Groundwater Sampling Report
September 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

This 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 report is to present the data collected from the September 2009 groundwater sampling event and any conclusions or suggestions drawn from this data. This groundwater sampling event was the fifth 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).

1.1 SITE DESCRIPTION AND HISTORY

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 delineated 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 future monitoring plan. The monitoring includes quarterly groundwater sampling for the first two years of the plan, followed by annual sampling thereafter.

2.0 GROUNDWATER SAMPLING AND ANALYSIS

AECOM collected groundwater samples from each of the 20 Site monitoring wells on September 15 through 17, 2009. All groundwater samples were submitted to Adirondack Environmental Services, Inc. in Albany, New York, for analysis of VOCs by method SW8260B, SVOCs by SW8270C and Metals by E200.7. PCBs or pesticides were not detected during the first rounds of sampling and the NYSDEC has determined that these compounds will be analyzed only during annual sampling events. Hence, the PCBs and pesticides were not analyzed during this quarterly sampling event. Monitoring well purging/sampling logs were completed for each monitoring well and are presented in Appendix A.

2.1 METHODOLOGY

A complete round of depth to water measurements was completed prior to purging and sampling the monitoring wells. The groundwater levels were collected to develop a potentiometric map for the shallow and deep groundwater zones and to determine the groundwater flow pathways. In addition, before purging each well, a depth to water measurement was recorded using an interface probe, this was decontaminated with a liquinox bath and rinsed with distilled water between each use. 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). Field parameters were taken using an YSI 600 series Water Quality Meter and a LaMotte 2020 turbidimeter. Each piece of equipment was calibrated each day prior to use. 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.

3.0 MONITORING RESULTS

The following section presents the results of the September 2009 groundwater sampling events at the Site.

3.1 GROUNDWATER FLOW

Prior to groundwater sampling, water level measurements were collected and recorded for each well (Table 1). These water level elevations were then used to develop a groundwater flow map for the shallow aquifer (Figure 2). 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 direction of groundwater flow has remained consistent over the past five sampling events.

The September 2009 water level data indicated that the overall direction of groundwater flow in the deeper portion of the aquifer was towards north, similar to prior sampling events (see Figure 3).

3.2 GROUNDWATER ANALYTICAL RESULTS

This was the fifth of the eight quarterly groundwater sampling events proposed in the SMP. The groundwater results were evaluated based on comparison with NYS Ambient Water Quality Standards (AWQS) and Guidance Values (GV), collectively known as Standards, Criteria and Guidelines (SCGs). In addition, the September 2009 results were compared to the previous five sampling events occurring from March 2008 through June 2009.

In each of previous sampling events the water purged from each of the monitoring wells was very turbid. This additional material is likely caused by the fine nature of the thermally treated soil used to backfill. Due to this, additional groundwater was purged during the March and June 2009 sampling events from each monitoring well. During the September 2009 sampling event each of the wells showed significant decreases in turbidity.

MW-20 exhibited a strong odor and yellow coloration, similar to what was observed in this well during the past four sampling events. The well is located adjacent to the Veterinarians office to the west (36 Freemans Bridge Road). Additionally, for this sampling event, MW-21 exhibited for the first time a similar odor and coloration observed in MW-20.

Tables 2 through 4 presents the groundwater analytical results for the 20 monitoring wells sampled during the September 2009 and prior sampling events, for VOCs, SVOCs, and metals, respectively. These tables present only those compounds detected above the laboratory detection limits.

3.2.1 Volatile Organic Compounds

The results of the VOC analysis are presented in Table 2. VOCs were detected in the concentrations exceeding the AWQS standards in the same ten monitoring wells during September 2009 event compared to the June 2009 event. Cis-1,2-dichloroethene was detected in six wells, with a maximum concentration of 33 µg/L (MW-23). The concentrations of cis-1,2-dichloroethene have decreased compared to those detected in June 2009 in all but one well (MW-15). The concentration of cis-1,2-dichloroethene increased slightly from 8.6 µg/L to 11 µg/L in MW-15.

The list of VOCs detected include, vinyl chloride, cis-1,2 dichloroethene, trichloroethene, methylene chloride, benzene, acetone, methyl acetate, 2-butanone, chloroethane, o-xylene, m&p xylene, methylcyclohexane, isopropylbenzene, ethylbenzene, and toluene. Several of these VOCs are only being detected in MW-30. This well had a total VOC concentration of 5,284 µg/L, an increase from 4,969 µg/L from the June 2009 sampling event. MW-30 is located in a section of the former excavation that exhibited some evidence of non-aqueous phase liquid (NAPL) during remediation. An oily residue has been observed in this well at each of the sampling events for the SMP; however no measurable NAPL has been detected with the interface probe since the onset of sampling.

Shallow monitoring well MW-20 has exhibited a high concentration of acetone in all of the five quarterly sampling events. The concentration has decreased to 670 µg/L from 1300 µg/L in June 2009, but remains above the GV of 50 µg/L. This monitoring well is located along the northwestern Site boundary, adjacent to the veterinary clinic property. Similar to June 2009, methyl acetate and 2-butanone were both detected at elevated concentrations. The concentration of methyl acetate decreased from 390 ug/L in June 2009 to 57 ug/L in the September event.

As in the prior sampling events, the only deep wells with VOC concentrations above the laboratory detection limits were MW-19D located upgradient and off-site to the southeast and MW-16D located in the northeastern edge of the site. Cis-1,2-dichloroethene was detected at concentrations exceeding AWQS standards (5 µg/L) in MW-19D (26 µg/L) and MW-16D (7.8 µg/L). These concentrations both decreased from the concentrations detected in June 2009.

Two wells exhibited concentrations of acetone for the first time during the quarterly sampling events. These wells were MW-20D and MW-23D. Acetone is a common laboratory contaminant and was present in the trip blanks for this sampling event at similar concentrations. Due to this, the data is considered a laboratory contaminant and not attributed to the site.

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

3.2.2 Semi-volatile Organic Compounds

Concentrations of SVOCs above laboratory detection limits were detected in only two monitoring wells: MW-20 and MW-30 (see Table 3). Phenol concentrations in MW-20 decreased, from 1600 µg/L in June 2009 to 1400 µg/L in September 2009. Conversely, the concentration of 4-methyl phenol increased from 720 µg/L to 980 µg/L.

The only other monitoring well with a concentration exceeding the AWQS standards was MW-30 with 11 µg/L of naphthalene. There was a detection of 2,4-dimethylphenol at 37 µg/L which is below the AWQS standards of 50 µg/L. Both of these concentrations are lower than the concentrations detected in the June 2009 sampling event.

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

3.2.3 Metals

Table 4 presents the results of the metals analysis for the September 2009 and previous sampling events. Antimony, iron, lead, magnesium, manganese, sodium, and thallium were

detected in concentrations above the AWQS and GV for metals in drinking water in the prior sampling events.

This sampling event exhibited exceedences for thallium in all of the 20 monitoring wells. Wells MW-20 and MW-21 have shown concentrations above the GV (0.5 UG/L) in past sampling events, but this is the first time this metal has been detected in all of the wells at the site, at similar concentrations. No apparent explanation for this sudden increase of this element has been determined and further monitoring may provide an explanation.

As with most of the past sampling events for the SMP, there were no exceedences of the AWQS standards for cyanide.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Comparison of the September 2009 groundwater analytical data to the data from the five previous sampling events shows few notable changes to the 20 Site wells. Monitoring wells MW-20, MW 23 and MW-30 continue to have the highest levels of VOC concentrations and MW-20 and MW-30 continue to be the only wells with exceedences for SVOCs. Eight other wells on site recorded exceedences for VOCs but showed no significant changes in concentrations from the June 2009 sampling event.

Cis-1,2 dichloroethene (33 µg/L), vinyl chloride (16 µg/L), and chloroethane (24 ug/L) were detected in MW-23 at concentrations exceeding their respective AQWS/ GVs. Chloroethane was detected in this well for the first time since December 2008.

There was an increase in the concentration of total VOCs in MW-30 from 4,969 µg/L to 5,284 µg/L. This concentration is still an order of magnitude lower than the maximum concentration of 11,100 µg/L recorded in March 2009. The total SVOC concentrations have continued to decrease to 48 µg/L from its maximum of 125 µg/L recorded in August 2008. The level of 2, 4-dimethyphenol has dropped below the AWQS/GV value (50 ug/L) to a concentration of 37 µg/L. The concentration of naphthalene (11 µg/L) has decreased to just above the AWQS/GV value of 10 µg/L.

Acetone still exceeds cleanup standards in MW-20; however the concentration has decreased from 1,300 µg/L in June 2009 to 670 µg/L in September 2009. The total VOC concentrations in MW-20 have decreased each event since its maximum of 3,310 µg/L in December 2008. MW-20 has exhibited characteristics leading to the hypothesis that practices at the veterinary clinic could be impacting this well. This well should be sampled for nitrates, nitrites, total coliform bacteria during the next sampling event to determine if septic discharge is possibly entering the well from the veterinary clinic located to the west.

Continued monitoring for metals will help determine if the exceedences for thallium in all of the wells at the site is a trend or a one-time issue. Disposal practices at the site do not appear to have contributed to the concentration of thallium (ie. commonly found in specialized electronic equipment and a by-product of cement plants and coal-burning power plants).

The next sampling event for the Freemans Bridge Site is December 2009.

TABLES

Table 1

Groundwater Elevations and Monitoring Well Details
34 Freemans Bridge Road
Glenville, New York
Site No. 4-47-028
September 2009

Date		Aug-08		Dec-08		Mar-09		Jun-09		Sep-09	
Monitoring Well	Total Depth	DTW (ft)	GW Elevation (ft)	DTW (ft)	GW Elevation (ft)	DTW (ft)	GW Elevation (ft)	DTW (ft)	GW Elevation (ft)	DTW (ft)	GW Elevation (ft)
MW-11	19.35	11.94	219.29	11.41	219.82	11.24	219.99	11.69	219.54	12.05	219.18
MW-11D	53.5	11.48	219.72	11.16	220.04	10.85	220.35	11.42	219.78	11.71	219.49
MW-12	17.29	10.97	219.71	12.36	218.32	10.2	220.48	10.81	219.87	11.15	219.53
MW-15	14.25	3.5	220.64	3.31	220.83	2.92	221.22	3.58	220.56	3.84	220.30
MW-15D	29.5	3.75	220.60	3.44	220.91	3.03	221.32	3.66	220.69	3.94	220.41
MW-16	13.2	9.57	218.84	6.15	222.26	9.2	219.21	9.08	219.33	9.39	219.02
MW-16D	28.64	8.58	218.91	8.28	219.21	8.13	219.36	8.46	219.03	8.72	218.77
MW-18	14.7	7.11	222.47	6.41	223.17	6.69	222.89	7.8	221.78	8.3	221.28
MW-19	9.72	5.52	221.60	4.94	222.18	4.66	222.46	5.95	221.17	6.33	220.79
MW-19D	22.31	4.65	221.36	4.15	221.86	3.87	222.14	4.87	221.14	5.33	220.68
MW-20	12.41	6.8	220.09	6.37	220.52	5.96	220.93	6.61	220.28	7.1	219.79
MW-20D	31.9	6.93	220.20	6.58	220.55	6.26	220.87	6.81	220.32	7.16	219.97
MW-21	18.3	7.43	220.03	6.89	220.57	6.72	220.74	7.37	220.09	7.7	219.76
MW-21D	50.2	8.85	220.20	8.61	220.44	8.3	220.75	8.89	220.16	9.19	219.86
MW-23	11.3	5.34	219.52	4.81	220.05	4.72	220.14	5.22	219.64	5.5	219.36
MW-23D	55.3	4.36	219.96	4.02	220.30	3.70	220.62	4.31	220.01	4.61	219.71
MW-30	16.49	6.61	219.58	6.12	220.07	5.92	220.27	6.42	219.77	6.76	219.43
MW-31	16.79	5.81	219.62	5.48	219.95	5.24	220.19	5.72	219.71	6.01	219.42
MW-32	22.24	7.3	220.02	6.68	220.64	6.39	220.93	7.02	220.30	7.32	220.00
MW-33	13.94	6.45	220.54	6.07	220.92	5.77	221.22	6.5	220.49	6.74	220.25

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
September 2009
Site No. 4-47-028

Sample ID		MW11						MW11D					
Sampling Date		3/27/08	8/26/08	12/3/08	3/26/09	6/18/09	9/16/09	3/27/08	8/26/08	12/3/08	3/26/09	6/18/09	9/16/09
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
Volatiles	AWQS/GV Values												
Vinyl chloride	2	5 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U
Chloroethane	5	5 U	10 U	10 U	5 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U
Acetone	50 (GV)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	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
Methylene chloride	5	5 U	5 U	**11**	5 U	5 U	5 U	5 U	**5**	**5**	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
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
2-Butanone	50(GV)	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	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5	**17**	**9.9**	**12**	5 U	**11**	**5.7**	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
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
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
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
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
m&p-xylenes	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
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
Total CVOC's		24	9.9	23	0	11	5.7	0	5	5	0	0	0
Total VOC's		**24**	**9.9**	**23**	**0**	**11**	**5.7**	**0**	**5**	**5**	**0**	**0**	**0**

Sample ID		MW12						MW15						MW15D					
Sampling Date		3/24/08	8/26/08	12/5/08	3/26/09	6/18/09	9/16/09	3/26/08	8/26/08	12/5/08	3/27/09	6/19/09	9/17/09	3/26/08	8/26/08	12/5/08	3/27/09	6/19/09	9/17/09
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
Volatiles	AWQS/GV Values																		
Vinyl chloride	2	5 U	10 U	10 U	10 U	10 U	10 U	**16**	**76**	**44**	**11**	**21**	**21**	5 U	10 U	10 U	10 U	10 U	10 U
Chloroethane	5	5 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U
Acetone	50 (GV)	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	10 U	10 U	10 U	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
Methylene chloride	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
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
cis-1,2-Dichloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	**8.3**	**15**	**17**	5 U	**8.6**	**11**	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	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	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	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
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
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
Tetrachloroethene	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
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
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
m&p-xylenes	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
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
Total CVOC's		0	0	0	0	0	0	24.3	91	61	11	29.6	32	0	0	0	0	0	0
Total VOC's		**0**	**0**	**0**	**0**	**0**	**0**	**24.3**	**91**	**61**	**11**	**29.6**	**32**	**0**	**0**	**0**	**0**	**0**	**0**

