Groundwater Sampling and Analysis Report

October 2016 Sampling Event

Former EMCA Site
Site No. 360025
Mamaroneck, New York

Prepared for:

Rohm and Haas Company, a wholly-owned subsidiary of The Dow Chemical Company

Prepared by:

URS
257 West Genesee Street, Suite 400
Buffalo, New York 14202

December 2016

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FORMER EMCA SITE

SITE NO. 360025

MAMARONECK, NEW YORK

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DECEMBER 2016

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1.0 INTRODUCTION

The Former EMCA Site occupies 0.3 acres of land in a mixed residential/industrial area in the Village of Mamaroneck, New York (see Figure 1). The site was formerly owned and operated by a subsidiary of the Rohm and Haas Company (Rohm and Haas) who manufactured high conductivity precious metal paste at the site. Manufacturing was discontinued in 1988 and the current site owner is Cablevision of Westchester.

Environmental site investigations revealed that groundwater beneath the site was contaminated with 1,1,2-trichloro-1,2,2 trifluoroethane (Freon 113, CAS No. 76-13-1). The site was listed on the New York Registry of Inactive Hazardous Waste Disposal Sites and a Consent Order was signed between the New York State Department of Environmental Conservation (NYSDEC) and Rohm and Haas in March 1999. Rohm and Haas implemented remediation to address impacted groundwater at the site. The remedial technology consisted of anaerobic biodegradation and reductive dechlorination of Freon 113 through injection of food-grade emulsified soybean oil, sodium lactate, and specialized bacteria into the groundwater aquifer. Remedial actions were conducted during the following events:

- Pilot program conducted in June 2003
- Interim remedial measure in November 2004
- Supplemental injection in August 2007
- Supplemental injection in September 2009
- Supplemental injection in October 2012
- Supplemental injection in June 2013
- Supplemental injection in October 2014

The original release was thought to be in the vicinity of monitoring well MW-03 and the pilot program injections were focused on that area. As additional data were obtained, injection areas included the area of groundwater monitoring wells MW-02, MW-06, and MW-07/MW-07R and piezometer GZ-06. The 2012, 2013, and 2014 supplemental injections also included the KB-1 Plus® bacteria culture, developed by SiREM Laboratory in Guelph, Ontario, Canada, as a biological amendment to the emulsified soybean oil and sodium lactate injections. The KB-1 Plus® bacteria culture contains a proprietary mixture of dehalobacter and dehalococcoides strains formulated by the laboratory to stimulate biological dechlorination of Freon.

This report presents the results of semi-annual groundwater monitoring conducted in October 2016 at the site pursuant to the approved Site Management Plan ([SMP], URS, 2010). The groundwater monitoring program generates data used to monitor the effectiveness of remedial actions performed at the site between 2003 and 2014. The October 2016 groundwater sampling event was the twenty-fourth site-wide sampling event since the interim remedial measure (IRM) began in November 2004 and the fifth site-wide sampling event following the October 2014 remedial injections.

2.0 GROUNDWATER SAMPLING AND ANALYSIS

On October 5, 2016, URS collected groundwater samples from monitoring wells MW-02, MW-03, MW-04, MW-06 and MW-07R (see Figure 3 for well locations). The samples were collected using low-flow sampling procedures.

The depth to groundwater and water quality parameter measurements of ferrous iron, dissolved oxygen, oxidation-reduction potential, pH, specific conductance, temperature, and turbidity were recorded prior to and during purging/sampling. The field purging/sampling logs are presented in Appendix A.

The sample chain-of-custody (COC) was initiated immediately after the groundwater samples were collected and was maintained through shipment to the laboratory. Laboratory analyses were performed for the following parameters:

Parameter	Analytical Method
Freon 113, Freon 123a, Freon 1113	SW8260B
Methane	RSK-175
Sulfate	ASTM D516-90, 02

In addition, the following analyses were performed on samples collected from all five monitoring wells in order to generate additional natural attenuation groundwater data and to evaluate bacteria concentrations:

Parameter	Analytical Method
Total Iron	200.7
Ferrous Iron	Field Parameter
Nitrate	SM 4500-NO_3 F
Nitrite	SM 4500-NO_2 F
Hardness	SM 2340 C
Alkalinity (Total, HCO_3^-, CO_3^-, OH^-)	SM 2320 B
Total Organic Carbon	SM 5310 B
Dehalococcoides (MW-02 only)	SiREM - Gene-Trac® Dhc
Dehalobacter	SiREM - Gene-Trac® Dhb

A round of groundwater levels were recorded on October 5, 2016. The data are presented in Table 1 and Figure 3. The Sheldrake River water surface level was unable to be calculated. The Sheldrake River flows to the northeast. Typically, an upstream measurement is recorded at the Rockland Avenue bridge (Benchmark B) to the south of the site and a downstream measurement is recorded at the Fenimore Road bridge (Benchmark D) to the north of the site. The water surface level in the Sheldrake River in the area west of the site, referred to as Benchmark C (Figure 3), is calculated by taking the average surface elevation of Benchmark B and Benchmark D. However, an upstream measurement at Benchmark B was unable to be recorded during October 2016 due to a safety concern, thus an average Sheldrake River water surface level was unable to be determined.

Typically, general groundwater flow is to the north and northeast. The resulting groundwater contours for the October 5, 2016 data are consistent with this flow pattern.

3.0 RESULTS

The analytical results for the October 2016 sampling event, along with the previous April 2016 and October 2015 sampling data, are provided in Table 2. Historical groundwater analytical results are presented in Appendix B. Laboratory data sheets and a data usability summary report (DUSR) for the October 2016 samples are provided in Appendix C.

The analytical results presented in Table 2 are compared to groundwater standards and guidance values presented in New York State Department of Environmental Conservation's (NYSDEC's) Technical and Operational Guidance Series Memo 1.1.1 (TOGS 1.1.1). It is noted that there are no TOGS 1.1.1 groundwater standards or guidance values for Freon 1113 or Freon 123a. However, consistent with TOGS 1.1.1, the Freon 1113 and Freon 123a results are compared to the "principal organic contaminant" standard for groundwater of 5 micrograms per liter (µg/L).

The October 2016 results presented in Table 2 and Figure 4 show that only the samples from wells MW-02 and MW-03 contained Freon 113 at concentrations above the 5 µg/L guidance value for this compound. The Freon 113 concentration in these samples was 940 µg/L in well MW-02 and 11 µg/L in well MW-03.

The October 2016 results show that only the sample from well MW-02 contained Freon 123a at a concentration above the 5 µg/L guidance value for this compound. The Freon 123a concentration in this sample was 37 µg/L.

The results show that Freon 1113 was detected at concentrations above the 5 µg/L groundwater standard in the samples from wells MW-02, MW-03, MW-06 and MW-07R. The detections are as follows: MW-02 - 1000 µg/L, MW-03 - 290 µg/L, MW-06 - 68 µg/L, and MW-07R - 65 µg/L. The Freon 1113 concentration in well MW-04 did not exceed the groundwater standard.

The groundwater samples collected in October 2016 were analyzed for dehalobacter and the sample from MW-02 was also analyzed for dehalococcoides. The analytical results, presented in Table 2, indicate that the October 2016 dehalobacter concentration was highest in MW-02 [30 gene copies per milliliter (GC/mL)] and low in MW-03, MW-06, and MW-07R (10 GC/mL, 4 GC/mL, and 5 GC/mL, respectively). Dehalobacter was not detected in well MW-04.

The dehalococcoides concentration in MW-02 was 90 colony equivalents per milliliter (CEQ/mL) in October 2016, which is an increase from April 2016 (40 CEQ/mL).

In general, the results of the semi-annual groundwater sampling event completed in October 2016 showed that concentrations of Freon 113 and Freon 123a have decreased while concentrations of Freon 1113 have increased. Freon 113 concentrations decreased slightly in wells MW-02 and MW-03; Freon 123A concentrations decreased in wells MW-02, MW-03, and MW-06; Freon 1113 concentrations increased in wells MW-02, MW-03, MW-06, and MW-07R. The highest total Freon concentrations are in MW-02.

4.0 DATA ASSESSMENT

The groundwater analytical data for October 2016 is the fifth site-wide set of data collected following the October 2014 supplemental injection. The previous round of site-wide groundwater sampling occurred in April 2016.

Appendix B presents the historical groundwater analytical data dating back to the pilot program in 2003. Using this data, Freon 113, 123a, and 1113 concentrations are shown in plan view in Figure 4 for the period between 2006 and 2016. The historical data were also used to create trend plots for the following parameters:

- Freon 113 - Figures 5 and 6
- Freon 123a - Figure 7
- Freon 1113 - Figure 8
- Sulfate - Figure 9
- Methane - Figure 10
- Dissolved Oxygen - Figure 11
- Dissolved Oxygen vs. Temperature in MW-02 – Figure 12
- Oxidation-Reduction Potential - Figure 13

The text below presents a discussion of the April 2016 data compared to the October 2016 data followed by an assessment of the historical results over time. Table 3 presents a summary comparison of April 2016 and October 2016 parameter concentration trends.

Freon 113

In comparison with the April 2016 results, the analytical results for the October 2016 sampling events (Figures 5 and 6) indicate that Freon 113:

- Decreased in MW-02 from 960 µg/L in April 2016 to 940 µg/L in October 2016;
- Decreased in MW-03 from 42 µg/L in April 2016 to 11 µg/L in October 2016;
- Remained non-detect in MW-04 in April 2016 and October 2016;
- Remained non-detect in MW-06 in April 2016 and October 2016; and
- Remained non-detect in MW-07R in April 2016 and October 2016.

In well MW-02, the Freon 113 concentration has generally decreased over the course of the treatment program. The highest concentration of 2,400 µg/L occurred in July 2001 prior to the treatment

program. Since November 2012, Freon 113 concentrations have steadily decreased and have not been detected above the groundwater criteria in eight of the past fourteen sampling events (Freon 113 was above the criteria in July 2014, March 2015, April 2015, October 2015, April 2016, and October 2016). Freon 113 concentrations detected at well MW-02 during the two most recent sampling events (April and October 2016) were significantly higher than levels detected since 2012 (960 and 940 µg/L, respectively).

Wells MW-03 and MW-07R had the highest Freon 113 concentrations prior to the treatment program and showed the greatest reduction as a result of the treatment. The Freon 113 concentration of 0.81 µg/L (October 2014) in MW-03 was below TOGS 1.1.1 criteria and was non-detect in November and December 2014. A slight rebound of Freon 113 at MW-03 in March and April 2015 and again in April 2016 coincides with an increase in the concentration of the Freon 123a and Freon 1113 daughter products, indicating ongoing reduction of Freon 113. The relatively low-level Freon 113 concentration from October 2014 in MW-07R (15 µg/L) decreased to non-detect in March, April, and October 2015, and in April and October 2016.

Freon 113 has not been detected in well MW-04 since April 2015. Freon 113 was not detected in MW-06 in the October 2014 sampling event, increased slightly to 1.6 µg/L in April 2015, and decreased to non-detect in October 2015 and April and October 2016.

Freon 123a

Freon 123a and Freon 1113 are the expected reductive dechlorination daughter products of Freon 113. Freon 123a holds one less chlorine than Freon 113, while Freon 1113 holds two less chlorines than Freon 113. With the reductive dechlorination of Freon 113, the concentrations of these daughter compounds are expected to increase and then eventually decline over time as reductive dechlorination continues and the residual source diminishes. The following text presents a discussion of the October 2016 Freon 123a results in comparison with the April 2016 results.

Compared to the April 2016 data, the analytical results for the October 2016 sampling event (Figure 7) indicate that Freon 123a:

- Decreased in MW-02 from 220 µg/L in April 2016 to 37 µg/L in October 2016;
- Decreased in MW-03 from 30 µg/L in April 2016 to 3.3 µg/L in October 2016;
- Remained non-detect in MW-04 in April 2016 and October 2016;
- Decreased in MW-06 from 1.1 µg/L in April 2016 to 0.28 µg/L in October 2016; and
- Remained non-detect in MW-07R in April 2016 and October 2016.

In well MW-02, the Freon 123a concentration has remained variable over the course of the treatment program. The highest concentration was 220 µg/L in April 2016, indicating increased reductive dechlorination of Freon 113.

Between October 2014 and December 2014, Freon 123a concentrations in well MW-03 remained below TOGS 1.1.1 criteria. The concentration increased to 17 µg/L in March 2015 and 25 µg/L in April 2015, then decreased to 1.7 µg/L in October 2015. Concentrations increased again in April 2016 to 30 µg/L then decreased to 3.3 µg/L in October 2016. Freon 123a concentrations in well MW-07R have remained well below TOGS 1.1.1 criteria since October 2014, and have been non-detect for the past year.

Freon 123a has never been detected in well MW-04. Freon 123a was not detected in well MW-06 in the October 2014 sampling event, increased to 8.1 µg/L in April 2015, decreased to non-detect in October 2015, increased slightly to 1.1 µg/L in April 2016, and decreased to 0.28 µg/L in October 2016.

Freon 1113

Compared to the April 2016 data, the analytical results for the October 2016 sampling event (Figure 8) indicate that Freon 1113:

- Increased in MW-02 from a concentration of 940 µg/L in April 2016 to 1000 µg/L in October 2016;
- Increased in MW-03 from a concentration of 180 µg/L in April 2016 to 290 µg/L in October 2016;
- Increased in MW-04 from 0.52 µg/L in April 2016 to 4.3 µg/L in October 2016;
- Increased in MW-06 from 51 µg/L in April 2016 to 68 µg/L in October 2016; and
- Increased in MW-07R from a concentration of 22 µg/L in April 2016 to 65 µg/L in October 2016.

Prior to and at the beginning of the treatment program, Freon 1113 was either not detected or was present at very low concentrations. As the treatment program progressed, Freon 1113 concentrations increased, indicating the successful reduction of Freon 113. The October 2016 concentrations of Freon 1113 in wells MW-02 and MW-03 were the highest levels detected in those wells.

Sulfate

In comparison with the April 2016 data, the October 2016 sulfate concentrations increased in MW-04, decreased in MW-02, MW-03, and MW-06, and remained non-detect in MW-07R (Figure 9).

Studies have shown that the presence of sulfate in anaerobic environments above 200 mg/L slows the rates of dehalogenation reactions because sulfate competes with the halogenated compounds as electron acceptors (USGS, 2009). The recent sulfate concentrations in groundwater at the site are well below 200 mg/L.

Methane

In comparison with the April 2016 data, the October 2016 methane concentrations (Figure 10) decreased in wells MW-02 and MW-06, and increased in wells MW-03, MW-04, and MW-07R.

Degradation of Freon is likely due to sulfate-reducing or methane-forming microbes (Horneman, 2007). Historical site data shows increased methane concentrations during the treatment programs, suggesting that reduction of Freon concentrations may be due to contaminant degradation through methanogenesis, a process that was successfully stimulated as a result of the treatment injection program. Methane concentrations following injection events rose to levels of 5,000 µg/L or more. The methane concentrations in all wells as measured in April and October 2016 have been considerably lower (e.g., less than 3,000 µg/L), suggesting that conditions are becoming less favorable for methanogenesis.

Dissolved Oxygen

In comparison with the April 2016 data, the October 2016 dissolved oxygen concentrations (Figure 11) generally decreased in all five wells and remain at low levels (e.g., less than 0.67 mg/L). Historically, dissolved oxygen concentrations have fluctuated significantly, from highs as much as 9 mg/L down to below detection limits. Overall, levels are generally low, reflecting anaerobic conditions.

Temperature

Comparison of the October 2016 data with historical measurements shows an apparent correlation of groundwater temperature with seasonal weather conditions; groundwater is cooler in the winter/spring and warmer in the summer/fall. As an example, Figure 12 presents a graphical presentation of temperature data for well MW-02 dating back to February 2008. The October 2016 temperature measurements were as much as 7 degrees Celsius higher than measurements recorded in April 2016. The temperature data suggests that groundwater at the site area is influenced by changes in seasonal weather conditions/precipitation infiltration. The graph also shows dissolved oxygen concentrations in MW-02.

Oxidation-Reduction Potential

In comparison with the April 2016 data, the October 2016 oxidation-reduction potential values (Figure 13) decreased. The October 2016 values were all negative, ranging from -102 millivolts (mV) to -151 mV. Oxidation-reduction potential values have remained at negative values throughout most of the treatment program.

Dehalococcoides

Since December 2014, only well MW-02 has been analyzed for dehalococcoides (see Table 2). The dehalococcoides concentration detected in April 2016 was 40 CEQ/mL, and increased in October 2016 to 90 CEQ/mL. Since the October 2014 injection event, the dehalococcoides concentration in MW-02 has not increased to a significant level, unlike after previous injection events. Dehalococcoides concentration can be as high as 2,000 CEQ/mL following injection.

Dehalobacter

Dehalobacter concentrations can be as high as 40,000 GC/mL following remedial injection. The April 2016 data showed a dehalobactor concentration in MW-02 at 80 GC/mL and a concentration in MW-03 at 4 GC/mL. The October 2016 results showed a decrease in dehalobactor concentration in MW-02 (30 GC/mL) and an increase in MW-03 (10 GC/mL). Well MW-07R showed an increase from 3 GC/mL in October 2014 to 300 GC/mL in March 2015, and reduction to 90 GC/mL in April 2015. MW-07R showed further reduction in dehalobactor concentrations in October 2015 (20 GC/mL), April 2016 (7 GC/mL), and October 2016 (5 GC/mL). MW-04 showed a reduction of dehalobacter concentration from 3 GC/mL in October 2014 to non-detect since April 2015. MW-06 showed a reduction of dehalobactor concentrations from 80 GC/mL in October 2014 to non-detect in April 2015, followed by a slight increase to 1 GC/mL in October 2015, 3 GC/mL in April 2016, and 4 GC/mL in October 2016.

5.0 CONCLUSIONS

The majority of the original Freon 113 release has been remediated over the past 13 years through anaerobic bioremediation. With the exception of MW-02, the Freon 113 concentrations detected during the October 2016 sampling event remain orders of magnitude below initial contaminant concentrations documented prior to initiating remedial activities. In addition, the elevated concentrations of Freon 123A and Freon 1113 at well MW-02 and other wells are evidence that significant reductive dechlorination of Freon 113 is continuing.

The residual groundwater impacts remain localized to the original release area (i.e., MW-02). Low Freon concentrations have been found in MW-03 while limited to no impacts have been found in MW-04, MW-06, and MW-07R. The absence of impacts in these wells demonstrates that there are no unacceptable impacts to surface water or other potential receptors.

6.0 CONTINGENCY TRIGGER EVALUATION AND NEXT STEPS

Section 4.0 of the Site Management Plan (SMP) states that once a Freon 113 concentration of 40 µg/L is achieved after 2014, Criteria #1 becomes the relevant trigger contingency criteria. Criteria #1 states, "A successive increase of 100-percent or greater in Freon 113 concentrations for two consecutive events at any monitored well, assuming that the remediation goal (5 µg/L) is exceeded in at least one of the monitoring events. For example, a well concentration that increased from 4 µg/L to 8 µg/L and from 8 µg/L to 16 µg/L over two consecutive events would trigger contingency measures."

The data show that the less than 40 µg/L criteria was met in 2014 in all wells. Since 2014, Criteria #1 has not been exceeded, including the October 2016 data. Therefore, contingency measures are not warranted at this time.

In accordance with the SMP, the semi-annual groundwater sampling program will continue on the five long-term monitoring wells (i.e., MW-02, MW-03, MW-04, MW-06 and MW-07R). The next sampling event will be in April 2017. Each well will be sampled for Freon-113, Freon-123a, and Freon-1113, as well as other water quality, biological and natural attenuation parameters as listed in Table 4.

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TABLES

TABLE 1
GROUNDWATER ELEVATION MEASUREMENTS (October 5, 2016)
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location	Measuring Point Elevation[1] (ft.)	Depth to Water[2] (ft.)	Water Surface Elevation (ft.)
GZ-03[3]	26.16	6.69	19.47
GZ-06	28.02	8.09	19.93
MW-01	25.74	5.48	20.26
MW-02	25.63	6.11	19.52
MW-03	25.59	5.99	19.60
MW-04	25.31	5.01	20.30
MW-05	24.63	5.44	19.19
MW-06	25.77	6.52	19.25
MW-07R	25.63	6.48	19.15
Benchmark B (Sheldrake River - South [Rockaway Avenue] Bridge)	NM	NM	NM
Benchmark C[4] (Sheldrake River - between North and South Bridges)	--	--	NM
Benchmark D[5] (Sheldrake River - North [Fenimore Road] Bridge)	27.41	10.39	17.02

Notes:

1) All of the monitoring well and benchmark locations were resurveyed on 6/25/2010.
2) Water elevations for all wells and benchmarks were collected on 10/08/2015.
3) Monitoring well GZ-03 was modified from a stick-up well to a flush-mount well on 6/24/2010.
4) Benchmark C could not be calculated because of a safety issue at Benchmark B.
5) Benchmark D water surface elevation was taken from culvert approximately 10 feet from concrete support of North bridge.

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
OCTOBER 2015 TO OCTOBER 2016
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-03	MW-03
Sample ID			20151008MW-02	20160427MW-02	20161005MW-02	20151008MW-03	20160427MW-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/08/15	04/27/16	10/05/16	10/08/15	04/27/16
Parameter	**Units**	**Criteria***					
Volatiles							
Chlorotrifluoroethene (Freon-1113)	UG/L	5	260	940	1,000	140	180
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	21	960 J	940	0.52 J	42
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	7.7	220	37	1.7	30
Dissolved Gases							
Methane	UG/L	-	12,000	2,600	2,400	10,000	2,100
Total Metals							
Iron	UG/L	300	61,800	63,100	53,800	29,500	23,700
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	292	261	250	279	313
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	292	261	250	279	313
Alkalinity, Carbonate (as CaCO3)	MG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Alkalinity, Hydroxide	MG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dehalococcoides ethenogenes	CEQ/mL	-	1 J	40	90	NA	NA
Dehalobacter	GC/mL	-	300	80 J	30	2 J	4 J
Hardness (as CaCO3)	MG/L	-	424	400	470	368	400
Nitrogen, Nitrate	MG/L	10	2.0 U	0.10 U	0.28	2.0 U	0.10 U
Nitrogen, Nitrite	MG/L	1	0.034 J	0.085 J	0.037 J	0.021 J	0.076 J
Sulfate	MG/L	250	25.6	41.3	27.2	48.2	78.2
Total Organic Carbon	MG/L	-	6.2	6.0	6.2	7.1	7.6
Ferrous Iron (lab)	MG/L	-	2.5 J	NA	0.25 J	1.7 J	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0.38	0.66	0.40	0.39	0.54

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect J - Estimated Result NA - Not Analyzed

UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalvents per milliliter; GC/mL - Gene Copies per milliliter

S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts

Detection Limits shown are PQL

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TABLE 2
GROUNDWATER ANALYTICAL RESULTS
OCTOBER 2015 TO OCTOBER 2016
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-03	MW-03
Sample ID			20151008MW-02	20160427MW-02	20161005MW-02	20151008MW-03	20160427MW-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/08/15	04/27/16	10/05/16	10/08/15	04/27/16
Parameter	**Units**	**Criteria***					
Field Parameter							
Ferrous Iron	MG/L	-	7.0	4.5	11	6.5	6.5
Oxidation-Reduction Potential	mV	-	-131	-102	-151	-84	-88
pH	S.U.	-	5.36	6.14	6.49	5.27	6.31
Specific Conductance	MS/CM	-	2.52	2.71	2.69	1.69	2.08
Temperature	DEG C	-	19.70	12.03	18.91	19.94	13.90
Turbidity	NTU	-	0.0	7.2	0.1	0.0	4.5

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect J - Estimated Result NA - Not Analyzed

UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalvents per milliliter; GC/mL - Gene Copies per milliliter

S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts

Detection Limits shown are PQL

Advanced Selection: amk-temp2
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Printed: 11/7/2016 11:55:31 AM
[LOGDATE] >= #10/01/2015# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
OCTOBER 2015 TO OCTOBER 2016
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-04	MW-04	MW-04	MW-06
Sample ID			20161005MW-03	20151008MW-04	20160427MW-04	20161005MW-04	20151008MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/05/16	10/08/15	04/27/16	10/05/16	10/08/15
Parameter	**Units**	**Criteria***					
Volatiles							
Chlorotrifluoroethene (Freon-1113)	UG/L	5	290	4.4	0.52 J	4.3	51
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	11	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	3.3	1.0 U	1.0 U	1.0 U	1.0 U
Dissolved Gases							
Methane	UG/L	-	2,300	2,100	610	1,000	7,200
Total Metals							
Iron	UG/L	300	22,200	15,800	16,700	10,900	20,200
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	297	303	255	277	312
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	297	303	255	277	312
Alkalinity, Carbonate (as CaCO3)	MG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Alkalinity, Hydroxide	MG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	10	3.0 U	3.0 U	3.0 U	1 J
Hardness (as CaCO3)	MG/L	-	420	523	450	320	337
Nitrogen, Nitrate	MG/L	10	0.13	2.0 U	0.10 U	0.10 U	2.0 U
Nitrogen, Nitrite	MG/L	1	0.036 J	0.016 J	0.052 J	0.046 J	0.020 J
Sulfate	MG/L	250	56.1	7.4	5.0 U	7.2	16.7
Total Organic Carbon	MG/L	-	5.8	11.8	9.2	9.8	5.5
Ferrous Iron (lab)	MG/L	-	0.35 J	0.33 J	NA	0.10 UJ	0.44 J
Field Parameter							
Dissolved Oxygen	MG/L	-	0.32	0.32	0.54	0.28	0.34

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect J - Estimated Result NA - Not Analyzed

UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalvents per milliliter; GC/mL - Gene Copies per milliliter

S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts

Detection Limits shown are PQL

Advanced Selection: amk-temp2
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Printed: 11/7/2016 11:55:31 AM
[LOGDATE] >= #10/01/2015# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
OCTOBER 2015 TO OCTOBER 2016
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-04	MW-04	MW-04	MW-06
Sample ID			20161005MW-03	20151008MW-04	20160427MW-04	20161005MW-04	20151008MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/05/16	10/08/15	04/27/16	10/05/16	10/08/15
Parameter	**Units**	**Criteria***					
Field Parameter							
Ferrous Iron	MG/L	-	5.5	6.0	5.5	6.0	7.0
Oxidation-Reduction Potential	mV	-	-125	-95	-79	-106	-110
pH	S.U.	-	6.52	5.42	6.33	6.61	5.50
Specific Conductance	MS/CM	-	2.03	3.05	2.90	2.02	1.60
Temperature	DEG C	-	20.15	21.26	14.79	21.54	18.70
Turbidity	NTU	-	0 U	0.0	0.0	1.5	0.0

