EARTH TECH | AECOM

Groundwater Sampling Report
March 2009

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

Work Assignment No. D004445-9

Prepared for:

SUPERFUND STANDBY PROGRAM
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June 2009

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1.0 INTRODUCTION

This groundwater sampling report has been prepared by Earth Tech Northeast, Inc. (Earth Tech | 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 Earth Tech Northeast, Inc.. The purpose of this report is to present the data collected from the March 2009 groundwater sampling event and any conclusions or suggestions drawn from this data. This groundwater sampling event was the third of eight quarterly events required during the first two years of monitoring at the Site as presented in the Site Management Plan (SMP) (Earth Tech, 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 Earth Tech from 2000 through 2004. A remediation strategy consisting of excavation and treatment 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 (Earth Tech, 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

Earth Tech collected groundwater samples from each of the 20 Site monitoring wells on March 25, 26, and 27, 2009. All groundwater samples were submitted to Adirondack Environmental Services, Inc. for the Target Compound and Target Analysis Lists (VOCs by ASP 95-1, SVOCs by ASP 95-2, and TAL Metals by ASP CLP Methodologies). PCBs or pesticides were not detected during the first two 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. In addition, before purging each well, a depth to water measurement was recorded using an interface probe, this was decontaminated with a liquinox bath and rinsed with distilled water between each use. Prior to sampling, each monitoring well was purged of three well volumes of water. Purge water was disposed on the ground in the immediate vicinity of each well as per NYSDEC directive. The pump was decontaminated after purging/sampling each monitoring well by a liquinox bath followed by a distilled water rinse.

After purging, temperature, conductivity, pH, turbidity, color and odor of the groundwater were recorded on the monitoring well purging/sampling logs (Appendix A). The parameters were taken using an YSI 600 series Water Quality Meter and a LaMotte 2020 turbidimeter. Each piece of equipment was calibrated each day prior to use. Groundwater samples were collected using a Whale pump with dedicated polyethylene tubing and foot valve. All groundwater samples were collected in bottles provided by the laboratory. Samples were packed on ice, and submitted with a completed Chain-of-Custody (COC) to Adirondack Environmental Services, Inc., for analysis.

3.0 MONITORING RESULTS

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

3.1 GROUNDWATER FLOW

Prior to groundwater sampling, water level measurements were collected and recorded for each well (Table 1). These water level elevations were then used to develop a groundwater flow map for the shallow aquifer (Figure 2). The overall direction of groundwater flow in the shallow aquifer was to the northwest in the southern portion of the Site, trending to the north-northeast in the northern portion of the Site, towards Warner's Creek.

The March 2009 water level data indicated that the overall direction of groundwater flow in the deeper portion of the aquifer was towards north, similar to prior sampling events.

3.2 GROUNDWATER ANALYTICAL RESULTS

This was the third 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 March 2009 results were compared to the August, March, and December 2008 quarterly groundwater sampling results.

During this sampling event, a significant amount of sediment was observed in the water being purged at many of the Site wells, similar to the December 2008 sampling event. The fine nature of the thermally treated soil on the Site may be the source of the excess sediment in the wells. The particulate matter caused the sampling water to be turbid, leading to difficulties in the sealing of the VOC vials. Additional purging of the highly turbid wells was performed following the sampling event to further develop these wells for next sampling event. In addition, MW-20 exhibited a strong odor and yellow coloration, similar to what was observed in this well during the December 2008 sampling event. The well is located in proximity of the Veterinarians office to the West. Practices at the vet's office may be influencing this well but further investigation would be needed to confirm.

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

3.2.1 Volatile Organic Compounds

The results of the VOC analysis are presented in Table 2. VOCs were detected in the concentrations exceeding the AWQS standards in seven of the monitoring wells during this sampling event compared to ten in August 2008 and nine in December of 2008. Similar to the previous sampling events, cis-1,2-dichloroethene was detected in four of the 20 Site wells, with

the maximum concentration of 61 µg/L. The concentrations of cis-1,2-dichloroethene have decreased compared to those detected in December 2008 in all but one well (MW-23). The concentration of cis-1,2-dichloroethene increased from 21µg/L to 61µg/L in MW-23.

Other VOCs detected include vinyl chloride, acetone, ethylbenzene, and m&p xylenes. Ethylbenzene and xylenes were detected only in MW-30. This well had a total VOC concentration of 11,100 µg/L, a significant increase from 3,393 µg/L in the December 2008 sampling event. o-xylenes and isopropylbenzene were not detected during the present sampling event, though both compounds were present in the previous three sampling events. This may be due to an elevated detection limit for this well during this event for these compounds. 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 exhibited a high concentration of acetone for the third straight sampling event. The concentration has decreased to 1900 µg/L from 2900 µg/L in December 2008, but is still well above the guidance value of 50 µg/L. This monitoring well is located along the northwestern Site boundary, adjacent to the veterinary clinic. Other VOCs that were detected during the previous sampling events, 2- butanone and methylene chloride, were not detected during the present sampling event.

As in the prior sampling events, the only deep wells with the VOC concentrations above the laboratory detection limits in the March 2009 sampling event were MW-19D located off-site to the southeast, and MW-16D located in the northeastern edge of the Site. Cis-1,2-dichloroethene was detected at concentrations exceeding AWQS standards (5 µg/L) in MW-19D (34 µg/L) and MW-16D (7.3 µg/L). These concentrations have not varied significantly over the past year.

Figure 3 summarizes the contaminant concentrations that exceeded the VOC AWQS standards.

3.2.2 Semi-volatile Organic Compounds

Concentrations of SVOCs above laboratory detection limits were detected in two monitoring wells: MW-20 and MW-30 (see Table 3) compared to four monitoring wells in the December 2008 sampling event. Increased phenol concentrations were detected in MW-20, from 930 µg/L in December 2008 to 970 µg/L in March 2009. Decreased concentrations of 2-methylphenol and 4-methylphenol were exhibited in March 2009 in this well. All of these concentrations remain significantly above the AWQS standards.

The only other monitoring well with concentrations exceeding the AWQS standards was MW-30 with 86 µg/L 2, 4-dimethylphenol, and 13 µg/L naphthalene. Both of these concentrations are lower than the concentrations detected in the December 2008 sampling event.

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

3.2.3 Metals

Table 4 presents the results of the metals analysis for the March 2009 and previous sampling events. Antimony, iron, lead, magnesium, manganese, sodium, and thallium were detected in concentrations above the AWQS and GV for metals in drinking water in the prior sampling events. During March 2009 sampling event all these metals but antimony were detected at concentrations exceeding AWQA and GV.

As with all the past sampling events for the SMP, there were no exceedences of the AWQS standards for cyanide in any of the Site's monitoring wells.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Comparison of the March 2009 groundwater analytical data to the previous data from March, August and December 2008 shows notable changes to eight of the 20 Site wells. Most notably, four of the monitoring wells exhibited no contaminant contamination during this sampling event. These monitoring wells include MW-11, MW-19, MW-32, and MW-33. Specific contaminants are no longer detected in concentrations exceeding AWQS/GV for MW-15 (cis-1,2-dichloroethene), MW-30 (o-xylenes, isopropylbenzene), MW-23 (chloroethane), and MW-20 (2-butanone, methylene chloride).

There was an increase in the concentration of total VOCs in MW-30 from 3,393 µg/L to 11,100 µg/L. The presence of NAPL during the remedial investigation in the area of MW-30 may be an explanation for ethylbenzene and xylene concentration exceedences. An oily residue has been observed on the sampling tubes during the quarterly sampling events however no measurable NAPL has been detected in this well since its installation.

Acetone still exceeds cleanup standards in MW-20; however the concentration has decreased from 2,900µg/L in December 2008 to 1,900 µg/L in March 2009. Cis-1,2 dichloroethene (61 µg/L) and vinyl chloride (23 µg/L) are detected in MW-23 at concentrations exceeding their respective AQWS/ GVs. MW-20 has exhibited characteristics leading to the hypothesis that the septic system from the veterinary clinic may be entering the well. This well should be sampled for nitrates, nitrites, total coliform bacteria during the next sampling event to determine if septic discharge is possibly entering the well from the veterinary clinic located to the west.

TABLES

Table 1

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

March 2009

Date				Aug-08		Dec-08		Mar-09	
Monitoring Well	GROUND Elevation	CASING Elevation	Measuring Point	Depth To Water (ft)	Ground Water Elevation (ft)	Depth To Water (ft)	Ground Water Elevation (ft)	Depth To Water (ft)	Ground Water Elevation (ft)
MW-11	228.57	231.42	231.23	11.94	219.29	11.41	219.82	11.24	219.99
MW-11D	228.61	231.26	231.20	11.48	219.72	11.16	220.04	10.85	220.35
MW-12	228.50	231.06	230.68	10.97	219.71	12.36	218.32	10.2	220.48
MW-15	FLUSH	224.47	224.14	3.5	220.64	3.31	220.83	2.92	221.22
MW-15D	FLUSH	224.49	224.35	3.75	220.60	3.44	220.91	3.03	221.32
MW-16	226.09	228.68	228.41	9.57	218.84	6.15	222.26	9.2	219.21
MW-16D	225.81	227.67	227.49	8.58	218.91	8.28	219.21	8.13	219.36
MW-18	227.29	229.94	229.58	7.11	222.47	6.41	223.17	6.69	222.89
MW-19	224.77	227.27	227.12	5.52	221.60	4.94	222.18	4.66	222.46
MW-19D	224.89	226.14	226.01	4.65	221.36	4.15	221.86	3.87	222.14
MW-20	224.80	226.99	226.89	6.8	220.09	6.37	220.52	5.96	220.93
MW-20D	224.72	227.16	227.13	6.93	220.20	6.58	220.55	6.26	220.87
MW-21	224.52	227.51	227.46	7.43	220.03	6.89	220.57	6.72	220.74
MW-21D	224.71	229.56	229.05	8.85	220.20	8.61	220.44	8.3	220.75
MW-23	221.99	224.93	224.86	5.34	219.52	4.81	220.05	4.72	220.14
MW-23D	222.36	224.46	224.32	4.36	219.96	4.02	220.30	3.70	220.62
MW-30	223.57	226.26	226.19	6.61	219.58	6.12	220.07	5.92	220.27
MW-31	223.18	225.55	225.43	5.81	219.62	5.48	219.95	5.24	220.19
MW-32	224.92	227.83	227.32	7.3	220.02	6.68	220.64	6.39	220.93
MW-33	224.18	227.37	226.99	6.45	220.54	6.07	220.92	5.77	221.22