Sample ID		MW16						MW16D					
Sampling Date		3/25/08	8/26/08	12/3/08	3/25/09	6/17/09	9/15/09	3/25/08	8/26/08	12/3/08	3/25/09	6/17/09	9/15/09
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
Volatiles	AWQS/GV Values												
Vinyl chloride	2	5 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U
Chloroethane	5	5 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U
Acetone	50 (GV)	10 U	**24**	10 U	**15**	10 U	10 U	10 U	5 U	5 U	5 U	10 U	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
Methylene chloride	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
Methyl tert-butyl Ether	10(GV)	**5.9**	5 U	5 U	5 U	**11**	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	5	**25**	**9.2**	**11**	**7.3**	**14**	**7.8**	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	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	5 U	5 U	5 U	5 U	5 U
Trichloroethene	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
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
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
Tetrachloroethene	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
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
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
m&p-xylenes	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
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
Total CVOC's		0	0	0	0	0	0	25	9.2	11	7.3	14	7.8
Total VOC's		**0**	**24**	**0**	**15**	**0**	**0**	**30.9**	**9.2**	**11**	**7.3**	**25**	**7.8**

Sample ID		MW18						MW19						MW19D					
Sampling Date		3/26/08	8/26/08	12/5/08	3/27/09	6/18/09	9/16/09	3/26/08	8/25/08	12/4/08	3/27/09	6/18/09	9/16/09	3/26/08	8/25/08	12/4/08	3/27/09	6/18/09	9/16/09
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
Volatiles	AWQS/GV Values																		
Vinyl chloride	2	5 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	5 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U
Chloroethane	5	5 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	5 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U
Acetone	50 (GV)	10 U	5 U	5 U	5 U	5 U	5 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
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
Methylene chloride	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
Methyl tert-butyl Ether	10(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**23**	**12**	5 U	**9.4**	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	**6.5**	**5.7**	**36**	**33**	**42**	**34**	**43**	**26**
2-Butanone	50(GV)	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	10 U	10 U	10 U	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
Trichloroethene	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
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
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
Tetrachloroethene	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
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
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
m&p-xylenes	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
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
Total CVOC's		0	0	0	0	0	0	0	23	12	0	15.9	5.7	36	33	42	34	43	26
Total VOC's		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**23**	**12**	**0**	**15.9**	**5.7**	**36**	**33**	**42**	**34**	**43**	**26**

Qualifiers:
Detected concentrations shown in **bold** font. Bold font in shaded cell indicates exceedances of AWQS+GV.
NA - Not analyzed
ND - Non Detect
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 above the IDL but less than the contract required detection limits (CRDL).
D - Results from a subsequent dilution of the original sample due to original sample results being outside the linear range.
* - Duplicate Sample
** New York State Ambient Water Quality Standards (TOGs 1.1.1) GV - guidance value.
NS - No standard or Guidance Value

Table 2
Groundwater Analytical Summary
Volatile Organic Compounds
34 Freemans Bridge Road
Glenville, New York
September 2009
Site No. 4-47-028

Sample ID		MW20						MW20D						MW21						MW21D						MW23					
Sampling Date		3/24/08	8/25/08	12/4/08	3/25/09	6/19/09	9/15/09	3/24/08	8/25/08	12/4/08	3/25/09	6/19/09	9/15/09	3/24/08	8/25/08	12/4/08	3/26/09	6/17/09	9/16/09	3/24/08	8/25/08	12/4/08	3/26/09	6/17/09	9/16/09	3/27/08	8/25/08	12/3/08	3/25/09	6/17/09	9/15/09
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
Volatiles	AWQS/GV Values																														
Vinyl chloride	2	5 U	100 U	200 U	200 U	100 U	50 U	5 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	**10**	10 U	**16**	**23**	**39**	**16**
Chloroethane	5	5 U	100 U	200 U	200 U	100 U	50 U	5 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	**34**	10 U	10 U	**24**
Acetone	50 (GV)	**720** D	**1400** D	**2900** D	**1900**	**1300**	**670**	10 U	10 U	10 U	10 U	10 U	**15**	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	10 U	10 U	10 U	10 U
Methyl Acetate	NS	5 U	50 U	50 U	100 U	**390**	**57**	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	50 U	**120** D	100 U	100 U	25 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
Methyl tert-butyl Ether	10(GV)	5 U	50 U	50 U	100 U	100 U	25 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	50 U	100 U	100 U	50 U	25 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	**49**	**68**	**21**	**61**	**99**	**33**
2-Butanone	50(GV)	**77**	100 U	**290** D	200 U	**190**	**120**	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	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzene	1	5 U	50 U	100 U	100 U	50 U	25 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	5 U	50 U	50 U	100 U	50 U	25 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
Methylcyclohexane	NS	5 U	50 U	100 U	100 U	50 U	25 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	50 U	100 U	100 U	50 U	25 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	5 U	50 U	50 U	100 U	50 U	25 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	50 U	100 U	100 U	50 U	25 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	50 U	100 U	100 U	50 U	25 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-xylenes	5	5 U	50 U	100 U	100 U	50 U	25 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	50 U	100 U	100 U	50 U	25 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		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	73
Total VOC's		**797**	**1400**	**3310**	**1900**	**1880**	**847**	**0**	**0**	**0**	**0**	**0**	**15**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**59**	**68**	**71**	**84**	**138**	**73**

Sample ID		MW-23D						MW30						MW31						MW32						MW33					
Sampling Date		4/4/08	8/25/08	12/3/08	3/25/09	6/17/09	9/15/09	3/25/08	8/26/08	12/5/08	3/27/09	6/19/09	9/17/09	3/25/08	8/26/08	12/4/08	3/25/09	6/19/09	9/17/09	3/27/08	8/26/08	12/5/08	3/26/09	6/19/09	9/17/09	3/26/08	8/26/08	12/5/08	3/26/09	6/17/09	9/17/09
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
Volatiles	AWQS/GV Values																														
Vinyl chloride	2	5 U	10 U	10 U	10 U	10 U	10 U	5 U	200 U	100 U	500 U	100 U	100 U	**7.9**	**13**	**12**	**11**	**11**	10 U	5 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U
Chloroethane	5	5 U	10 U	10 U	10 U	10 U	10 U	5 U	200 U	100 U	500 U	100 U	100 U	5 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U
Acetone	50 (GV)	10 U	10 U	10 U	10 U	10 U	**25**	10 U	200 U	100 U	500 U	100 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	**36**	10 U	**16**	10 U	10 U	**18** B
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	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	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	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	5 U	5 U	5 U	**11**
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	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	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	50 U	**12**	**10**	**14**	**11**	**24**	**12**	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-Butanone	50(GV)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	200 U	100 U	500 U	100 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	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	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	**6**	6 U	5 U	**7.8**	**7.1**
Trichloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	100 U	250 U	50 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	5 U	5 U	5 U	5 U
Methylcyclohexane	NS	5 U	5 U	5 U	5 U	5 U	5 U	**26**	100 U	50 U	250 U	50 U	**64**	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	**69**	100 U	50 U	250 U	50 U	**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	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	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	5 U	5 U	5 U	5 U
Ethylbenzene	5	5 U	5 U	5 U	5 U	5 U	5 U	**110**	**1700** D	**610** D	**1100**	**700**	**780**	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	**110**	**140** D	**73** D	250 U	**79**	**150**	**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	5 U	5 U	5 U	5 U
m&p-xylenes	5	5 U	5 U	5 U	5 U	5 U	5 U	**3000** D	**8500** E	**2600** E	**10000**	**4100** EE	**4000**	**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	5 U	5 U	5 U	5 U
Isopropylbenzene	5	5 U	5 U	5 U	5 U	5 U	5 U	**72**	**180** D	**110** D	250 U	**90**	**150**	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		0	0	0	0	0	0	50	0	0	0	0	0	19.9	23	26	22	35	12	0	0	0	0	0	0	0	0	0	0	0	11
Total VOC's		**0**	**0**	**0**	**0**	**0**	**25**	**3437**	**10520**	**3393**	**11100**	**4969**	**5284**	**165.7**	**23**	**26**	**22**	**35**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**36**	**6**	**16**	**0**	**7.8**	**36.1**

Qualifiers:
Detected concentrations shown in **bold** font. Bold font in shaded cell indicates exceedances of AWQS+GV.
NA - Not analyzed
ND - Non Detect
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 above the IDL but less than the contract required detection limits (CRDL).
D - Results from a subsequent dilution of the original sample due to original sample results being outside the linear range.
* - Duplicate Sample
** New York State Ambient Water Quality Standards (TOGs 1.1.1) GV - guidance value.
NS - No standard or Guidance Value

Table 3
Groundwater Analytical Summary
Semi-Volatile Organic Compounds
34 Freemans Bridge Road
Glenville, New York
September 2009
Site No. 4-47-028

Sample ID		MW11						MW11D					
Sampling Date		3/27/08	8/26/08	12/3/08	3/26/09	6/18/09	9/16/09	3/27/08	8/26/08	12/3/08	3/26/09	6/18/09	9/16/09
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
Semi-Volatiles	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 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 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 U	5 U
4-Methylphenol	1	NA	5 U	5 U	5 U	5 U	5 U	NA	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 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 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 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 U	5 U
Carbazole	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
Fluoranthene	50(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
Pyrene	50(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
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 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 U	5 U
Bis(2-ethylhexyl)phthalate	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**6** B	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 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 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 U	5 U
Total SVOCs		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Sample ID		MW12						MW15						MW15D					
Sampling Date		3/24/08	8/26/08	12/5/08	3/26/09	6/18/09	9/16/09	3/26/08	8/26/08	12/5/08	3/27/09	6/19/09	9/17/09	3/26/08	8/26/08	12/5/08	3/27/09	6/19/09	9/17/09
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
Semi-Volatiles	AWQS/GV Values																		
Phenol	1	5.1 U	5 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	5 U	5 U
2-Chlorophenol	1	5.1 U	5 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	5 U	5 U
2-Methylphenol	1	5.1 U	5 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	5 U	5 U
4-Methylphenol	1	NA	5 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	5 U	5 U
2,4-Dimethylphenol	50(GV)	5.1 U	5 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	5 U	5 U
Naphthalene	10(GV)	5.1 U	5 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	5 U	5 U
Phenanthrene	50(GV)	5.1 U	5 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	5 U	5 U
Anthracene	50(GV)	5.1 U	5 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	5 U	5 U
Carbazole	NA	5.1 U	5 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	5 U	5 U
Fluoranthene	50(GV)	5.1 U	5 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	5 U	5 U
Pyrene	50(GV)	5.1 U	5 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	5 U	5 U
Benzo(a)anthracene	0.002	5.1 U	5 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	5 U	5 U
Chrysene	0.002	5.1 U	5 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	5 U	5 U
Bis(2-ethylhexyl)phthalate	5	5.1 U	5 U	**7** B	5 U	5 U	5 U	5 U	6 U	**7** B	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(b)fluoranthene	0.002 (GV)	5.1 U	5 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	5 U	5 U
Benzo(k)fluoranthene	0.002 (GV)	5.1 U	5 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	5 U	5 U
Benzo(a)pyrene	ND	5.1 U	5 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	5 U	5 U
Total SVOCs		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Sample ID		MW16						MW16D					
Sampling Date		3/25/08	8/26/08	12/3/08	3/25/09	6/17/09	9/15/09	3/25/08	8/26/08	12/3/08	3/25/09	6/17/09	9/15/09
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
Semi-Volatiles	AWQS/GV Values												
Phenol	1	5.2 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	5.2 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	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methylphenol	1	NA	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
2,4-Dimethylphenol	50(GV)	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Naphthalene	10(GV)	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Phenanthrene	50(GV)	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Anthracene	50(GV)	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbazole	NA	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Fluoranthene	50(GV)	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Pyrene	50(GV)	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(a)anthracene	0.002	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chrysene	0.002	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bis(2-ethylhexyl)phthalate	5	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(b)fluoranthene	0.002 (GV)	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(k)fluoranthene	0.002 (GV)	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(a)pyrene	ND	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Total SVOCs		**4.8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Sample ID		MW18						MW19						MW19D					
Sampling Date		3/26/08	8/26/08	12/5/08	3/27/09	6/18/09	9/16/09	3/26/08	8/25/08	12/4/08	3/27/09	6/18/09	9/16/09	3/26/08	8/25/08	12/4/08	3/27/09	6/18/09	9/16/09
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
Semi-Volatiles	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	6 U	6 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Chlorophenol	1	5 U	**9**	5 U	5 U	5 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
2-Methylphenol	1	5 U	5 U	5 U	5 U	5 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
4-Methylphenol	1	5 U	5 U	5 U	5 U	5 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
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	6 U	6 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	6 U	6 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	**7**	**23**	5 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	**11**	5 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**	5 U	5 U	6 U	6 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	**7**	**31**	5 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	**6**	**16**	5 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	**11**	5 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	**11**	5 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	**15** B	5 U	5 U	5 U	5 U	5 U	**11** B	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	**8**	5 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	**8**	5 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	**9**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Total SVOCs		**0**	**9**	**0**	**0**	**0**	**0**	**0**	**25**	**128**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Qualifiers:
Detected concentrations shown in **bold** font. Bold font in shaded cell indicates exceedances of AWQS+GV.
NA - Not analyzed
ND - Non Detect
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 above the IDL but less than the contract required detection limits (CRDL).
D - Results from a subsequent dilution of the original sample due to original sample results being outside the linear range.
* - Duplicate Sample
** New York State Ambient Water Quality Standards (TOGs 1.1.1) GV - guidance value.
NS - No standard or Guidance Value

