

**Annual Report  
June 2009**

**34 FREEMAN'S BRIDGE ROAD SITE  
Site 4-47-028**

**Work Assignment No. D004445-9**

Prepared for:

**SUPERFUND STANDBY PROGRAM  
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## **1.0 INTRODUCTION**

### **1.1 GENERAL**

This annual groundwater sampling report has been prepared by AECOM Technical Services Northeast, Inc. (AECOM) for the 34 Freeman's Bridge Road Site (Site), Site Number 4-47-028, located at 34 Freeman's Bridge Road, Town of Glenville, Schenectady County, New York (See Figure 1). This work is being performed under Work Assignment No. D004445-9 of the Superfund Standby Contract between the New York State Department of Environmental Conservation (NYSDEC) and AECOM. The purpose of this annual report is to present post-remediation sampling data and any conclusions, trends or suggestions drawn from this data. This report includes the most recent groundwater data collected in the June 2009 sampling event. The June 2009 groundwater sampling event was the fourth of eight quarterly events required during the first two years of monitoring at the Site as presented in the Site Management Plan (SMP) (AECOM, 2008).

### **1.2 SITE DESCRIPTION AND BACKGROUND**

The Site is located in a commercial and light industrial area in the southeast part of the Town of Glenville, northeast of the Village of Scotia. The Site is on the northeast side of Freeman's Bridge Road approximately 1,000 feet northwest of the reconstructed Freeman's Bridge over the Mohawk River. The site is currently owned by Lyon's Ventures, Inc.

The Site occupies approximately 13 acres, as determined by the estimated limits of impacted fill on the property and adjacent properties as determined during the Remedial Investigation/Feasibility Study (RI/FS). The site is bordered to the east by the Delaware and Hudson Railroad, and Niagara Mohawk power line right of ways; to the north by Warner Creek; to the west by private properties and Freeman's Bridge Road; and to the south by a private property. The Site is generally flat, with a rise in the grade approaching the railroad power line and right of ways to the east and a swale centrally located that extends to Warner Creek to the north. The Mohawk River is approximately 300 feet south of the Site. Warner Creek is a Class A designated tributary of the Mohawk River.

The Site was owned and operated by the Kitchton Cooperage Company as a drum recycling facility from the late 1950's to 1972. A 12-acre parcel, Town of Glenville Tax Map # 30.19-01-26.1, was purchased in 1978 by Lyon's Ventures, Inc (Lyon's). In addition to operating a commercial used furniture business, Lyon's operations also included storing drummed waste on the Site and receiving large quantities of fill and construction and demolition (C&D) debris that were spread across an 11-acre area south of Warner Creek. Drum recycling operations (late 1950's to 1972) by the Kitchton Cooperage Company, and more recent drum storage and unregulated fill operations conducted by Lyon's, contaminated the soils and groundwater on the Site to various degrees, in particular the southwest corner, with polychlorinated biphenyls (PCBs).

A RI/FS was conducted by AECOM from 2000 through 2004. A remediation strategy consisting of excavation and treatment of on-site soil via low temperature thermal technologies and the collection and treatment of contaminated groundwater was recommended in the NYSDEC ROD (March 31, 2004). Construction of the preferred remediation alternative began in November 2006 and was completed in October 2007. In addition to treating over 75,000 tons of hazardous and non-hazardous soils, over 9 million gallons of groundwater from the Site operations was

treated by the on-site wastewater treatment plant and discharged into the Warner's Creek in accordance with the NYSDEC approved Site Dewatering Plan.

A SMP (AECOM, 2008) was developed for the Site and approved by the NYSDEC in July 2008. The SMP summarizes the engineering and institutional controls for the site, as well as outlining the monitoring plan, which specifies quarterly groundwater sampling for the first two years, followed by annual sampling thereafter.

## 2.0 MONITORING AND MAINTENANCE

### 2.1 GROUNDWATER SAMPLING

AECOM performed five quarterly groundwater sampling events since completion of the remedial action: one prior to the submission of the SMP (March 2008) and four following NYSDEC acceptance of the SMP (August 2008 through June 2009). Groundwater samples were collected from each of the 20 Site monitoring wells for each event. All groundwater samples were submitted to Adirondack Environmental Services, Inc. in Albany, New York, for Volatile Organic Compounds (VOCs) by method SW8260B, Semi-volatile Organic Compounds (SVOCs) by SW8270C, ICP Metals by E200.7, PCBs by method SW8082 and pesticides by method 8081A. PCBs or pesticides were not detected during the first two post-remediation sampling rounds (March and August 2008) and the NYSDEC has determined that these compounds will be analyzed only during annual sampling events.

For each sampling event, a complete round of depth to water measurements was completed using an interface probe prior to purging and sampling the monitoring wells and these measurements are presented on Table 1. The groundwater levels were collected to develop a potentiometric map for the shallow and deep groundwater zones and to determine the groundwater flow pathways.

Prior to sampling, each monitoring well was purged of three well volumes of water. Purge water was disposed on the ground in the immediate vicinity of each well as per NYSDEC directive. The pump was decontaminated after purging/sampling each monitoring well by a liquinox bath followed by a distilled water rinse.

After purging, temperature, conductivity, pH, turbidity, color and odor of the groundwater were recorded on the monitoring well purging/sampling logs (Appendix A). The parameters were taken using an YSI and a LaMotte 2020 turbidimeter. Each piece of equipment was calibrated prior to use each day. Groundwater samples were collected using a Whale pump with dedicated polyethylene tubing and foot valve. All groundwater samples were collected in bottles provided by the laboratory. Samples were packed on ice, and submitted with a completed Chain-of-Custody (COC) to Adirondack Environmental Services, Inc. for analysis.

### 2.2 SITE MAINTENANCE

Site maintenance is conducted quarterly to ensure that the condition of the monitoring wells as well as the engineering controls (e.g. fencing) on the site are in proper working condition in accordance to the SMP.

During the March 2009 site inspection several damaged well caps and well casing tops were repaired. In addition, signage was placed on the fence surrounding the site indicating private property. A photo log of these repairs is included in Appendix B. Lawn maintenance is contracted out by the NYSDEC and occurs on an as needed basis.

As part of the Annual Report, as specified in the SMP, an Institutional and Engineering Controls Certification Form was completed (Appendix C) and is discussed in Section 4.0.

### **3.0 MONITORING RESULTS**

#### **3.1 GROUNDWATER FLOW**

Prior to groundwater sampling, water level measurements were collected and recorded for each monitoring well and are presented with historical water levels on Table 1. These water level elevations were then used to develop a groundwater flow map for the shallow and deeper aquifers (Figures 2 and 3, respectively). The overall direction of groundwater flow in the shallow aquifer was to the northwest in the southern portion of the Site, trending to the north-northeast in the northern portion of the Site, towards Warner's Creek. The overall direction of the shallow groundwater flow has not changed over the past five quarters of sampling.

The overall direction of groundwater flow in the deeper portion of the aquifer was towards north-northeast, similar to prior sampling events.

#### **3.2 JUNE 2009 QUARTERLY SAMPLING RESULTS**

Tables 2 through 6 presents the groundwater analytical results for the 20 monitoring wells sampled during the June 2009 sampling event. The groundwater results were evaluated based on comparison with NYS Ambient Water Quality Standards (AWQS) and guidance values, collectively known as Standards, Criteria and Guidelines (SCGs). These tables present only those compounds detected above the laboratory detection limits and also the cumulative concentrations of VOCs, SVOCs, metals, PCBs and pesticides. The previous post-remediation groundwater sampling results are also included for comparison.

##### **3.2.1 Volatile Organic Compounds**

The June 2009 results of VOC analysis are presented in Table 2. VOCs were detected at concentrations exceeding AWQS standards in ten of the monitoring wells during this sampling event, seven in March 2009 and eleven in December of 2008. Similar to the previous sampling events, cis-1,2-dichloroethene (cis-1,2-DCE) was the predominant contaminant detected in five (MW-15, MW-16D, MW-19D, MW-23, and MW-31) of the 20 wells, with the maximum concentration of 99 µg/L detected in MW-23. The concentrations of cis-1,2-DCE increased slightly in all five of the wells compared to the March 2009 concentrations.

Other VOCs detected include vinyl chloride (VC), trichloroethene, methyl tert-butyl ether (MTBE), acetone, methyl acetate, isopropylbenzene ethylbenzene, benzene, o-xylene, 2-butanone, and m&p xylenes. Toluene, ethylbenzene, isopropylbenzene and xylenes were detected only in well MW-30. This well had a total VOC concentration of 4,969 µg/L in the June 2009 sampling event, a significant decrease from 11,100 µg/L total VOCs detected in the March 2009 event. No measurable NAPL has been recorded at this well, despite an oily residue being observed at each of the sampling events for the SMP. A review of historical water level data showed little correlation in comparison of VOC concentrations to water level elevation. MW-30 is located within remedial excavation cell J13, an area of high contaminant concentration as determined in the RI/FS for the Freemans Site. This cell, as detailed in the Final Remediation Report, failed the verification floor sample with a concentration of 1,144,000 µg/Kg total VOCs in the soil. Since this cell was already excavated to 12 feet below grade and penetrating the underlying semi-confining clay layer and aquifer, it was deemed inadvisable by AECOM and the NYSDEC to excavate further in this area. The remaining contamination in this area may be impacting the groundwater as evidenced by the concentrations in MW-30.

Shallow monitoring well MW-20 exhibited an elevated concentration of acetone for the fourth consecutive sampling event. The concentration has decreased from 1,900 µg/L in March 2009 to 1,300 µg/L in June 2009, but is still above the guidance value of 50 µg/L. This monitoring well is located along the northwestern Site boundary, adjacent to the veterinary clinic.

As in the prior sampling events, the only deep wells with the VOC concentrations above the laboratory detection limits in the June 2009 sampling event, were MW-19D located off-site to the southeast, and MW-16D located in the northeastern edge of the Site. Cis-1,2-DCE was detected at concentrations exceeding AWQS standards (5 µg/L) in MW-19D (43 µg/L) and MW-16D (14 µg/L). These concentrations have not varied significantly over the past year. Additionally MW-16D exhibited an exceedence of MTBE for the first time since sampling was initiated, at a concentration of 11 µg/L.

Figure 4 summarizes the VOC contaminant concentrations that exceeded the AWQS standards.

### **3.2.2 Semi-volatile Organic Compounds**

Concentrations of SVOCs above laboratory detection limits were detected in two monitoring wells: MW-20 and MW-30 (see Table 3). Increased phenol concentrations were detected in MW-20, from 970 µg/L in March 2009 to 1,600 µg/L in June 2009. The concentrations of 2-methylphenol and 4-methylphenol were again present in MW-20 at increased concentrations. The concentrations in all of these compounds remain significantly above the AWQS standards.

Compounds exceeding the AWQS standards in MW-30 were 2,4-dimethylphenol (49 µg/L) and naphthalene (14 µg/L). The concentration of 2,4-dimethylphenol decreased from the past sampling event and the concentration of naphthalene showed no change.

Figure 5 summarizes the SVOC contaminant concentrations that exceeded the AWQS standards.

### **3.2.3 Metals**

Table 4 presents the results of the metals analysis for the June 2009 and previous sampling events. Iron, lead, magnesium, manganese, sodium, thallium and cyanide were detected at concentrations above the AWQS and GV for metals in drinking water in the June 2009 sampling event. These results are consistent with previous sampling results.

Two wells in the June 2009 sampling showed concentrations of cyanide above the AWQS standard of 200 µg/L. These wells were MW-16D and MW-32, with concentrations of 750 µg/L and 200 µg/L, respectively. Each of these wells have shown elevated concentrations of cyanide in past samplings, however, the concentration in MW-16D increased from below detection limits in the March 2009 sampling event to 750 ug/L. This analysis will be confirmed in the September 2009 sampling event for this well.

### **3.2.4 PCBs and Pesticides**

The groundwater samples from the June 2009 sampling event showed no concentrations of PCBs or pesticides above the laboratory detection limits for any compounds, with one exception. The pesticide methoxychlor was detected at 0.298 µg/L in monitoring well MW-19, significantly below the AWQS standard of 35 µg/L for this compound. This well is considered off-site and upgradient and the source of this insecticide is not evident. Since methoxychlor is a

common ingredient in household and commercial insecticides, the source could be local or from upgradient runoff. The PCB and pesticide results are presented in Tables 5 and 6.

## 4.0 ANNUAL REVIEW OF MONITORING EFFORTS AND IC/EC CONTROLS

As part of the SMP, this annual report is to summarize the results of the long-term monitoring program and confirm that the conditions of the IC/ECs are being met. The Post Remediation Field Investigation Report prepared by AECOM in September 2008 summarizes the procedures used for the post remediation field investigation and presents the data collected from the groundwater sampling and soil vapor analysis, including boring logs and well construction details. An inspection form for the IC/EC controls was generated and was used to complete a site inspection. The completed form is presented in Appendix C. A discussion of the long term monitoring to date is presented below.

### 4.1 Volatile Organic Compounds

The graph presented in Figure 6 shows the trends over time for the chlorinated volatile organic compounds (C VOCs). In addition, Appendix D presents graphs showing trends of individual contaminants of concern for selected wells.

Over the past five sampling events, eight site monitoring wells have shown significant exceedences of different volatile organic constituents. The two wells showing the highest concentrations of total VOCs have consistently been MW-20 and MW-30, both exceeding 1000 µg/L and will be the focus of any recommendations for the site. The most common constituent detected has been cis-1,2-DCE, present in six of the 20 monitoring wells over the five sampling events. Cis-1,2-DCE detection has been varied and inconsistent. This is likely due to the varied nature of the disposal practices and the contaminants at the site.

The trends of the volatile organic exceedences for MW-11 over the past five sampling events show that the concentrations of TCE and total VOCs have varied very little over the past year and half but show an overall decreasing trend.

The graph for MW-15 in Appendix D represents the concentrations trends for VC, cis-1,2-DCE and total VOCs for MW-15. No trend is evident and concentrations appear to fluctuate. The total VOC level has decreased over time since the August 2008 sampling event.

MW-20 has shown concentrations of acetone exceeding 1000 µg/L in four of the five sampling events (refer to Table 2). Acetone has only been recorded in one other well at values lower than the AWQS standard. Additionally MW-20 had an exceedence of 2-butanone in three of the five sampling events, the only well to show this compound. Graphical representation of these trends can be viewed in the graph for MW-20 in Appendix D. A strong odor and yellow coloration have been noted in the last three sampling events and it was been attributed to the near location of a local veterinary office.

MW-23 has shown exceedences of VC and cis-1,2-DCE continuously over the past five sampling events. An overall increasing trend in the concentrations of VC and cis-1,2-DEC can be noted on Figure 6 showing C VOCs concentrations in selected site wells over time. This well is downgradient from MW-20 but the contaminants of concern in each well are not similar. As stated previously, the varied nature of the wastes at the site, and the possibility of some contaminants remaining in place may explain the varied spatial nature of the site contaminants. Though verification samples from this area of the remediation passed, there were some elevated levels of VOCs in several samples and this may explain some of the VOCs in the groundwater in this well.

The monitoring well that has recorded the highest level of VOCs has been MW-30 in all of the five sampling events. The number of constituents that have been recorded in the well has decreased over time with it no longer exhibiting exceedences for DCE, toluene, and methylcyclohexane. The four contaminants that have shown consistent exceedences have been ethylbenzene, isopropylbenzene, o-xylene, and m&p xylene. The contaminants have varied in each sampling event causing the total VOC concentrations to be highly variable, ranging from 3,437 µg/L to 11,100 µg/L.

Although MW-31 is located directly downgradient of MW-30, the contaminants of concern, o-xylene and m&p xylenes were only recorded during the first sampling event in March of 2008. MW-30 does not appear to be impacting this well, located downgradient.

Deep monitoring wells MW-11D, MW-16D, and MW-19D have shown little variation in the concentrations of total VOCs over the past five sampling events. In the June 2009 sampling event an exceedence of MTBE occurred for the first time in MW-16D. That detection of MTBE increased the total VOC concentration by an order of magnitude in June 2009.

#### **4.2 Semi-volatile Organic Compounds**

Similar to the VOC contaminants, the SVOC contaminants are predominantly exhibited in MW-20 and MW-30. MW-19, located upgradient and off-site, was the only other well to exhibit a high concentrations of SVOCs. This only occurred for one sampling event and has not been recorded in the two most recent events.

The three SVOC contaminants that have been recorded in MW-20 in each of the five sampling events have been phenol, 2-methylphenol, and 4-methylphenol. The concentrations of each of these contaminants have fluctuated and show no evident trends (see Appendix D). Each of the contaminants exceeds its AWQS value of 1 µg/L with levels of phenol reaching as high as 1600 ug/L. The source of the phenol and other VOCs in this well may be explained by the varied nature of the contaminants at the site, but additionally, this area showed a verification sample failure of the side wall of the excavation during remediation. MW-20 is located at the limit of the remedial excavation in this area and some contaminants may remain and be influencing this well. Data from former studies at the Freemans Bridge site (RI/FS) did not indicate high concentrations of phenol in this area.

MW-30 has exhibited decreasing SVOC concentrations since the August 2008 sampling event for two different contaminants, 2,4-dimethylphenol and naphthalene. In August of 2008 the total SVOC concentrations were at 125 µg/L. In the most recent data in June 2009 the total concentrations were at 63 µg/L. The overall trend of the SVOC concentrations is decreasing and moving closer to AWQS and GV standards, as presented in the graph for MW-30 in Appendix D.

#### **4.3 Metals**

There have been no discernable trends in the levels of metals on the site in each sampling events analytical results. The metals that have been consistently present at levels above AWQS and GV are antimony, iron, lead, magnesium, manganese, sodium, and thallium. During all of the sampling events for the SMP, there have only been two exceedences of the AWQS standards for cyanide in the Site's monitoring wells. These wells were MW-16D and MW-32, with concentrations of 750 µg/L and 200 µg/L, respectively, detected only in the June 2009

sampling event. There is no apparent reason for the sudden increase in cyanide in MW-16D but this well will continue to be monitored.

#### **4.4 PCBs and Pesticides**

There have been no exceedences for PCBs in any of the 20 wells on site. There has only been one detection for pesticides in MW-19 for Methoxychlor in the June 2009 sampling event and it was below the AWQS standard.

## 5.0 DISCUSSION

After the completion of five quarterly sampling events, two wells have exhibited the highest concentrations of contaminants, MW-20 and MW-30. These two monitoring wells show exceedences for VOCs as well as SVOCs. Unlike the other wells on site, neither well exhibits an exceedence for cis-1,2 DCE and the contaminants detected in each is completely different. This is explained by the varying nature of the contaminants disposed on the site and the fact that these wells are located in areas where complete excavation of contaminants during the remediation process was not possible.

In MW-20, concentrations of 2- butanone and acetone exceed the AWQS values by one and two orders of magnitude respectively. The concentrations of each contaminant have shown a decreasing trend over the past two sampling events but remain well above guidance values. Additionally MW-20 has shown exceedences for SVOCs for phenol, 2-methylphenol, and 4-methylphenol exceeding the AWQS level of 1 µg/L by 2 orders of magnitude. As with the VOC contaminants, these three SVOC contaminants are not present in any other site monitoring wells. The location of MW-20 is adjacent to the edge of the excavated area next to a wall that failed verification sampling during the remediation. Remnant contamination from this area may be impacting this well. In addition, the veterinary clinics practices may be impacting this well. Adding nitrates and coliform to the analyte list for this well will help in this determination. An additional monitoring well upgradient but in closer proximity to the veterinary office may help to better pinpoint the source of the contamination for any additional remedial action.

In monitoring well MW-30, the total VOC concentrations reached a peak in March of 2009, exceeding 11,000 µg/L. The highest concentration of contamination has been in m&p-xylanes over each of the five sampling events. The total VOC concentrations have shown no discernable trend that can confirm decreasing or increasing levels in the wells due to large variations in concentrations each sampling event. Further monitoring may show evidence of a trend. This monitoring well is the only one on site to exhibit visible product in the well itself and on the surface of the groundwater. An interface probe is used each sampling event to attempt to quantify the amount of free product but there is not a significant enough amount to record a reading. Additionally in MW-30, SVOC concentrations for 2,4 dimethylphenol and naphthalene are above AWQS standards. These concentrations are only slightly above standards and have exhibited a decreasing trend.