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
March 2009

Sample ID		MW11				MW11D				MW12				MW15				MW15D			
Sampling Date		3/27/08	8/26/08	12/3/08	3/26/09	3/27/08	8/26/08	12/3/08	3/26/09	3/24/08	8/26/08	12/5/08	3/26/09	3/26/08	8/26/08	12/5/08	3/27/09	3/26/08	8/26/08	12/5/08	3/27/09
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
Volatiles	AWQS/GV Values																				
Vinyl chloride	2	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	**16**	**76**	**44**	**11**	5 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
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
Methylene chloride	5	5 U	5 U	**11**	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	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
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	**8.3**	**15**	**17**	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5	**17**	**9.9**	**12**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	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
Total VOC's		**24**	**9.9**	**23**	**0**	**0**	**5**	**5**	**0**	**0**	**0**	**0**	**0**	**24.3**	**91**	**61**	**11**	**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 2
Groundwater Analytical Summary
Volatile Organic Compounds
34 Freemans Bridge Road
Glenville, New York
March 2009

Sample ID		MW16				MW16D				MW18				MW19				MW19D			
Sampling Date		3/25/08	8/26/08	12/3/08	3/25/09	3/25/08	8/26/08	12/3/08	3/25/09	3/26/08	8/26/08	12/5/08	3/27/09	3/26/08	8/25/08	12/4/08	3/27/09	3/26/08	8/25/08	12/4/08	3/27/09
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
Volatiles	AWQS/GV Values																				
Vinyl chloride	2	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	5 U	5 U	10 U	10 U	10 U
Acetone	50 (GV)	10 U	**24**	10 U	**15**	10 U	5 U	5 U	5 U	10 U	5 U	5 U	5 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
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
Methyl tert-butyl Ether	10(GV)	5 U	5 U	5 U	5 U	**5.9**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**23**	**12**	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	5	5 U	5 U	5 U	5 U	**25**	**9.2**	**11**	**7.3**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**36**	**33**	**42**	**34**
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
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
Total VOC's		**0**	**24**	**0**	**15**	**30.9**	**9.2**	**11**	**7.3**	**0**	**0**	**0**	**0**	**0**	**23**	**12**	**0**	**36**	**33**	**42**	**34**

Qualifiers:
Detected concentrations shown in **bold** font. Bold font in shaded cell indicates exceedances of AWQS+GV.
NA - Not analyzed
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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).
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* - 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
March 2009

Sample ID		MW20				MW20D				MW21				MW21D				MW23			
Sampling Date		3/24/08	8/25/08	12/4/08	3/25/09	3/24/08	8/25/08	12/4/08	3/25/09	3/24/08	8/25/08	12/4/08	3/26/09	3/24/08	8/25/08	12/4/08	3/26/09	3/27/08	8/25/08	12/3/08	3/25/09
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
Volatiles	AWQS/GV Values																				
Vinyl chloride	2	5 U	100 U	200 U	200 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	**10**	10 U	**16**	**23**
Chloroethane	5	5 U	100 U	200 U	200 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	**34**	10 U
Acetone	50 (GV)	**720** D	**1400** D	**2900** D	**1900**	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
Methylene chloride	5	5 U	50 U	**120** D	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
cis-1,2-Dichloroethene	5	5 U	50 U	100 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**49**	**68**	**21**	**61**
2-Butanone	50(GV)	**77**	100 U	**290** D	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
Benzene	1	5 U	50 U	100 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylcyclohexane	NS	5 U	50 U	100 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	5	5 U	50 U	100 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	5	5 U	50 U	100 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
o-xylene	5	5 U	50 U	100 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 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	5 U	5 U	5 U	5 U	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	5 U	5 U	5 U	5 U	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 VOC's		**797**	**1400**	**3310**	**1900**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**59**	**68**	**71**	**84**

Qualifiers:
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NA - Not analyzed
ND - Non Detect
E - Value above quantitation range
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Table 2
Groundwater Analytical Summary
Volatile Organic Compounds
34 Freemans Bridge Road
Glenville, New York
March 2009

Sample ID		MW-23D				MW30				MW31				MW32				MW33			
Sampling Date		4/4/08	8/25/08	12/3/08	3/25/09	3/25/08	8/26/08	12/5/08	3/27/09	3/25/08	8/26/08	12/4/08	3/25/09	3/27/08	8/26/08	12/5/08	3/26/09	3/26/08	8/26/08	12/5/08	3/26/09
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
Volatiles	AWQS/GV Values																				
Vinyl chloride	2	5 U	10 U	10 U	10 U	5 U	200 U	100 U	500 U	**7.9**	**13**	**12**	**11**	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U
Chloroethane	5	5 U	10 U	10 U	10 U	5 U	200 U	100 U	500 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U
Acetone	50 (GV)	10 U	10 U	10 U	10 U	10 U	200 U	100 U	500 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	**36**	10 U	**16**	10 U
Methylene chloride	5	5 U	5 U	5 U	5 U	5 U	100 U	50 U	250 U	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	**50**	100 U	50 U	250 U	**12**	**10**	**14**	**11**	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	200 U	100 U	500 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	100 U	50 U	250 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**6**	6 U	5 U
Methylcyclohexane	NS	5 U	5 U	5 U	5 U	**26**	100 U	50 U	250 U	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	**69**	100 U	50 U	250 U	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	**110**	**1700** D	**610** D	**1100**	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	**110**	**140** D	**73** D	250 U	**140**	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	**3000** D	**8500** E	**2600** E	**10000**	**5.8**	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	**72**	**180** D	**110** D	250 U	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 VOC's		**0**	**0**	**0**	**0**	**3437**	**10520**	**3393**	**11100**	**165.7**	**23**	**26**	**22**	**0**	**0**	**0**	**0**	**36**	**6**	**16**	**0**

Qualifiers:
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E - Value above quantitation range
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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
March 2009

Sample ID		MW11				MW11D				MW12				MW15				MW15D			
Sampling Date		3/27/08	8/26/08	12/3/08	3/26/09	3/27/08	8/26/08	12/3/08	3/26/09	3/24/08	8/26/08	12/5/08	3/26/09	3/26/08	8/26/08	12/5/08	3/27/09	3/26/08	8/26/08	12/5/08	3/27/09
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
Semi-Volatiles	AWQS/GV Values																				
2-Chlorophenol	1	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	6 U	5 U	5 U	5 U	5 U	5 U	5 U
2,2-Oxybis(1-chloropropane)	5	5 U	NA	NA	NA	5 U	NA	NA	NA	5.1 U	NA	NA	NA	5 U	NA	NA	NA	5 U	NA	NA	NA
Phenanthrene	50(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	6 U	5 U	5 U	5 U	5 U	5 U	5 U
Anthracene	50(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	6 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbazole	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	6 U	6 U	5 U	5 U	5 U	5 U	5 U
Fluoranthene	50(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	6 U	5 U	5 U	5 U	5 U	5 U	5 U
Pyrene	50(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	6 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(a)anthracene	0.002	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	6 U	5 U	5 U	5 U	5 U	5 U	5 U
Chrysene	0.002	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	6 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	**6** B	5 U	5.1 U	5 U	**7** B	5 U	5 U	6 U	**7** B	5 U	5 U	5 U	5 U	5 U
Di-n-octylphthalate	50(GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	6 U	6 U	5 U	5 U	5 U	5 U	5 U
Benzo(b)fluoranthene	0.002 (GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	6 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(k)fluoranthene	0.002 (GV)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	6 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(a)pyrene	ND	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	6 U	5 U	5 U	5 U	5 U	5 U	5 U
Total SVOCs		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Qualifiers:
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E - Value above quantitation range
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Table 3
Groundwater Analytical Summary
Semi-Volatile Organic Compounds
34 Freemans Bridge Road
Glenville, New York
March 2009

Sample ID		MW16				MW16D				MW18				MW19				MW19D			
Sampling Date		3/25/08	8/26/08	12/3/08	3/25/09	3/25/08	8/26/08	12/3/08	3/25/09	3/26/08	8/26/08	12/5/08	3/27/09	3/26/08	8/25/08	12/4/08	3/27/09	3/26/08	8/25/08	12/4/08	3/27/09
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
Semi-Volatiles	AWQS/GV Values																				
2-Chlorophenol	1	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**9**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,2-Oxybis(1-chloropropane)	5	**4.8** J	NA	NA	NA	5 U	NA	NA	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	5 U	NA	NA	NA
Phenanthrene	50(GV)	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**7**	**23**	5 U	5 U	5 U	5 U	5 U
Anthracene	50(GV)	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**11**	5 U	5 U	5 U	5 U	5 U
Carbazole	NA	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**5**	5 U	5 U	5 U	5 U	5 U	5 U
Fluoranthene	50(GV)	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**7**	**31**	5 U	5 U	5 U	5 U	5 U
Pyrene	50(GV)	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**6**	**16**	5 U	5 U	5 U	5 U	5 U
Benzo(a)anthracene	0.002	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**11**	5 U	5 U	5 U	5 U	5 U
Chrysene	0.002	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**11**	5 U	5 U	5 U	5 U	5 U
Bis(2-ethylhexyl)phthalate	5	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**15** B	5 U	5 U	5 U	**11** B	5 U
Di-n-octylphthalate	50(GV)	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(b)fluoranthene	0.002 (GV)	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**8**	5 U	5 U	5 U	5 U	5 U
Benzo(k)fluoranthene	0.002 (GV)	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**8**	5 U	5 U	5 U	5 U	5 U
Benzo(a)pyrene	ND	5.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**9**	5 U	5 U	5 U	5 U	5 U
Total SVOCs		**4.8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**25**	**128**	**0**	**0**	**0**	**0**	**0**