Table 3
Groundwater Analytical Summary
Semi-Volatile Organic Compounds
34 Freemans Bridge Road
Glenville, New York
September 2009
Site No. 4-47-028

Sample ID		MW20						MW20D					
Sampling Date		3/24/08	8/25/08	12/4/08	3/25/09	6/19/09	9/15/09	3/24/08	8/25/08	12/4/08	3/25/09	6/19/09	9/15/09
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
Semi-Volatiles	AWQS/GV Values												
Phenol	1	**180** D	**1700** D	**930** E	**970** E	**1600** D	**1400**	5 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	500 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Methylphenol	1	**9.2**	**200** D	**140** D	**120**	**200** D	500 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methylphenol	1	NA	**1100** D	**650** D	**470**	**720** D	**980**	NA	5 U	5 U	5 U	5 U	5 U
2,4-Dimethylphenol	50(GV)	5.1 U	110 U	56 U	42 U	190 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Naphthalene	10(GV)	**4.8** J	110 U	56 U	42 U	190 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Phenanthrene	50(GV)	5.1 U	110 U	110 U	42 U	190 U	500 U	5 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	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbazole	NA	5.1 U	110 U	110 U	42 U	190 U	500 U	5 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	500 U	5 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	500 U	5 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	500 U	5 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	500 U	5 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	500 U	5 U	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	500 U	5 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	500 U	5 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	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Total SVOCs		**197.2**	**3000**	**1720**	**1560**	**2520**	**2380**	**0**	**0**	**0**	**0**	**0**	**0**

Sample ID		MW21						MW21D						MW23					
Sampling Date		3/24/08	8/25/08	12/4/08	3/26/09	6/17/09	9/16/09	3/24/08	8/25/08	12/4/08	3/26/09	6/17/09	9/16/09	3/27/08	8/25/08	12/3/08	3/25/09	6/17/09	9/15/09
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
Semi-Volatiles	AWQS/GV Values																		
Phenol	1	5.2 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	6 U	5 U	5 U	5 U
2-Chlorophenol	1	5.2 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
2-Methylphenol	1	5.2 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	6 U	5 U	5 U	5 U
4-Methylphenol	1	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	6 U	5 U	5 U	5 U
2,4-Dimethylphenol	50(GV)	5.2 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	6 U	5 U	5 U	5 U
Naphthalene	10(GV)	5.2 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	6 U	5 U	5 U	5 U
Phenanthrene	50(GV)	5.2 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
Anthracene	50(GV)	5.2 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
Carbazole	NA	5.2 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
Fluoranthene	50(GV)	5.2 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
Pyrene	50(GV)	5.2 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
Benzo(a)anthracene	0.002	5.2 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
Chrysene	0.002	5.2 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
Bis(2-ethylhexyl)phthalate	5	5.2 U	5 U	**14** B	5 U	5 U	5 U	5.1 U	5 U	**6** B	5 U	5 U	5 U	5 U	5 U	6 U	5 U	5 U	5 U
Benzo(b)fluoranthene	0.002 (GV)	5.2 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	6 U	5 U	5 U	5 U
Benzo(k)fluoranthene	0.002 (GV)	5.2 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	6 U	5 U	5 U	5 U
Benzo(a)pyrene	ND	5.2 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	6 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**

Sample ID		MW-23D						MW30					
Sampling Date		4/4/08	8/25/08	12/3/08	3/25/09	6/17/09	9/15/09	3/25/08	8/26/08	12/5/08	3/27/09	6/19/09	9/17/09
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
Semi-Volatiles	AWQS/GV Values												
Phenol	1	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	15 U	9 U	10 U	5 U
2-Chlorophenol	1	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	11 U	9 U	10 U	5 U
2-Methylphenol	1	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	15 U	9 U	10 U	5 U
4-Methylphenol	1	5 U	5 U	5 U	5 U	5 U	5 U	NA	11 U	15 U	9 U	10 U	5 U
2,4-Dimethylphenol	50(GV)	5 U	5 U	5 U	5 U	5 U	5 U	**21**	**110** D	**100**	**86**	**49** D	**37**
Naphthalene	10(GV)	5 U	5 U	5 U	5 U	5 U	5 U	**2.3** J	**15** D	**22**	**13**	**14** D	**11**
Phenanthrene	50(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	11 U	9 U	10 U	5 U
Anthracene	50(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	11 U	9 U	10 U	5 U
Carbazole	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	11 U	9 U	10 U	5 U
Di-n-butylphthalate	50(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	11 U	9 U	10 U	5 U
Fluoranthene	50(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	11 U	9 U	10 U	5 U
Pyrene	50(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	11 U	9 U	10 U	5 U
Butylbenzylphthalate	50(GV)	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	9 U	10 U	NA
3,3-Dichlorobenzidine	5	5 U	10 U	10 U	10 U	10 U	10 U	5 U	21 U	21 U	19 U	20 U	10 U
Benzo(a)anthracene	0.002	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	11 U	9 U	10 U	5 U
Chrysene	0.002	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	11 U	9 U	10 U	5 U
Bis(2-ethylhexyl)phthalate	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	15 U	9 U	10 U	5 U
Di-n-octylphthalate	50(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	11 U	9 U	10 U	5 U
Benzo(b)fluoranthene	0.002 (GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	11 U	9 U	10 U	5 U
Benzo(k)fluoranthene	0.002 (GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	11 U	9 U	10 U	5 U
Benzo(a)pyrene	ND	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	11 U	9 U	10 U	5 U
Total SVOCs		**0**	**0**	**0**	**0**	**0**	**0**	**23.3**	**125**	**122**	**99**	**63**	**48**

Sample ID		MW31						MW32						MW33					
Sampling Date		3/25/08	8/26/08	12/4/08	3/25/09	6/19/09	9/17/09	3/27/08	8/26/08	12/5/08	3/26/09	6/19/09	9/17/09	3/26/08	8/26/08	12/5/08	3/26/09	6/17/09	9/17/09
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
Semi-Volatiles	AWQS/GV Values																		
Phenol	1	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**13**	5 U	6 U	5 U	5 U	6 U	6 U	11 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	6 U	5 U	5 U	6 U	6 U	11 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	6 U	5 U	5 U	6 U	6 U	11 U	5 U	5 U
4-Methylphenol	1	NA	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	6 U	5 U	5 U	6 U	6 U	11 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	6 U	5 U	5 U	6 U	6 U	11 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	6 U	5 U	5 U	6 U	6 U	11 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	6 U	5 U	5 U	6 U	6 U	11 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	6 U	5 U	5 U	6 U	6 U	11 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 U	6 U	5 U	5 U	6 U	6 U	11 U	5 U	5 U
Di-n-butylphthalate	50(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 U	5 U	6 U	6 U	11 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	6 U	5 U	5 U	6 U	6 U	11 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	6 U	5 U	5 U	6 U	6 U	11 U	5 U	5 U
Butylbenzylphthalate	50(GV)	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	NA	NA	NA
3,3-Dichlorobenzidine	5	5 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	5 U	11 U	11 U	21 U	10 U	11 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	6 U	5 U	5 U	6 U	6 U	11 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	6 U	5 U	5 U	6 U	6 U	11 U	5 U	5 U
Bis(2-ethylhexyl)phthalate	5	5 U	5 U	**10** B	5 U	5 U	5 U	5 U	5 U	**6** B	5 U	6 U	5 U	5 U	6 U	6 U	11 U	5 U	5 U
Di-n-octylphthalate	50(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 U	5 U	6 U	6 U	11 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	6 U	5 U	5 U	6 U	6 U	11 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	6 U	5 U	5 U	6 U	6 U	11 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	6 U	5 U	5 U	6 U	6 U	11 U	5 U	5 U
Total SVOCs		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Qualifiers:
Detected concentrations shown in **bold** font. Bold font in shaded cell indicates exceedances of AWQS+GV.
NA - Not analyzed
ND - Non Detect
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 above the IDL but less than the contract required detection limits (CRDL).
D - Results from a subsequent dilution of the original sample due to original sample results being outside the linear range.
* - Duplicate Sample
** New York State Ambient Water Quality Standards (TOGs 1.1.1) GV - guidance value.
NS - No standard or Guidance Value

Table 4
Groundwater Analytical Summary
Metals
34 Freemans Bridge Road
Glenville, New York
September 2009
Site No. 4-47-028

Sample ID		MW11						MW11D						MW12					
Sampling Date		3/27/08	8/26/08	12/3/08	3/26/09	6/18/09	9/16/09	3/27/08	8/26/08	12/3/08	3/26/09	6/18/09	9/16/09	3/24/08	8/26/08	12/5/08	3/26/09	6/18/09	9/16/09
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
Metals	AWQS/GV Values																		
Aluminum	NS	**4190**	**521**	**307**	**285**	**335**	**1280**	**60.4** J	100 U	100 U	100 U	100 U	**790**	**830**	**14100**	**1460**	**558**	**843**	**1880**
Antimony	3	6.8 U	60 U	60 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	60 U	60 U
Arsenic	25	**5.99** J	5 U	5 U	5 U	5 U	5 U	3.9 U	5 U	5 U	5 U	5 U	5 U	3.9 U	5 U	5 U	5 U	5 U	5 U
Barium	1000	**79.4** J	**67**	**60**	**56**	**56**	**64**	**153** J	**187**	**180**	**168**	**173**	**155**	**40.5** J	**181**	**79**	**70**	**65**	**78**
Beryllium	3	**0.59** J	5 U	5 U	5 U	5 U	5 U	0.3 U	5 U	5 U	5 U	5 U	5 U	**0.5** J	5 U	5 U	5 U	5 U	5 U
Cadmium	5	1.1 U	5 U	5 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	5 U	5 U
Calcium	NS	**117000**	**161000**	**149000**	**170000**	**152000**	**144000**	**178000**	**311000**	**284000**	**167000** R	**169000**	**180000**	**95100**	**149000**	**140000**	**112000**	**125000**	**145000**
Chromium	50	**10.4**	5 U	5 U	5 U	5 U	5 U	1.2 U	5 U	5 U	5 U	5 U	5 U	**1.5** J	**20**	5 U	5 U	5 U	5 U
Cobalt	NS	**6.78** J	50 U	50 U	50 U	50 U	50 U	2.4 U	50 U	50 U	50 U	50 U	50 U	2.4 U	50 U	50 U	50 U	50 U	50 U
Copper	200	**11.4** J	5 U	5 U	5 U	5 U	5 U	1.7 U	5 U	5 U	5 U	5 U	5 U	1.7 U	**35**	**8**	**11**	5 U	**9**
Iron	300	**11500**	**1640**	**1250**	**462**	**1350**	**2900**	**3100**	**6310**	**6820**	**6620**	**6740**	**7160**	**2160**	**26500**	**2610**	**450**	**1460**	**3790**
Lead	25	**11.7**	5 U	5 U	5 U	5 U	5 U	4.6 U	**12**	5 U	5 U	5 U	5 U	4.6 U	5 U	5 U	5 U	5 U	5 U
Magnesium	35000 (GV)	**18800**	**22800**	**21800**	**24600**	**22700**	**22300**	**31200**	**34500**	**30000**	**25500**	**26200**	**22600**	**10300**	**20000**	**17300**	**12600**	**15800**	**16500**
Manganese	300	**1180**	**2200**	**1780**	**1620**	**1780**	**1690**	**269**	**540**	**529**	**512**	**515**	**440**	**49**	**242**	**59**	**27**	20 U	**52**
Mercury	0.7	0.08 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.08 U	0.2 U	0.2	0.2 U	0.2 U	0.2 U	0.08 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	100	**10.9** J	20 U	20 U	20 U	20 U	20 U	4.7 U	20 U	20 U	20 U	20 U	20 U	4.7 U	**21**	20 U	20 U	20 U	20 U
Potassium	NS	**1590** J	**2130**	**1710**	**1880**	**1670**	**1840**	**2490** J	**2990**	**2830**	**2980**	**3020**	**2520**	**1170** J	**6180**	**2970**	**2130**	**2500**	**3520**
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 U	5 U	5 U	5 U
Silver	50	0.7 U	10 U	10 U	10 U	10 U	10 U	0.7 U	10 U	10 U	10 U	10 U	10 U	0.7 U	10 U	10 U	10 U	10 U	10 U
Sodium	20000	**23600**	**27300**	**34300**	**27400**	**28200**	**30300**	**69200**	**40200**	**83600**	**45300**	**45800**	**43100**	**6500**	**11500**	**14200**	**8620**	**11200**	**12100**
Thallium	0.5 (GV)	8 U	10 U	10 U	10 U	10 U	**13**	8 U	10 U	10 U	10 U	10 U	**14**	8 U	10 U	10 U	10 U	10 U	**40**
Vanadium	NS	**12.6** J	20 U	20 U	20 U	20 U	20 U	3.1 U	20 U	20 U	20 U	20 U	20 U	3.1 U	**31**	20 U	20 U	20 U	20 U
Zinc	2000 (GV)	**51.5** J	10 U	10 U	10 U	10 U	**14**	**9.89** J	10 U	10 U	10 U	**69**	10 U	**19.2** J	**136**	**23**	**11**	**10**	**22**
Cyanide	200	**28.1**	10 U	10 U	10 U	10 U	10 U	**4.5**	10 U	10 U	10 U	10 U	10 U	**2.9**	10 U	10 U	10 U	10 U	10 U