Due to the high level of contamination that has been prevalent in MW-30, it is suggested that an additional remedial activity be conducted to enhance the natural biodegradation of the contaminants in this well. A possible alternative to monitored natural attenuation would be to use of a Fenton's reagent injection to increase the breakdown of the BTEX contamination in this well. After the injection of the reagent, quarterly sampling would continue as planned, monitoring the increasing breakdown of the chemical constituents.

The other area of concern at the site is in the vicinity of MW-23. This well shows increasing concentrations of CVOCs and will continue to be monitored to discern any trends.

The levels of PCBs and pesticides have continued to be below the guidance values for each of the 20 wells on site. These compounds will continue to be monitored annually. There have been exceedences for several metals in each sampling event.

Quarterly monitoring will continue for the next year, as per the SMP, after which sampling will decrease to annually, unless otherwise advised by the NYSDEC.

## **Tables**

**Table 1**

**Groundwater Elevations and Monitoring Well Details**  
**34 Freemans Bridge Road**  
**Glenville, New York**

June 2009

Date	Monitoring Well	GROUND Elevation	CASING Elevation	Measuring Point	Aug-08	Dec-08	Mar-09	Jun-09
					GW Elevation (ft)	GW Elevation (ft)	GW Elevation (ft)	GW Elevation (ft)
	<b>MW-11</b>	228.57	231.42	231.23	219.29	219.82	219.99	219.54
	<b>MW-11D</b>	228.61	231.26	231.20	219.72	220.04	220.35	219.78
	<b>MW-12</b>	228.50	231.06	230.68	219.71	218.32	220.48	219.87
	<b>MW-15</b>	FLUSH	224.47	224.14	220.64	220.83	221.22	220.56
	<b>MW-15D</b>	FLUSH	224.49	224.35	220.60	220.91	221.32	220.69
	<b>MW-16</b>	226.09	228.68	228.41	218.84	222.26	219.21	219.33
	<b>MW-16D</b>	225.81	227.67	227.49	218.91	219.21	219.36	219.03
	<b>MW-18</b>	227.29	229.94	229.58	222.47	223.17	222.89	221.78
	<b>MW-19</b>	224.77	227.27	227.12	221.60	222.18	222.46	221.17
	<b>MW-19D</b>	224.89	226.14	226.01	221.36	221.86	222.14	221.14
	<b>MW-20</b>	224.80	226.99	226.89	220.09	220.52	220.93	220.28
	<b>MW-20D</b>	224.72	227.16	227.13	220.20	220.55	220.87	220.32
	<b>MW-21</b>	224.52	227.51	227.46	220.03	220.57	220.74	220.09
	<b>MW-21D</b>	224.71	229.56	229.05	220.20	220.44	220.75	220.16
	<b>MW-23</b>	221.99	224.93	224.86	219.52	220.05	220.14	219.64
	<b>MW-23D</b>	222.36	224.46	224.32	219.96	220.30	220.62	220.01
	<b>MW-30</b>	223.57	226.26	226.19	219.58	220.07	220.27	219.77
	<b>MW-31</b>	223.18	225.55	225.43	219.62	219.95	220.19	219.71
	<b>MW-32</b>	224.92	227.83	227.32	220.02	220.64	220.93	220.30
	<b>MW-33</b>	224.18	227.37	226.99	220.54	220.92	221.22	220.49

MP = Measuring point established on top of pvc (black marker)

All measurements in Feet

**Table 2**  
**Groundwater Analytical Summary**  
**Volatile Organic Compounds**  
**34 Freemans Bridge Road**  
**Glenville, New York**  
**June 2009**

Sample ID		MW11					MW11D					MW12					MW15					MW15D					
		3/27/08	8/26/08	12/3/08	3/26/09	6/18/09	3/27/08	8/26/08	12/3/08	3/26/09	6/18/09	3/24/08	8/26/08	12/5/08	3/26/09	6/18/09	3/26/08	8/26/08	12/5/08	3/27/09	6/19/09	3/26/08	8/26/08	12/5/08	3/27/09	6/19/09	
Sampling Date		ug/l																									
Units																											
<b>Volatiles</b>	AWQS/GV Values																										
Vinyl chloride	2	5 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	16	76	44	11	21	5 U	10 U	10 U	10 U	10 U	
Chloroethane	5	5 U	10 U	10 U	5 U	10 U	5 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	
Acetone	50 (GV)	10 U																									
Methyl Acetate	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene chloride	5	5 U	5 U	11	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl tert-butyl Ether	10(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	8.3	15	17	5 U	8.6	5 U	5 U	5 U	5 U	5 U
2-Butanone	50(GV)	10 U																									
Benzene	1	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5	17	9.9	12	5 U	11	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylcyclohexane	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	7	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
o-xylene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
m&p-xylanes	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Total CVOC's		24	9.9	23	0	11	0	5	5	0	0	0	0	0	0	0	24.3	91	61	11	29.6	0	0	0	0	0	
Total VOC's		24	9.9	23	0	11	0	5	5	0	0	0	0	0	0	0	24.3	91	61	11	29.6	0	0	0	0	0	

Sample ID		MW16					MW16D					MW18					MW19					MW19D				
		3/25/08	8/26/08	12/3/08	3/25/09	6/17/09	3/25/08	8/26/08	12/3/08	3/25/09	6/17/09	3/26/08	8/26/08	12/5/08	3/27/09	6/18/09	3/26/08	8/25/08	12/4/08	3/27/09	6/18/09	3/26/08	8/25/08	12/4/08	3/27/09	6/18/09
Sampling Date		ug/l																								
Units																										
<b>Volatiles</b>	AWQS/GV Values																									
Vinyl chloride	2	5 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	5 U	10 U													

**Table 2**  
**Groundwater Analytical Summary**  
**Volatile Organic Compounds**  
**34 Freemans Bridge Road**  
**Glenville, New York**  
**June 2009**

Sample ID		MW20						MW20D						MW21						MW21D						MW23						
Sampling Date		3/24/08	8/25/08	12/4/08	3/25/09	6/19/09	3/24/08	8/25/08	12/4/08	3/25/09	6/19/09	3/24/08	8/25/08	12/4/08	3/26/09	6/17/09	3/24/08	8/25/08	12/4/08	3/26/09	6/17/09	3/24/08	8/25/08	12/4/08	3/26/09	6/17/09	3/27/08	8/25/08	12/3/08	3/25/09	6/17/09	
Units		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
Volatile		AWQS/GV Values																														
Vinyl chloride		2	5	U	100	U	200	U	200	U	100	U	5	U	10																	
Chloroethane		5	5	U	100	U	200	U	200	U	100	U	5	U	10																	
Acetone	50 (GV)	720	D	1400	D	2900	D	1900	D	1300		10	U	10																		
Methyl Acetate	NS	5	U	50	U	50	U	100	U	390		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5
Methylene chloride		5	5	U	50	U	120	D	100	U	100	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	
Methyl tert-butyl Ether	10(GV)	5	U	50	U	50	U	100	U	100	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5		
cis-1,2-Dichloroethene	5	5	U	50	U	100	U	100	U	50	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5		
2-Butanone	50(GV)	77		100	U	290	D	200	U	190		10	U	10																		
Benzene		1	5	U	50	U	100	U	100	U	50	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	
Trichloroethene		5	5	U	50	U	50	U	100	U	50	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	
Methylcyclohexane	NS	5	U	50	U	100	U	100	U	50	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5		
Toluene		5	5	U	50	U	100	U	100	U	50	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	
Tetrachloroethene		5	5	U	50	U	50	U	100	U	50	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	
Ethylbenzene		5	5	U	50	U	100	U	100	U	50	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	
o-xylene		5	5	U	50	U	100	U	100	U	50	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	
m&p-xylenes		5	5	U	50	U	100	U	100	U	50	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	
Bromoform	50(GV)	5	U	50	U	50	U	100	U	50	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5		
Isopropylbenzene		5	5	U	50	U	100	U	100	U	50	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	
Total CVOC's		0	0	120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59	68	71	84	138		
Total VOC's		797	1400	3310	1900	1880	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59	68	71	84	138		

Sample ID		MW-23D					MW30					MW31					MW32					MW33					
		4/4/08	8/25/08	12/3/08	3/25/09	6/17/09	3/25/08	8/26/08	12/5/08	3/27/09	6/19/09	3/25/08	8/26/08	12/4/08	3/25/09	6/19/09	3/27/08	8/26/08	12/5/08	3/26/09	6/19/09	3/26/08	8/26/08	12/5/08	3/26/09	6/17/09	
Sampling Date		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
Units		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
Volatiles	AWQS/GV Values																										
Vinyl chloride	2	5 U	10 U	10 U	10 U	10 U	5 U	200 U	100 U	500 U	100 U	7.9	13	12	11	11	5 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	
Chloroethane	5	5 U	10 U	10 U	10 U	10 U	5 U	200 U	100 U	500 U	100 U	5 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	
Acetone	50 (GV)	10 U	10 U	10 U	10 U	10 U	10 U	200 U	100 U	500 U	100 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	36	10 U	10 U	16	10 U	10	
Methyl Acetate	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	100 U	250 U	50 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
Methylene chloride	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U	250 U	50 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
Methyl tert-butyl Ether	10(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	100 U	250 U	50 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
cis-1,2-Dichloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	50	100 U	50 U	250 U	50 U	12	10	14	11	24	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
2-Butanone	50(GV)	10 U	10 U	10 U	10 U	10 U	10 U	200 U	100 U	500 U	100 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U		
Benzene	1	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U	250 U	50 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	6	6 U	
Trichloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	100 U	250 U	50 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	7.8	
Methylcyclohexane	NS	5 U	5 U	5 U	5 U	5 U	5 U	26	100 U	50 U	250 U	50 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
Toluene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	69	100 U	50 U	250 U	50 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
trans-1,3-Dichloropropene	0.4	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	100 U	250 U	50 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
Tetrachloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	100 U	250 U	50 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
Ethylbenzene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	110	1700 D	610 D	1100	700	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
o-xylene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	110	140 D	73 D	250 U	79	140	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
m&p-xlyenes	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	3000 D	8500 E	2600 E	10000	4100 EE	5.8	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	50(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	100 U	250 U	50 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
Isopropylbenzene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	72	180 D	110 D	250 U	90	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Total CVOC's		0	0	0	0	0	50	0	0	0	0	19.9	23	26	22	35	0	0	0	0	0	0	0	0	0	0	
Total VOC's		0	0	0	0	0	3437	10520	3393	11100	4969	165.7	23	26	22	35	0	0	0	0	0	36	6	16	0	7.8	

### Qualifiers

Detected concentrations shown in **bold** font. Bold font in shaded cell indicates exceedances of AWQS+GV.

NA - Not analyzed

NA - Not anal.

E - Value above quantitation range

B - For organic analyses - compound detected in laboratory method blank. For inorganic analyses - indicates trace concentration below reporting limit and equal to or above the detection limit.

U - Compound not detected at or above the instrument detection limit (IDL).

J - Estimated concentration

D - Results from a subsequent dilution of the original sample due to original sample results being outside the linear range.

\* - Duplicate Sample

**Table 3**  
**Groundwater Analytical Summary**  
**Semi-Volatile Organic Compounds**  
**34 Freemans Bridge Road**  
**Glenville, New York**  
**June 2009**

Sample ID		MW11						MW11D						MW12						MW15						MW15D					
		3/27/08	8/26/08	12/3/08	3/26/09	6/18/09		3/27/08	8/26/08	12/3/08	3/26/09	6/18/09		3/24/08	8/26/08	12/5/08	3/26/09	6/18/09		3/26/08	8/26/08	12/5/08	3/27/09	6/19/09		3/26/08	8/26/08	12/5/08	3/27/09	6/19/09	
Sampling Date		ug/l	ug/l	ug/l	ug/l	ug/l		ug/l	ug/l	ug/l	ug/l	ug/l		ug/l	ug/l	ug/l	ug/l	ug/l		ug/l	ug/l	ug/l	ug/l	ug/l		ug/l	ug/l	ug/l	ug/l	ug/l	
AWQS/GV Values																															
Phenol	1	5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U		5.1 U	5 U	5 U	5 U	5 U		5 U	6 U	6 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U	
Bis(2-chloroethyl)ether	1	5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U		5.1 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U	
2-Chlorophenol	1	5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U		5.1 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U	
2-Methylphenol	1	5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U		5.1 U	5 U	5 U	5 U	5 U		5 U	6 U	6 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U	
2,2-Oxybis(1-chloropropane)	5	5 U	NA	NA	NA	NA		5 U	NA	NA	NA	NA		5.1 U	NA	NA	NA	NA		5 U	NA	NA	NA	NA		5 U	NA	NA	NA	NA	
4-Methylphenol	1	NA	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U	
2,4-Dimethylphenol	50(GV)	5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U		5.1 U	5 U	5 U	5 U	5 U		5 U	6 U	6 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U	
Naphthalene	10(GV)	5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U		5.1 U	5 U	5 U	5 U	5 U		5 U	6 U	6 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U	
Acenaphthylene		NA	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U		5.1 U	5 U	5 U	5 U	5 U		5 U	6 U	6 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U	
Phenanthrene	50(GV)	5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U		5.1 U	5 U	5 U	5 U	5 U		5 U	6 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U	
Anthracene	50(GV)	5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U		5.1 U	5 U	5 U	5 U	5 U		5 U	6 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U	
Carbazole		NA	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U		5.1 U	5 U	5 U	5 U	5 U		5 U	6 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U	
Fluoranthene	50(GV)	5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U		5.1 U	5 U	5 U	5 U	5 U		5 U	6 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U	
Pyrene	50(GV)	5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U		5.1 U	5 U	5 U	5 U	5 U		5 U	6 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U	
Benzo(a)anthracene	0.002	5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U		5.1 U	5 U	5 U	5 U	5 U		5 U	6 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U	
Chrysene	0.002	5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U		5.1 U	5 U	5 U	5 U	5 U		5 U	6 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U	
Bis(2-ethylhexyl)phthalate	5	5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U		5.1 U	5 U	5 U	5 U	5 U		5 U	6 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U	
Benzo(b)fluoranthene	0.002 (GV)	5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U		5.1 U	5 U	5 U	5 U	5 U		5 U	6 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U	
Benzo(k)fluoranthene	0.002 (GV)	5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U		5.1 U	5 U	5 U	5 U	5 U		5 U	6 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U	
Benzo(a)pyrene	ND	5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U		5.1 U	5 U	5 U	5 U	5 U		5 U	6 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U	
Total SVOCs		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0	

Sample ID		MW16						MW16D						MW18						MW19</
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**Table 3**  
**Groundwater Analytical Summary**  
**Semi-Volatile Organic Compounds**  
**34 Freemans Bridge Road**  
**Glenville, New York**  
**June 2009**

Sample ID		MW20					MW20D					MW21					MW21D					MW23						
		3/24/08	8/25/08	12/4/08	3/25/09	6/19/09	3/24/08	8/25/08	12/4/08	3/25/09	6/19/09	3/24/08	8/25/08	12/4/08	3/26/09	6/17/09	3/24/08	8/25/08	12/4/08	3/26/09	6/17/09	3/27/08	8/25/08	12/3/08	3/25/09	6/17/09		
Sampling Date		ug/l	ug/l																									
	AWQS/GV Values																											
<b>Semi-Volatiles</b>																												
Phenol	1	180	D	1700	D	930	E	970	E	1600	D	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	
Bis(2-chloroethyl)ether	1	5.1	U	110	U	110	U	42	U	190	U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	
2-Chlorophenol	1	5.1	U	110	U	110	U	42	U	190	U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	
2-Methylphenol	1	9.2	200	D	140	D	120	200	D	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,2-Oxybis(1-chloropropane)	5	5.1	U	NA	NA	NA																						
4-Methylphenol	1	NA	1100	D	650	D	470	720	D	NA	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	6 U	5 U	5 U	
2,4-Dimethylphenol	50(GV)	5.1	U	110	U	56	U	42	U	190	U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	6 U	5 U	
Naphthalene	10(GV)	4.8	J	110	U	56	U	42	U	190	U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	6 U	5 U	
Acenaphthylene	NS	3.2	J	110	U	56	U	42	U	190	U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	6 U	5 U	
2,4-Dinitrophenol	10(GV)	10	U	540	U	540	U	210	U	940	U	10 U	25	U	26	U	25	U	10	U	25	U	25	U	25	U	10	U
Phenanthrene	50(GV)	5.1	U	110	U	110	U	42	U	190	U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	
Anthracene	50(GV)	5.1	U	110	U	110	U	42	U	190	U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	
Carbazole	NA	5.1	U	110	U	110	U	42	U	190	U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	
Fluoranthene	50(GV)	5.1	U	110	U	110	U	42	U	190	U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	
Pyrene	50(GV)	5.1	U	110	U	110	U	42	U	190	U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	
Benzo(a)anthracene	0.002	5.1	U	110	U	110	U	42	U	190	U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	
Chrysene	0.002	5.1	U	110	U	110	U	42	U	190	U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	
Bis(2-ethylhexyl)phthalate	5	5.1	U	110	U	56	U	42	U	190	U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	14 B	5 U	5 U	5 U	5 U	5 U	
Benzo(b)fluoranthene	0.002 (GV)	5.1	U	110	U	110	U	42	U	190	U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	
Benzo(k)fluoranthene	0.002 (GV)	5.1	U	110	U	110	U	42	U	190	U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	
Benzo(a)pyrene	ND	5.1	U	110	U	110	U	42	U	190	U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	
Total SVOCs		197.2		3000		1720		1560		2520		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Sample ID		MW-23D					MW30					MW31					MW32					MW33				
		4/4/08	8/25/08	12/3/08	3/25/09	6/17/09	3/25/08	8/26/08	12/5/08	3/27/09	6/19/09	3/25/08	8/26/08	12/4/08	3/25											

**Table 4**  
**Groundwater Analytical Summary**  
**Metals**  
**34 Freemans Bridge Road**  
**Glenville, New York**  
**June 2009**

Sample ID	MW11						MW11D						MW12						MW15						MW15D								
Sampling Date	3/27/08	8/26/08	12/9/08	3/26/09	6/18/09	3/27/08	8/26/08	12/3/08	3/26/09	6/18/09	3/24/08	8/26/08	12/5/08	3/26/09	6/18/09	3/26/08	8/26/08	12/5/08	3/27/09	6/19/09	3/26/08	8/26/08	12/5/08	3/27/09	6/19/09								
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l				
Metals	AWQS/GV Values																																
Aluminum	NS	4190	521	307	285	335	60.4	J	100	U	100	U	100	U	100	U	830	14100	1460	558	843	1840	6660	10900	277	1320	45.8	U	430	440	100	U	147
Antimony	3	6.8	U	60	U	60	U	60	U	6.8	U	60	U	60	U	60	U	6.8	U	60	U	60	U	60	U	60	U	60	U	60			
Arsenic	25	5.99	J	5	U	5	U	5	U	3.9	J	5	U	5	U	5	U	3.9	J	5	U	5	U	5	U	5	U	5	U	5			
Barium	1000	79.4	J	67	60	56	56	153	J	187	180	168	173	40.5	J	181	79	70	65	29.3	J	66	90	24	31	13.2	J	21	25	19	22		
Beryllium	3	0.59	J	5	U	5	U	5	U	0.31	J	5	U	5	U	5	U	0.5	J	5	U	5	U	5	U	5	U	5	U	5			
Cadmium	5	1.1	U	5	U	5	U	5	U	1.1	U	5	U	5	U	5	U	1.1	U	5	U	5	U	5	U	5	U	5	U	5			
Calcium	NS	117000	161000	149000	170000	152000	178000	311000	284000	167000	R	169000	95100	149000	140000	112000	125000	65600	115000	127000	106000	105000	61100	111000	112000	115000	111000	111000					
Chromium	50	10.4	J	5	U	5	U	5	U	1.2	U	5	U	5	U	5	U	1.5	J	20	5	U	5	U	3.27	J	6	5	U	11	2.32		
Cobalt	NS	6.78	J	50	U	50	U	50	U	2.4	J	50	U	50	U	50	U	2.4	J	50	U	50	U	3.05	J	50	U	50	U	50			
Copper	200	11.4	J	5	U	5	U	5	U	1.7	U	5	U	5	U	5	U	1.7	U	35	8	11	5	U	4.06	J	15	30	6	5			
Iron	300	11500	1640	1250	462	1350	3100	6310	6820	6620	6740	2160	26500	2610	450	1460	4080	1110	18400	776	3490	37	U	864	831	56	175	175	175				
Lead	25	11.7	J	5	U	5	U	5	U	4.6	U	12	5	U	5	U	5	U	4.6	U	5	U	5	U	5	U	5	U	5				
Magnesium	35000 (GV)	18800	22800	21800	24600	22700	31200	34500	30000	25500	26200	10300	20000	17300	12600	15800	11400	20000	24100	18500	19800	10300	17900	19200	19000	19000	19000						
Manganese	300	1180	2200	1780	1620	1780	269	540	529	512	515	49	242	59	27	20	224	474	583	282	306	38.7	108	114	103	124	124	124					
Mercury	0.7	0.08	U	0.2	U	0.2	U	0.2	U	0.08	U	0.2	U	0.2	U	0.08	U	0.2	U	0.2	U	0.08	U	0.2	U	0.2	U	0.2					
Nickel	100	10.9	J	20	U	20	U	20	U	20	U	4.7	J	20	U	20	U	4.7	J	20	U	20	U	29	20	U	20	U	20				
Potassium	NS	1590	J	2130	1710	1880	1670	2490	J	2990	2830	2980	3020	1170	J	6180	2970	2130	2500	1540	J	5120	6220	2740	2820	1480	J	3340	3240	3880	3660		
Selenium	10	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5			
Silver	50	0.7	U	10	U	10	U	10	U	0.7	U	10	U	10	U	0.7	U	10	U	10	U	0.7	U	10	U	0.7	U	10					
Sodium	20000	23600	27300	34300	27400	48200	69200	40200	83600	45300	45800	6500	11500	14200	8620	11200	14200	26600	35900	38900	31600	30500	34600	38400	43200	32200	32200	32200					
Thallium	0.5 (GV)	8	U	10	U	10	U	10	U	8	U	10	U	10	U	8	U	10	U	10	U	8	U	10	U	10	U	10	U	10			
Vanadium	NS	12.6	J	20	U	20	U	20	U	3.1	J	20	U	20	U	20	U	3.1	J	31	20	U	20	4.9	J	20	U	20	U	20			
Zinc	2000 (GV)	51.5	J	10	U	10	U	10	U	9.89	J	10	U	10	U	69	19.2	J	136	23	11	10	23	J	34	74	10	U	15	10.6	J	13	13
Cyanide	200	28.1	J	10	U	10	U	10	U	4.5	J	10	U	10	U	10	U	2.9	J	10	U	10	U	10	U	10	U	10	U	10			