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

Sample ID		MW20				MW20D				MW21				MW21D				MW23			
Sampling Date		3/24/08	8/25/08	12/4/08	3/25/09	3/24/08	8/25/08	12/4/08	3/25/09	3/24/08	8/25/08	12/4/08	3/26/09	3/24/08	8/25/08	12/4/08	3/26/09	3/27/08	8/25/08	12/3/08	3/25/09
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
Semi-Volatiles	AWQS/GV Values																				
Phenol	1	**180** D	**1700** D	**930** E	**970** E	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	6 U	5 U
2-Methylphenol	1	**9.2**	**200** D	**140** D	**120**	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	6 U	5 U
4-Methylphenol	1	NA	**1100** D	**650** D	**470**	NA	5 U	5 U	5 U	NA	5 U	5 U	5 U	NA	5 U	5 U	5 U	NA	5 U	6 U	5 U
2,4-Dimethylphenol	50(GV)	5.1 U	110 U	56 U	42 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	6 U	5 U
Naphthalene	10(GV)	**4.8** J	110 U	56 U	42 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	6 U	5 U
Acenaphthylene	NS	**3.2** J	110 U	56 U	42 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U	5 U	6 U	5 U
Total SVOCs		**197.2**	**3000**	**1720**	**1560**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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Groundwater Analytical Summary
Semi-Volatile Organic Compounds
34 Freemans Bridge Road
Glenville, New York
March 2009

Sample ID		MW-23D				MW30				MW31				MW32				MW33			
Sampling Date		4/4/08	8/25/08	12/3/08	3/25/09	3/25/08	8/26/08	12/5/08	3/27/09	3/25/08	8/26/08	12/4/08	3/25/09	3/27/08	8/26/08	12/5/08	3/26/09	3/26/08	8/26/08	12/5/08	3/26/09
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
Semi-Volatiles	AWQS/GV Values																				
Phenol	1	5 U	5 U	5 U	5 U	5 U	11 U	15 U	9 U	5 U	5 U	5 U	5 U	5 U	5 U	**13**	5 U	5 U	6 U	6 U	11 U
2-Methylphenol	1	5 U	5 U	5 U	5 U	5 U	11 U	15 U	9 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	6 U	6 U	11 U
4-Methylphenol	1	5 U	5 U	5 U	5 U	NA	11 U	15 U	9 U	NA	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	6 U	6 U	11 U
2,4-Dimethylphenol	50(GV)	5 U	5 U	5 U	5 U	**21**	**110** D	**100**	**86**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	6 U	6 U	11 U
Naphthalene	10(GV)	5 U	5 U	5 U	5 U	**2.3** J	**15** D	**22**	**13**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	6 U	6 U	11 U
Acenaphthylene	NA	5 U	5 U	5 U	5 U	5 U	11 U	15 U	9 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	6 U	6 U	11 U
Total SVOCs		**0**	**0**	**0**	**0**	**23.3**	**125**	**122**	**99**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**0**	**0**	**0**	**0**	**0**

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

Sample ID		MW11				MW11D				MW12				MW15				MW15D			
Sampling Date		3/27/08	8/26/08	12/3/08	3/26/09	3/27/08	8/26/08	12/3/08	3/26/09	3/24/08	8/26/08	12/5/08	3/26/09	3/26/08	8/26/08	12/5/08	3/27/09	3/26/08	8/26/08	12/5/08	3/27/09
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
Metals	AWQS/GV Values																				
Aluminum	NS	**4190**	**521**	**307**	**285**	**60.4** J	100 U	100 U	100 U	**830**	**14100**	**1460**	**558**	**1840**	**6660**	**10900**	**277**	45.8 U	**430**	**440**	100 U
Antimony	3	6.8 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U
Arsenic	25	**5.99** J	5 U	5 U	5 U	3.9 U	5 U	5 U	5 U	3.9 U	5 U	5 U	5 U	3.9 U	5 U	5 U	5 U	3.9 U	5 U	5 U	5 U
Barium	1000	**79.4** J	**67**	**60**	**56**	**153** J	**187**	**180**	**168**	**40.5** J	**181**	**79**	**70**	**29.3** J	**66**	**90**	**24**	**13.2** J	**21**	**25**	**19**
Beryllium	3	**0.59** J	5 U	5 U	5 U	0.3 U	5 U	5 U	5 U	**0.5** J	5 U	5 U	5 U	**0.38** J	5 U	5 U	5 U	0.3 U	5 U	5 U	5 U
Cadmium	5	1.1 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U
Calcium	NS	**117000**	**161000**	**149000**	**170000**	**178000**	**311000**	**284000**	**167000** R	**95100**	**149000**	**140000**	**112000**	**65600**	**115000**	**127000**	**106000**	**61100**	**111000**	**112000**	**115000**
Chromium	50	**10.4**	5 U	5 U	5 U	1.2 U	5 U	5 U	5 U	**1.5** J	**20**	5 U	5 U	**3.27** J	**6**	5 U	5 U	**2.32** J	5 U	5 U	5 U
Cobalt	NS	**6.78** J	50 U	50 U	50 U	2.4 U	50 U	50 U	50 U	2.4 U	50 U	50 U	50 U	**3.05** J	50 U	50 U	50 U	2.4 U	50 U	50 U	50 U
Copper	200	**11.4** J	5 U	5 U	5 U	1.7 U	5 U	5 U	5 U	1.7 U	**35**	**8**	**11**	**4.06** J	**15**	**30**	**6**	1.7 U	5 U	5 U	**6**
Iron	300	**11500**	**1640**	**1250**	**462**	**3100**	**6310**	**6820**	**6620**	**2160**	**26500**	**2610**	**450**	**4080**	**1110**	**18400**	**776**	37 U	**864**	**831**	**56**
Lead	25	**11.7**	5 U	5 U	5 U	4.6 U	**12**	5 U	5 U	4.6 U	5 U	5 U	5 U	4.6 U	5 U	**11**	5 U	4.6 U	5 U	5 U	5 U
Magnesium	35000 (GV)	**18800**	**22800**	**21800**	**24600**	**31200**	**34500**	**30000**	**25500**	**10300**	**20000**	**17300**	**12600**	**11400**	**20000**	**24100**	**18500**	**10300**	**17900**	**19200**	**19000**
Manganese	300	**1180**	**2200**	**1780**	**1620**	**269**	**540**	**529**	**512**	**49**	**242**	**59**	**27**	**224**	**474**	**583**	**282**	**38.7**	**108**	**114**	**103**
Mercury	0.7	0.08 U	0.2 U	0.2 U	0.2 U	0.08 U	0.2 U	0.2	0.2 U	0.08 U	0.2 U	0.2 U	0.2 U	0.08 U	0.2 U	0.2 U	0.2 U	0.08 U	0.2 U	0.2 U	0.2 U
Nickel	100	**10.9** J	20 U	20 U	20 U	4.7 U	20 U	20 U	20 U	4.7 U	**21**	20 U	20 U	4.7 U	20 U	**29**	20 U	4.7 U	20 U	20 U	20 U
Potassium	NS	**1590** J	**2130**	**1710**	**1880**	**2490** J	**2990**	**2830**	**2980**	**1170** J	**6180**	**2970**	**2130**	**1540** J	**5120**	**6220**	**2740**	**1480** J	**3340**	**3240**	**3880**
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
Silver	50	0.7 U	10 U	10 U	10 U	0.7 U	10 U	10 U	10 U	0.7 U	10 U	10 U	10 U	0.7 U	10 U	10 U	10 U	0.7 U	10 U	10 U	10 U
Sodium	20000	**23600**	**27300**	**34300**	**27400**	**69200**	**40200**	**83600**	**45300**	**6500**	**11500**	**14200**	**8620**	**14200**	**26600**	**35900**	**38900**	**30500**	**34600**	**38400**	**43200**
Thallium	0.5 (GV)	8 U	10 U	10 U	10 U	8 U	10 U	10 U	10 U	8 U	10 U	10 U	10 U	8 U	10 U	10 U	10 U	8 U	10 U	10 U	10 U
Vanadium	NS	**12.6** J	20 U	20 U	20 U	3.1 U	20 U	20 U	20 U	3.1 U	**31**	20 U	20 U	**4.9** J	20 U	**29**	20 U	3.1 U	20 U	20 U	20 U
Zinc	2000 (GV)	**51.5** J	10 U	10 U	10 U	**9.89** J	10 U	10 U	10 U	**19.2** J	**136**	**23**	**11**	**23** J	**34**	**74**	10 U	**10.6** J	**13**	**13**	10 U
Cyanide	200	**28.1**	10 U	10 U	10 U	**4.5**	10 U	10 U	10 U	**2.9**	10 U	10 U	10 U	10 U	10 U	10 U	10 U	**1.9**	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).
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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
March 2009