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect J - Estimated Result NA - Not Analyzed

UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts

Detection Limits shown are PQL

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Printed: 11/7/2016 11:55:31 AM
[LOGDATE] >= #10/01/2015# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
OCTOBER 2015 TO OCTOBER 2016
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-07R	MW-07R	MW-07R
Sample ID			20160427MW-06	20161005MW-06	20151008MW-07R	20160427MW-07R	20161005MW-07R
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/27/16	10/05/16	10/08/15	04/27/16	10/05/16
Parameter	**Units**	**Criteria***					
Volatiles							
Chlorotrifluoroethene (Freon-1113)	UG/L	5	51	68	46	22	65
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	1.1	0.28 J	1.0 U	1.0 U	1.0 U
Dissolved Gases							
Methane	UG/L	-	890	280	9,800	2,400	2,500
Total Metals							
Iron	UG/L	300	20,600	14,900	39,000	39,300	42,200
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	277	256	450	357	374
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	277	256	450	357	374
Alkalinity, Carbonate (as CaCO3)	MG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Alkalinity, Hydroxide	MG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	3 J	4	20	7 J	5
Hardness (as CaCO3)	MG/L	-	380	320	475	630	510
Nitrogen, Nitrate	MG/L	10	0.10 U	0.10 U	2.0 U	0.10 U	0.10 U
Nitrogen, Nitrite	MG/L	1	0.098 J	0.031 J	0.028 J	0.072 J	0.045 J
Sulfate	MG/L	250	36.3	30.7	9.1	5.0 U	5.0 U
Total Organic Carbon	MG/L	-	4.9	4.3	11.8	9.7	10.4
Ferrous Iron (lab)	MG/L	-	NA	0.10 UJ	0.49 J	NA	2.6 J
Field Parameter							
Dissolved Oxygen	MG/L	-	0.59	0.44	0.37	0.53	0.31

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect J - Estimated Result NA - Not Analyzed

UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalvents per milliliter; GC/mL - Gene Copies per milliliter

S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts

Detection Limits shown are PQL

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
OCTOBER 2015 TO OCTOBER 2016
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-07R	MW-07R	MW-07R
Sample ID			20160427MW-06	20161005MW-06	20151008MW-07R	20160427MW-07R	20161005MW-07R
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/27/16	10/05/16	10/08/15	04/27/16	10/05/16
Parameter	**Units**	**Criteria***					
Field Parameter							
Ferrous Iron	MG/L	-	7.0	4.5	7.0	7.0	11
Oxidation-Reduction Potential	mV	-	-97	-102	-100	-95	-119
pH	S.U.	-	6.35	6.66	5.35	6.25	6.46
Specific Conductance	MS/CM	-	1.97	1.59	2.40	3.44	2.61
Temperature	DEG C	-	13.61	17.83	19.15	14.10	18.98
Turbidity	NTU	-	0.0	0 U	0.0	0.0	0 U

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect J - Estimated Result NA - Not Analyzed

UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalvents per milliliter; GC/mL - Gene Copies per milliliter

S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts

Detection Limits shown are PQL

Advanced Selection: amk-temp2
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Printed: 11/7/2016 11:55:31 AM
[LOGDATE] >= #10/01/2015# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

Table 3

Comparison of April 2016 to October 2016 Data

Location	Freon 113	Freon 123a	Freon 1113	Methane	Sulfate	ORP	DO
MW-02	↓	↓	↑	↓	↓	↓	↓
MW-03	↓	↓	↑	↑	↓	↓	↓
MW-04	↔	↔	↑	↑	↑	↓	↓
MW-06	↔	↓	↑	↓	↓	↓	↓
MW-07/07R	↔	↔	↑	↑	↔	↓	↓

Legend

↓ Decrease from previous event

↑ Increase from previous event

↔ No significant change from previous event

TABLE 4
SUMMARY OF GROUNDWATER MONITORING PARAMETERS

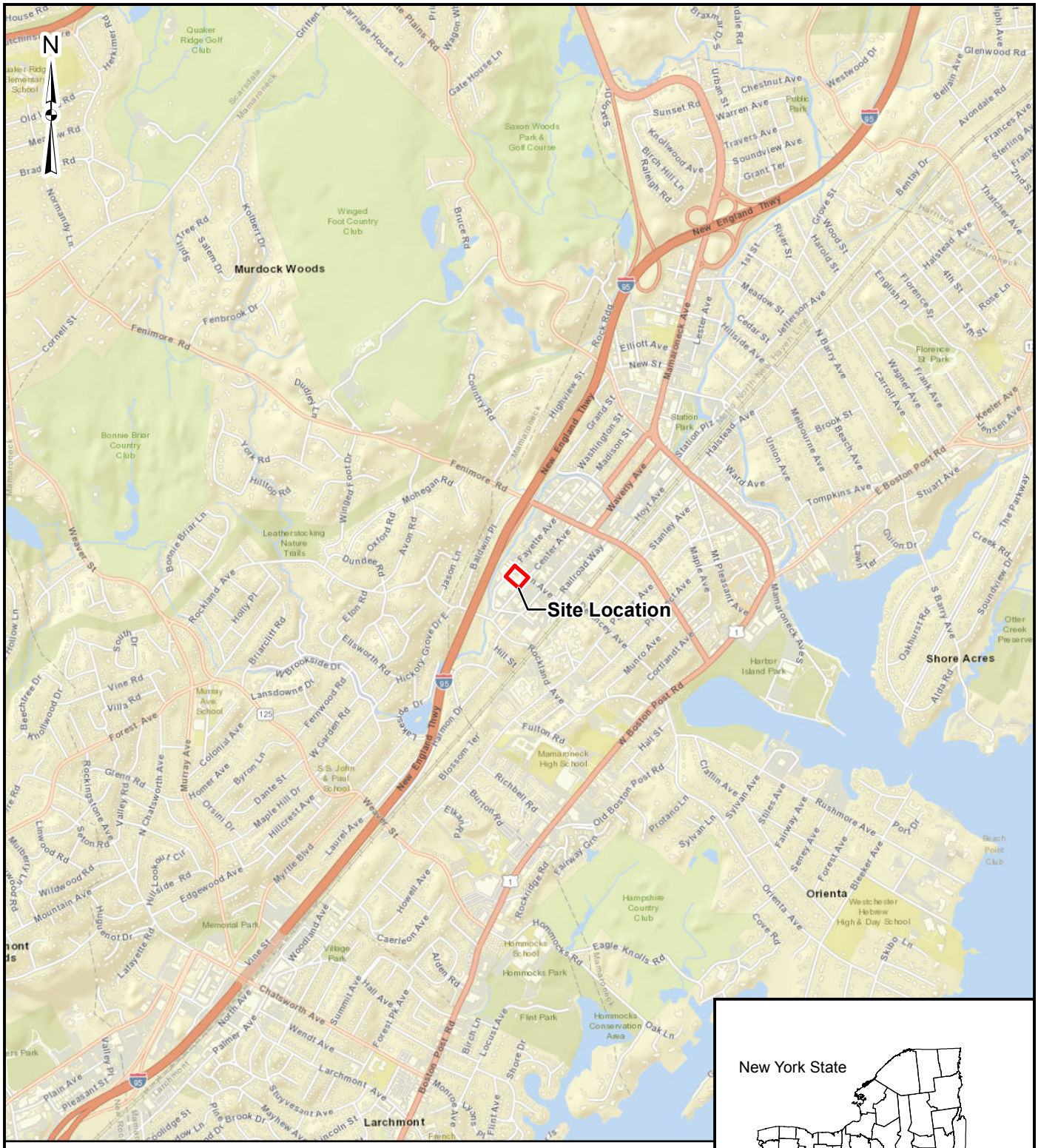
Date	Well	Sample Parameter or Parameter Group								
		Freon 113	Freon 123a	Freon1113	Methane	Sulfate	Dehalococcoides	Dehalobacter	Field Parameters	Natural Attenuation Parameters
April 2017	MW-02	x	x	x	x	x	x	x	x	x
	MW-03	x	x	x	x	x		x	x	x
	MW-04	x	x	x	x	x		x	x	x
	MW-06	x	x	x	x	x		x	x	x
	MW-07R	x	x	x	x	x		x	x	x

Notes:

* Field parameters include dissolved oxygen, oxidation-reduction potential, pH, specific conductance, temperature, and turbidity.

** Natural attenuation parameters include iron (total and ferrous), alkalinity, hardness, nitrogen-nitrate, and TOC.

FIGURES



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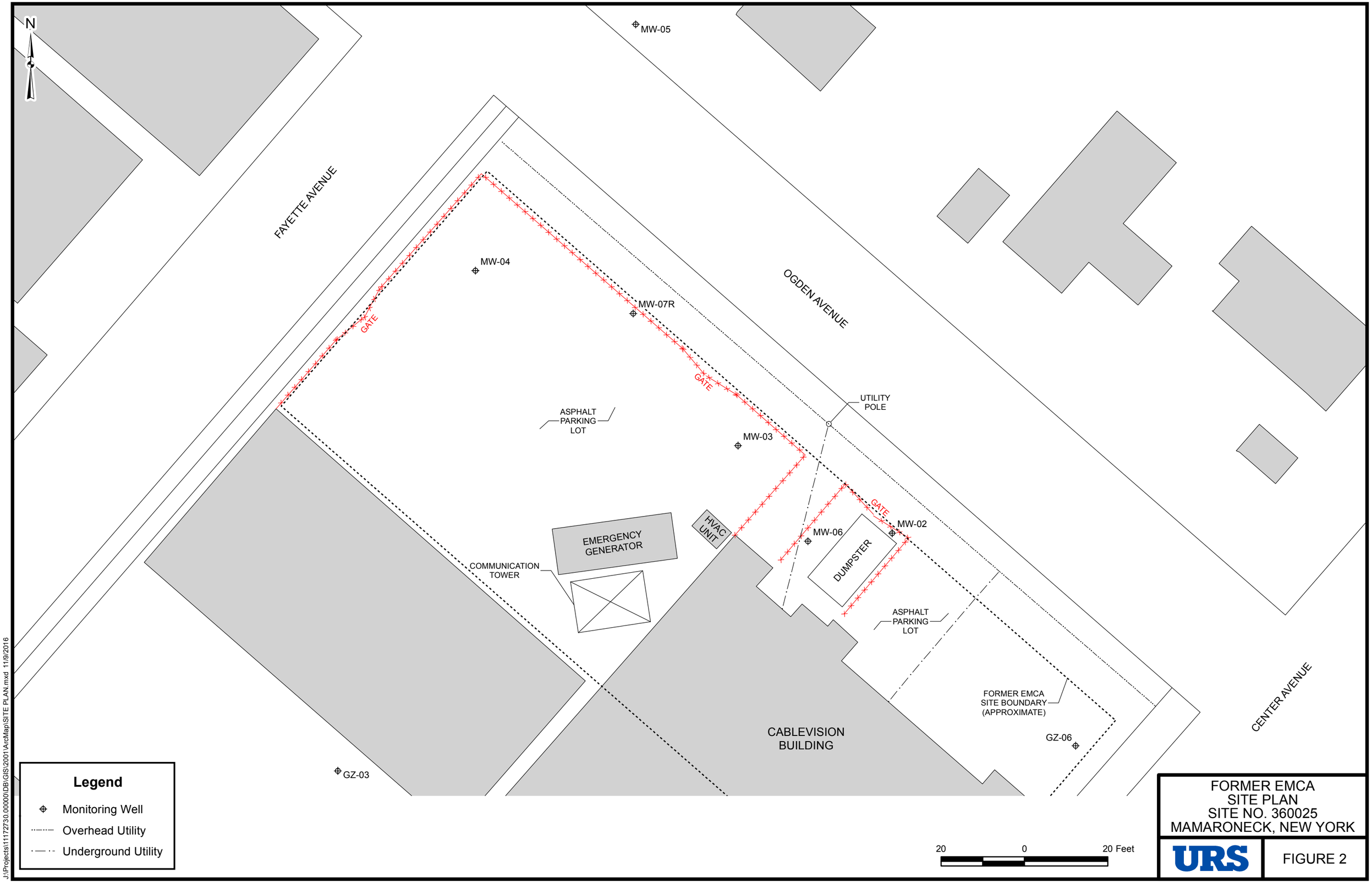
URS

FORMER EMCA
SITE LOCATION
SITE NO. 360025
MAMARONECK, NEW YORK

FIGURE 1



FORMER EMCA
SITE PLAN
SITE NO. 360025
MAMARONECK, NEW YORK

URS

FIGURE 2

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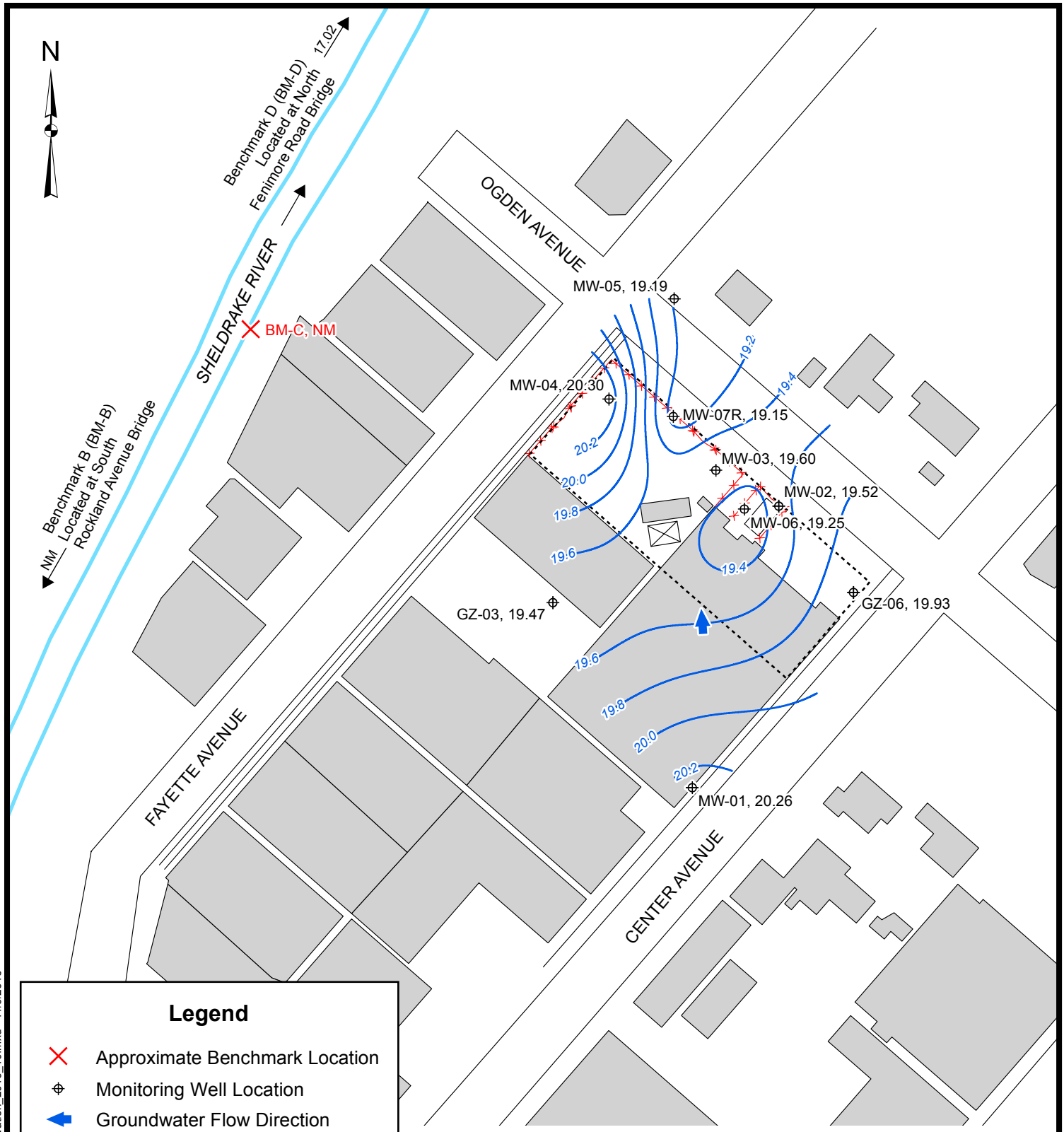

Legend

- Approximate Benchmark Location
- Monitoring Well Location
- Groundwater Flow Direction
- –19.8– Groundwater Elevation Contour
- Former EMCA Site Boundary (Approximate)

MW-02, 19.52
Location ID
Groundwater Elevation (based upon URS survey datum)

NOTES:
(1) Well MW-07 was replaced by well MW-07R on September 3, 2009.
(2) Benchmark C was originally established as a temporary benchmark off a tree branch overhanging the Sheldrake River between the north and south bridges. The approximate water surface elevation for this benchmark was calculated by taking the average water surface elevation of Benchmark B and Benchmark D until 2015 when measurements at Benchmark B were no longer taken due to safety concerns.
(3) NM - Not Measured

80 0 80 Feet

URS

FORMER EMCA
GROUNDWATER ELEVATION - OCTOBER 5, 2016
SITE NO. 360025
MAMARONECK, NEW YORK

FIGURE 3

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N

SHELDRAKE RIVER

FAYETTE AVENUE

OGDEN AVENUE

CENTER AVENUE

MW-05

MW-04	8/06	2/07	8/07	2/08	8/08	2/09	10/09	2/10	6/10	10/10	4/11	9/11	4/12	9/12	4/13	10/13	4/14	7/14	10/14	4/15	10/15	4/16	10/16
Freon-113	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.38J	ND	ND	ND
Freon-123A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon-1113	0.7J	0.6J	ND	1.0J	ND	1.0J	15	7.7J	12	2.8	5J	1.2	7.2J	2.5	4.4J	12	ND	ND	1.2	2.1	4.4	0.5J	4.3

MW-03	8/06	2/07	8/07	2/08	8/08	2/09	10/09	2/10	6/10	10/10	4/11	9/11	4/12	9/12	4/13	10/13	4/14	7/14	10/14	11/14	12/14	3/15	4/15	10/15	4/16	10/16
Freon-113	ND	10	2.0J	0.5J	ND	5.0J	0.9J	ND	ND	ND	32	5.4	20J	1.1	27	ND	100	120	0.81J	ND	ND	18	25	0.52J	42	11
Freon-123A	0.8J	48	7.0J	4.0J	1.0J	40	2.1	ND	0.5J	ND	99J	9.4	36	3.2	30	ND	62	100	1.3	ND	1.7	17	25	1.7	30	3.3
Freon-1113	51	39	54	13J	10	38	20	17J	26	4.6	110J	82	150J	130	160J	58	96	170	96	86	150	110	120	140	180	290

MW-07/07R	8/06	2/07	8/07	2/08	8/08	2/09	10/09	2/10	6/10	10/10	4/11	9/11	4/12	9/12	4/13	10/13	4/14	7/14	10/14	3/15	4/15	10/15	4/16	10/16
Freon-113	ND	ND	6.0J	ND	3.0J	46	580	18J	1.1J	53J	18	1.6	67J	5.9J	5.5	12	ND	ND	15	ND	ND	ND	ND	ND
Freon-123A	1.0J	3.0J	10	0.9J	16	20	76	8.1	1.8	9.5	6.3J	0.9J	11	2.4J	2.6	1.1	ND	1.2	2.2	0.78J	0.39J	ND	ND	ND
Freon-1113	97	89	82	92	170	150	370	150J	390	350	370J	26	630J	430	310J	390	2.1	69	130	130	10	46	22	65

MW-02	8/06	11/06	2/07	8/07	2/08	8/08	2/09	10/09	2/10	6/10	10/10	4/11	9/11	4/12	9/12	11/12	1/13	2/13	4/13	7/13	8/13	9/13	10/13	4/14	7/14	10/14	11/14	12/14	3/15	4/15	10/15	4/16	10/16
Freon-113	890	100	800	290	830J	700	1300	1200	76J	670	580	920	490	1200J	650	65	28	18	12	ND	ND	ND	ND	3.1	83	0.19J	0.14J	ND	45	24	21	960	940
Freon-123A	110	10	95	40	72	38J	34J	51	6.1	37	26	33J	26	57	26	29	52	30J	11	ND	ND	ND	ND	10	62	3.3	1.5	1.7	67	22	7.7	220	37
Freon-1113	200	21	84	61	120J	160	81J	300	92J	240	180	110J	180	140J	98	380	400	330J	400J	120	66	42	61	210	480	270J	66	56	300	310	260	940	1000

GZ-03	8/07
Freon-113	ND
Freon-123A	ND
Freon-1113	ND

GZ-06	8/06	11/06	2/07	8/07	2/08	8/08	2/09
Freon-113	74	2.0J	14	13	ND	ND	ND
Freon-123A	23	2.0J	4.0J	10	ND	ND	ND
Freon-1113	13	2.0J	1.0J	2.0J	ND	ND	ND

MW-06	8/06	2/07	8/07	2/08	8/08	2/09	10/09	2/10	6/10	10/10	4/11	9/11	4/12	9/12	4/13	10/13	4/14	7/14	10/14	4/15	10/15	4/16	10/16
Freon-113	ND	3J	ND	ND	ND	2.0J	ND	ND	ND	ND	33	ND	82J	3.3	0.19J	ND	26	ND	ND	1.6	ND	ND	ND
Freon-123A	ND	8J	0.6J	ND	ND	35	ND	3.6	0.57J	ND	38J	4.4	28	3.6	4.9	ND	33	2.7	ND	8.1	ND	1.1	0.28J
Freon-1113	ND	100	21	8.0J	4.0J	34	6.4	35J	68J	61	96J	30	230J	140	61J	27	75	84	51	110	51	51	68

MW-01	8/07
Freon-113	ND
Freon-123A	ND
Freon-1113	ND

Legend

- Existing Monitoring Well Location
- Generalized Groundwater Flow Direction
- Concentration Exceeds NYSDEC TOGS (1.1.1) Class GA Standards
- 12/05 - Post-IRM Injection Sampling Dates
- 2/08 - Post-2007 Supplemental Injection Sampling Dates
- 10/09 - Post-2009 Supplemental Injection Sampling Dates
- 11/12 - Post-2012 Supplemental Injection Sampling Dates
- 7/13 - Post-2013 Supplemental Injection Sampling Dates
- 10/14 - Post-2014 Supplemental Injection Sampling Dates

NOTES:
All analytical results are reported in µg/L.
Well, MW-07, was replaced by well, MW-07R, on September 3, 2009.
ND = Not Detected
J = Estimated Value
Freon-113 = 1,1,2-Trichloro-1,2,2-trifluoroethane
Freon-123A = 1,2-Dichloro-1,1,2-trifluoroethane
Freon-1113 = Chlorotrifluoroethene

100 0 100 Feet

FORMER EMCA
SUMMARY OF FREON DETECTIONS IN GROUNDWATER (2006 - 2016)
SITE NO. 360025
MAMARONECK, NEW YORK

URS

FIGURE 4

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FIGURE 5
FORMER EMCA SITE
Freon 113 Concentrations, MW-03 , MW-04, and MW-07/07R