Sample ID	MW16						MW16D						MW18						MW19						MW19D															
Sampling Date	3/25/08	8/26/08	12/3/08	3/25/09	6/17/09	3/25/08	8/26/08	12/3/08	3/25/09	6/17/09	3/26/08	8/26/08	12/5/08	3/27/09	6/18/09	3/26/08	8/25/08	12/4/08	3/27/09	6/18/09	3/26/08	8/25/08	12/4/08	3/27/09	6/18/09															
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l												
Metals	AWQS/GV Values																																							
Aluminum	NS	45.8	U	100	U	100	U	103		100	U	103	J	100	U	100	U	100	U	930	970	386	444	187	458	990	1420	415	2940	694	1390	496	277	580						
Antimony	3	6.8	U	60	U	60	U	60	U	60	U	6.8	J	60	U	60	U	60	U	6.8	60	60	5	60	60	60	60	60	15.1	J	60	60	60	60						
Arsenic	25	3.9	U	7	U	5	U	14		5	U	3.9	J	5	U	5	U	5	U	3.9	5	5	5	5	5	5	5	5	3.9	U	5	5	5	5						
Barium	1000	247		160		241		174		255		35.5	J	54		54		48		19.6	J	51	21	20	21	29.1	J	109	73	46	116	42.3	J	60	53	47	48			
Beryllium	3	0.3	U	5	U	5	U	5	U	5	U	0.3	J	5	U	5	U	5	U	0.3	5	5	5	5	5	5	5	5	0.3	U	5	5	5	5						
Cadmium	5	1.1	U	5	U	5	U	5	U	5	U	1.1	J	5	U	5	U	5	U	1.1	5	5	5	5	5	5	5	5	1.1	U	5	5	5	5						
Calcium	NS	347000		254000		250000		297000		265000		69200		121000		112000		114000		109000		58400	141000	49800	67700	73000	67700	162000	152000	123000	161000	1E+05	156000	146000	154000	139000				
Chromium	50	1.31	J	5	U	5	U	5	U	5	U	1.37	J	5	U	5	U	5	U	4.33	J	5	U	5	U	5	U	5	4.65	J	5	U	5	U	5					
Cobalt	NS	2.4	U	50	U	50	U	50	U	50	U	7.93	J	50	U	50	U	50	U	2.56	J	50	U	50	U	50	U	2.4	U	50	U	50	U	50						
Copper	200	1.7	U	5	U	5	U	5	U	5	U	1.7	J	5	U	5	U	5	U	1.7	U	5	U	7	S	6	5	U	2.86	J	10	5	U	14	1.93	J	5	U	5	5
Iron	300	19200		14500		11400		3830		12900		1640		1200		1210		822		877	2530	2080	712	S	730	301	1520	4570	3410	966	5580	8990	9350	6950	5880	6530				
Lead	25	4.6	U	5	U	5	U	5	U	5	U	4.6	J	5	U	5	U	5	U	4.6	J	5	U	5	U	5	U	10	7.04	J	5	U	5	U	5					
Magnesium	35000	(GV)	47900		48200		34000		42100		36900		11100		19500		18800		18500		18200		9290	20600	9020	11200	11900	7680	19400	19600	16400	16000	17300	22200	21200	21400	20500			
Manganese	300	2430		3000		1490		2100		1540		841		803		598		499		610		62.7	218	48	79	20	116	1820	597	184	1100	429	594	523	518	506				
Mercury	0.7	0.08	U	0.2	U	0.2	U	0.2	U	0.2	U	0.08	J	0.2	U	0.2	U	0.2	U	0.08	U	0.2	U	0.2	U	0.09	J	0.2	U	0.2	U	0.2	U							
Nickel	100	4.7	U	20	U	20	U	20	U	20	U	4.7	J	20	U	20	U	20	U	4.7	U	20	U	20	U	4.7	U	20	U	20	U	20	U	20						
Potassium	NS	7790		6040		9430		7770		11400		1100	J	2680		2430		2490		2480		615	J	1690	752	822	772	1560	J	6280	4850	3710	5140	883	J	1670	1330	1170	1290	
Selenium	10	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	S	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	5			
Silver	50	0.7	U	10	U	10	U	10	U	10	U	0.7	J	10	U	10	U	10	U	0.7	U	10	U	10	S	10	U	10	U	10	U	10	U	10	U	10				
Sodium	20000	31300		22800		20500		24500		20100		35800		42000		53900		47600		40500		3570	J	10000	13200	12200	6580	8400	15100	12700	1270	7170		5960	5610	6810	6240	5380		
Thallium	0.5	(GV)	8	U	10	U	10	U	10	U	8	U	10	U	10	U	10	U	8	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	10				
Vanadium	NS	3.1	U	20	U	20	U	20	U	20	U	3.1	J	20	U	20	U	20	U	3.1	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20				
Zinc	2000	(GV)	16.7	J	10	U	10	U	10	U	14		16	J	10	U	10	U	10	U	26.6	J	10	U	10	U	17.3	J	38	35	10	U	46	21.1	J	10	U	10	U	
Cyanide	200	7.6		10	U	10	U	10	U	10	U	5.1		20		10	U	10	U	750		2.3		10	U	10	U	2.3		10	U	10	U	4.8	10	10	10	10	10	

#### **Qualifiers:**

Detected concentrations shown in **bold** font. Bold font in shaded cell indicates exceedances of AWQS+GV.

NA - Not analyzed

NA - Not analyzed  
ND - Non Detect

ND - Null Detect  
E - Value above quantitation range

B - For organic analyses - compound detected in laboratory method blank. For inorganic analyses - value above quantitation range

B - For organic analyses - compound detected in laboratory  
II - Compound not detected at or above the instrument detection limit

L - Estimated concentration above the IDL, but less than the contract required detection limits (CRDL).

D. Results from a subsequent dilution

D - Results from a subsequent dilution of the original sample due to original sample results  
† - Positive Control

\* - Duplicate Sample

\*\* New York State Amb

**Table 4**  
**Groundwater Analytical Summary**  
**Metals**  
**34 Freemans Bridge Road**  
**Glenville, New York**  
**June 2009**

Sample ID	MW20						MW20D						MW21						MW21D						MW23							
Sampling Date	3/24/08	8/25/08	12/4/08	3/25/09	6/19/09	3/24/08	8/25/08	12/4/08	3/25/09	6/19/09	3/24/08	8/25/08	12/4/08	3/26/09	6/17/09	3/24/08	8/25/08	12/4/08	3/26/09	6/17/09	3/27/08	8/25/08	12/3/08	3/25/09	6/17/09							
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l				
Metals	AWQS/GV Values						AWQS/GV Values																									
Aluminum	NS	141	J	3090	2060	2190	501	347	649	136	1300	105	441	3310	2410	347	NA	45.8	U	100	U	100	U	100	U	386	3650	11400	2160	2060		
Antimony	3	6.8	U	60	60	60	60	6.8	60	60	60	60	10.2	J	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60		
Arsenic	25	4.77	J	21	9	S	19	18	3.9	5	5	5	5	3.9	5	5	5	3.9	5	5	5	5	5	5	5	5	5	5	5	5		
Barium	1000	64.2	J	240	319	378	373	56	J	115	104	119	108	67	J	153	286	110	109	80.3	J	113	98	89	103	44.1	J	132	193	77	68	
Beryllium	3	0.3	U	5	5	5	5	0.3	U	5	5	5	5	0.3	U	5	5	0.3	U	5	5	0.3	U	5	5	0.3	U	5	5	0.3	U	
Cadmium	5	1.1	U	5	5	5	5	1.1	U	5	5	5	5	1.1	U	5	5	1.1	U	5	5	1.1	U	5	5	1.1	U	5	5	1.1	U	
Calcium	NS	168000	460000	635000	560000	396000	61100	114000	102000	111000	110000	186000	351000	341000	324000	285000	82200	114000	98300	94700	101000	88800	136000	147000	118000	112000	112000					
Chromium	50	1.2	U	5	5	6	12	1.2	U	5	5	5	8	8.49	J	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
Cobalt	NS	2.4	U	50	50	50	50	2.4	U	50	50	50	50	6.67	J	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	
Copper	200	12.9	J	29	10	9	9	2.1	J	5	5	8	5	5	5	5	44	J	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Iron	300	37	U	3660	2350	3350	655	1630	2480	1420	5880	1190	9160	20400	58700	11700	13400	1050	1650	1400	1280	1300	3890	18000	45900	12100	8240	8240				
Lead	25	4.6	U	5	5	9	5	5	5	5	5	5	4.6	U	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5		
Magnesium	35000 (GV)	3950	J	5510	1760	4150	2980	9700	18600	17400	17800	18100	28800	50500	58200	46100	45400	13900	19400	17100	17100	16000	18100	13800	23100	27200	18700	18800	18800			
Manganese	300	14.4	J	71	38	44	20	20	52.3	71	47	88	61	6730	10300	11700	12200	9730	107	163	136	122	142	449	904	800	390	308	308			
Mercury	0.7	0.08	U	0.2	U	0.2	U	0.08	U	0.2	U	0.2	U	0.08	U	0.2	U	0.2	U	0.08	U	0.2	U	0.08	U	0.2	U	0.08	U	0.08	U	
Nickel	100	8.81	J	39	54	39	36	3.1	J	20	20	20	20	4.7	U	20	20	54	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Potassium	NS	15100	92600	97100	108000	120000	2000	J	5560	4910	5710	5210	888	J	3000	5900	1620	1630	1640	J	3420	3030	3230	1630	J	4540	5110	2970	2170	2170		
Selenium	10	6.18	J	9	7	S	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
Silver	50	0.7	U	10	10	10	S	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
Sodium	20000	69800	122000	185000	167000	159000	32000	35400	47000	41900	38700	12500	19400	27600	26000	21300	52000	43500	73600	45800	42300	30900	33900	34100	36900	32100	32100	32100	32100	32100		
Thallium	0.5 (GV)	8	U	69	26	15	18	8	U	10	10	10	10	10	U	8	U	24	20	16	8	U	10	10	10	8	U	10	10	10	10	10
Vanadium	NS	3.67	J	20	36	43	32	3.1	U	20	20	20	20	20	5.96	J	20	77	20	20	3.1	U	20	20	20	20	20	20	20	20	20	20
Zinc	2000 (GV)	43.2	J	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
Cyanide	200	11.2	U	10	10	10	10	10	10	10	10	10	10	22.4	10	10	10	10	10	21.2	10	10	10	10	2.7	10	10	10	8.5	10	10	10

<tbl\_struct

**Table 5**  
**Groundwater Analytical Summary**  
**PCBs**  
**34 Freemans Bridge Road**  
**Glenville, New York**  
**June 2009**

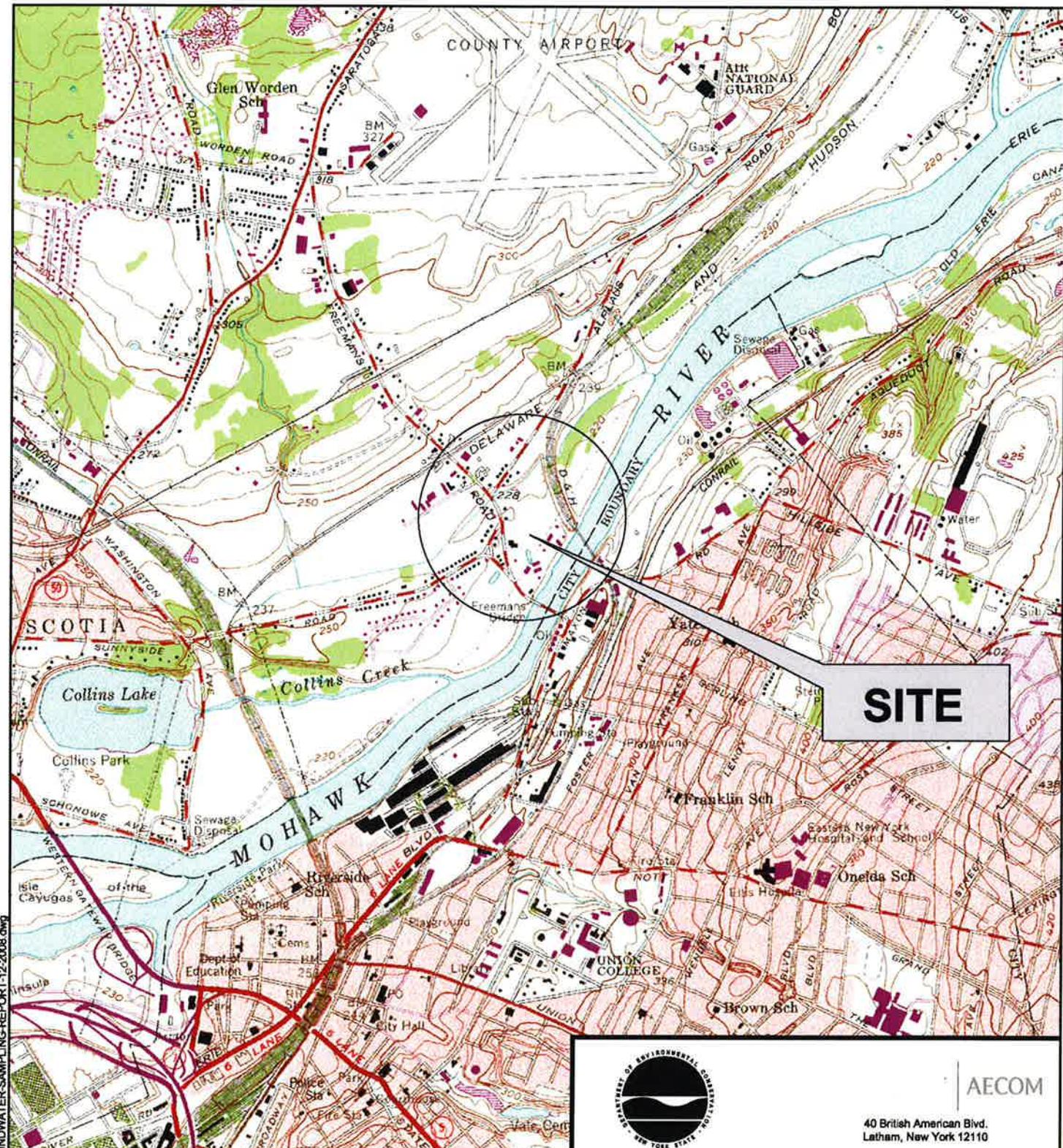
Sample ID		MW11			MW11D			MW12			MW15			MW15D			MW16			MW16D			MW18			MW19			MW19D		
Sampling Date		3/27/08	8/26/08	6/18/09	3/27/08	8/26/08	6/18/09	3/24/08	8/26/08	6/18/09	3/26/08	8/26/08	6/19/09	3/26/08	8/26/08	6/19/09	3/25/08	8/26/08	6/17/09	3/25/08	8/26/08	6/19/09	3/26/08	8/26/08	6/18/09	3/26/08	8/25/08	6/18/09	3/26/08	8/25/08	6/18/09
Units		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
PCBs	CAS #	AWQS/GV Values																													
Aroclor-1016	12674-11-2	sum Aroclor .09	0.5 U	0.065 U	0.065 U	0.5 U	0.065 U	0.065 U	0.53 U	0.066 U	0.065 U	0.5 U	0.068 U	0.065 U	0.5 U	0.065 U	0.065 U	0.5 U	0.068 U	0.065 U	0.5 U	0.066 U	0.065 U	0.5 U	0.065 U	0.065 U	0.5 U	0.068 U	0.065 U		
Aroclor-1221	11104-28-2		0.5 U	0.065 U	0.065 U	0.5 U	0.065 U	0.065 U	0.53 U	0.066 U	0.065 U	0.5 U	0.068 U	0.065 U	0.5 U	0.065 U	0.065 U	0.5 U	0.068 U	0.065 U	0.5 U	0.066 U	0.065 U	0.5 U	0.066 U	0.065 U	0.5 U	0.068 U	0.065 U		
Aroclor-1232	11141-16-5		0.5 U	0.065 U	0.065 U	0.5 U	0.065 U	0.065 U	0.53 U	0.066 U	0.065 U	0.5 U	0.068 U	0.065 U	0.5 U	0.065 U	0.065 U	0.5 U	0.068 U	0.065 U	0.5 U	0.066 U	0.065 U	0.5 U	0.066 U	0.065 U	0.5 U	0.068 U	0.065 U		
Aroclor-1242	53469-21-9		0.5 U	0.065 U	0.065 U	0.5 U	0.065 U	0.065 U	0.53 U	0.066 U	0.065 U	0.5 U	0.068 U	0.065 U	0.5 U	0.065 U	0.065 U	0.5 U	0.068 U	0.065 U	0.5 U	0.066 U	0.065 U	0.5 U	0.066 U	0.065 U	0.5 U	0.068 U	0.065 U		
Aroclor-1248	12672-29-6		0.5 U	0.065 U	0.065 U	0.5 U	0.065 U	0.065 U	0.53 U	0.066 U	0.065 U	0.5 U	0.068 U	0.065 U	0.5 U	0.065 U	0.065 U	0.5 U	0.068 U	0.065 U	0.5 U	0.066 U	0.065 U	0.5 U	0.066 U	0.065 U	0.5 U	0.068 U	0.065 U		
Aroclor-1254	11097-69-1		0.5 U	0.065 U	0.065 U	0.5 U	0.065 U	0.065 U	0.53 U	0.066 U	0.065 U	0.5 U	0.068 U	0.065 U	0.5 U	0.065 U	0.065 U	0.5 U	0.068 U	0.065 U	0.5 U	0.066 U	0.065 U	0.5 U	0.066 U	0.065 U	0.5 U	0.068 U	0.065 U		
Aroclor-1260	11096-82-5		0.5 U	0.065 U	0.065 U	0.5 U	0.065 U	0.065 U	0.53 U	0.066 U	0.065 U	0.5 U	0.068 U	0.065 U	0.5 U	0.065 U	0.065 U	0.5 U	0.068 U	0.065 U	0.5 U	0.066 U	0.065 U	0.5 U	0.066 U	0.065 U	0.5 U	0.068 U	0.065 U		
Aroclor-1262	37324-23-5		0.5 U	0.065 U	0.065 U	0.5 U	0.065 U	0.065 U	0.53 U	0.066 U	0.065 U	0.5 U	0.068 U	0.065 U	0.5 U	0.065 U	0.065 U	0.5 U	0.068 U	0.065 U	0.5 U	0.066 U	0.065 U	0.5 U	0.066 U	0.065 U	0.5 U	0.068 U	0.065 U		
Aroclor-1268	11100-14-4		0.5 U	0.065 U	0.065 U	0.5 U	0.065 U	0.065 U	0.53 U	0.066 U	0.065 U	0.5 U	0.068 U	0.065 U	0.5 U	0.065 U	0.065 U	0.5 U	0.068 U	0.065 U	0.5 U	0.066 U	0.065 U	0.5 U	0.066 U	0.065 U	0.5 U	0.068 U	0.065 U		
Total Aroclor		0.09	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