Sample ID		MW16				MW16D				MW18				MW19				MW19D			
Sampling Date		3/25/08	8/26/08	12/3/08	3/25/09	3/25/08	8/26/08	12/3/08	3/25/09	3/26/08	8/26/08	12/5/08	3/27/09	3/26/08	8/25/08	12/4/08	3/27/09	3/26/08	8/25/08	12/4/08	3/27/09
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
Metals	AWQS/GV Values																				
Aluminum	NS	45.8 U	100 U	100 U	**103**	**103** J	100 U	100 U	100 U	**930**	**970**	**386**	**444**	**458**	**990**	**1420**	**415**	**694**	**1390**	**496**	**277**
Antimony	3	6.8 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	**15.1** J	60 U	60 U	60 U
Arsenic	25	3.9 U	**7**	5 U	**14**	3.9 U	5 U	5 U	5 U	3.9 U	5 U	5 S	5 U	3.9 U	**7**	5 U	5 U	3.9 U	**5**	5 U	5 U
Barium	1000	**247**	**160**	**241**	**174**	**35.5** J	**54**	**54**	**48**	**19.6** J	**51**	**21**	**20**	**29.1** J	**109**	**73**	**46**	**42.3** J	**60**	**53**	**47**
Beryllium	3	0.3 U	5 U	5 U	5 U	0.3 U	5 U	5 U	5 U	0.3 U	5 U	5 U	5 U	0.3 U	5 U	5 U	5 U	0.3 U	5 U	5 U	5 U
Cadmium	5	1.1 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U
Calcium	NS	**347000**	**254000**	**250000**	**297000**	**69200**	**121000**	**112000**	**114000**	**58400**	**141000**	**49800**	**67700**	**67700**	**162000**	**152000**	**123000**	**120000**	**156000**	**146000**	**154000**
Chromium	50	**1.31** J	5 U	5 U	5 U	**1.37** J	5 U	5 U	5 U	**4.33** J	5 U	5 U	5 U	**4.65** J	5 U	5 U	5 U	**7.04** J	5 U	5 U	5 U
Cobalt	NS	2.4 U	50 U	50 U	50 U	**7.93** J	50 U	50 U	50 U	**2.56** J	50 U	50 U	50 U	2.4 U	50 U	50 U	50 U	**7.29** J	50 U	50 U	50 U
Copper	200	1.7 U	5 U	5 U	5 U	1.7 U	5 U	5 U	5 U	1.7 U	5 U	**7** S	**6**	**2.86** J	**10**	5 U	5 U	**1.93** J	5 U	5 U	5 U
Iron	300	**19200**	**14500**	**11400**	**3830**	**1640**	**1200**	**1210**	**822**	**2530**	**2080**	**712** S	**730**	**1520**	**4570**	**3410**	**966**	**8990**	**9350**	**6950**	**5880**
Lead	25	4.6 U	5 U	5 U	5 U	4.6 U	5 U	5 U	5 U	4.6 U	5 U	5 U	5 U	4.6 U	5 U	**15**	5 U	4.6 U	5 U	5 U	5 U
Magnesium	35000 (GV)	**47900**	**48200**	**34000**	**42100**	**11100**	**19500**	**18800**	**18500**	**9290**	**20600**	**9020**	**11200**	**7680**	**19400**	**19600**	**16400**	**17300**	**22200**	**21200**	**21400**
Manganese	300	**2430**	**3000**	**1490**	**2100**	**841**	**803**	**598**	**499**	62.7	**218**	**48**	**79**	**116**	**1820**	**597**	**184**	**429**	**594**	**523**	**518**
Mercury	0.7	0.08 U	0.2 U	0.2 U	0.2 U	0.08 U	0.2 U	0.2 U	0.2 U	0.08 U	0.2 U	0.2 U	0.2 U	**0.09** J	0.2 U	0.2 U	0.2 U	0.08 U	0.2 U	0.2 U	0.2 U
Nickel	100	4.7 U	20 U	20 U	20 U	4.7 U	20 U	20 U	20 U	4.7 U	20 U	20 U	20 U	4.7 U	20 U	20 U	20 U	4.7 U	20 U	20 U	20 U
Potassium	NS	**7790**	**6040**	**9430**	**7770**	**1100** J	**2680**	**2430**	**2490**	**615** J	**1690**	**752**	**822**	**1560** J	**6280**	**4850**	**3710**	**883** J	**1670**	**1330**	**1170**
Selenium	10	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
Silver	50	0.7 U	10 U	10 U	10 U	0.7 U	10 U	10 U	10 U	0.7 U	10 U	10 S	10 U	0.7 U	10 U	10 U	10 U	0.7 U	10 U	10 U	10 U
Sodium	20000	**31300**	**22800**	**20500**	**24500**	**35800**	**42000**	**53900**	**47600**	**3570** J	**10000**	**13200**	**12200**	**8400**	**15100**	**12700**	**1270**	**5960**	**5610**	**6810**	**6240**
Thallium	0.5 (GV)	8 U	10 U	10 U	10 U	8 U	10 U	10 U	10 U	8 U	10 U	10 U	10 U	8 U	10 U	10 U	10 U	8 U	10 U	10 U	10 U
Vanadium	NS	3.1 U	20 U	20 U	20 U	3.1 U	20 U	20 U	20 U	3.1 U	20 U	20 U	20 U	3.1 U	20 U	20 U	20 U	3.1 U	20 U	20 U	20 U
Zinc	2000 (GV)	**16.7** J	10 U	10 U	10 U	**16** J	10 U	10 U	10 U	26.6 J	10 U	**12**	10 U	**17.3** J	**38**	**35**	10 U	**21.1** J	10 U	10 U	10 U
Cyanide	200	**7.6**	10 U	10 U	10 U	**5.1**	**20**	10 U	10 U	**2.3**	10 U	10 U	10 U	**2.3**	10 U	**10**	**10**	**4.8**	**10**	10 U	10 U

Qualifiers:
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E - Value above quantitation range
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Table 4
Groundwater Analytical Summary
Metals
34 Freemans Bridge Road
Glenville, New York
March 2009

Sample ID		MW20				MW20D				MW21				MW21D				MW23			
Sampling Date		3/24/08	8/25/08	12/4/08	3/25/09	3/24/08	8/25/08	12/4/08	3/25/09	3/24/08	8/25/08	12/4/08	3/26/09	3/24/08	8/25/08	12/4/08	3/26/09	3/27/08	8/25/08	12/3/08	3/25/09
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
Metals	AWQS/GV Values																				
Aluminum	NS	**141** J	**3090**	**2060**	**2190**	**347**	**649**	**136**	**1300**	**441**	**3310**	**2410**	**347**	45.8 U	100 U	100 U	100 U	**386**	**3650**	**11400**	**2160**
Antimony	3	6.8 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	**10.2** J	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U
Arsenic	25	**4.77** J	**21**	**9** S	**19**	3.9 U	5 U	5 U	5 U	3.9 U	5 U	5 U	5 U	3.9 U	5 U	5 U	5 U	3.9 U	5 U	5 U	5 U
Barium	1000	**64.2** J	**240**	**319**	**378**	**56** J	**115**	**104**	**119**	**67** J	**153**	**286**	**110**	**80.3** J	**113**	**98**	**89**	**44.1** J	**132**	**193**	**77**
Beryllium	3	0.3 U	5 U	5 U	5 U	0.3 U	5 U	5 U	5 U	0.3 U	5 U	5 U	5 U	0.3 U	5 U	5 U	5 U	0.3 U	5 U	5 U	5 U
Cadmium	5	1.1 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5	1.1 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U
Calcium	NS	**168000**	**460000**	**635000**	**560000**	**61100**	**114000**	**102000**	**111000**	**186000**	**351000**	**341000**	**324000**	**82200**	**114000**	**98300**	**94700**	**88800**	**136000**	**147000**	**118000**
Chromium	50	1.2 U	5 U	5 U	**6**	1.2 U	5 U	5 U	5 U	**8.49** J	5 U	**44**	5 U	1.2 U	5 U	5 U	5 U	**1.73** J	5 U	**27**	5 U
Cobalt	NS	2.4 U	50 U	50 U	50 U	2.4 U	50 U	50 U	50 U	6.67 J	50 U	50 U	50 U	2.4 U	50 U	50 U	50 U	2.4 U	50 U	50 U	50 U
Copper	200	**12.9** J	**29**	**10**	**9**	**2.1** J	5 U	5 U	**8**	1.7 U	**5**	**44**	5 U	1.7 U	5 U	5 U	5 U	1.7 U	**8**	**22**	5 U
Iron	300	37 U	**3660**	**2350**	**3350**	**1630**	**2480**	**1420**	**5880**	**9160**	**20400**	**58700**	**11700**	**1050**	**1650**	**1400**	**1280**	**3890**	**18000**	**45900**	**12100**
Lead	25	4.6 U	5 U	**9**	5 U	4.6 U	5 U	5 U	5 U	4.6 U	5 U	**58**	5 U	4.6 U	5 U	5 U	5 U	**30.5**	**130**	**515**	**74**
Magnesium	35000 (GV)	**3950** J	**5510**	**1760**	**4150**	**9700**	**18600**	**17400**	**17800**	**28800**	**50500**	**58200**	**46100**	**13900**	**19400**	**17100**	**16000**	13800	**23100**	**27200**	**18700**
Manganese	300	**14.4** J	**71**	**38**	**44**	**52.3**	**71**	**47**	**88**	**6730**	**10300**	**11700**	**12200**	**107**	**163**	**136**	**122**	**449**	**904**	**800**	**390**
Mercury	0.7	0.08 U	0.2 U	0.2 U	0.2 U	0.08 U	0.2 U	0.2 U	0.2	0.08 U	0.2 U	0.2 U	0.2	0.08 U	0.2 U	0.2 U	0.2 U	0.08 U	0.2 U	0.2 U	0.2 U
Nickel	100	**8.81** J	**39**	**54**	**39**	4.7 U	20 U	20 U	20 U	4.7 U	20 U	**54**	20 U	4.7 U	20 U	20 U	20 U	4.7 U	20 U	**26**	20 U
Potassium	NS	**15100**	**92600**	**97100**	**108000**	**2000** J	**5560**	**4910**	**5710**	**898** J	**3000**	**5900**	**1620**	**1640** J	**3420**	**3030**	**3230**	**1630** J	**4540**	**5110**	**2970**
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
Silver	50	0.7 U	10 U	10 S	10 U	0.7 U	10 U	10 U	10	0.7 U	10 U	10 U	10	0.7 U	10 U	10 U	10 U	0.7 U	10 U	10 U	10 U
Sodium	20000	**69800**	**122000**	**185000**	**167000**	**32000**	**35400**	**47000**	**41900**	**12500**	**19400**	**27600**	**26000**	**52000**	**43500**	**73600**	**45800**	**30900**	**33900**	**34100**	**36900**
Thallium	0.5 (GV)	8 U	**69**	**26**	**15**	8 U	10 U	10 U	10 U	8 U	10 U	**24**	**20**	8 U	10 U	10 U	10 U	8 U	10 U	10 U	10 U
Vanadium	NS	**3.67** J	20 U	**36**	**43**	3.1 U	20 U	20 U	20 U	**5.96** J	20 U	**77**	20 U	3.1 U	20 U	20 U	20 U	3.1 U	20 U	**27**	20 U
Zinc	2000 (GV)	**10.9** J	**20**	**23**	**20**	**11.8** J	10 U	10 U	**12**	**20.8** J	**21**	**178**	**11**	**9.18** J	10 U	10 U	10 U	**18.8** J	**54**	**160**	**34**
Cyanide	200	**11.2**	10 U	10 U	10 U	**22.4**	10 U	10 U	10 U	**21.2**	10 U	10 U	10 U	**2.7**	10 U	10 U	**10**	**8.5**	10 U	10 U	10 U