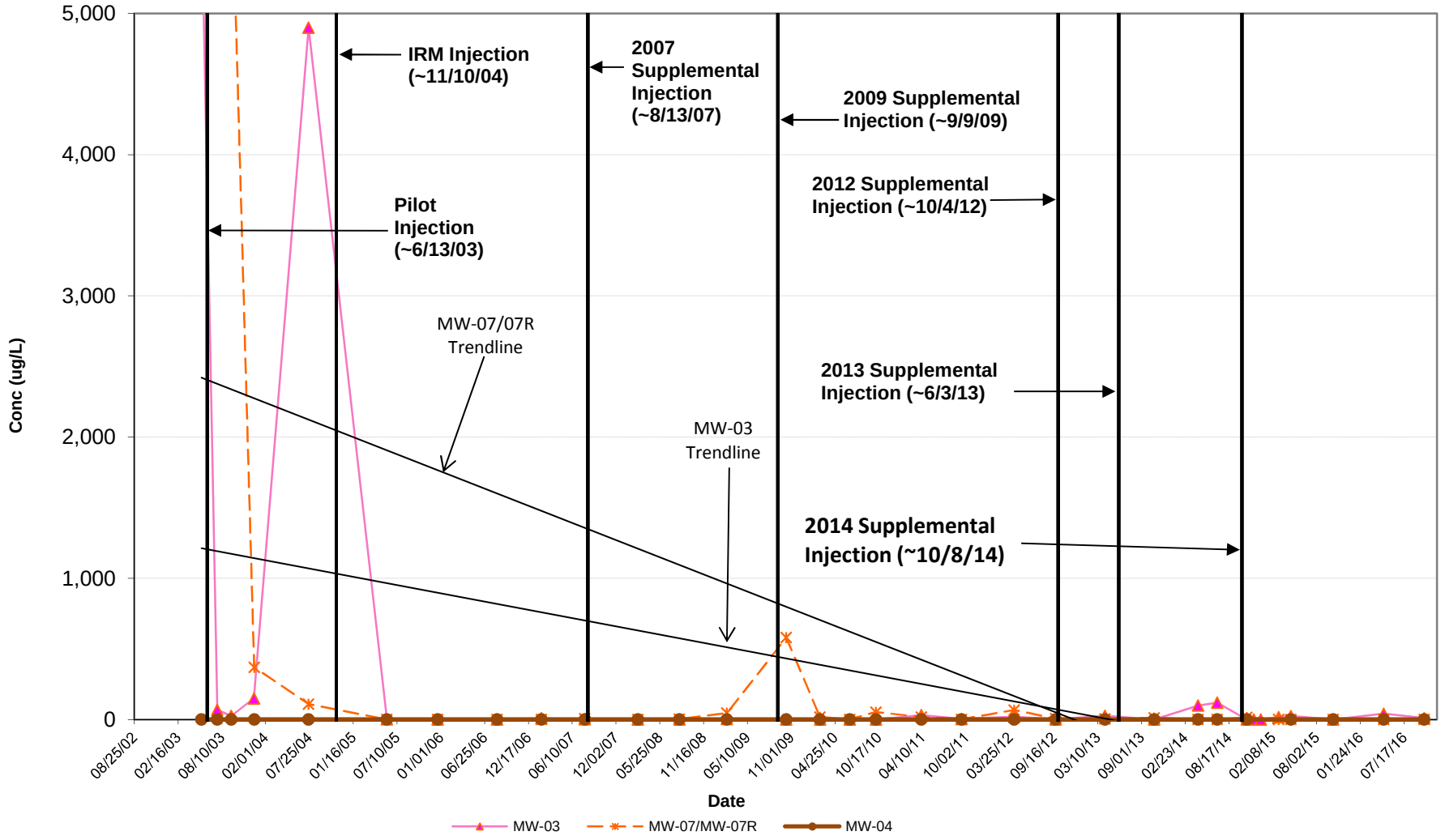

FIGURE 6
FORMER EMCA SITE

Freon 113 Concentrations, GZ-06, MW-02, and MW-06

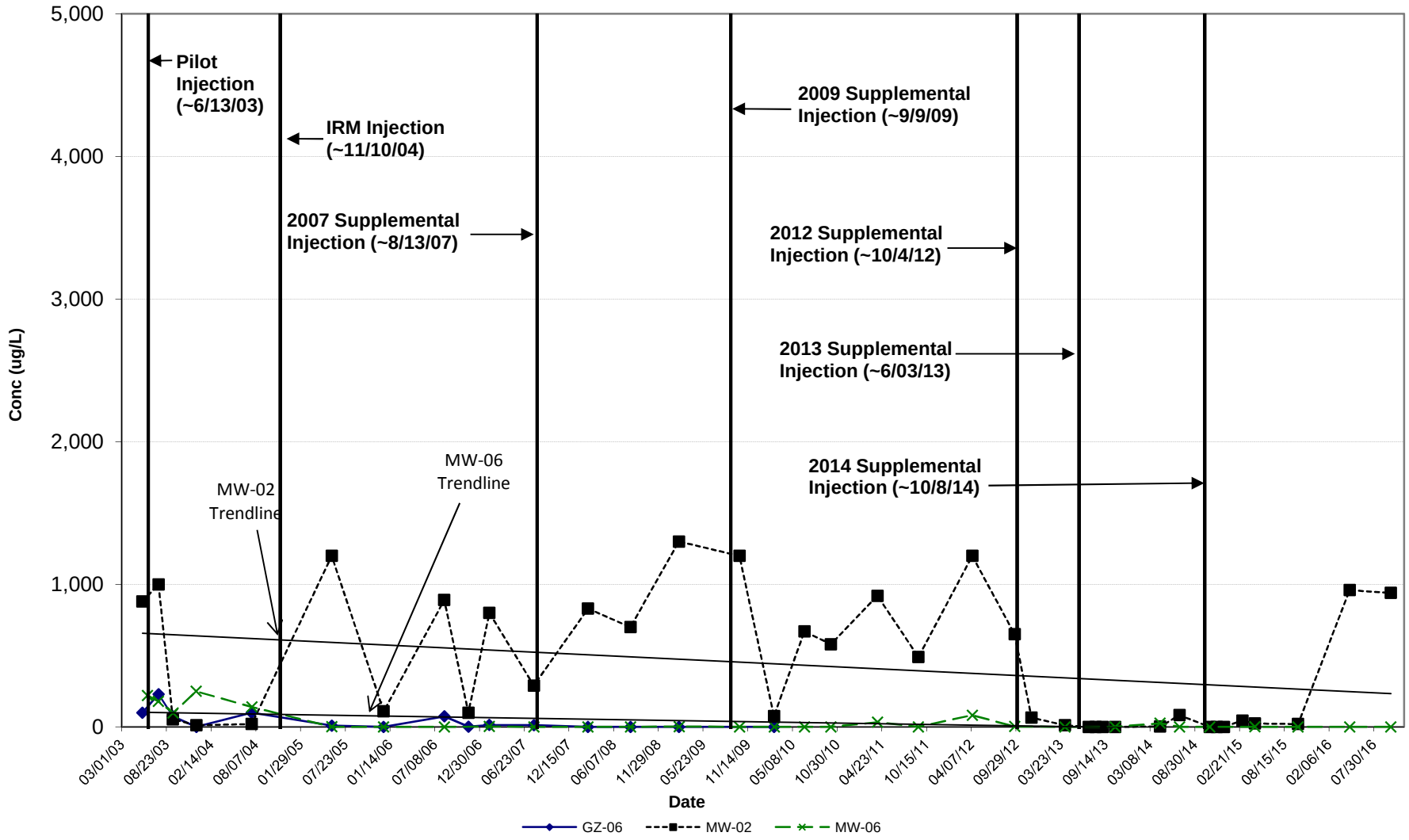

FIGURE 7
FORMER EMCA SITE

Freon 123a Concentrations

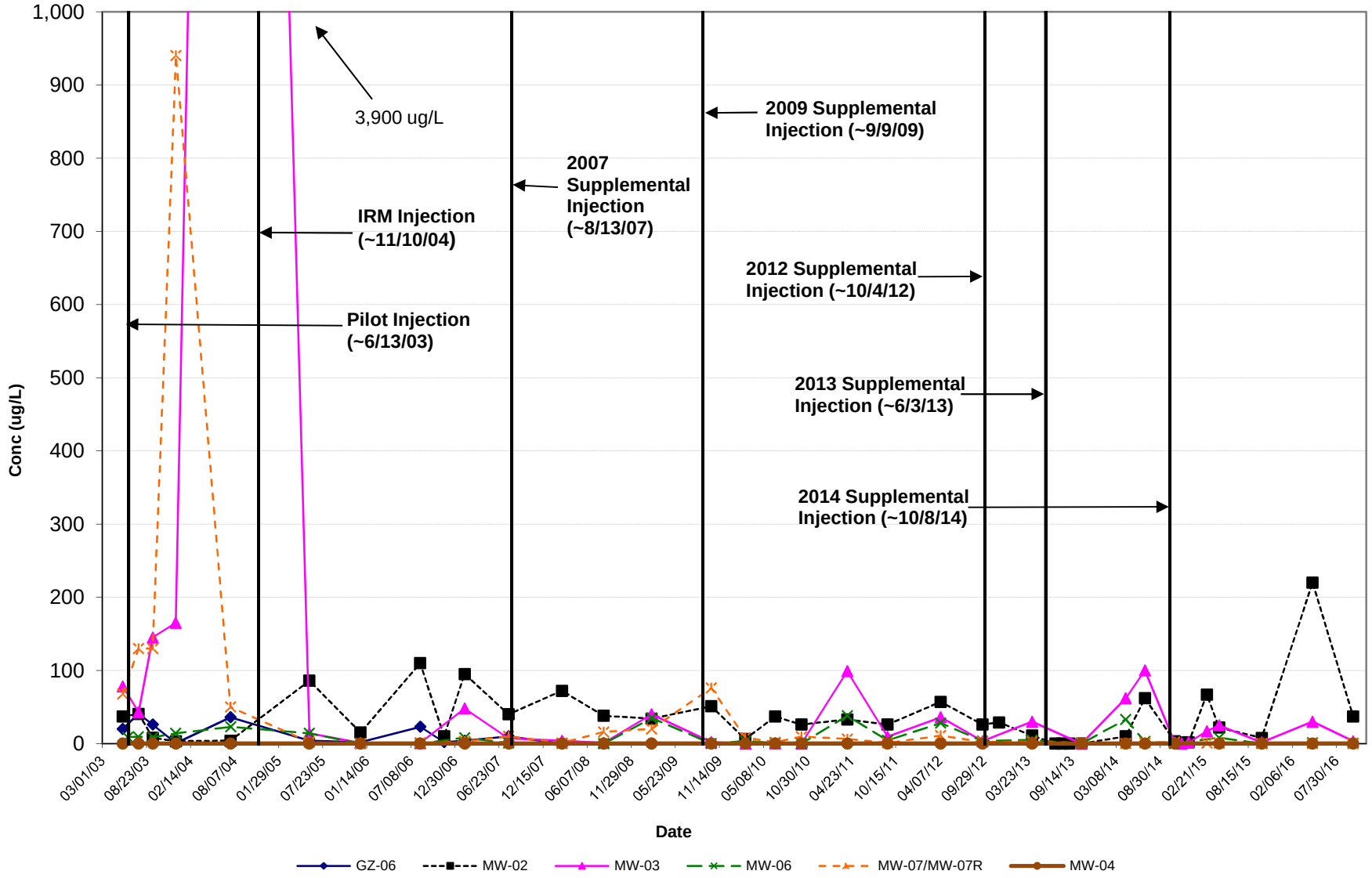

FIGURE 8
FORMER EMCA SITE

Freon 1113 Concentrations

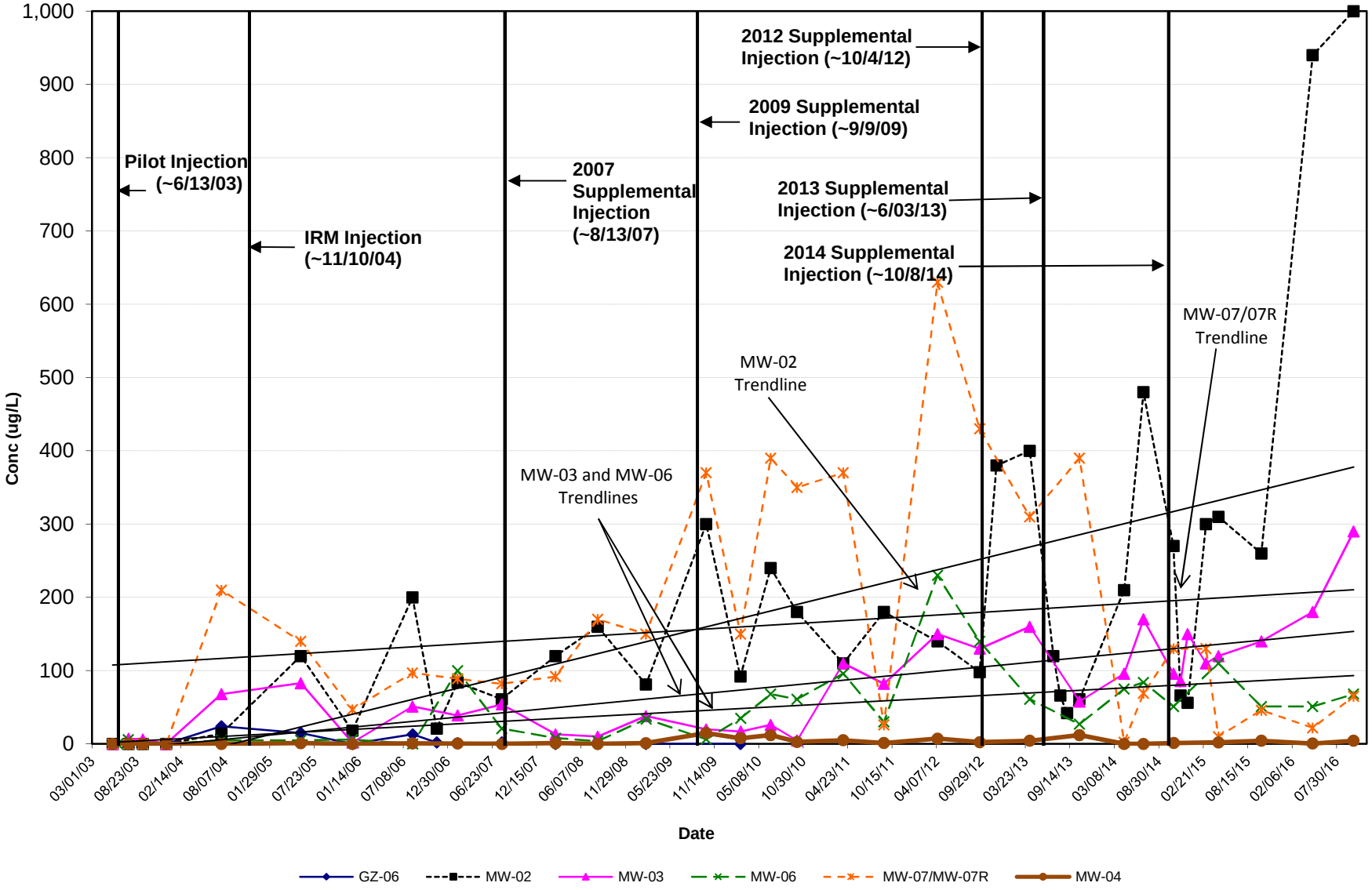

FIGURE 9
FORMER EMCA SITE

Sulfate Concentrations

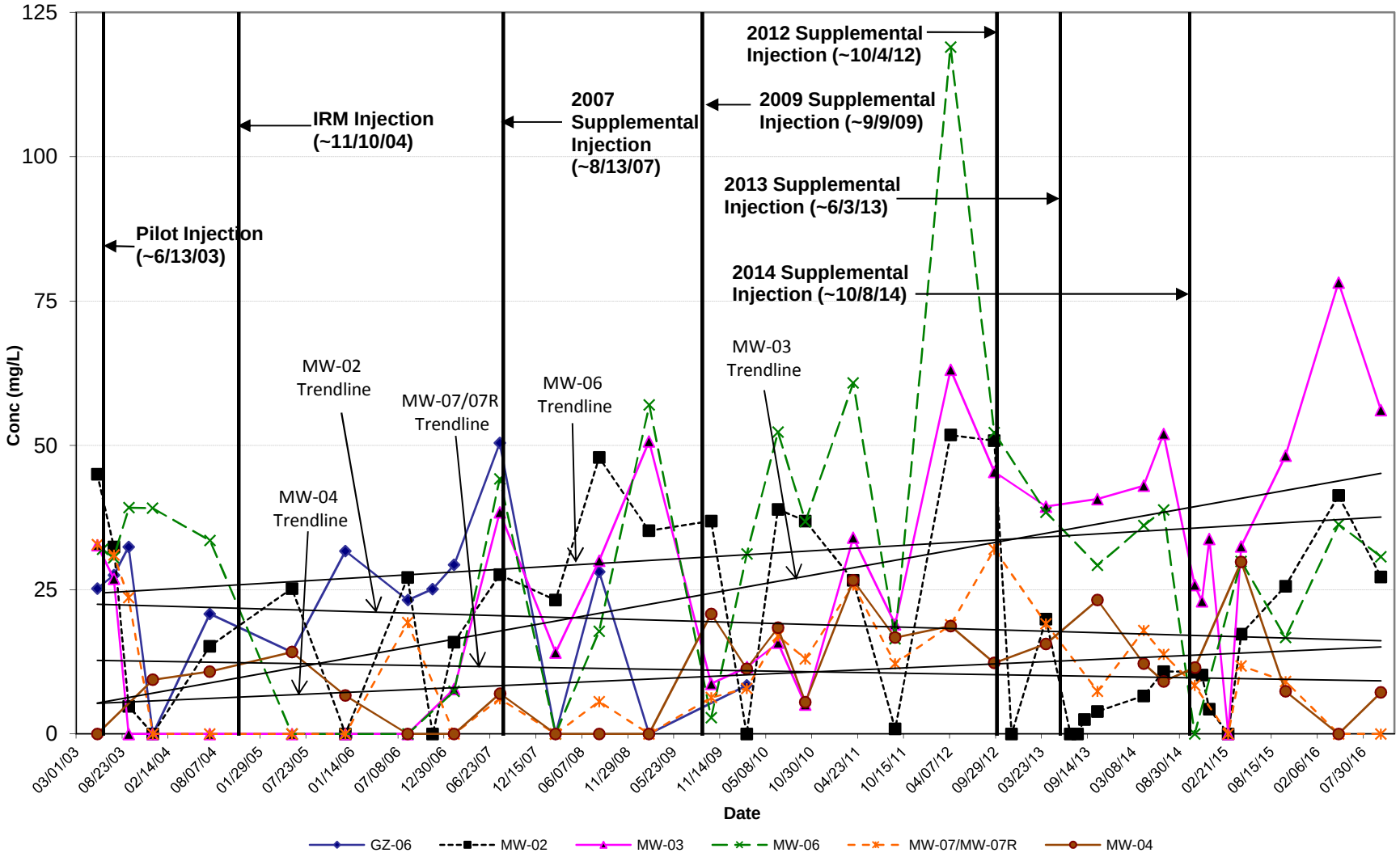

FIGURE 10
FORMER EMCA SITE
Methane Concentrations

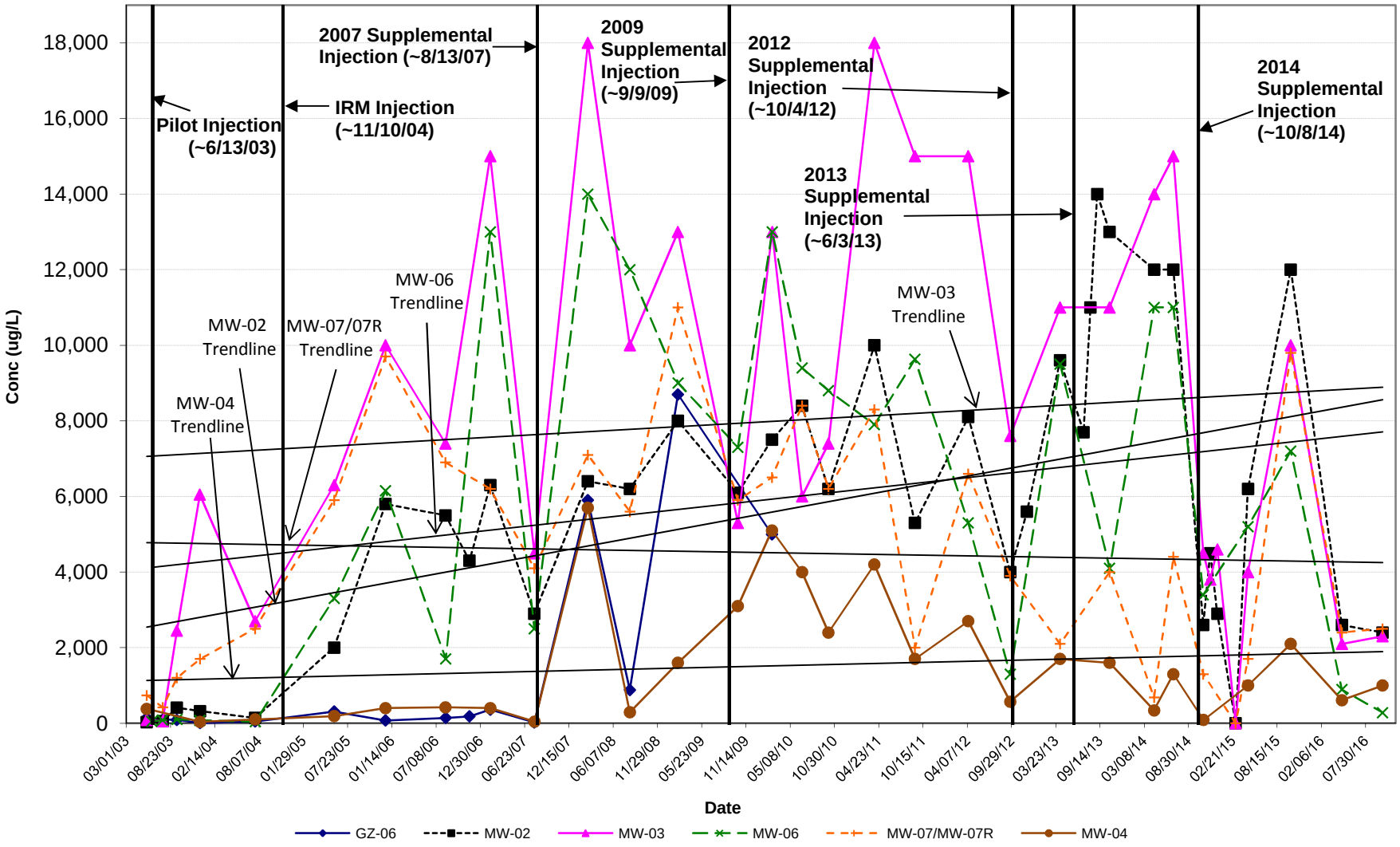

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FIGURE 11
FORMER EMCA SITE

Dissolved Oxygen Concentrations

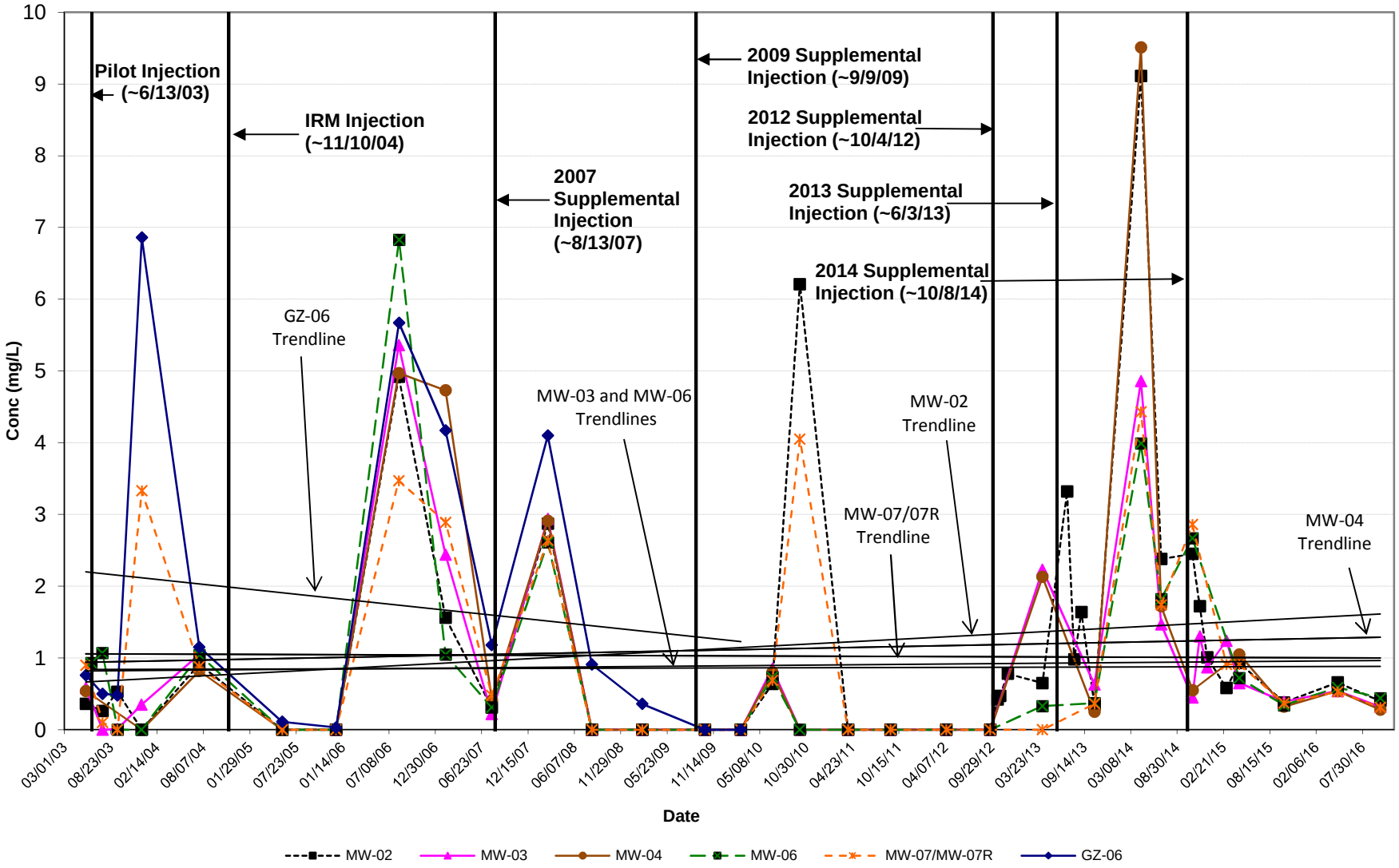
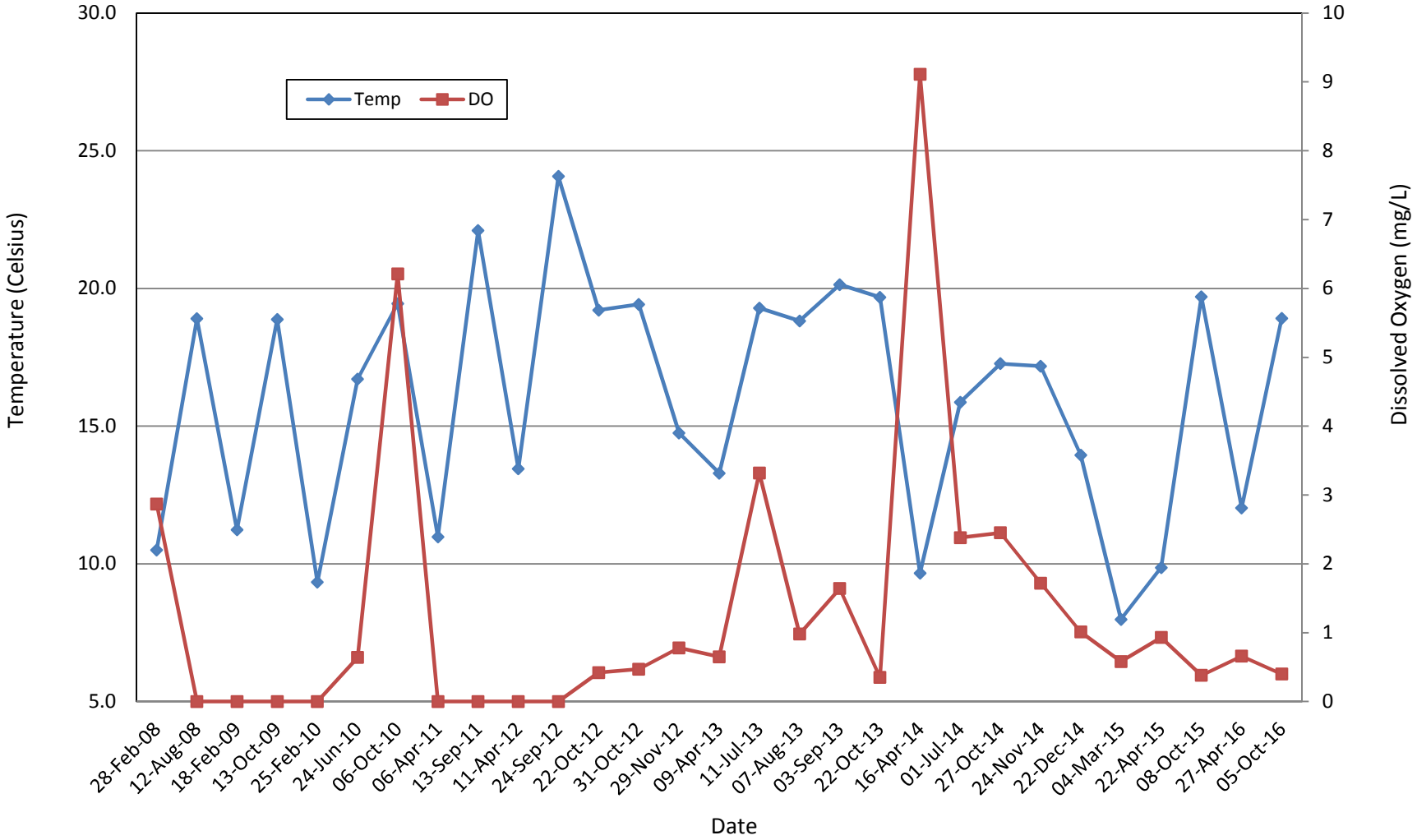
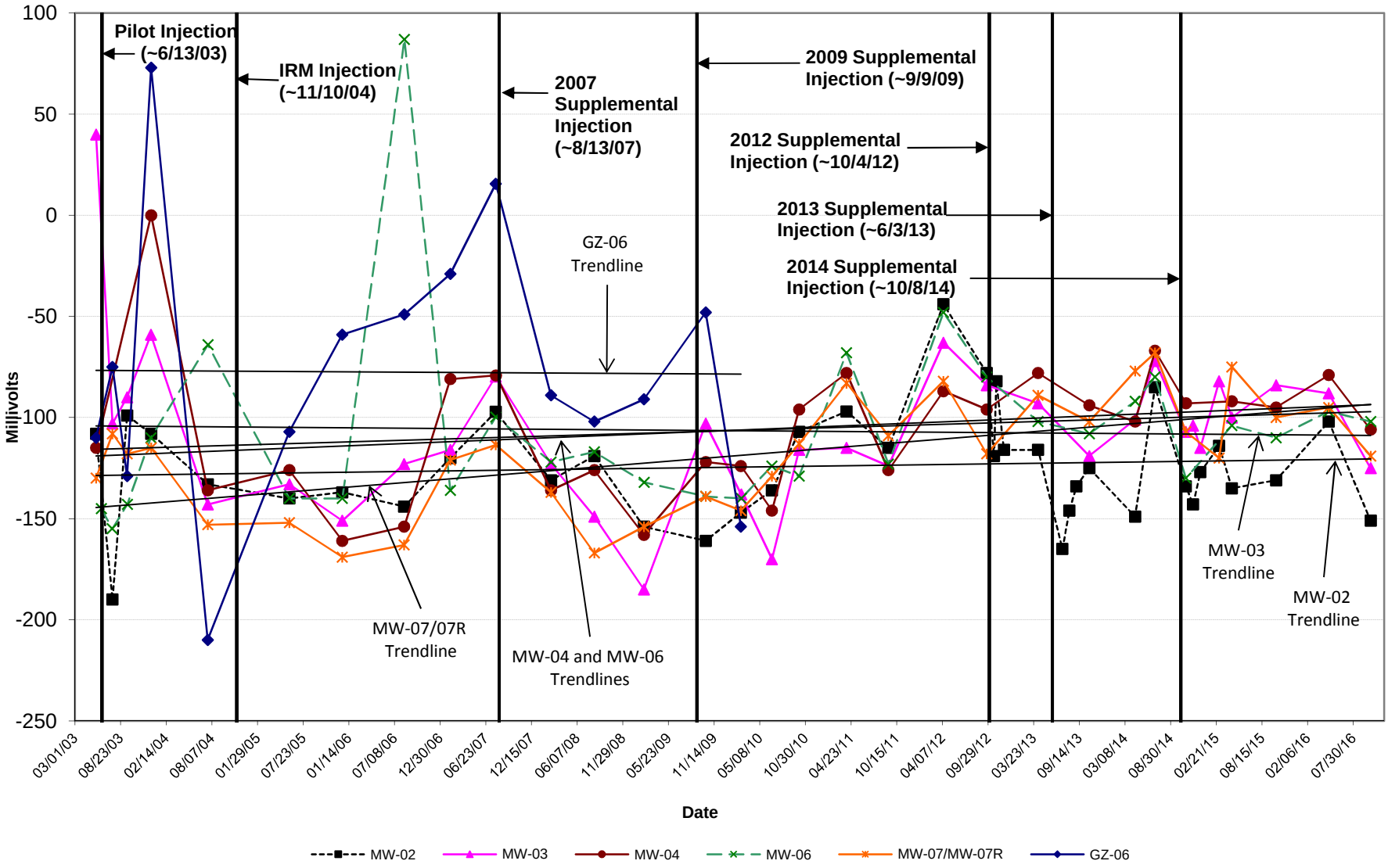