Sample ID		MW20			MW20D			MW21			MW21D			MW23			MW-23D			MW30			MW31			MW32			MW33		
Sampling Date		3/24/08	8/25/08	6/19/09	3/24/08	8/25/08	6/19/09	3/24/08	8/25/08	6/17/09	3/24/08	8/25/08	6/17/09	3/27/08	8/25/08	6/17/09	4/4/08	8/25/08	6/17/09	3/25/08	8/26/08	6/19/09	3/25/08	8/26/08	6/19/09	3/27/08	8/26/08	6/19/09	3/26/08	8/26/08	6/17/09
Units		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
PCBs	CAS #	AWQS/GV Values																													
Aroclor-1016	12674-11-2	sum Aroclor .09	0.5 U	0.069 U	0.065 U	0.5 U	0.068 U	0.065 U	0.56 U	0.067 U	0.065 U	0.5 U	0.066 U	0.065 U	0.5 U	0.068 U	0.065 U	0.5 U	0.066 U	0.065 U	0.5 U	0.068 U	0.065 U	0.5 U	0.066 U	0.065 U	0.5 U	0.069 U	0.065 U		
Aroclor-1221	11104-28-2		0.5 U	0.069 U	0.065 U	0.5 U	0.068 U	0.065 U	0.56 U	0.0																					

**Table 6**  
**Groundwater Analytical Summary**  
**Pesticides**  
**34 Freemans Bridge Road**  
**Glenville, New York**  
**June 2009**

Sample ID	MW11			MW11D			MW12			MW15			MW15D			MW16			MW16D			MW18			MW19			MW19D		
Sampling Date	3/27/08	8/26/08	6/18/09	3/27/08	8/26/08	6/18/09	3/24/08	8/26/08	6/18/09	3/26/08	8/26/08	6/19/09	3/25/08	8/26/08	6/17/09	3/25/08	8/26/08	6/17/09	3/26/08	8/26/08	6/18/09	3/26/08	8/25/08	6/18/09	3/26/08	8/25/08	6/18/09			
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
<b>PESTICIDES</b>	AWQS/GV Values																													
alpha-BHC	0.01	0.01 U	0.05 U	0.05 U	0.01 U	0.05 U	0.05 U	0.01 U	0.05 U	0.054 U	0.01 U	0.053 U	0.05 U	0.01 U	0.05 U	0.05 U	0.01 U	0.052 U	0.057 U	0.01 U	0.051 U	0.056 U	0.01 U	0.05 U	0.056 U	0.01 U	0.053 U	0.051 U		
beta-BHC	0.04	0.01 U	0.05 U	0.05 U	0.01 U	0.05 U	0.05 U	0.01 U	0.05 U	0.054 U	0.01 U	0.053 U	0.05 U	0.01 U	0.05 U	0.05 U	0.01 U	0.052 U	0.057 U	0.01 U	0.051 U	0.056 U	0.01 U	0.05 U	0.056 U	0.01 U	0.053 U	0.051 U		
delta-BHC	0.04	0.01 U	0.05 U	0.05 U	0.01 U	0.05 U	0.05 U	0.01 U	0.05 U	0.054 U	0.01 U	0.053 U	0.05 U	0.01 U	0.05 U	0.05 U	0.01 U	0.052 U	0.057 U	0.01 U	0.051 U	0.056 U	0.01 U	0.05 U	0.056 U	0.01 U	0.053 U	0.051 U		
gamma-BHC	0.05	0.01 U	0.05 U	0.05 U	0.01 U	0.05 U	0.05 U	0.01 U	0.05 U	0.054 U	0.01 U	0.053 U	0.05 U	0.01 U	0.05 U	0.05 U	0.01 U	0.052 U	0.057 U	0.01 U	0.051 U	0.056 U	0.01 U	0.05 U	0.056 U	0.01 U	0.053 U	0.051 U		
Heptachlor	0.04	0.01 U	0.05 U	0.05 U	0.01 U	0.05 U	0.05 U	0.01 U	0.05 U	0.054 U	0.01 U	0.053 U	0.05 U	0.01 U	0.05 U	0.05 U	0.01 U	0.052 U	0.057 U	0.01 U	0.051 U	0.056 U	0.01 U	0.05 U	0.056 U	0.01 U	0.053 U	0.051 U		
Aldrin	ND	0.01 U	0.05 U	0.05 U	0.01 U	0.05 U	0.05 U	0.01 U	0.05 U	0.054 U	0.01 U	0.053 U	0.05 U	0.01 U	0.05 U	0.05 U	0.01 U	0.052 U	0.057 U	0.01 U	0.051 U	0.056 U	0.01 U	0.05 U	0.056 U	0.01 U	0.053 U	0.051 U		
Heptachlor epoxide	0.03	0.01 U	0.05 U	0.05 U	0.01 U	0.05 U	0.05 U	0.01 U	0.05 U	0.054 U	0.01 U	0.053 U	0.05 U	0.01 U	0.05 U	0.05 U	0.01 U	0.052 U	0.057 U	0.01 U	0.051 U	0.056 U	0.01 U	0.05 U	0.056 U	0.01 U	0.053 U	0.051 U		
Endosulfan I	NA	0.01 U	0.05 U	0.05 U	0.01 U	0.05 U	0.05 U	0.01 U	0.05 U	0.054 U	0.01 U	0.053 U	0.05 U	0.01 U	0.05 U	0.05 U	0.01 U	0.052 U	0.057 U	0.01 U	0.051 U	0.056 U	0.01 U	0.05 U	0.056 U	0.01 U	0.053 U	0.051 U		
Dieldrin	0.004	0.01 U	0.1 U	0.1 U	0.01 U	0.1 U	0.1 U	0.01 U	0.1 U	0.108 U	0.01 U	0.105 U	0.1 U	0.01 U	0.1 U	0.1 U	0.01 U	0.104 U	0.114 U	0.01 U	0.103 U	0.111 U	0.01 U	0.1 U	0.105 U	0.01 U	0.102 U	0.102 U		
4,4-DDE	0.2	0.01 U	0.1 U	0.1 U	0.01 U	0.1 U	0.1 U	0.01 U	0.1 U	0.108 U	0.01 U	0.105 U	0.1 U	0.01 U	0.1 U	0.1 U	0.01 U	0.104 U	0.114 U	0.01 U	0.103 U	0.111 U	0.01 U	0.1 U	0.105 U	0.01 U	0.102 U	0.102 U		
Endrin	ND	0.01 U	0.1 U	0.1 U	0.01 U	0.1 U	0.1 U	0.01 U	0.1 U	0.108 U	0.01 U	0.105 U	0.1 U	0.01 U	0.1 U	0.1 U	0.01 U	0.104 U	0.114 U	0.01 U	0.103 U	0.111 U	0.01 U	0.1 U	0.105 U	0.01 U	0.102 U	0.102 U		
Endosulfan II	NA	0.01 U	0.1 U	0.1 U	0.01 U	0.1 U	0.1 U	0.01 U	0.1 U	0.108 U	0.01 U	0.105 U	0.1 U	0.01 U	0.1 U	0.1 U	0.01 U	0.104 U	0.114 U	0.01 U	0.103 U	0.111 U	0.01 U	0.1 U	0.105 U	0.01 U	0.102 U	0.102 U		
4,4-DDD	0.3	0.01 U	0.1 U	0.1 U	0.01 U	0.1 U	0.1 U	0.01 U	0.1 U	0.108 U	0.01 U	0.105 U	0.1 U	0.01 U	0.1 U	0.1 U	0.01 U	0.104 U	0.114 U	0.01 U	0.103 U	0.111 U	0.01 U	0.1 U	0.105 U	0.01 U	0.102 U	0.102 U		
Endosulfan Sulfate	NA	0.01 U	0.1 U	0.1 U	0.01 U	0.1 U	0.1 U	0.01 U	0.1 U	0.108 U	0.01 U	0.105 U	0.1 U	0.01 U	0.1 U	0.1 U	0.01 U	0.104 U	0.114 U	0.01 U	0.103 U	0.111 U	0.01 U	0.1 U	0.105 U	0.01 U	0.102 U	0.102 U		
4,4-DDT	0.2	0.01 U	0.1 U	0.1 U	0.01 U	0.1 U	0.1 U	0.01 U	0.1 U	0.108 U	0.01 U	0.105 U	0.1 U	0.01 U	0.1 U	0.1 U	0.01 U	0.104 U	0.114 U	0.01 U	0.103 U	0.111 U	0.01 U	0.1 U	0.105 U	0.01 U	0.102 U	0.102 U		
Methoxychlor	35	0.01 U	0.05 U	0.05 U	0.01 U	0.05 U	0.05 U	0.01 U	0.05 U	0.054 U	0.01 U	0.053 U	0.05 U	0.01 U	0.05 U	0.05 U	0.01 U	0.052 U	0.057 U	0.01 U	0.051 U	0.056 U	0.01 U	0.05 U	0.056 U	0.01 U	0.053 U	0.051 U		
Endrin ketone	5	0.01 U	0.1 U	0.1 U	0.01 U	0.1 U	0.1 U	0.01 U	0.1 U	0.108 U	0.01 U	0.105 U	0.1 U	0.01 U	0.1 U	0.1 U	0.01 U	0.104 U	0.114 U	0.01 U	0.103 U	0.111 U	0.01 U	0.1 U	0.105 U	0.01 U	0.102 U	0.102 U		
Endrin aldehyde	5	0.01 U	0.1 U	0.1 U	0.01 U	0.1 U	0.1 U	0.01 U	0.1 U	0.108 U	0.01 U	0.105 U	0.1 U	0.01 U	0.1 U	0.1 U	0.01 U	0.104 U	0.114 U	0.01 U	0.103 U	0.111 U	0.01 U	0.1 U	0.105 U	0.01 U	0.102 U	0.102 U		
alpha-Chlordane	0.5	0.01 U	0.05 U	0.05 U	0.01 U	0.05 U	0.05 U	0.01 U	0.05 U	0.054 U	0.01 U	0.053 U	0.05 U	0.01 U	0.05 U	0.05 U	0.01 U	0.052 U	0.057 U	0.01 U	0.051 U	0.056 U	0.01 U	0.05 U	0.056 U	0.01 U	0.053 U	0.051 U		
gamma-Chlordane	0.5	0.01 U	0.053 U	0.05 U	0.01 U	0.05 U	0.5	0.01 U	0.51 U																					

## **Figures**



### PLAN

Scale in Feet  
0 1000' 2000'

MAP REFERENCES:  
IMAGE FROM USGS 7.5 MIN. QUADRANGLE, SCHENECTADY SERIES.



