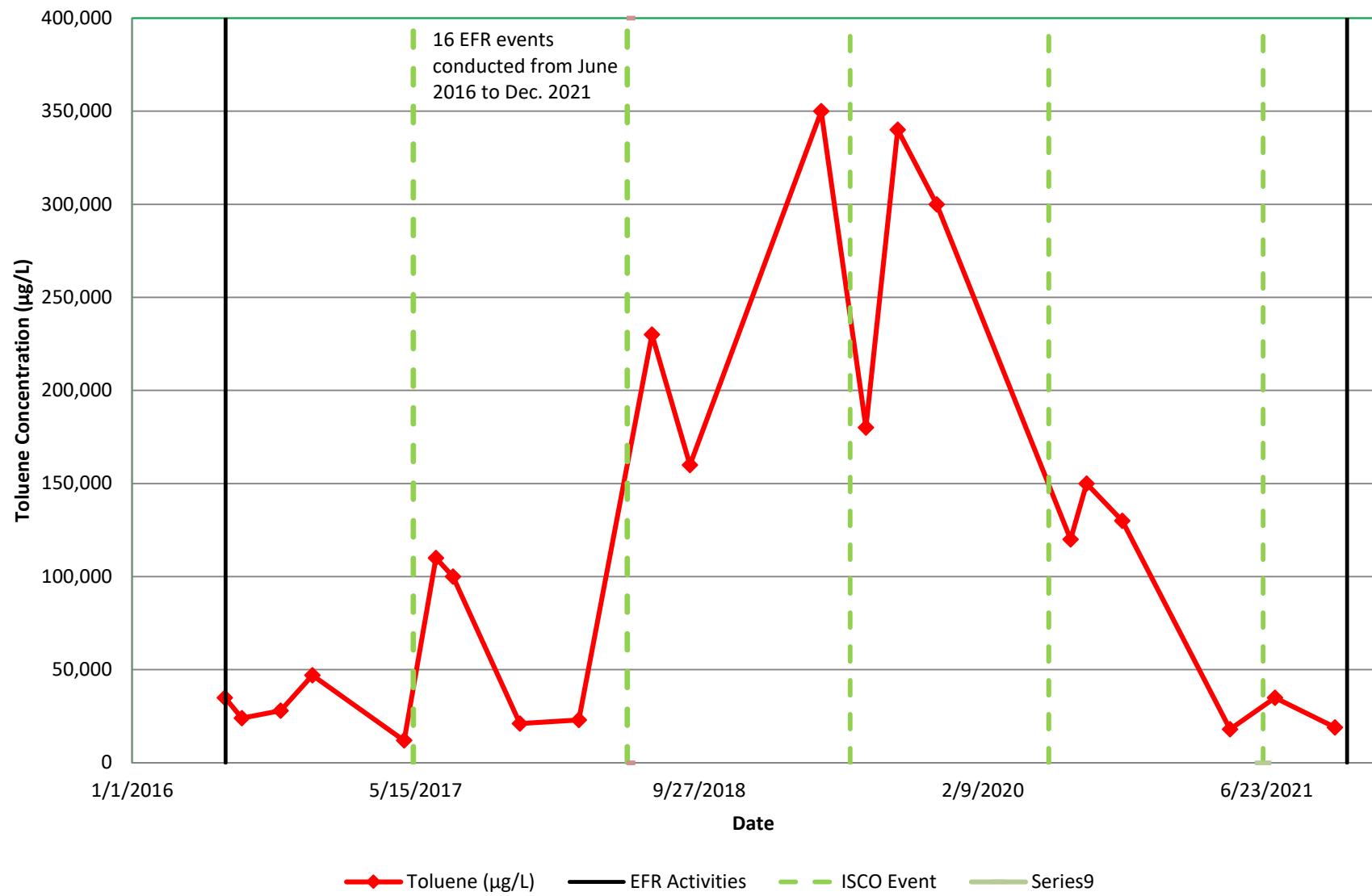
**Figure 2-7**  
**Toluene Concentrations Vs Time**  
**Monitoring Well MW-22**  
**Former Norton/Nashua Tape Products Facility**



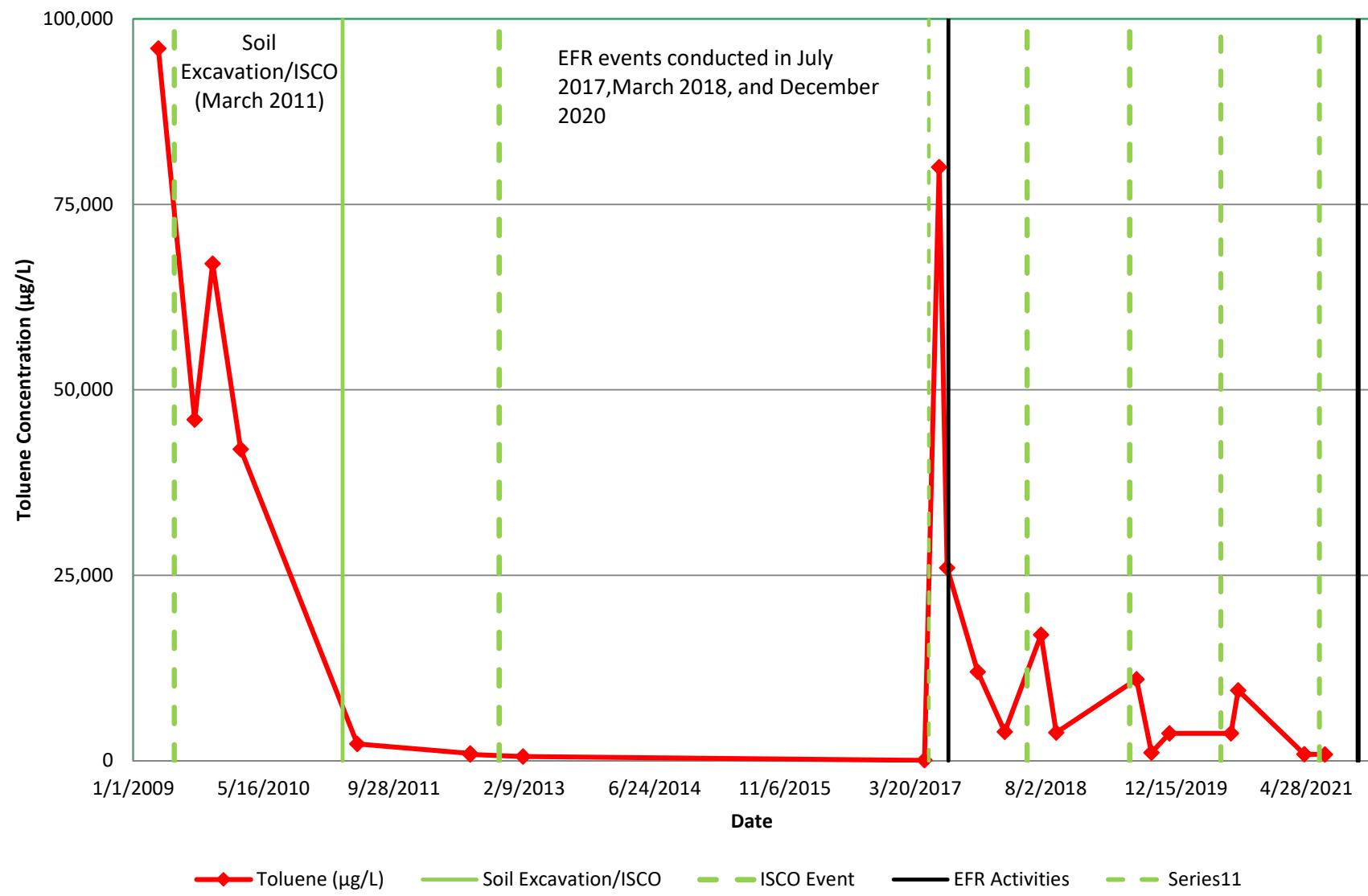
**Figure 2-8**  
**Toluene Concentrations Vs Time**  
**Monitoring Well MW-27**  
**Former Norton/Nashua Tape Products Facility**



