Groundwater Sampling Report
December 2009

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

Work Assignment No. D004445-9

Prepared for:

SUPERFUND STANDBY PROGRAM
New York State
Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Prepared by:

AECOM Technical Services Northeast, Inc.
40 British American Boulevard
Latham, New York 12110

February 2010

TABLE OF CONTENTS

Chapter **Page**

LIST OF TABLES

LIST OF FIGURES

APPENDIX

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 December 2009 groundwater sampling event and any conclusions or suggestions drawn from this data. This groundwater sampling event was the sixth 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 December 8 through 10, 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. Neither PCBs nor 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 groundwater zone and to determine the groundwater flow pathways. The depth to water measurements were recorded using an interface probe, which 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 556 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 or a dedicated bailer. Bailers were used on the shallow wells that have historically purged dry very quickly. This change was made to gather more accurate parameters on the groundwater on these wells. 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 December 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 portion of the aquifer (Figure 2). The overall direction of groundwater flow in the shallow portion was to the northwest in the southern section of the Site, trending to the north-northeast in the northern section of the Site, towards Warner's Creek. The overall direction of groundwater flow has remained consistent over the past five sampling events.

3.2 GROUNDWATER ANALYTICAL RESULTS

This was the sixth 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 December 2009 results were compared to the previous five sampling events occurring from March 2008 through September 2009.

In each of previous sampling events the water purged from the monitoring wells was very turbid. This additional material is likely caused by the fine nature of the thermally treated soil used to backfill. In response to this situation, additional groundwater was purged to augment well development during the March and June 2009 sampling events. The wells and groundwater samples have continued to show much lower levels of turbidity following the additional well development the wells.

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

3.2.1 Volatile Organic Compounds

The results of the VOC analysis are presented in Table 2. VOCs were detected in concentrations exceeding the AWQSs in the seven monitoring wells during the December 2009 event compared to ten in September 2009. Cis-1,2-dichloroethene was detected in four wells, with a maximum concentration of 29 µg/L (MW-19D). The concentrations of cis-1,2-dichloroethene in MW-19 and MW-23 have decreased to below detection limits during this sampling event. These monitoring wells have consistently showed exceedences in past sampling events.

The list of VOCs detected in the December 2009 sampling event include, vinyl chloride, cis-1,2 dichloroethene, trichloroethene, acetone, 2-butanone, xylene, isopropylbenzene, and ethylbenzene. Several of these VOCs are only being detected in MW-30. This well had a total VOC concentration of 8,600 µg/L, an increase from 5,284 µg/L in the September 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 six quarterly sampling events. The concentration has increased to 1,100 µg/L (December 2009) from 670 µg/L (September 2009). Similar to September 2009, 2-butanone was detected at elevated concentrations. The concentration of 2-butanone was recorded at 210 µg/L in this well, an increase from 120 µg/L. No apparent trends in the concentrations of these compounds are evident at this time. This monitoring well is located along the northwestern Site boundary, adjacent to the veterinary clinic property. The well has exhibited a very strong "urine" odor and yellow coloration over the past five sampling events. Groundwater quality data measured the Oxygen Reduction Potential (ORP) to be an order of magnitude lower than upgradient wells. In addition, the pH in the water exceeded 11.

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 (29 µg/L) and MW-16D (8.4 µg/L). These concentrations remain relatively unchanged from the concentrations detected in September 2009.

Figure 3 summarizes the contaminant concentrations that exceeded the VOC AWQSs.

3.2.2 Semi-volatile Organic Compounds

Concentrations of SVOCs above laboratory detection limits were detected in four monitoring wells: MW-16, MW-20, MW-30, and MW-33 (see Table 3). Phenol concentrations in MW-20 increased, from 1400 µg/L in September 2009 to 2300 µg/L in December 2009, the highest concentration to date. Additionally MW-20 had exceedences for 2-methylphenol (180 µg/L) and 4-methylphenol (720 µg/L).

MW-16 and MW-33 both exhibited exceedences for SVOCs for the first time since the onset of sampling. MW-16 had an exceedence of bis(2-ethylhexyl)phthalate (17 µg/L) and MW-33 had an exceedence of naphthalene (35 µg/L).

The only other monitoring well with a concentration exceeding the AWQSs was MW-30 with 15 µg/L of naphthalene. This is the first sampling event where the concentration of 2,4-dimethylphenol was below the detection limit of 5 µg/L. This concentration has shown a steady decrease in the concentration of this compound since August 2008.

Figure 4 summarizes the contaminant concentrations that exceeded the SVOC AWQSs.

3.2.3 Metals

Table 4 presents the results of the metals analysis for the December 2009 and previous sampling events. Antimony, iron, lead, magnesium, manganese, sodium, and thallium were detected in concentrations above the SCGs for metals in drinking water in the prior sampling events.

This sampling event exhibited exceedences for thallium in 13 out of the 20 monitoring wells compared to all 20 wells in September 2009. No apparent explanation for the increase of this element has been determined, but some possibilities are presented in section 4.0.

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

4.0 CONCLUSIONS AND RECOMMENDATIONS

Comparison of the December 2009 groundwater analytical data to the data from the six previous sampling events shows few notable changes to the 20 Site wells. Monitoring wells MW-20, and MW-30 continue to have the highest levels of VOC concentrations. Both of these wells had increased concentrations for total VOCs during this event. Additionally MW-20 and MW-30 continue to have exceedences for SVOCs significantly higher than any of the other site wells. MW-23 had previously shown exceedences in all six sampling events but had no VOC concentrations over detection limits in December 2009.

There was an increase in the concentration of total VOCs in MW-30 from 5,284 µg/L to 8,600 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 15 µg/L, down from its maximum of 125 µg/L recorded in August 2008. The level of 2, 4-dimethyphenol has dropped to below the detection limit (5 µg/L). The concentration of naphthalene (15 µg/L) continues to be just above the SCGs value of 10 µg/L.

Acetone still exceeds cleanup standards in MW-20. The concentration increased from 670 µg/L in September 2009 to 1,100 µg/L. The total VOC concentrations in MW-20 have increased slightly from September 2009 but are still lower than the maximum of 3,310 µg/L in December 2008. Odors from MW-20 suggest that practices at the veterinary clinic could be impacting this well. This well should be sampled for total organic carbon, ammonia, 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.

Seven other wells on site recorded exceedences for VOCs but showed no significant changes in concentrations from the September 2009 sampling event.

Continued monitoring for metals may help determine if the exceedences for thallium in 13 of the 20 wells at the site is a trend or an anomaly. Disposal and backfilling practices at the site may 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). Large volumes of concrete were part of the site fill, and were processed through the Low Temperature Thermal Desorption (LTTD) unit and subsequently backfilled former fill area. In addition, the excavated soil was often combined with Lime Kiln Dust (LKD) prior to treatment to reduce moisture. This concrete and concrete dust may be leaching additional thallium into the groundwater adding to the elevated concentrations.

The next sampling event for the Freemans Bridge Site is March 2010.

Tables

Table 1

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

Date					Dec-09	
Monitoring Well	Total Depth	GROUND Elevation	CASING Elevation	Measuring Point	DTW (ft)	GW Elevation (ft)
MW-11	19.35	228.57	231.42	231.23	11.51	219.72
MW-11D	53.5	228.61	231.26	231.20	11.44	219.76
MW-12	17.29	228.50	231.06	230.68	10.63	220.05
MW-15	14.25	FLUSH	224.47	224.14	3.42	220.72
MW-15D	29.5	FLUSH	224.49	224.35	3.51	220.84
MW-16	13.2	226.09	228.68	228.41	9.06	219.35
MW-16D	28.64	225.81	227.67	227.49	8.45	219.04
MW-18	14.7	227.29	229.94	229.58	7.88	221.70
MW-19	9.72	224.77	227.27	227.12	5.62	221.50
MW-19D	22.31	224.89	226.14	226.01	4.71	221.30
MW-20	12.41	224.80	226.99	226.89	6.59	220.30
MW-20D	31.9	224.72	227.16	227.13	6.8	220.33
MW-21	18.3	224.52	227.51	227.46	7.17	220.29
MW-21D	50.2	224.71	229.56	229.05	8.85	220.20
MW-23	11.3	221.99	224.93	224.86	4.97	219.89
MW-23D	55.3	222.36	224.46	224.32	4.28	220.04
MW-30	16.49	223.57	226.26	226.19	6.3	219.89
MW-31	16.79	223.18	225.55	225.43	5.69	219.74
MW-32	22.24	224.92	227.83	227.32	6.93	220.39
MW-33	13.94	224.18	227.37	226.99	6.19	220.80

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
December 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	12/8/09	3/27/08	8/26/08	12/3/08	3/26/09	6/18/09	9/16/09	12/10/09	3/24/08	8/26/08	12/5/08	3/26/09	6/18/09	9/16/09	12/8/09
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
Volatiles	AWQS/GV Values																					
Vinyl chloride	2	5 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	10 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	10 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	10 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	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	5 U	5 U	5 U
Methylene chloride	5	5 U	5 U	**11**	5 U	5 U	5 U	5 U	5 U	**5**	**5**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl tert-butyl Ether	10(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	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	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	5 U	5 U	5 U
Trichloroethene	5	**17**	**9.9**	**12**	5 U	**11**	**5.7**	**7.5**	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
Methylcyclohexane	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	**7**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
o-xylene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
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	5 U	5 U	5 U
Isopropylbenzene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Total CVOC's		24	9.9	23	0	11	5.7	7.5	0	5	5	0	0	0	0	0	0	0	0	0	0	0
Total VOC's		**24**	**9.9**	**23**	**0**	**11**	**5.7**	**7.5**	**0**	**5**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Sample ID		MW15							MW15D						
Sampling Date		3/26/08	8/26/08	12/5/08	3/27/09	6/19/09	9/17/09	12/10/09	3/26/08	8/26/08	12/5/08	3/27/09	6/19/09	9/17/09	12/10/09
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
Volatiles	AWQS/GV Values														
Vinyl chloride	2	**16**	**76**	**44**	**11**	**21**	**21**	**18**	5 U	10 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	10 U	5 U	10 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
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
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
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
cis-1,2-Dichloroethene	5	**8.3**	**15**	**17**	5 U	**8.6**	**11**	**9.9**	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	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
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
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
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
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
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
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
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
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
Total CVOC's		24.3	91	61	11	29.6	32	27.9	0	0	0	0	0	0	0
Total VOC's		**24.3**	**91**	**61**	**11**	**29.6**	**32**	**27.9**	**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	12/9/09	3/25/08	8/26/08	12/3/08	3/25/09	6/17/09	9/15/09	12/9/09
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
Volatiles	AWQS/GV Values														
Vinyl chloride	2	5 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	10 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	10 U	5 U	10 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	10 U	5 U	5 U	5 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
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
Methyl tert-butyl Ether	10(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**5.9**	5 U	5 U	5 U	**11**	5 U	5 U
cis-1,2-Dichloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**25**	**9.2**	**11**	**7.3**	**14**	**7.8**	**8.4**
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
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
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
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
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
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
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
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
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
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
Total CVOC's		0	0	0	0	0	0	0	25	9.2	11	7.3	14	7.8	8.4
Total VOC's		**0**	**24**	**0**	**15**	**0**	**0**	**0**	**30.9**	**9.2**	**11**	**7.3**	**25**	**7.8**	**8.4**

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	12/10/09	3/26/08	8/25/08	12/4/08	3/27/09	6/18/09	9/16/09	12/10/09	3/26/08	8/25/08	12/4/08	3/27/09	6/18/09	9/16/09	12/10/09
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
Volatiles	AWQS/GV Values																					
Vinyl chloride	2	5 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 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	10 U	5 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	50 (GV)	10 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	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	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	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	**23**	**12**	5 U	**9.4**	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	**6.5**	**5.7**	5 U	**36**	**33**	**42**	**34**	**43**	**26**	**29**
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	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	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	5 U	5 U	5 U
Methylcyclohexane	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
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	5 U	5 U	5 U
Ethylbenzene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
o-xylene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
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	5 U	5 U	5 U
Isopropylbenzene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Total CVOC's		0	0	0	0	0	0	0	0	23	12	0	15.9	5.7	0	36	33	42	34	43	26	29
Total VOC's		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**23**	**12**	**0**	**15.9**	**5.7**	**0**	**36**	**33**	**42**	**34**	**43**	**26**	**29**