AECOM

40 British American Blvd.  
Latham, New York 12110

**FIGURE 1**  
**SITE LOCATION MAP**

### GROUNDWATER SAMPLING REPORT

**34 Freeman's Bridge Road Site**  
**NYSDEC Site # 4-47-028**

Town of Glenville

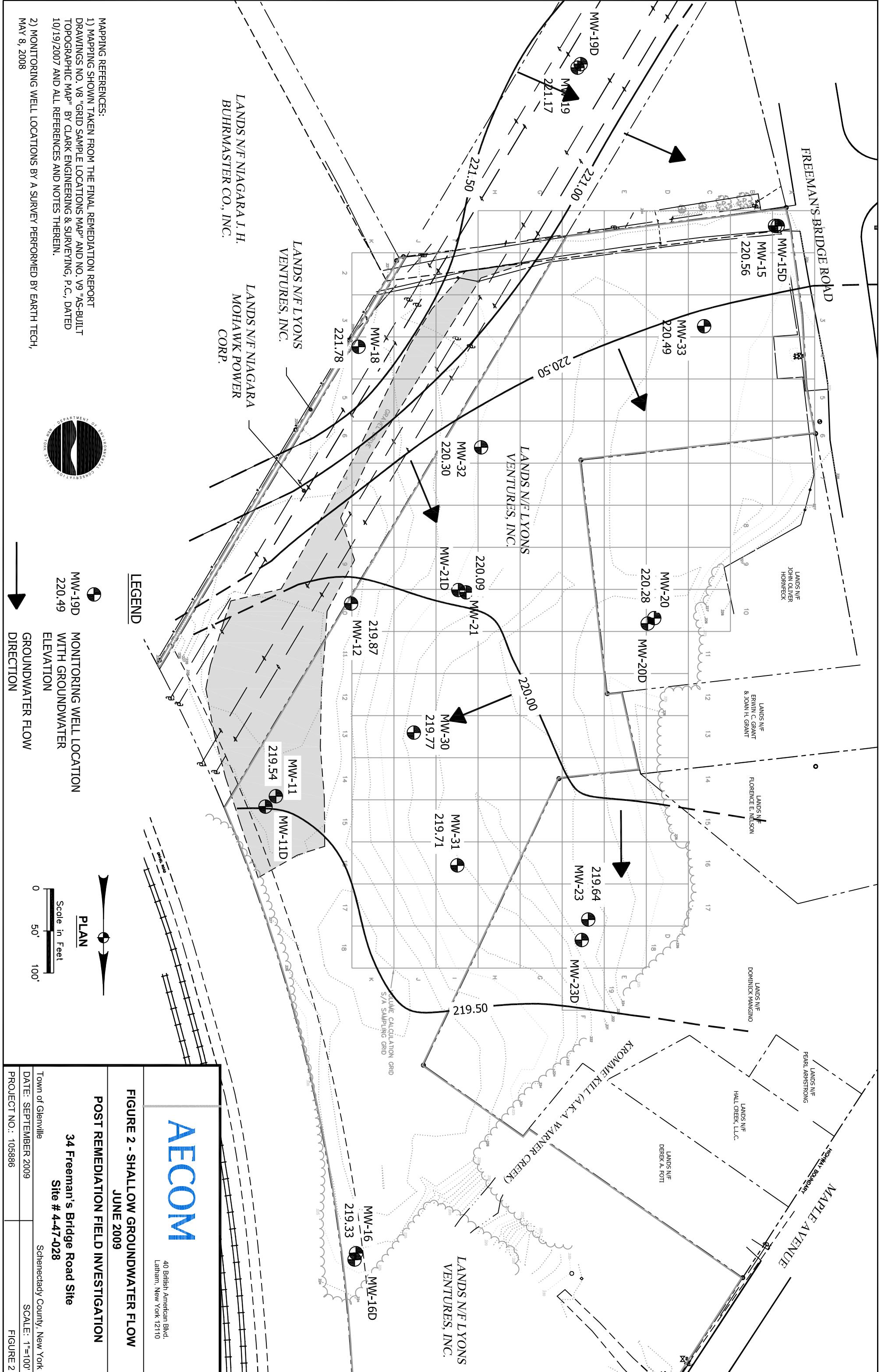
Schenectady County, New York

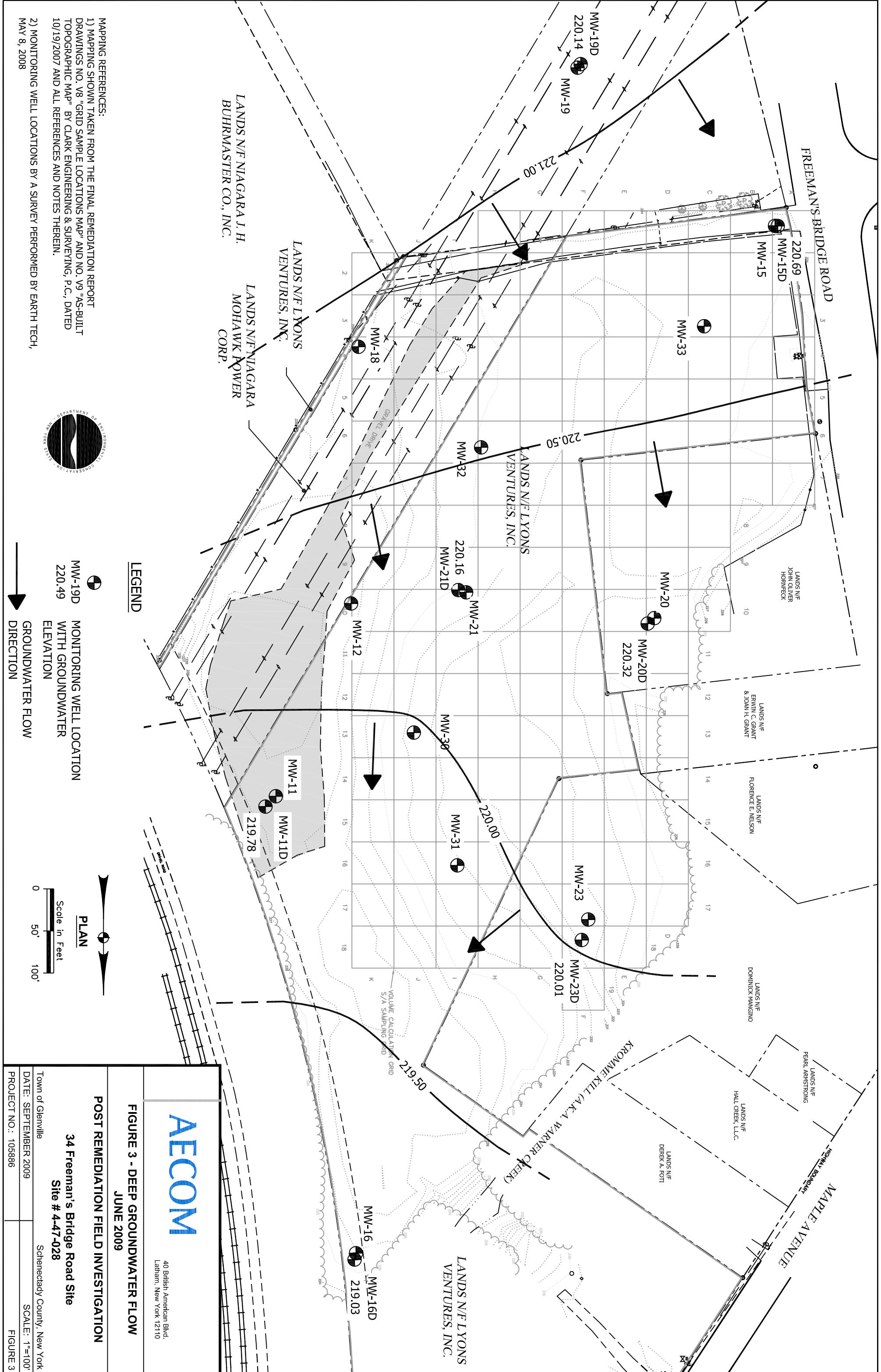
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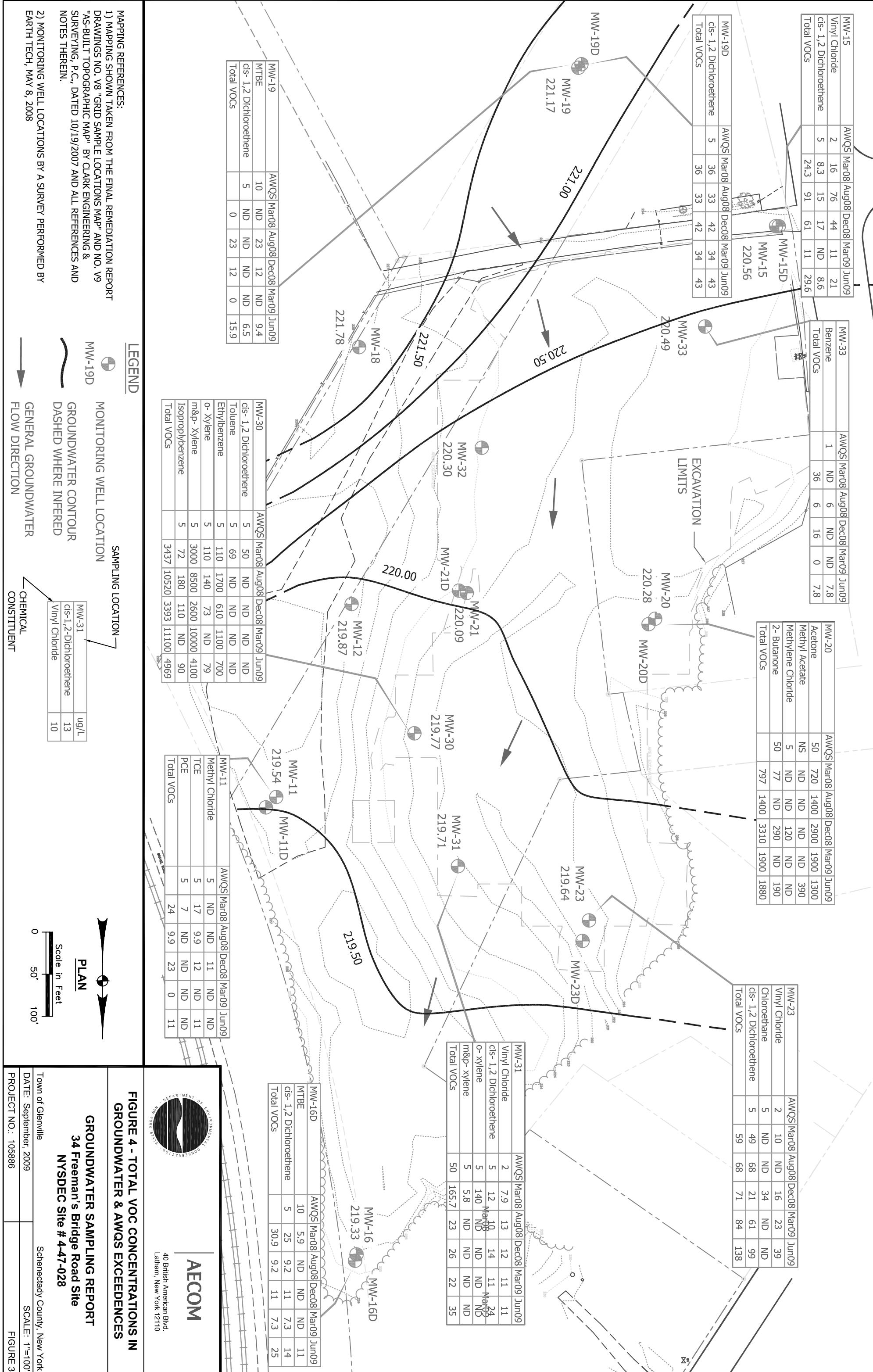
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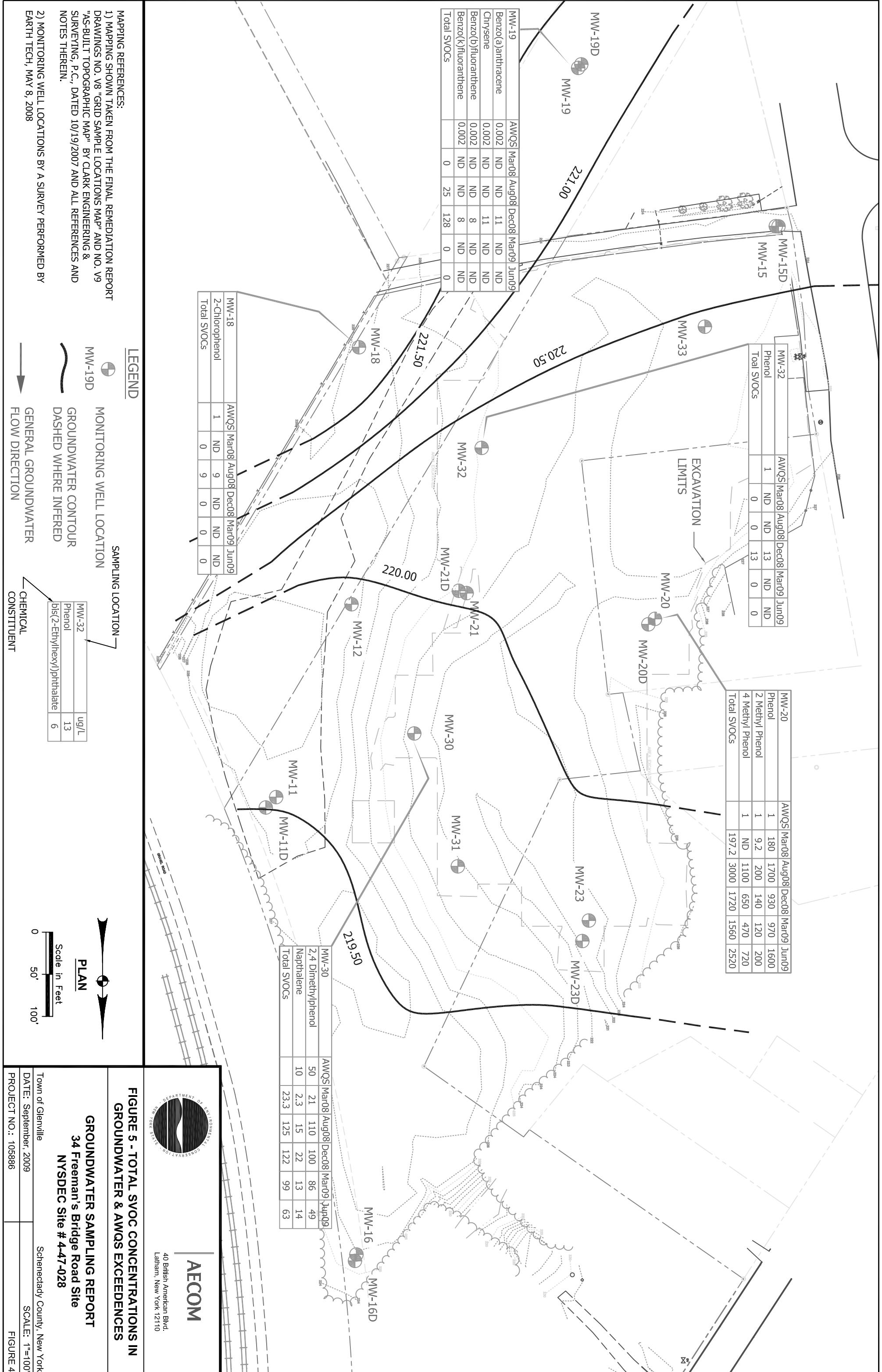
PROJECT NO.: 105886

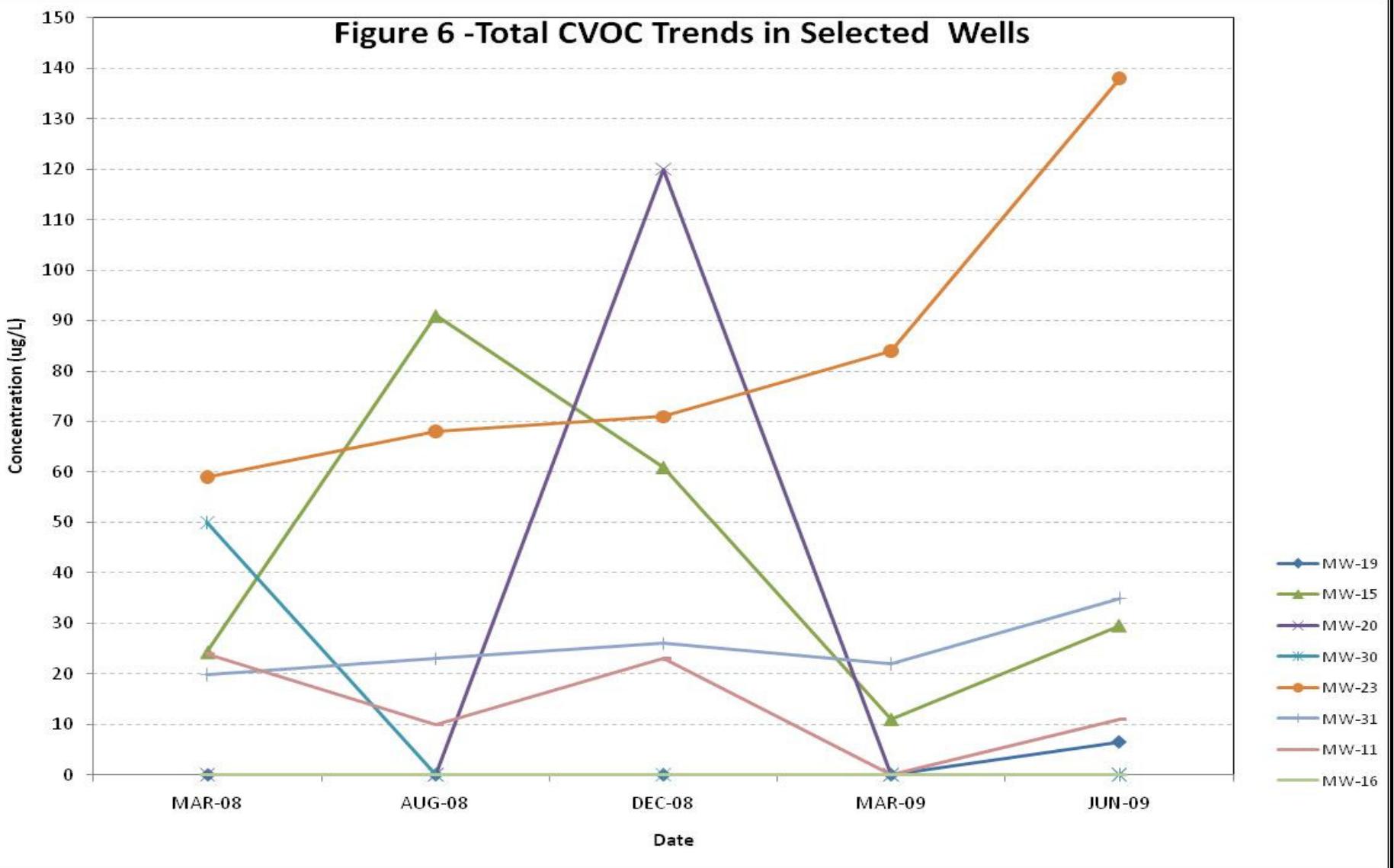
FIGURE 1











AECOM

34 Freemans Bridge Road  
Glenville, New York

AECOM

September 2009

PROJECT NO:105886

**Appendix A**  
**Monitoring Well Purging/Sampling Logs**

## Monitoring Well Purgging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 11 Date: 6/18/09

Samplers: Tyler Brown and Cristine Vinciguerra

Sample Number: MW-11 QA/QC Collected? None

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth: 19.35 feet
2. D = Riser Diameter (I.D.): 0.17 feet
3. W = Static Depth to Water (TOC): 11.69 feet
4. C = Column of Water in Casing: 7.66 feet
5. V = Volume of Water in Well = C(3.14159)(0.5D)<sup>2</sup>(7.48) 1.24 gal
6. 3(V) =Target Purge Volume 3.75 gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Units	Readings			
Time	24 hr	1157	1158	1159	1201
Water Level	feet	-	-	-	-
Volume Purged	gal	0.00	1.50	3.00	6.00
Flow Rate	mL / min	-	-	-	-
Turbidity	NTU	53.1	609.0	433.0	534.0
Dissolved Oxygen	mg / L	1.70	2.01	1.78	2.00
Eh / ORP	MeV	64.7	55.6	47.9	36
Conductivity	umho / cm	1.163	1.207	1.165	1.119
pH	pH unit	6.44	6.46	6.54	6.64
Temp	C	12.37	11.91	11.01	11.41
Color	Visual	cloudy	cloudy	clear	clear
Odor	Olfactory	none	none	none	none

### Comments:

Started purge at 1157

Sampled at 1205

## Monitoring Well Purgng / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 11 D Date: 6/18/2009

Samplers: Tyler Brown and Cristine Vinciguerra

Sample Number: MW-11 D QA/QC Collected? MS/MSD

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth: 53.5 feet
2. D = Riser Diameter (I.D.): 0.17 feet
3. W = Static Depth to Water (TOC): 11.42 feet
4. C = Column of Water in Casing: 42.08 feet
5. V = Volume of Water in Well = C(3.14159)(0.5D)<sup>2</sup>(7.48) 6.85 gal
6. 3(V) =Target Purge Volume 20.57 gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Units	Readings			
Time	24 hr	1221	1225	1229	1232
Water Level	feet	-	-	-	-
Volume Purged	gal	0.00	5.00	10.00	15.00
Flow Rate	mL / min	-	-	-	-
Turbidity	NTU	47.20	3.70	2.90	1.90
Dissolved Oxygen	mg / L	4.14	0.53	0.67	0.41
Eh / ORP	MeV	23.7	-74.9	-86.8	-86.3
Conductivity	µmho / cm	1.272	1.924	1.896	1.908
pH	pH unit	7.29	7.17	7.19	7.36
Temp	C	13.71	12.00	11.71	11.93
Color	Visual	sl cloudy	sl cloudy	clear	clear
Odor	Olfactory	none	none	none	none

### Comments:

Started purge at 1221

Sampled at 1232

## Monitoring Well Purgging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 12 Date: 6/18/09

Samplers: Tyler Brown and Cristine Vinciguerra

Sample Number: MW-12 QA/QC Collected? None

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth: 17.29 feet
2. D = Riser Diameter (I.D.): 0.17 feet
3. W = Static Depth to Water (TOC): 10.81 feet
4. C = Column of Water in Casing: 6.48 feet
5. V = Volume of Water in Well = C(3.14159)(0.5D)<sup>2</sup>(7.48) 1.05 gal
6. 3(V) =Target Purge Volume 3.16 gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Units	Readings			
Time	24 hr	810	812	835	
Water Level	feet	-	-	-	
Volume Purged	gal	0.00	1.50	3.00	
Flow Rate	mL / min	-	-	-	
Turbidity	NTU	346.0	489.0	126.0	
Dissolved Oxygen	mg / L	4.88	5.12		
Eh / ORP	MeV	12	40.7	48.2	
Conductivity	µmho / cm	0.76	0.753	0.759	
pH	pH unit	6.88	6.80	6.86	
Temp	C	11.56	10.60	11.14	
Color	Visual	cloudy	cloudy	cloudy	
Odor	Olfactory	none	none	none	

Comments:

## Monitoring Well Purgng / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 15 Date: 6/19/2009

Samplers: Tyler Brown and Cristine Vinciguerra

Sample Number: MW-15 QA/QC Collected? None

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth: 14.25 feet
2. D = Riser Diameter (I.D.): 0.17 feet
3. W = Static Depth to Water (TOC): 3.58 feet
4. C = Column of Water in Casing: 10.67 feet
5. V = Volume of Water in Well = C(3.14159)(0.5D)<sup>2</sup>(7.48) 1.74 gal
6. 3(V) =Target Purge Volume 5.22 gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Units	Readings				
Time	24 hr	822	823	824	825	
Water Level	feet	-	-	-	-	
Volume Purged	gal	0.00	2.00	5.00	6.00	
Flow Rate	mL / min	-	-	-	-	
Turbidity	NTU	18.0	300.0	150.0	90.0	
Dissolved Oxygen	mg / L	3.50	2.30	2.58	2.27	
Eh / ORP	MeV	-5.5	-33.3	-46.9	-50.1	
Conductivity	umho / cm	0.784	0.814	0.834	0.855	
pH	pH unit	7.34	7.32	7.32	7.31	
Temp	C	13.92	13.23	12.80	12.58	
Color	Visual	cloudy	cloudy	cloudy	cloudy	
Odor	Olfactory	none	none	none	none	

Comments: Started purge at 822

Sampled at 825

## Monitoring Well Purgng / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 15 D Date: 6/19/2009

Samplers: Tyler Brown and Cristine Vinciguerra

Sample Number: MW-15 D QA/QC Collected? None

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth: 29.5 feet
2. D = Riser Diameter (I.D.): 0.17 feet
3. W = Static Depth to Water (TOC): 3.66 feet
4. C = Column of Water in Casing: 25.84 feet
5. V = Volume of Water in Well = C(3.14159)(0.5D)<sup>2</sup>(7.48) 4.21 gal
6. 3(V) =Target Purge Volume 12.64 gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Units	Readings			
Time	24 hr	805	806	809	811
Water Level	feet	-	-	-	-
Volume Purged	gal	0.00	4.00	8.00	12.00
Flow Rate	mL / min	-	-	-	-
Turbidity	NTU	290.0	290.0	60.00	32.00
Dissolved Oxygen	mg / L	2.01	0.85	0.84	1.09
Eh / ORP	MeV	-10.9	-2.8	-0.4	2.9
Conductivity	µmho / cm	1.028	1.02	1.001	0.986
pH	pH unit	7.34	7.20	7.21	7.25
Temp	C	12.80	12.11	11.95	11.94
Color	Visual	cloudy	cloudy	cloudy	slight cloud
Odor	Olfactory	none	none	none	none

Comments: Started purge at 805

Sampled at 815

## Monitoring Well Purgng / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW-16 Date: 6/17/2009

Samplers: Tyler Brown and Cristine Vinciguerra

Sample Number: MW-16 QA/QC Collected? None

Purgng / Sampling Method: Whale Pump

1. L = Total Well Depth: 13.20 feet
2. D = Riser Diameter (I.D.): 0.17 feet
3. W = Static Depth to Water (TOC): 9.08 feet
4. C = Column of Water in Casing: 4.12 feet
5. V = Volume of Water in Well = C(3.14159)(0.5D)<sup>2</sup>(7.48) 0.670 gal
6. 3(V) =Target Purge Volume 2.010 gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Units	Readings			
Time	24 hr	1009	1011	1035	
Water Level	feet	-	-	-	
Volume Purged	gal	1.00	2.00	3.00	
Flow Rate	mL / min	-	-	-	
Turbidity	NTU	15.3	8.51	107.0	
Dissolved Oxygen	mg / L	4.05	6.15	5.15	
Eh / ORP	MeV	-81.5	-83.7	-82.6	
Conductivity	umho / cm	1.758	1.777	1.852	
pH	pH unit	6.90	7.04	7.17	
Temp	C	15.06	10.89	13.16	
Color	Visual	clear	clear	cloudy	
Odor	Olfactory	none	none	none	

### Comments:

Started purge at 1009

\*\*\* Tube is to short, need to replace

Purged dry at 1011

Purged 3 gallons

Sampled at 1035

## Monitoring Well Purgng / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 16 D Date: 6/17/2009

Samplers: Tyler Brown and Cristine Vinciguerra

Sample Number: MW-16 D QA/QC Collected? None

Purgng / Sampling Method: Whale Pump

1. L = Total Well Depth: 28.64 feet
2. D = Riser Diameter (I.D.): 0.17 feet
3. W = Static Depth to Water (TOC): 8.46 feet
4. C = Column of Water in Casing: 20.18 feet
5. V = Volume of Water in Well = C(3.14159)(0.5D)<sup>2</sup>(7.48) 3.28 gal
6. 3(V) =Target Purge Volume 9.86 gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Units	Readings			
Time	24 hr	1049	1051	1053	1055
Water Level	feet	-	-	-	-
Volume Purged	gal	0.00	3.00	6.00	9.00
Flow Rate	mL / min	-	-	-	-
Turbidity	NTU	2.85	0.91	1.82	1.30
Dissolved Oxygen	mg / L	6.11	4.43	3.16	3.01
Eh / ORP	MeV	1.2	13.5	4.1	1.1
Conductivity	umho / cm	0.993	1.048	0.787	1.004
pH	pH unit	7.54	7.19	7.03	6.93
Temp	C	16.00	13.00	11.21	11.21
Color	Visual	clear	clear	clear	clear
Odor	Olfactory	none	none	none	none