FIGURE 12
FORMER EMCA SITE
MW-02
Dissolved Oxygen vs Temperature



\\URSBUFFALO\Buffalo\Projects\11172730.00000\WORD\DRAFT\GW SAR Reports\Oct 2016 GW SAR\Figures\GW Data Plots_Time Scaled Long_Oct2016.xls

FIGURE 13
FORMER EMCA SITE
Oxidation-Reduction Potential



\\URSBUFFALO\Buffalo\Projects\11172730.00000\WORD\DRAFT\GW SAR Reports\Oct 2016 GW SAR\Figures\GW Data Plots_Time Scaled Long_Oct2016.xls - Figure 13

APPENDIX A

LOW FLOW GROUNDWATER PURGING/SAMPLING LOGS

EMCA
Mamaroneck, NY
Date: 10/5/16

Well ID	DTP	DTW 3Q14	DTB 3Q14	DTW	DTB
GZ-03	x	6.12	9.21	6.69	9.81
GZ-06	x	7.40	15.47	8.09	15.20
MW-01	x	5.23	8.35	5.48	8.02
MW-02	x	5.87	11.71	6.11	11.99
MW-03	x	5.87	14.28	5.99	13.98
MW-04	x	5.65	11.85	5.01	11.59
MW-05	x	4.90	15.48	5.44	15.18
MW-06	x	5.98	18.70	6.52	18.49
MW-07R	x	5.98	20.00	6.48	19.74
BM B	x	13.56	13.62	Removed from 1st b/c of safety concerns	
BM D	x	10.78	11.29	10.39	10.79

DTW checked 2X

all DTW + DTB measurements taken before sampling began

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: Dow/ Rohm& Haas, former EMCA Site: Mamaroneck, NY Well I.D.: MW-02

Date: 10/5/16 Sampling Personnel: Megan Dascoli Company: URS Corporation

Purging/ Sampling Device: Low Flow/ Peristaltic Pump- Geopump Tubing Type: HDPE & Silicone Pump/Tubing Inlet Location:

Measuring Point: Below Top of Riser Initial Depth to Water: 6.11 Depth to Well Bottom: Well Diameter: 1" Screen Length: 10'

Casing Type: PVC Volume in 1 Well Casing (liters): Estimated Purge Volume (liters):

Sample ID: 20161005 MW-02 Sample Time: 950 QA/QC:

Sample Parameters: Freon 113, 123a, 1113; Methane; Sulfate, alkalinity, hardness, nitrogen-nitrate, TOC, total iron- TestAmerica, Edis
Dehalobactor (and Dehalococcoides for MW-02 only) - sent to SIREM in Ontario, Canada
Total 13 bottles

PURGE PARAMETERS

TIME	pH	TEMP (°C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP Eh (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)	Ferrous Iron (mg/l)
9:10	6.44	18.99	3.56	1.40	22.6	-144	400	6.29	—
9:15	6.53	18.91	3.07	0.85	5.2	-156	240	—	—
9:20	6.51	18.90	2.87	0.61	1.0	-154	250	~~5.88~~	—
9:25	6.51	18.88	2.82	0.54	0.4	-154	·	6.31	—
9:30	6.50	18.90	2.77	0.48	0.1	-153	255	6.36	~8mg/l (dilute
9:35	6.49	18.94	2.75	0.45	0.0	-153	255	6.36	—
9:40	6.49	18.90	2.72	0.42	0.1	-153		6.39	11mg/l (dilute
9:45	6.49	18.91	2.69	0.40	0.1	-151			
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---		

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks:

initial color was clear w/ slw smpy odor

Ferrous Iron dilution was 25 ml w/ 1 packet then 10 ml of that diluted w/ 10 ml of sample water. took that # 5.5 + doubled it.

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: Dow/ Rohm& Haas, former EMCA Site: Mamaroneck, NY Well I.D.: MW-03

Date: 10/5/16 Sampling Personnel: Megan Dascoli Company: URS Corporation

Purging/ Sampling Device: Low Flow/ Peristaltic Pump- Geopump Tubing Type: HDPE & Silicone Pump/Tubing Inlet Location:

Measuring Point: Below Top of Riser Initial Depth to Water: 5.99 Depth to Well Bottom: Well Diameter: 1" Screen Length: 10'

Casing Type: PVC Volume in 1 Well Casing (liters): Estimated Purge Volume (liters):

Sample ID: 20161005MW-03 Sample Time: 1200 QA/QC: —

Sample Parameters: Freon 113, 123a, 1113; Methane; Sulfate, alkalinity, hardness, nitrogen-nitrate, TOC, total iron- TestAmerica, Edis
Dehalobactor (~~and Dehalococcoides for MW 02 only~~) sent to SIREM in Ontario, Canada

12 bottles

PURGE PARAMETERS

TIME	pH	TEMP (°C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP Eh (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)	Ferrous Iron (mg/l)
1125	6.36	19.31	1.94	6.37	18.2	-79	300	6.36	—
1130	6.46	19.70	1.95	0.63	5.7	-107			—
1135	6.48	19.80	1.97	0.44	3.5	-114	250	6.56	—
1140	6.49	20.13	1.99	0.40	0.9	-117			—
1145	6.50	20.16	2.01	0.35	0.0	-121			—
1150	6.51	20.21	2.02	0.33	0.0	-123	280	6.58	—
1155	6.52	20.15	2.03	0.32	0.0	-125			5.15 mg/l
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---		

Information: WATER VOLUMES–0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cy} = \pi r^2 h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: Dow/ Rohm& Haas, former EMCA Site: Mamaroneck, NY Well I.D.: MW-04

Date: 10/5/16 Sampling Personnel: Megan Dascoli Company: URS Corporation

Purging/ Sampling Device: Low Flow/ Peristaltic Pump- Geopump Tubing Type: HDPE & Silicone Pump/Tubing Inlet Location:

Measuring Point: Below Top of Riser Initial Depth to Water: 5.85 / 6.15 Depth to Well Bottom: Well Diameter: 1" Screen Length: 10'

Casing Type: PVC Volume in 1 Well Casing (liters): Estimated Purge Volume (liters):

Sample ID: 20161005MW-04 Sample Time: 1440 QA/QC: —

Sample Parameters: Freon 113, 123a, 1113; Methane; Sulfate, alkalinity, hardness, nitrogen-nitrate, TOC, total iron- TestAmerica, Edis
Dehalobactor ~~(and Dehalococcoides for MW-02 only)~~ - sent to SIREM in Ontario, Canada

PURGE PARAMETERS

TIME	pH	TEMP (°C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP Eh (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)	Ferrous Iron (mg/l)
1359	6.65	21.25	1.74	0.54	33.9	-90	200	6.11	—
1404	6.61	21.63	1.95	0.43	34.5	-97			
1409	6.61	21.67	1.98	0.34	13.0	-99			
1414	6.61	21.61	1.98	0.30	4.8	-101	240	6.51	
1419	6.61	21.62	2.00	0.29	2.6	-103			
1424	6.61	21.60	2.02	0.28	1.7	-104	270	6.54	
1429	6.61	21.56	2.01	0.27	1.6	-106	200	6.21	
1434	6.61	21.54	2.02	0.28	1.5	-106			16.0 mg/L
1439									
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---		

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks:

~~5~~. Water level meter may not be 100% accurate today.

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: Dow/ Rohm& Haas, former EMCA Site: Mamaroneck, NY Well I.D.: MW-06

Date: 10/5/16 Sampling Personnel: Megan Dascoli Company: URS Corporation

Purging/ Sampling Device: Low Flow/ Peristaltic Pump- Geopump Tubing Type: HDPE & Silicone Pump/Tubing Inlet Location:

Measuring Point: Below Top of Riser Initial Depth to Water: 6.52 Depth to Well Bottom: Well Diameter: 1" Screen Length: 10'

Casing Type: PVC Volume in 1 Well Casing (liters): Estimated Purge Volume (liters):

Sample ID: 20161005MW-06 Sample Time: 1545 QA/QC:

Sample Parameters: Freon 113, 123a, 1113; Methane; Sulfate, alkalinity, hardness, nitrogen-nitrate, TOC, total iron- TestAmerica, Edis
Dehalobactor ~~(and Dehalococcoides for MW-02 only)~~ - sent to SIREM in Ontario, Canada

PURGE PARAMETERS

TIME	pH	TEMP (°C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP Eh (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)	Ferrous Iron (mg/l)
1510	6.75	18.63	0.881	2.66	21.3	-56	175	6.65	
1515	6.60	18.22	0.945	0.88	2.9	-42			
1520	6.62	18.01	0.38	0.60	0.8	~~-44~~	240	6.68	
1525	6.65	17.92	1.49	0.50	2.6	-90			
1530	6.65	17.92	1.53	0.50	0.0	-95	160	6.64	
1535	6.66	17.87	1.57	0.47	0.0	-99			
1540	6.66	17.83	1.59	0.44	0.0	-102	195	6.65	4.5 mg/L
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---		

Information: WATER VOLUMES–0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: Dow/ Rohm& Haas, former EMCA Site: Mamaroneck, NY Well I.D.: MW-07R

Date: 10/5/16 Sampling Personnel: Megan Dascoli Company: URS Corporation

Purging/ Sampling Device: Low Flow/ Peristaltic Pump- Geopump Tubing Type: HDPE & Silicone Pump/Tubing Inlet Location:

Measuring Point: Below Top of Riser Initial Depth to Water: 6.48 Depth to Well Bottom: Well Diameter: 1" Screen Length: 10'

Casing Type: PVC Volume in 1 Well Casing (liters): Estimated Purge Volume (liters):

Sample ID: 20161005 MW-07R Sample Time: 1315 QA/QC:

Sample Parameters: Freon 113, 123a, 1113; Methane; Sulfate, alkalinity, hardness, nitrogen-nitrate, TOC, total iron- TestAmerica, Edis
Dehalobactor ~~(and Dehalococcoides for MW-02 only)~~ - sent to SIREM in Ontario, Canada

PURGE PARAMETERS

TIME	pH	TEMP (°C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP Eh (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)	Ferrous Iron (mg/l)
1237	6.57	20.36	2.71	1.61	1.2	-102	250	6.51	
1242	6.48	19.17	2.60	0.60	0.2	-112		6.51	
1247	6.47	19.06	2.58	0.45	0.0	-115	270	6.52	
1252	6.47	19.07	2.58	0.39	0.0	-117			
1257	6.47	19.09	2.59	0.36	0.0	-118	250	6.52	
1302	6.47	19.00	2.60	0.33	0.0	-118			
1307	6.46	18.98	2.61	0.31	0.0	-119			11mg/L diluted
1312									
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---		

Information: WATER VOLUMES–0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks:

* Near well, one injection point is no longer plugged, is a hole.

Diluted 25 ml of sample water w/ 1 packet by taking 11 ml of that & adding 11 ml of DI. Took this measurement of 5.5 + doubled it to get 11mg/L.

APPENDIX B

HISTORICAL ANALYTICAL DATA SUMMARY

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			GZ-03	GZ-06	GZ-06	GZ-06	GZ-06
Sample ID			20070801GZ-03V11N	GZ06_52103	GZ06	GZ06-091703	GZ-06-121803
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/01/07	05/21/03	07/23/03	09/17/03	12/18/03
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	NA	5.0 U	10 U	5.0 U	5.0 U
Benzene	UG/L	1	NA	5.0 U	10 U	5.0 U	5.0 U
Bromodichloromethane	UG/L	50	NA	1.0 U	2 U	1.0 U	1.0 U
Bromoform	UG/L	50	NA	4.0 U	8 U	4.0 U	4.0 U
Bromomethane	UG/L	5	NA	5.0 U	10 U	5.0 U	5.0 U
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	R	R	R	R
Carbon Disulfide	UG/L	60	NA	5.0 U	10 U	5.0 U	5.0 U
Carbon Tetrachloride	UG/L	5	NA	2.0 U	4 U	2.0 U	2.0 U
Chlorobenzene	UG/L	5	NA	5.0 U	10 U	5.0 U	5.0 U
Chloroethane	UG/L	5	NA	5.0 U	10 U	5.0 U	5.0 U
Chloroform	UG/L	7	NA	5.0 U	10 U	5.0 U	5.0 U
Chloromethane	UG/L	5	NA	5.0 U	10 U	5.0 U	5.0 U
Chlorotrifluoroethene (Freon-1113)	UG/L	5	10 U	0 U	0 U	5.4 NJ	0 U
Dibromochloromethane	UG/L	50	NA	5.0 U	10 U	5.0 U	5.0 U
1,1-Dichloroethane	UG/L	5	NA	5.0 U	10 U	5.0 U	5.0 U
1,2-Dichloroethane	UG/L	0.6	NA	2.0 U	4 U	2.0 U	2.0 U
1,1-Dichloroethene	UG/L	5	NA	0.8 J	1.5 J	2.0 U	2.0 U
cis-1,2-Dichloroethene	UG/L	5	NA	5.0 U	10 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	UG/L	5	NA	5.0 U	10 U	5.0 U	5.0 U
1,2-Dichloropropane	UG/L	1	NA	1.0 U	2 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	UG/L	0.4	NA	5.0 U	10 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	UG/L	0.4	NA	5.0 U	10 U	5.0 U	5.0 U

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect UJ - Estimated quantitation limit. NJ - Analyte is reported as tentatively identified compound at an estimated concentration.
J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data rejected.
S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			GZ-03	GZ-06	GZ-06	GZ-06	GZ-06
Sample ID			20070801GZ-03V11N	GZ06_52103	GZ06	GZ06-091703	GZ-06-121803
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/01/07	05/21/03	07/23/03	09/17/03	12/18/03
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	NA	4.0 U	8 U	4.0 U	4.0 U
2-Hexanone	UG/L	50	NA	5.0 U	10 U	5.0 U	5.0 U
4-Methyl-2-Pentanone	UG/L	-	NA	5.0 U	10 U	5.0 U	5.0 U
Methylene Chloride	UG/L	5	NA	3.0 U	6 U	3.0 U	3.0 U
Styrene	UG/L	5	NA	5.0 U	10 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	UG/L	5	NA	1.0 U	2 U	1.0 U	1.0 U
Tetrachloroethene	UG/L	5	NA	0.6 J	2 U	0.5 J	1.0 U
1,1,1-Trichloroethane	UG/L	5	NA	5.0 U	10 U	5.0 U	5.0 U
1,1,2-Trichloroethane	UG/L	1	NA	3.0 U	6 U	3.0 U	3.0 U
Trichloroethene	UG/L	5	NA	1.0 U	2 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	10 U	100	230	74	5.0 U
Toluene	UG/L	5	NA	5.0 U	10 U	5.0 U	5.0 U
Vinyl Chloride	UG/L	2	NA	5.0 U	10 U	5.0 U	5.0 U
Xylene (total)	UG/L	5	NA	5.0 U	10 U	5.0 U	5.0 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	10 U	20	41	26	0.7 J
Dissolved Gases							
Ethane	UG/L	-	NA	10 U	5 U	10 U	5.0 U
Ethene	UG/L	-	NA	10 U	5 U	10 U	5.0 U
Methane	UG/L	-	5.0 U	140	98	89	5.9
Total Metals							
Iron	UG/L	300	NA	2,390	866	517 J	173

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect UJ - Estimated quantitation limit. NJ - Analyte is reported as tentatively identified compound at an estimated concentration.
J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data rejected.
S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			GZ-03	GZ-06	GZ-06	GZ-06	GZ-06
Sample ID			20070801GZ-03V11N	GZ06_52103	GZ06	GZ06-091703	GZ-06-121803
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/01/07	05/21/03	07/23/03	09/17/03	12/18/03
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	2,290	778	583 J	85.3 B
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	559	474	477 J	218
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	0.1 U	0.1 U	0.1 U	0.1 U
Nitrogen, Kjeldahl, Total	MG/L	-	NA	0.5 U	0.7	1.3	0.57
Nitrogen, Nitrate	MG/L	10	NA	0.1 U	NA	0.58	0.1 U
Nitrogen, Nitrite	MG/L	1	NA	0.1 U	NA	0.1 U	0.1 U
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	0.12 J	NA	NA
Sulfate	MG/L	250	15.8	25.2	27.5	32.4	5.0 U
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	2.8	9.6	0.25	0.03
Ferric Iron (lab)	MG/L	-	NA	0.1 U	0.1 U	0.52	0.143
Fluoride	MG/L	1.5	NA	0.1 U	0.1 U	0.1 U	0.32

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect UJ - Estimated quantitation limit. NJ - Analyte is reported as tentatively identified compound at an estimated concentration.
J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data rejected.
S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			GZ-03	GZ-06	GZ-06	GZ-06	GZ-06
Sample ID			20070801GZ-03V11N	GZ06_52103	GZ06	GZ06-091703	GZ-06-121803
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/01/07	05/21/03	07/23/03	09/17/03	12/18/03
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	NA	5 U	5 U	NA	5 U
Oil & Grease	MG/L	-	NA	NA	NA	R	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0.52	0.76	0.5	0.48	6.86
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	98.5	-110	-75	-129	73
pH	S.U.	-	6.05	NA	NA	NA	NA
Specific Conductance	MS/CM	-	0.599	2.27	1.99	1.98	1.11
Temperature	DEG C	-	21.6	NA	NA	NA	NA
Turbidity	NTU	-	28	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect UJ - Estimated quantitation limit. NJ - Analyte is reported as tentatively identified compound at an estimated concentration.
J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data rejected.
S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			GZ-06	GZ-06	GZ-06	GZ-06	GZ-06
Sample ID			GZ06	GZ-06	MW-GZ-06V08N	GZ-0608N	20061117GZ-0608
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/22/04	05/31/05	12/20/05	08/15/06	11/17/06
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	24	15	10 U	13	2.0 J
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			GZ-06	GZ-06	GZ-06	GZ-06	GZ-06
Sample ID			GZ06	GZ-06	MW-GZ-06V08N	GZ-0608N	20061117GZ-0608
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/22/04	05/31/05	12/20/05	08/15/06	11/17/06
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	100 J	9.0 J	10 U	74	2.0 J
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	36	4.0 J	2.0 J	23	2.0 J
Dissolved Gases							
Ethane	UG/L	-	NA	50 U	NA	NA	NA
Ethene	UG/L	-	NA	50 U	NA	NA	NA
Methane	UG/L	-	48	310	74	140	180
Total Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

Advanced Selection: amk-temp
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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			GZ-06	GZ-06	GZ-06	GZ-06	GZ-06
Sample ID			GZ06	GZ-06	MW-GZ-06V08N	GZ-0608N	20061117GZ-0608
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/22/04	05/31/05	12/20/05	08/15/06	11/17/06
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	1,610	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	20.8	14.2	31.7	23.2	25.1
Sulfide	MG/L	0.05	1.0 U	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	1.00 U	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalvents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

Advanced Selection: amk-temp
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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			GZ-06	GZ-06	GZ-06	GZ-06	GZ-06
Sample ID			GZ06	GZ-06	MW-GZ-06V08N	GZ-0608N	20061117GZ-0608
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/22/04	05/31/05	12/20/05	08/15/06	11/17/06
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	1.15	0.11	0.03	5.67	NA
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-210	-107	-59	-49	NA
pH	S.U.	-	NA	NA	NA	NA	NA
Specific Conductance	MS/CM	-	5.25	1.43	1.16	1.28	NA
Temperature	DEG C	-	NA	NA	NA	NA	NA
Turbidity	NTU	-	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			GZ-06	GZ-06	GZ-06	GZ-06	GZ-06
Sample ID			20061117GZ0608FD	20070207GZ-06V08N	20070731GZ-06V08	20080228GZ06V08	20080812GZ06V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			11/17/06	02/07/07	07/31/07	02/28/08	08/12/08
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)				
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	2.0 J	1.0 J	2.0 J	10 U	10 U
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			GZ-06	GZ-06	GZ-06	GZ-06	GZ-06
Sample ID			20061117GZ0608FD	20070207GZ-06V08N	20070731GZ-06V08	20080228GZ06V08	20080812GZ06V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			11/17/06	02/07/07	07/31/07	02/28/08	08/12/08
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)				
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	2.0 J	14	13	10 UJ	10 U
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	2.0 J	4.0 J	10	10 U	10 U
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	210	360	23	5,900	880
Total Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			GZ-06	GZ-06	GZ-06	GZ-06	GZ-06
Sample ID			20061117GZ0608FD	20070207GZ-06V08N	20070731GZ-06V08	20080228GZ06V08	20080812GZ06V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			11/17/06	02/07/07	07/31/07	02/28/08	08/12/08
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)				
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	25.4	29.3	50.4	5 U	28.1
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			GZ-06	GZ-06	GZ-06	GZ-06	GZ-06
Sample ID			20061117GZ0608FD	20070207GZ-06V08N	20070731GZ-06V08	20080228GZ06V08	20080812GZ06V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			11/17/06	02/07/07	07/31/07	02/28/08	08/12/08
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)				
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	NA	4.17	1.18	4.1	0.91
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	NA	-29	15.6	-89.0	-102
pH	S.U.	-	NA	NA	6.22	6.15	6.31
Specific Conductance	MS/CM	-	NA	3.06	1.671	0.89	1.59
Temperature	DEG C	-	NA	NA	NA	8.91	17.5
Turbidity	NTU	-	NA	NA	NA	1,000	18