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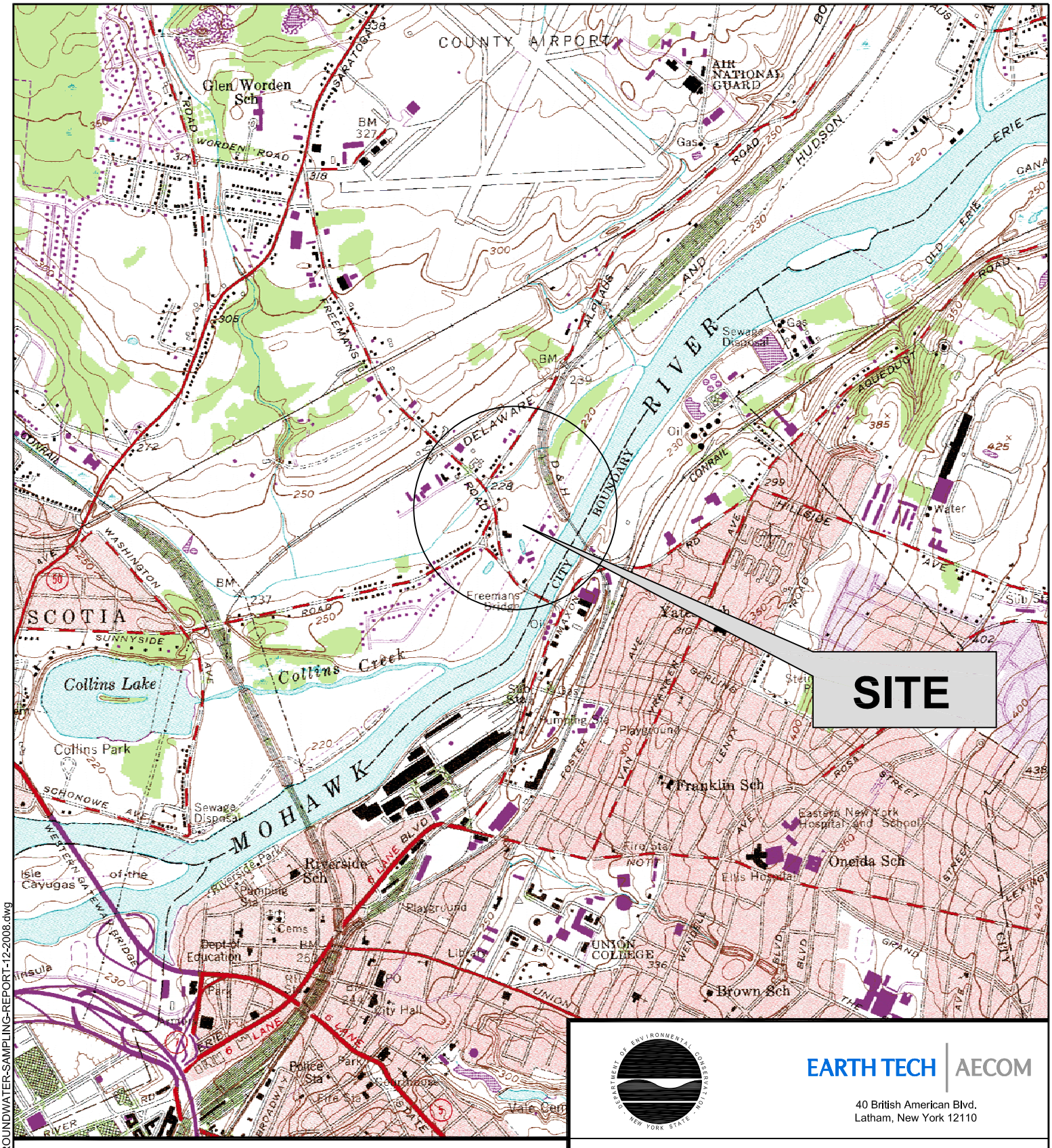
Table 4
Groundwater Analytical Summary
Metals
34 Freemans Bridge Road
Glenville, New York
March 2009

Sample ID		MW-23D				MW30				MW31				MW32				MW33			
Sampling Date		4/4/08	8/25/08	12/3/08	3/25/09	3/25/08	8/26/08	12/5/08	3/27/09	3/25/08	8/26/08	12/4/08	3/25/09	3/27/08	8/26/08	12/5/08	3/26/09	3/26/08	8/26/08	12/5/08	3/26/09
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
Metals	AWQS/GV Values																				
Aluminum	NS	**1400**	**544**	**252**	**182**	**401**	**707**	**286**	**294**	**265**	**820**	**131**	**122**	**1590**	**2730**	**13700**	**150**	45.8 U	**1780**	**812**	**439**
Antimony	3	6.8 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	6.8 U	60 U	60 U	60 U	**15.1** J	60 U	60 U	60 U
Arsenic	25	3.9 U	5 U	5 U	5 U	**6.66** J	**9**	5 S	5 U	3.9 U	5 U	5 U	5 U	3.9 U	5 U	5 U	5 U	3.9 U	**18**	5 S	**8**
Barium	1000	**101** J	**88**	**80**	**74**	**132** J	**113**	**100**	**95**	**41.7** J	**96**	**81**	**68**	**89.2** J	**142**	**214**	**102**	**39.8** J	**98**	**81**	**54**
Beryllium	3	0.3 U	5 U	5 U	5 U	**0.31** J	5 U	5 U	5 U	**0.36** J	5 U	5 U	5 U	**0.41** J	5 U	5 U	5 U	0.3 U	5 U	5 U	5 U
Cadmium	5	1.1 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U	1.1 U	5 U	5 U	5 U
Calcium	NS	**123000**	**110000**	**100000**	**102000**	**126000**	**126000**	**103000**	**115000**	**115000**	**183000**	**179000**	**169000**	**99200**	**156000**	**217000**	**145000**	**128000**	**415000**	**596000**	**717000**
Chromium	50	**2.67** J	5 U	5 U	5 U	1.2 U	5 U	5 U	5 U	1.2 U	5 U	5 U	5 U	**4.85** J	5 U	**16**	5 U	**4.94** J	5 U	5 U	5 U
Cobalt	NS	2.4 U	50 U	50 U	50 U	2.4 U	50 U	50 U	50 U	2.4 U	50 U	50 U	50 U	**3.3** J	50 U	50 U	50 U	**5.84** J	50 U	50 U	50 U
Copper	200	**4.17** J	5 U	5 U	5 U	1.7 U	5 U	5 U	**7**	1.7 S	5 U	5 U	5 U	**1.97** J	5 U	**29**	5 U	1.7 U	**8**	5 S	**8**
Iron	300	**5560**	**2630**	**1840**	**1470**	**6430**	**5410**	**5510**	**3570**	**1800** S	**6050**	**3160**	**4060**	**7900**	**14800**	**39700**	**10800**	**2480**	**6190**	**3000** S	**1780**
Lead	25	**4.96** J	5 U	5 U	5 U	4.6 U	5 U	5 U	5 U	4.6 U	5 U	5 U	5 U	**5.73** J	5 U	**44**	5 U	4.6 U	**7**	5 U	5 U
Magnesium	35000 (GV)	**19400**	**16900**	**15900**	**16400**	**20900**	**16500**	**16900**	**15500**	**17400**	**39500**	**36000**	**31300**	**17800**	**29100**	**39000**	**24900**	**12800**	**20700**	**22800**	**21200**
Manganese	300	**226**	**159**	**129**	**121**	**626**	**792**	**678**	**733**	**359**	**455**	**364**	**328**	**714**	**1530**	**1830**	**1410**	**232**	**413**	**298**	**162**
Mercury	0.7	0.02 U	0.2 U	0.2 U	0.2 U	0.08 U	0.2 U	0.2 U	0.2 U	0.08 U	0.2	0.2	0.2 U	0.08 U	0.2 U	0.2 U	0.2 U	0.08 U	0.2 U	0.2 U	0.2 U
Nickel	100	4.7 U	20 U	20 U	20 U	4.7 U	20 U	20 U	20 U	4.7 U	20 U	20 U	20 U	4.7 U	20 U	**35**	20 U	4.7 U	20	20 U	20 U
Potassium	NS	**15300**	**2890**	**2530**	**3390**	**1590** J	**7060**	**3750**	**4730**	**1590** J	**5750**	**4960**	**3490**	**1520** J	**2880**	**7620**	**7610**	**4780** J	**33600**	**33400**	**33100**
Selenium	10	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 S	5 U
Silver	50	0.7 U	10 U	10 U	10 U	0.7 U	10 U	10 S	10 U	0.7 S	10 U	10 U	10 U	0.7 U	10 U	10 U	10 U	0.7 U	10 U	10 S	10 U
Sodium	20000	**80200**	**36300**	**48200**	**50800**	**124000**	**135000**	**159000**	**240000**	**29300**	**45300**	**68700**	**43300**	**13900**	**19400**	**29500**	**20200**	**130000**	**166000**	**214000**	**188000**
Thallium	0.5 (GV)	8 U	10 U	10 U	10 U	8 U	10 U	10 U	10 U	8 U	10 U	10 U	10 U	8 U	10	10	10 U	8 U	10 U	10 U	10 U
Vanadium	NS	**3.59** J	20 U	20 U	20 U	3.1 U	20 U	20 U	20 U	3.1 U	20 U	20 U	20 U	**3.4** J	20 U	**43**	20 U	3.1 U	20 U	20 U	20 U
Zinc	2000 (GV)	**43.2** J	10 U	10 U	10 U	**19.5** J	**11**	**12**	10 U	**8.35** J	10 U	10 U	10 U	**21.1** J	**20**	**131**	10 U	**14.2** J	**26**	**22**	10 U
Cyanide	200	0.96 J	**10**	10 U	10 U	**4.3**	10 U	**30**	10 U	**8.4**	**20**	**20**	**60**	**79.9**	**190**	10 U	**21**	**3.7**	**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



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PLAN

Scale in Feet

0 1000' 2000'

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

FIGURE 1
SITE LOCATION MAP

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

Town of Glenville	Schenectady County, New York
DATE: DECEMBER, 2008	SCALE: 1"=2000'
PROJECT NO.: 105886	FIGURE 1

FILE NAME = WORK\105886\CADD\...\GROUNDWATER-SAMPLING-REPORT-12-2008.dwg

FREEMAN'S BRIDGE ROAD

MAPLE AVENUE

HIGHWAY BOUNDARY

LANDS N/F JOHN OLIVER HORNFECK

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

LANDS N/F FLORENCE E. NELSON

LANDS N/F DOMINICK MANGINO

LANDS N/F PEARL ARMSTRONG

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

LANDS N/F DEREK A. FOTI

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

LANDS N/F LYONS VENTURES, INC.

LANDS N/F LYONS VENTURES, INC.

LANDS N/F LYONS VENTURES, INC.

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

LANDS N/F NIAGARA MOHAWK POWER CORP.