### Comments:

Started purge at 1049

\*\*\* Tube is to short, need to replace

Purged 10 gallons

Sampled at 1105

## Monitoring Well Purgng / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 18 Date: 6/18/09

Samplers: Tyler Brown and Cristine Vinciguerra

Sample Number: MW-18 QA/QC Collected? None

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth: 14.7 feet
2. D = Riser Diameter (I.D.): 0.17 feet
3. W = Static Depth to Water (TOC): 7.8 feet
4. C = Column of Water in Casing: 6.9 feet
5. V = Volume of Water in Well = C(3.14159)(0.5D)<sup>2</sup>(7.48) 1.12 gal
6. 3(V) =Target Purge Volume 3.30 gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Units	Readings			
Time	24 hr	1006	1007	1008	1009
Water Level	feet	-	-	-	-
Volume Purged	gal	0.00	1.50	3.00	3.50
Flow Rate	mL / min	-	-	-	-
Turbidity	NTU	68.9	117.0	38.1	19.60
Dissolved Oxygen	mg / L	2.37	2.91	3.01	3.34
Eh / ORP	MeV	37.2	41.3	52.7	56.4
Conductivity	umho / cm	0.851	0.612	0.692	0.573
pH	pH unit	7.10	6.68	6.46	6.43
Temp	C	12.25	11.83	11.85	12.00
Color	Visual	cloudy	cloudy	cloudy	cloudy
Odor	Olfactory	none	none	none	none

### Comments:

Started purge at 1006  
Sampled at 1015

## Monitoring Well Purgng / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 19 Date: 6/18/09

Samplers: Tyler Brown and Cristine Vinciguerra

Sample Number: MW-19 QA/QC Collected? None

Purging / Sampling Method: Bailer

1. L = Total Well Depth:	<u>9.72</u> feet	D (inches)	D (feet)
2. D = Riser Diameter (I.D.):	<u>0.17</u> feet	1-inch	0.08
3. W = Static Depth to Water (TOC):	<u>5.95</u> feet	2-inch	0.17
4. C = Column of Water in Casing:	<u>3.77</u> feet	3-inch	0.25
5. V = Volume of Water in Well = C(3.14159)(0.5D) <sup>2</sup> (7.48)	<u>0.61</u> gal	4-inch	0.33
6. 3(V) =Target Purge Volume	<u>1.80</u> gal	6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Units	Readings			
Time	24 hr	856	900	901	915
Water Level	feet	-	-	-	-
Volume Purged	gal	0.00	0.50	1.20	1.80
Flow Rate	mL / min	-	-	-	-
Turbidity	NTU	Error3	552.0	566.0	235.0
Dissolved Oxygen	mg / L	1.53	1.88	1.72	2.13
Eh / ORP	MeV	-44.30	-44.90	-41.20	-70.10
Conductivity	umho / cm	0.817	0.899	0.922	0.939
pH	pH unit	7.1	6.8	6.9	7.1
Temp	C	13.31	12.44	12.01	12.15
Color	Visual	clear	cloudy	cloudy	cloudy
Odor	Olfactory	none	none	none	none

### Comments:

Started purge at 855

Purged dry at 903

Sampled at 915

## Monitoring Well Purgng / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 19 D Date: 6/18/09

Samplers: Tyler Brown and Cristine Vinciguerra

Sample Number: MW-19 D QA/QC Collected? MS/MSD

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth:	<u>22.31</u> feet	D (inches)	D (feet)
2. D = Riser Diameter (I.D.):	<u>0.17</u> feet	1-inch	0.08
3. W = Static Depth to Water (TOC):	<u>4.87</u> feet	2-inch	0.17
4. C = Column of Water in Casing:	<u>17.44</u> feet	3-inch	0.25
5. V = Volume of Water in Well = C(3.14159)(0.5D) <sup>2</sup> (7.48)	<u>2.84</u> gal	4-inch	0.33
6. 3(V) =Target Purge Volume	<u>8.50</u> gal	6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Units	Readings			
Time	24 hr	905	906	908	909
Water Level	feet	-	-	-	-
Volume Purged	gal	0.00	3.00	6.00	9.00
Flow Rate	mL / min	-	-	-	-
Turbidity	NTU	51.7	82.9	60.2	79.7
Dissolved Oxygen	mg / L	3.61	2.00	1.94	1.32
Eh / ORP	MeV	-35.7	-72.2	-71.1	-71.5
Conductivity	umho / cm	0.922	0.833	0.877	0.858
pH	pH unit	7.01	7.12	7.20	7.18
Temp	C	10.42	8.96	10.05	9.94
Color	Visual	cloudy	cloudy	clear	clear
Odor	Olfactory	none	none	none	none

### Comments:

Started purge at 905  
Sampled at 910

## Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02  
 Monitoring Well Number: MW- 20 Date: 6/19/2009  
 Samplers: Tyler Brown and Cristine Vinciguerra  
 Sample Number: MW-20 QA/QC Collected? None  
 Purgung / Sampling Method: Bailer

1. L = Total Well Depth:	<u>12.41</u>	feet	D (inches)	D (feet)
2. D = Riser Diameter (I.D.):	<u>0.17</u>	feet	1-inch	0.08
3. W = Static Depth to Water (TOC):	<u>6.61</u>	feet	2-inch	0.17
4. C = Column of Water in Casing:	<u>5.8</u>	feet	3-inch	0.25
5. V = Volume of Water in Well = C(3.14159)(0.5D) <sup>2</sup> (7.48)	<u>0.95</u>	gal	4-inch	0.33
6. 3(V) =Target Purge Volume	<u>2.84</u>	gal	6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Units	Readings		
Time	24 hr	914	916	932
Water Level	feet	-	-	-
Volume Purged	gal	0.00	1.00	2.00
Flow Rate	mL / min	-	-	-
Turbidity	NTU	190.0	error 3	500.0
Dissolved Oxygen	mg / L	0.73	4.01	1.31
Eh / ORP	MeV	-125.6	-97	-38.9
Conductivity	μmho / cm	3.213	3.489	2.991
pH	pH unit	11.07	11.19	9.39
Temp	C	12.89	11.86	12.28
Color	Visual	yellow	cloudy	cloudy
Odor	Olfactory	strong odor	strong odor	strong odor

Comments: Started purge at 913

Purged dry at 918

Sampled at 935

## Monitoring Well Purgng / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 20 D Date: 6/19/2009

Samplers: Tyler Brown and Cristine Vinciguerra

Sample Number: MW-20 D QA/QC Collected? None

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth: 31.9 feet
2. D = Riser Diameter (I.D.): 0.17 feet
3. W = Static Depth to Water (TOC): 6.81 feet
4. C = Column of Water in Casing: 25.09 feet
5. V = Volume of Water in Well = C(3.14159)(0.5D)<sup>2</sup>(7.48) 4.09 gal
6. 3(V) =Target Purge Volume 12.27 gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Units	Readings			
Time	24 hr	900	902	904	906
Water Level	feet	-	-	-	-
Volume Purged	gal	0.00	4.00	8.00	12.00
Flow Rate	mL / min	-	-	-	-
Turbidity	NTU	90.0	400.0	260.0	75.0
Dissolved Oxygen	mg / L	1.15	1.19	0.62	1.16
Eh / ORP	MeV	-63.1	-77	-79.2	-79.9
Conductivity	umho / cm	0.975	0.967	0.976	0.965
pH	pH unit	7.31	7.31	7.33	7.34
Temp	C	12.21	11.63	12.21	11.61
Color	Visual	clear	cloudy	cloudy	cloudy
Odor	Olfactory	none	none	none	none

Comments: Started purge at 900

Sampled at 908

## Monitoring Well Purgng / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 21 Date: 6/17/2009

Samplers: Tyler Brown and Cristine Vinciguerra

Sample Number: MW-21 QA/QC Collected? None

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth:	<u>18.3</u> feet	D (inches)	D (feet)
2. D = Riser Diameter (I.D.):	<u>0.17</u> feet	1-inch	0.08
3. W = Static Depth to Water (TOC):	<u>7.37</u> feet	2-inch	0.17
4. C = Column of Water in Casing:	<u>10.93</u> feet	3-inch	0.25
5. V = Volume of Water in Well = C(3.14159)(0.5D) <sup>2</sup> (7.48)	<u>1.78</u> gal	4-inch	0.33
6. 3(V) =Target Purge Volume	<u>5.34</u> gal	6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Units	Readings			
Time	24 hr	1428	1430	1432	1435
Water Level	feet	-	-	-	-
Volume Purged	gal	0.00	1.75	3.00	5.50
Flow Rate	mL / min	-	-	-	-
Turbidity	NTU	622.0	155.0	19.6	19.2
Dissolved Oxygen	mg / L	2.62	2.31	6.33	3.98
Eh / ORP	MeV	-64.1	-54	-41.8	-41.4
Conductivity	umho / cm	1.362	1.214	1.202	1.239
pH	pH unit	6.87	6.80	6.83	6.87
Temp	C	12.96	11.34	11.18	10.77
Color	Visual	Brown	Brown	clear	
Odor	Olfactory	none	none	none	

### Comments:

Started purge at 1428

\*\*\* Tube is to short, needs to be replaced

Purged 5.34 gallons

Sampled at 1440

## Monitoring Well Purgging / Sampling Form

Project Name and Number:	Freemans Bridge Road	105886.02
Monitoring Well Number:	MW- 21 D	Date: 6/17/2009
Samplers:	Tyler Brown and Cristine Vinciguerra	
Sample Number:	MW-21 D	QA/QC Collected? None
Purging / Sampling Method:	Whale Pump	

1. L = Total Well Depth:	50.2	feet	D (inches)	D (feet)
2. D = Riser Diameter (I.D.):	0.17	feet	1-inch	0.08
3. W = Static Depth to Water (TOC):	8.89	feet	2-inch	0.17
4. C = Column of Water in Casing:	41.31	feet	3-inch	0.25
5. V = Volume of Water in Well = C(3.14159)(0.5D) <sup>2</sup> (7.48)	6.73	gal	4-inch	0.33
6. 3(V) =Target Purge Volume	20.20	gal	6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Units	Readings			
Time	24 hr	1451	1454	1458	1502
Water Level	feet	-	-	-	-
Volume Purged	gal	0.00	5.00	10.00	15.00
Flow Rate	mL / min	-	-	-	-
Turbidity	NTU	5.74	1.15	4.39	2.03
Dissolved Oxygen	mg / L	3.18	0.849	1.45	0.61
Eh / ORP	MeV	-26	-36.7	-60	-61.8
Conductivity	µmho / cm	0.874	0.848	0.836	0.835
pH	pH unit	7.45	7.39	7.35	7.34
Temp	C	14.82	13.01	13.18	12.57
Color	Visual	clear	clear	clear	clear
Odor	Olfactory	none	none	none	none

Comments:

## Monitoring Well Purgng / Sampling Form

Project Name and Number:	Freemans Bridge Road	105886.02
Monitoring Well Number:	MW- 23	Date: 6/17/2009
Samplers:	Tyler Brown and Cristine Vinciguerra	
Sample Number:	MW-23	QA/QC Collected? None
Purging / Sampling Method:	Whale Pump	
1. L = Total Well Depth:	11.3 feet	D (inches) D (feet)
2. D = Riser Diameter (I.D.):	0.17 feet	1-inch 0.08
3. W = Static Depth to Water (TOC):	5.22 feet	2-inch 0.17
4. C = Column of Water in Casing:	6.08 feet	3-inch 0.25
5. V = Volume of Water in Well = C(3.14159)(0.5D) <sup>2</sup> (7.48)	0.99 gal	4-inch 0.33
6. 3(V) =Target Purge Volume	2.97 gal	6-inch 0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Units	Readings			
Time	24 hr	1123	1125	1126	1136
Water Level	feet	-	-	-	-
Volume Purged	gal	0.00	2.50	3.50	4.00
Flow Rate	mL / min	-	-	-	-
Turbidity	NTU	343.0	1023.0		604.0
Dissolved Oxygen	mg / L	5.49	1.97	2.26	6.78
Eh / ORP	MeV	-72.6	-85.8	-61.8	-61.8
Conductivity	umho / cm	1.019	1.019	0.986	0.984
pH	pH unit	7.28	7.36	7.21	7.32
Temp	C	12.94	10.89	11.40	13.27
Color	Visual	cloudy	cloudy	cloudy	cloudy
Odor	Olfactory	none	none	none	none

### Comments:

Started purge at 1123  
 Purged dry at 1126  
 Purged 3.5 gallons  
 Sampled at 1136

## Monitoring Well Purging / Sampling Form

Project Name and Number:	Freemans Bridge Road	105886.02
Monitoring Well Number:	MW- 23 D	Date: 6/17/2009
Samplers:	Tyler Brown and Cristine Vinciguerra	
Sample Number:	MW-23 D	QA/QC Collected? None
Purging / Sampling Method:	Whale Pump	

1. L = Total Well Depth:
2. D = Riser Diameter (I.D.):
3. W = Static Depth to Water (TOC):
4. C = Column of Water in Casing:
5. V = Volume of Water in Well =  $C(3.14159)(0.5D)^2(7.48)$
6. 3(V) =Target Purge Volume

D (inches)	D (feet)
0.17	feet
4.31	feet
50.99	feet
8.31	gal
24.90	gal

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Units	Readings				
Time	24 hr	1151	1154	1157	1201	1205
Water Level	feet	-	-	-	-	-
Volume Purged	gal	0.00	6.00	12.00	18.00	24.00
Flow Rate	mL / min	-	-	-	-	-
Turbidity	NTU	34.7	239.0	66.0	18.2	15.8
Dissolved Oxygen	mg / L	2.95	1.10	8.90	6.40	0.70
Eh / ORP	MeV	37.2	-55.8	-59.6	-62.1	-61
Conductivity	µmho / cm	0.992	1.076	1.072	1.072	1.071
pH	pH unit	7.55	7.35	7.46	7.43	7.48
Temp	C	13.98	12.96	13.24	12.48	12.45
Color	Visual	clear	cloudy	cloudy	cloudy	clear
Odor	Olfactory	none	none	none	none	none

### Comments:

Started purge at 1151  
 Purged 25 gallons  
 Sampled at 1207

## Monitoring Well Purging / Sampling Form

Project Name and Number:	Freemans Bridge Road	105886.02		
Monitoring Well Number:	MW-30	Date: 6/19/2009		
Samplers:	Tyler Brown and Cristine Vinciguerra			
Sample Number:	MW-30	QA/QC Collected? DUP-1		
Purging / Sampling Method:	Whale Pump			
1. L = Total Well Depth:	16.49	feet	D (inches)	D (feet)
2. D = Riser Diameter (I.D.):	0.33	feet	1-inch	0.08
3. W = Static Depth to Water (TOC):	6.42	feet	2-inch	0.17
4. C = Column of Water in Casing:	10.07	feet	3-inch	0.25
5. V = Volume of Water in Well = C(3.14159)(0.5D) <sup>2</sup> (7.48)	6.55	gal	4-inch	0.33
6. 3(V) =Target Purge Volume	19.64	gal	6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Units	Readings			
Time	24 hr	1223	1226	1232	1236
Water Level	feet	-	-	-	-
Volume Purged	gal	0.00	7.00	14.00	21.00
Flow Rate	mL / min	-	-	-	-
Turbidity	NTU	17.0	20.0	19.0	38.0
Dissolved Oxygen	mg / L	0.72	0.60	0.61	0.60
Eh / ORP	MeV	-217.7	-233.7	-239.5	-223.7
Conductivity	µmho / cm	1.926	1.807	1.575	1.533
pH	pH unit	7.42	7.45	7.40	7.53
Temp	C	11.92	11.43	10.86	10.56
Color	Visual	gray/black	gray	gray	gray
Odor	Olfactory	strong odor	strong odor	strong odor	strong odor

**Comments:**  
 Started purge at 1223  
 Sampled at 1240  
 Sheen on the waters surface, no measurable product

## Monitoring Well Purgng / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 31 Date: 6/19/2009

Samplers: Tyler Brown and Cristine Vinciguerra

Sample Number: MW-31 QA/QC Collected? None

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth: 16.79 feet
2. D = Riser Diameter (I.D.): 0.33 feet
3. W = Static Depth to Water (TOC): 5.72 feet
4. C = Column of Water in Casing: 11.07 feet
5. V = Volume of Water in Well = C(3.14159)(0.5D)<sup>2</sup>(7.48) 7.20 gal
6. 3(V) =Target Purge Volume 21.59 gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Units	Readings			
Time	24 hr	1143	1146	1149	1152
Water Level	feet	-	-	-	-
Volume Purged	gal	0.00	7.00	14.00	21.00
Flow Rate	mL / min	-	-	-	-
Turbidity	NTU	60.0	45.0	18.0	8.8
Dissolved Oxygen	mg / L	1.00	1.12	0.72	0.63
Eh / ORP	MeV	-77	-80.3	-75.1	-72.2
Conductivity	umho / cm	1.78	1.739	1.644	1.598
pH	pH unit	7.02	7.08	7.13	7.14
Temp	C	12.11	11.17	10.76	11.04
Color	Visual	slight cloud	slight cloud	slight cloud	clear
Odor	Olfactory	none	none	none	none

Comments: Started purge at 1143

Sampled at 1155

## Monitoring Well Purgng / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 32 Date: 6/19/2009

Samplers: Tyler Brown and Cristine Vinciguerra

Sample Number: MW-32 QA/QC Collected? None

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth:	<u>22.24</u>	feet		D (inches)	D (feet)
2. D = Riser Diameter (I.D.):	<u>0.33</u>	feet		1-inch	0.08
3. W = Static Depth to Water (TOC):	<u>7.02</u>	feet		2-inch	0.17
4. C = Column of Water in Casing:	<u>15.22</u>	feet		3-inch	0.25
5. V = Volume of Water in Well = C(3.14159)(0.5D) <sup>2</sup> (7.48)	<u>9.89</u>	gal		4-inch	0.33
6. 3(V) =Target Purge Volume	<u>29.68</u>	gal		6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Units	Readings				
Time	24 hr	951	955	957	1001	1005
Water Level	feet	-	-	-	-	-
Volume Purged	gal	0.00	7.50	15.00	22.50	30.00
Flow Rate	mL / min	-	-	-	-	-
Turbidity	NTU	120.0	error 3	900.0	400.0	300.0
Dissolved Oxygen	mg / L	4.23	1.08	1.01	1.00	1.20
Eh / ORP	MeV	-81	-106.7	-99.2	-93.1	-92.4
Conductivity	µmho / cm	1.07	1.075	1.073	1.07	1.068
pH	pH unit	8.21	7.25	7.19	7.12	7.12
Temp	C	10.68	10.53	10.24	10.26	10.26
Color	Visual	black	black	black	black	black
Odor	Olfactory	sulfur	sulfur	sulfur	sulfur	sulfur

Comments: Started purge at 951

Sampled at 1010

## Monitoring Well Purgng / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 33 Date: 6/17/2009

Samplers: Tyler Brown and Cristine Vinciguerra

Sample Number: MW-33 QA/QC Collected? None

Purgng / Sampling Method: Whale Pump

1. L = Total Well Depth: 13.94 feet
2. D = Riser Diameter (I.D.): 0.33 feet
3. W = Static Depth to Water (TOC): 6.5 feet
4. C = Column of Water in Casing: 7.44 feet
5. V = Volume of Water in Well =  $C(3.14159)(0.5D)^2(7.48)$  4.22 gal
6. 3(V) =Target Purge Volume 12.67 gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Units	Readings			
Time	24 hr	1314	1316	1331	
Water Level	feet	-	-	-	
Volume Purged	gal	0.00	4.00	5.00	
Flow Rate	mL / min	-	-	-	
Turbidity	NTU	8.1	4.9	66.7	
Dissolved Oxygen	mg / L	7.32	0.79	4.00	
Eh / ORP	MeV	-71.3	-69.2	-60.7	
Conductivity	umho / cm	3.012	2.941	2.995	
pH	pH unit	7.46	7.42	7.60	
Temp	C	14.18	12.63	13.86	
Color	Visual	gray	gray	gray	
Odor	Olfactory	sulfur	sulfur	sulfur	

### Comments:

Started purge at 1314

Purged dry at 1320

Purged a total of 8 gallons

Sampled at 1333

## **Appendix B**

### **Photograph Log**

<b>Client Name:</b> NYSDEC		<b>Site Location:</b> 34 Freeman's Bridge Rd, Glenville, NY	<b>Project No.:</b> 105886
<b>Photo No.</b> <b>1</b>	<b>Date:</b> 03/25/09	<b>Description:</b>  There is a six foot high fence surrounding the site except on the northern most side where Warner Creek provides a natural boundary.	
<b>Photo No.</b> <b>2</b>	<b>Date:</b> 03/25/09	<b>Description:</b>  Signage at the site on the perimeter fencing.	