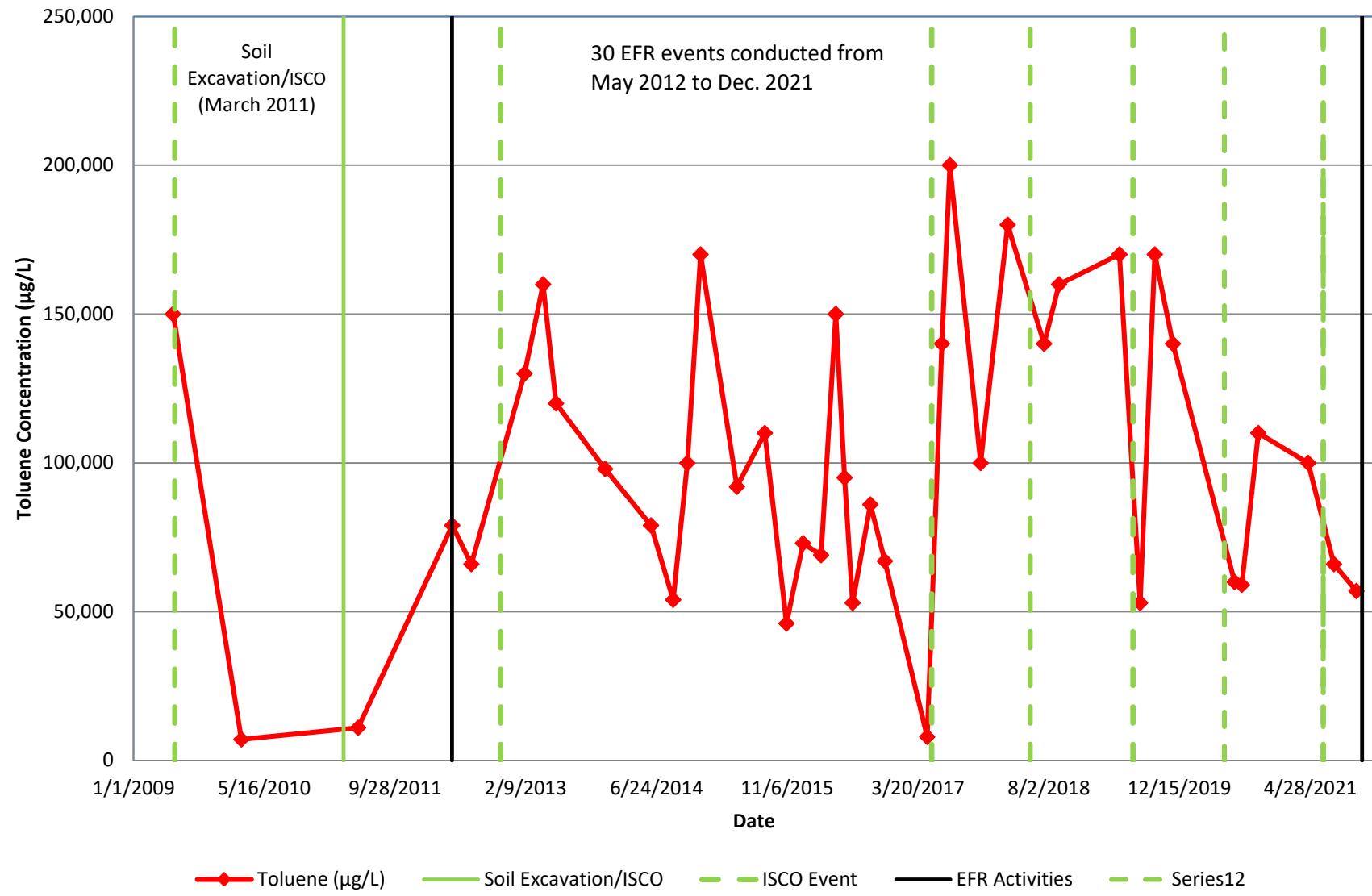
**Figure 2-9**  
**Toluene Concentrations Vs Time**  
**Monitoring Well MW-28**  
**Former Norton/Nashua Tape Products Facility**