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
December 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	12/10/09	3/24/08	8/25/08	12/4/08	3/25/09	6/19/09	9/15/09	12/10/09	3/24/08	8/25/08	12/4/08	3/26/09	6/17/09	9/16/09	12/10/09	3/24/08	8/25/08	12/4/08	3/26/09	6/17/09	9/16/09	12/10/09	3/27/08	8/25/08	12/3/08	3/25/09	6/17/09	9/15/09	12/9/09
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	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	50 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	10 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**	10 U
Chloroethane	5	5 U	100 U	200 U	200 U	100 U	50 U	50 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	**34**	10 U	10 U	**24**	10 U
Acetone	50 (GV)	**720** D	**1400** D	**2900** D	**1900**	**1300**	**670**	**1100**	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	10 U	10 U	10 U	10 U
Methyl Acetate	NS	5 U	50 U	50 U	100 U	**390**	**57**	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	5 U	5 U	5 U	5 U
Methylene chloride	5	5 U	50 U	**120** D	100 U	100 U	25 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	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	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	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	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	**49**	**68**	**21**	**61**	**99**	**33**	5 U
2-Butanone	50(GV)	**77**	100 U	**290** D	200 U	**190**	**120**	**210**	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	10 U	10 U	10 U	10 U
Benzene	1	5 U	50 U	100 U	100 U	50 U	25 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	5 U	5 U	5 U	5 U
Trichloroethene	5	5 U	50 U	50 U	100 U	50 U	25 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	5 U	5 U	5 U	5 U
Methylcyclohexane	NS	5 U	50 U	100 U	100 U	50 U	25 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	5 U	5 U	5 U	5 U
Toluene	5	5 U	50 U	100 U	100 U	50 U	25 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	5 U	5 U	5 U	5 U
Tetrachloroethene	5	5 U	50 U	50 U	100 U	50 U	25 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	5 U	5 U	5 U	5 U
Ethylbenzene	5	5 U	50 U	100 U	100 U	50 U	25 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	5 U	5 U	5 U	5 U
o-xylene	5	5 U	50 U	100 U	100 U	50 U	25 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	5 U	5 U	5 U	5 U
m&p-xylenes	5	5 U	50 U	100 U	100 U	50 U	25 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	5 U	5 U	5 U	5 U
Isopropylbenzene	5	5 U	50 U	100 U	100 U	50 U	25 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	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	0	0	0	0	59	68	71	84	138	73	0
Total VOC's		**797**	**1400**	**3310**	**1900**	**1880**	**847**	**1310**	**0**	**0**	**0**	**0**	**0**	**15**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**59**	**68**	**71**	**84**	**138**	**73**	**0**

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	12/9/09	3/25/08	8/26/08	12/5/08	3/27/09	6/19/09	9/17/09	12/10/09	3/25/08	8/26/08	12/4/08	3/25/09	6/19/09	9/17/09	12/10/09	3/27/08	8/26/08	12/5/08	3/26/09	6/19/09	9/17/09	12/8/09	3/26/08	8/26/08	12/5/08	3/26/09	6/17/09	9/17/09	12/8/09
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	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	10 U	5 U	200 U	100 U	500 U	100 U	100 U	200 U	**7.9**	**13**	**12**	**11**	**11**	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	10 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	10 U	5 U	200 U	100 U	500 U	100 U	100 U	200 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 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	10 U	200 U	100 U	500 U	100 U	100 U	200 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	**36**	10 U	**16**	10 U	10 U	**18** B	10 U
Methyl Acetate	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U	250 U	50 U	50 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	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	100 U	50 U	250 U	50 U	50 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	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**	5 U
Methyl tert-butyl Ether	10(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U	250 U	50 U	50 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	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	**50**	10 U	10 U	**14**	**11**	**24**	**10**	**12**	**10**	**14**	**11**	**24**	**12**	**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	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	200 U	100 U	500 U	100 U	100 U	200 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	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U	250 U	50 U	50 U	100 U	5 U	5 U	5 U	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**	5 U
Trichloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	100 U	250 U	50 U	50 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	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	5 U	**26**	100 U	50 U	250 U	50 U	**64**	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**69**	100 U	50 U	250 U	50 U	**140**	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	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	100 U	100 U	250 U	50 U	50 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**110**	**1700** D	**610** D	**1100**	**700**	**780**	**800**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
o-xylene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**110**	**140** D	**73** D	250 U	**79**	**150**	100 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	5 U	5 U	5 U
m&p-xylenes	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**3000** D	**8500** E	**2600** E	**10000**	**4100** EE	**4000**	**7700**	**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	5 U	5 U	5 U	5 U
Isopropylbenzene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**72**	**180** D	**110** D	250 U	**90**	**150**	**100**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	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	50	0	0	0	0	0	0	19.9	23	26	22	35	12	10	0	0	0	0	0	0	0	0	0	0	0	11	0
Total VOC's		**0**	**0**	**0**	**0**	**0**	**25**	**0**	**3437**	**10520**	**3393**	**11100**	**4969**	**5284**	**8600**	**165.7**	**23**	**26**	**22**	**35**	**12**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**36**	**6**	**16**	**0**	**7.8**	**36.1**	**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
December 2009
Site No. 4-47-028

Sample ID		MW11						
Sampling Date		3/27/08	8/26/08	12/3/08	3/26/09	6/18/09	9/16/09	12/8/09
Units		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
2-Chlorophenol	1	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
4-Methylphenol	1	NA	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
Naphthalene	10(GV)	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
Anthracene	50(GV)	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
Fluoranthene	50(GV)	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
Benzo(a)anthracene	0.002	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
Bis(2-ethylhexyl)phthalate	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(b)fluoranthene	0.002 (GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(k)fluoranthene	0.002 (GV)	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
Total SVOCs		**0**	**0**	**0**	**0**	**0**	**0**	**0**

Sample ID		MW11D						
Sampling Date		3/27/08	8/26/08	12/3/08	3/26/09	6/18/09	9/16/09	12/10/09
Units		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
2-Chlorophenol	1	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
4-Methylphenol	1	NA	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
Naphthalene	10(GV)	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
Anthracene	50(GV)	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
Fluoranthene	50(GV)	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
Benzo(a)anthracene	0.002	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
Bis(2-ethylhexyl)phthalate	5	5 U	5 U	**6** B	5 U	5 U	5 U	5 U
Benzo(b)fluoranthene	0.002 (GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(k)fluoranthene	0.002 (GV)	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
Total SVOCs		**0**	**0**	**0**	**0**	**0**	**0**	**0**

Sample ID		MW12						
Sampling Date		3/24/08	8/26/08	12/5/08	3/26/09	6/18/09	9/16/09	12/8/09
Units		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
2-Chlorophenol	1	5.1 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
4-Methylphenol	1	NA	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
Naphthalene	10(GV)	5.1 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
Anthracene	50(GV)	5.1 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
Fluoranthene	50(GV)	5.1 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
Benzo(a)anthracene	0.002	5.1 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
Bis(2-ethylhexyl)phthalate	5	5.1 U	5 U	**7** B	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
Benzo(k)fluoranthene	0.002 (GV)	5.1 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
Total SVOCs		**0**	**0**	**0**	**0**	**0**	**0**	**0**

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

Sample ID		MW15D						
Sampling Date		3/26/08	8/26/08	12/5/08	3/27/09	6/19/09	9/17/09	12/10/09
Units		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
2-Chlorophenol	1	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
4-Methylphenol	1	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,4-Dimethylphenol	50(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Naphthalene	10(GV)	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
Anthracene	50(GV)	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
Fluoranthene	50(GV)	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
Benzo(a)anthracene	0.002	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
Bis(2-ethylhexyl)phthalate	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(b)fluoranthene	0.002 (GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(k)fluoranthene	0.002 (GV)	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
Total SVOCs		**0**	**0**	**0**	**0**	**0**	**0**	**0**

Sample ID		MW16						
Sampling Date		3/25/08	8/26/08	12/3/08	3/25/09	6/17/09	9/15/09	12/9/09
Units		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
2-Chlorophenol	1	5.2 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
4-Methylphenol	1	NA	5 U	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
Naphthalene	10(GV)	5.2 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
Anthracene	50(GV)	5.2 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
Fluoranthene	50(GV)	5.2 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
Benzo(a)anthracene	0.002	5.2 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
Bis(2-ethylhexyl)phthalate	5	5.2 U	5 U	5 U	5 U	5 U	5 U	**17**
Benzo(b)fluoranthene	0.002 (GV)	5.2 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
Benzo(a)pyrene	ND	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U
Total SVOCs		**4.8**	**0**	**0**	**0**	**0**	**0**	**17**

Sample ID		MW16D						
Sampling Date		3/25/08	8/26/08	12/3/08	3/25/09	6/17/09	9/15/09	12/9/09
Units		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
2-Chlorophenol	1	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
4-Methylphenol	1	NA	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
Naphthalene	10(GV)	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
Anthracene	50(GV)	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
Fluoranthene	50(GV)	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
Benzo(a)anthracene	0.002	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
Bis(2-ethylhexyl)phthalate	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(b)fluoranthene	0.002 (GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(k)fluoranthene	0.002 (GV)	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
Total SVOCs		**0**	**0**	**0**	**0**	**0**	**0**	**0**

Sample ID		MW18						
Sampling Date		3/26/08	8/26/08	12/5/08	3/27/09	6/18/09	9/16/09	12/10/09
Units		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
2-Chlorophenol	1	5 U	**9**	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
4-Methylphenol	1	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,4-Dimethylphenol	50(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Naphthalene	10(GV)	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
Anthracene	50(GV)	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
Fluoranthene	50(GV)	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
Benzo(a)anthracene	0.002	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
Bis(2-ethylhexyl)phthalate	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(b)fluoranthene	0.002 (GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(k)fluoranthene	0.002 (GV)	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
Total SVOCs		**0**	**9**	**0**	**0**	**0**	**0**	**0**

Sample ID		MW19						
Sampling Date		3/26/08	8/25/08	12/4/08	3/27/09	6/18/09	9/16/09	12/10/09
Units		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	6 U	6 U	5 U
2-Chlorophenol	1	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	6 U	6 U	5 U
4-Methylphenol	1	5 U	5 U	5 U	5 U	6 U	6 U	5 U
2,4-Dimethylphenol	50(GV)	5 U	5 U	5 U	5 U	6 U	6 U	5 U
Naphthalene	10(GV)	5 U	5 U	5 U	5 U	6 U	6 U	5 U
Phenanthrene	50(GV)	5 U	**7**	**23**	5 U	5 U	5 U	5 U
Anthracene	50(GV)	5 U	5 U	**11**	5 U	5 U	5 U	5 U
Carbazole	NA	5 U	**5**	5 U	5 U	6 U	6 U	5 U
Fluoranthene	50(GV)	5 U	**7**	**31**	5 U	5 U	5 U	5 U
Pyrene	50(GV)	5 U	**6**	**16**	5 U	5 U	5 U	5 U
Benzo(a)anthracene	0.002	5 U	5 U	**11**	5 U	5 U	5 U	5 U
Chrysene	0.002	5 U	5 U	**11**	5 U	5 U	5 U	5 U
Bis(2-ethylhexyl)phthalate	5	5 U	5 U	**15** B	5 U	5 U	5 U	5 U
Benzo(b)fluoranthene	0.002 (GV)	5 U	5 U	**8**	5 U	5 U	5 U	5 U
Benzo(k)fluoranthene	0.002 (GV)	5 U	5 U	**8**	5 U	5 U	5 U	5 U
Benzo(a)pyrene	ND	5 U	5 U	**9**	5 U	5 U	5 U	5 U
Total SVOCs		**0**	**25**	**128**	**0**	**0**	**0**	**0**