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect UJ - Estimated quantitation limit. NJ - Analyte is reported as tentatively identified compound at an estimated concentration.
J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data rejected.
S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			GZ-06	GZ-06	MW-01	MW-02	MW-02
Sample ID			20090218GZ-06V10N	20100225GZ-06V14N	20070801MW-01V08N	MW02-5-20-03	MW02-5-20-03DUP
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/18/09	02/25/10	08/01/07	05/20/03	05/20/03
Parameter	**Units**	**Criteria***					Field Duplicate (1-1)
Volatiles							
Acetone	UG/L	50	NA	NA	NA	140 J	130 J
Benzene	UG/L	1	NA	NA	NA	50 U	25 U
Bromodichloromethane	UG/L	50	NA	NA	NA	10 U	5.0 U
Bromoform	UG/L	50	NA	NA	NA	40 U	20 U
Bromomethane	UG/L	5	NA	NA	NA	50 U	25 U
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	R	R
Carbon Disulfide	UG/L	60	NA	NA	NA	50 U	25 U
Carbon Tetrachloride	UG/L	5	NA	NA	NA	20 U	10 U
Chlorobenzene	UG/L	5	NA	NA	NA	50 U	25 U
Chloroethane	UG/L	5	NA	NA	NA	50 U	25 U
Chloroform	UG/L	7	NA	NA	NA	50 U	25 U
Chloromethane	UG/L	5	NA	NA	NA	50 U	25 U
Chlorotrifluoroethene (Freon-1113)	UG/L	5	10 U	1 UJ	20 U	0 U	0 U
Dibromochloromethane	UG/L	50	NA	NA	NA	50 U	25 U
1,1-Dichloroethane	UG/L	5	NA	NA	20 U	50 U	25 U
1,2-Dichloroethane	UG/L	0.6	NA	NA	20 U	20 U	10 U
1,1-Dichloroethene	UG/L	5	NA	NA	20 U	4.4 J	5.1 J
cis-1,2-Dichloroethene	UG/L	5	NA	NA	250	50 U	25 U
trans-1,2-Dichloroethene	UG/L	5	NA	NA	4.0 J	50 U	25 U
1,2-Dichloropropane	UG/L	1	NA	NA	NA	10 U	5.0 U
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	50 U	25 U
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	50 U	25 U

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Concentration Exceeds Criteria

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J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data rejected.
S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			GZ-06	GZ-06	MW-01	MW-02	MW-02
Sample ID			20090218GZ-06V10N	20100225GZ-06V14N	20070801MW-01V08N	MW02-5-20-03	MW02-5-20-03DUP
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/18/09	02/25/10	08/01/07	05/20/03	05/20/03
Parameter	**Units**	**Criteria***					Field Duplicate (1-1)
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	40 U	20 U
2-Hexanone	UG/L	50	NA	NA	NA	50 U	25 U
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	50 U	25 U
Methylene Chloride	UG/L	5	NA	NA	NA	30 U	15 U
Styrene	UG/L	5	NA	NA	NA	50 U	25 U
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	10 U	5.0 U
Tetrachloroethene	UG/L	5	NA	NA	8.0 J	10 U	5.0 U
1,1,1-Trichloroethane	UG/L	5	NA	NA	20 U	50 U	25 U
1,1,2-Trichloroethane	UG/L	1	NA	NA	20 U	30 U	15 U
Trichloroethene	UG/L	5	NA	NA	5.0 J	10 U	5.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	10 U	1 UJ	20 U	710	880
Toluene	UG/L	5	NA	NA	NA	50 U	25 U
Vinyl Chloride	UG/L	2	NA	NA	5.0 J	50 U	25 U
Xylene (total)	UG/L	5	NA	NA	NA	50 U	25 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	10 U	1 U	20 U	34 J	40
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	5.0 U	5.0 U
Ethene	UG/L	-	NA	NA	NA	5.0 U	5.0 U
Methane	UG/L	-	8,700	5,000	98	26	32
Total Metals							
Iron	UG/L	300	NA	NA	NA	27,800	28,300

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect UJ - Estimated quantitation limit. NJ - Analyte is reported as tentatively identified compound at an estimated concentration.
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S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			GZ-06	GZ-06	MW-01	MW-02	MW-02
Sample ID			20090218GZ-06V10N	20100225GZ-06V14N	20070801MW-01V08N	MW02-5-20-03	MW02-5-20-03DUP
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/18/09	02/25/10	08/01/07	05/20/03	05/20/03
Parameter	**Units**	**Criteria***					Field Duplicate (1-1)
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	27,900	28,200
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	338	338
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	3.3	3.4
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	6.6	6.2
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	0.15	0.16
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	0.1 U	0.1 U
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	5 UJ	8.4	39.2	44.0	46.0
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	25.3	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	2.5	3
Fluoride	MG/L	1.5	NA	NA	NA	0.28	0.3

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Concentration Exceeds Criteria

U - Non-Detect UJ - Estimated quantitation limit. NJ - Analyte is reported as tentatively identified compound at an estimated concentration.
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S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			GZ-06	GZ-06	MW-01	MW-02	MW-02
Sample ID			20090218GZ-06V10N	20100225GZ-06V14N	20070801MW-01V08N	MW02-5-20-03	MW02-5-20-03DUP
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/18/09	02/25/10	08/01/07	05/20/03	05/20/03
Parameter	**Units**	**Criteria***					Field Duplicate (1-1)
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	5 U	5 U
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0.36	0.0	0.99	0.36	NA
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-91	-154	95.4	-108	NA
pH	S.U.	-	6.12	6.73	6.25	NA	NA
Specific Conductance	MS/CM	-	2.13	5.49	1.755	1.68	NA
Temperature	DEG C	-	9.24	7.23	NA	NA	NA
Turbidity	NTU	-	16	300	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Concentration Exceeds Criteria

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J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data rejected.
S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			DUP-7_22_03	MW02-7_22_03	MW02-091803	MW-02-121803	MW-02
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/22/03	07/22/03	09/18/03	12/18/03	07/22/04
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)				
Volatiles							
Acetone	UG/L	50	R	R	5.0 U	5.0 U	NA
Benzene	UG/L	1	50 U	50 U	5.0 U	5.0 U	NA
Bromodichloromethane	UG/L	50	10 U	10 U	1.0 U	1.0 U	NA
Bromoform	UG/L	50	40 U	40 U	4.0 U	4.0 U	NA
Bromomethane	UG/L	5	50 U	50 U	5.0 U	5.0 U	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	R	R	R	R	NA
Carbon Disulfide	UG/L	60	50 U	50 U	5.0 U	5.0 U	NA
Carbon Tetrachloride	UG/L	5	20 U	20 U	2.0 U	2.0 U	NA
Chlorobenzene	UG/L	5	50 U	50 U	5.0 U	5.0 U	NA
Chloroethane	UG/L	5	50 U	50 U	5.0 U	5.0 U	NA
Chloroform	UG/L	7	50 U	50 U	5.0 U	5.0 U	NA
Chloromethane	UG/L	5	50 U	50 U	5.0 U	5.0 U	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	0 U	0 U	0 U	0 U	14
Dibromochloromethane	UG/L	50	50 U	50 U	5.0 U	5.0 U	NA
1,1-Dichloroethane	UG/L	5	50 U	50 U	5.0 U	5.0 U	NA
1,2-Dichloroethane	UG/L	0.6	20 U	20 U	2.0 U	2.0 U	NA
1,1-Dichloroethene	UG/L	5	8.2 J	7.5 J	2.0 U	2.0 U	NA
cis-1,2-Dichloroethene	UG/L	5	50 U	50 U	5.0 U	5.0 U	NA
trans-1,2-Dichloroethene	UG/L	5	50 U	50 U	5.0 U	5.0 U	NA
1,2-Dichloropropane	UG/L	1	10 U	10 U	1.0 U	1.0 U	NA
cis-1,3-Dichloropropene	UG/L	0.4	50 U	50 U	5.0 U	5.0 U	NA
trans-1,3-Dichloropropene	UG/L	0.4	50 U	50 U	5.0 U	5.0 U	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Concentration Exceeds Criteria

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			DUP-7_22_03	MW02-7_22_03	MW02-091803	MW-02-121803	MW-02
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/22/03	07/22/03	09/18/03	12/18/03	07/22/04
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)				
Volatiles							
Ethylbenzene	UG/L	5	40 U	3.4 J	4.0 U	4.0 U	NA
2-Hexanone	UG/L	50	50 U	50 U	5.0 U	5.0 U	NA
4-Methyl-2-Pentanone	UG/L	-	50 U	50 U	5.0 U	5.0 U	NA
Methylene Chloride	UG/L	5	30 U	30 U	3.0 U	3.0 U	NA
Styrene	UG/L	5	50 U	50 U	5.0 U	5.0 U	NA
1,1,2,2-Tetrachloroethane	UG/L	5	10 U	10 U	1.0 U	1.0 U	NA
Tetrachloroethene	UG/L	5	10 U	10 U	1.0 U	1.0 U	NA
1,1,1-Trichloroethane	UG/L	5	50 U	50 U	5.0 U	5.0 U	NA
1,1,2-Trichloroethane	UG/L	1	30 U	30 U	3.0 U	3.0 U	NA
Trichloroethene	UG/L	5	10 U	10 U	1.0 U	1.0 U	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1,000	1,000	54	12	21 J
Toluene	UG/L	5	50 U	50 U	5.0 U	5.0 U	NA
Vinyl Chloride	UG/L	2	50 U	50 U	5.0 U	5.0 U	NA
Xylene (total)	UG/L	5	7.1 J	11 J	5.0 U	5.0 U	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	40 J	41 J	7.8	3.3 J	4 J
Dissolved Gases							
Ethane	UG/L	-	5 U	5 U	50 U	25 U	NA
Ethene	UG/L	-	5 U	5 U	50 U	25 U	NA
Methane	UG/L	-	54	52	410	320	140
Total Metals							
Iron	UG/L	300	30,100	30,900	63,800 J	69,000	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
Printed: 11/3/2016 4:19:33 PM
[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			DUP-7_22_03	MW02-7_22_03	MW02-091803	MW-02-121803	MW-02
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/22/03	07/22/03	09/18/03	12/18/03	07/22/04
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)				
Dissolved Metals							
Iron	UG/L	300	30,500	30,500	60,900 J	69,300	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	307	283	839	769	238
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	4.1	3.8	11.5	11.9	NA
Nitrogen, Kjeldahl, Total	MG/L	-	6.6	6.1	17.1	16.9	NA
Nitrogen, Nitrate	MG/L	10	0.1 U	0.1	0.1 U	0.1 U	NA
Nitrogen, Nitrite	MG/L	1	0.1 U	0.1 U	0.1 U	0.1 U	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	32.3	32.5	4.80	5.0 U	15.2
Sulfide	MG/L	0.05	NA	NA	NA	NA	1.0 U
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	25.7	28.0	49.3	6.3	NA
Ferric Iron (lab)	MG/L	-	4.4	2.9	48.3	62.7	NA
Fluoride	MG/L	1.5	0.37	0.39	0.3	0.31	0.294

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			DUP-7_22_03	MW02-7_22_03	MW02-091803	MW-02-121803	MW-02
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/22/03	07/22/03	09/18/03	12/18/03	07/22/04
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)				
Miscellaneous Parameters							
TPH	MG/L	-	5 U	5 U	NA	5 U	NA
Oil & Grease	MG/L	-	NA	NA	5 U	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	NA	0.26	0.53	0 U	0.91
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	NA	-190	-99	-108	-133
pH	S.U.	-	NA	NA	NA	NA	NA
Specific Conductance	MS/CM	-	NA	1.65	3.17	3.28	2.34
Temperature	DEG C	-	NA	NA	NA	NA	NA
Turbidity	NTU	-	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect UJ - Estimated quantitation limit. NJ - Analyte is reported as tentatively identified compound at an estimated concentration.
J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data rejected.
S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

Advanced Selection: amk-temp
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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			MW-02	MW-02V06N	MW-02V15N	20061117MW02VISN	20070207MW-02V06N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/31/05	12/20/05	08/14/06	11/17/06	02/07/07
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	120	18	200	21	84
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect UJ - Estimated quantitation limit. NJ - Analyte is reported as tentatively identified compound at an estimated concentration.
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S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalvents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			MW-02	MW-02V06N	MW-02V15N	20061117MW02VISN	20070207MW-02V06N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/31/05	12/20/05	08/14/06	11/17/06	02/07/07
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1,200	110	890	100	800
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	86 J	15	110	10	95
Dissolved Gases							
Ethane	UG/L	-	100 U	NA	NA	NA	NA
Ethene	UG/L	-	100 U	NA	NA	NA	NA
Methane	UG/L	-	2,000	5,800	5,500	4,300	6,300
Total Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Concentration Exceeds Criteria

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Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			MW-02	MW-02V06N	MW-02V15N	20061117MW02VISN	20070207MW-02V06N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/31/05	12/20/05	08/14/06	11/17/06	02/07/07
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	25.2	5.0 U	27.1	5.0 U	15.9
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalvents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			MW-02	MW-02V06N	MW-02V15N	20061117MW02VISN	20070207MW-02V06N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/31/05	12/20/05	08/14/06	11/17/06	02/07/07
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0 U	0 U	4.92	NA	1.56
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-140	-137	-144	NA	-120
pH	S.U.	-	NA	NA	NA	NA	NA
Specific Conductance	MS/CM	-	1.19	2.51	1.55	NA	1.77
Temperature	DEG C	-	NA	NA	NA	NA	NA
Turbidity	NTU	-	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			20070731MW-02V15N	20080228MW02V15N	20080812MW02V10N	20090218MW-02V10N	20091013MW-02V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/31/07	02/28/08	08/12/08	02/18/09	10/13/09
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	61	120 J	160	81 J	300
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			20070731MW-02V15N	20080228MW02V15N	20080812MW02V10N	20090218MW-02V10N	20091013MW-02V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/31/07	02/28/08	08/12/08	02/18/09	10/13/09
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	290	830 J	700	1,300	1,200 D
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	40	72	38 J	34 J	51
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	2,900	6,400	6,200	8,000	6,100
Total Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			20070731MW-02V15N	20080228MW02V15N	20080812MW02V10N	20090218MW-02V10N	20091013MW-02V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/31/07	02/28/08	08/12/08	02/18/09	10/13/09
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	27.6	23.2	47.9	35.2 J	36.9
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			20070731MW-02V15N	20080228MW02V15N	20080812MW02V10N	20090218MW-02V10N	20091013MW-02V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/31/07	02/28/08	08/12/08	02/18/09	10/13/09
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0.31	2.87	0 U	0 U	0.0
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-97.2	-131	-119	-154	-161
pH	S.U.	-	6.39	6.38	6.40	6.26	6.16
Specific Conductance	MS/CM	-	2.357	2.18	2.14	2.55	2.09
Temperature	DEG C	-	NA	10.5	18.9	11.23	18.88
Turbidity	NTU	-	NA	28	3	5	9.4

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
Printed: 11/3/2016 4:19:34 PM
[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			20100225MW-02V08N	20100624MW-02V08N	20101006MW-02V08N	20110406MW-02V08N	20110913MW02V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/25/10	06/24/10	10/06/10	04/06/11	09/13/11
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	92 J	240	180	110 J	180
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			20100225MW-02V08N	20100624MW-02V08N	20101006MW-02V08N	20110406MW-02V08N	20110913MW02V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/25/10	06/24/10	10/06/10	04/06/11	09/13/11
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	76 J	670	580	920	490
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	6.1	37	26	33 J	26
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	7,500	8,400	6,200	10,000	5,300
Total Metals							
Iron	UG/L	300	NA	NA	NA	NA	60,400

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			20100225MW-02V08N	20100624MW-02V08N	20101006MW-02V08N	20110406MW-02V08N	20110913MW02V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/25/10	06/24/10	10/06/10	04/06/11	09/13/11
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	361
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	1.79
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	726
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	NA	0.1 U
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	5 U	38.9	36.9 J	26.6	5 U
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	19.1
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			20100225MW-02V08N	20100624MW-02V08N	20101006MW-02V08N	20110406MW-02V08N	20110913MW02V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/25/10	06/24/10	10/06/10	04/06/11	09/13/11
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0.0	0.64	6.21	0.0	0.0
Ferrous Iron	MG/L	-	NA	NA	NA	NA	50.6
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	9.8
Oxidation-Reduction Potential	mV	-	-147	-136	-107	-97	-115
pH	S.U.	-	6.57	8.91	6.76	6.36	6.80
Specific Conductance	MS/CM	-	4.48	1.70	1.91	3.34	3.24
Temperature	DEG C	-	9.33	16.71	19.45	10.98	22.1
Turbidity	NTU	-	0.0	3.0	11.9	3.9	0.1

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			20120411MW-02V08N	20120924MW-02V10N	20121022MW-02V10N	MW-02	20121129MW-02V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/11/12	09/24/12	10/22/12	10/31/12	11/29/12
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	140 J	98	NA	NA	380
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			20120411MW-02V08N	20120924MW-02V10N	20121022MW-02V10N	MW-02	20121129MW-02V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/11/12	09/24/12	10/22/12	10/31/12	11/29/12
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1,200 J	650	NA	NA	65
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	57	26	NA	NA	29
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	8,100	4,000	NA	NA	5,600
Total Metals							
Iron	UG/L	300	NA	32,900	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			20120411MW-02V08N	20120924MW-02V10N	20121022MW-02V10N	MW-02	20121129MW-02V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/11/12	09/24/12	10/22/12	10/31/12	11/29/12
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	245	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	245	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	5.0 U	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	5.0 U	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	100	NA	NA	2,000
Dehalobacter	GC/mL	-	NA	5	NA	NA	40,000
Hardness (as CaCO3)	MG/L	-	NA	388	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	0.10 U	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	51.8	50.8	NA	NA	2.2 U
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	8.4	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			20120411MW-02V08N	20120924MW-02V10N	20121022MW-02V10N	MW-02	20121129MW-02V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/11/12	09/24/12	10/22/12	10/31/12	11/29/12
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0.0	0.0	0.42	0.47	0.78
Ferrous Iron	MG/L	-	NA	9.0	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-44	-78	-119	-82	-116
pH	S.U.	-	6.56	6.62	6.38	6.35	6.40
Specific Conductance	MS/CM	-	1.86	1.69	2.53	2.52	2.39
Temperature	DEG C	-	13.45	24.07	19.21	19.42	14.75
Turbidity	NTU	-	0.0	0.0	0.0	9.3	0.0

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
Printed: 11/3/2016 4:19:35 PM
[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			20130115MW-02V10N	20130219MW-02V10N	20130409MW-02V09ED	20130409MW-02V09N	20130711MW-02V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			01/15/13	02/19/13	04/09/13	04/09/13	07/11/13
Parameter	Units	Criteria*			Field Duplicate (1-1)		
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	400	330 J	400 J	280 J	120
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Concentration Exceeds Criteria

U - Non-Detect UJ - Estimated quantitation limit. NJ - Analyte is reported as tentatively identified compound at an estimated concentration.
J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data rejected.
S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			20130115MW-02V10N	20130219MW-02V10N	20130409MW-02V09FD	20130409MW-02V09N	20130711MW-02V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			01/15/13	02/19/13	04/09/13	04/09/13	07/11/13
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	28	18	12	11	1.0 UJ
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	52	30 J	11	11	1.0 U
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	8,000	8,000	9,600	9,000	7,700
Total Metals							
Iron	UG/L	300	NA	NA	56,600	58,100	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			20130115MW-02V10N	20130219MW-02V10N	20130409MW-02V09FD	20130409MW-02V09N	20130711MW-02V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			01/15/13	02/19/13	04/09/13	04/09/13	07/11/13
Parameter	Units	Criteria*			Field Duplicate (1-1)		
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	510	249	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	510	249	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	5.0 U	5.0 U	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	5.0 U	5.0 U	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	2,000	200	NA	60	1,000
Dehalobacter	GC/mL	-	30,000	2,000	NA	1,000	6,000 J
Hardness (as CaCO3)	MG/L	-	NA	NA	673	653	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	0.10 UJ	0.10 UJ	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	14.4	13 J	9.2	19.9	5.0 U
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	31.1	31.1	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Concentration Exceeds Criteria

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			20130115MW-02V10N	20130219MW-02V10N	20130409MW-02V09FD	20130409MW-02V09N	20130711MW-02V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			01/15/13	02/19/13	04/09/13	04/09/13	07/11/13
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	1 U	NA	29.3 J	NA
Formic Acid	MG/L	-	NA	1 U	NA	1.0 U	NA
Lactic Acid	MG/L	-	NA	1 U	NA	1.0 U	NA
n-Butyric Acid	MG/L	-	NA	0.19 J	NA	1.0 U	NA
Propionic Acid	MG/L	-	NA	1 U	NA	1.0 U	NA
Pyruvic Acid	MG/L	-	NA	1 U	NA	4.4	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	1.36	4.57	NA	0.65	3.32
Ferrous Iron	MG/L	-	NA	NA	NA	44.3	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-121	-140	NA	-116	-165
pH	S.U.	-	6.58	6.82	NA	6.27	6.61
Specific Conductance	MS/CM	-	2.43	2.61	NA	8.18	2.60
Temperature	DEG C	-	13.05	10.18	NA	13.29	19.29
Turbidity	NTU	-	0.0	0.0	NA	0.0	0.0

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			20130807MW-02V09N	20130903MW-02V09N	20131022MW-02V09FD	20131022MW-02V09N	20140416MW-02V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/07/13	09/03/13	10/22/13	10/22/13	04/16/14
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	66 J	42	64	61	210
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			20130807MW-02V09N	20130903MW-02V09N	20131022MW-02V09FD	20131022MW-02V09N	20140416MW-02V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/07/13	09/03/13	10/22/13	10/22/13	04/16/14
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1.0 U	1.0 U	1.0 U	1.0 U	3.1
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	1.0 U	1.0 U	1.0 U	1.0 U	10
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	11,000	14,000	9,600	13,000	12,000
Total Metals							
Iron	UG/L	300	NA	NA	77,200	78,400	69,900

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			20130807MW-02V09N	20130903MW-02V09N	20131022MW-02V09FD	20131022MW-02V09N	20140416MW-02V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/07/13	09/03/13	10/22/13	10/22/13	04/16/14
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	230	233	456
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	456
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	5.0 U
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	5.0 U
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	800 J	50 J	NA	30	NA
Dehalobacter	GC/mL	-	10,000	3,000	NA	500	70
Hardness (as CaCO3)	MG/L	-	NA	NA	69.3	131	455
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	0.10 UJ	0.28 J	0.10 U
Nitrogen, Nitrite	MG/L	1	NA	NA	0.078 J	0.036 J	0.049 J
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	5.0 U	2.5 J	3.9 J	3.9 J	6.6
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	9.5	9.5	12.8
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			20130807MW-02V09N	20130903MW-02V09N	20131022MW-02V09FD	20131022MW-02V09N	20140416MW-02V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/07/13	09/03/13	10/22/13	10/22/13	04/16/14
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0.98	1.64	NA	0.35	9.11
Ferrous Iron	MG/L	-	NA	NA	NA	46.5	3.5
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-146	-134	NA	-125	-149
pH	S.U.	-	6.42	6.10	NA	6.41	7.04
Specific Conductance	MS/CM	-	2.22	2.06	NA	1.76	2.49
Temperature	DEG C	-	18.82	20.14	NA	19.68	9.66
Turbidity	NTU	-	0.0	1.0	NA	1.2	0

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			DUP04162014	20140701MW-02V09N	Dup20140701	20141027MW-02V09N	20141124MW-02V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/16/14	07/01/14	07/01/14	10/27/14	11/24/14
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)		Field Duplicate (1-1)		
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	190	480	380	270 J	66
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Concentration Exceeds Criteria

U - Non-Detect UJ - Estimated quantitation limit. NJ - Analyte is reported as tentatively identified compound at an estimated concentration.
J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data rejected.
S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			DUP04162014	20140701MW-02V09N	Dup20140701	20141027MW-02V09N	20141124MW-02V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/16/14	07/01/14	07/01/14	10/27/14	11/24/14
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)		Field Duplicate (1-1)		
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	2.9	83	78	0.19 J	0.14 J
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	11	62	50	3.3	1.5
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	13,000	12,000	8,000	2,600	4,500
Total Metals							
Iron	UG/L	300	70,500	73,100	74,300	94,800	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Concentration Exceeds Criteria

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S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			DUP04162014	20140701MW-02V09N	Dup20140701	20141027MW-02V09N	20141124MW-02V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/16/14	07/01/14	07/01/14	10/27/14	11/24/14
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)		Field Duplicate (1-1)		
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	456	254	292	367	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	456	254	292	367	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	NA
Alkalinity, Hydroxide	MG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	5	2 J
Dehalobacter	GC/mL	-	NA	100	NA	9,000	2,000
Hardness (as CaCO3)	MG/L	-	455	436	356	455	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	0.10 U	0.10 U	0.11	1.0 U	NA
Nitrogen, Nitrite	MG/L	1	0.043 J	0.038 J	0.049 J	0.10 U	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	6.5	10.8	10.5	10.8	10.2
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	12.7	9.2	10	81.0	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			DUP04162014	20140701MW-02V09N	Dup20140701	20141027MW-02V09N	20141124MW-02V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/16/14	07/01/14	07/01/14	10/27/14	11/24/14
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)		Field Duplicate (1-1)		
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	NA	2.38	NA	2.45	1.72
Ferrous Iron	MG/L	-	NA	3.0	NA	7.8	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	NA	-85	NA	-134	-143
pH	S.U.	-	NA	6.49	NA	6.50	6.85
Specific Conductance	MS/CM	-	NA	2.13	NA	2.48	2.59
Temperature	DEG C	-	NA	15.87	NA	17.27	17.18
Turbidity	NTU	-	NA	2.7	NA	0.7	0.0