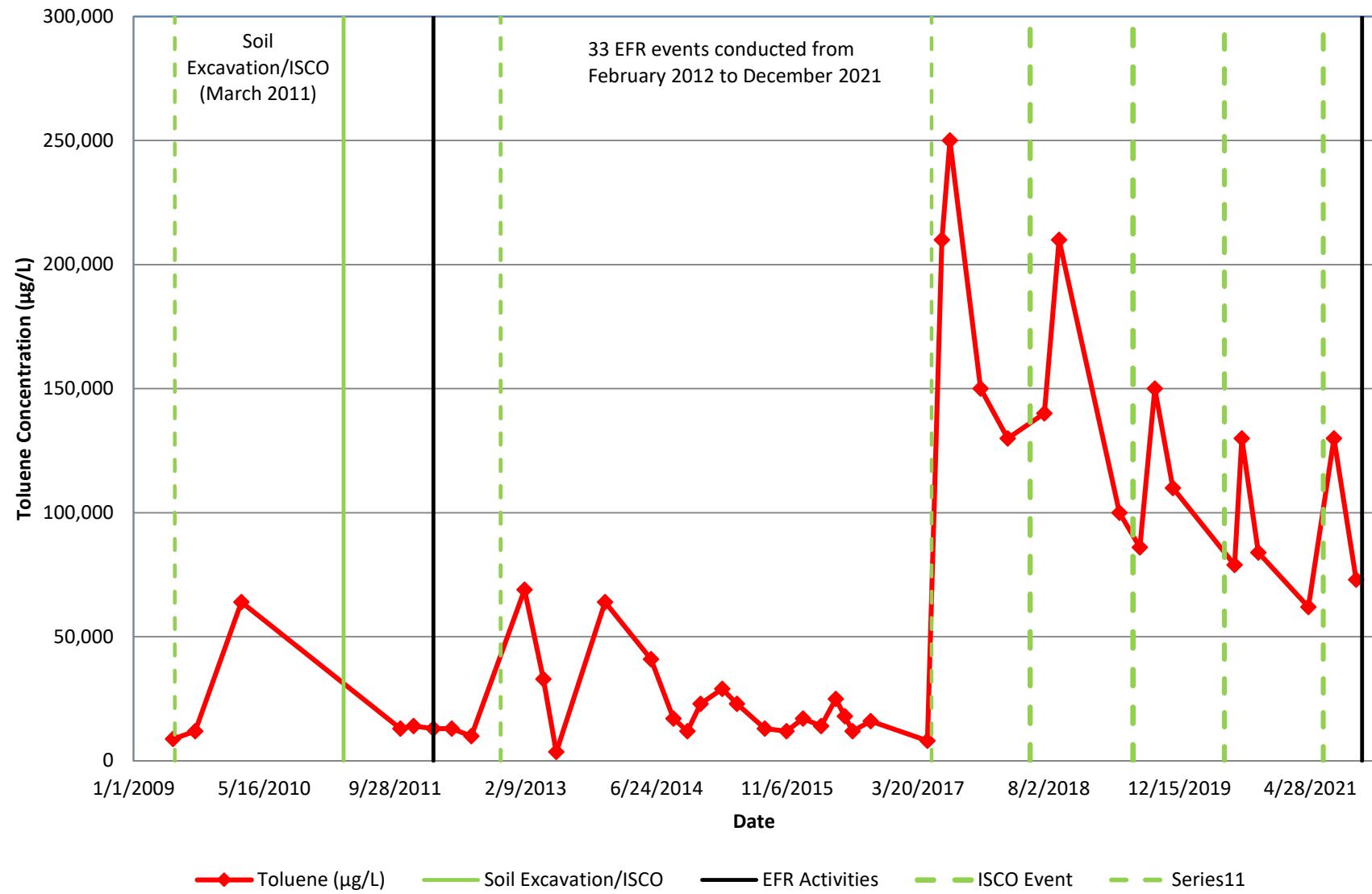
**Figure 2-10**  
**Toluene Concentrations Vs Time**  
**Monitoring Well MP-24**  
**Former Norton/Nashua Tape Products Facility**



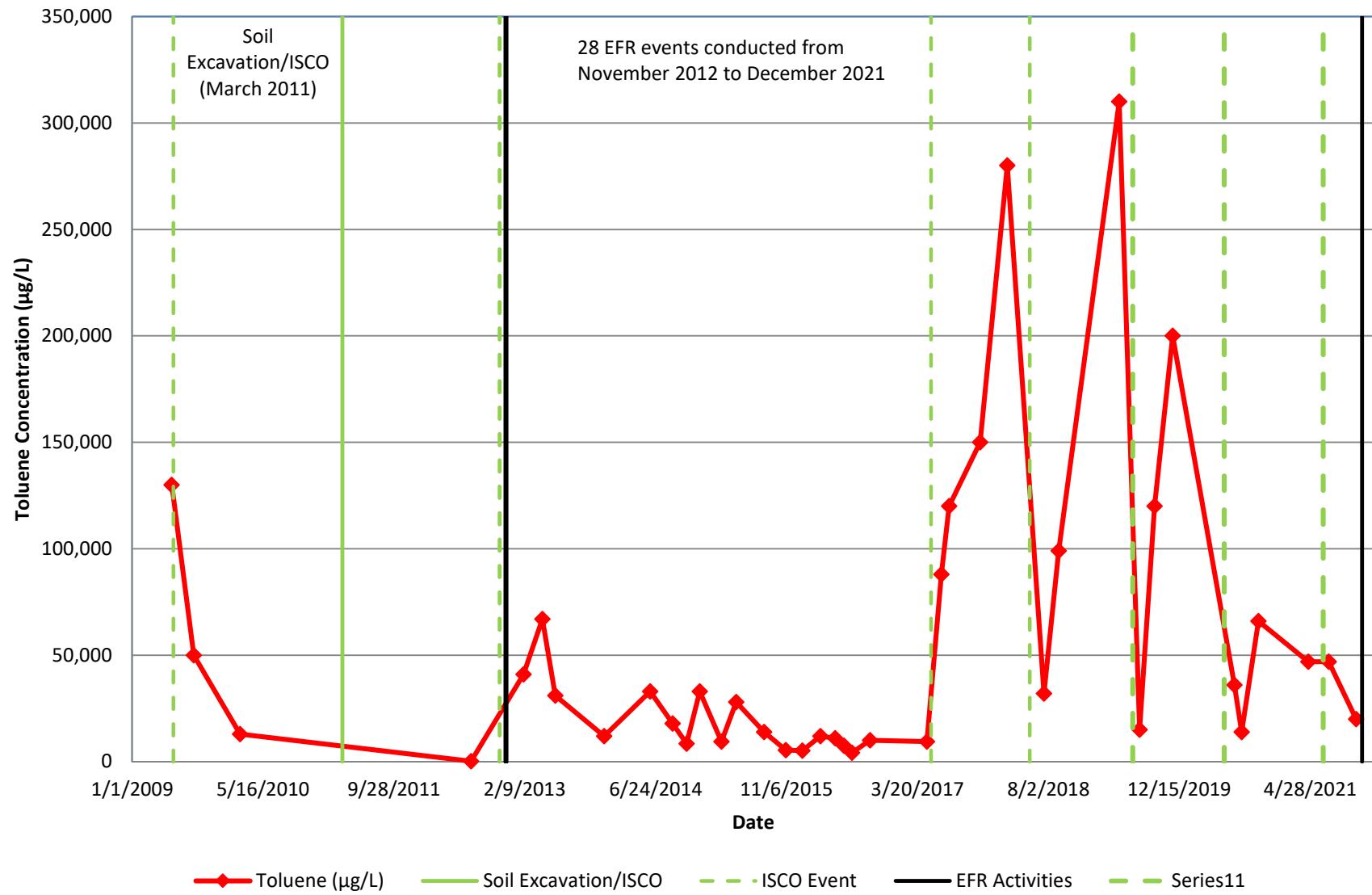
**Figure 2-11**  
**Toluene Concentrations Vs Time**  
**Monitoring Well MP-25**  
**Former Norton/Nashua Tape Products Facility**