Sample ID		MW19D						
Sampling Date		3/26/08	8/25/08	12/4/08	3/27/09	6/18/09	9/16/09	12/10/09
Units		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
2-Chlorophenol	1	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
4-Methylphenol	1	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,4-Dimethylphenol	50(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Naphthalene	10(GV)	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
Anthracene	50(GV)	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
Fluoranthene	50(GV)	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
Benzo(a)anthracene	0.002	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
Bis(2-ethylhexyl)phthalate	5	5 U	5 U	**11** B	5 U	5 U	5 U	5 U
Benzo(b)fluoranthene	0.002 (GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(k)fluoranthene	0.002 (GV)	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
Total SVOCs		**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
December 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	12/10/09	3/24/08	8/25/08	12/4/08	3/25/09	6/19/09	9/15/09	12/10/09	3/24/08	8/25/08	12/4/08	3/26/09	6/17/09	9/16/09	12/10/09	3/24/08	8/25/08	12/4/08	3/26/09	6/17/09	9/16/09	12/10/09	3/27/08	8/25/08	12/3/08	3/25/09	6/17/09	9/15/09	12/9/09
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	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**	**2300** E	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	6 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	140 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Methylphenol	1	**9.2**	**200** D	**140** D	**120**	**200** D	500 U	**180**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 U	5 U	5 U	5 U
4-Methylphenol	1	NA	**1100** D	**650** D	**470**	**720** D	**980**	**720**	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U	6 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	140 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	6 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	140 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	6 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	140 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Anthracene	50(GV)	5.1 U	110 U	110 U	42 U	190 U	500 U	140 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbazole	NA	5.1 U	110 U	110 U	42 U	190 U	500 U	140 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Fluoranthene	50(GV)	5.1 U	110 U	110 U	42 U	190 U	500 U	140 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Pyrene	50(GV)	5.1 U	110 U	110 U	42 U	190 U	500 U	140 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(a)anthracene	0.002	5.1 U	110 U	110 U	42 U	190 U	500 U	140 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chrysene	0.002	5.1 U	110 U	110 U	42 U	190 U	500 U	140 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bis(2-ethylhexyl)phthalate	5	5.1 U	110 U	56 U	42 U	190 U	500 U	140 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	**14** B	5 U	5 U	5 U	5 U	5.1 U	5 U	**6** B	5 U	5 U	5 U	5 U	5 U	5 U	6 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	140 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	6 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	140 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	6 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	140 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Total SVOCs		**197.2**	**3000**	**1720**	**1560**	**2520**	**2380**	**3200**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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	12/9/09	3/25/08	8/26/08	12/5/08	3/27/09	6/19/09	9/17/09	12/10/09	3/25/08	8/26/08	12/4/08	3/25/09	6/19/09	9/17/09	12/10/09	3/27/08	8/26/08	12/5/08	3/26/09	6/19/09	9/17/09	12/8/09	3/26/08	8/26/08	12/5/08	3/26/09	6/17/09	9/17/09	12/8/09
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	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	11 U	15 U	9 U	10 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	**13**	5 U	6 U	5 U	5 U	5 U	6 U	6 U	11 U	5 U	5 U	11 U
2-Chlorophenol	1	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	11 U	9 U	10 U	5 U	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 U	5 U	5 U	5 U	6 U	6 U	11 U	5 U	5 U	11 U
2-Methylphenol	1	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	15 U	9 U	10 U	5 U	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 U	5 U	5 U	5 U	6 U	6 U	11 U	5 U	5 U	11 U
4-Methylphenol	1	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	11 U	15 U	9 U	10 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	6 U	5 U	5 U	5 U	6 U	6 U	11 U	5 U	5 U	11 U
2,4-Dimethylphenol	50(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**21**	**110** D	**100**	**86**	**49** D	**37**	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 U	5 U	5 U	5 U	6 U	6 U	11 U	5 U	5 U	11 U
Naphthalene	10(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**2.3** J	**15** D	**22**	**13**	**14** D	**11**	**15**	5 U	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	5 U	6 U	6 U	11 U	5 U	5 U	**35**
Phenanthrene	50(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	11 U	9 U	10 U	5 U	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 U	5 U	5 U	5 U	6 U	6 U	11 U	5 U	5 U	11 U
Anthracene	50(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	11 U	9 U	10 U	5 U	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 U	5 U	5 U	5 U	6 U	6 U	11 U	5 U	5 U	11 U
Carbazole	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	11 U	9 U	10 U	5 U	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 U	5 U	5 U	5 U	6 U	6 U	11 U	5 U	5 U	11 U
Fluoranthene	50(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	11 U	9 U	10 U	5 U	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 U	5 U	5 U	5 U	6 U	6 U	11 U	5 U	5 U	11 U
Pyrene	50(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	11 U	9 U	10 U	5 U	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 U	5 U	5 U	5 U	6 U	6 U	11 U	5 U	5 U	11 U
Benzo(a)anthracene	0.002	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	11 U	9 U	10 U	5 U	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 U	5 U	5 U	5 U	6 U	6 U	11 U	5 U	5 U	11 U
Chrysene	0.002	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	11 U	9 U	10 U	5 U	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 U	5 U	5 U	5 U	6 U	6 U	11 U	5 U	5 U	11 U
Bis(2-ethylhexyl)phthalate	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	15 U	9 U	10 U	5 U	5 U	5 U	5 U	**10** B	5 U	5 U	5 U	5 U	5 U	5 U	**6** B	5 U	6 U	5 U	5 U	5 U	6 U	6 U	11 U	5 U	5 U	11 U
Benzo(b)fluoranthene	0.002 (GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	11 U	9 U	10 U	5 U	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 U	5 U	5 U	5 U	6 U	6 U	11 U	5 U	5 U	11 U
Benzo(k)fluoranthene	0.002 (GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	11 U	9 U	10 U	5 U	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 U	5 U	5 U	5 U	6 U	6 U	11 U	5 U	5 U	11 U
Benzo(a)pyrene	ND	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11 U	11 U	9 U	10 U	5 U	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 U	5 U	5 U	5 U	6 U	6 U	11 U	5 U	5 U	11 U
Total SVOCs		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**23.3**	**125**	**122**	**99**	**63**	**48**	**15**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**35**

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
December 2009
Site No. 4-47-028

Sample ID		MW11							MW11D							MW12							MW15							MW15D						
Sampling Date		3/27/08	8/26/08	12/3/08	3/26/09	6/18/09	9/16/09	12/8/09	3/27/08	8/26/08	12/3/08	3/26/09	6/18/09	9/16/09	12/10/09	3/24/08	8/26/08	12/5/08	3/26/09	6/18/09	9/16/09	12/8/09	3/26/08	8/26/08	12/5/08	3/27/09	6/19/09	9/17/09	12/10/09	3/26/08	8/26/08	12/5/08	3/27/09	6/19/09	9/17/09	12/10/09
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	ug/l	ug/l	ug/l	ug/l	ug/l
Metals	AWQS/GV Values																																			
Aluminum	NS	**4190**	**521**	**307**	285	**335**	**1280**	**230**	**60.4** J	100 U	100 U	100 U	100 U	**790**	100 U	**830**	**14100**	**1460**	**558**	**843**	**1880**	**2570**	**1840**	**6660**	**10900**	**277**	**1320**	**693**	**1660**	45.8 U	**430**	**440**	100 U	**147**	100 U	100 U
Antimony	3	6.8 U	60 U	60 U	60 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	60 U	60 U	60 U	6.8 U	60 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	5 U	3.9 U	5 U	5 U	5 U	5 U	5 U	5 U	3.9 U	5 U	5 U	5 U	5 U	5 U	5 U	3.9 U	5 U	5 U	5 U	5 U	5 U	5 U	3.9 U	5 U	5 U	5 U	5 U	5 U	5 U
Barium	1000	**79.4** J	**67**	**60**	**56**	**56**	**64**	**60**	**153** J	**187**	**180**	**168**	**173**	**155**	**152**	**40.5** J	**181**	**79**	**70**	**65**	**78**	**81**	**29.3** J	**66**	**90**	**24**	**31**	**46**	**37**	**13.2** J	**21**	**25**	**19**	**22**	**22**	**20**
Beryllium	3	**0.59** J	5 U	5 U	5 U	5 U	5 U	5 U	0.3 U	5 U	5 U	5 U	5 U	5 U	5 U	**0.5** J	5 U	5 U	5 U	5 U	5 U	5 U	**0.38** J	5 U	5 U	5 U	5 U	5 U	5 U	0.3 U	5 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	5 U	1.1 U	5 U	5 U	5 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	5 U	5 U	5 U
Calcium	NS	**117000**	**161000**	**149000**	**170000**	**152000**	**144000**	**155000**	**178000**	**311000**	**284000**	**167000** R	**169000**	**180000**	**190000**	**95100**	**149000**	**140000**	**112000**	**125000**	**145000**	**143000**	**65600**	**115000**	**127000**	**106000**	**105000**	**109000**	**101000**	**61100**	**111000**	**112000**	**115000**	**111000**	**127000**	**104000**
Chromium	50	**10.4**	5 U	5 U	5 U	5 U	5 U	5 U	1.2 U	5 U	5 U	5 U	5 U	5 U	5 U	**1.5** J	**20**	5 U	5 U	5 U	5 U	5 U	**3.27** J	**6**	5 U	5 U	**11**	5 U	5 U	**2.32** J	5 U	5 U	5 U	**10**	5 U	5 U
Cobalt	NS	**6.78** J	50 U	50 U	50 U	50 U	50 U	50 U	2.4 U	50 U	50 U	50 U	50 U	50 U	50 U	2.4 U	50 U	50 U	50 U	50 U	50 U	50 U	**3.05** J	50 U	50 U	50 U	50 U	50 U	50 U	2.4 U	50 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	5 U	1.7 U	5 U	5 U	5 U	5 U	5 U	5 U	1.7 U	**35**	**8**	**11**	5 U	**9**	**7**	**4.06** J	**15**	**30**	**6**	5 U	**8**	**6**	1.7 U	5 U	5 U	**6**	5 U	5 U	5 U
Iron	300	**11500**	**1640**	**1250**	**462**	**1350**	**2900**	**1200**	**3100**	**6310**	**6820**	**6620**	**6740**	**7160**	**5710**	**2160**	**26500**	**2610**	**450**	**1460**	**3790**	**4250**	**4080**	**1110**	**18400**	**776**	**3490**	**2570**	**3940**	37 U	**864**	**831**	**56**	**175**	**91**	**128**
Lead	25	**11.7**	5 U	5 U	5 U	5 U	5 U	5 U	4.6 U	**12**	5 U	5 U	5 U	5 U	5 U	4.6 U	5 U	5 U	5 U	5 U	5 U	5 U	4.6 U	5 U	**11**	5 U	5 U	5 U	5 U	4.6 U	5 U	5 U	5 U	5 U	5 U	5 U
Magnesium	35000 (GV)	**18800**	**22800**	**21800**	**24600**	**22700**	**22300**	**23100**	**31200**	**34500**	**30000**	**25500**	**26200**	**22600**	**21700**	**10300**	**20000**	**17300**	**12600**	**15800**	**16500**	**17200**	**11400**	**20000**	**24100**	**18500**	**19800**	**18800**	**18300**	**10300**	**17900**	**19200**	**19000**	**19000**	**20500**	**17700**
Manganese	300	**1180**	**2200**	**1780**	**1620**	**1780**	**1690**	**1770**	**269**	**540**	**529**	**512**	**515**	**440**	**397**	**49**	**242**	**59**	**27**	20 U	**52**	**39**	**224**	**474**	**583**	**282**	**306**	**353**	**326**	**38.7**	**108**	**114**	**103**	**124**	**136**	**118**
Mercury	0.7	0.08 U	0.2 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	0.2 U	0.08 U	0.2 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	0.02 U	0.02 U	0.2 U	0.08 U	0.2 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	20 U	4.7 U	20 U	20 U	20 U	20 U	20 U	20 U	4.7 U	**21**	20 U	20 U	20 U	20 U	20 U	4.7 U	20 U	**29**	20 U	20 U	20 U	20 U	4.7 U	20 U	20 U	20 U	20 U	20 U	20 U
Potassium	NS	**1590** J	**2130**	**1710**	**1880**	**1670**	**1840**	**1590**	**2490** J	**2990**	**2830**	**2980**	**3020**	**2520**	**2750**	**1170** J	**6180**	**2970**	**2130**	**2500**	**3520**	**2980**	**1540** J	**5120**	**6220**	**2740**	**2820**	**3140**	**3240**	**1480** J	**3340**	**3240**	**3880**	**3660**	**4130**	**3310**
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	5 U	5 U	5 U	5 U	5 U	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	10 U	0.7 U	10 U	10 U	10 U	10 U	10 U	10 U	0.7 U	10 U	10 U	10 U	10 U	10 U	10 U	0.7 U	10 U	10 U	10 U	10 U	10 U	10 U	0.7 U	10 U	10 U	10 U	10 U	10 U	10 U
Sodium	20000	**23600**	**27300**	**34300**	**27400**	**28200**	**30300**	**39100**	**69200**	**40200**	**83600**	**45300**	**45800**	**43100**	**68500**	**6500**	**11500**	**14200**	**8620**	**11200**	**12100**	**10900**	**14200**	**26600**	**35900**	**38900**	**31600**	**32400**	**64300**	**30500**	**34600**	**38400**	**43200**	**32200**	**37800**	**38600**
Thallium	0.5 (GV)	8 U	10 U	10 U	10 U	10 U	**13**	**20**	8 U	10 U	10 U	10 U	10 U	**14**	**10**	8 U	10 U	10 U	10 U	10 U	**40**	10 U	8 U	10 U	10 U	10 U	10 U	**23**	10 U	8 U	10 U	10 U	10 U	10 U	**25**	**17**
Vanadium	NS	**12.6** J	20 U	20 U	20 U	20 U	20 U	20 U	3.1 U	20 U	20 U	20 U	20 U	20 U	20 U	3.1 U	**31**	20 U	20 U	20 U	20 U	20 U	**4.9** J	20 U	**29**	20 U	20 U	20 U	20 U	3.1 U	20 U	20 U	20 U	20 U	20 U	20 U
Zinc	2000 (GV)	**51.5** J	10 U	10 U	10 U	10 U	**14**	10 U	**9.89** J	10 U	10 U	10 U	**69**	10 U	**77**	**19.2** J	**136**	**23**	**11**	**10**	**22**	**15**	**23** J	**34**	**74**	10 U	**15**	**28**	**67**	**10.6** J	**13**	**13**	10 U	10 U	10 U	**72**
Cyanide	200	**28.1**	10 U	10 U	10 U	10 U	10 U	**10**	**4.5**	10 U	10 U	10 U	10 U	10 U	10 U	**2.9**	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	**1.9**	10 U	10 U	10 U	10 U	10 U	10 U