<b>Client Name:</b> NYSDEC		<b>Site Location:</b> 34 Freeman's Bridge Rd, Glenville, NY	<b>Project No.:</b> 105886
<b>Photo No.</b> <b>3</b>	<b>Date:</b> 03/25/09	 A photograph showing two circular flushmount monitoring wells in a concrete surface. One well is open, revealing a yellow cap inside, while the other has a brown lid with a triangular logo. The concrete is cracked and shows signs of age.	
<b>Description:</b>  MW- 15 & MW-15D are located outside of the fence near the driveway entrance of the site. These are the only flushmount wells on site.			
<b>Photo No.</b> <b>4</b>	<b>Date:</b> 03/25/09	 A photograph of a monitoring well setup in a grassy field. A vertical metal pipe stands in the ground, connected to a white flexible hose that runs to a white bucket. Various pieces of equipment, including a blue cooler, a black control panel, and some bottles, are scattered around the base of the pipe. The ground is covered in dry grass and debris.	

<b>Client Name:</b> NYSDEC		<b>Site Location:</b> 34 Freeman's Bridge Rd, Glenville, NY	<b>Project No.:</b> 105886
<b>Photo No.</b> <b>5</b>	<b>Date:</b> 03/25/09	<b>Description:</b> Example of sampling.	
<b>Photo No.</b> <b>6</b>	<b>Date:</b> 03/25/09	<b>Description:</b> Equipment photo.	

<b>Client Name:</b> NYSDEC		<b>Site Location:</b> 34 Freeman's Bridge Rd, Glenville, NY	<b>Project No.:</b> 105886
<b>Photo No.</b> <b>7</b>	<b>Date:</b> 03/25/09	<b>Description:</b>  Broken well cap on MW-18 that has since been repaired.	
<b>Photo No.</b> <b>8</b>	<b>Date:</b> 03/25/09	<b>Description:</b>  Example of a broken well casing rim on MW-16D, subsequently repaired.	

Client Name:		Site Location:	Project No.:
NYSDEC		34 Freeman's Bridge Rd, Glenville, NY	105886
Photo No.	Date:		
9	03/25/09	<p><b>Description:</b></p> <p>Example of a broken well cap on MW-21D, subsequently repaired.</p> 	
10	03/25/09	<p><b>Description:</b></p> <p>Broken well cap on MW-19D, subsequently repaired.</p> 	

**Appendix C**

**Institutional and Engineering Controls Certification**

**Form**

**Enclosure 1**

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

<b>Site No.</b>	<b>447028</b>	<b>Site Details</b>	<b>Box 1</b>
<b>Site Name</b>	<b>34 Freeman's Bridge Road</b>		
Site Address:	34 Freeman's Bridge Road	Zip Code:	12302
City/Town:	Glenville		
County:	Schenectady		
Current Use:	None		
Intended Use:	Commercial		
 <b>Verification of Site Details</b> <b>Box 2</b>			
<b>YES    NO</b>			
1.	Are the Site Details above correct?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	If NO, are changes handwritten above or included on a separate sheet?	<input type="checkbox"/>	
2.	Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment since the initial/last certification?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.	Have any federal, state, and/or local permits (e.g. building, discharge) have been issued for or at the property since the initial/last certification?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	If YES, is documentation or evidence that documentation has been previously Submitted included with this certification?	<input type="checkbox"/>	
4.	Has a change-of-use occurred since the initial/last certification?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	If YES, is documentation or evidence that documentation has been previously submitted included with this certification?	<input type="checkbox"/>	
5.	For non-significant-threat Brownfield Cleanup Program Sites subject to ECL 27-1415.7(c), has any new information revealed that assumptions made in The Qualitative Exposure Assessment for offsite contamination is no longer valid?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	If YES, is the new information or evidence that new information has been previously submitted included with this Certification?	<input type="checkbox"/>	
6.	For non-significant-threat Brownfield Cleanup Program Sites subject to ECL 27-1415.7(c), are the assumptions in the Qualitative Exposure Assessment still valid (must be certified every five years)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	If NO, are changes in the assessment included with this Certification?	<input type="checkbox"/>	

<b>SITE NO. 447028</b>	<b>Box 3</b>	
<b>Description of Institutional Control</b>	<b>Control Certification</b>	
	<u>YES</u>	<u>NO</u>
<b>34 Freeman's Bridge Road</b> GLENVILLE, NY Deed Restriction		
<b>S_B_L Image:</b> To Be Supplied by NYSDEC		
Site Use Restriction	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ground Water Use Restriction	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Land Use Restriction	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Box 4</b>		
<b>Description of Engineering Control</b>	<b>Control Certification</b>	
<b>34 Freeman's Bridge Road</b> Glenville, NY Deed Restriction		
<b>S_B_L Image:</b> To Be Supplied by NYSDEC		
Fencing/Access Control	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Signage	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Monitoring Wells	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Attach documentation if IC/ECs cannot be certified or why IC/ECs are no longer applicable. (Also see instructions)		
<b>Control Certification Statement</b>		
For each Institutional or Engineering control listed above, I certify by checking "Yes" that all of the following statements are true:		
(a) The Institutional Control and/or Engineering Control employed at this site is unchanged since the date that the Control was put in-placed, or was last approved by the Department;		
(b) Nothing has occurred that would impair the ability of such Control, to protect public health and the environment;		
(c) Nothing occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and		
(d) 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.		
(e) If a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.		

**IC/EC CERTIFICATIONS  
SITE NO. 447028**

**SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE**

I certify that all information and statements in Boxes 2 and/or 3 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.

---

### Signature of Owner or Remedial Party Rendering Certification

Date

Box 6

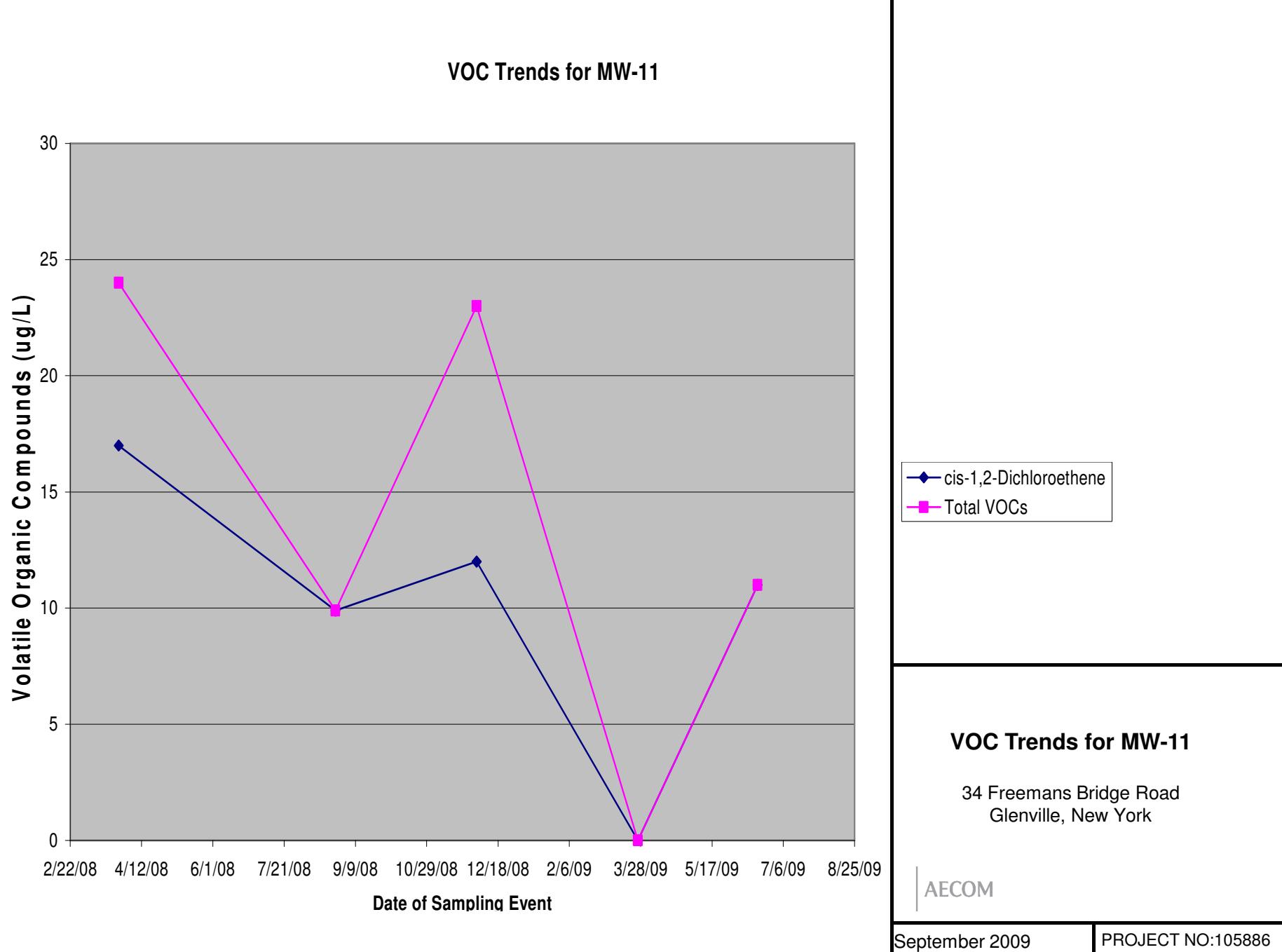
## **QUALIFIED ENVIRONMENTAL PROFESSIONAL (QEP) SIGNATURE**

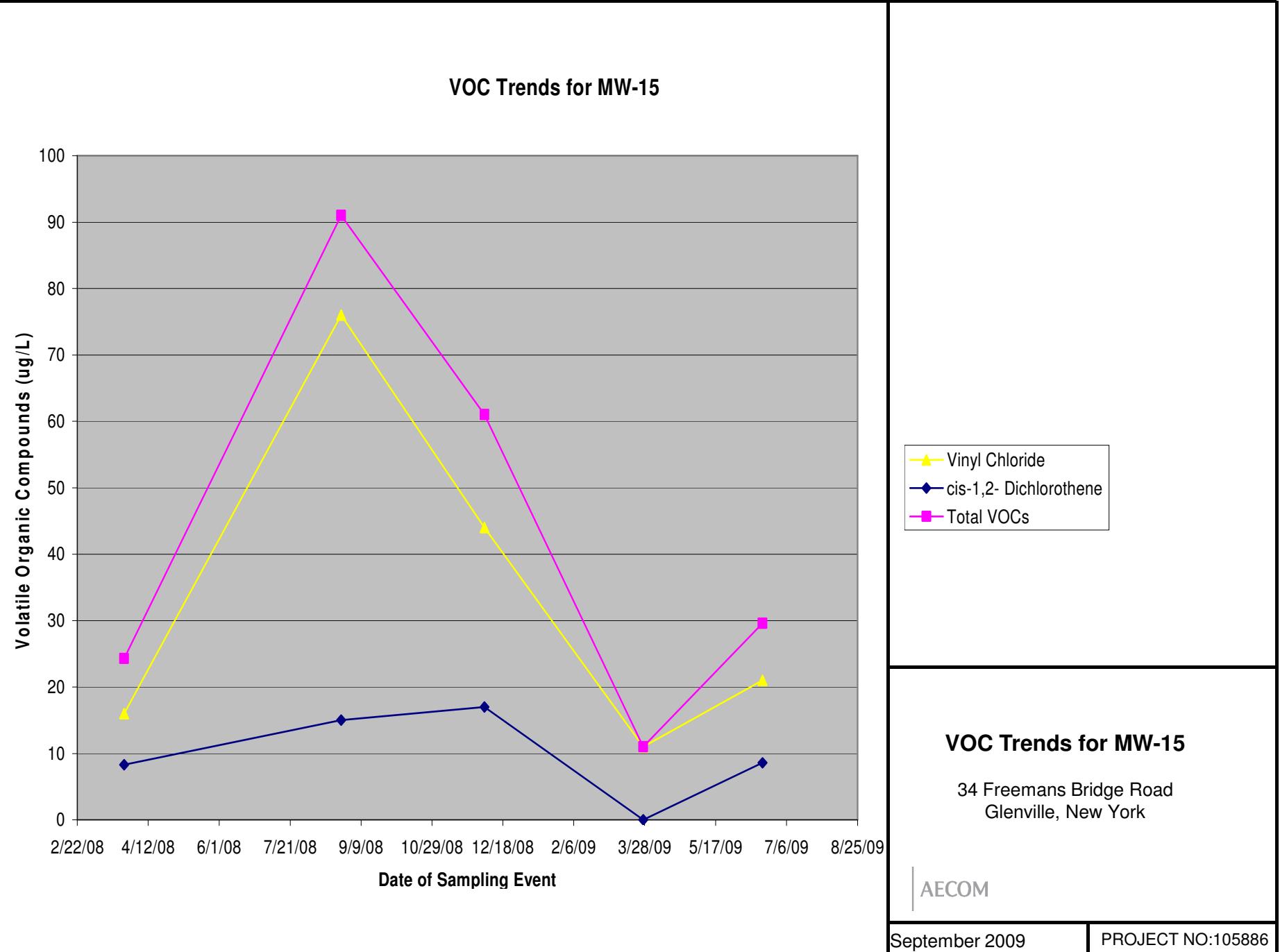
I certify that all information and statements in Box 4 are true. I understand that a false statement made herein punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

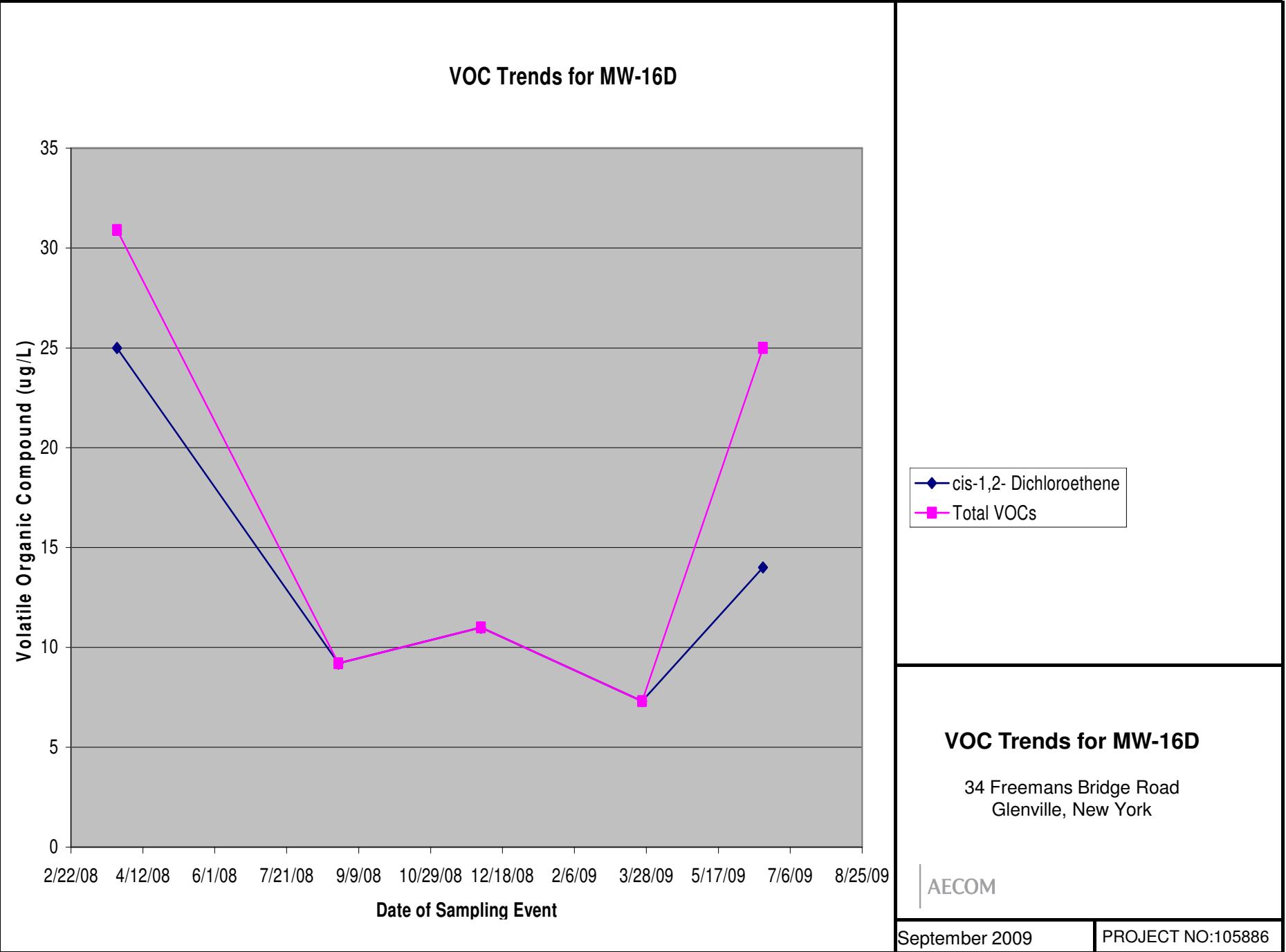
I \_\_\_\_\_ at \_\_\_\_\_,  
print name print business address  
am certifying as a Qualified Environmental Professional for the \_\_\_\_\_  
(Owner or Remedial Party) for the Site Named in the Site Details Section of this form.

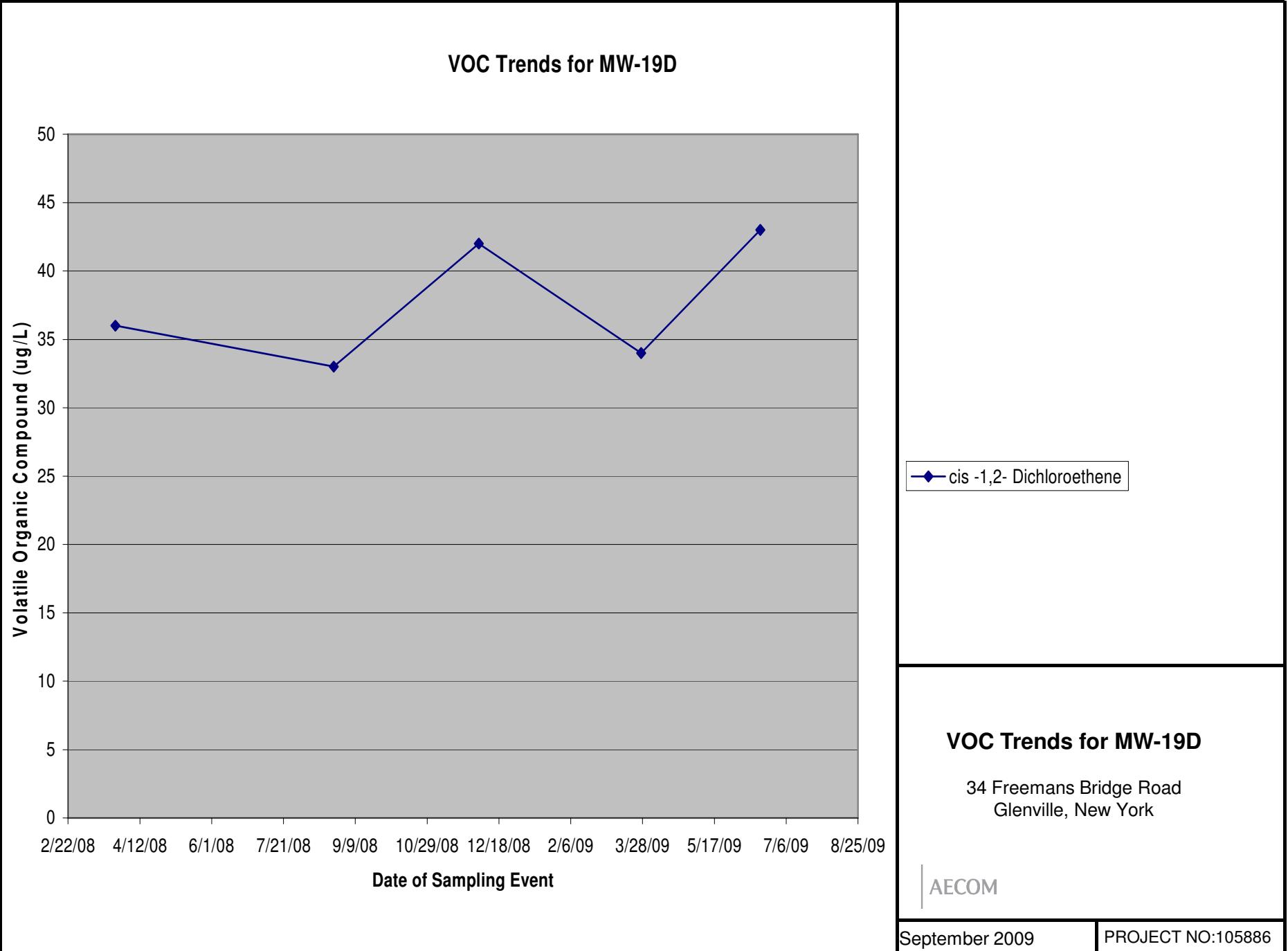
Signature of Qualified Environmental Professional,  
for the Owner or Remedial Party, Rendering  
Certification