GRAVEL ROAD

MW-15D
MW-15
221.22

MW-33
221.22

MW-20
220.93

MW-20D

MW-19D

MW-19
222.46

MW-23
220.14

MW-23D

MW-32
220.93

MW-21
220.74

MW-21D

MW-30
220.27

MW-31
220.19

MW-18
222.89

MW-12
220.48

MW-11
219.99

MW-11D

MW-16
219.21

MW-16D

221.5

221.0

222.0

222.5

220.5

220.0

219.5

LEGEND

MW-19D — MONITORING WELL LOCATION

GROUNDWATER CONTOUR

GENERAL GROUNDWATER FLOW DIRECTION

PLAN

Scale in Feet

0 50' 100'

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

2) MONITORING WELL AND SOIL VAPOR POINT LOCATIONS BY A SURVEY PERFORMED BY EARTH TECH, MAY 8, 2008

FILE NAME = WORK\105886\CADD\...\GROUNDWATER-SAMPLING-REPORT-12-2008.dwg

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FIGURE 2 - SHALLOW GROUNDWATER FLOW MARCH 2009

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

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

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

MW-33	AWQS	Mar08	Aug08	Dec08	Mar09
Benzene	1	ND	6	ND	ND
Total VOCs		36	6	16	0

MW-20	AWQS	Mar08	Aug08	Dec08	Mar09
Acetone	50	720	1400	2900	1900
Methylene Chloride	5	ND	ND	120	ND
2- Butanone	50	77	ND	290	ND
Total VOCs		797	1400	3310	1900

MW-23	AWQS	Mar08	Aug08	Dec08	Mar09
Vinyl Chloride	2	10	ND	16	23
Chloroethane	5	ND	ND	34	ND
cis- 1,2 Dichloroethene	5	49	68	21	61
Total VOCs		59	68	71	84

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

MW-30	AWQS	Mar08	Aug08	Dec08	Mar09
cis- 1,2 Dichloroethene	5	50	ND	ND	ND
Toluene	5	69	ND	ND	ND
Ethylbenzene	5	110	1700	610	1100
o- Xylene	5	110	140	73	ND
m&p- Xylene	5	3000	8500	2600	10000
Isoproplybenzene	5	72	180	110	ND
Total VOCs		3437	10520	3393	11100

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

MW-19	AWQS	Mar08	Aug08	Dec08	Mar09
MTBE	10	ND	23	12	ND
Total VOCs		0	23	12	0

MW-16D	AWQS	Mar08	Aug08	Dec08	Mar09
cis- 1,2 Dichloroethene	5	25	9.2	11	7.3
Total VOCs		30.9	9.2	11	7.3

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

ROAD

MW-15D

MW-15

MW-33

LANDS N/F JOHN OLIVER HORNFECK

LANDS N/F PEARL ARMSTRONG

LANDS N/F DOMINICK MANGINO

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

HIGHWAY BOUNDARY

MAPLE AVENUE

MW-20

MW-20D

LANDS N/F DEREK A. FOTI

MW-19D

MW-19

MW-23

MW-23D

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

LANDS N/F LYONS VENTURES, INC.

MW-32

MW-21

MW-21D

MW-30

MW-31

LANDS N/F LYONS VENTURES, INC.

MW-18

MW-12

MW-16

MW-16D

LANDS N/F LYONS VENTURES, INC.

MW-11

MW-11D

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

LANDS N/F NIAGARA MOHAWK POWER CORP.

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	ug/L
cis-1,2-Dichloroethene	13
Vinyl Chloride	10

CHEMICAL CONSTITUENT

PLAN

Scale in Feet

0 50' 100'

FILE NAME = W:\WORK\93993\CAD\SITE-MANAGEMENT-PLAN\SMP-FIG-PRES.DWG

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FIGURE 3 - TOTAL 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: May, 2009	SCALE: 1"=100'
PROJECT NO.: 105886	FIGURE 3

FREEMAN'S BRIDGE ROAD

MAPLE AVENUE

HIGHWAY BOUNDARY

LANDS N/F JOHN OLIVER HORNFECK

LANDS N/F ERWIN C. GRANT

LANDS N/F FLORENCE E. NELSON

LANDS N/F PEARL ARMSTRONG

LANDS N/F DOMINICK MANGINO

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

LANDS N/F DEREK A. FOTI

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

LANDS N/F LYONS VENTURES, INC.

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

LANDS N/F NIAGARA MOHAWK POWER CORP.

MW-15D

MW-15

MW-33

MW-20

MW-20D

MW-19D

MW-19

MW-23

MW-23D

MW-32

MW-21

MW-21D

MW-30

MW-31

MW-18

MW-12

MW-16

MW-16D

MW-11

MW-11D

MW-20	AWQS	Mar08	Aug08	Dec08	Mar09
Phenol	1	180	1700	930	970
2 Methyl Phenol	1	9.2	200	140	120
4 Methyl Phenol	1	ND	1100	650	470
Total SVOCs		197.2	3000	1720	1560

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

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

MW-30	AWQS	Mar08	Aug08	Dec08	Mar09
2,4 Dimethylphenol	50	21	110	100	86
Napthalene	10	2.3	15	22	13
Total SVOCs		23.3	125	122	99

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

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

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

LEGEND

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

SAMPLING LOCATION

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

CHEMICAL CONSTITUENT

PLAN

Scale in Feet

0 50' 100'

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FIGURE 4 - TOTAL 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: May, 2009	SCALE: 1"=100'
PROJECT NO.: 105886	FIGURE 4

FILE NAME = W:\WORK\93983\TASK\SITE-MANAGEMENT-PLAN\SMP\FIGURES.DWG

Appendix A
Monitoring Well Purging/Sampling Forms

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 11 Date: 3/26/2009

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):	11.24	feet
4. C = Column of Water in Casing:	8.11	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.32	gal
6. 3(V) =Target Purge Volume	3.97	gal

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

Conversion factors to determine V given C

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

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Stabilizati	Units	Readings						
Time		24 hr	1358	1354	1400	1401			
Water Leve	0.33	feet	11.24	-	-	-			
Volume Pu	N / A	gal	0.00	1.50	3.00	4.50			
Flow Rate	N / A	mL / min	-	-	-	-			
Turbidity	(+/-) 10%	NTU	25.9	53.6	360.0	54.3			
Dissolved C	(+/-) 10%	mg / L	3.71	2.11	2.47	1.24			
Eh / ORP	(+/-) 10	MeV	-15.7	14.8	28.2	28.3			
Conductivit	(+/-) 3%	µmho / cm	0.789	0.8	0.82	0.786			
pH	(+/-) 0.1	pH unit	6.75	6.48	6.38	6.35			
Temp		C	8.71	8.43	8.58	9.06			
Color		Visual	clear	cloudy	cloudy	cloudy			
Odor		Olfactory	none	none	none	none			

Comments:

Started purge at 1358
Purged a total of 3.97 gal
Sampled at 1401

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 11 D Date: 03/26/2009

Samplers: Tyler Brown and Mark Howard

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

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth:	53.5	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	10.85	feet
4. C = Column of Water in Casing:	42.05	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	6.95	gal
6. 3(V) =Target Purge Volume	20.86	gal

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

Conversion factors to determine V given C

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

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Stabilizati	Units	Readings						
Time		24 hr	1412	1417	1421	1426			
Water Leve	0.33	feet	10.85	-	-	-			
Volume Pu	N / A	gal	0.00	7.00	14.00	21.00			
Flow Rate	N / A	mL / min	-	-	-	-			
Turbidity	(+/-) 10%	NTU	14.70	1.98	0.59	0.00			
Dissolved C	(+/-) 10%	mg / L	3.26	2.57	1.39	1.32			
Eh / ORP	(+/-) 10	MeV	-25.5	-82.1	-95.8	-98.4			
Conductivit	(+/-) 3%	µmho / cm	0.833	1.444	1.385	1.372			
pH	(+/-) 0.1	pH unit	6.71	7.02	7.09	7.10			
Temp		C	10.24	10.43	10.77	10.75			
Color		Visual	clear	clear	clear	clear			
Odor		Olfactory	none	none	none	none			

Comments:

Started purge at 1412
Purged a total of 20.86gal
Sampled 1426

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 12 Date: 03/26/2009

Samplers: Tyler Brown and Mark Howard

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

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth:	17.29	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	10.2	feet
4. C = Column of Water in Casing:	7.09	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.16	gal
6. 3(V) =Target Purge Volume	3.46	gal

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

Conversion factors to determine V given C

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

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Stabilizati	Units	Readings						
Time		24 hr	1102	1105	1123				
Water Leve	0.33	feet	6.39	-	-				
Volume Pu	N / A	gal	0.00	2.50	2.60				
Flow Rate	N / A	mL / min	-	-	-				
Turbidity	(+/-) 10%	NTU	157.0	87.4	162.0				
Dissolved C	(+/-) 10%	mg / L	9.14	4.67	6.58				
Eh / ORP	(+/-) 10	MeV	-20	29.4	52.1				
Conductivit	(+/-) 3%	µmho / cm	0.438	0.429	0.43				
pH	(+/-) 0.1	pH unit	7.16	6.78	7.04				
Temp		C	8.01	7.99	7.91				
Color		Visual	cloudy	cloudy	cloudy				
Odor		Olfactory	none	none	none				

Comments:

Started purge at 1102
Purged a total of 3.46 gal
Sampled at 1123

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 15 Date: 03/27/2009

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):	2.92	feet
4. C = Column of Water in Casing:	11.33	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.85	gal
6. 3(V) =Target Purge Volume	5.54	gal

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

Conversion factors to determine V given C

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

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Stabilizati	Units	Readings						
Time		24 hr	1006	1007	1007	1008			
Water Leve	0.33	feet	2.92	-	-	-			
Volume Pu	N / A	gal	0.00	2.00	4.00	6.00			
Flow Rate	N / A	mL / min	-	-	-	-			
Turbidity	(+/-) 10%	NTU	737.0	601.0	156.0	116.0			
Dissolved C	(+/-) 10%	mg / L	3.71	2.54	2.02	2.30			
Eh / ORP	(+/-) 10	MeV	-65.7	-53.6	-49.7	-47.3			
Conductivit	(+/-) 3%	µmho / cm	0.588	0.576	0.575	0.58			
pH	(+/-) 0.1	pH unit	7.15	7.16	7.10	7.06			
Temp		C	8.63	8.73	8.97	9.17			
Color		Visual	brown	brown	brown	brown			
Odor		Olfactory	none	none	none	none			