Sample ID		MW16							MW16D							MW18							MW19							MW19D						
Sampling Date		3/25/08	8/26/08	12/3/08	3/25/09	6/17/09	9/15/09	12/9/09	3/25/08	8/26/08	12/3/08	3/25/09	6/17/09	9/15/09	12/9/09	3/26/08	8/26/08	12/5/08	3/27/09	6/18/09	9/16/09	12/10/09	3/26/08	8/25/08	12/4/08	3/27/09	6/18/09	9/16/09	12/10/09	3/26/08	8/25/08	12/4/08	3/27/09	6/18/09	9/16/09	12/10/09
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	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	**2550**	**103** J	100 U	100 U	100 U	100 U	100 U	**215**	**930**	**970**	**386**	**444**	**187**	**176**	**160**	**458**	**990**	**1420**	**415**	**2940**	**1500**	**6260**	**694**	**1390**	**496**	**277**	**580**	**151**	**102**
Antimony	3	6.8 U	60 U	60 U	60 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	60 U	60 U	60 U	**15.1** J	60 U	60 U	60 U	60 U	60 U	60 U
Arsenic	25	3.9 U	**7**	5 U	**14**	5 U	5 U	5 U	3.9 U	5 U	5 U	5 U	5 U	5 U	5 U	3.9 U	5 U	5 S	5 U	5 U	5 U	5 U	3.9 U	**7**	5 U	5 U	5 U	5 U	5 U	3.9 U	**5**	5 U	5 U	5 U	5 U	5 U
Barium	1000	**247**	**160**	**241**	**174**	**255**	**320**	**299**	**35.5** J	**54**	**54**	**48**	**48**	**51**	**58**	**19.6** J	**51**	**21**	**20**	**21**	**19**	**22**	**29.1** J	**109**	**73**	**46**	**116**	**79**	**117**	**42.3** J	**60**	**53**	**47**	**48**	**47**	**49**
Beryllium	3	0.3 U	5 U	5 U	5 U	5 U	5 U	5 U	0.3 U	5 U	5 U	5 U	5 U	5 U	5 U	0.3 U	5 U	5 U	5 U	5 U	5 U	5 U	0.3 U	5 U	5 U	5 U	5 U	5 U	5 U	0.3 U	5 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	5 U	1.1 U	5 U	5 U	5 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	5 U	5 U	5 U
Calcium	NS	**347000**	**254000**	**250000**	**297000**	**265000**	**288000**	**285000**	**69200**	**121000**	**112000**	**114000**	**109000**	**99400**	**106000**	**58400**	**141000**	**49800**	**67700**	**73000**	**67000**	**79700**	**67700**	**162000**	**152000**	**123000**	**161000**	**169000**	**172000**	**120000**	**156000**	**146000**	**154000**	**139000**	**159000**	**151000**
Chromium	50	**1.31** J	5 U	5 U	5 U	5 U	5 U	5 U	**1.37** J	5 U	5 U	5 U	5 U	5 U	5 U	**4.33** J	5 U	5 U	5 U	5 U	5 U	5 U	**4.65** J	5 U	5 U	5 U	**10**	5 U	**12**	**7.04** J	5 U	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	50 U	**7.93** J	50 U	50 U	50 U	50 U	50 U	50 U	**2.56** J	50 U	50 U	50 U	50 U	50 U	50 U	2.4 U	50 U	50 U	50 U	50 U	50 U	50 U	**7.29** J	50 U	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	**9**	1.7 U	5 U	5 U	5 U	5 U	5 U	5 U	1.7 U	5 U	**7** S	**6**	5 U	5 U	5 U	**2.86** J	**10**	5 U	5 U	**14**	5 U	**16**	**1.93** J	5 U	5 U	5 U	5 U	5 U	5 U
Iron	300	**19200**	**14500**	**11400**	**3830**	**12900**	**17800**	**19600**	**1640**	**1200**	**1210**	**822**	**877**	**1820**	**3690**	**2530**	**2080**	**712** S	**730**	**301**	**432**	**303**	**1520**	**4570**	**3410**	**966**	**5580**	**3770**	**13600**	**8990**	**9350**	**6950**	**5880**	**6530**	**6240**	**5990**
Lead	25	4.6 U	5 U	5 U	5 U	5 U	5 U	**16**	4.6 U	5 U	5 U	5 U	5 U	5 U	5 U	4.6 U	5 U	5 U	5 U	5 U	5 U	5 U	4.6 U	5 U	**15**	5 U	**7**	5 U	**11**	4.6 U	5 U	5 U	5 U	5 U	5 U	5 U
Magnesium	35000 (GV)	**47900**	**48200**	**34000**	**42100**	**36900**	**33700**	**35500**	**11100**	**19500**	**18800**	**18500**	**18200**	**17100**	**16800**	**9290**	**20600**	**9020**	**11200**	**11900**	**9800**	**11300**	**7680**	**19400**	**19600**	**16400**	**16000**	**17200**	**18300**	**17300**	**22200**	**21200**	**21400**	**20500**	**21500**	**21300**
Manganese	300	**2430**	**3000**	**1490**	**2100**	**1540**	**1420**	**1610**	**841**	**803**	**598**	**499**	**610**	**662**	**997**	**62.7**	**218**	**48**	**79**	20 U	**30**	20 U	**116**	**1820**	**597**	**184**	**1100**	**1220**	**1390**	**429**	**594**	**523**	**518**	**506**	**530**	**528**
Mercury	0.7	0.08 U	0.2 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	0.2 U	0.08 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.09** J	0.2 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	0.2 U
Nickel	100	4.7 U	20 U	20 U	20 U	20 U	20 U	20 U	4.7 U	20 U	20 U	20 U	20 U	20 U	20 U	4.7 U	20 U	20 U	20 U	20 U	20 U	20 U	4.7 U	20 U	20 U	20 U	20 U	20 U	20 U	4.7 U	20 U	20 U	20 U	20 U	20 U	20 U
Potassium	NS	**7790**	**6040**	**9430**	**7770**	**11400**	**9300**	**10300**	**1100** J	**2680**	**2430**	**2490**	**2480**	**1940**	**2320**	**615** J	**1690**	**752**	**822**	**772**	**899**	**847**	**1560** J	**6280**	**4850**	**3710**	**5140**	**4920**	**5490**	**883** J	**1670**	**1330**	**1170**	**1290**	**1100**	**1060**
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 S	5 U	5 U	5 U	5 U	5 U	5 U	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	10 U	0.7 U	10 U	10 U	10 U	10 U	10 U	10 U	0.7 U	10 U	10 S	10 U	10 U	10 U	10 U	0.7 U	10 U	10 U	10 U	10 U	10 U	10 U	0.7 U	10 U	10 U	10 U	10 U	10 U	10 U
Sodium	20000	**31300**	**22800**	**20500**	**24500**	**20100**	**14100**	**17100**	**35800**	**42000**	**53900**	**47600**	**40500**	**42800**	**55800**	**3570** J	**10000**	**13200**	**12200**	**6580**	**5230**	**6000**	**8400**	**15100**	**12700**	**1270**	**7170**	**10100**	**8510**	**5960**	**5610**	**6810**	**6240**	**5380**	**6060**	**6970**
Thallium	0.5 (GV)	8 U	10 U	10 U	10 U	10 U	**31**	**32**	8 U	10 U	10 U	10 U	10 U	**17**	**15**	8 U	10 U	10 U	10 U	10 U	**15**	10 U	8 U	10 U	10 U	10 U	10 U	**25**	**12**	8 U	10 U	10 U	10 U	10 U	**29**	10 U
Vanadium	NS	3.1 U	20 U	20 U	20 U	20 U	20 U	20 U	3.1 U	20 U	20 U	20 U	20 U	20 U	20 U	3.1 U	20 U	20 U	20 U	20 U	20 U	20 U	3.1 U	20 U	20 U	20 U	20 U	20 U	20 U	3.1 U	20 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**	**211**	**16** J	10 U	10 U	10 U	10 U	10 U	**333**	26.6 J	10 U	**12**	10 U	10 U	10 U	**64**	**17.3** J	**38**	**35**	10 U	**46**	**22**	**131**	**21.1** J	10 U	10 U	10 U	10 U	10 U	**66**
Cyanide	200	**7.6**	10 U	10 U	10 U	10 U	10 U	10 U	**5.1**	**20**	10 U	10 U	**750**	10 U	10 U	**2.3**	10 U	10 U	10 U	10 U	10 U	10 U	**2.3**	10 U	**10**	**10**	10 U	10 U	10 U	**4.8**	**10**	10 U	10 U	10 U	10 U	10 U

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

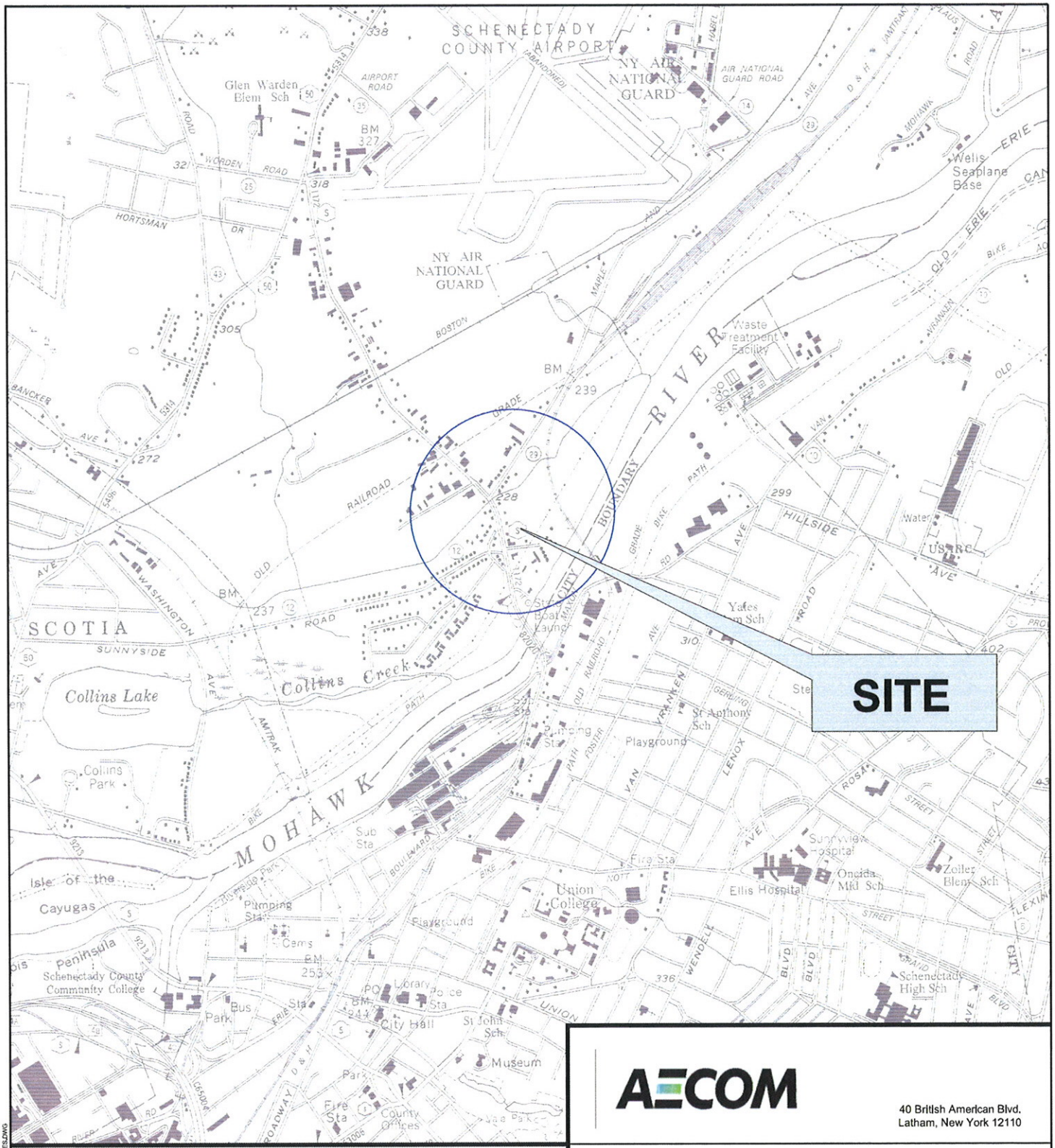
Table 4
Groundwater Analytical Summary
Metals
34 Freemans Bridge Road
Glenville, New York
December 2009
Site No. 4-47-028