Sample ID		MW12		MW15						MW15D					
Sampling Date		12/5/08	3/26/09	3/26/08	8/26/08	12/5/08	3/27/09	6/19/09	9/17/09	3/26/08	8/26/08	12/5/08	3/27/09	6/19/09	9/17/09
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
Metals	AWQS/GV Values														
Aluminum	NS	**1460**	**558**	**1840**	**6660**	**10900**	**277**	**1320**	**693**	45.8 U	**430**	**440**	100 U	**147**	100 U
Antimony	3	60 U	60 U	6.8 U	60 U	60 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	60 U	60 U
Arsenic	25	5 U	5 U	3.9 U	5 U	5 U	5 U	5 U	5 U	3.9 U	5 U	5 U	5 U	5 U	5 U
Barium	1000	**79**	**70**	**29.3** J	**66**	**90**	**24**	**31**	**46**	**13.2** J	**21**	**25**	**19**	**22**	**22**
Beryllium	3	5 U	5 U	0.38 J	5 U	5 U	5 U	5 U	5 U	0.3 U	5 U	5 U	5 U	5 U	5 U
Cadmium	5	5 U	5 U	1.1 U	5 U	5 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	5 U	5 U
Calcium	NS	**140000**	**112000**	**65600**	**115000**	**127000**	**106000**	**105000**	**109000**	**61100**	**111000**	**112000**	**115000**	**111000**	**127000**
Chromium	50	5 U	5 U	**3.27** J	**6**	5 U	5 U	**11**	5 U	**2.32** J	5 U	5 U	5 U	**10**	5 U
Cobalt	NS	50 U	50 U	**3.05** J	50 U	50 U	50 U	50 U	50 U	2.4 U	50 U	50 U	50 U	50 U	50 U
Copper	200	5 U	**8**	**4.06** J	**15**	**30**	**6**	5 U	**8**	1.7 U	5 U	5 U	**6**	5 U	5 U
Iron	300	**2610**	**450**	**4080**	**1110**	**18400**	**776**	**3490**	**2570**	37 U	**864**	**831**	**56**	**175**	**91**
Lead	25	5 U	5 U	4.6 U	5 U	**11**	5 U	5 U	5 U	4.6 U	5 U	5 U	5 U	5 U	5 U
Magnesium	35000 (GV)	**17300**	**12600**	**11400**	**20000**	**24100**	**18500**	**19800**	**18800**	**10300**	**17900**	**19200**	**19000**	**19000**	**20500**
Manganese	300	**242**	**27**	**224**	**474**	**583**	**282**	**306**	**353**	**38.7**	**108**	**114**	**103**	**124**	**136**
Mercury	0.7	0.2 U	0.2 U	0.08 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.08 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	100	20 U	**29**	4.7 U	20 U	20 U	20 U	20 U	20 U	4.7 U	20 U	20 U	20 U	20 U	20 U
Potassium	NS	**2970**	**2130**	**1540**	**5120**	**6220**	**2740**	**2820**	**3140**	**1480** J	**3340**	**3240**	**3880**	**3660**	**4130**
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
Silver	50	10 U	10 U	0.7 U	10 U	10 U	10 U	10 U	10 U	0.7 U	10 U	10 U	10 U	10 U	10 U
Sodium	20000	**14200**	**8620**	**14200**	**26600**	**35900**	**38900**	**31600**	**32400**	**30500**	**34600**	**38400**	**43200**	**32200**	**37800**
Thallium	0.5 (GV)	10 U	10 U	8 U	10 U	10 U	10 U	10 U	**23**	8 U	10 U	10 U	10 U	10 U	**25**
Vanadium	NS	20 U	20 U	**4.9** J	20 U	**29**	20 U	20 U	20 U	3.1 U	20 U	20 U	20 U	20 U	20 U
Zinc	2000 (GV)	**23**	**34**	**74**	10 U	**15**	**28**	**10.6** J	**13**	**13**	10 U	10 U	10 U	10 U	10 U
Cyanide	200	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	**1.9**	10 U	10 U	10 U	10 U	10 U

Sample ID		MW16						MW16D						MW18					
Sampling Date		3/25/08	8/26/08	12/3/08	3/25/09	6/17/09	9/15/09	3/25/08	8/26/08	12/3/08	3/25/09	6/17/09	9/15/09	3/26/08	8/26/08	12/5/08	3/27/09	6/18/09	9/16/09
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
Metals	AWQS/GV Values																		
Aluminum	NS	45.8 U	100 U	100 U	**103**	100 U	100 U	**103** J	100 U	100 U	100 U	100 U	100 U	**930**	**970**	**386**	**444**	**187**	**176**
Antimony	3	6.8 U	60 U	60 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	60 U	60 U
Arsenic	25	3.9 U	**7**	5 U	**14**	5 U	5 U	3.9 U	5 U	5 U	5 U	5 U	5 U	3.9 U	5 U	5 S	5 U	5 U	5 U
Barium	1000	**247**	**160**	**241**	**174**	**255**	**320**	**35.5** J	**54**	**54**	**48**	**48**	**51**	**19.6** J	**51**	**21**	**20**	**21**	**19**
Beryllium	3	0.3 U	5 U	5 U	5 U	5 U	5 U	0.3 U	5 U	5 U	5 U	5 U	5 U	0.3 U	5 U	5 U	5 U	5 U	5 U
Cadmium	5	1.1 U	5 U	5 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	5 U	5 U
Calcium	NS	**347000**	**254000**	**250000**	**297000**	**265000**	**288000**	**69200**	**121000**	**112000**	**114000**	**109000**	**99400**	**58400**	**141000**	**49800**	**67700**	**73000**	**67000**
Chromium	50	**1.31** J	5 U	5 U	5 U	5 U	5 U	**1.37** J	5 U	5 U	5 U	5 U	5 U	**4.33** J	5 U	5 U	5 U	5 U	5 U
Cobalt	NS	2.4 U	50 U	50 U	50 U	50 U	50 U	**7.93** J	50 U	50 U	50 U	50 U	50 U	**2.56** J	50 U	50 U	50 U	50 U	50 U
Copper	200	1.7 U	5 U	5 U	5 U	5 U	5 U	1.7 U	5 U	5 U	5 U	5 U	5 U	1.7 U	5 U	7 S	**6**	5 U	5 U
Iron	300	**19200**	**14500**	**11400**	**3830**	**12900**	**17800**	**1640**	**1200**	**1210**	**822**	**877**	**1820**	**2530**	**2080**	**712** S	**730**	**301**	**432**
Lead	25	4.6 U	5 U	5 U	5 U	5 U	5 U	4.6 U	5 U	5 U	5 U	5 U	5 U	4.6 U	5 U	5 U	5 U	5 U	5 U
Magnesium	35000 (GV)	**47900**	**48200**	**34000**	**42100**	**36900**	**33700**	**11100**	**19500**	**18800**	**18500**	**18200**	**17100**	**9290**	**20600**	**9020**	**11200**	**11900**	**9800**
Manganese	300	**2430**	**3000**	**1490**	**2100**	**1540**	**1420**	**841**	**803**	**598**	**499**	**610**	**662**	**62.7**	**218**	**48**	**79**	20 U	**30**
Mercury	0.7	0.08 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.08 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.08 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	100	4.7 U	20 U	20 U	20 U	20 U	20 U	4.7 U	20 U	20 U	20 U	20 U	20 U	4.7 U	20 U	20 U	20 U	20 U	20 U
Potassium	NS	**7790**	**6040**	**9430**	**7770**	**11400**	**9300**	**1100** J	**2680**	**2430**	**2490**	**2480**	**1940**	**615** J	**1690**	**752**	**822**	**772**	**899**
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 S	5 U	5 U	5 U
Silver	50	0.7 U	10 U	10 U	10 U	10 U	10 U	0.7 U	10 U	10 U	10 U	10 U	10 U	0.7 U	10 U	10 S	10 U	10 U	10 U
Sodium	20000	**31300**	**22800**	**20500**	**24500**	**20100**	**14100**	**35800**	**42000**	**53900**	**47600**	**40500**	**42800**	**3570** J	**10000**	**13200**	**12200**	**6580**	**5230**
Thallium	0.5 (GV)	8 U	10 U	10 U	10 U	10 U	**31**	8 U	10 U	10 U	10 U	10 U	**17**	8 U	10 U	10 U	10 U	10 U	**15**
Vanadium	NS	3.1 U	20 U	20 U	20 U	20 U	20 U	3.1 U	20 U	20 U	20 U	20 U	20 U	3.1 U	20 U	20 U	20 U	20 U	20 U
Zinc	2000 (GV)	**16.7** J	10 U	10 U	10 U	**14**	**10**	**16** J	10 U	10 U	10 U	10 U	10 U	26.6 J	10 U	**12**	10 U	10 U	10 U
Cyanide	200	**7.6**	10 U	10 U	10 U	10 U	10 U	**5.1**	**20**	10 U	10 U	**750**	10 U	**2.3**	10 U	10 U	10 U	10 U	10 U

Sample ID		MW19						MW19D					
Sampling Date		3/26/08	8/25/08	12/4/08	3/27/09	6/18/09	9/16/09	3/26/08	8/25/08	12/4/08	3/27/09	6/18/09	9/16/09
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
Metals	AWQS/GV Values												
Aluminum	NS	**458**	**990**	**1420**	**415**	**2940**	**1500**	**694**	**1390**	**496**	**277**	**580**	**151**
Antimony	3	6.8 U	60 U	60 U	60 U	60 U	60 U	**15.1** J	60 U	60 U	60 U	60 U	60 U
Arsenic	25	3.9 U	**7**	5 U	5 U	5 U	5 U	3.9 U	**5**	5 U	5 U	5 U	5 U
Barium	1000	**247**	**109**	**73**	**46**	**116**	**79**	**42.3** J	**60**	**53**	**47**	**48**	**47**
Beryllium	3	0.3 U	5 U	5 U	5 U	5 U	5 U	0.3 U	5 U	5 U	5 U	5 U	5 U
Cadmium	5	1.1 U	5 U	5 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	5 U	5 U
Calcium	NS	**67700**	**162000**	**152000**	**123000**	**161000**	**169000**	**120000**	**156000**	**146000**	**154000**	**139000**	**159000**
Chromium	50	**4.65** J	5 U	5 U	5 U	**10**	5 U	**7.04** J	5 U	5 U	5 U	5 U	5 U
Cobalt	NS	2.4 U	50 U	50 U	50 U	50 U	50 U	**7.29** J	50 U	50 U	50 U	50 U	50 U
Copper	200	**2.86** J	**10**	5 U	5 U	**14**	5 U	**1.93** J	5 U	5 U	5 U	5 U	5 U
Iron	300	**1520**	**4570**	**3410**	**966**	**5580**	**3770**	**8990**	**9350**	**6950**	**5880**	**6530**	**6240**
Lead	25	4.6 U	5 U	**15**	5 U	**7**	5 U	4.6 U	5 U	5 U	5 U	5 U	5 U
Magnesium	35000 (GV)	**7680**	**19400**	**19600**	**16400**	**16000**	**17200**	**17300**	**22200**	**21200**	**21400**	**20500**	**21500**
Manganese	300	**116**	**1820**	**597**	**184**	**1100**	**1220**	**429**	**594**	**523**	**518**	**506**	**530**
Mercury	0.7	**0.09** J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.08 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	100	4.7 U	20 U	20 U	20 U	20 U	20 U	4.7 U	20 U	20 U	20 U	20 U	20 U
Potassium	NS	**1560** J	**6280**	**4850**	**3710**	**5140**	**4920**	**883** J	**1670**	**1330**	**1170**	**1290**	**1100**
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
Silver	50	0.7 U	10 U	10 U	10 U	10 U	10 U	0.7 U	10 U	10 U	10 U	10 U	10 U
Sodium	20000	**8400**	**15100**	**12700**	**1270**	**7170**	**10100**	**5960**	**5610**	**6810**	**6240**	**5380**	**6060**
Thallium	0.5 (GV)	8 U	10 U	10 U	10 U	10 U	**25**	8 U	10 U	10 U	10 U	10 U	**29**
Vanadium	NS	3.1 U	20 U	20 U	20 U	20 U	20 U	3.1 U	20 U	20 U	20 U	20 U	20 U
Zinc	2000 (GV)	**17.3** J	**38**	**35**	10 U	**46**	**22**	**21.1** J	10 U	10 U	10 U	10 U	10 U
Cyanide	200	**2.3**	10 U	**10**	**10**	10 U	10 U	**4.8**	**10**	10 U	10 U	10 U	**10**

Qualifiers:
Detected concentrations shown in **bold** font. Bold font in shaded cell indicates exceedances of AWQS+GV.
NA - Not analyzed
ND - Non Detect
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 above the IDL but less than the contract required detection limits (CRDL).
D - Results from a subsequent dilution of the original sample due to original sample results being outside the linear range.
* - Duplicate Sample
** New York State Ambient Water Quality Standards (TOGs 1.1.1) GV - guidance value.
NS - No standard or Guidance Value

Table 4
Groundwater Analytical Summary
Metals
34 Freemans Bridge Road
Glenville, New York
September 2009
Site No. 4-47-028