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
Printed: 11/3/2016 4:19:37 PM
[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			20141222MW-02V09N	20150304MW-02	20150422MW-02	20151008MW-02	20160427MW-02
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/22/14	03/04/15	04/22/15	10/08/15	04/27/16
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	56	300	310	260	940
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			20141222MW-02V09N	20150304MW-02	20150422MW-02	20151008MW-02	20160427MW-02
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/22/14	03/04/15	04/22/15	10/08/15	04/27/16
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1.0 U	45	24	21	960 J
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	1.7	67	22	7.7	220
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	2,900	NA	6,200	12,000	2,600
Total Metals							
Iron	UG/L	300	NA	NA	60,500	61,800	63,100

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			20141222MW-02V09N	20150304MW-02	20150422MW-02	20151008MW-02	20160427MW-02
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/22/14	03/04/15	04/22/15	10/08/15	04/27/16
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	432	292	261
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	432	292	261
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	5.0 U	5.0 U	5.0 U
Alkalinity, Hydroxide	MG/L	-	NA	NA	5.0 U	5.0 U	5.0 U
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	1 J	NA	20 J	1 J	40
Dehalobacter	GC/mL	-	NA	90	200	300	80 J
Hardness (as CaCO3)	MG/L	-	NA	NA	525	424	400
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	0.10 U	2.0 U	0.10 U
Nitrogen, Nitrite	MG/L	1	NA	NA	0.10 U	0.034 J	0.085 J
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	0.050 U	NA	NA
Sulfate	MG/L	250	4.3 J	NA	17.3	25.6	41.3
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	13.8	6.2	6.0
Ferrous Iron (lab)	MG/L	-	NA	NA	12.5 J	2.5 J	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			20141222MW-02V09N	20150304MW-02	20150422MW-02	20151008MW-02	20160427MW-02
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/22/14	03/04/15	04/22/15	10/08/15	04/27/16
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	1.01	0.58	0.93	0.38	0.66
Ferrous Iron	MG/L	-	NA	NA	5.5	7.0	4.5
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-127	-114	-135	-131	-102
pH	S.U.	-	6.78	6.80	6.60	5.36	6.14
Specific Conductance	MS/CM	-	2.60	2.53	2.86	2.52	2.71
Temperature	DEG C	-	13.95	7.98	9.86	19.70	12.03
Turbidity	NTU	-	0.0	0.0	8.0	0.0	7.2

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-03	MW-03	MW-03	MW-03
Sample ID			20161005MW-02	MW03_52103	MW03	DUP-91703	MW03-091703
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/05/16	05/21/03	07/23/03	09/17/03	09/17/03
Parameter	Units	Criteria*				Field Duplicate (1-1)	
Volatiles							
Acetone	UG/L	50	NA	250 U	78	110	110
Benzene	UG/L	1	NA	250 U	2.3	2.2	1.8
Bromodichloromethane	UG/L	50	NA	50 U	1.0 U	1.0 U	1.0 U
Bromoform	UG/L	50	NA	200 U	4.0 U	4.0 U	4.0 U
Bromomethane	UG/L	5	NA	250 U	5.0 U	5.0 U	5.0 U
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	R	130 J	69 J	65 J
Carbon Disulfide	UG/L	60	NA	250 U	5.0 U	5.0 U	5.0 U
Carbon Tetrachloride	UG/L	5	NA	100 U	2.0 U	2.0 U	2.0 U
Chlorobenzene	UG/L	5	NA	250 U	5.0 U	5.0 U	5.0 U
Chloroethane	UG/L	5	NA	250 U	5.0 U	5.0 U	5.0 U
Chloroform	UG/L	7	NA	250 U	5.0 U	5.0 U	5.0 U
Chloromethane	UG/L	5	NA	250 U	5.0 U	5.0 U	5.0 U
Chlorotrifluoroethene (Freon-1113)	UG/L	5	1,000	0 U	7.0 NJ	6.2 NJ	0 U
Dibromochloromethane	UG/L	50	NA	250 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	UG/L	5	NA	250 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	UG/L	0.6	NA	100 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethene	UG/L	5	NA	33 J	2.0 U	2.0 U	2.0 U
cis-1,2-Dichloroethene	UG/L	5	NA	250 U	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	UG/L	5	NA	250 U	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	UG/L	1	NA	50 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	UG/L	0.4	NA	250 U	5.0 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	UG/L	0.4	NA	250 U	5.0 U	5.0 U	5.0 U

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-03	MW-03	MW-03	MW-03
Sample ID			20161005MW-02	MW03_52103	MW03	DUP-91703	MW03-091703
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/05/16	05/21/03	07/23/03	09/17/03	09/17/03
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)	
Volatiles							
Ethylbenzene	UG/L	5	NA	200 U	0.3 J	4.0 U	4.0 U
2-Hexanone	UG/L	50	NA	250 U	5.0 U	19	16
4-Methyl-2-Pentanone	UG/L	-	NA	250 U	5.0 U	11	11
Methylene Chloride	UG/L	5	NA	150 U	3.0 U	3.0 U	3.0 U
Styrene	UG/L	5	NA	250 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	UG/L	5	NA	50 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	UG/L	5	NA	50 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	UG/L	5	NA	250 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	UG/L	1	NA	150 U	3.0 U	3.0 U	3.0 U
Trichloroethene	UG/L	5	NA	50 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	940	5,800	68	26	16
Toluene	UG/L	5	NA	250 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride	UG/L	2	NA	250 U	5.0 U	5.0 U	5.0 U
Xylene (total)	UG/L	5	NA	250 U	1.1 J	5.0 U	5.0 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	37	78 J	43	180	110
Dissolved Gases							
Ethane	UG/L	-	NA	5.0 U	5 U	250 U	250 U
Ethene	UG/L	-	NA	5.0 U	5 U	250 U	250 U
Methane	UG/L	-	2,400	86	56	2,400	2,500
Total Metals							
Iron	UG/L	300	53,800	1,170	150,000	174,000 J	178,000 J

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-03	MW-03	MW-03	MW-03
Sample ID			20161005MW-02	MW03_52103	MW03	DUP-91703	MW03-091703
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/05/16	05/21/03	07/23/03	09/17/03	09/17/03
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)	
Dissolved Metals							
Iron	UG/L	300	NA	267	152,000	187,000 J	186,000 J
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	250	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	250	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	5.0 U	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	5.0 U	NA	NA	NA	NA
Chloride	MG/L	250	NA	113	143	99.2 J	91.5 J
Dehalococcoides ethenogenes	CEQ/mL	-	90	NA	NA	NA	NA
Dehalobacter	GC/mL	-	30	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	470	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	0.36	2.7	0.86	0.95
Nitrogen, Kjeldahl, Total	MG/L	-	NA	1.3	10.8	4.5	4.4
Nitrogen, Nitrate	MG/L	10	0.28	2	NA	0.1 U	0.1 U
Nitrogen, Nitrite	MG/L	1	0.037 J	0.1 U	NA	0.1 U	0.1 U
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	0.1 UJ	NA	NA
Sulfate	MG/L	250	27.2	32.7	26.9	5.0 U	5.0 U
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	6.2	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	0.25 J	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	0.5	3.7	25.5	27.9
Ferric Iron (lab)	MG/L	-	NA	0.67	146	67.0	93.0
Fluoride	MG/L	1.5	NA	0.28	0.44	0.27	0.2

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-03	MW-03	MW-03	MW-03
Sample ID			20161005MW-02	MW03_52103	MW03	DUP-91703	MW03-091703
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/05/16	05/21/03	07/23/03	09/17/03	09/17/03
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)	
Miscellaneous Parameters							
TPH	MG/L	-	NA	5 U	5 U	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	R	R
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0.40	0.58	0 U	NA	0.01
Ferrous Iron	MG/L	-	11	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-151	40	-103	NA	-90
pH	S.U.	-	6.49	NA	NA	NA	NA
Specific Conductance	MS/CM	-	2.69	0.638	4.35	NA	1.64
Temperature	DEG C	-	18.91	NA	NA	NA	NA
Turbidity	NTU	-	0.1	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalvents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			DUP1_121703	MW-03_121703	MW-03	MW-03	MW-03VION
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/17/03	12/17/03	07/23/04	05/31/05	12/20/05
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)				
Volatiles							
Acetone	UG/L	50	130 J	120 J	NA	NA	NA
Benzene	UG/L	1	10 U	10 U	NA	NA	NA
Bromodichloromethane	UG/L	50	2.0 U	2 U	NA	NA	NA
Bromoform	UG/L	50	8.0 U	8 U	NA	NA	NA
Bromomethane	UG/L	5	10 U	10 U	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	39 J	38 J	NA	NA	NA
Carbon Disulfide	UG/L	60	10 U	10 U	NA	NA	NA
Carbon Tetrachloride	UG/L	5	4.0 U	4 U	NA	NA	NA
Chlorobenzene	UG/L	5	10 U	10 U	NA	NA	NA
Chloroethane	UG/L	5	10 U	10 U	NA	NA	NA
Chloroform	UG/L	7	10 U	10 U	NA	NA	NA
Chloromethane	UG/L	5	10 U	10 U	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	0 U	0 U	68 J	83	2.0 J
Dibromochloromethane	UG/L	50	10 U	10 U	NA	NA	NA
1,1-Dichloroethane	UG/L	5	10 U	10 U	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	4.0 U	4 U	NA	NA	NA
1,1-Dichloroethene	UG/L	5	4.0 U	4 U	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	10 U	10 U	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	10 U	10 U	NA	NA	NA
1,2-Dichloropropane	UG/L	1	2.0 U	2 U	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	10 U	10 U	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	10 U	10 U	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			DUP1_121703	MW-03_121703	MW-03	MW-03	MW-03VION
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/17/03	12/17/03	07/23/04	05/31/05	12/20/05
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)				
Volatiles							
Ethylbenzene	UG/L	5	8.0 U	8 U	NA	NA	NA
2-Hexanone	UG/L	50	10 U	10 U	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	10 U	10 U	NA	NA	NA
Methylene Chloride	UG/L	5	6.0 U	6 U	NA	NA	NA
Styrene	UG/L	5	10 U	10 U	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	2.0 U	2 U	NA	NA	NA
Tetrachloroethene	UG/L	5	4.9	4.6	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	10 U	10 U	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	6.0 U	6 U	NA	NA	NA
Trichloroethene	UG/L	5	2.0 U	2 U	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	150	150	4,900 J	2.0 J	10 U
Toluene	UG/L	5	10 U	10 U	NA	NA	NA
Vinyl Chloride	UG/L	2	10 U	10 U	NA	NA	NA
Xylene (total)	UG/L	5	10 U	10 U	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	170	160	3,900	14	1.0 J
Dissolved Gases							
Ethane	UG/L	-	500 U	250 U	NA	500 U	NA
Ethene	UG/L	-	500 U	250 U	NA	500 U	NA
Methane	UG/L	-	7,200	4,900	2,700	6,300	10,000
Total Metals							
Iron	UG/L	300	156,000	164,000	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			DUP1_121703	MW-03_121703	MW-03	MW-03	MW-03VION
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/17/03	12/17/03	07/23/04	05/31/05	12/20/05
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)				
Dissolved Metals							
Iron	UG/L	300	167,000	176,000	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	224	192	71.7	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	1.4	1.2	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	4.0	4.0	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	0.1 U	0.1 U	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	0.1 U	0.1 U	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sulfide	MG/L	0.05	NA	NA	1.0 U	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	23.5	30.0	NA	NA	NA
Ferric Iron (lab)	MG/L	-	132	134	NA	NA	NA
Fluoride	MG/L	1.5	0.22	0.25	0.397	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			DUP1_121703	MW-03_121703	MW-03	MW-03	MW-03VION
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/17/03	12/17/03	07/23/04	05/31/05	12/20/05
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)				
Miscellaneous Parameters							
TPH	MG/L	-	5.38 U	5.21 U	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	NA	0.35	1.05	1.24	0 U
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	NA	-59	-143	-133	-151
pH	S.U.	-	NA	NA	NA	NA	NA
Specific Conductance	MS/CM	-	NA	1.99	2.40	3.19	1.20
Temperature	DEG C	-	NA	NA	NA	NA	NA
Turbidity	NTU	-	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			MW-03V15N	20070207MW-03V10N	20070731MW-03V10N	20080228MW03V10N	20080812MW03V10FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/14/06	02/07/07	07/31/07	02/28/08	08/12/08
Parameter	**Units**	**Criteria***					Field Duplicate (1-1)
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	51	39	54	13 J	10
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect UJ - Estimated quantitation limit. NJ - Analyte is reported as tentatively identified compound at an estimated concentration.
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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			MW-03V15N	20070207MW-03V10N	20070731MW-03V10N	20080228MW03V10N	20080812MW03V10FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/14/06	02/07/07	07/31/07	02/28/08	08/12/08
Parameter	**Units**	**Criteria***					Field Duplicate (1-1)
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	10 U	10	2.0 J	0.5 J	10 U
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	0.8 J	48	7.0 J	4.0 J	1.0 J
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	7,400	15,000	4,500	18,000	10,000
Total Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

Advanced Selection: amk-temp
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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			MW-03V15N	20070207MW-03V10N	20070731MW-03V10N	20080228MW03V10N	20080812MW03V10FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/14/06	02/07/07	07/31/07	02/28/08	08/12/08
Parameter	**Units**	**Criteria***					Field Duplicate (1-1)
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	5.0 U	7.80	38.4	14.1	30.0
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			MW-03V15N	20070207MW-03V10N	20070731MW-03V10N	20080228MW03V10N	20080812MW03V10FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/14/06	02/07/07	07/31/07	02/28/08	08/12/08
Parameter	**Units**	**Criteria***					Field Duplicate (1-1)
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	5.36	2.44	0.22	2.94	NA
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-123	-116	-79.7	-123	NA
pH	S.U.	-	NA	NA	6.15	6.15	NA
Specific Conductance	MS/CM	-	0.946	0.91	1.309	1.36	NA
Temperature	DEG C	-	NA	NA	NA	11.6	NA
Turbidity	NTU	-	NA	NA	NA	41	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Concentration Exceeds Criteria

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Advanced Selection: amk-temp
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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20080812MW03V10N	20090218MW-03V10N	20091013MW-03V10FD	20091013MW-03V10N	20100226MW-03V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/12/08	02/18/09	10/13/09	10/13/09	02/26/10
Parameter	Units	Criteria*			Field Duplicate (1-1)		
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	10	38	20	19	17 J
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20080812MW03V10N	20090218MW-03V10N	20091013MW-03V10FD	20091013MW-03V10N	20100226MW-03V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/12/08	02/18/09	10/13/09	10/13/09	02/26/10
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	10 U	5.0 J	0.92 J	0.82 J	1 UJ
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	1.0 J	40	2.1	1.9	1 U
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	8,400	13,000	5,300	4,800	13,000
Total Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Concentration Exceeds Criteria

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20080812MW03V10N	20090218MW-03V10N	20091013MW-03V10FD	20091013MW-03V10N	20100226MW-03V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/12/08	02/18/09	10/13/09	10/13/09	02/26/10
Parameter	Units	Criteria*			Field Duplicate (1-1)		
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	28.1	50.7 J	4.6 J	8.7	11.6
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Concentration Exceeds Criteria

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20080812MW03V10N	20090218MW-03V10N	20091013MW-03V10FD	20091013MW-03V10N	20100226MW-03V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/12/08	02/18/09	10/13/09	10/13/09	02/26/10
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0 U	0 U	NA	0.0	0.0
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-149	-185	NA	-103	-138
pH	S.U.	-	6.36	6.06	NA	5.87	6.32
Specific Conductance	MS/CM	-	1.69	2.08	NA	1.85	3.39
Temperature	DEG C	-	17.8	12.87	NA	18.68	8.95
Turbidity	NTU	-	2	5	NA	8.7	94

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20100624MW-03V09N	20101006MW-03V09N	20110406MW-03V09N	20110913MW03V09FD	20110913MW03V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/24/10	10/06/10	04/06/11	09/13/11	09/13/11
Parameter	Units	Criteria*				Field Duplicate (1-1)	
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	26	4.6	110 J	69	82
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data rejected.
S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20100624MW-03V09N	20101006MW-03V09N	20110406MW-03V09N	20110913MW03V09FD	20110913MW03V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/24/10	10/06/10	04/06/11	09/13/11	09/13/11
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)	
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1 U	1 U	32	4.2	5.4
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	0.5 J	1 U	99 J	8.3	9.4
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	6,000	7,400	18,000	12,000	15,000
Total Metals							
Iron	UG/L	300	NA	NA	NA	35,300	35,700

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20100624MW-03V09N	20101006MW-03V09N	20110406MW-03V09N	20110913MW03V09FD	20110913MW03V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/24/10	10/06/10	04/06/11	09/13/11	09/13/11
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)	
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	596	596
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	1,820	3,780
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	520	510
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	0.1 U	0.1 U
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	15.8	5.1 J	34.0	19	18.2
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	27.1	26.7
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20100624MW-03V09N	20101006MW-03V09N	20110406MW-03V09N	20110913MW03V09FD	20110913MW03V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/24/10	10/06/10	04/06/11	09/13/11	09/13/11
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)	
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0.85	0.0	0.0	NA	0.0
Ferrous Iron	MG/L	-	NA	NA	NA	29.8	29.8
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	5.5	5.9
Oxidation-Reduction Potential	mV	-	-170	-116	-115	NA	-124
pH	S.U.	-	9.28	6.73	6.38	NA	6.85
Specific Conductance	MS/CM	-	1.50	1.68	1.55	NA	1.99
Temperature	DEG C	-	16.51	20.19	11.90	NA	20.7
Turbidity	NTU	-	5.1	6.3	3.6	NA	21.8

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

Advanced Selection: amk-temp
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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20120411MW-03V09N	20120924MW-03V09N	20130409MW-03V10N	20131022MW-03V12N	20140416MW-03V12N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/11/12	09/24/12	04/09/13	10/22/13	04/16/14
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	150 J	130	160 J	58	96
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20120411MW-03V09N	20120924MW-03V09N	20130409MW-03V10N	20131022MW-03V12N	20140416MW-03V12N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/11/12	09/24/12	04/09/13	10/22/13	04/16/14
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	20 J	1.1	27	1.0 U	100
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	36	3.2	30	1.0 U	62
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	15,000	7,600	11,000	11,000	14,000
Total Metals							
Iron	UG/L	300	NA	21,800	27,900	29,400	19,700

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

Advanced Selection: amk-temp
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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20120411MW-03V09N	20120924MW-03V09N	20130409MW-03V10N	20131022MW-03V12N	20140416MW-03V12N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/11/12	09/24/12	04/09/13	10/22/13	04/16/14
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	292	367	237	220
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	292	367	NA	220
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	5.0 U	5.0 U	NA	5.0 U
Alkalinity, Hydroxide	MG/L	-	NA	5.0 U	5.0 U	NA	5.0 U
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	700	40	100	10
Hardness (as CaCO3)	MG/L	-	NA	248	396	65.3	249
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	0.10 U	0.21 J	0.23 J	0.40
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	0.025 J	0.038 J
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	63.1	45.4	39.4	40.7	43.0
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	7.2	8.7	5.6	6.3
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20120411MW-03V09N	20120924MW-03V09N	20130409MW-03V10N	20131022MW-03V12N	20140416MW-03V12N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/11/12	09/24/12	04/09/13	10/22/13	04/16/14
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0.0	0.0	2.23	0.63	4.86
Ferrous Iron	MG/L	-	NA	3.5	26.0	16.9	5.5
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-63	-84	-93	-119	-101
pH	S.U.	-	6.64	6.64	6.39	6.21	6.85
Specific Conductance	MS/CM	-	1.02	0.697	3.37	1.35	1.12
Temperature	DEG C	-	13.35	23.57	15.42	19.3	10.69
Turbidity	NTU	-	0.0	0.0	17.9	0.4	0

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20140701MW-03V12N	20141027MW-03V12N	20141124MW-03V12N	20141222MW-03V12N	20150304MW-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/01/14	10/27/14	11/24/14	12/22/14	03/04/15
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	170	96	86	150	110
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Concentration Exceeds Criteria

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S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20140701MW-03V12N	20141027MW-03V12N	20141124MW-03V12N	20141222MW-03V12N	20150304MW-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/01/14	10/27/14	11/24/14	12/22/14	03/04/15
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	120	0.81 J	1.0 U	1.0 U	18
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	100	1.3	1.0 U	1.7	17
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	15,000	4,500	3,800	4,600	NA
Total Metals							
Iron	UG/L	300	26,800	26,600	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
Printed: 11/3/2016 4:19:41 PM
[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20140701MW-03V12N	20141027MW-03V12N	20141124MW-03V12N	20141222MW-03V12N	20150304MW-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/01/14	10/27/14	11/24/14	12/22/14	03/04/15
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	253	329	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	253	329	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	5.0 U	5.0 U	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	5.0 U	5.0 U	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	500	NA	500	20	NA
Dehalobacter	GC/mL	-	20	50	10	NA	3
Hardness (as CaCO3)	MG/L	-	337	386	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	0.10 U	1.0 U	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	0.017 J	0.10 U	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	52.0	25.8	23.0	33.8	NA
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	7.0	27.1	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalvents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20140701MW-03V12N	20141027MW-03V12N	20141124MW-03V12N	20141222MW-03V12N	20150304MW-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/01/14	10/27/14	11/24/14	12/22/14	03/04/15
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	1.47	0.45	1.30	0.87	1.24
Ferrous Iron	MG/L	-	4.5	8.3	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-72	-107	-104	-115	-82
pH	S.U.	-	6.69	6.54	6.68	6.58	6.84
Specific Conductance	MS/CM	-	1.26	1.72	1.28	1.38	1.82
Temperature	DEG C	-	19.59	17.99	17.52	14.88	8.58
Turbidity	NTU	-	5.4	0.2	0.0	0.0	0.0

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-04
Sample ID			20150422MW-03	20151008MW-03	20160427MW-03	20161005MW-03	MW04-5-20-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/22/15	10/08/15	04/27/16	10/05/16	05/20/03
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	5.0 U
Benzene	UG/L	1	NA	NA	NA	NA	5.0 U
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	1.0 U
Bromoform	UG/L	50	NA	NA	NA	NA	4.0 U
Bromomethane	UG/L	5	NA	NA	NA	NA	5.0 U
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	R
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	5.0 U
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	2.0 U
Chlorobenzene	UG/L	5	NA	NA	NA	NA	5.0 U
Chloroethane	UG/L	5	NA	NA	NA	NA	5.0 U
Chloroform	UG/L	7	NA	NA	NA	NA	5.0 U
Chloromethane	UG/L	5	NA	NA	NA	NA	5.0 U
Chlorotrifluoroethene (Freon-1113)	UG/L	5	120	140	180	290	0 U
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	5.0 U
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	5.0 U
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	2.0 U
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	2.0 U
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	5.0 U
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	5.0 U
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	1.0 U
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	5.0 U
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	5.0 U

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-04
Sample ID			20150422MW-03	20151008MW-03	20160427MW-03	20161005MW-03	MW04-5-20-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/22/15	10/08/15	04/27/16	10/05/16	05/20/03
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	4.0 U
2-Hexanone	UG/L	50	NA	NA	NA	NA	5.0 U
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	5.0 U
Methylene Chloride	UG/L	5	NA	NA	NA	NA	3.0 U
Styrene	UG/L	5	NA	NA	NA	NA	5.0 U
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	1.0 U
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	1.0 U
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	5.0 U
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	3.0 U
Trichloroethene	UG/L	5	NA	NA	NA	NA	1.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	25	0.52 J	42	11	5.0 U
Toluene	UG/L	5	NA	NA	NA	NA	5.0 U
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	5.0 U
Xylene (total)	UG/L	5	NA	NA	NA	NA	5.0 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	25	1.7	30	3.3	5.0 U
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	25 U
Ethene	UG/L	-	NA	NA	NA	NA	25 U
Methane	UG/L	-	4,000	10,000	2,100	2,300	380
Total Metals							
Iron	UG/L	300	19,600	29,500	23,700	22,200	18,400

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-04
Sample ID			20150422MW-03	20151008MW-03	20160427MW-03	20161005MW-03	MW04-5-20-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/22/15	10/08/15	04/27/16	10/05/16	05/20/03
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	18,500
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	196	279	313	297	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	196	279	313	297	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	NA
Alkalinity, Hydroxide	MG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	NA
Chloride	MG/L	250	NA	NA	NA	NA	238
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	7	2 J	4 J	10	NA
Hardness (as CaCO3)	MG/L	-	242	368	400	420	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	1.6
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	6.2
Nitrogen, Nitrate	MG/L	10	0.10 U	2.0 U	0.10 U	0.13	0.1 U
Nitrogen, Nitrite	MG/L	1	0.10 U	0.021 J	0.076 J	0.036 J	0.1 U
Nitrogen, Nitrate-Nitrite	MG/L	10	0.050 U	NA	NA	NA	NA
Sulfate	MG/L	250	32.5	48.2	78.2	56.1	5.0 U
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	5.1	7.1	7.6	5.8	NA
Ferrous Iron (lab)	MG/L	-	0.10 UJ	1.7 J	NA	0.35 J	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	17.6
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	0.76
Fluoride	MG/L	1.5	NA	NA	NA	NA	0.27