Comments:

Started purge at 1006
Purged a total of 5.54 gal
Sampled at 1008

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 15 D Date: 03/27/2009

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):	3.03	feet
4. C = Column of Water in Casing:	26.47	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	4.31	gal
6. 3(V) =Target Purge Volume	12.94	gal

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

Conversion factors to determine V given C

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

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Stabilizati	Units	Readings						
Time		24 hr	1016	1018	1021	1024			
Water Leve	0.33	feet	3.03	-	-	-			
Volume Pu	N / A	gal	0.00	4.50	9.00	13.50			
Flow Rate	N / A	mL / min	-	-	-	-			
Turbidity	(+/-) 10%	NTU	551.0	303.0	47.50	8.95			
Dissolved C	(+/-) 10%	mg / L	4.56	4.50	2.58	4.33			
Eh / ORP	(+/-) 10	MeV	-32.6	-21.4	-16.4	-4.3			
Conductivit	(+/-) 3%	µmho / cm	0.656	0.694	0.696	0.703			
pH	(+/-) 0.1	pH unit	7.15	7.21	7.28	7.37			
Temp		C	10.40	11.67	12.05	12.15			
Color		Visual	cloudy	cloudy/br	sl cloudy	clear			
Odor		Olfactory	none	none	none	none			

Comments:

Started purge at 1016
Purged a total of 12.94 gal
Sampled 1024

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW-16 Date: 03/25/2009

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):	9.20	feet
4. C = Column of Water in Casing:	4.00	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	0.652	gal
6. 3(V) =Target Purge Volume	1.956	gal

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

Conversion factors to determine V given C

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

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Stabilizati	Units	Readings						
Time		24 hr	920	922	923	1012	1013		
Water Leve	0.33	feet	9.20	-	-	-	-		
Volume Pu	N / A	gal	0.00	1.50	2.50	2.75	3.60		
Flow Rate	N / A	mL / min	-	-	-	-	-		
Turbidity	(+/-) 10%	NTU	12.8	2.7	56.7	25.8	58.4		
Dissolved C	(+/-) 10%	mg / L	2.21	1.24	3.51	6.40	4.80		
Eh / ORP	(+/-) 10	MeV	-14.1	-63.8	-51.2	-59.4	-52.2		
Conductivit	(+/-) 3%	µmho / cm	1.211		1.238	1.24	1.227		
pH	(+/-) 0.1	pH unit	6.11		6.31	6.76	6.59		
Temp		C	9.42		8.69	8.75	8.79		
Color		Visual	brown		cloudy	clear	clear		
Odor		Olfactory	none		none	none	none		

Comments:

Started purge at 923
Purged a total of 2.5 gal, purged dry
Sampled at 1013

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 16 D Date: 03/25/2009

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):	8.13	feet
4. C = Column of Water in Casing:	20.51	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	3.49	gal
6. 3(V) =Target Purge Volume	10.46	gal

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

Conversion factors to determine V given C

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

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Stabilizati	Units	Readings						
Time		24 hr	946	948	950	952	954	956	
Water Leve	0.33	feet	8.13	-	-	-	-	-	
Volume Pu	N / A	gal	0-	3.50	7.00	10.50	14.00	17.50	
Flow Rate	N / A	mL / min	-	-	-	-	-	-	
Turbidity	(+/-) 10%	NTU	271.00	2.10	0.85	0.84	0.61	0.65	
Dissolved C	(+/-) 10%	mg / L	5.02	3.04	3.78	4.59	2.50	4.85	
Eh / ORP	(+/-) 10	MeV	4.7	-8.8	-21.3	-25.5	-30.1	-29.3	
Conductivit	(+/-) 3%	µmho / cm	0.612	0.749	0.771	0.775	0.78	0.779	
pH	(+/-) 0.1	pH unit	7.24	7.08	7.03	7.03	7.01	7.03	
Temp		C	8.43	10.92	11.22	11.26	11.35	11.41	
Color		Visual	lt brown	clear	clear	clear	clear	clear	
Odor		Olfactory	none	none	none	none	none	none	

Comments:

Started purge at 946
Purged a total of 10.4 gal
Sampled at 956

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 18 Date: 03/27/2009

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):	6.69	feet
4. C = Column of Water in Casing:	8.01	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.31	gal
6. 3(V) =Target Purge Volume	3.92	gal

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

Conversion factors to determine V given C

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

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Stabilizati	Units	Readings						
Time		24 hr	800	801	802	803			
Water Leve	0.33	feet	6.69	-	-	-			
Volume Pu	N / A	gal	0.00	1.50	3.00	4.50			
Flow Rate	N / A	mL / min	-	-	-	-			
Turbidity	(+/-) 10%	NTU	117.0	31.9	19.7	5.1			
Dissolved C	(+/-) 10%	mg / L	8.07	4.40	3.96	4.85			
Eh / ORP	(+/-) 10	MeV	-9.5	14	26.3	37			
Conductivit	(+/-) 3%	µmho / cm	0.389	0.402	0.378	0.345			
pH	(+/-) 0.1	pH unit	7.34	7.01	6.89	6.89			
Temp		C	6.34	6.27	6.22	6.17			
Color		Visual	cloudy	clear	clear	clear			
Odor		Olfactory	none	none	none	none			

Comments:

Started purge at 800
Purged a total of 3.92 gal
Sampled at 803

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 19 Date: 03/27/2009

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):	4.66	feet
4. C = Column of Water in Casing:	5.06	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	0.82	gal
6. 3(V) =Target Purge Volume	2.47	gal

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

Conversion factors to determine V given C

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

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Stabilizati	Units	Readings						
Time		24 hr	831	832					
Water Leve	0.33	feet	4.66	-					
Volume Pu	N / A	gal	0.00	1.00					
Flow Rate	N / A	mL / min	-	-					
Turbidity	(+/-) 10%	NTU	42.2	54.4					
Dissolved C	(+/-) 10%	mg / L	6.31	2.88					
Eh / ORP	(+/-) 10	MeV	94.8	91.3					
Conductivit	(+/-) 3%	µmho / cm	0.481	0.457					
pH	(+/-) 0.1	pH unit	6.79	7.00					
Temp		C	6.35	5.24					
Color		Visual	cloudy	cloudy					
Odor		Olfactory	none	none					

Comments:

Started purge at 831, purged dry @832
Purged a total of 1.5 gal
Sampled at 851

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 19 D Date: 03/27/2009

Samplers: Tyler Brown and Mark Howard

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

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):	3.87	feet
4. C = Column of Water in Casing:	18.44	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	3.01	gal
6. 3(V) =Target Purge Volume	9.02	gal

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

Conversion factors to determine V given C

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

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Stabilizati	Units	Readings						
Time		24 hr	900	902	903	905			
Water Leve	0.33	feet	3.87	-	-	-			
Volume Pu	N / A	gal	0.00	3.00	6.00	9.00			
Flow Rate	N / A	mL / min	-	-	-	-			
Turbidity	(+/-) 10%	NTU	514.0	207.0	67.3	35.5			
Dissolved C	(+/-) 10%	mg / L	1.78	3.50	3.21	3.57			
Eh / ORP	(+/-) 10	MeV	-57.6	-77.5	-87.1	-92.1			
Conductivit	(+/-) 3%	µmho / cm	0.636	0.637	0.629	0.635			
pH	(+/-) 0.1	pH unit	7.26	7.06	6.98	6.99			
Temp		C	9.76	9.79	9.97	9.98			
Color		Visual	Rusty	Rusty	Rusty	Rusty			
Odor		Olfactory	none	none	none	none			

Comments:

Started purge at 900
Purged a total 9.02 gal
Sampled at 905

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 20 Date: 03/25/2009

Samplers: Tyler Brown and Mark Howard

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

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth:	12.41	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	6.8	feet
4. C = Column of Water in Casing:	5.6	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	0.91	gal
6. 3(V) =Target Purge Volume	3.97	gal

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

Conversion factors to determine V given C

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

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Stabilizati	Units	Readings						
Time		24 hr	1401	1402	1435				
Water Leve	0.33	feet	5.96	-	-				
Volume Pu	N / A	gal	0.00	1.25	1.50				
Flow Rate	N / A	mL / min	-	-	-				
Turbidity	(+/-) 10%	NTU	99.7	121.0	22.5				
Dissolved (	(+/-) 10%	mg / L	3.12	1.64	2.10				
Eh / ORP	(+/-) 10	MeV	-181.3	-180.4	-129.9				
Conductivit	(+/-) 3%	µmho / cm	2.4	2.47	2.092				
pH	(+/-) 0.1	pH unit	11.06	11.42	9.89				
Temp		C	8.06	7.36	7.77				
Color		Visual	cloudy	cloudy	cludy				
Odor		Olfactory	urine	urine	urine				

Comments:

Started purge at 1401
Purged dry at 1403, with 2.5 gallons
Returned to sample at 1435

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 20 D Date: 03/25/2009

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):	6.26	feet
4. C = Column of Water in Casing:	25.64	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	4.18	gal
6. 3(V) =Target Purge Volume	12.54	gal

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

Conversion factors to determine V given C

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

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Stabilizati	Units	Readings						
Time		24 hr	1406	1409	1412	1415			
Water Leve	0.33	feet	6.26	-	-	-			
Volume Pu	N / A	gal	0.00	4.25	8.50	-			
Flow Rate	N / A	mL / min	-	-	-	-			
Turbidity	(+/-) 10%	NTU	error 2	error2	182.0	53.9			
Dissolved C	(+/-) 10%	mg / L	2.07	0.98	1.63	1.16			
Eh / ORP	(+/-) 10	MeV	-138.9	-102.9	-97.2	-97.4			
Conductivit	(+/-) 3%	µmho / cm	0.706	0.687	0.686	0.689			
pH	(+/-) 0.1	pH unit	8.66	7.62	7.39	7.27			
Temp		C	10.49	11.46	11.44	11.94			
Color		Visual	cloudy	cloudy	cloudy	cloudy			
Odor		Olfactory	slight odor	none	none	none			

Comments:

Started purge at 1406
Purged a total of 12.54 gal
Sampled at 1415

Error 2= Maximum Turbidity

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 21 Date: 03/26/2009

Samplers: Tyler Brown and Mark Howard

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

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth:	18.3	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	6.72	feet
4. C = Column of Water in Casing:	11.58	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.89	gal
6. 3(V) =Target Purge Volume	5.66	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 and Lamont 2020