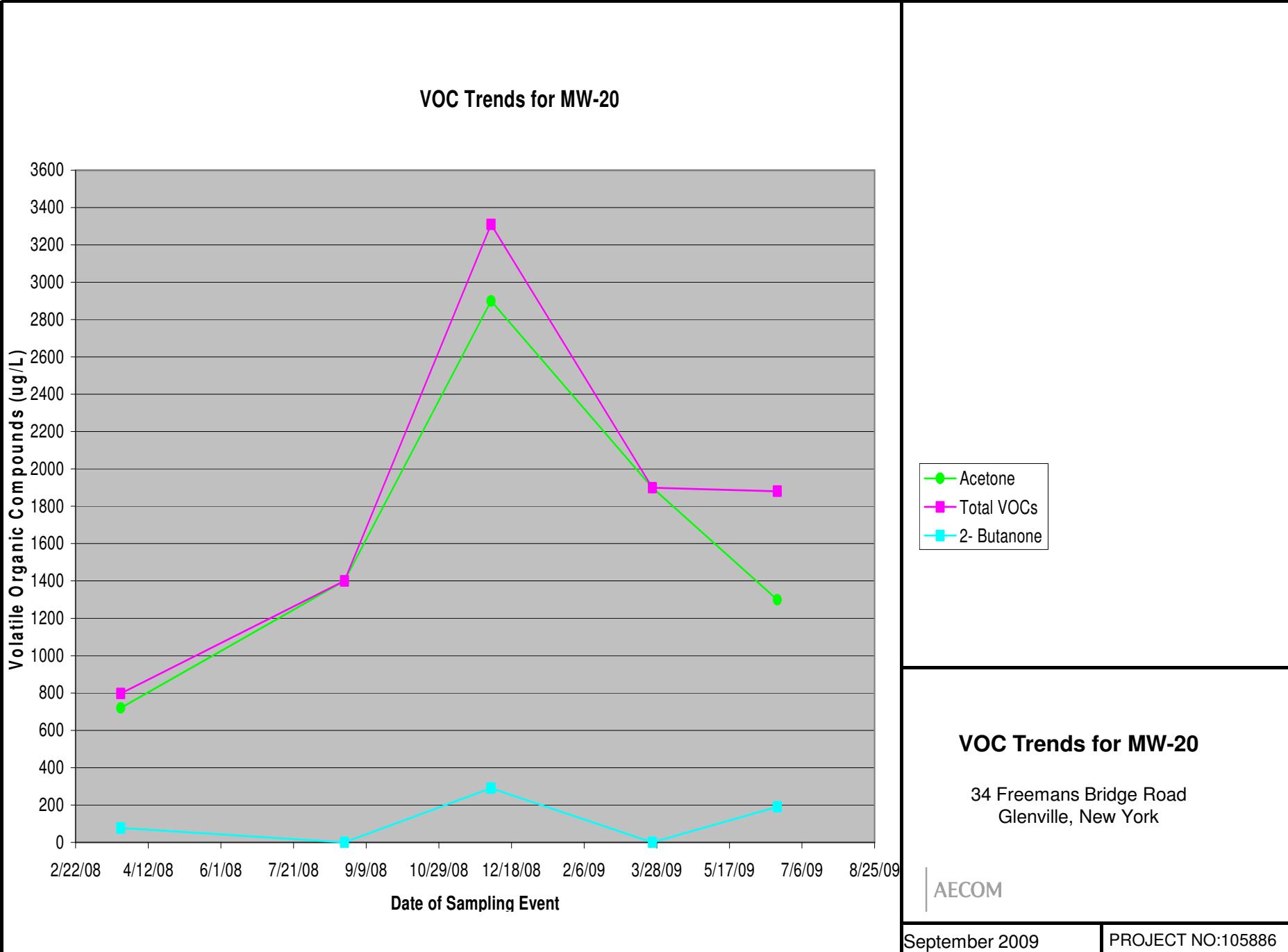
**Appendix D**  
**Graphs of Trends in VOC and SVOC Concentrations in  
Selected Wells**

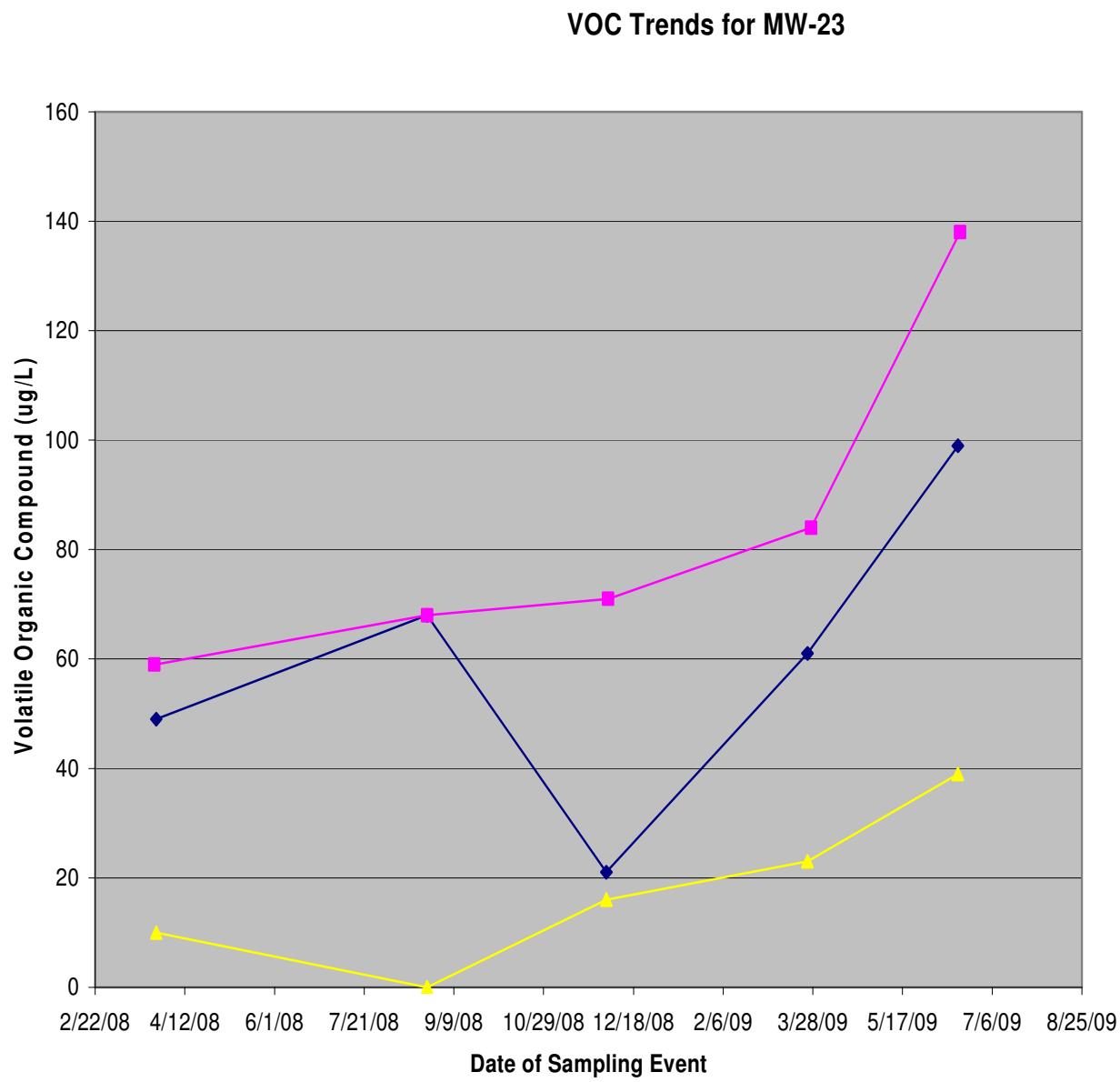












Vinyl Chloride  
cis-1,2-Dichloroethene  
Total VOCs

### VOC Trends for MW-23

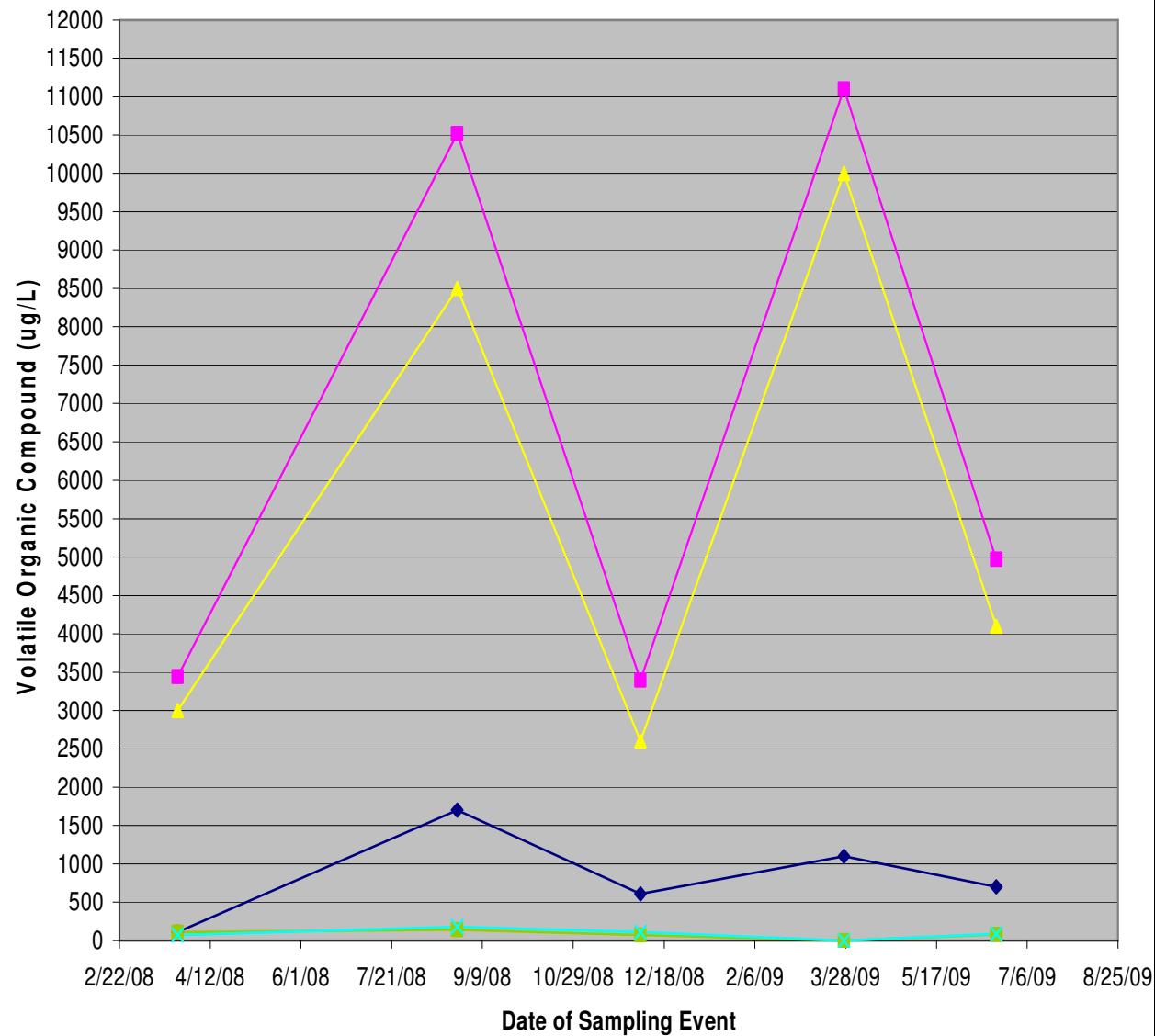
34 Freemans Bridge Road  
Glenville, New York

AECOM

September 2009

PROJECT NO:105886

### VOC Trends for MW-30



—♦— Ethylbenzene  
—■— o-Xylene  
—▲— m&p-Xylene  
—×— Isopropylbenzene  
—■— Total VOCs

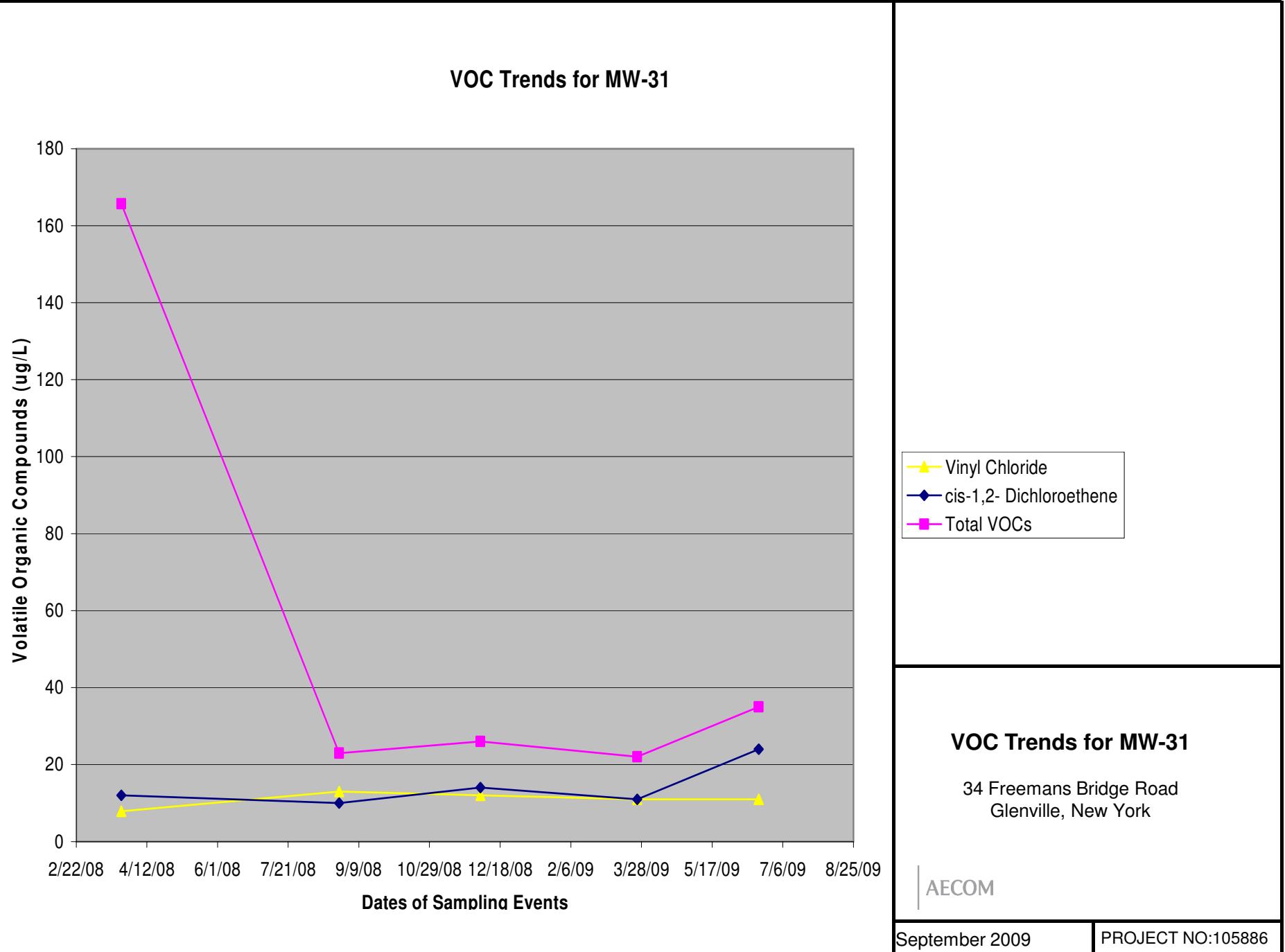
### VOC Trends for MW-30

34 Freemans Bridge Road  
Glenville, New York

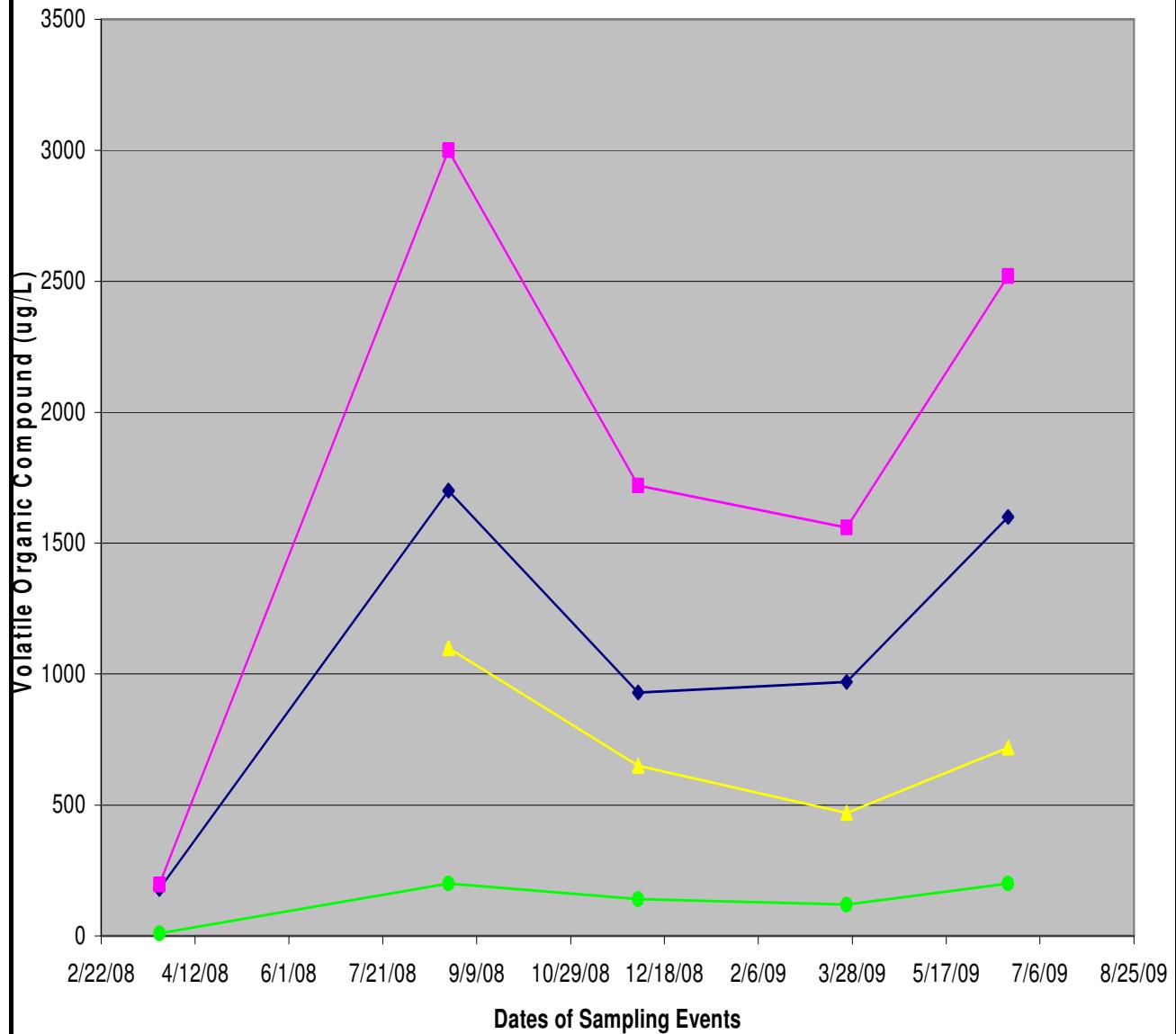
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September 2009

PROJECT NO:105886



## SVOC Trends for MW-20



Phenol  
2-Methylphenol  
4-Methylphenol  
Total SVOCs

## SVOC Trends for MW-20

34 Freemans Bridge Road  
Glenville, New York

AECOM

September 2009

PROJECT NO:105886