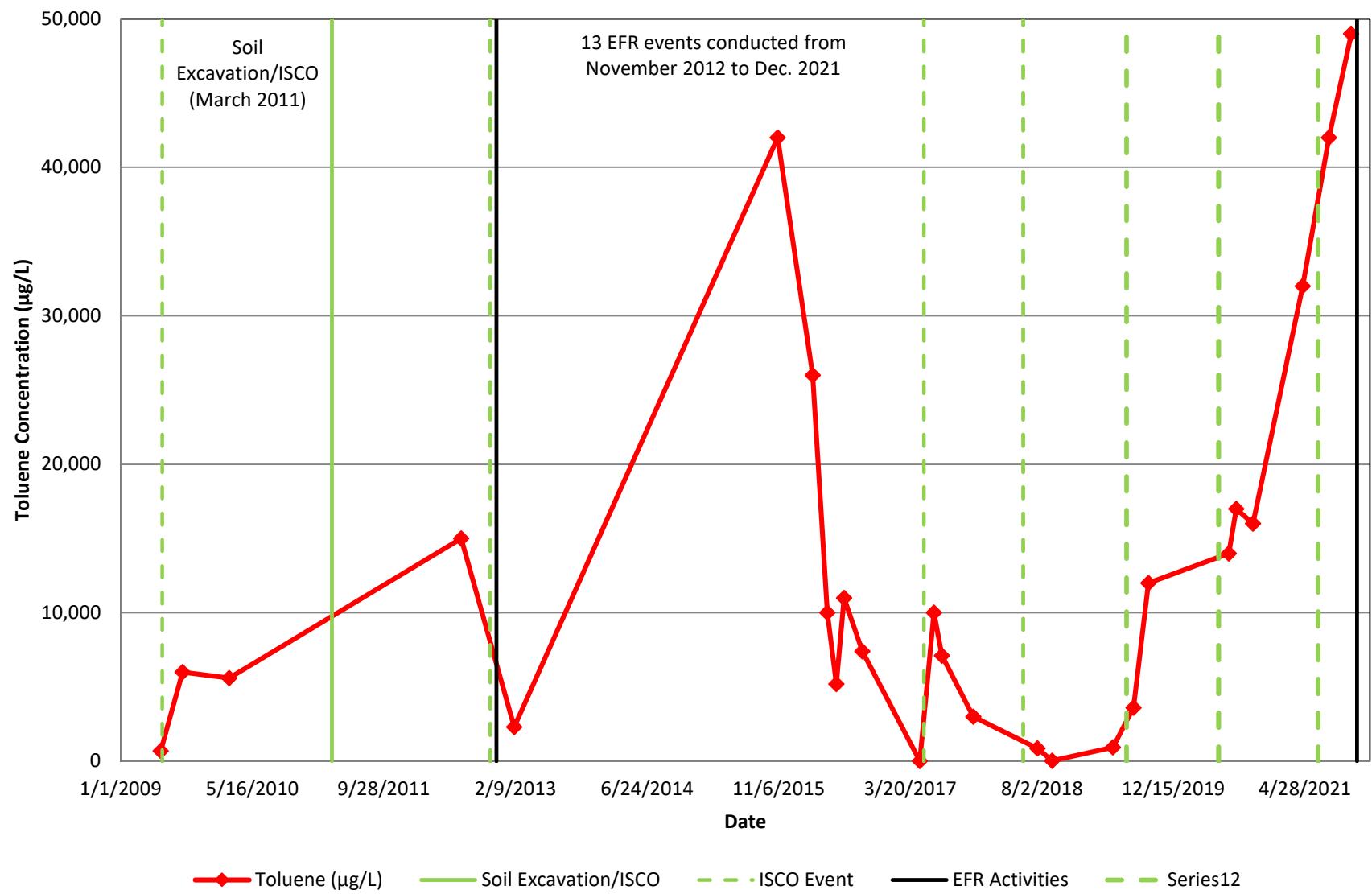
**Figure 2-12**  
**Toluene Concentrations Vs Time**  
**Monitoring Well MP-26**  
**Former Norton/Nashua Tape Products Facility**



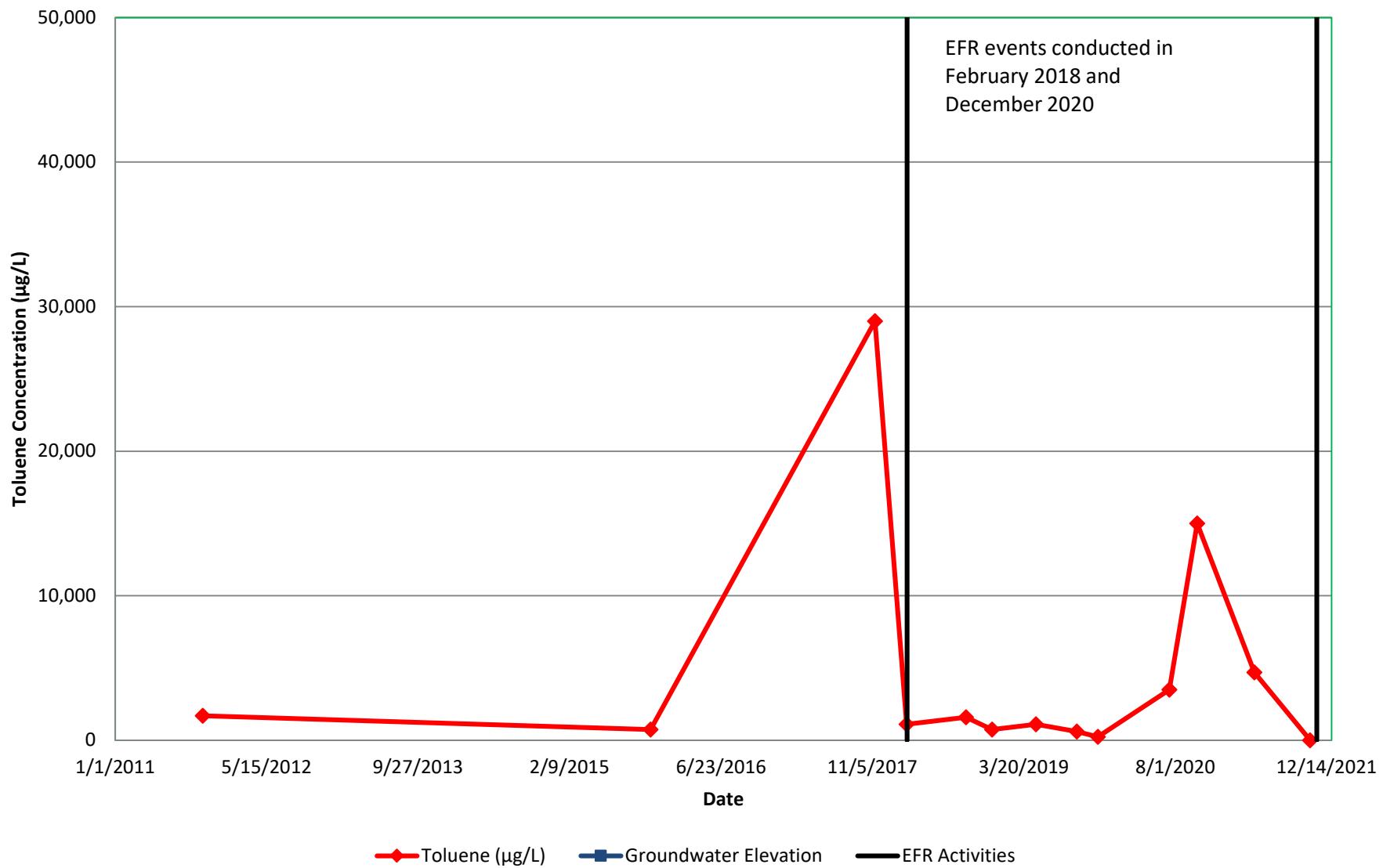
**Figure 2-13**  
**Toluene Concentrations Vs Time**  
**Monitoring Well MP-27**  
**Former Norton/Nashua Tape Products Facility**