Parameter	Stabilizati	Units	Readings						
Time		24 hr	923	924	925	927	943		
Water Leve	0.33	feet	6.72	-	-	-	-		
Volume Pu	N / A	gal	0.00	2.00	4.00	6.00	-		
Flow Rate	N / A	mL / min	-	-	-	-	-		
Turbidity	(+/-) 10%	NTU	280.0	700.0	error2	600.0	-		
Dissolved (	(+/-) 10%	mg / L	5.74	4.92	3.89	2.44	7.86		
Eh / ORP	(+/-) 10	MeV	-74.2	-69.5	-64.9	-61.8	-61.6		
Conductivit	(+/-) 3%	µmho / cm	1.259	1.105	1.272	1.268	1.27		
pH	(+/-) 0.1	pH unit	7.57	7.07	6.85	6.76	6.79		
Temp		C	8.18	7.08	7.97	8.52	8.74		
Color		Visual	rust br	rust br	rust br	rust br	rust br		
Odor		Olfactory	none	none	none	none	none		

Comments:

Started purge at 923, purged dry @928 purged 7gal

Sampled at 943

Error 2= Maximum Turbidity need new tubing, too short

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 21 D Date: 03/26/2009

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):	8.3	feet
4. C = Column of Water in Casing:	41.9	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	6.83	gal
6. 3(V) =Target Purge Volume	20.49	gal

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

Conversion factors to determine V given C

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

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Stabilizati	Units	Readings						
Time		24 hr	1006	1012	1017	1022			
Water Leve	0.33	feet	8.30	-	-	-			
Volume Pu	N / A	gal	0.00	7.00	14.00	21.00			
Flow Rate	N / A	mL / min	-	-	-	-			
Turbidity	(+/-) 10%	NTU	41.80	1.97	0.97	0.00			
Dissolved C	(+/-) 10%	mg / L	4.26	1.20	2.97	1.47			
Eh / ORP	(+/-) 10	MeV	-61	-79	-87.7	-90.9			
Conductivit	(+/-) 3%	µmho / cm	0.728	0.758	0.758	0.758			
pH	(+/-) 0.1	pH unit	7.06	7.29	7.27	7.32			
Temp		C	10.65	11.28	10.88	11.44			
Color		Visual	clear	clear	clear	clear			
Odor		Olfactory	none	none	none	none			

Comments:
Started purge at 1006
Purged a total 20.49 gal
Sampled 1022

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 23 Date: 03/25/2009

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):	4.72	feet
4. C = Column of Water in Casing:	6.58	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.07	gal
6. 3(V) =Target Purge Volume	3.22	gal

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

Conversion factors to determine V given C

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

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Stabilizatic	Units	Readings						
Time		24 hr	1040	1041	1042	1043	1142		
Water Leve	0.33	feet	4.72	-	-	-	-		
Volume Pu	N / A	gal	0.00	1.25	2.50	3.75	4.00		
Flow Rate	N / A	mL / min	-	-	-	-	-		
Turbidity	(+/-) 10%	NTU	164.0	94.0	370.0	278.0	66.6		
Dissolved (	(+/-) 10%	mg / L	4.74	3.90	4.57	4.11	2.30		
Eh / ORP	(+/-) 10	MeV	-71.3	-67.3	-62	-71.8	-94		
Conductivit	(+/-) 3%	µmho / cm	0.641	0.62	0.62	0.624	0.657		
pH	(+/-) 0.1	pH unit	7.12	7.04	6.87	6.94	7.29		
Temp		C	8.68	8.00	7.90	7.52	9.42		
Color		Visual	cloudy	cloudy	cloudy	cloudy	cloudy		
Odor		Olfactory	none	none	none	none	none		

Comments:

Started purge at 1040
Purged a total of 3.75 gal, purged dry @1043
Sampled at 1142

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 23 D Date: 03/25/2009

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):	3.7	feet
4. C = Column of Water in Casing:	51.6	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	8.41	gal
6. 3(V) =Target Purge Volume	25.23	gal

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

Conversion factors to determine V given C

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

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Stabilizatic	Units	Readings						
Time		24 hr	1109	1116	1123	1130			
Water Leve	0.33	feet	3.70	-	-	-			
Volume Pu	N / A	gal	0.00	8.50	17.00	25.50			
Flow Rate	N / A	mL / min	-	-	-	-			
Turbidity	(+/-) 10%	NTU	470.0	34.9	12.5	7.6			
Dissolved (	(+/-) 10%	mg / L	6.19	2.66	2.14	1.03			
Eh / ORP	(+/-) 10	MeV	-62.4	-64.3	-93.2	-89.9			
Conductivit	(+/-) 3%	µmho / cm	0.643	0.752	0.75	0.757			
pH	(+/-) 0.1	pH unit	7.47	7.41	7.37	7.35			
Temp		C	9.64	11.60	12.18	12.17			
Color		Visual	cloudy	cloudy	cloudy	cloudy			
Odor		Olfactory	none	none	none	none			

Comments:

Started purge 1109
Purged a total of 25.23 gal
Sampled at 1130

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW-30 Date: 03/27/2009

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):	6.61	feet
4. C = Column of Water in Casing:	4.88	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	6.42	gal
6. 3(V) =Target Purge Volume	3.97	gal

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

Conversion factors to determine V given C

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

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Stabilizati	Units	Readings						
Time		24 hr	1236	1238	1240	1243			
Water Leve	0.33	feet	5.92	-	-	-			
Volume Pu	N / A	gal	0.00	3.50	7.00	10.50			
Flow Rate	N / A	mL / min	-	-	-	-			
Turbidity	(+/-) 10%	NTU	18.2	24.2	9.4	28.4			
Dissolved (	(+/-) 10%	mg / L	2.37	2.52	3.10	1.71			
Eh / ORP	(+/-) 10	MeV	-174	-241	-247.5	-241.7			
Conductivit	(+/-) 3%	µmho / cm	1.36	1.32	1.275	1.238			
pH	(+/-) 0.1	pH unit	7.17	7.33	7.14	6.97			
Temp		C	7.61	7.40	7.00	6.94			
Color		Visual	Black	black	lt black	gray			
Odor		Olfactory	strong smell	strong smell	strong smell	strong smell			

Comments:

Black oil on tubing and walls of well
Started purge at 1236
Purged a total of 10.46 gal
Sampled at 1243

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 31 Date: 03/25/2009

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):	5.24	feet
4. C = Column of Water in Casing:	11.55	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	7.50	gal
6. 3(V) =Target Purge Volume	22.50	gal

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

Conversion factors to determine V given C

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

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Stabilizati	Units	Readings						
Time		24 hr	1224	1227	1230	1233			
Water Leve	0.33	feet	5.24	-	-	-			
Volume Pu	N / A	gal	0.00	7.50	15.00	24.00			
Flow Rate	N / A	mL / min	-	-	-	-			
Turbidity	(+/-) 10%	NTU	113.0	25.9	10.4	11.4			
Dissolved C	(+/-) 10%	mg / L	5.77	1.96	3.21	2.44			
Eh / ORP	(+/-) 10	MeV	-45.3	-40.4	-56.2	-53.2			
Conductivit	(+/-) 3%	µmho / cm	1.099	1.072	1.002	1.001			
pH	(+/-) 0.1	pH unit	7.08	6.89	7.03	6.96			
Temp		C	7.87	7.83	8.25	8.49			
Color		Visual	orange	orange	clear	clear			
Odor		Olfactory	none	none	none	none			

Comments:

Started purge at 1224
Purged a total of 22.50 gal
Sampled at 1233

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 32 Date: 03/26/2009

Samplers: Tyler Brown and Mark Howard

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

Purging / Sampling Method: Whale Pump

1. L = Total Well Depth:	22.24	feet
2. D = Riser Diameter (I.D.):	0.33	feet
3. W = Static Depth to Water (TOC):	6.39	feet
4. C = Column of Water in Casing:	15.85	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	10.30	gal
6. 3(V) =Target Purge Volume	30.91	gal

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

Conversion factors to determine V given C

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

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Stabilizati	Units	Readings						
Time		24 hr	1236	1243	1250	1257			
Water Leve	0.33	feet	6.39	-	-	-			
Volume Pu	N / A	gal	0.00	10.00	20.00	31.00			
Flow Rate	N / A	mL / min	-	-	-	-			
Turbidity	(+/-) 10%	NTU	137.0	6.9	45.6	26.1			
Dissolved C	(+/-) 10%	mg / L	9.50	3.05	2.01	2.83			
Eh / ORP	(+/-) 10	MeV	-65.4	-130.2	-110.7	-98.3			
Conductivit	(+/-) 3%	µmho / cm	0.664	0.74	0.733	0.731			
pH	(+/-) 0.1	pH unit	7.25	7.03	6.77	6.76			
Temp		C	8.70	9.42	9.33	9.52			
Color		Visual	black	gray	lt gray	lt gray			
Odor		Olfactory	volatile	yes	yes	yes			

Comments:

Started purge at 1236
Purged a total of 30.91 gal
Sampled at 1257

Monitoring Well Purging / Sampling Form

Project Name and Number: Freemans Bridge Road 105886.02

Monitoring Well Number: MW- 33 Date: 03/26/2009

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):	5.77	feet
4. C = Column of Water in Casing:	8.17	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	5.31	gal
6. 3(V) =Target Purge Volume	15.93	gal

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

Conversion factors to determine V given C

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

Water Quality Readings Collected Using YSI and Lamont 2020

Parameter	Stabilizati	Units	Readings						
Time		24 hr	825	828					
Water Leve	0.33	feet	5.77	-					
Volume Pu	N / A	gal	0.00	5.25					
Flow Rate	N / A	mL / min	-	-					
Turbidity	(+/-) 10%	NTU	25.9	46.9					
Dissolved C	(+/-) 10%	mg / L	3.24	1.20					
Eh / ORP	(+/-) 10	MeV	-14.5	-76.8					
Conductivit	(+/-) 3%	µmho / cm	2.722	2.72					
pH	(+/-) 0.1	pH unit	8.07	7.95					
Temp		C	6.20	6.09					
Color		Visual	sl cl	gr yw					
Odor		Olfactory	none	none					

Comments:

Starged purge at 825
Purged dry at 829
Purged a total of 6 gal
Sampled at 845
Tubing had a black coat