Sample ID		MW20						MW20D					
Sampling Date		3/24/08	8/25/08	12/4/08	3/25/09	6/19/09	9/15/09	3/24/08	8/25/08	12/4/08	3/25/09	6/19/09	9/15/09
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
Metals	AWQS/GV Values												
Aluminum	NS	**141** J	**3090**	**2060**	**2190**	**501**	**1490**	**347**	**649**	**136**	**1300**	**105**	**415**
Antimony	3	6.8 U	60 U	60 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	60 U	60 U
Arsenic	25	**4.77** J	**21**	**9** S	**19**	**18**	**8**	3.9 U	5 U	5 U	5 U	5 U	5 U
Barium	1000	**64.2** J	**240**	**319**	**378**	**373**	**376**	**56** J	**115**	**104**	**119**	**108**	**110**
Beryllium	3	0.3 U	5 U	5 U	5 U	5 U	5 U	0.3 U	5 U	5 U	5 U	5 U	5 U
Cadmium	5	1.1 U	5 U	5 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	5 U	5 U
Calcium	NS	**168000**	**460000**	**635000**	**560000**	**396000**	**362000**	**61100**	**114000**	**102000**	**111000**	**110000**	**101000**
Chromium	50	1.2 U	5 U	5 U	**6**	**12**	5 U	1.2 U	5 U	5 U	5 U	**8**	5 U
Cobalt	NS	2.4 U	50 U	50 U	50 U	50 U	50 U	2.4 U	50 U	50 U	50 U	50 U	50 U
Copper	200	**12.9** J	**29**	**10**	**9**	**9**	5 U	**2.1** J	5 U	5 U	**8**	5 U	5 U
Iron	300	37 U	**3660**	**2350**	**3350**	**655**	**2560**	**1630**	**2480**	**1420**	**5880**	**1190**	**1910**
Lead	25	4.6 U	5 U	**9**	5 U	5 U	5 U	4.6 U	5 U	5 U	5 U	5 U	5 U
Magnesium	35000 (GV)	**3950** J	**5510**	**1760**	**4150**	**2980**	**3530**	**9700**	**18600**	**17400**	**17800**	**18100**	**17500**
Manganese	300	**14.4** J	**71**	**38**	**44**	20 U	**47**	**52.3**	**71**	**47**	**88**	**61**	**55**
Mercury	0.7	0.08 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.08 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	100	**8.81** J	**39**	**54**	**39**	**36**	**28**	4.7 U	20 U	20 U	20 U	20 U	20 U
Potassium	NS	**15100**	**92600**	**97100**	**108000**	**120000**	**99200**	**2000** J	**5560**	**4910**	**5710**	**5210**	**4310**
Selenium	10	**6.18** J	**9**	**7** S	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Silver	50	0.7 U	10 U	10 S	10 U	10 U	10 U	0.7 U	10 U	10 U	10	10 U	10 U
Sodium	20000	**69800**	**122000**	**185000**	**167000**	**159000**	**136000**	**32000**	**35400**	**47000**	**41900**	**38700**	**38200**
Thallium	0.5 (GV)	8 U	**69**	**26**	**15**	**18**	**69**	8 U	10 U	10 U	10 U	10 U	**17**
Vanadium	NS	**3.67** J	20 U	**36**	**43**	**32**	**21**	3.1 U	20 U	20 U	20 U	20 U	20 U
Zinc	2000 (GV)	**10.9** J	**20**	**23**	**20**	10 U	**16**	**11.8** J	10 U	10 U	**12**	10 U	10 U
Cyanide	200	**11.2**	10 U	10 U	10 U	10 U	10 U	**22.4**	10 U	10 U	10 U	10 U	10 U

Sample ID		MW21						MW21D					
Sampling Date		3/24/08	8/25/08	12/4/08	3/26/09	6/17/09	9/16/09	3/24/08	8/25/08	12/4/08	3/26/09	6/17/09	9/16/09
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
Metals	AWQS/GV Values												
Aluminum	NS	**441**	**3310**	**2410**	**347**	NA	**5350**	45.8 U	100 U	100 U	100 U	100 U	100 U
Antimony	3	**10.2** J	60 U	60 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	60 U	60 U
Arsenic	25	3.9 U	5 U	5 U	5 U	5 U	5 U	3.9 U	5 U	5 U	5 U	5 U	5 U
Barium	1000	**67** J	**153**	**286**	**110**	**109**	**160**	**80.3** J	**113**	**98**	**89**	**103**	**97**
Beryllium	3	0.3 U	5 U	5 U	5 U	5 U	5 U	0.3 U	5 U	5 U	5 U	5 U	5 U
Cadmium	5	1.1 U	5 U	5 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	5 U	5 U
Calcium	NS	**186000**	**351000**	**341000**	**324000**	**285000**	**279000**	**82200**	**114000**	**98300**	**94700**	**101000**	**102000**
Chromium	50	**8.49** J	5 U	**44**	5 U	5 U	5 U	1.2 U	5 U	5 U	5 U	5 U	5 U
Cobalt	NS	6.67 J	50 U	50 U	50 U	50 U	50 U	2.4 U	50 U	50 U	50 U	50 U	50 U
Copper	200	1.7 U	**5**	**44**	5 U	5 U	**10**	1.7 U	5 U	5 U	5 U	5 U	5 U
Iron	300	**9160**	**20400**	**58700**	**11700**	**13400**	**22400**	**1050**	**1650**	**1400**	**1280**	**1300**	**1540**
Lead	25	4.6 U	5 U	**58**	5 U	5 U	**8**	4.6 U	5 U	5 U	5 U	5 U	5 U
Magnesium	35000 (GV)	**28800**	**50500**	**58200**	**46100**	**45400**	**39400**	**13900**	**19400**	**17100**	**16000**	**18100**	**18100**
Manganese	300	**6730**	**10300**	**11700**	**12200**	**9730**	**8220**	**107**	**163**	**136**	**122**	**142**	**144**
Mercury	0.7	0.08 U	0.2 U	0.2 U	0.2	0.2 U	0.2 U	0.08 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	100	4.7 U	20 U	**54**	20 U	20 U	20 U	4.7 U	20 U	20 U	20 U	20 U	20 U
Potassium	NS	**898** J	**3000**	**5900**	**1620**	**1630**	**2660**	**1640** J	**3420**	**3030**	**3230**	**3230**	**2730**
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
Silver	50	0.7 U	10 U	10 U	10 U	10 U	10 U	0.7 U	10 U	10 U	10 U	10 U	10 U
Sodium	20000	**12500**	**19400**	**27600**	**26000**	**21300**	**24300**	**52000**	**43500**	**73600**	**45800**	**42300**	**46500**
Thallium	0.5 (GV)	8 U	10 U	**24**	**20**	16 U	**37**	8 U	10 U	10 U	10 U	10 U	**17**
Vanadium	NS	**5.96** J	20 U	**77**	20 U	20 U	20 U	3.1 U	20 U	20 U	20 U	20 U	20 U
Zinc	2000 (GV)	**20.8** J	**21**	**178**	**11**	**317**	**35**	**9.18** J	10 U	10 U	10 U	10 U	10 U
Cyanide	200	**21.2**	10 U	10 U	10 U	10 U	10 U	**2.7**	10 U	10 U	**10**	10 U	10 U

Sample ID		MW23					
Sampling Date		3/27/08	8/25/08	12/3/08	3/25/09	6/17/09	9/15/09
Units		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Metals	AWQS/GV Values						
Aluminum	NS	**386**	**3650**	**11400**	**2160**	**2060**	**1480**
Antimony	3	6.8 U	60 U	60 U	60 U	60 U	60 U
Arsenic	25	3.9 U	5 U	5 U	5 U	5 U	5 U
Barium	1000	**44.1** J	**132**	**193**	**77**	**68**	**61**
Beryllium	3	0.3 U	5 U	5 U	5 U	5 U	5 U
Cadmium	5	1.1 U	5 U	5 U	5 U	5 U	5 U
Calcium	NS	**88800**	**136000**	**147000**	**118000**	**112000**	**102000**
Chromium	50	**1.73** J	5 U	**27**	5 U	**8**	5 U
Cobalt	NS	2.4 U	50 U	50 U	50 U	50 U	50 U
Copper	200	1.7 U	**8**	**22**	5 U	5 U	5 U
Iron	300	**3890**	**18000**	**45900**	**12100**	**8240**	**7260**
Lead	25	**30.5**	**130**	**515**	**74**	**72**	**44**
Magnesium	35000 (GV)	**13800**	**23100**	**27200**	**18700**	**18800**	**17600**
Manganese	300	**449**	**904**	**800**	**390**	**308**	**323**
Mercury	0.7	0.08 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	100	4.7 U	20 U	**26**	20 U	20 U	20 U
Potassium	NS	**1630** J	**4540**	**5110**	**2970**	**2170**	**1700**
Selenium	10	5 U	5 U	5 U	5 U	5 U	5 U
Silver	50	0.7 U	10 U	10 U	10 U	10 U	10 U
Sodium	20000	**30900**	**33900**	**34100**	**36900**	**32100**	**33000**
Thallium	0.5 (GV)	8 U	10 U	10 U	10 U	10 U	**17**
Vanadium	NS	3.1 U	20 U	**27**	20 U	20 U	20 U
Zinc	2000 (GV)	**18.8** J	**54**	**160**	**34**	**30**	**22**
Cyanide	200	**8.5**	10 U	10 U	10 U	10 U	10 U

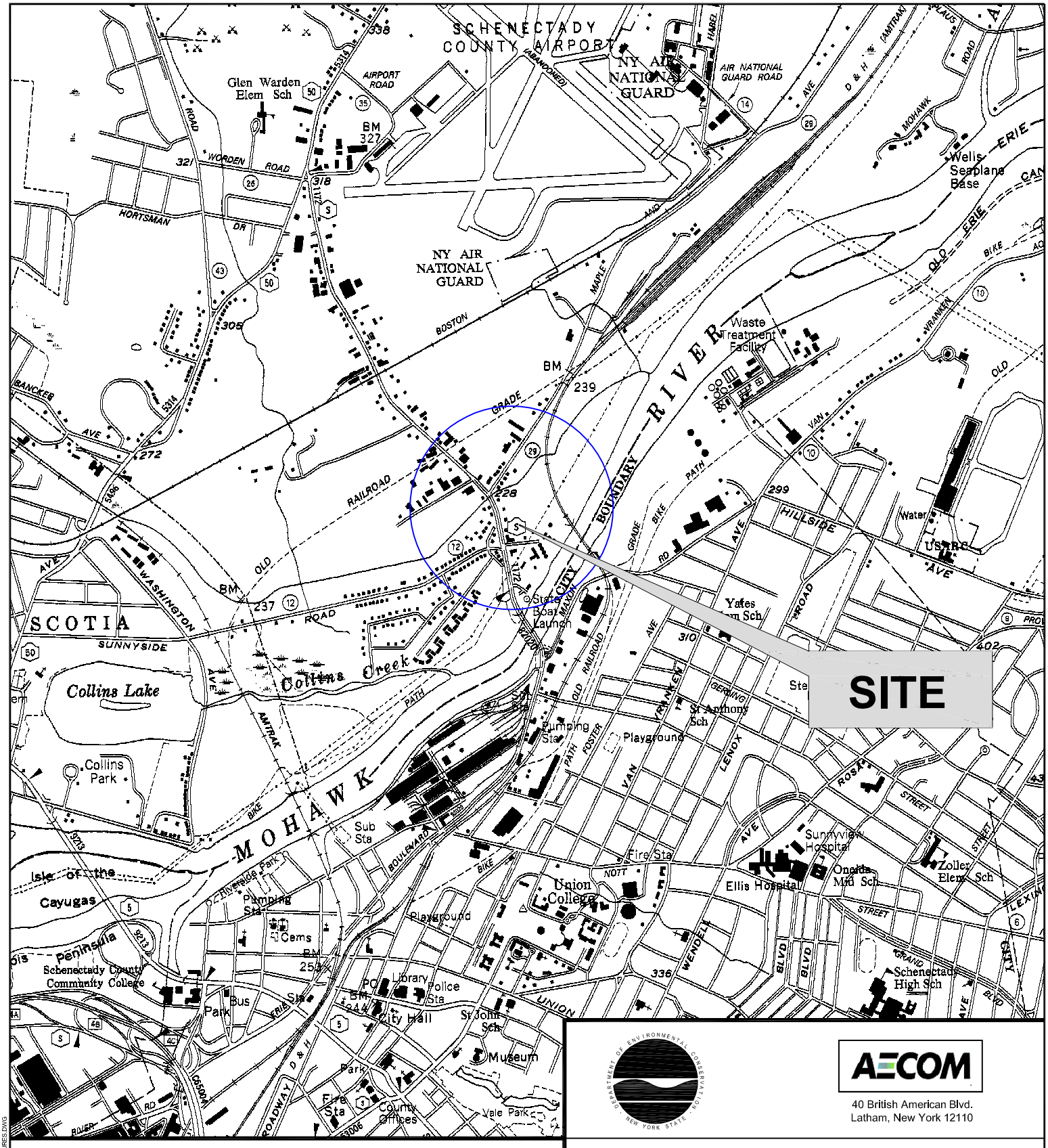
Sample ID		MW-23D						MW30					
Sampling Date		4/4/08	8/25/08	12/3/08	3/25/09	6/17/09	9/15/09	3/25/08	8/26/08	12/5/08	3/27/09	6/19/09	9/17/09
Units		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Metals	AWQS/GV Values												
Aluminum	NS	**1400**	**544**	**252**	**182**	**108**	**138**	**401**	**707**	**286**	**294**	**111**	100 U
Antimony	3	6.8 U	60 U	60 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	60 U	60 U
Arsenic	25	3.9 U	5 U	5 U	5 U	5 U	5 U	**6.66** J	**9**	5 S	5 U	5 U	5 U
Barium	1000	**101** J	**88**	**80**	**74**	**87**	**83**	**132** J	**113**	**100**	**95**	**94**	**88**
Beryllium	3	0.3 U	5 U	5 U	5 U	5 U	5 U	**0.31** J	5 U	5 U	5 U	5 U	5 U
Cadmium	5	1.1 U	5 U	5 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	5 U	5 U
Calcium	NS	**123000**	**110000**	**100000**	**102000**	**109000**	**97900**	**126000**	**126000**	**103000**	**115000**	**99500**	**112000**
Chromium	50	**2.67** J	5 U	5 U	5 U	5 U	5 U	1.2 U	5 U	5 U	5 U	**14**	5 U
Cobalt	NS	2.4 U	50 U	50 U	50 U	50 U	50 U	2.4 U	50 U	50 U	50 U	50 U	50 U
Copper	200	**4.17** J	5 U	5 U	5 U	5 U	5 U	1.7 U	5 U	5 U	**7**	5 U	5 U
Iron	300	**5560**	**2630**	**1840**	**1470**	**1830**	**1540**	**6430**	**5410**	**5510**	**3570**	**2660**	**2410**
Lead	25	**4.96** J	5 U	5 U	5 U	5 U	5 U	4.6 U	5 U	5 U	5 U	5 U	5 U
Magnesium	35000 (GV)	**19400**	**16900**	**15900**	**16400**	**17400**	**16300**	**20900**	**16500**	**16900**	**15500**	**16600**	**17500**
Manganese	300	**226**	**159**	**129**	**121**	**144**	**128**	**626**	**792**	**678**	**733**	**767**	**755**
Mercury	0.7	0.02 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.08 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	100	4.7 U	20 U	20 U	20 U	20 U	20 U	4.7 U	20 U	20 U	20 U	20 U	20 U
Potassium	NS	**15300**	**2890**	**2530**	**3390**	**2820**	**2170**	**1590** J	**7060**	**3750**	**4730**	**2910**	**3650**
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
Silver	50	0.7 U	10 U	10 U	10 U	10 U	10 U	0.7 U	10 U	10 S	10 U	10 U	10 U
Sodium	20000	**80200**	**36300**	**48200**	**50800**	**39000**	**41400**	**124000**	**135000**	**159000**	**240000**	**70400**	**190000**
Thallium	0.5 (GV)	8 U	10 U	10 U	10 U	10 U	**12**	8 U	10 U	10 U	10 U	10 U	**16**
Vanadium	NS	**3.59** J	20 U	20 U	20 U	20 U	20 U	3.1 U	20 U	20 U	20 U	20 U	20 U
Zinc	2000 (GV)	**43.2** J	10 U	10 U	10 U	10 U	10 U	**19.5** J	**11**	**12**	10 U	10 U	10 U
Cyanide	200	0.96 J	**10**	10 U	10 U	10 U	10 U	**4.3**	10 U	**30**	10 U	10 U	10 U