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	12/10/09	3/24/08	8/25/08	12/4/08	3/25/09	6/19/09	9/15/09	12/10/09	3/24/08	8/25/08	12/4/08	3/26/09	6/17/09	9/16/09	12/10/09	3/24/08	8/25/08	12/4/08	3/26/09	6/17/09	9/16/09	12/10/09	3/27/08	8/25/08	12/3/08	3/25/09	6/17/09	9/15/09	12/9/09
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	ug/l	ug/l	ug/l	ug/l	ug/l
Metals	AWQS/GV Values																																			
Aluminum	NS	**141** J	**3090**	**2060**	**2190**	**501**	**1490**	**3840**	**347**	**649**	**136**	**1300**	**105**	**415**	**176**	**441**	**3310**	**2410**	**347**	NA	**5350**	**36800**	45.8 U	100 U	100 U	100 U	100 U	100 U	100 U	**386**	**3650**	**11400**	**2160**	**2060**	**1480**	**15800**
Antimony	3	6.8 U	60 U	60 U	60 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	60 U	60 U	60 U	**10.2** J	60 U	60 U	60 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	60 U	60 U	60 U
Arsenic	25	**4.77** J	**21**	**9** S	**19**	**18**	**8**	**13**	3.9 U	5 U	5 U	5 U	5 U	5 U	5 U	3.9 U	5 U	5 U	5 U	5 U	5 U	5 U	3.9 U	5 U	5 U	5 U	5 U	5 U	5 U	3.9 U	5 U	5 U	5 U	5 U	5 U	5 U
Barium	1000	**64.2** J	**240**	**319**	**378**	**373**	**376**	**299**	**56** J	**115**	**104**	**119**	**108**	**110**	**111**	**67** J	**153**	**286**	**110**	**109**	**160**	**389**	**80.3** J	**113**	**98**	**89**	**103**	**97**	**95**	**44.1** J	**132**	**193**	**77**	**68**	**61**	**261**
Beryllium	3	0.3 U	5 U	5 U	5 U	5 U	5 U	5 U	0.3 U	5 U	5 U	5 U	5 U	5 U	5 U	0.3 U	5 U	5 U	5 U	5 U	5 U	5 U	0.3 U	5 U	5 U	5 U	5 U	5 U	5 U	0.3 U	5 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	5 U	1.1 U	5 U	5 U	5	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	5 U	5 U	5 U
Calcium	NS	**168000**	**460000**	**635000**	**560000**	**396000**	**362000**	**563000**	**61100**	**114000**	**102000**	**111000**	**110000**	**101000**	**113000**	**186000**	**351000**	**341000**	**324000**	**285000**	**279000**	**416000**	**82200**	**114000**	**98300**	**94700**	**101000**	**102000**	**107000**	**88800**	**136000**	**147000**	**118000**	**112000**	**102000**	**172000**
Chromium	50	1.2 U	5 U	5 U	**6**	**12**	5 U	**7**	1.2 U	5 U	5 U	5 U	**8**	5 U	5 U	**8.49** J	5 U	**44**	5 U	5 U	5 U	**54**	1.2 U	5 U	5 U	5 U	5 U	5 U	5 U	**1.73** J	5 U	**27**	5 U	**8**	5 U	**36**
Cobalt	NS	2.4 U	50 U	50 U	50 U	50 U	50 U	50 U	2.4 U	50 U	50 U	50 U	50 U	50 U	50 U	6.67 J	50 U	50 U	50 U	50 U	50 U	50 U	2.4 U	50 U	50 U	50 U	50 U	50 U	50 U	2.4 U	50 U	50 U	50 U	50 U	50 U	50 U
Copper	200	**12.9** J	**29**	**10**	**9**	**9**	5 U	**18**	**2.1** J	5 U	5 U	**8**	5 U	5 U	5 U	1.7 U	**5**	**44**	5 U	5 U	**10**	**77**	1.7 U	5 U	5 U	5 U	5 U	5 U	5 U	1.7 U	**8**	**22**	5 U	5 U	5 U	**47**
Iron	300	37 U	**3660**	**2350**	**3350**	**655**	**2560**	**5720**	**1630**	**2480**	**1420**	**5880**	**1190**	**1910**	**1500**	**9160**	**20400**	**58700**	**11700**	**13400**	**22400**	**80200**	**1050**	**1650**	**1400**	**1280**	**1300**	**1540**	**1720**	**3890**	**18000**	**45900**	**12100**	**8240**	**7260**	**47300**
Lead	25	4.6 U	5 U	**9**	5 U	5 U	5 U	**18**	4.6 U	5 U	5 U	5 U	5 U	5 U	5 U	4.6 U	5 U	**58**	5 U	5 U	**8**	**58**	4.6 U	5 U	5 U	5 U	5 U	5 U	5 U	**30.5**	**130**	**515**	**74**	**72**	**44**	**643**
Magnesium	35000 (GV)	**3950** J	**5510**	**1760**	**4150**	**2980**	**3530**	**3260**	**9700**	**18600**	**17400**	**17800**	**18100**	**17500**	**18600**	**28800**	**50500**	**58200**	**46100**	**45400**	**39400**	**55100**	**13900**	**19400**	**17100**	**16000**	**18100**	**18100**	**19000**	**13800**	**23100**	**27200**	**18700**	**18800**	**17600**	**28500**
Manganese	300	**14.4** J	**71**	**38**	**44**	20 U	**47**	**75**	**52.3**	**71**	**47**	**88**	**61**	**55**	**49**	**6730**	**10300**	**11700**	**12200**	**9730**	**8220**	**14100**	**107**	**163**	**136**	**122**	**142**	**144**	**155**	**449**	**904**	**800**	**390**	**308**	**323**	**983**
Mercury	0.7	0.08 U	0.2 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	0.2 U	0.2 U	0.2 U	0.08 U	0.2 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	0.2 U	0.08 U	0.2 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**	**45**	4.7 U	20 U	20 U	20 U	20 U	20 U	20 U	4.7 U	20 U	**54**	20 U	20 U	20 U	**60**	4.7 U	20 U	20 U	20 U	20 U	20 U	20 U	4.7 U	20 U	**26**	20 U	20 U	20 U	**30**
Potassium	NS	**15100**	**92600**	**97100**	**108000**	**120000**	**99200**	**154000**	**2000** J	**5560**	**4910**	**5710**	**5210**	**4310**	**5280**	**898** J	**3000**	**5900**	**1620**	**1630**	**2660**	**6450**	**1640** J	**3420**	**3030**	**3230**	**3230**	**2730**	**2900**	**1630** J	**4540**	**5110**	**2970**	**2170**	**1700**	**8690**
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	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	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 S	10 U	10 U	10 U	0.7 U	10 U	10 U	10 U	10 U	10 U	10 U	0.7 U	10 U	10 U	10	10 U	10 U	10 U	0.7 U	10 U	10 U	10 U	10 U	10 U	10 U	0.7 U	10 U	10 U	10 U	10 U	10 U	10 U
Sodium	20000	**69800**	**122000**	**185000**	**167000**	**159000**	**136000**	**215000**	**32000**	**35400**	**47000**	**41900**	**38700**	**38200**	**61000**	**12500**	**19400**	**27600**	**26000**	**21300**	**24300**	**24400**	**52000**	**43500**	**73600**	**45800**	**42300**	**46500**	**72200**	**30900**	**33900**	**34100**	**36900**	**32100**	**33000**	**21500**
Thallium	0.5 (GV)	8 U	**69**	**26**	**15**	**18**	**69**	**76**	8 U	10 U	10 U	10 U	10 U	**17**	10 U	8 U	10 U	**24**	**20**	**16**	**37**	**29**	8 U	10 U	10 U	10 U	10 U	**17**	10 U	8 U	10 U	10 U	10 U	10 U	**17**	**19**
Vanadium	NS	**3.67** J	20 U	**36**	**43**	**32**	**21**	**24**	3.1 U	20 U	20 U	20 U	20 U	20 U	20 U	**5.96** J	20 U	**77**	20 U	20 U	20 U	**53**	3.1 U	20 U	20 U	20 U	20 U	20 U	20 U	3.1 U	20 U	**27**	20 U	20 U	20 U	**29**
Zinc	2000 (GV)	**10.9** J	**20**	**23**	**20**	10 U	**16**	**135**	**11.8** J	10 U	10 U	**12**	10 U	10 U	**102**	**20.8** J	**21**	**178**	**11**	**317**	**35**	**346**	**9.18** J	10 U	10 U	10 U	10 U	10 U	**113**	**18.8** J	**54**	**160**	**34**	**30**	**22**	**278**
Cyanide	200	**11.2**	10 U	10 U	10 U	10 U	10 U	10 U	**22.4**	10 U	10 U	10 U	10 U	10 U	10 U	**21.2**	10 U	10 U	10 U	10 U	10 U	10 U	**2.7**	10 U	10 U	**10**	10 U	10 U	10 U	**8.5**	10 U	10 U	10 U	10 U	10 U	10 U