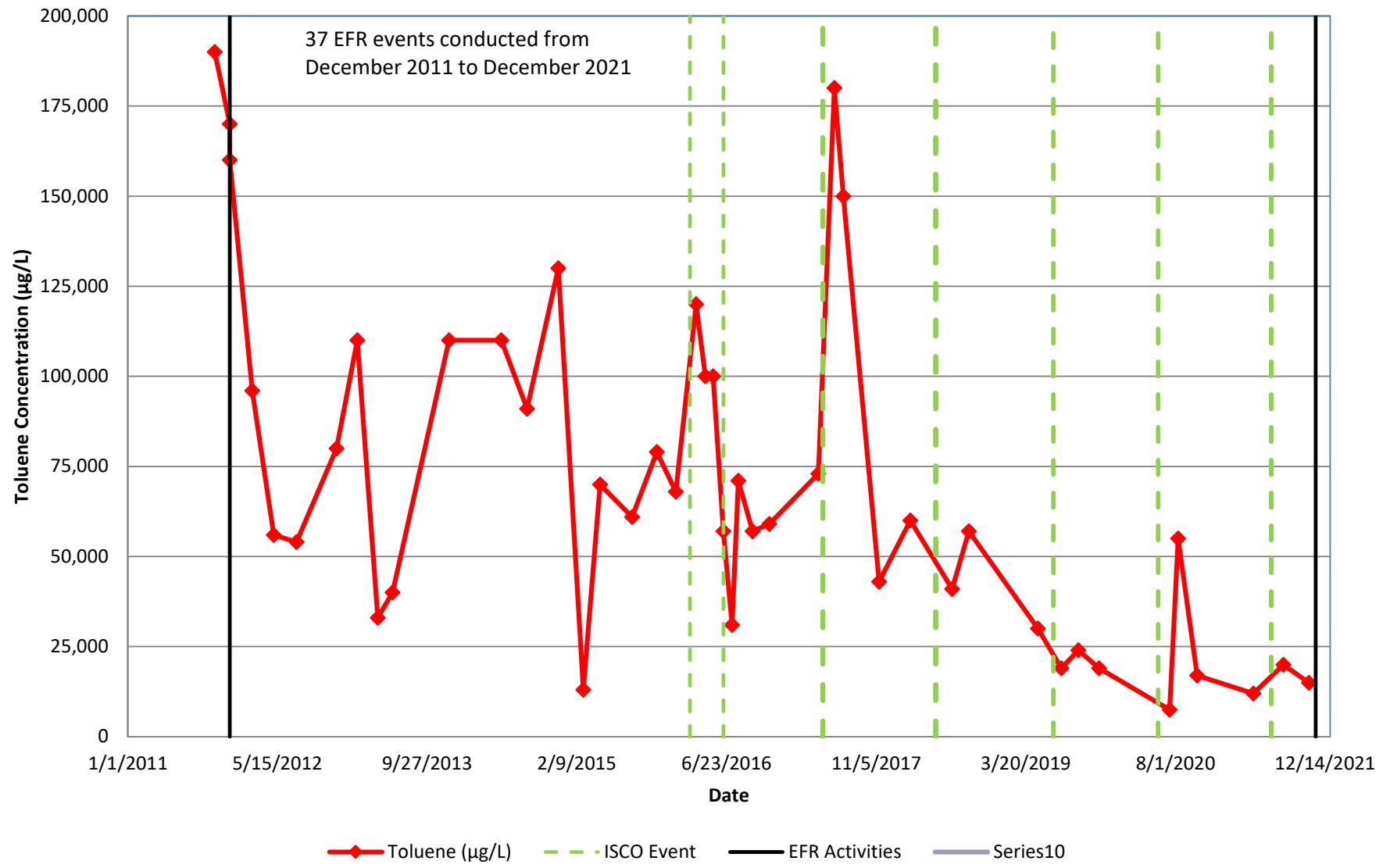
**Figure 2-14**  
**Toluene Concentrations Vs Time**  
**Monitoring Well MP-29**  
**Former Norton/Nashua Tape Products Facility**