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-04
Sample ID			20150422MW-03	20151008MW-03	20160427MW-03	20161005MW-03	MW04-5-20-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/22/15	10/08/15	04/27/16	10/05/16	05/20/03
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	5 U
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0.65	0.39	0.54	0.32	0.54
Ferrous Iron	MG/L	-	6.0	6.5	6.5	5.5	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-100	-84	-88	-125	-115
pH	S.U.	-	6.69	5.27	6.31	6.52	NA
Specific Conductance	MS/CM	-	1.06	1.69	2.08	2.03	1.61
Temperature	DEG C	-	11.87	19.94	13.90	20.15	NA
Turbidity	NTU	-	1.7	0.0	4.5	0 U	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalvents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
Printed: 11/3/2016 4:19:42 PM
[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			MW-04_121703	Dup1	MW-04	MW-04	MW-04VION
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/17/03	07/22/04	07/22/04	05/31/05	12/20/05
Parameter	Units	Criteria*		Field Duplicate (1-1)			
Volatiles							
Acetone	UG/L	50	5.0 U	NA	NA	NA	NA
Benzene	UG/L	1	5.0 U	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	1.0 U	NA	NA	NA	NA
Bromoform	UG/L	50	4.0 U	NA	NA	NA	NA
Bromomethane	UG/L	5	5.0 U	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	R	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	5.0 U	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	2.0 U	NA	NA	NA	NA
Chlorobenzene	UG/L	5	5.0 U	NA	NA	NA	NA
Chloroethane	UG/L	5	5.0 U	NA	NA	NA	NA
Chloroform	UG/L	7	5.0 U	NA	NA	NA	NA
Chloromethane	UG/L	5	5.0 U	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	0 U	10 U	10 U	1.0 J	10 U
Dibromochloromethane	UG/L	50	5.0 U	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	5.0 U	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	2.0 U	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	2.0 U	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	5.0 U	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	5.0 U	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	1.0 U	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	5.0 U	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	5.0 U	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect UJ - Estimated quantitation limit. NJ - Analyte is reported as tentatively identified compound at an estimated concentration.
J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data rejected.
S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			MW-04_121703	Dup1	MW-04	MW-04	MW-04VION
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/17/03	07/22/04	07/22/04	05/31/05	12/20/05
Parameter	**Units**	**Criteria***		Field Duplicate (1-1)			
Volatiles							
Ethylbenzene	UG/L	5	4.0 U	NA	NA	NA	NA
2-Hexanone	UG/L	50	5.0 U	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	5.0 U	NA	NA	NA	NA
Methylene Chloride	UG/L	5	3.0 U	NA	NA	NA	NA
Styrene	UG/L	5	5.0 U	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	1.0 U	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	1.0 U	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	5.0 U	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	3.0 U	NA	NA	NA	NA
Trichloroethene	UG/L	5	1.0 U	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	5.0 U	10 UJ	0.7 J	10 U	10 U
Toluene	UG/L	5	5.0 U	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	5.0 U	NA	NA	NA	NA
Xylene (total)	UG/L	5	5.0 U	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	5.0 U	10 U	10 U	10 U	10 U
Dissolved Gases							
Ethane	UG/L	-	5.0 U	NA	NA	10 U	NA
Ethene	UG/L	-	5.0 U	NA	NA	10 U	NA
Methane	UG/L	-	35	69	99	190	400
Total Metals							
Iron	UG/L	300	3,640	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Concentration Exceeds Criteria

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			MW-04_121703	Dup1	MW-04	MW-04	MW-04VION
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/17/03	07/22/04	07/22/04	05/31/05	12/20/05
Parameter	**Units**	**Criteria***		Field Duplicate (1-1)			
Dissolved Metals							
Iron	UG/L	300	3,760	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	294	158	161	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	1.2	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	1.9	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	0.1 U	NA	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	0.1 U	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	9.40	10.8	10.8	14.2	6.66
Sulfide	MG/L	0.05	NA	1.0 U	1.0 U	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	2.2	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	1.3	NA	NA	NA	NA
Fluoride	MG/L	1.5	0.19	0.304	0.302	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

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Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			MW-04_121703	Dup1	MW-04	MW-04	MW-04VION
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/17/03	07/22/04	07/22/04	05/31/05	12/20/05
Parameter	**Units**	**Criteria***		Field Duplicate (1-1)			
Miscellaneous Parameters							
TPH	MG/L	-	5.38 U	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0 U	NA	0.82	0 U	0 U
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	0 U	NA	-136	-126	-161
pH	S.U.	-	NA	NA	NA	NA	NA
Specific Conductance	MS/CM	-	0.99	NA	1.05	1.85	1.47
Temperature	DEG C	-	NA	NA	NA	NA	NA
Turbidity	NTU	-	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Advanced Selection: amk-temp
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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			MW-04V15N	20070207MW-04V10N	20070801MW-04V10N	20080228MW04V10N	20080812MW04V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/14/06	02/07/07	08/01/07	02/28/08	08/12/08
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	0.7 J	0.6 J	10 U	1.0 J	10 U
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			MW-04V15N	20070207MW-04V10N	20070801MW-04V10N	20080228MW04V10N	20080812MW04V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/14/06	02/07/07	08/01/07	02/28/08	08/12/08
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	10 U	10 U	10 U	10 UJ	10 U
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	10 U	10 U	10 U	10 U	10 U
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	420	400	43	5,700	290
Total Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			MW-04V15N	20070207MW-04V10N	20070801MW-04V10N	20080228MW04V10N	20080812MW04V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/14/06	02/07/07	08/01/07	02/28/08	08/12/08
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	5.0 U	5.0 U	7.0	5 U	5 U
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			MW-04V15N	20070207MW-04V10N	20070801MW-04V10N	20080228MW04V10N	20080812MW04V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/14/06	02/07/07	08/01/07	02/28/08	08/12/08
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	4.97	4.73	0.41	2.91	0 U
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-154	-81	-79.2	-136	-126
pH	S.U.	-	NA	NA	6.59	6.45	6.65
Specific Conductance	MS/CM	-	1.14	0.804	1.241	1.16	0.531
Temperature	DEG C	-	NA	NA	NA	9.19	21.3
Turbidity	NTU	-	NA	NA	NA	9	2

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
Printed: 11/3/2016 4:19:43 PM
[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20090218MW-04V08FD	20090218MW-04V08N	20091013MW-04V08N	20100225MW04V08FD	20100225MW-04V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/18/09	02/18/09	10/13/09	02/25/10	02/25/10
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)			Field Duplicate (1-1)	
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	1.0 J	1.0 J	15	6.6 J	7.7 J
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20090218MW-04V08FD	20090218MW-04V08N	20091013MW-04V08N	20100225MW04V08FD	20100225MW-04V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/18/09	02/18/09	10/13/09	02/25/10	02/25/10
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)			Field Duplicate (1-1)	
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	10 U	10 U	1 U	1 UJ	1 UJ
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	10 U	10 U	1 U	1 U	1 U
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	1,600	1,600	3,100	5,200	5,100
Total Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Concentration Exceeds Criteria

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20090218MW-04V08FD	20090218MW-04V08N	20091013MW-04V08N	20100225MW04V08FD	20100225MW-04V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/18/09	02/18/09	10/13/09	02/25/10	02/25/10
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)			Field Duplicate (1-1)	
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	5 UJ	5 UJ	20.8	13	11.3
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20090218MW-04V08FD	20090218MW-04V08N	20091013MW-04V08N	20100225MW04V08FD	20100225MW-04V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/18/09	02/18/09	10/13/09	02/25/10	02/25/10
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)			Field Duplicate (1-1)	
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	NA	0 U	0.0	NA	0.0
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	NA	-158	-122	NA	-124
pH	S.U.	-	NA	6.33	6.43	NA	6.50
Specific Conductance	MS/CM	-	NA	1.75	1.83	NA	2.14
Temperature	DEG C	-	NA	9.36	19.37	NA	8.34
Turbidity	NTU	-	NA	4	4.6	NA	1.5

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20100624MW-04V08N	20101006MW-04V08N	20110406MW-04V08FD	20110406MW-04V08N	20110913MW04V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/24/10	10/06/10	04/06/11	04/06/11	09/13/11
Parameter	Units	Criteria*			Field Duplicate (1-1)		
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	12	2.8	5 J	4.3 J	1.2
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20100624MW-04V08N	20101006MW-04V08N	20110406MW-04V08FD	20110406MW-04V08N	20110913MW04V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/24/10	10/06/10	04/06/11	04/06/11	09/13/11
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1 U	1 U	1 U	1 U	1 U
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	1 U	1 U	1 UJ	1 UJ	1 U
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	4,000	2,400	4,200	4,300	1,700
Total Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20100624MW-04V08N	20101006MW-04V08N	20110406MW-04V08FD	20110406MW-04V08N	20110913MW04V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/24/10	10/06/10	04/06/11	04/06/11	09/13/11
Parameter	Units	Criteria*			Field Duplicate (1-1)		
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	18.4	5.5 J	26.6	22.3	16.7
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20100624MW-04V08N	20101006MW-04V08N	20110406MW-04V08FD	20110406MW-04V08N	20110913MW04V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/24/10	10/06/10	04/06/11	04/06/11	09/13/11
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0.80	0.0	NA	0.0	0.0
Ferrous Iron	MG/L	-	NA	NA	NA	NA	14.3
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-146	-96	NA	-78	-126
pH	S.U.	-	8.99	6.86	NA	6.40	6.83
Specific Conductance	MS/CM	-	1.84	1.48	NA	2.19	2.29
Temperature	DEG C	-	18.45	21.38	NA	12.86	22.5
Turbidity	NTU	-	1.9	3.7	NA	0.0	0.2

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20120411MW-04V08N	20120924MW-04V08FD	20120924MW-04V08N	20130409MW-04V09N	20131022MW-04V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/11/12	09/24/12	09/24/12	04/09/13	10/22/13
Parameter	**Units**	**Criteria***		Field Duplicate (1-1)			
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	7.2 J	2.1	2.5	4.4 J	12
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20120411MW-04V08N	20120924MW-04V08FD	20120924MW-04V08N	20130409MW-04V09N	20131022MW-04V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/11/12	09/24/12	09/24/12	04/09/13	10/22/13
Parameter	**Units**	**Criteria***		Field Duplicate (1-1)			
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	1 U	1.0 U	1.0 U	1.0 U	1.0 U
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	2,700	570	550	1,700	1,600
Total Metals							
Iron	UG/L	300	NA	7,430	7,280	16,100	17,700

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect UJ - Estimated quantitation limit. NJ - Analyte is reported as tentatively identified compound at an estimated concentration.
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S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20120411MW-04V08N	20120924MW-04V08FD	20120924MW-04V08N	20130409MW-04V09N	20131022MW-04V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/11/12	09/24/12	09/24/12	04/09/13	10/22/13
Parameter	**Units**	**Criteria***		Field Duplicate (1-1)			
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	211	210	5.0 U	243
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	211	210	5.0 U	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	5.0 U	5.0 U	5.0 U	NA
Alkalinity, Hydroxide	MG/L	-	NA	5.0 U	5.0 U	5.0 U	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	4 U	3 U	3 U
Hardness (as CaCO3)	MG/L	-	NA	188	185	426	73.3
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	0.10 U	0.10 U	0.10 UJ	0.10 UJ
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	0.014 J
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	18.7	12.3	12.0	15.6	23.2
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	10.2	10	7.2	7.0
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20120411MW-04V08N	20120924MW-04V08FD	20120924MW-04V08N	20130409MW-04V09N	20131022MW-04V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/11/12	09/24/12	09/24/12	04/09/13	10/22/13
Parameter	**Units**	**Criteria***		Field Duplicate (1-1)			
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0.0	NA	0.0	2.13	0.25
Ferrous Iron	MG/L	-	NA	NA	27.7	14.9	13.9
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-87	NA	-96	-78	-94
pH	S.U.	-	6.80	NA	6.91	6.43	6.44
Specific Conductance	MS/CM	-	1.38	NA	0.519	3.98	1.27
Temperature	DEG C	-	14.07	NA	25.40	16.39	19.44
Turbidity	NTU	-	8.9	NA	8.0	1.7	5.7

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20140428MW-04V09N	20140701MW-04V09N	20141028MW-04V09N	20150422MW-04	20151008MW-04
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/28/14	07/01/14	10/28/14	04/22/15	10/08/15
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	1.0 U	1.0 U	1.2	2.1	4.4
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20140428MW-04V09N	20140701MW-04V09N	20141028MW-04V09N	20150422MW-04	20151008MW-04
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/28/14	07/01/14	10/28/14	04/22/15	10/08/15
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1.0 U	1.0 U	1.0 U	0.38 J	1.0 U
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	340	1,300	87	1,000	2,100
Total Metals							
Iron	UG/L	300	18,900	17,900	8,820	28,000	15,800

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20140428MW-04V09N	20140701MW-04V09N	20141028MW-04V09N	20150422MW-04	20151008MW-04
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/28/14	07/01/14	10/28/14	04/22/15	10/08/15
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	239	295	208	338	303
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	239	295	208	338	303
Alkalinity, Carbonate (as CaCO3)	MG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Alkalinity, Hydroxide	MG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	3 U	3 U	3	3.0 U	3.0 U
Hardness (as CaCO3)	MG/L	-	525	614	267	882	523
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	0.10 U	0.10 U	0.10 U	0.10 U	2.0 U
Nitrogen, Nitrite	MG/L	1	0.10 U	0.013 J	0.10 U	0.10 U	0.016 J
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	0.050 U	NA
Sulfate	MG/L	250	12.2	9.1	11.5	29.8	7.4
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	8.4	11.4	8.4	12.3	11.8
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	0.10 J	0.33 J
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
Printed: 11/3/2016 4:19:45 PM
[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20140428MW-04V09N	20140701MW-04V09N	20141028MW-04V09N	20150422MW-04	20151008MW-04
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/28/14	07/01/14	10/28/14	04/22/15	10/08/15
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	9.51	1.72	0.55	1.05	0.32
Ferrous Iron	MG/L	-	7.0	6.5	5.2	5.5	6.0
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-102	-67	-93	-92	-95
pH	S.U.	-	6.76	6.62	6.57	6.73	5.42
Specific Conductance	MS/CM	-	2.65	2.47	1.62	4.47	3.05
Temperature	DEG C	-	12.11	21.90	17.78	11.71	21.26
Turbidity	NTU	-	0	52.9	2.1	1.1	0.0

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
Printed: 11/3/2016 4:19:45 PM
[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-05	MW-05	MW-05
Sample ID			20160427MW-04	20161005MW-04	MW05_52103	MW-05-121803	MW-05
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/27/16	10/05/16	05/21/03	12/18/03	07/23/04
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	NA	NA	5.0 U	5.0 U	NA
Benzene	UG/L	1	NA	NA	5.0 U	5.0 U	NA
Bromodichloromethane	UG/L	50	NA	NA	1.0 U	1.0 U	NA
Bromoform	UG/L	50	NA	NA	4.0 U	4.0 U	NA
Bromomethane	UG/L	5	NA	NA	5.0 U	5.0 U	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	R	R	NA
Carbon Disulfide	UG/L	60	NA	NA	5.0 U	5.0 U	NA
Carbon Tetrachloride	UG/L	5	NA	NA	2.0 U	2.0 U	NA
Chlorobenzene	UG/L	5	NA	NA	5.0 U	5.0 U	NA
Chloroethane	UG/L	5	NA	NA	5.0 U	5.0 U	NA
Chloroform	UG/L	7	NA	NA	5.0 U	5.0 U	NA
Chloromethane	UG/L	5	NA	NA	5.0 U	5.0 U	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	0.52 J	4.3	0 U	0 U	10 U
Dibromochloromethane	UG/L	50	NA	NA	5.0 U	5.0 U	NA
1,1-Dichloroethane	UG/L	5	NA	NA	5.0 U	5.0 U	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	2.0 U	2.0 U	NA
1,1-Dichloroethene	UG/L	5	NA	NA	2.0 U	2.0 U	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	5.0 U	5.0 U	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	5.0 U	5.0 U	NA
1,2-Dichloropropane	UG/L	1	NA	NA	1.0 U	1.0 U	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	5.0 U	5.0 U	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	5.0 U	5.0 U	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-05	MW-05	MW-05
Sample ID			20160427MW-04	20161005MW-04	MW05_52103	MW-05-121803	MW-05
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/27/16	10/05/16	05/21/03	12/18/03	07/23/04
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	4.0 U	4.0 U	NA
2-Hexanone	UG/L	50	NA	NA	5.0 U	5.0 U	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	5.0 U	5.0 U	NA
Methylene Chloride	UG/L	5	NA	NA	3.0 U	3.0 U	NA
Styrene	UG/L	5	NA	NA	5.0 U	5.0 U	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	1.0 U	1.0 U	NA
Tetrachloroethene	UG/L	5	NA	NA	0.4 J	1.0 U	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	5.0 U	5.0 U	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	3.0 U	3.0 U	NA
Trichloroethene	UG/L	5	NA	NA	1.0 U	1.0 U	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1.0 U	1.0 U	5.0 U	5.0 U	0.5 J
Toluene	UG/L	5	NA	NA	5.0 U	5.0 U	NA
Vinyl Chloride	UG/L	2	NA	NA	5.0 U	5.0 U	NA
Xylene (total)	UG/L	5	NA	NA	5.0 U	5.0 U	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	1.0 U	1.0 U	5.0 U	5.0 U	10 U
Dissolved Gases							
Ethane	UG/L	-	NA	NA	5.0 U	5.0 U	NA
Ethene	UG/L	-	NA	NA	5.0 U	5.0 U	NA
Methane	UG/L	-	610	1,000	27	6.7	47
Total Metals							
Iron	UG/L	300	16,700	10,900	2,110	15,500	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect UJ - Estimated quantitation limit. NJ - Analyte is reported as tentatively identified compound at an estimated concentration.
J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data rejected.
S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalvents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

Advanced Selection: amk-temp
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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-05	MW-05	MW-05
Sample ID			20160427MW-04	20161005MW-04	MW05_52103	MW-05-121803	MW-05
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/27/16	10/05/16	05/21/03	12/18/03	07/23/04
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	1,670	39.7 U	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	255	277	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	255	277	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	5.0 U	5.0 U	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	5.0 U	5.0 U	NA	NA	NA
Chloride	MG/L	250	NA	NA	49.8	27.5	63.9
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	3.0 U	3.0 U	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	450	320	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	0.25	0.1 U	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	3.6	0.61	NA
Nitrogen, Nitrate	MG/L	10	0.10 U	0.10 U	0.22	0.18	NA
Nitrogen, Nitrite	MG/L	1	0.052 J	0.046 J	0.1 U	0.1 U	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	5.0 U	7.2	50.1	61.4	42.3
Sulfide	MG/L	0.05	NA	NA	NA	NA	1.0 U
Total Organic Carbon	MG/L	-	9.2	9.8	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	0.10 UJ	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	1.7	0.07	NA
Ferric Iron (lab)	MG/L	-	NA	NA	0.43	15.4	NA
Fluoride	MG/L	1.5	NA	NA	0 U	0.12	0.103

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

Advanced Selection: amk-temp
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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-05	MW-05	MW-05
Sample ID			20160427MW-04	20161005MW-04	MW05_52103	MW-05-121803	MW-05
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/27/16	10/05/16	05/21/03	12/18/03	07/23/04
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	5 U	5 U	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0.54	0.28	0.37	0 U	0.97
Ferrous Iron	MG/L	-	5.5	6.0	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-79	-106	26	121	46
pH	S.U.	-	6.33	6.61	NA	NA	NA
Specific Conductance	MS/CM	-	2.90	2.02	0.426	0.629	0.463
Temperature	DEG C	-	14.79	21.54	NA	NA	NA
Turbidity	NTU	-	0.0	1.5	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			MW06-6-10-03	MW06-7_22_03	MW06-091803	MW-06_121703	MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/10/03	07/22/03	09/18/03	12/17/03	07/23/04
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	10 U	5.0 U	5.0 U	10 U	NA
Benzene	UG/L	1	10 U	5.0 U	5.0 U	10 U	NA
Bromodichloromethane	UG/L	50	2 U	1.0 U	1.0 U	2 U	NA
Bromoform	UG/L	50	8 U	4.0 U	4.0 U	8 U	NA
Bromomethane	UG/L	5	10 U	5.0 U	5.0 U	10 U	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	R	R	R	R	NA
Carbon Disulfide	UG/L	60	10 U	5.0 U	5.0 U	10 U	NA
Carbon Tetrachloride	UG/L	5	4 U	2.0 U	2.0 U	4 U	NA
Chlorobenzene	UG/L	5	10 U	5.0 U	5.0 U	10 U	NA
Chloroethane	UG/L	5	10 U	5.0 U	5.0 U	10 U	NA
Chloroform	UG/L	7	10 U	5.0 U	5.0 U	10 U	NA
Chloromethane	UG/L	5	10 U	5.0 U	5.0 U	10 U	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	0 U	5.7 NJ	0 U	0 U	5 J
Dibromochloromethane	UG/L	50	10 U	5.0 U	5.0 U	10 U	NA
1,1-Dichloroethane	UG/L	5	10 U	5.0 U	5.0 U	10 U	NA
1,2-Dichloroethane	UG/L	0.6	4 U	2.0 U	2.0 U	4 U	NA
1,1-Dichloroethene	UG/L	5	4 U	1.2 J	2.0 U	4 U	NA
cis-1,2-Dichloroethene	UG/L	5	10 U	1.7 J	1.4 J	1.3 J	NA
trans-1,2-Dichloroethene	UG/L	5	10 U	5.0 U	5.0 U	10 U	NA
1,2-Dichloropropane	UG/L	1	2 U	1.0 U	1.0 U	2 U	NA
cis-1,3-Dichloropropene	UG/L	0.4	10 U	5.0 U	5.0 U	10 U	NA
trans-1,3-Dichloropropene	UG/L	0.4	10 U	5.0 U	5.0 U	10 U	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			MW06-6-10-03	MW06-7_22_03	MW06-091803	MW-06_121703	MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/10/03	07/22/03	09/18/03	12/17/03	07/23/04
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	8 U	4.0 U	4.0 U	8 U	NA
2-Hexanone	UG/L	50	10 U	5.0 U	5.0 U	10 U	NA
4-Methyl-2-Pentanone	UG/L	-	10 U	5.0 U	5.0 U	10 U	NA
Methylene Chloride	UG/L	5	6 U	3.0 U	3.0 U	6 U	NA
Styrene	UG/L	5	10 U	5.0 U	5.0 U	10 U	NA
1,1,2,2-Tetrachloroethane	UG/L	5	2 U	1.0 U	1.0 U	2 U	NA
Tetrachloroethene	UG/L	5	2 U	1.0 U	1.0 U	2 U	NA
1,1,1-Trichloroethane	UG/L	5	10 U	5.0 U	5.0 U	10 U	NA
1,1,2-Trichloroethane	UG/L	1	6 U	3.0 U	3.0 U	6 U	NA
Trichloroethene	UG/L	5	2 U	1.0 U	1.0 U	2 U	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	220	180	97	250	140 J
Toluene	UG/L	5	10 U	5.0 U	5.0 U	10 U	NA
Vinyl Chloride	UG/L	2	10 U	1.2 J	5.0 U	10 U	NA
Xylene (total)	UG/L	5	10 U	5.0 U	5.0 U	10 U	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	8.8 J	9.5	8.6	14	23
Dissolved Gases							
Ethane	UG/L	-	5.0 U	5 U	5.0 U	5.0 U	NA
Ethene	UG/L	-	5.0 U	5 U	5.0 U	5.0 U	NA
Methane	UG/L	-	49	81	99	78	40
Total Metals							
Iron	UG/L	300	14,400	10,500	8,370 J	7,690	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			MW06-6-10-03	MW06-7_22_03	MW06-091803	MW-06_121703	MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/10/03	07/22/03	09/18/03	12/17/03	07/23/04
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	14,300	10,300	8,470 J	7,670	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	184	82.3	74.6	84.0	60.5
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	0.19	0.33	0.31	0.36	NA
Nitrogen, Kjeldahl, Total	MG/L	-	0.72	1.1	0.88	0.79	NA
Nitrogen, Nitrate	MG/L	10	0.33	0.1 U	0.1 U	0.1 UJ	NA
Nitrogen, Nitrite	MG/L	1	0.1 U	0.1 U	0.1 U	0.1 UJ	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	32.0	30.5	39.2	39.1	33.5
Sulfide	MG/L	0.05	NA	NA	NA	NA	1.0 U
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	14.3	8.6	6.0	8.7	NA
Ferric Iron (lab)	MG/L	-	0.12	1.9	8.4	1.0 U	NA
Fluoride	MG/L	1.5	0.46	0.56	0.37	0.42	0.467