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	12/9/09	3/25/08	8/26/08	12/5/08	3/27/09	6/19/09	9/17/09	12/10/09	3/25/08	8/26/08	12/4/08	3/25/09	6/19/09	9/17/09	12/10/09	3/27/08	8/26/08	12/5/08	3/26/09	6/19/09	9/17/09	12/8/09	3/26/08	8/26/08	12/5/08	3/26/09	6/17/09	9/17/09	12/8/09
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	ug/l	ug/l	ug/l	ug/l	ug/l
Metals	AWQS/GV Values																																			
Aluminum	NS	**1400**	**544**	**252**	**182**	**108**	**138**	**126**	**401**	**707**	**286**	**294**	**111**	100 U	100 U	**265**	**820**	**131**	**122**	**438**	100 U	100 U	**1590**	**2730**	**13700**	**150**	**1630**	**453**	**772**	45.8 U	**1780**	**812**	**439**	**765**	**2310**	**630**
Antimony	3	6.8 U	60 U	60 U	60 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	60 U	60 U	**74**	6.8 U	60 U	60 U	60 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	60 U	60 U	60 U	**15.1** J	60 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	5 U	**6.66** J	**9**	5 S	5 U	5 U	5 U	5 U	3.9 U	5 U	5 U	5 U	5 U	5 U	5 U	3.9 U	5 U	5 U	5 U	5 U	5 U	5 U	3.9 U	**18**	5 S	**8**	**9**	**11**	5 U
Barium	1000	**101** J	**88**	**80**	**74**	**87**	**83**	**85**	**132** J	**113**	**100**	**95**	**94**	**88**	**101**	**41.7** J	**96**	**81**	**68**	**80**	**81**	**86**	**89.2** J	**142**	**214**	**102**	**126**	**110**	**117**	**39.8** J	**98**	**81**	**54**	**54**	**66**	**60**
Beryllium	3	0.3 U	5 U	5 U	5 U	5 U	5 U	5 U	**0.31** J	5 U	5 U	5 U	5 U	5 U	5 U	**0.36** J	5 U	5 U	5 U	5 U	5 U	5 U	**0.41** J	5 U	5 U	5 U	5 U	5 U	5 U	0.3 U	5 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	5 U	1.1 U	5 U	5 U	5 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	5 U	5 U	5 U
Calcium	NS	**123000**	**110000**	**100000**	**102000**	**109000**	**97900**	**109000**	**126000**	**126000**	**103000**	**115000**	**99500**	**112000**	**106000**	**115000**	**183000**	**179000**	**169000**	**184000**	**166000**	**190000**	**99200**	**156000**	**217000**	**145000**	**154000**	**126000**	**143000**	**128000**	**415000**	**596000**	**717000**	**527000**	**590000**	**825000**
Chromium	50	**2.67** J	5 U	5 U	5 U	5 U	5 U	5 U	1.2 U	5 U	5 U	5 U	**14**	5 U	5 U	1.2 U	5 U	5 U	5 U	**8**	5 U	5 U	**4.85** J	5 U	**16**	5 U	**15**	5 U	5 U	**4.94** J	5 U	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	50 U	2.4 U	50 U	50 U	50 U	50 U	50 U	50 U	2.4 U	50 U	50 U	50 U	50 U	50 U	50 U	**3.3** J	50 U	50 U	50 U	50 U	50 U	50 U	**5.84** J	50 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	5 U	1.7 U	5 U	5 U	**7**	5 U	5 U	5 U	1.7 S	5 U	5 U	5 U	5 U	5 U	5 U	**1.97** J	5 U	**29**	5 U	**9**	5 U	5 U	1.7 U	**8**	5 S	**8**	5 U	**12**	**5**
Iron	300	**5560**	**2630**	**1840**	**1470**	**1830**	**1540**	**1780**	**6430**	**5410**	**5510**	**3570**	**2660**	**2410**	**3450**	**1800** S	**6050**	**3160**	**4060**	**2890**	**3000**	**1970**	**7900**	**14800**	**39700**	**10800**	**11500**	**10400**	**10300**	**2480**	**6190**	**3000** S	**1780**	**3090**	**8530**	**2620**
Lead	25	**4.96** J	5 U	5 U	5 U	5 U	5 U	5 U	4.6 U	5 U	5 U	5 U	5 U	5 U	5 U	4.6 U	5 U	5 U	5 U	5 U	5 U	5 U	**5.73** J	5 U	**44**	5 U	**8**	5 U	5 U	4.6 U	**7**	5 U	5 U	5 U	**25**	5 U
Magnesium	35000 (GV)	**19400**	**16900**	**15900**	**16400**	**17400**	**16300**	**16800**	**20900**	**16500**	**16900**	**15500**	**16600**	**17500**	**17200**	**17400**	**39500**	**36000**	**31300**	**38200**	**39500**	**41200**	**17800**	**29100**	**39000**	**24900**	**27700**	**27300**	**25600**	**12800**	**20700**	**22800**	**21200**	**22100**	**21800**	**19400**
Manganese	300	**226**	**159**	**129**	**121**	**144**	**128**	**138**	**626**	**792**	**678**	**733**	**767**	**755**	**668**	**359**	**455**	**364**	**328**	**358**	**357**	**375**	**714**	**1530**	**1830**	**1410**	**1560**	**1490**	**1450**	**232**	**413**	**298**	**162**	**307**	**366**	**274**
Mercury	0.7	0.02 U	0.2 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	0.2 U	0.08 U	0.2	0.2	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	0.2 U	0.08 U	0.2 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	20 U	4.7 U	20 U	20 U	20 U	20 U	20 U	20 U	4.7 U	20 U	20 U	20 U	20 U	20 U	20 U	4.7 U	20 U	**35**	20 U	20 U	20 U	20 U	4.7 U	20	20 U	20 U	20 U	20 U	20 U
Potassium	NS	**15300**	**2890**	**2530**	**3390**	**2820**	**2170**	**2690**	**1590** J	**7060**	**3750**	**4730**	**2910**	**3650**	**4430**	**1590** J	**5750**	**4960**	**3490**	**4060**	**4140**	**5400**	**1520** J	**2880**	**7620**	**7610**	**4580**	**6330**	**8310**	**4780** J	**33600**	**33400**	**33100**	**29200**	**29500**	**35300**
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	5 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	5 U
Silver	50	0.7 U	10 U	10 U	10 U	10 U	10 U	10 U	0.7 U	10 U	10 U	10 S	10 U	10 U	10 U	0.7 S	10 U	10 U	10 U	10 U	10 U	10 U	0.7 U	10 U	10 U	10 U	10 U	10 U	10 U	0.7 U	10 U	10 S	10 U	10 U	10 U	10 U
Sodium	20000	**80200**	**36300**	**48200**	**50800**	**39000**	**41400**	**57700**	**124000**	**135000**	**159000**	**240000**	**70400**	**190000**	**175000**	**29300**	**45300**	**68700**	**43300**	**45700**	**109000**	**83800**	**13900**	**19400**	**29500**	**20200**	**18200**	**27600**	**26100**	**130000**	**166000**	**214000**	**188000**	**184000**	**424000**	**248000**
Thallium	0.5 (GV)	8 U	10 U	10 U	10 U	10 U	**12**	10 U	8 U	10 U	10 U	10 U	10 U	**16**	**16**	8 U	10 U	10 U	10 U	10 U	**54**	**31**	8 U	10 U	10	10 U	10 U	**39**	**15**	8 U	10 U	10 U	10 U	10 U	**57**	**17**
Vanadium	NS	**3.59** J	20 U	20 U	20 U	20 U	20 U	20 U	3.1 U	20 U	20 U	20 U	20 U	20 U	20 U	3.1 U	20 U	20 U	20 U	20 U	20 U	20 U	**3.4** J	20 U	**43**	20 U	20 U	20 U	20 U	3.1 U	20 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	**105**	**19.5** J	**11**	**12**	10 U	10 U	10 U	**68**	**8.35** J	10 U	10 U	10 U	10 U	10 U	**81**	**21.1** J	**20**	**131**	10 U	**22**	10 U	**15**	**14.2** J	**26**	**22**	10 U	**11**	**31**	10 U
Cyanide	200	0.96 J	**10**	10 U	10 U	10 U	10 U	10 U	**4.3**	10 U	**30**	10 U	10 U	10 U	10 U	**8.4**	**20**	**20**	**60**	**20**	**20**	10 U	**79.9**	**190**	10 U	**21**	**200**	**190**	**190**	**3.7**	**20**	**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



AECOM

40 British American Blvd.
Latham, New York 12110

PLAN

Scale in Feet

0 1000' 2000'

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

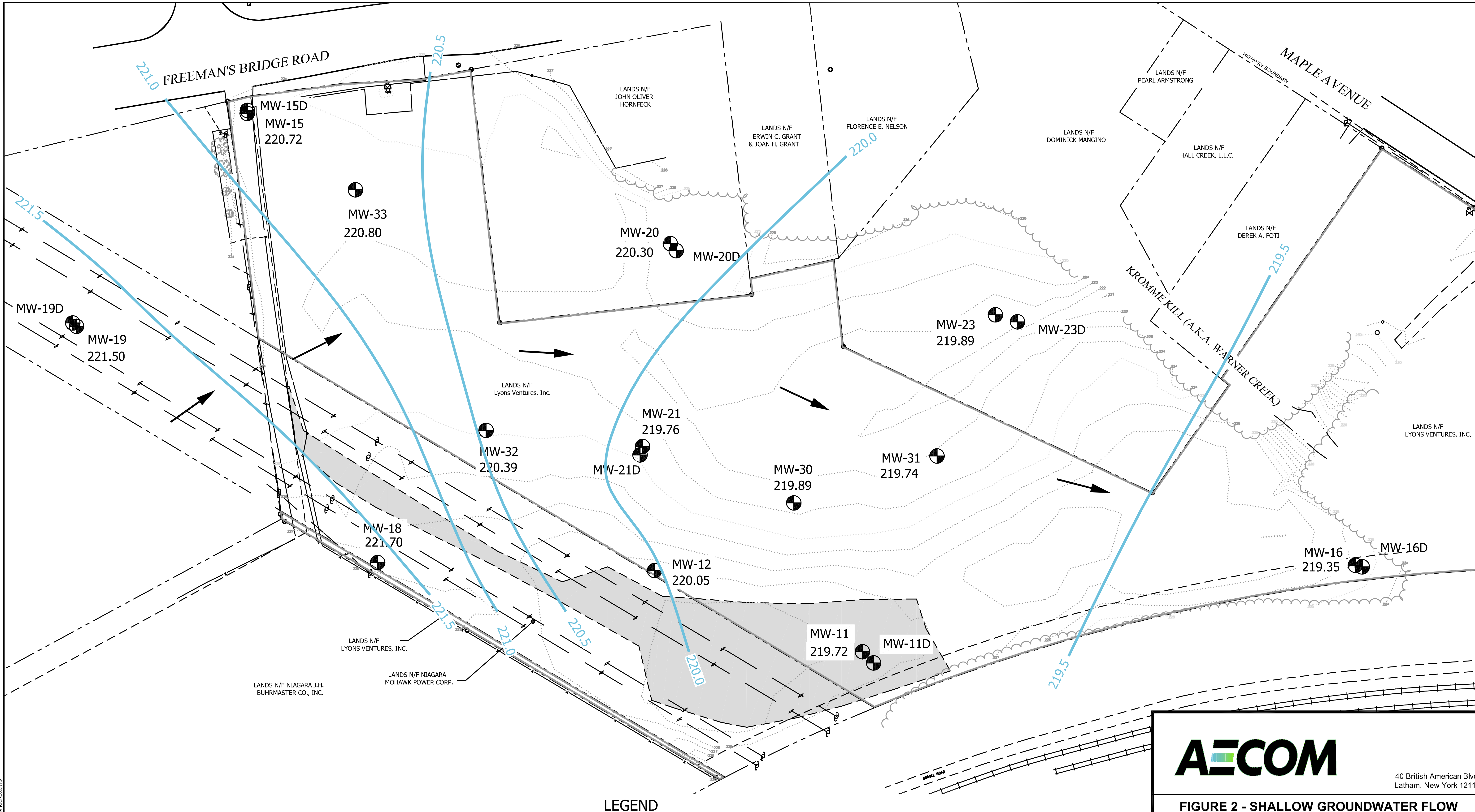
FIGURE 1
SITE LOCATION MAP

POST REMEDIATION FIELD INVESTIGATION

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

Town of Glenville	Schenectady County, New York
DATE: December, 2009	SCALE: 1"=2000'
PROJECT NO.:105886 / 60133947	FIGURE 1

FILE NAME = W:\Work\60693\CADD\SITE-MANAGEMENT-PLAN\SMP-FIGURES.DWG



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 AND SOIL VAPOR POINT LOCATIONS BY A SURVEY PERFORMED BY EARTH TECH, MAY 8, 2008

LEGEND

MW-19D — MONITORING WELL LOCATION

GROUNDWATER CONTOUR DASHED WHERE INFERED

GENERAL GROUNDWATER FLOW DIRECTION

PLAN

Scale in Feet
0 50' 100'

AECOM
40 British American Blvd.
Latham, New York 12110

FIGURE 2 - SHALLOW GROUNDWATER FLOW
December 2009

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

Town of Glenville	Schenectady County, New York
DATE: December, 2009	SCALE: 1"=100'
PROJECT NO.: 105886 / 60133947	FIGURE 2

FILE NAME = WORK\93693\CADD\SITE-MANAGEMENT-PLAN\SM-FIGURES.DWG

MW-15	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09	Dec09
Vinyl Chloride	2	16	76	44	11	21	21	18
cis- 1,2 Dichloroethene	5	8.3	15	17	ND	8.6	11	9.9
Total VOCs		24.3	91	61	11	29.6	32	27.9

MW-15D
MW-15

MW-33	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09	Dec09
Methylene Chloride	5	ND	ND	ND	ND	ND	11	ND
Benzene	1	ND	6	ND	ND	7.8	7.1	ND
Total VOCs		36	6	16	0	7.8	36.1	0

MW-33

LANDS N/F
JOHN OLIVER

MW-20	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09	Dec09
Acetone	50	720	1400	2900	1900	1300	670	1100
Methyl Acetate	NS	ND	ND	ND	ND	390	57	ND
Methylene Chloride	5	ND	ND	120	ND	ND	ND	ND
2- Butanone	50	77	ND	290	ND	190	120	210
Total VOCs		797	1400	3310	1900	1880	847	1310

MW-20
MW-20D

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

HIGHWAY BOUNDARY

MAPLE AVENUE

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

MW-23	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09	Dec09
Vinyl Chloride	2	10	ND	16	23	39	16	ND
Chloroethane	5	ND	ND	34	ND	ND	24	ND
cis- 1,2 Dichloroethene	5	49	68	21	61	99	33	ND
Total VOCs		59	68	71	84	138	73	0

MW-23
MW-23D

MW-19D	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09	Dec09
cis- 1,2 Dichloroethene	5	36	33	42	34	43	26	29
Total VOCs		36	33	42	34	43	26	29

MW-19D
MW-19

MW-30	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09	Dec09
Methylcyclohexane	NS	26	ND	ND	ND	ND	64	ND
cis- 1,2 Dichloroethene	5	50	ND	ND	ND	ND	ND	ND
Toluene	5	69	ND	ND	ND	ND	140	ND
Ethylbenzene	5	110	1700	610	1100	700	780	800
o- Xylene	5	110	140	73	ND	79	150	ND
m&p- Xylene	5	3000	8500	2600	10000	4100	4000	7700
Isoproplybenzene	5	72	180	110	ND	90	150	100
Total VOCs		3437	10520	3393	11100	4969	5284	8600

MW-21

LANDS N/F
Lyons Ventures, Inc.

MW-31	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09	Dec09
Vinyl Chloride	2	7.9	13	12	11	11	ND	ND
cis- 1,2 Dichloroethene	5	12	10	14	11	24	12	10
o- xylene	5	140	ND	ND	ND	ND	ND	ND
m&p- xylene	5	5.8	ND	ND	ND	ND	ND	ND
Total VOCs	50	165.7	23	26	22	35	12	10

MW-31

LANDS N/F
LYONS VENTURES, INC.