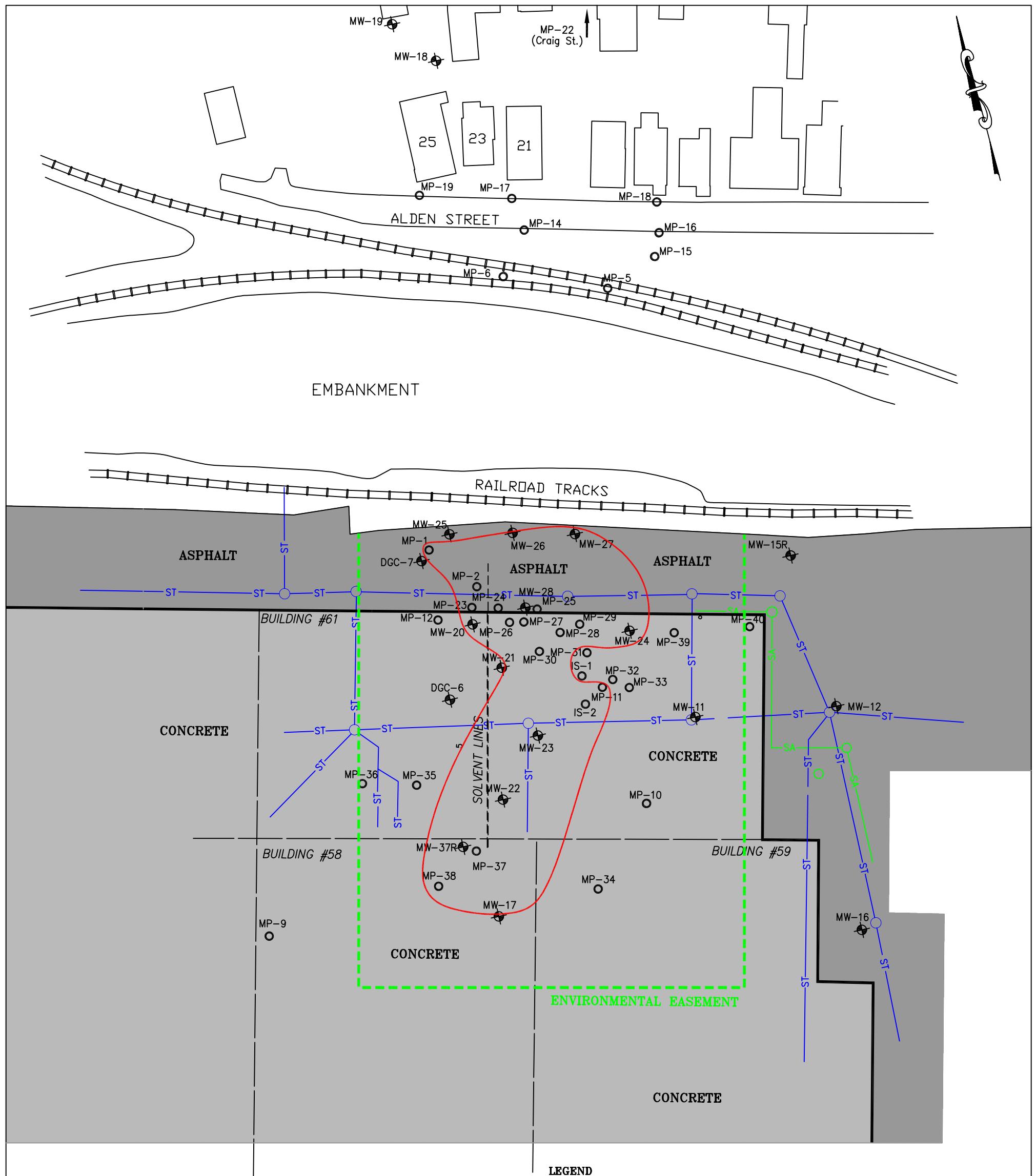


**Figure 2-15**  
**Toluene Concentrations Vs Time**  
**Monitoring Well MP-39**  
**Former Norton/Nashua Tape Products Facility**



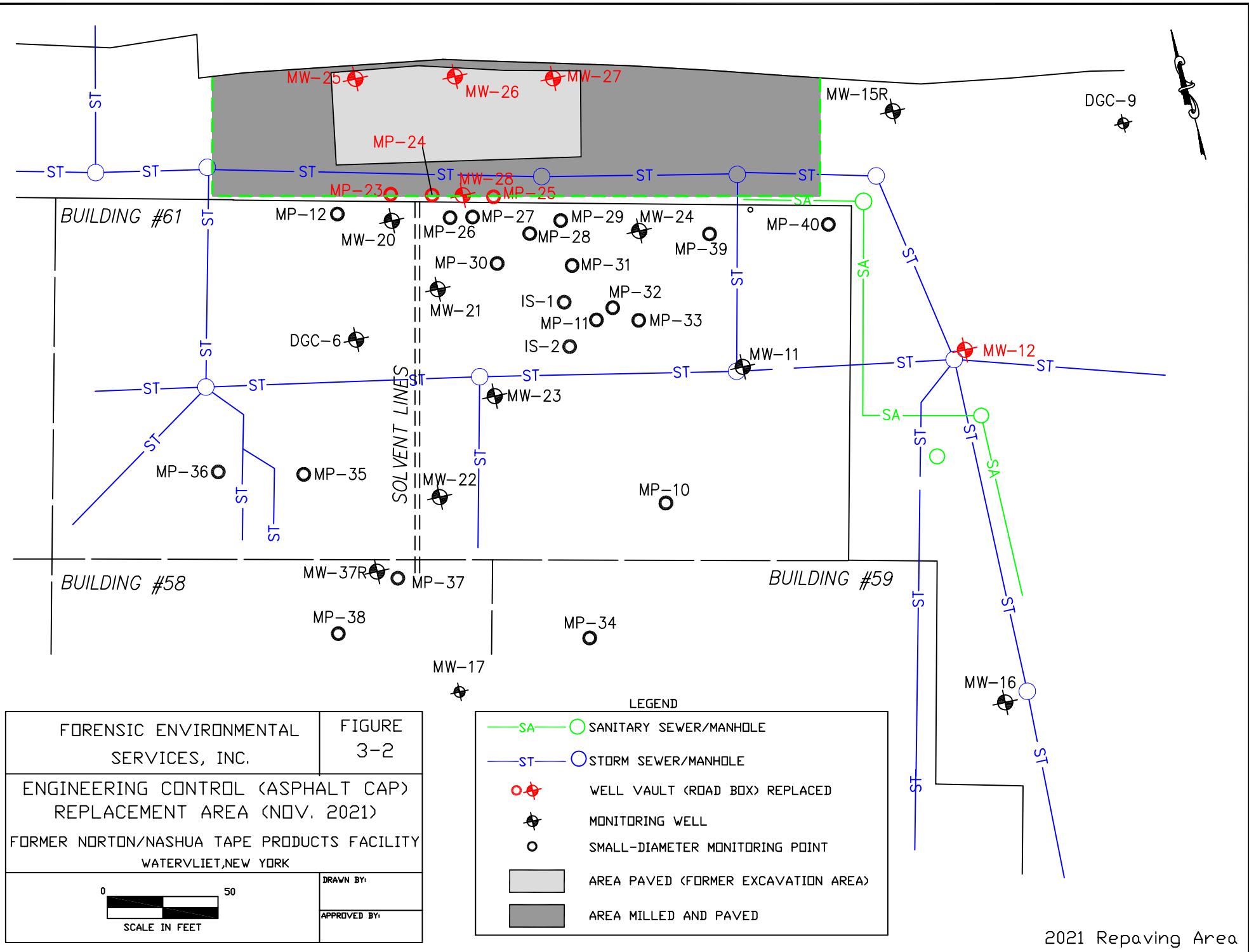
**Figure 2-16**  
**Toluene Concentrations Vs Time**  
**Monitoring Well MP-37**  
**Former Norton/Nashua Tape Products Facility**





FORENSIC ENVIRONMENTAL SERVICES, INC.	FIGURE 3-1
COVER SYSTEM	
FORMER NORTON/NASHUA TAPE PRODUCTS FACILITY	
WATERVLIET, NEW YORK	
0  70 SCALE IN FEET	DRAWN BY: B.J.M. 8/5/2017 APPROVED BY: B.J.M. 8/5/2017