Sample ID		MW31						MW32					
Sampling Date		3/25/08	8/26/08	12/4/08	3/25/09	6/19/09	9/17/09	3/27/08	8/26/08	12/5/08	3/26/09	6/19/09	9/17/09
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
Metals	AWQS/GV Values												
Aluminum	NS	**265**	**820**	**131**	**122**	**438**	100 U	**1590**	**2730**	**13700**	**150**	**1630**	**453**
Antimony	3	6.8 U	60 U	60 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	60 U	60 U
Arsenic	25	3.9 U	5 U	5 U	5 U	5 U	5 U	3.9 U	5 U	5 U	5 U	5 U	5 U
Barium	1000	**41.7** J	**96**	**81**	**68**	**80**	**81**	**89.2** J	**142**	**214**	**102**	**126**	**110**
Beryllium	3	**0.36** J	5 U	5 U	5 U	5 U	5 U	**0.41** J	5 U	5 U	5 U	5 U	5 U
Cadmium	5	1.1 U	5 U	5 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	5 U	5 U
Calcium	NS	**115000**	**183000**	**179000**	**169000**	**184000**	**166000**	**99200**	**156000**	**217000**	**145000**	**154000**	**126000**
Chromium	50	1.2 U	5 U	5 U	5 U	**8**	5 U	**4.85** J	5 U	**16**	5 U	**15**	5 U
Cobalt	NS	2.4 U	50 U	50 U	50 U	50 U	50 U	**3.3** J	50 U	50 U	50 U	50 U	50 U
Copper	200	1.7 S	5 U	5 U	5 U	5 U	5 U	**1.97** J	5 U	**29**	5 U	**9**	5 U
Iron	300	**1800** S	**6050**	**3160**	**4060**	**2890**	**3000**	**7900**	**14800**	**39700**	**10800**	**11500**	**10400**
Lead	25	4.6 U	5 U	5 U	5 U	5 U	5 U	**5.73** J	5 U	**44**	5 U	**8**	5 U
Magnesium	35000 (GV)	**17400**	**39500**	**36000**	**31300**	**38200**	**39500**	**17800**	**29100**	**39000**	**24900**	**27700**	**27300**
Manganese	300	**359**	**455**	**364**	**328**	**358**	**357**	**714**	**1530**	**1830**	**1410**	**1560**	**1490**
Mercury	0.7	0.08 U	0.2	0.2	0.2 U	0.2 U	0.2 U	0.08 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	100	4.7 U	20 U	20 U	20 U	20 U	20 U	4.7 U	20 U	**35**	20 U	20 U	20 U
Potassium	NS	**1590** J	**5750**	**4960**	**3490**	**4060**	**4140**	**1520** J	**2880**	**7620**	**7610**	**4580**	**6330**
Selenium	10	5 S	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Silver	50	0.7 S	10 U	10 U	10 U	10 U	10 U	0.7 U	10 U	10 U	10 U	10 U	10 U
Sodium	20000	**29300**	**45300**	**68700**	**43300**	**45700**	**109000**	**13900**	**19400**	**29500**	**20200**	**18200**	**27600**
Thallium	0.5 (GV)	8 U	10 U	10 U	10 U	10 U	**54**	8 U	10	10	10 U	10 U	**39**
Vanadium	NS	3.1 U	20 U	20 U	20 U	20 U	20 U	**3.4** J	20 U	**43**	20 U	20 U	20 U
Zinc	2000 (GV)	**8.35** J	10 U	10 U	10 U	10 U	10 U	**21.1** J	**20**	**131**	10 U	**22**	10 U
Cyanide	200	**8.4**	**20**	**20**	**60**	**20**	**20**	**79.9**	**190**	10 U	**21**	**200**	**190**

Sample ID		MW33					
Sampling Date		3/26/08	8/26/08	12/5/08	3/26/09	6/17/09	9/17/09
Units		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Metals	AWQS/GV Values						
Aluminum	NS	45.8 U	**1780**	**812**	**439**	**765**	**2310**
Antimony	3	**15.1** J	60 U	60 U	60 U	60 U	60 U
Arsenic	25	3.9 U	**18**	5 S	**8**	**9**	**11**
Barium	1000	**39.8** J	**98**	**81**	**54**	**54**	**66**
Beryllium	3	0.3 U	5 U	5 U	5 U	5 U	5 U
Cadmium	5	1.1 U	5 U	5 U	5 U	5 U	5 U
Calcium	NS	**128000**	**415000**	**596000**	**717000**	**527000**	**590000**
Chromium	50	**4.94** J	5 U	5 U	5 U	5 U	5 U
Cobalt	NS	**5.84** J	50 U	50 U	50 U	50 U	50 U
Copper	200	1.7 U	**8**	5 S	**8**	5 U	**12**
Iron	300	**2480**	**6190**	**3000** S	**1780**	**3090**	**8530**
Lead	25	4.6 U	**7**	5 U	5 U	5 U	**25**
Magnesium	35000 (GV)	**12800**	**20700**	**22800**	**21200**	**22100**	**21800**
Manganese	300	**232**	**413**	**298**	**162**	**307**	**366**
Mercury	0.7	0.08 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	100	4.7 U	20	20 U	20 U	20 U	20 U
Potassium	NS	**4780** J	**33600**	**33400**	**33100**	**29200**	**29500**
Selenium	10	5 U	5 U	5 S	5 U	5 U	5 U
Silver	50	0.7 U	10 U	10 S	10 U	10 U	10 U
Sodium	20000	**130000**	**166000**	**214000**	**188000**	**184000**	**424000**
Thallium	0.5 (GV)	8 U	10 U	10 U	10 U	10 U	**57**
Vanadium	NS	3.1 U	20 U	20 U	20 U	20 U	20 U
Zinc	2000 (GV)	**14.2** J	**26**	**22**	10 U	**11**	**31**
Cyanide	200	**3.7**	**20**	**20**	**20**	**20**	**20**

Qualifiers:
Detected concentrations shown in **bold** font. Bold font in shaded cell indicates exceedances of AWQS+GV.
NA - Not analyzed
ND - Non Detect
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 above the IDL but less than the contract required detection limits (CRDL).
D - Results from a subsequent dilution of the original sample due to original sample results being outside the linear range.
* - Duplicate Sample
** New York State Ambient Water Quality Standards (TOGs 1.1.1) GV - guidance value.
NS - No standard or Guidance Value

FIGURES



PLAN

Scale in Feet

0 1000' 2000'

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

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FIGURE 1
SITE LOCATION MAP

POST REMEDIATION FIELD INVESTIGATION

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

Town of Glenville	Schenectady County, New York
DATE: SEPTEMBER, 2009	SCALE: 1"=2000'
PROJECT NO.: 105886	FIGURE 1

FILE NAME = WORK\93893\CADD\SITE-MANAGEMENT-PLAN\SM-FIGURES.DWG

FREEMAN'S BRIDGE ROAD

MAPLE AVENUE

HIGHWAY BOUNDARY

LANDS N/F JOHN OLIVER HORNFECK

LANDS N/F ERWIN C. GRANT & JOAN H. GRANT

LANDS N/F FLORENCE E. NELSON

LANDS N/F DOMINICK MANGINO

LANDS N/F PEARL ARMSTRONG

LANDS N/F HALL CREEK, L.L.C.

LANDS N/F DEREK A. FOTI

LANDS N/F LYONS VENTURES, INC.

LANDS N/F NIAGARA J. H. BUHRMASTER CO., INC.

LANDS N/F NIAGARA MOHAWK POWER CORP.

KROMMIE KILL (A.K.A. WARNER CREEK)

GRAVEL DRIVE

VOLUME CALCULATION GRID
S/A SAMPLING GRID

MW-15D
MW-15
220.30

MW-33
220.25

MW-20
219.79

MW-20D

MW-19D
MW-19
220.79

220.50

220.00

219.50

219.36
MW-23

MW-23D

219.76
MW-21

MW-21D

MW-32
220.00

MW-30
219.43

MW-31
219.42

219.00

MW-18
221.28

MW-12
219.53

MW-11
219.18

MW-11D

MW-16
219.02

MW-16D

221.00

LEGEND

MW-19D — MONITORING WELL LOCATION WITH GROUNDWATER ELEVATION

GROUNDWATER FLOW DIRECTION

PLAN

Scale in Feet

0 50' 100'

MAPPING REFERENCES:
1) MAPPING SHOWN TAKEN FROM THE FINAL REMEDIATION REPORT DRAWINGS NO. V8 "GRID SAMPLE LOCATIONS MAP" AND NO. V9 "AS-BUILT TOPOGRAPHIC MAP" BY CLARK ENGINEERING & SURVEYING, P.C., DATED 10/19/2007 AND ALL REFERENCES AND NOTES THEREIN.

2) MONITORING WELL LOCATIONS BY A SURVEY PERFORMED BY EARTH TECH, MAY 8, 2008

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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FIGURE 2 - SHALLOW GROUNDWATER CONTOURS SEPTEMBER 2009

GROUNDWATER SAMPLING REPORT
34 Freeman's Bridge Road Site
Site # 4-47-028

Town of Glenville	Schenectady County, New York
DATE: SEPTEMBER 2009	SCALE: 1"=100'
PROJECT NO.: 105886	FIGURE 2

FILE NAME = W:\WORK\93693\CAD\SITE-MANAGEMENT-PLAN\SMP-FIGURES.DWG

FREEMAN'S BRIDGE ROAD

MAPLE AVENUE

HIGHWAY BOUNDARY

220.41
MW-15D
MW-15

MW-33

MW-20
MW-20D
219.97

MW-19D
220.68
MW-19

220.50

220.00

MW-23
MW-23D
219.71

KROMMIE KILL (A.K.A. WARNER CREEK)

MW-32

MW-21
MW-21D
219.86

MW-30

MW-31

219.50

219.00

MW-18

MW-12

GRAVEL DRIVE

VOLUME CALCULATION GRID
S/A SAMPLING GRID

MW-16
MW-16D
218.77

MW-11
MW-11D
219.49

LANDS N/F JOHN OLIVER HORNFECK

LANDS N/F ERWIN C. GRANT & JOAN H. GRANT

LANDS N/F FLORENCE E. NELSON

LANDS N/F DOMINICK MANGINO

LANDS N/F PEARL ARMSTRONG

LANDS N/F HALL CREEK, L.L.C.

LANDS N/F DEREK A. FOTI

LANDS N/F LYONS VENTURES, INC.

LANDS N/F LYONS VENTURES, INC.

LANDS N/F LYONS VENTURES, INC.

LANDS N/F NIAGARA J. H. BUHRMASTER CO., INC.

LANDS N/F NIAGARA MOHAWK POWER CORP.

LEGEND

MW-19D — MONITORING WELL LOCATION WITH GROUNDWATER ELEVATION

GROUNDWATER FLOW DIRECTION

PLAN

Scale in Feet

0 50' 100'

MAPPING REFERENCES:
1) MAPPING SHOWN TAKEN FROM THE FINAL REMEDIATION REPORT DRAWINGS NO. V8 "GRID SAMPLE LOCATIONS MAP" AND NO. V9 "AS-BUILT TOPOGRAPHIC MAP" BY CLARK ENGINEERING & SURVEYING, P.C., DATED 10/19/2007 AND ALL REFERENCES AND NOTES THEREIN.