MW-19	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09	Dec09
MTBE	10	ND	23	12	ND	9.4	ND	ND
cis- 1,2 Dichloroethene	5	ND	ND	ND	ND	6.5	5.7	ND
Total VOCs		0	23	12	0	15.9	5.7	0

MW-32

MW-21D

MW-30

MW-18

MW-12

MW-16
MW-16D

MW-16D	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09	Dec09
MTBE	10	5.9	ND	ND	ND	11	ND	ND
cis- 1,2 Dichloroethene	5	25	9.2	11	7.3	14	7.8	8.4
Total VOCs		30.9	9.2	11	7.3	25	7.8	8.4

MW-11
MW-11D

LANDS N/F
LYONS VENTURES, INC.

LANDS N/F NIAGARA
MOHAWK POWER CORP.

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

MW-11	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09	Dec09
Methylene Chloride	5	ND	ND	11	ND	ND	ND	ND
TCE	5	17	9.9	12	ND	11	5.7	7.5
PCE	5	7	ND	ND	ND	ND	ND	ND
Total VOCs		24	9.9	23	0	11	5.7	7.5

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'

AECOM
40 British American Blvd.
Latham, New York 12110

FIGURE 3 - 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: December, 2009	SCALE: 1"=100'
PROJECT NO.: 105886 / 60133947	FIGURE 4

FREEMAN'S BRIDGE ROAD

MAPLE AVENUE

HIGHWAY BOUNDARY

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

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

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.

gravel road

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-11
MW-11D
MW-16
MW-16D

MW-33	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09	Dec09
Napthalene	10	ND	ND	ND	ND	ND	ND	35
Toal SVOCs		0	0	0	0	0	0	35

MW-20	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09	Dec09
Phenol	1	180	1700	930	970	1600	1400	2300
2 Methyl Phenol	1	9.2	200	140	120	200	ND	180
4 Methyl Phenol	1	ND	1100	650	470	720	980	720
Total SVOCs		197.2	3000	1720	1560	2520	2380	3200

MW-19	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09	Dec09
Benzo(a)anthracene	0.002	ND	ND	11	ND	ND	ND	ND
Chrysene	0.002	ND	ND	11	ND	ND	ND	ND
Benzo(b)fluoranthene	0.002	ND	ND	8	ND	ND	ND	ND
Benzo(k)fluoranthene	0.002	ND	ND	8	ND	ND	ND	ND
Total SVOCs		0	25	128	0	0	0	0

MW-32	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09	Dec09
Phenol	1	ND	ND	13	ND	ND	ND	ND
Toal SVOCs		0	0	13	0	0	0	0

MW-30	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09	Dec09
2,4 Dimethylphenol	50	21	110	100	86	49	37	ND
Napthalene	10	2.3	15	22	13	14	11	15
Total SVOCs		23.3	125	122	99	63	48	15

MW-18	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09	Dec09
2-Chlorophenol	1	ND	9	ND	ND	ND	ND	ND
Total SVOCs		0	9	0	0	0	0	0

MW-16	AWQS	Mar08	Aug08	Dec08	Mar09	Jun09	Sep09	Dec09
Bis(2-ethylhexyl)phthalate	5	ND	ND	ND	ND	ND	ND	17
Total SVOCs		0	0	0	0	0	0	17

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

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'

AECOM

40 British American Blvd.
Latham, New York 12110

FIGURE 4 - 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: December, 2009	SCALE: 1"=100'
PROJECT NO.: 105886 / 60133947	FIGURE 5

FILE NAME = W:\ORK\105886\DOCS\SEPTEMBER 2009 QUARTERLY GW SAMPLING\FIGURES AND TABLES\GROUNDWATER SAMPLING REPORT 9 2009

Appendix A
Monitoring Well Purging/Sampling Logs

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 11 Date: 12-8-09

Samplers: Tyler Brown and Mark Howard

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

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth:	19.35	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	11.51	feet
4. C = Column of Water in Casing:	7.84	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.30	gal
6. 3(V) =Target Purge Volume	3.90	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 556 and Lamont 2020

Parameter	**Units**	**Readings**						
Time	24 hr	1054	1056	1057	1058			
Water Level	feet	11.51	-	-	-			
Volume Purged	gal	0.00	5.00	7.00	8.50			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	8.92	6.61	6.00	5.96			
Dissolved Oxygen	mg / L	8.92	6.61	6.00	5.96			
Eh / ORP	MeV	74.80	68.90	63.60	58.30			
Conductivity	µmho / cm	1.075	1.018	1.004	0.989			
pH	pH unit	6.45	6.5	6.52	6.55			
Temp	C	9.51	11.09	11.41	11.48			
Color	Visual	clear	clear	cloudy	cloudy			
Odor	Olfactory	sulfu	sl. Sulfur	none	none			

Comments:

1054 - Started Purge
1058- Sampled, purged 10 gallons

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 11 D Date: 12/10/09

Samplers: Tyler Brown and Mark Howard

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

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth:	53.5	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	11.44	feet
4. C = Column of Water in Casing:	42.06	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	6.90	gal
6. 3(V) =Target Purge Volume	20.60	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 556 and Lamont 2020

Parameter	**Units**	**Readings**						
Time	24 hr	1015	1022	1029	1036			
Water Level	feet	11.44	-	-	-			
Volume Purged	gal	0.00	7.00	14.00	21.00			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	96.80	8.92	0.00	0.00			
Dissolved Oxygen	mg / L	9.60	3.94	2.67	2.58			
Eh / ORP	MeV	-65.3	-83.9	-90.3	-90.3			
Conductivity	µmho / cm	1.156	1.511	1.5	1.479			
pH	pH unit	7.20	7.15	7.20	7.20			
Temp	C	8.09	8.16	7.95	8.17			
Color	Visual	cloudy	clear	clear	clear			
Odor	Olfactory	none	none	none	none			

Comments:

1015 - Started purge
1036 - Sampled

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 12 Date: 12/8/09

Samplers: Tyler Brown and Mark Howard

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

Purging / Sampling Method: Whale Pump with dedicated poly

1. L = Total Well Depth:	17.29	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	10.63	feet
4. C = Column of Water in Casing:	6.66	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.10	gal
6. 3(V) =Target Purge Volume	3.30	gal

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

Conversion factors to determine V given C

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

Water Quality Readings Collected Using YSI 556 and Lamont 2020

Parameter	**Units**	**Readings**						
Time	24 hr	1143	1147	1205				
Water Level	feet	10.63	-	-				
Volume Purged	gal	0.00	1.10	2.10				
Flow Rate	mL / min	-	-	-				
Turbidity	NTU	54.3	86.2	33.3				
Dissolved Oxygen	mg / L	44.33	13.45	14.47				
Eh / ORP	MeV	97	110.8	136.7				
Conductivity	µmho / cm	0.743	0.722	0.735				
pH	pH unit	6.93	6.92	6.99				
Temp	C	8.62	9.66	8.22				
Color	Visual	yellowish	cloudy yellow	cloudy				
Odor	Olfactory	none	none	none				

Comments:

1143 - Started purge
1144 - Purged dry, 1.1 gallon
1145- purged dry purged another well volume
1205 - Sampled

Needs new tubing

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 15 Date: 12/10/09

Samplers: Tyler Brown and Mark Howard

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):	3.42	feet
4. C = Column of Water in Casing:	10.83	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.77	gal
6. 3(V) =Target Purge Volume	5.30	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 556 and Lamont 2020

Parameter	**Units**	**Readings**						
Time	24 hr	1333	1334	1334	1335			
Water Level	feet	3.42	-	-	-			
Volume Purged	gal	0.00	1.75	3.50	7.00			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	167.00	0.00	0.00	0.00			
Dissolved Oxygen	mg / L	8.10	9.87	4.66	4.58			
Eh / ORP	MeV	28.6	15.0	-22.5	-33.9			
Conductivity	µmho / cm	2.95	1.775	1.254	0.889			
pH	pH unit	7.51	7.39	7.33	7.35			
Temp	C	9.50	10.39	10.81	11.03			
Color	Visual	cloudy	cloudy	clear	clear			
Odor	Olfactory	none	none	none	none			

Comments:

1333 - Started purge
1335 - Sampled

The well has been destroyed from the plow. This well has no cap left on it and is only covered by a J plug

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 15 D Date: 12/10/09

Samplers: Tyler Brown and Mark Howard

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):	3.51	feet
4. C = Column of Water in Casing:	25.99	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	4.23	gal
6. 3(V) =Target Purge Volume	12.70	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 556 and Lamont 2020

Parameter	**Units**	**Readings**						
Time	24 hr	1315	1318	1321	1324			
Water Level	feet	3.51	-	-	-			
Volume Purged	gal	0.00	4.25	8.50	13.00			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	131.0	0.0	0.00	0.00			
Dissolved Oxygen	mg / L	17.81	6.85	3.50	3.08			
Eh / ORP	MeV	17.9	27.8	25.5	27.9			
Conductivity	µmho / cm	0.693	0.84	0.857	0.854			
pH	pH unit	7.35	7.31	7.32	7.32			
Temp	C	8.94	9.44	9.52	9.53			
Color	Visual	cloudy	clear	clear	clear			
Odor	Olfactory	none	none	none	none			

Comments:

1315 - Started purge
1324 - Sampled

Well missing screws for cap, continually floods bentonite to top of casing.

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW-16 Date: 12/9/09

Samplers: Tyler Brown and Mark Howard

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):	8.45	feet
4. C = Column of Water in Casing:	4.75	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	0.770	gal
6. 3(V) =Target Purge Volume	2.300	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 556 and Lamont 2020

Parameter	**Units**	**Readings**						
Time	24 hr	1013	1016	1020	1045			
Water Level	feet	8.45	-	-	-			
Volume Purged	gal	0.00	1.00	2.00	3.25			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	49.9	42.30	25.9	51.5			
Dissolved Oxygen	mg / L	8.89	6.79	5.48	6.34			
Eh / ORP	MeV	-47.6	-65.3	-65.2	-47.1			
Conductivity	µmho / cm	1.378	1.409	1.414	1.524			
pH	pH unit	6.80	6.82	6.82	6.84			
Temp	C	8.85	9.12	8.72	6.54			
Color	Visual	clear	cloudy	clear	cloudy			
Odor	Olfactory	none	sulfur	sulfur	sulfur			

Comments:

1013 - Started purge
1021 - purged dry, 3.25 gallons
1045 - Sampled

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 16 D Date: 12/9/09

Samplers: Tyler Brown and Mark Howard

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):	8.45	feet
4. C = Column of Water in Casing:	20.19	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	3.30	gal
6. 3(V) =Target Purge Volume	9.90	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 556 and Lamont 2020

Parameter	**Units**	**Readings**						
Time	24 hr	950	953	957	959			
Water Level	feet	8.45	-	-	-			
Volume Purged	gal	0.00	3.30	6.60	10.00			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	Max	207.00	15.40	7.68			
Dissolved Oxygen	mg / L	10.32	3.60	3.01	1.69			
Eh / ORP	MeV	109.6	23.7	0.4	-11.7			
Conductivity	µmho / cm	0.925	0.947	0.959	0.949			
pH	pH unit	7.22	7.06	7.11	7.09			
Temp	C	4.36	8.21	7.50	8.74			
Color	Visual	very turbid	cloudy	clear	clear			
Odor	Olfactory	none	none	none	none			

Comments:
Tubing fell off when pumpig, initial turbidity product off pump falling off tubing
950 - Started purge
959 - Sampled

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 18 Date: 12/10/09

Samplers: Tyler Brown and Mark Howard

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

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth:	14.7	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	7.88	feet
4. C = Column of Water in Casing:	6.82	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.11	gal
6. 3(V) =Target Purge Volume	3.33	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 556 and Lamont 2020

Parameter	**Units**							
Time	24 hr	1102	1104	1105	1107			
Water Level	feet	7.88	-	-	-			
Volume Purged	gal	0.00	1.11	2.22	3.33			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	32.8	55.2	35.5	17.60			
Dissolved Oxygen	mg / L	22.33	10.54	9.31	6.12			
Eh / ORP	MeV	2.15	31.3	49.3	58.5			
Conductivity	µmho / cm	0.544	0.506	0.497	0.482			
pH	pH unit	6.89	6.61	6.52	6.45			
Temp	C	8.34	8.72	8.61	8.84			
Color	Visual	clear	sl cloudy	clear	clear			
Odor	Olfactory	none	none	none	none			

Comments:

1102 - Started purge
1107 - Sampled

PVC was bent at approximatetly ground level, a bailer was unable to be put down the well.