COVER SYSTEM.DWG



**APPENDIX A**  
**CAP INSPECTION FORM**

**SITE MANAGEMENT FORM**  
**CAP SYSTEM INSPECTION FORM**

Former Norton/Nashua Tape Products Facility  
2600 Seventh Avenue  
Watervliet, New York

**O&M INSPECTION**

Inspector Information		Date/Time: 11/9/2021 9:00
Inspector Name: <u>Bryant Machella</u>		Project No. <u>029.08</u>
Company: <u>FORENSIC ENVIRONMENTAL SERVICES</u>		Weather: <u>SUNNY</u>
Address: <u>113 JOHN Robert Thomas Drive, Exton, PA 19341</u>		
Phone: <u>610-594-3940</u>		
E-mail:		
Are there cracks or rills in the asphalt/concrete cap more than 2-inches wide? Do the cracks extend through the cap?		Yes <input checked="" type="radio"/> No <input type="radio"/>
Comments: <u>Entire Easement Area North of Building #61 repaved last week</u>		
Are there noticeable depressions, ponding of surface water, or evidence of ponding on the capped areas?		Yes <input type="radio"/> No <input checked="" type="radio"/>
Comments: <u>See Above</u>		
Are there any signs of sliding or sloughing which might indicate cap failure?		Yes <input type="radio"/> No <input checked="" type="radio"/>
Comments: <u>See Above</u>		
Are there open holes or animal burrows in the cap?		Yes <input type="radio"/> No <input checked="" type="radio"/>
Comments: <u>See Above</u>		
Is there excessive debris, silt, or other deleterious material obstructing flow over the cap?		Yes <input type="radio"/> No <input checked="" type="radio"/>
Comments: <u>See Above</u>		
Is there evidence of erosion or damage to the cap?		Yes <input type="radio"/> No <input checked="" type="radio"/>
Comments: <u>See Above</u>		
Are there areas of stressed or missing vegetation adjacent to the cap?		Yes <input type="radio"/> No <input checked="" type="radio"/>
Comments: <u>See Above</u>		

## CAP SYSTEM INSPECTION FORM

Watervliet New York

Date: 11/9/2021

Have invasive or deep-rooting species taken root on the cap cover?

Yes

No

Comments:

Is the perimeter fencing intact and in good condition?

Yes No

Comments:

The fencing along the northern portion of the site was removed by Stone Management to make room for a truck turn-around area. Possibly for the new tenant in Building #6) (granite countertops)

Other evidence of cap system damage or failure?

Yes

No

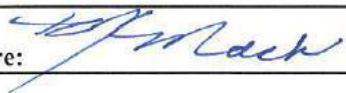
Comments:

Additional Notes:

Site repaving conducted in November (1<sup>st</sup> week). Entire embankment North of Building #61 repaved.

All interior areas (concrete floors) are in good condition, w/no breaks or trenches

Inspector Signature:



11/9/2021

**SITE MANAGEMENT FORM**  
**SITE-WIDE SYSTEM INSPECTION FORM**

Former Norton/Nashua Tape Products Facility  
2600 Seventh Avenue  
Watervliet, New York

**O&M INSPECTION**

Inspector Information		Project No. 029.05
Date/Time	11/9/2021 9:00	Weather: <i>Sunny</i>
Inspector Name:	BAYAR MACHOLIA	
Company:	FES	
Phone:	610-594-3940	
Site Usage:	Commercial (Warehousing)	
Current Site Activities:	Warehousing	
General Site Condition:	Good	

**Description of Inspection Methods**

*Walked entire Environmental Grounds & out (from tank farm N. of Building #6), Inside Buildings 58, 59, & 61*

Observations							
Area Inspected	Evidence of Cracks?	Crack Description (location, type, dimensions)	Evidence of Ponding?	Ponding Description (location, areal extent)	Evidence of Erosion	Erosion Description (location, characteristics)	Other Observations
outside - North of Building #61	Y <input checked="" type="radio"/> N <input type="radio"/>	None	Y <input checked="" type="radio"/> N <input type="radio"/>	None	Y <input checked="" type="radio"/> N <input type="radio"/>	None	- New pavement laid work. Fence removed by stone contractor around
Inside Building #61	Y <input checked="" type="radio"/> N <input type="radio"/>	Floor in good condition	Y <input checked="" type="radio"/> N <input type="radio"/>	—	Y <input checked="" type="radio"/> N <input type="radio"/>	—	ISCD Boreholes patched & sealed
Inside Buildings 58 + 59	Y <input checked="" type="radio"/> N <input type="radio"/>	Floor in good condition	Y <input checked="" type="radio"/> N <input type="radio"/>	—	Y <input checked="" type="radio"/> N <input type="radio"/>	—	ISCD Boreholes by MP37 sealed

**Recommendations**

*Walls vaults outside MW-25, MW-26, MW-27, MW-28, MP-23, MP-24, MP-25, 1 MW-12 (Durham B/S) scheduled for replacement in December.*

Inspection Signature: *[Signature]* 11/9/2021

**PHOTO LOG**

**Photographs of Capping Area (November 9 and 10, 2021)**  
**Former Norton/Nashua Facility**  
**Watervliet, New York**

**Figure 1.** Paved parking area north of Building #61 (view looking east).



**Figure 2.** Paved parking area north of Building #61 (view looking east).



**Figure 3.** Paved parking area north of Building #61; monitoring well MW-25 in foreground (view looking east).



**Figure 4.** Paved parking area north of Building #61; monitoring well MW-27 in foreground (view looking east).



**Figure 5.** Paved parking area north of Building #61; Durham Bus area; eastern border of Environmental Easement (view looking southwest)



**Figure 6.** Paved parking area north of Building #61 (view looking west).



**Figure 7.** Paved parking area north of Building #61; sewer manhole MH-2 in foreground (view looking west).



**Figure 8.** Paved parking area north of Building #61 (view looking west)



**Figure 9.** Paved area north of Building #61; monitoring well MP-25 in foreground (view looking west).



**Figure 10.** Paved parking area north of Building #61; western end of Environmental Easement (view looking southeast)



**Figure 11.** Northwestern corner of paved area (view looking southwest)



**Figure 12.** Eastern end of paved area proximal to Durham Bus garage (view looking southeast)



**Figure 13.** Concrete slab inside the northern portion of Building #61 (view looking south)



**Figure 14.** Concrete slab inside the northern portion of Building #61 (view looking north)



**Figure 15.** Concrete slab inside Building #61 (view looking east)



**Figure 16.** Concrete slab inside the northern portion of Building #61; traffic cones at monitoring wells MW-20, MP-26, MP-27, and MP-28 (left to right) (view looking northeast)