2) MONITORING WELL LOCATIONS BY A SURVEY PERFORMED BY EARTH TECH, MAY 8, 2008

DEPARTMENT OF ENVIRONMENTAL CONSERVATION NEW YORK STATE

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FIGURE 3 - DEEP GROUNDWATER CONTOURS SEPTEMBER 2009

GROUNDWATER SAMPLING REPORT
34 Freeman's Bridge Road Site
Site # 4-47-028

Town of Glenville	Schenectady County, New York
DATE: NOVEMBER 2009	SCALE: 1"=100'
PROJECT NO.: 105886	FIGURE 3

FILE NAME = W:\WORK\93893\CAD\SITE-MANAGEMENT-PLANS\M-FIGURES.DWG

MW-15	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09
Vinyl Chloride	2	16	76	44	11	21	21
cis- 1,2 Dichloroethene	5	8.3	15	17	ND	8.6	11
Total VOCs		24.3	91	61	11	29.6	32

MW-33	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09
Methylene Chloride	5	ND	ND	ND	ND	ND	11
Benzene	1	ND	6	ND	ND	7.8	7.1
Total VOCs		36	6	16	0	7.8	36.1

MW-20	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09
Acetone	50	720	1400	2900	1900	1300	670
Methyl Acetate	NS	ND	ND	ND	ND	390	57
Methylene Chloride	5	ND	ND	120	ND	ND	ND
2- Butanone	50	77	ND	290	ND	190	120
Total VOCs		797	1400	3310	1900	1880	847

MW-19D	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09
cis- 1,2 Dichloroethene	5	36	33	42	34	43	26
Total VOCs		36	33	42	34	43	26

MW-30	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09
Methylcyclohexane	NS	26	ND	ND	ND	ND	64
cis- 1,2 Dichloroethene	5	50	ND	ND	ND	ND	ND
Toluene	5	69	ND	ND	ND	ND	140
Ethylbenzene	5	110	1700	610	1100	700	780
o- Xylene	5	110	140	73	ND	79	150
m&p- Xylene	5	3000	8500	2600	10000	4100	4000
Isoproplybenzene	5	72	180	110	ND	90	150
Total VOCs		3437	10520	3393	11100	4969	5284

MW-23	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09
Vinyl Chloride	2	10	ND	16	23	39	16
Chloroethane	5	ND	ND	34	ND	ND	24
cis- 1,2 Dichloroethene	5	49	68	21	61	99	33
Total VOCs		59	68	71	84	138	73

MW-19	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09
MTBE	10	ND	23	12	ND	9.4	ND
cis- 1,2 Dichloroethene	5	ND	ND	ND	ND	6.5	5.7
Total VOCs		0	23	12	0	15.9	5.7

MW-31	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09
Vinyl Chloride	2	7.9	13	12	11	11	ND
cis- 1,2 Dichloroethene	5	12	10	14	11	24	12
o- xylene	5	140	ND	ND	ND	ND	ND
m&p- xylene	5	5.8	ND	ND	ND	ND	ND
Total VOCs	50	165.7	23	26	22	35	12

MW-16D	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09
MTBE	10	5.9	ND	ND	ND	11	ND
cis- 1,2 Dichloroethene	5	25	9.2	11	7.3	14	7.8
Total VOCs		30.9	9.2	11	7.3	25	7.8

MW-11	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09
Methylene Chloride	5	ND	ND	11	ND	ND	ND
TCE	5	17	9.9	12	ND	11	5.7
PCE	5	7	ND	ND	ND	ND	ND
Total VOCs		24	9.9	23	0	11	5.7

LANDS N/F JOHN OLIVER HORNEECK

LANDS N/F ERWIN C. GRANT & JOAN H. GRANT

LANDS N/F FLORENCE E. NELSON

LANDS N/F PEARL ARMSTRONG

LANDS N/F DOMINICK MANGINO

LANDS N/F HALL CREEK, L.L.C.

HIGHWAY BOUNDARY

MAPLE AVENUE

LANDS N/F LYONS VENTURES, INC.

LANDS N/F NIAGARA J.H. BUHRMASTER CO., INC.

LANDS N/F NIAGARA MOHAWK POWER CORP.

MW-15D

MW-15

MW-33

MW-20

MW-20D

MW-19D

MW-19

MW-23

MW-23D

MW-21

MW-32

MW-21D

MW-30

MW-31

MW-18

MW-12

MW-16

MW-16D

MW-11

MW-11D

MAPPING REFERENCES:
1) MAPPING SHOWN TAKEN FROM THE FINAL REMEDIATION REPORT DRAWINGS NO. V8 "GRID SAMPLE LOCATIONS MAP" AND NO. V9 "AS-BUILT TOPOGRAPHIC MAP" BY CLARK ENGINEERING & SURVEYING, P.C., DATED 10/19/2007 AND ALL REFERENCES AND NOTES THEREIN.

2) MONITORING WELL LOCATIONS BY A SURVEY PERFORMED BY EARTH TECH, MAY 8, 2008

LEGEND

MW-19D MONITORING WELL LOCATION WITH REPORTED TOTAL VOC CONCENTRATION

SAMPLING LOCATION

MW-31	µg/L
cis-1,2-Dichloroethene	13
Vinyl Chloride	10

CHEMICAL CONSTITUENT

PLAN

Scale in Feet

0 50' 100'

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FIGURE 4 - TOTAL DETECTED VOC CONCENTRATIONS IN GROUNDWATER & AWQS EXCEEDENCES

GROUNDWATER SAMPLING REPORT
34 Freeman's Bridge Road Site
NYSDEC Site # 4-47-028

Town of Glenville — Schenectady County, New York

DATE: September, 2009 — SCALE: 1"=100'

PROJECT NO.: 105886 — FIGURE 4

FREEMAN'S BRIDGE ROAD

MAPLE AVENUE

HIGHWAY BOUNDARY

LANDS N/F
JOHN OLIVER
HORNFECK

LANDS N/F
ERWIN C. GRANT

LANDS N/F
FLORENCE E. NELSON

LANDS N/F
DOMINICK MANGINO

LANDS N/F
PEARL ARMSTRONG

LANDS N/F
HALL CREEK, L.L.C.

LANDS N/F
DEREK A. FOTI

KROMME KILL (A.K.A. WARNER CREEK)

LANDS N/F
LYONS VENTURES, INC.

LANDS N/F
LYONS VENTURES, INC.

LANDS N/F NIAGARA J.H.
BUHRMASTER CO., INC.

LANDS N/F NIAGARA
MOHAWK POWER CORP.

MW-15D
MW-15
MW-33
MW-20
MW-20D
MW-19D
MW-19
MW-23
MW-23D
MW-32
MW-21
MW-21D
MW-30
MW-31
MW-18
MW-12
MW-16
MW-16D
MW-11
MW-11D

MW-20	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09
Phenol	1	180	1700	930	970	1600	1400
2 Methyl Phenol	1	9.2	200	140	120	200	ND
4 Methyl Phenol	1	ND	1100	650	470	720	980
Total SVOCs		197.2	3000	1720	1560	2520	2380

MW-19	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09
Benzo(a)anthracene	0.002	ND	ND	11	ND	ND	ND
Chrysene	0.002	ND	ND	11	ND	ND	ND
Benzo(b)fluoranthene	0.002	ND	ND	8	ND	ND	ND
Benzo(k)fluoranthene	0.002	ND	ND	8	ND	ND	ND
Total SVOCs		0	25	128	0	0	0

MW-32	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09
Phenol	1	ND	ND	13	ND	ND	ND
Toal SVOCs		0	0	13	0	0	0

MW-30	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09
2,4 Dimethylphenol	50	21	110	100	86	49	37
Napthalene	10	2.3	15	22	13	14	11
Total SVOCs		23.3	125	122	99	63	48

MW-18	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09
2-Chlorophenol	1	ND	9	ND	ND	ND	ND
Total SVOCs		0	9	0	0	0	0

MAPPING REFERENCES:
1) MAPPING SHOWN TAKEN FROM THE FINAL REMEDIATION REPORT DRAWINGS NO. V8 "GRID SAMPLE LOCATIONS MAP" AND NO. V9 "AS-BUILT TOPOGRAPHIC MAP" BY CLARK ENGINEERING & SURVEYING, P.C., DATED 10/19/2007 AND ALL REFERENCES AND NOTES THEREIN.

2) MONITORING WELL LOCATIONS BY A SURVEY PERFORMED BY EARTH TECH, MAY 8, 2008

LEGEND

MW-19D MONITORING WELL LOCATION WITH REPORTED TOTAL SVOC CONCENTRATION

SAMPLING LOCATION

MW-32	µg/L
Phenol	13
bis(2-Ethylhexyl)phthalate	6

CHEMICAL CONSTITUENT

PLAN

Scale in Feet

0 50' 100'

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Latham, New York 12110

FIGURE 5 - TOTAL DETECTED SVOC CONCENTRATIONS IN GROUNDWATER & AWQS EXCEEDENCES

GROUNDWATER SAMPLING REPORT
34 Freeman's Bridge Road Site
NYSDEC Site # 4-47-028

Town of Glenville	Schenectady County, New York
DATE: September, 2009	SCALE: 1"=100'
PROJECT NO.: 105886	FIGURE 5

Appendix A
Monitoring Well Purging/Sampling Forms

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 11 Date: 9/16/2009

Samplers: Tyler Brown and Caty Kielb

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):	12.05	feet
4. C = Column of Water in Casing:	7.3	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.20	gal
6. 3(V) =Target Purge Volume	3.60	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	815	816	817	818			
Water Level	feet	12.05	-	-	-			
Volume Purged	gal	0.00	1.20	2.40	3.60			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	8.2	16.0	19.0	17.0			
Dissolved Oxygen	mg / L	6.23	3.94	2.68	3.95			
Eh / ORP	MeV	58.8	49	54.4	39.5			
Conductivity	µmho / cm	0.975	1.107	1.023	0.995			
pH	pH unit	6.66	6.41	6.35	6.42			
Temp	C	15.65	16.20	15.32	14.48			
Color	Visual	clear	clear	clear	clear			
Odor	Olfactory	none	none	none	none			

Comments:

Started purge at 815
Sampled at 820

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 11 D Date: 9/16/2009

Samplers: Tyler Brown and Catey Kielb

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

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):	11.71	feet
4. C = Column of Water in Casing:	41.79	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	6.80	gal
6. 3(V) =Target Purge Volume	20.40	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	847	854	900	909			
Water Level	feet	11.71	-	-	-			
Volume Purged	gal	0.00	6.80	13.60	20.40			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	7.00	11.00	4.70	15.00			
Dissolved Oxygen	mg / L	5.39	10.81	3.33	2.62			
Eh / ORP	MeV	28.7	-81.5	-92.9	-95.9			
Conductivity	µmho / cm	1.085	1.568	1.558	1.543			
pH	pH unit	6.72	6.95	6.93	6.95			
Temp	C	15.35	11.66	11.41	11.43			
Color	Visual	clear	clear	clear	clear			
Odor	Olfactory	none	none	none	none			

Comments:

Started purge at 847
Sampled at 910

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 12 Date: 9/16/2009

Samplers: Tyler Brown and Catey Kielb

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):	11.15	feet
4. C = Column of Water in Casing:	6.14	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.00	gal
6. 3(V) =Target Purge Volume	3.00	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	1326	1328					
Water Level	feet	11.15	-					
Volume Purged	gal	0.00	1.00					
Flow Rate	mL / min	-	-					
Turbidity	NTU	11.0	100.0					
Dissolved Oxygen	mg / L	10.49	5.96					
Eh / ORP	MeV	27.7	61.7					
Conductivity	µmho / cm	0.714	0.718					
pH	pH unit	7.01	6.67					
Temp	C	15.02	14.24					
Color	Visual	clear	clear					
Odor	Olfactory	none	none					

Comments:

Started purge at 1326
Purged 1.5 gallons
Sampled at 1346

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 15 Date: 9/17/2009

Samplers: Tyler Brown and Catey Kielb

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):	3.84	feet
4. C = Column of Water in Casing:	10.41	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.70	gal
6. 3(V) =Target Purge Volume	5.10	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	821	823	824	825			
Water Level	feet	3.84	-	-	-			
Volume Purged	gal	0.00	1.70	3.40	5.10			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	240.0	33.0	23.0	32.0			
Dissolved Oxygen	mg / L	4.31	3.69	3.93	2.99			
Eh / ORP	MeV	-19.9	-56.5	-59	-64.4			
Conductivity	µmho / cm	0.702	0.729	0.728	0.685			
pH	pH unit	6.57	6.56	6.96	7.02			
Temp	C	15.31	15.70	15.60	16.38			
Color	Visual	clear	clear	clear	clear			
Odor	Olfactory	none	none	none	none			

Comments:

Started purge at 821
Sampled at 825

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 15 D Date: 9-17-09

Samplers: Tyler Brown and Catey Kielb

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):	3.94	feet
4. C = Column of Water in Casing:	25.56	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	4.20	gal
6. 3(V) =Target Purge Volume	12.60	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	839	842	845	848			
Water Level	feet	3.94	-	-	-			
Volume Purged	gal	0.00	4.20	8.40	12.60			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	130.0	3.8	9.00	6.40			
Dissolved Oxygen	mg / L	4.42	4.90	4.11	3.92			
Eh / ORP	MeV	-64	-15.9	-2.2	1.8			
Conductivity	µmho / cm	0.236	0.82	0.843	0.846			
pH	pH unit	7.42	7.05	7.08	7.07			
Temp	C	14.23	12.23	11.98	11.92			
Color	Visual	clear	clear	clear	clear			
Odor	Olfactory	none	none	none	none			

Comments:

Started purge at 839
Sampled at 850

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW-16 Date: 9-15-09

Samplers: Tyler Brown and Catey Kielb

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

Purging / 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):	9.39	feet
4. C = Column of Water in Casing:	3.81	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	0.620	gal
6. 3(V) =Target Purge Volume	1.860	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	922						
Water Level	feet	-						
Volume Purged	gal	0.00						
Flow Rate	mL / min	-						
Turbidity	NTU	12.0						
Dissolved Oxygen	mg / L	3.46						
Eh / ORP	MeV	-113.5						
Conductivity	µmho / cm	1.461						
pH	pH unit	6.86						
Temp	C	15.58						
Color	Visual	clear						
Odor	Olfactory	none						

Comments:

Started purge at 921
Purged dry at 923, purged 1 gallon
Sampled at 945

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 16 D Date: 9-15-09

Samplers: Tyler Brown and Catey Kielb

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

Purging / 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):	8.72	feet
4. C = Column of Water in Casing:	19.92	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	3.25	gal
6. 3(V) =Target Purge Volume	9.74	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	954	956	959	1001			
Water Level	feet	-	-	-	-			
Volume Purged	gal	0.00	3.25	6.50	9.75			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	120.00	4.90	2.70	2.30			
Dissolved Oxygen	mg / L	11.21	4.85	3.44	4.32			
Eh / ORP	MeV	55.5	-5.4	-14.5	-26.7			
Conductivity	µmho / cm	0.783	0.921	0.932	0.931			
pH	pH unit	7.80	7.37	7.15	7.07			
Temp	C	15.54	11.82	11.37	11.26			
Color	Visual	brown	clear	clear	clear			
Odor	Olfactory	none	none	none	none			

Comments:

Started purge at 954
Sampled at 1002

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 18 Date: 9-16-09

Samplers: Tyler Brown and Catey Kielb

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):	8.3	feet
4. C = Column of Water in Casing:	6.4	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.04	gal
6. 3(V) =Target Purge Volume	3.12	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	1404	1405	1406	1408			
Water Level	feet	-	-	-	-			
Volume Purged	gal	0.00	1.00	2.00	3.00			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	100.0	60.0	22.0	8.40			
Dissolved Oxygen	mg / L	7.47	4.90	4.21	3.67			
Eh / ORP	MeV	69.3	78.4	107.4	112.2			
Conductivity	µmho / cm	0.781	0.442	0.398	0.387			
pH	pH unit	6.89	6.73	6.50	6.42			
Temp	C	16.01	16.59	16.86	16.93			
Color	Visual	clear	clear	clear	clear			
Odor	Olfactory	none	none	none	none			

Comments:

Started purge at 1404
Sampled at 1410

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 19 Date: 9-16-09

Samplers: Tyler Brown and Catey Kielb

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

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth:	9.72	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	6.83	feet
4. C = Column of Water in Casing:	2.89	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	0.50	gal
6. 3(V) =Target Purge Volume	1.50	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	943	944	945				
Water Level	feet	6.83	-	-				
Volume Purged	gal	0.00	0.50	1.00				
Flow Rate	mL / min	-	-	-				
Turbidity	NTU	120.0	16.0	55.0				
Dissolved Oxygen	mg / L	5	4.91	6.01				
Eh / ORP	MeV	-28.00	1.20	-18.20				
Conductivity	µmho / cm	0.896	0.887	0.875				
pH	pH unit	7	6.93	6.91				
Temp	C	16.34	16.72	16.46				
Color	Visual	cloudy	clear	clear				
Odor	Olfactory	none	none	none				

Comments:

Started purge 943
Purged dry at 945, 1.5 gallons
Sampled 950

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 19 D Date: 9-16-09

Samplers: Tyler Brown and Catey Kielb

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

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth:	22.31	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	5.33	feet
4. C = Column of Water in Casing:	16.98	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	2.77	gal
6. 3(V) =Target Purge Volume	8.30	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	1008	1011	1014	1016			
Water Level	feet	5.33	-	-	-			
Volume Purged	gal	0.00	2.77	5.50	8.30			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	80.0	24.0	0.0	6.1			
Dissolved Oxygen	mg / L	5.48	4.31	3.96	4.05			
Eh / ORP	MeV	-72.9	-77.3	-75	-75.8			
Conductivity	µmho / cm	0.841	0.804	0.794	0.792			
pH	pH unit	6.98	6.93	6.91	6.88			
Temp	C	13.15	12.22	12.07	12.00			
Color	Visual	clear	clear	clear	clear			
Odor	Olfactory	none	none	none	none			

Comments:

Started purge at 1008
Sampled at 1015

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 20 Date: 9-15-09

Samplers: Tyler Brown and Catey Kielb

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

Purging / Sampling Method: Bailer

1. L = Total Well Depth:	12.41	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	7.1	feet
4. C = Column of Water in Casing:	5.31	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	0.87	gal
6. 3(V) =Target Purge Volume	2.60	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	1309	1315					
Water Level	feet	-	-					
Volume Purged	gal	0.00	1.50					
Flow Rate	mL / min	-	-					
Turbidity	NTU	28.0	45.0					
Dissolved Oxygen	mg / L	3.95	5.74					
Eh / ORP	MeV	-24.3	-192.7					
Conductivity	µmho / cm	3.009	2.674					
pH	pH unit	10.28	9.38					
Temp	C	15.92	16.94					
Color	Visual	cloudy	cloudy					
Odor	Olfactory	urine	urine					

Comments:

Started purge at 1309
Purged dry 1 gallon
Restarted 1314
Sampled 1400

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 20 D Date: 9-15-09

Samplers: Tyler Brown and Catey Kielb

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):	7.16	feet
4. C = Column of Water in Casing:	24.74	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	4.00	gal
6. 3(V) =Target Purge Volume	12.00	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	1241	1243	1246	1249			
Water Level	feet	7.17	-	-	-			
Volume Purged	gal	0.00	4.00	8.00	12.00			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	210.0	30.0	13.0	7.6			
Dissolved Oxygen	mg / L	3.37	3.08	5.58	2.50			
Eh / ORP	MeV	-103.6	-98.7	-86.6	-84			
Conductivity	µmho / cm	0.853	0.841	0.836	0.834			
pH	pH unit	7.14	7.25	7.19	7.14			
Temp	C	13.31	11.93	11.54	11.42			
Color	Visual	cloudy	cloudy	clear	clear			
Odor	Olfactory	none	none	none	none			

Comments:

Started purge at 1241
Sampled at 1249

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 21 Date: 9-16-09

Samplers: Tyler Brown and Catey Kielb

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

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth:	18.3	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	7.7	feet
4. C = Column of Water in Casing:	10.6	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.70	gal
6. 3(V) =Target Purge Volume	5.20	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	1220	1222	1223	1225			
Water Level	feet	-	-	-	-			
Volume Purged	gal	0.00	1.70	3.40	5.20			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	45.0	55.0	70.0	160.0			
Dissolved Oxygen	mg / L	6.81	5.60	5.15	5.47			
Eh / ORP	MeV	-65.9	-64.3	-56.4	-56.5			
Conductivity	µmho / cm	1.358	1.188	1.38	1.454			
pH	pH unit	6.73	6.71	6.62	6.60			
Temp	C	14.96	15.24	13.96	13.57			
Color	Visual	yellow	yellow	yellow	brown			
Odor	Olfactory	strong odor	strong odor	strong odor	strong odor			

Comments:

Started purge 1220
Sampled at 1225

Odor smells like MW-20 and the visible evidence is that the seapage is moving into this monitoring well

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 21 D Date: 9-16-09

Samplers: Tyler Brown and Caty Kielb

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

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth:	50.2	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	9.19	feet
4. C = Column of Water in Casing:	41.01	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	6.70	gal
6. 3(V) =Target Purge Volume	20.10	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	1245	1251	1256	1301			
Water Level	feet	9.19	-	-	-			
Volume Purged	gal	0.00	6.70	13.40	20.10			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	8.20	0.00	5.40	0.35			
Dissolved Oxygen	mg / L	4.92	2.180	3.56	2.99			
Eh / ORP	MeV	-83.2	-88.8	-87.1	-87.6			
Conductivity	µmho / cm	0.894	0.911	0.904	0.907			
pH	pH unit	6.94	7.09	7.17	7.13			
Temp	C	13.91	12.40	12.08	11.96			
Color	Visual	clear	clear	clear	clear			
Odor	Olfactory	none	none	none	none			

Comments:

Started purge at 1245
Sampled at 1310

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 23 Date: 9-15-09

Samplers: Tyler Brown and Catey Kielb

Sample Number: MW-23 QA/QC Collected? None

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth:	11.3	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	5.5	feet
4. C = Column of Water in Casing:	5.8	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	0.95	gal
6. 3(V) =Target Purge Volume	2.83	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	1035	1036	1037	1039	1041		
Water Level	feet	5.50	-	-	-	-		
Volume Purged	gal	0.00	0.75	1.00	2.00	3.00		
Flow Rate	mL / min	-	-	-	-	-		
Turbidity	NTU	150.0	950.0	250.0	250.0	140.0		
Dissolved Oxygen	mg / L	6.76	4.31	3.53	5.78	4.77		
Eh / ORP	MeV	-69.7	-91.6	-107.1	-87.6	-87.6		
Conductivity	µmho / cm	0.843	0.853	0.872	0.848	0.843		
pH	pH unit	7.07	7.12	6.98	7.01	7.01		
Temp	C	16.72	14.95	13.83	14.63	14.41		
Color	Visual	cloudy	cloudy	cloudy	cloudy	cloudy		
Odor	Olfactory	sulfur	sulfur	none	none	none		

Comments:

Started purge at 1035
Purged 3 gallons
Sampled at 1042

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 23 D Date: 9-15-09

Samplers: Tyler Brown and Catey Kielb

Sample Number: MW-23 D QA/QC Collected? None

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth:	55.3	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	4.61	feet
4. C = Column of Water in Casing:	50.69	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	8.26	gal
6. 3(V) =Target Purge Volume	24.80	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	1047	1103	1109	1116			
Water Level	feet	4.61	-	-	-			
Volume Purged	gal	0.00	8.26	16.52	24.80			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	65.0	45.0	6.2	3.5			
Dissolved Oxygen	mg / L	7.91	4.19	3.00	3.55			
Eh / ORP	MeV	-89.4	-79	-87.6	-86.3			
Conductivity	µmho / cm	0.851	0.914	0.92	0.915			
pH	pH unit	7.21	7.27	7.32	7.18			
Temp	C	14.44	12.57	12.57	12.59			
Color	Visual	clear	clear	clear	clear			
Odor	Olfactory	none	none	none	none			

Comments:

Started purge at 1047
Sampled at 1115

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW-30 Date: 9-17-09

Samplers: Tyler Brown and Catey Kielb

Sample Number: MW-30 QA/QC Collected? DUP-1

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth:	16.49	feet
2. D = Riser Diameter (I.D.):	0.33	feet
3. W = Static Depth to Water (TOC):	6.76	feet
4. C = Column of Water in Casing:	9.73	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	6.30	gal
6. 3(V) =Target Purge Volume	18.90	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	1122	1126	1131	1137			
Water Level	feet	6.76	-	-	-			
Volume Purged	gal	0.00	6.30	12.60	18.90			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	19.0	12.0	5.0	6.1			
Dissolved Oxygen	mg / L	5.68	5.22	1.99	3.48			
Eh / ORP	MeV	-162.6	-247.8	-260.6	-244.6			
Conductivity	µmho / cm	1.525	1.465	1.392	1.232			
pH	pH unit	6.96	7.02	6.88	6.87			
Temp	C	15.34	14.87	14.12	13.52			
Color	Visual	grey	grey	grey	grey			
Odor	Olfactory	sulfur/volatile	volatiles	volatiles	volatiles			

Comments:

Started purge at 1122
Sampled at 1137

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 31 Date: 9-17-09

Samplers: Tyler Brown and Catey Kielb

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):	6.01	feet
4. C = Column of Water in Casing:	10.78	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	7.00	gal
6. 3(V) =Target Purge Volume	21.00	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	1051	1055	1059	1105			
Water Level	feet	6.01	-	-	-			
Volume Purged	gal	0.00	7.00	14.00	21.00			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	30.0	13.0	21.0	0.0			
Dissolved Oxygen	mg / L	5.08	6.87	5.11	3.49			
Eh / ORP	MeV	-76.2	-67.2	-71.6	-70.7			
Conductivity	µmho / cm	1.465	1.447	1.359	1.315			
pH	pH unit	6.28	6391.00	6.94	6.91			
Temp	C	14.25	13.86	13.44	13.33			
Color	Visual	clear	clear	clear	clear			
Odor	Olfactory	none	none	none	none			

Comments:

Started purge at 1051
Sampled at 1105

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 32 Date: 9-17-09

Samplers: Tyler Brown and Catey Kielb

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

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth:	22.24	feet
2. D = Riser Diameter (I.D.):	0.33	feet
3. W = Static Depth to Water (TOC):	7.32	feet
4. C = Column of Water in Casing:	14.92	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	9.70	gal
6. 3(V) =Target Purge Volume	29.10	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	1012	1020	1029			
Water Level	feet	7.32	-	-	-			
Volume Purged	gal	0.00	9.70	19.40	29.10			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	16.0	90.0	65.0				
Dissolved Oxygen	mg / L	6.06	15.44	6.94	6.83			
Eh / ORP	MeV	-115.9	-104.9	-90.8	-82			
Conductivity	µmho / cm	1.952	0.935	0.867	0.891			
pH	pH unit	7.53	7.42	6.90	6.86			
Temp	C	14.96	11.88	11.68	11.60			
Color	Visual	grey	grey	grey	grey			
Odor	Olfactory	sulfur	sulfur	sulfur	sulfur			

Comments:

Started purge at 1006
Sampled at 1030

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 33 Date: 9-17-09

Samplers: Tyler Brown and Catey Kielb

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

Purging / 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):	6.74	feet
4. C = Column of Water in Casing:	7.2	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	4.30	gal
6. 3(V) =Target Purge Volume	12.90	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	920	922					
Water Level	feet	6.24	-					
Volume Purged	gal	0.00	4.30					
Flow Rate	mL / min	-	-					
Turbidity	NTU	8.3	400.0					
Dissolved Oxygen	mg / L	5.35	7.06					
Eh / ORP	MeV	-105.1	-120.2					
Conductivity	µmho / cm	3.502	3.407					
pH	pH unit	7.03	7.16					
Temp	C	14.45	15.26					
Color	Visual	yellow	black					
Odor	Olfactory	sulfur	sulfur					

Comments:

Started purge at 920
Purged dry at 925, 6.25 gallons
Sampled at 935