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 19 Date: 12/10/09

Samplers: Tyler Brown and Mark Howard

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):	5.62	feet
4. C = Column of Water in Casing:	4.1	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	0.66	gal
6. 3(V) =Target Purge Volume	2.00	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 556 and Lamont 2020

Parameter	**Units**	**Readings**						
Time	24 hr	1232	1234	1236	1246			
Water Level	feet	5.62	-	-	-			
Volume Purged	gal	0.00	0.75	1.50	2.50			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	11.0	393.0	625.0	129.0			
Dissolved Oxygen	mg / L	5.21	5.03	4.36	3.04			
Eh / ORP	MeV	-22.00	-3.00	9.20	24.00			
Conductivity	µmho / cm	0.914	0.926	0.903	0.886			
pH	pH unit	7.24	7.13	7.17	7.12			
Temp	C	6.97	7.59	7.64	7.33			
Color	Visual	clear	v cloudy	v cloudy	cloudy			
Odor	Olfactory	none	none	none	none			

Comments:

1232 - Started purge
1238 - Purged dry, purged 2.5 gallons
1246 - Sampled

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 19 D Date: 12/10/09

Samplers: Tyler Brown and Mark Howard

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):	4.71	feet
4. C = Column of Water in Casing:	17.6	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	2.86	gal
6. 3(V) =Target Purge Volume	8.58	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 556 and Lamont 2020

Parameter	**Units**	**Readings**						
Time	24 hr	1220	1221	1223	1225			
Water Level	feet	4.71	-	-	-			
Volume Purged	gal	0.00	3.00	6.00	9.00			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	88.2	16.6	9.8	5.6			
Dissolved Oxygen	mg / L	9.86	6.88	4.41	3.05			
Eh / ORP	MeV	-38.2	-70.9	-74.7	-76.8			
Conductivity	µmho / cm	0.798	0.812	0.805	0.807			
pH	pH unit	6.97	7.04	7.07	7.10			
Temp	C	8.25	9.31	9.46	9.27			
Color	Visual	cloudy (br)	clear	clear	clear			
Odor	Olfactory	none	none	none	none			

Comments:

1220 - Started purge
1225 - Sampled

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 20 Date: 12/10/09

Samplers: Tyler Brown and Mark Howard

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):	6.59	feet
4. C = Column of Water in Casing:	5.82	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	2.85	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 556 and Lamont 2020

Parameter	**Units**	**Readings**						
Time	24 hr	844	846	906				
Water Level	feet	6.59	-	-				
Volume Purged	gal	0.00	1.00	1.75				
Flow Rate	mL / min	-	-	-				
Turbidity	NTU	568.0	425.0	512.0				
Dissolved Oxygen	mg / L	2.75	5.37	4.61				
Eh / ORP	MeV	-171.5	-128.6	-81.9				
Conductivity	µmho / cm	3.235	3.088	2.592				
pH	pH unit	11.30	11.19	9.31				
Temp	C	7.09	7.82	7.42				
Color	Visual	yellow	yellow	yellow				
Odor	Olfactory	urine	urine	urine				

Comments:

844 - Started purge
848 - Purged dry, purged 1.75 gallons
906 - Sampled

Well exhibited strong urine odor and coloration

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 20 D Date: 12-10-09

Samplers: Tyler Brown and Mark Howard

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

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth:	31.9	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	6.8	feet
4. C = Column of Water in Casing:	25.1	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	4.09	gal
6. 3(V) =Target Purge Volume	12.27	gal

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

Conversion factors to determine V given C

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

Water Quality Readings Collected Using YSI 556 and Lamont 2020

Parameter	**Units**	**Readings**						
Time	24 hr	826	828	831	833			
Water Level	feet	6.80	-	-	-			
Volume Purged	gal	0.00	4.00	8.00	12.00			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	116.0	219.0	72.4	31.2			
Dissolved Oxygen	mg / L	20.37	10.54	4.60	3.37			
Eh / ORP	MeV	-77.6	-75	-73.9	-74.2			
Conductivity	µmho / cm	0.823	0.841	0.828	0.828			
pH	pH unit	7.28	7.31	7.31	7.31			
Temp	C	8.34	8.40	8.69	8.75			
Color	Visual	cloudy	v cloudy	cloudy	sl cloudy			
Odor	Olfactory	none	none	none	none			

Comments:

826 - Started purge
833 - Sampled

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 21 Date: 12/10/09

Samplers: Tyler Brown and Mark Howard

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

Purging / Sampling Method: Bailer

1. L = Total Well Depth:	18.3	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	7.17	feet
4. C = Column of Water in Casing:	11.13	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.81	gal
6. 3(V) =Target Purge Volume	5.44	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 556 and Lamont 2020

Parameter	Units	Readings						
Time	24 hr	944	947	950	955			
Water Level	feet	7.17	-	-	-			
Volume Purged	gal	0.00	2.00	3.50	5.50			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	388.0	error3	error3	error3			
Dissolved Oxygen	mg / L	3.55	3.36	3.44	4.55			
Eh / ORP	MeV	-54.1	-57.8	-55.9	-54.2			
Conductivity	µmho / cm	1.254	1.279	1.249	1.307			
pH	pH unit	6.83	6.82	6.82	6.82			
Temp	C	7.77	8.37	8.79	9.15			
Color	Visual	yellow	br yellow	br yellow	brown			
Odor	Olfactory	urine	urine	urine	urine			

Comments:

944 - Started purge
955 - Sampled

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 21 D Date: 12/10/09

Samplers: Tyler Brown and Mark Howard

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):	8.85	feet
4. C = Column of Water in Casing:	41.35	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	6.74	gal
6. 3(V) =Target Purge Volume	20.22	gal

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

Conversion factors to determine V given C

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

Water Quality Readings Collected Using YSI 556 and Lamont 2020

Parameter	**Units**	**Readings**						
Time	24 hr	922	927	932	937			
Water Level	feet	8.85	-	-	-			
Volume Purged	gal	0.00	6.75	13.50	20.75			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	14.50	2.34	1.34	1.50			
Dissolved Oxygen	mg / L	4.56	5.410	2.14	2.42			
Eh / ORP	MeV	-143.8	-97.5	-95.5	-96.3			
Conductivity	µmho / cm	0.905	0.919	0.914	0.899			
pH	pH unit	7.75	7.36	7.34	7.35			
Temp	C	8.18	8.20	8.61	8.92			
Color	Visual	clear	clear	clear	clear			
Odor	Olfactory	none	none	none	none			

Comments:

922 - Started purge
937 - Sampled

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 23 Date: 12/9/09

Samplers: Tyler Brown and Mark Howard

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):	4.97	feet
4. C = Column of Water in Casing:	6.33	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.03	gal
6. 3(V) =Target Purge Volume	3.09	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 556 and Lamont 2020

Parameter	**Units**	**Readings**						
Time	24 hr	1214	1217	1219	1221			
Water Level	feet	4.97	-	-	-			
Volume Purged	gal	0.00	1.00	2.00	5.00			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	257.0	max	max	max			
Dissolved Oxygen	mg / L	1.26	2.89	2.21	3.70			
Eh / ORP	MeV	-102.4	-97.7	-91	-91.1			
Conductivity	µmho / cm	0.822	0.834	0.843	0.812			
pH	pH unit	7.18	7.19	7.18	7.18			
Temp	C	7.10	7.99	8.09	8.24			
Color	Visual	Turbid	v Turbid	v Turbid	v Turbid			
Odor	Olfactory	none	none	none	none			

Comments:

1214 - Started purge
1221 - Sampled

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 23 D Date: 12/9/09

Samplers: Tyler Brown and Mark Howard

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):	4.28	feet
4. C = Column of Water in Casing:	51.02	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	8.32	gal
6. 3(V) =Target Purge Volume	24.95	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 556 and Lamont 2020

Parameter	**Units**	**Readings**						
Time	24 hr	1135	1142	1149	1156			
Water Level	feet	4.28	-	-	-			
Volume Purged	gal	0.00	~8.5	~17	~25			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	max	92.40	7.29	8.34			
Dissolved Oxygen	mg / L	3.80	2.06	3.97	2.88			
Eh / ORP	MeV	-47.2	-60	-57.5	-66			
Conductivity	µmho / cm	0.919	0.92	0.909	0.921			
pH	pH unit	7.38	7.38	7.43	7.39			
Temp	C	7.52	8.40	7.73	8.28			
Color	Visual	v turbid	cloudy	clear	clear			
Odor	Olfactory	none	none	none	none			

Comments:

1135 - Started purge
1156 - Sampled

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW-30 Date: 12/10/09

Samplers: Tyler Brown and Mark Howard

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):	6.3	feet
4. C = Column of Water in Casing:	10.19	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	6.62	gal
6. 3(V) =Target Purge Volume	19.87	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 556 and Lamont 2020

Parameter	**Units**	**Readings**						
Time	24 hr	1507	1511	1515	1519			
Water Level	feet	6.30	-	-	-			
Volume Purged	gal	0.00	6.75	13.50	20.25			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	error1	error1	error1	error1			
Dissolved Oxygen	mg / L	2.50	1.81	1.54	1.19			
Eh / ORP	MeV	-137.8	-235.8	-261.8	-261.8			
Conductivity	µmho / cm	1.623	1.548	1.394	1.346			
pH	pH unit	7.29	7.26	7.07	7.00			
Temp	C	7.91	8.38	8.42	9.04			
Color	Visual	bk cl	black	black	black			
Odor	Olfactory	strong voc	strong voc	strong voc	strong voc			

Comments:

1507 - Started purge
1519 - Sampled

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 31 Date: 12/10/09

Samplers: Tyler Brown and Mark Howard

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

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth:	16.79	feet
2. D = Riser Diameter (I.D.):	0.33	feet
3. W = Static Depth to Water (TOC):	5.69	feet
4. C = Column of Water in Casing:	11.1	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	7.22	gal
6. 3(V) =Target Purge Volume	21.66	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 556 and Lamont 2020

Parameter	**Units**	**Readings**						
Time	24 hr	1444	1447	1450	1453			
Water Level	feet	5.69	-	-	-			
Volume Purged	gal	0.00	7.25	14.50	22.00			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	134.0	0.0	0.0	0.0			
Dissolved Oxygen	mg / L	2.49	2.53	3.50	2.24			
Eh / ORP	MeV	-24.7	-44.2	-56.8	-56.4			
Conductivity	µmho / cm	1.55	1.509	1.482	1.401			
pH	pH unit	7.05	7.12	7.16	7.15			
Temp	C	7.96	8.32	8.63	9.00			
Color	Visual	cloudy	clear	clear	clear			
Odor	Olfactory	none	none	none	none			

Comments:

1444- Started purge
1453 - Sampled

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 32 Date: 12/8/09

Samplers: Tyler Brown and Mark Howard

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

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth:	22.34	feet
2. D = Riser Diameter (I.D.):	0.33	feet
3. W = Static Depth to Water (TOC):	6.93	feet
4. C = Column of Water in Casing:	15.31	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	9.50	gal
6. 3(V) =Target Purge Volume	29.85	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 556 and Lamont 2020

Parameter	**Units**	**Readings**						
Time	24 hr	1332	1337	1341	1346			
Water Level	feet	6.93	-	-	-			
Volume Purged	gal	0.00	10.00	20.00	30.00			
Flow Rate	mL / min	-	-	-	-			
Turbidity	NTU	9.7	119.0	53.3	46.5			
Dissolved Oxygen	mg / L	31.50	8.38	6.82	3.91			
Eh / ORP	MeV	-94.3	-104.8	-86.7	-63.1			
Conductivity	µmho / cm	0.887	0.917	0.904	0.906			
pH	pH unit	8.60	7.15	7.10	7.06			
Temp	C	8.46	8.88	8.75	8.92			
Color	Visual	gr-bk	gr cloud	sl cl	sl cl			
Odor	Olfactory	sulfur	sulfur	sulfur	sulfur			

Comments:

1332 - Started purge
1346 - Sampled

Needs new tubing

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 33 Date: 12/8/09

Samplers: Tyler Brown and Mark Howard

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):	6.19	feet
4. C = Column of Water in Casing:	7.75	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	5.04	gal
6. 3(V) =Target Purge Volume	15.12	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 556 and Lamont 2020

Parameter	**Units**	**Readings**						
Time	24 hr	1412	1415	1451				
Water Level	feet	6.19	-	-				
Volume Purged	gal	0.00	5.00	5.75				
Flow Rate	mL / min	-	-	-				
Turbidity	NTU	44.60	196.00	82.80				
Dissolved Oxygen	mg / L	21.27	7.57	4.44				
Eh / ORP	MeV	-66.0	-98.2	-41.8				
Conductivity	µmho / cm	3.325	3.436	3.442				
pH	pH unit	7.61	7.76	7.52				
Temp	C	7.63	7.56	7.46				
Color	Visual	green	green	green				
Odor	Olfactory	sulfur	sulfur	sulfur				

Comments:

1412 - Started purge
1416 - Purged dry, purged 5.75 gallon
1451 - Sampled
Purged a total of 6.5 gallons