**Figure 17.** Concrete slab in Building #61; traffic cone at monitoring well MW-22 (view looking southeast)



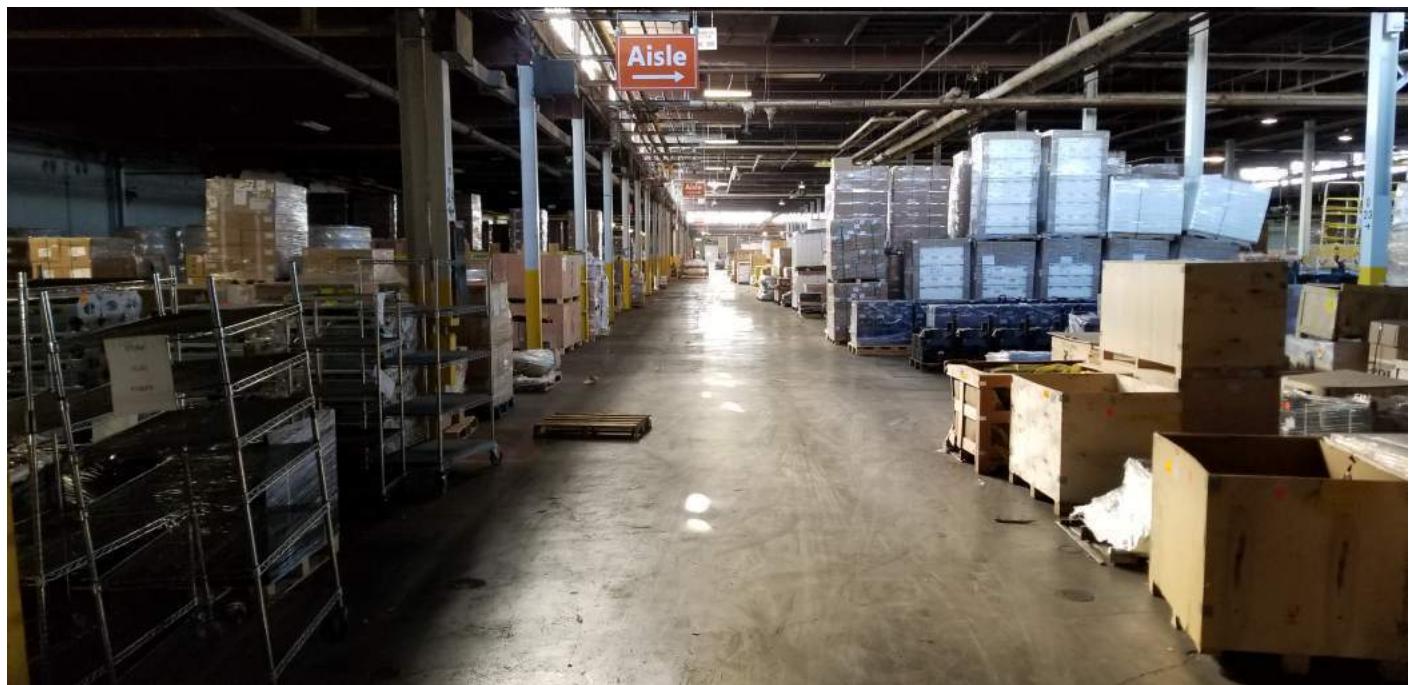
**Figure 18.** Concrete slab in Building #61 (view looking east)



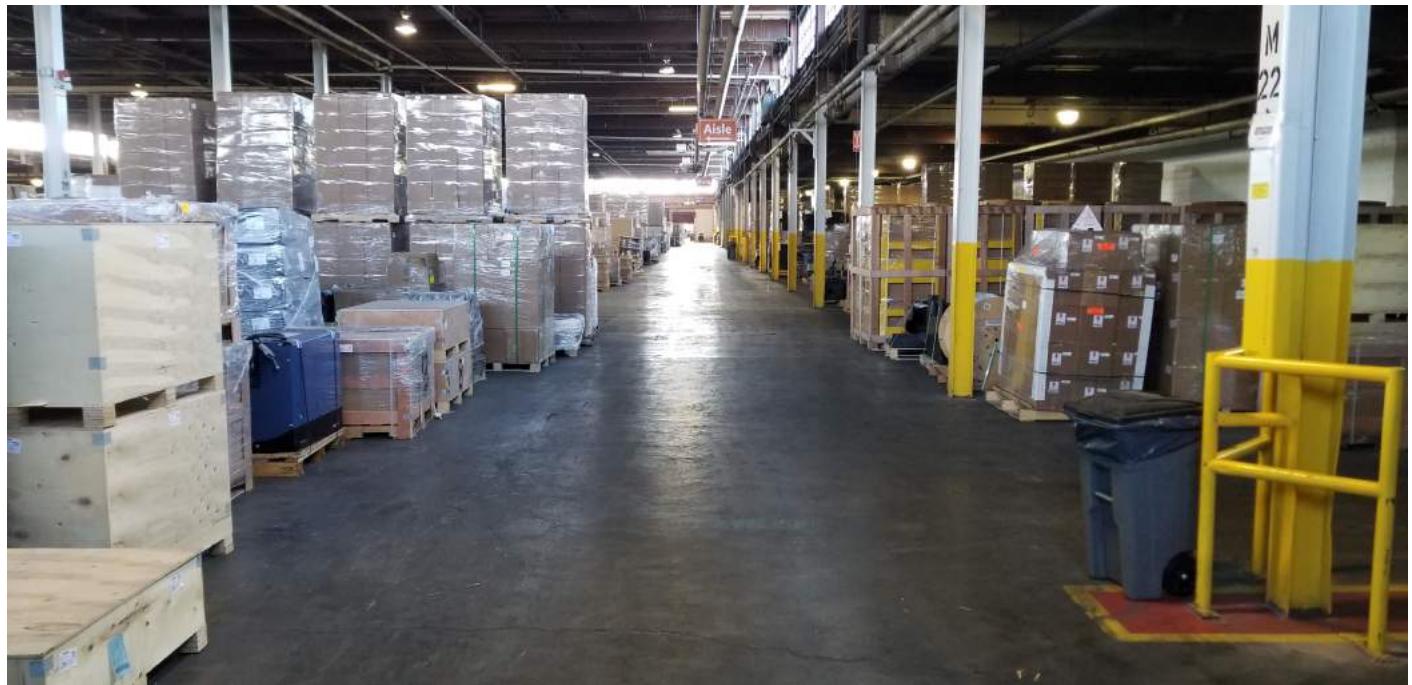
**Figure 19.** Concrete slab in Building #61; traffic cone at monitoring well MW-22 (view looking southeast)



**Figure 20.** Building #58; south of monitoring well MP-37 (view looking south)



**Figure 21.** Building #58; western half of Environmental Easement area (view looking south)



**Figure 22.** Building #58; western half of Environmental Easement area (view looking north)



**Figure 21.** Building #58; south of monitoring well MP-37 (view looking north)