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			MW06-6-10-03	MW06-7_22_03	MW06-091803	MW-06_121703	MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/10/03	07/22/03	09/18/03	12/17/03	07/23/04
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	5 U	5 U	NA	5.26 U	NA
Oil & Grease	MG/L	-	NA	NA	5 U	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0.93	1.07	0 U	0 U	1.04
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-145	-155	-143	-110	-64
pH	S.U.	-	NA	NA	NA	NA	NA
Specific Conductance	MS/CM	-	0.741	0.866	0.581	0.602	0.513
Temperature	DEG C	-	NA	NA	NA	NA	NA
Turbidity	NTU	-	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			Field-Dup	MW-06	MW-06V15FD	MW-06V15N	MW-06V15FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/31/05	05/31/05	12/20/05	12/20/05	08/15/06
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)		Field Duplicate (1-1)		Field Duplicate (1-1)
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	6.0 J	5.0 J	6.0 J	6.0 J	10 U
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			Field-Dup	MW-06	MW-06V15FD	MW-06V15N	MW-06V15FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/31/05	05/31/05	12/20/05	12/20/05	08/15/06
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)		Field Duplicate (1-1)		Field Duplicate (1-1)
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1.0 J	1.0 J	10 U	10 U	10 U
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	16	14	10 UJ	10 UJ	10 U
Dissolved Gases							
Ethane	UG/L	-	250 U	250 U	NA	NA	NA
Ethene	UG/L	-	250 U	250 U	NA	NA	NA
Methane	UG/L	-	3,600	3,300	6,700	5,600	1,600
Total Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect UJ - Estimated quantitation limit. NJ - Analyte is reported as tentatively identified compound at an estimated concentration.
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S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			Field-Dup	MW-06	MW-06V15FD	MW-06V15N	MW-06V15FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/31/05	05/31/05	12/20/05	12/20/05	08/15/06
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)		Field Duplicate (1-1)		Field Duplicate (1-1)
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			Field-Dup	MW-06	MW-06V15FD	MW-06V15N	MW-06V15FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/31/05	05/31/05	12/20/05	12/20/05	08/15/06
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)		Field Duplicate (1-1)		Field Duplicate (1-1)
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	NA	0 U	NA	0 U	NA
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	NA	-140	NA	-140	NA
pH	S.U.	-	NA	NA	NA	NA	NA
Specific Conductance	MS/CM	-	NA	1.13	NA	1.29	NA
Temperature	DEG C	-	NA	NA	NA	NA	NA
Turbidity	NTU	-	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
Printed: 11/3/2016 4:19:47 PM
[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			MW-06V15N	20070207MW-06V15FD	20070207MW-06V15N	20070731MW-06V15FD	20070731MW-06V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/15/06	02/07/07	02/07/07	07/31/07	07/31/07
Parameter	**Units**	**Criteria***		Field Duplicate (1-1)		Field Duplicate (1-1)	
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	10 U	100	100	18	21
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			MW-06V15N	20070207MW-06V15FD	20070207MW-06V15N	20070731MW-06V15FD	20070731MW-06V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/15/06	02/07/07	02/07/07	07/31/07	07/31/07
Parameter	**Units**	**Criteria***		Field Duplicate (1-1)		Field Duplicate (1-1)	
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	10 U	3.0 J	3.0 J	10 U	10 U
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	10 U	8.0 J	8.0 J	0.5 J	0.6 J
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	1,700	12,000	13,000	3,800	2,500
Total Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			MW-06V15N	20070207MW-06V15FD	20070207MW-06V15N	20070731MW-06V15FD	20070731MW-06V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/15/06	02/07/07	02/07/07	07/31/07	07/31/07
Parameter	**Units**	**Criteria***		Field Duplicate (1-1)		Field Duplicate (1-1)	
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	5.0 U	7.40	7.00	41.8	44.2
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
Printed: 11/3/2016 4:19:47 PM
[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			MW-06V15N	20070207MW-06V15FD	20070207MW-06V15N	20070731MW-06V15FD	20070731MW-06V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/15/06	02/07/07	02/07/07	07/31/07	07/31/07
Parameter	**Units**	**Criteria***		Field Duplicate (1-1)		Field Duplicate (1-1)	
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	6.83	NA	1.05	NA	0.31
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	87	NA	-136	NA	-99.7
pH	S.U.	-	NA	NA	NA	NA	6.38
Specific Conductance	MS/CM	-	0.033	NA	0.79	NA	1.050
Temperature	DEG C	-	NA	NA	NA	NA	NA
Turbidity	NTU	-	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20080228MW06V15FD	20080228MW06V15N	20080812MW06V13N	20090219MW-06V13N	20091013MW-06V13N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/28/08	02/28/08	08/12/08	02/19/09	10/13/09
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)				
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	8.0 J	8.0 J	4.0 J	34	6.4
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20080228MW06V15FD	20080228MW06V15N	20080812MW06V13N	20090219MW-06V13N	20091013MW-06V13N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/28/08	02/28/08	08/12/08	02/19/09	10/13/09
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)				
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	10 UJ	10 U	10 U	2.0 J	1 U
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	10 U	10 U	10 U	35	1 U
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	12,000	14,000	12,000	9,000	7,300
Total Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect UJ - Estimated quantitation limit. NJ - Analyte is reported as tentatively identified compound at an estimated concentration.
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S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20080228MW06V15FD	20080228MW06V15N	20080812MW06V13N	20090219MW-06V13N	20091013MW-06V13N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/28/08	02/28/08	08/12/08	02/19/09	10/13/09
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)				
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	5 U	5 U	17.8	57.0 J	2.8 J
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20080228MW06V15FD	20080228MW06V15N	20080812MW06V13N	20090219MW-06V13N	20091013MW-06V13N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/28/08	02/28/08	08/12/08	02/19/09	10/13/09
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)				
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	NA	2.61	0 U	0 U	0.0
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	NA	-122	-117	-132	-139
pH	S.U.	-	NA	6.24	6.37	6.30	6.57
Specific Conductance	MS/CM	-	NA	1.21	1.47	0.84	1.79
Temperature	DEG C	-	NA	12.2	17.0	13.23	17.80
Turbidity	NTU	-	NA	9	5	8	2.2

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20100226MW-06V13N	20100624MW-06V13N	20101006MW-06V13FD	20101006MW-06V13N	20110406MW-06V13N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/26/10	06/24/10	10/06/10	10/06/10	04/06/11
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	35 J	68 J	61	57	96 J
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20100226MW-06V13N	20100624MW-06V13N	20101006MW-06V13FD	20101006MW-06V13N	20110406MW-06V13N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/26/10	06/24/10	10/06/10	10/06/10	04/06/11
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1 UJ	1 U	1 U	1 U	33
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	3.6	0.57 J	1 U	1 U	38 J
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	13,000	9,400	8,300	8,800	7,900
Total Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20100226MW-06V13N	20100624MW-06V13N	20101006MW-06V13FD	20101006MW-06V13N	20110406MW-06V13N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/26/10	06/24/10	10/06/10	10/06/10	04/06/11
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	31.2	52.3	36.8 J	34.5 J	60.8
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20100226MW-06V13N	20100624MW-06V13N	20101006MW-06V13FD	20101006MW-06V13N	20110406MW-06V13N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/26/10	06/24/10	10/06/10	10/06/10	04/06/11
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0.0	0.73	NA	0.0	0.0
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-140	-124	NA	-129	-68
pH	S.U.	-	6.46	8.81	NA	6.97	7.08
Specific Conductance	MS/CM	-	2.48	0.958	NA	0.879	1.61
Temperature	DEG C	-	11.80	17.79	NA	18.25	12.46
Turbidity	NTU	-	39	0.45	NA	0.0	0.0

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20110913MW06V13N	20120411MW-06V13N	20120924MW-06V13N	20130409MW-06V12N	20131022MW-06V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/13/11	04/11/12	09/24/12	04/09/13	10/22/13
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	30	230 J	140	61 J	27
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20110913MW06V13N	20120411MW-06V13N	20120924MW-06V13N	20130409MW-06V12N	20131022MW-06V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/13/11	04/11/12	09/24/12	04/09/13	10/22/13
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1 U	82 J	3.3	0.19 J	1.0 U
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	4.4	28	3.6	4.9	1.0 U
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	1,800	5,300	1,300	9,500	4,100
Total Metals							
Iron	UG/L	300	9,630	NA	12,100	24,700	20,500

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20110913MW06V13N	20120411MW-06V13N	20120924MW-06V13N	20130409MW-06V12N	20131022MW-06V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/13/11	04/11/12	09/24/12	04/09/13	10/22/13
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	388	NA	304	244	245
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	304	244	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	5.0 U	5.0 U	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	5.0 U	5.0 U	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	353,000 J	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	1 J	3 U	2 J
Hardness (as CaCO3)	MG/L	-	235	NA	308	337	99.0
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	0.1 U	NA	0.10 U	0.25 J	0.10 UJ
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	0.017 J
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	16.5	119	52.2	38.4	29.2
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	10.9	NA	6.9	5.9	5.6
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20110913MW06V13N	20120411MW-06V13N	20120924MW-06V13N	20130409MW-06V12N	20131022MW-06V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/13/11	04/11/12	09/24/12	04/09/13	10/22/13
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0.0	0.0	0.0	0.33	0.37
Ferrous Iron	MG/L	-	7.4	NA	9.9	23.7	3.6
Ferric Iron (calculated)	MG/L	-	2.23	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-123	-48	-80	-102	-108
pH	S.U.	-	7.08	6.81	6.82	6.47	6.45
Specific Conductance	MS/CM	-	0.801	1.06	0.636	2.91	1.4
Temperature	DEG C	-	22.4	14.04	22.01	16.34	18.41
Turbidity	NTU	-	5.3	0.0	0.0	0.2	1.4

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20140416MW-06V15N	20140701MW-06V15N	20141027MW-06V15N	DUP20141027	20150422MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/16/14	07/01/14	10/27/14	10/27/14	04/22/15
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)	
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	75	84	51	44	110
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20140416MW-06V15N	20140701MW-06V15N	20141027MW-06V15N	DUP20141027	20150422MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/16/14	07/01/14	10/27/14	10/27/14	04/22/15
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)	
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	26	1.0 U	1.0 U	1.0 U	1.6
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	33	2.7	1.0 U	1.0 U	8.1
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	11,000	11,000	3,400	2,700	5,200
Total Metals							
Iron	UG/L	300	20,900	17,100	31,000	33,200	26,400

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20140416MW-06V15N	20140701MW-06V15N	20141027MW-06V15N	DUP20141027	20150422MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/16/14	07/01/14	10/27/14	10/27/14	04/22/15
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)	
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	240	259	740	726	311
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	240	259	740	726	311
Alkalinity, Carbonate (as CaCO3)	MG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Alkalinity, Hydroxide	MG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	3 U	3 U	80	NA	3.0 U
Hardness (as CaCO3)	MG/L	-	370	317	297	564	515
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	0.10 UJ	0.10 U	1.0 U	0.58 J	0.10 U
Nitrogen, Nitrite	MG/L	1	0.051 J	0.0092 J	0.10 U	0.10 U	0.10 U
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	0.050 U
Sulfate	MG/L	250	36.1	38.8	5.0 U	5.0 U	29.9
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	5.8	6.0	314	298	5.1
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	0.90 J
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20140416MW-06V15N	20140701MW-06V15N	20141027MW-06V15N	DUP20141027	20150422MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/16/14	07/01/14	10/27/14	10/27/14	04/22/15
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)	
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	3.99	1.82	2.67	NA	0.72
Ferrous Iron	MG/L	-	6.0	5.0	6.7	NA	4.5
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-92	-80	-130	NA	-104
pH	S.U.	-	7.02	6.78	6.66	NA	6.83
Specific Conductance	MS/CM	-	1.73	1.33	2.34	NA	2.67
Temperature	DEG C	-	12.71	19.20	17.32	NA	12.18
Turbidity	NTU	-	0	7.3	5.6	NA	4.1

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Advanced Selection: amk-temp
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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-07	MW-07
Sample ID			20151008MW-06	20160427MW-06	20161005MW-06	MW07-6-10-03	MW07
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/08/15	04/27/16	10/05/16	06/10/03	07/23/03
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	NA	NA	NA	250 U	500 U
Benzene	UG/L	1	NA	NA	NA	250 U	500 U
Bromodichloromethane	UG/L	50	NA	NA	NA	50 U	100 U
Bromoform	UG/L	50	NA	NA	NA	200 U	400 U
Bromomethane	UG/L	5	NA	NA	NA	250 U	500 U
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	R	R
Carbon Disulfide	UG/L	60	NA	NA	NA	250 U	500 U
Carbon Tetrachloride	UG/L	5	NA	NA	NA	100 U	200 U
Chlorobenzene	UG/L	5	NA	NA	NA	250 U	500 U
Chloroethane	UG/L	5	NA	NA	NA	250 U	500 U
Chloroform	UG/L	7	NA	NA	NA	250 U	500 U
Chloromethane	UG/L	5	NA	NA	NA	250 U	500 U
Chlorotrifluoroethene (Freon-1113)	UG/L	5	51	51	68	0 U	0 U
Dibromochloromethane	UG/L	50	NA	NA	NA	250 U	500 U
1,1-Dichloroethane	UG/L	5	NA	NA	NA	250 U	500 U
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	100 U	200 U
1,1-Dichloroethene	UG/L	5	NA	NA	NA	100 U	68 J
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	250 U	500 U
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	250 U	500 U
1,2-Dichloropropane	UG/L	1	NA	NA	NA	50 U	100 U
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	250 U	500 U
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	250 U	500 U

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-07	MW-07
Sample ID			20151008MW-06	20160427MW-06	20161005MW-06	MW07-6-10-03	MW07
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/08/15	04/27/16	10/05/16	06/10/03	07/23/03
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	200 U	400 U
2-Hexanone	UG/L	50	NA	NA	NA	250 U	500 U
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	250 U	500 U
Methylene Chloride	UG/L	5	NA	NA	NA	150 U	300 U
Styrene	UG/L	5	NA	NA	NA	250 U	500 U
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	50 U	100 U
Tetrachloroethene	UG/L	5	NA	NA	NA	50 U	100 U
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	250 U	500 U
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	150 U	300 U
Trichloroethene	UG/L	5	NA	NA	NA	50 U	100 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1.0 U	1.0 U	1.0 U	5,400	8,500
Toluene	UG/L	5	NA	NA	NA	250 U	500 U
Vinyl Chloride	UG/L	2	NA	NA	NA	250 U	500 U
Xylene (total)	UG/L	5	NA	NA	NA	250 U	500 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	1.0 U	1.1	0.28 J	68 J	130 J
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	50 U	50 U
Ethene	UG/L	-	NA	NA	NA	50 U	50 U
Methane	UG/L	-	7,200	890	280	740	420
Total Metals							
Iron	UG/L	300	20,200	20,600	14,900	21,300	21,200

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect UJ - Estimated quantitation limit. NJ - Analyte is reported as tentatively identified compound at an estimated concentration.
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S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-07	MW-07
Sample ID			20151008MW-06	20160427MW-06	20161005MW-06	MW07-6-10-03	MW07
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/08/15	04/27/16	10/05/16	06/10/03	07/23/03
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	20,800	20,800
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	312	277	256	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	312	277	256	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	5.0 U	5.0 U	5.0 U	NA	NA
Alkalinity, Hydroxide	MG/L	-	5.0 U	5.0 U	5.0 U	NA	NA
Chloride	MG/L	250	NA	NA	NA	140	168
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	1 J	3 J	4	NA	NA
Hardness (as CaCO3)	MG/L	-	337	380	320	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	0.39	0.6
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	1.2	1.8
Nitrogen, Nitrate	MG/L	10	2.0 U	0.10 U	0.10 U	0.1 U	NA
Nitrogen, Nitrite	MG/L	1	0.020 J	0.098 J	0.031 J	0.1 U	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	0.1 UJ
Sulfate	MG/L	250	16.7	36.3	30.7	32.8	31.0
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	5.5	4.9	4.3	NA	NA
Ferrous Iron (lab)	MG/L	-	0.44 J	NA	0.10 UJ	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	20.2	19.8
Ferric Iron (lab)	MG/L	-	NA	NA	NA	1	1.4
Fluoride	MG/L	1.5	NA	NA	NA	0.33	0.25

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-07	MW-07
Sample ID			20151008MW-06	20160427MW-06	20161005MW-06	MW07-6-10-03	MW07
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/08/15	04/27/16	10/05/16	06/10/03	07/23/03
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	5 U	5 U
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0.34	0.59	0.44	0.9	0.1
Ferrous Iron	MG/L	-	7.0	7.0	4.5	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-110	-97	-102	-130	-108
pH	S.U.	-	5.50	6.35	6.66	NA	NA
Specific Conductance	MS/CM	-	1.60	1.97	1.59	0.93	1.11
Temperature	DEG C	-	18.70	13.61	17.83	NA	NA
Turbidity	NTU	-	0.0	0.0	0 U	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

Advanced Selection: amk-temp
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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID			MW07-91703	MW-07_121703	MW-07	MW-07	MW-07V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/17/03	12/17/03	07/22/04	05/31/05	12/20/05
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	250 U	50 U	NA	NA	NA
Benzene	UG/L	1	250 U	14	NA	NA	NA
Bromodichloromethane	UG/L	50	50 U	10 U	NA	NA	NA
Bromoform	UG/L	50	200 U	40 U	NA	NA	NA
Bromomethane	UG/L	5	250 U	50 U	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	R	R	NA	NA	NA
Carbon Disulfide	UG/L	60	250 U	50 U	NA	NA	NA
Carbon Tetrachloride	UG/L	5	100 U	20 U	NA	NA	NA
Chlorobenzene	UG/L	5	250 U	50 U	NA	NA	NA
Chloroethane	UG/L	5	250 U	50 U	NA	NA	NA
Chloroform	UG/L	7	250 U	50 U	NA	NA	NA
Chloromethane	UG/L	5	250 U	50 U	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	0 U	0 U	210	140	47
Dibromochloromethane	UG/L	50	250 U	50 U	NA	NA	NA
1,1-Dichloroethane	UG/L	5	250 U	50 U	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	100 U	20 U	NA	NA	NA
1,1-Dichloroethene	UG/L	5	100 U	20 U	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	250 U	50 U	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	250 U	50 U	NA	NA	NA
1,2-Dichloropropane	UG/L	1	50 U	10 U	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	250 U	50 U	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	250 U	50 U	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID			MW07-91703	MW-07_121703	MW-07	MW-07	MW-07V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/17/03	12/17/03	07/22/04	05/31/05	12/20/05
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	200 U	49	NA	NA	NA
2-Hexanone	UG/L	50	250 U	50 U	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	250 U	50 U	NA	NA	NA
Methylene Chloride	UG/L	5	150 U	30 U	NA	NA	NA
Styrene	UG/L	5	250 U	50 U	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	50 U	10 U	NA	NA	NA
Tetrachloroethene	UG/L	5	50 U	10 U	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	250 U	50 U	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	150 U	30 U	NA	NA	NA
Trichloroethene	UG/L	5	50 U	10 U	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	6,100	370	110 J	10 U	10 U
Toluene	UG/L	5	250 U	50 U	NA	NA	NA
Vinyl Chloride	UG/L	2	250 U	50 U	NA	NA	NA
Xylene (total)	UG/L	5	250 U	50 U	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	130 J	940	50	2.0 J	10 U
Dissolved Gases							
Ethane	UG/L	-	50 U	120 U	NA	250 U	NA
Ethene	UG/L	-	50 U	120 U	NA	250 U	NA
Methane	UG/L	-	1,200	1,700	2,500	5,900	9,700
Total Metals							
Iron	UG/L	300	32,700 J	38,900	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

Advanced Selection: amk-temp
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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID			MW07-91703	MW-07_121703	MW-07	MW-07	MW-07V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/17/03	12/17/03	07/22/04	05/31/05	12/20/05
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	32,500 J	38,900	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	300 J	328	303	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	0.66	0.99	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	2.1	2.8	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	0.1 U	0.1 U	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	0.1 U	0.1 U	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	23.6	5.0 U	5.0 U	5.0 U	5.0 U
Sulfide	MG/L	0.05	NA	NA	1.0 U	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	33.8	19.5	NA	NA	NA
Ferric Iron (lab)	MG/L	-	14.1	19.4	NA	NA	NA
Fluoride	MG/L	1.5	0.24	0.19	0.190	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID			MW07-91703	MW-07_121703	MW-07	MW-07	MW-07V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/17/03	12/17/03	07/22/04	05/31/05	12/20/05
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	NA	5.26 U	NA	NA	NA
Oil & Grease	MG/L	-	5.44 U	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0 U	3.33	0.88	0 U	0 U
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-118	-115	-153	-152	-169
pH	S.U.	-	NA	NA	NA	NA	NA
Specific Conductance	MS/CM	-	1.44	1.94	1.69	1.75	1.65
Temperature	DEG C	-	NA	NA	NA	NA	NA
Turbidity	NTU	-	NA	NA	NA	NA	NA

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID			MW-07V15N	20070207MW-07V15N	20070731MW-07V15N	20080228MW07V15N	20080812MW07V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/14/06	02/07/07	07/31/07	02/28/08	08/12/08
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	97	89	82	92	170
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID			MW-07V15N	20070207MW-07V15N	20070731MW-07V15N	20080228MW07V15N	20080812MW07V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/14/06	02/07/07	07/31/07	02/28/08	08/12/08
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	10 U	10 U	6.0 J	10 UJ	3.0 J
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	1.0 J	3.0 J	10	0.9 J	16
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	6,900	6,200	4,100	7,100	5,600
Total Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID			MW-07V15N	20070207MW-07V15N	20070731MW-07V15N	20080228MW07V15N	20080812MW07V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/14/06	02/07/07	07/31/07	02/28/08	08/12/08
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	19.3	5.0 U	6.1	5 U	5.6
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID			MW-07V15N	20070207MW-07V15N	20070731MW-07V15N	20080228MW07V15N	20080812MW07V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/14/06	02/07/07	07/31/07	02/28/08	08/12/08
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	3.47	2.89	0.48	2.64	0 U
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-163	-121	-113.5	-137	-167
pH	S.U.	-	NA	NA	6.78	6.32	6.48
Specific Conductance	MS/CM	-	1.44	2.02	2.182	1.62	1.99
Temperature	DEG C	-	NA	NA	NA	9.03	17.3
Turbidity	NTU	-	NA	NA	NA	54	25

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Concentration Exceeds Criteria

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Detection Limits shown are PQL

Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20090218MW-07V09N	20091013MW-07RV15N	20100225MW-07RV15N	20100624MW-07RV15FD	20100624MW-07RV15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/18/09	10/13/09	02/25/10	06/24/10	06/24/10
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)	
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	150	370 D	150 J	350 J	390
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20090218MW-07V09N	20091013MW-07RV15N	20100225MW-07RV15N	20100624MW-07RV15FD	20100624MW-07RV15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/18/09	10/13/09	02/25/10	06/24/10	06/24/10
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)	
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	46	580 D	18 J	1.1 J	1
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	20	76	8.1	1.7 J	1.8
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	11,000	5,900	6,500	8,100	8,400
Total Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20090218MW-07V09N	20091013MW-07RV15N	20100225MW-07RV15N	20100624MW-07RV15FD	20100624MW-07RV15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/18/09	10/13/09	02/25/10	06/24/10	06/24/10
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)	
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	5 UJ	6.3	7.9	17	11.2
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20090218MW-07V09N	20091013MW-07RV15N	20100225MW-07RV15N	20100624MW-07RV15FD	20100624MW-07RV15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/18/09	10/13/09	02/25/10	06/24/10	06/24/10
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)	
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0 U	0.0	0.0	NA	0.69
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-154	-139	-146	NA	-129
pH	S.U.	-	6.18	6.45	6.52	NA	8.83
Specific Conductance	MS/CM	-	2.01	2.74	2.79	NA	2.09
Temperature	DEG C	-	12.11	18.36	10.69	NA	16.45
Turbidity	NTU	-	21	1.1	1.1	NA	0.35

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20101006MW-07RV15N	20110406MW-07RV15N	20110913MW07RV15N	20120411MW-07RV15FD	20120411MW-07RV15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/06/10	04/06/11	09/13/11	04/11/12	04/11/12
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)	
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	350	370 J	26	630 J	540 J
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20101006MW-07RV15N	20110406MW-07RV15N	20110913MW07RV15N	20120411MW-07RV15FD	20120411MW-07RV15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/06/10	04/06/11	09/13/11	04/11/12	04/11/12
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)	
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	53 J	18	1.6	67 J	59 J
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	9.5	6.3 J	0.94 J	11	9.7
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	6,200	8,300	2,000	6,400	6,600
Total Metals							
Iron	UG/L	300	NA	NA	23,600	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20101006MW-07RV15N	20110406MW-07RV15N	20110913MW07RV15N	20120411MW-07RV15FD	20120411MW-07RV15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/06/10	04/06/11	09/13/11	04/11/12	04/11/12
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)	
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	406	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	248	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	637	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	0.1 U	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	13 J	25.8	12.2	18.9	17.7
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	11.3	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Concentration Exceeds Criteria

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S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

Advanced Selection: amk-temp
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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20101006MW-07RV15N	20110406MW-07RV15N	20110913MW07RV15N	20120411MW-07RV15FD	20120411MW-07RV15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/06/10	04/06/11	09/13/11	04/11/12	04/11/12
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)	
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	4.05	0.0	0.0	NA	0.0
Ferrous Iron	MG/L	-	NA	NA	20.1	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	3.5	NA	NA
Oxidation-Reduction Potential	mV	-	-113	-83	-109	NA	-82
pH	S.U.	-	6.82	6.39	6.86	NA	6.72
Specific Conductance	MS/CM	-	2.03	3.40	3.28	NA	2.10
Temperature	DEG C	-	21.42	12.08	22.4	NA	13.63
Turbidity	NTU	-	14.3	0.0	0.1	NA	8.2

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Detection Limits shown are PQL

Advanced Selection: amk-temp
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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20120924MW-07RV15N	20130409MW-07RV13N	20131022MW-07RV17N	20140416MW-07RV17N	20140701MW-07RV17N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/24/12	04/09/13	10/22/13	04/16/14	07/01/14
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	430	310 J	390	2.4	69
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20120924MW-07RV15N	20130409MW-07RV13N	20131022MW-07RV17N	20140416MW-07RV17N	20140701MW-07RV17N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/24/12	04/09/13	10/22/13	04/16/14	07/01/14
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	5.9 J	5.5	12	1.0 U	1.0 U
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	2.4 J	2.6	1.1	1.0 U	1.2
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	3,900	2,100	4,000	680	4,400
Total Metals							
Iron	UG/L	300	29,900	29,000	30,900	24,500	28,700

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20120924MW-07RV15N	20130409MW-07RV13N	20131022MW-07RV17N	20140416MW-07RV17N	20140701MW-07RV17N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/24/12	04/09/13	10/22/13	04/16/14	07/01/14
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	335	263	291	305	399
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	335	263	NA	305	399
Alkalinity, Carbonate (as CaCO3)	MG/L	-	5.0 U	5.0 U	NA	5.0 U	5.0 U
Alkalinity, Hydroxide	MG/L	-	5.0 U	5.0 U	NA	5.0 U	5.0 U
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	70	NA
Dehalobacter	GC/mL	-	10	4	5	3 U	4 U
Hardness (as CaCO3)	MG/L	-	414	515	208	594	545
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	0.10 U	0.066 J	0.36 J	0.10 U	0.076 J
Nitrogen, Nitrite	MG/L	1	NA	NA	0.015 J	0.038 J	0.014 J
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	32.0	19.1	7.4	17.9	13.8
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	11.8	9.3	12.3	7.8	11.4
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20120924MW-07RV15N	20130409MW-07RV13N	20131022MW-07RV17N	20140416MW-07RV17N	20140701MW-07RV17N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/24/12	04/09/13	10/22/13	04/16/14	07/01/14
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0.0	0.0	0.36	4.43	1.74
Ferrous Iron	MG/L	-	30.4	27.5	15.3	6.0	6.0
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-118	-89	-102	-77	-68
pH	S.U.	-	6.69	6.35	6.31	6.89	6.64
Specific Conductance	MS/CM	-	1.78	4.84	1.84	3.31	2.58
Temperature	DEG C	-	22.35	17.93	19.42	11.39	19.41
Turbidity	NTU	-	0.0	53.9	0.2	0	20.7

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20141027MW-07RV17N	20150304MW-07R	20150422MW-07R	20151008MW-07R	20160427MW-07R
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/27/14	03/04/15	04/22/15	10/08/15	04/27/16
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	130	130	10	46	22
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20141027MW-07RV17N	20150304MW-07R	20150422MW-07R	20151008MW-07R	20160427MW-07R
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/27/14	03/04/15	04/22/15	10/08/15	04/27/16
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	15	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	2.2	0.78 J	0.39 J	1.0 U	1.0 U
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	1,300	NA	1,700	9,800	2,400
Total Metals							
Iron	UG/L	300	31,600	NA	25,300	39,000	39,300

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20141027MW-07RV17N	20150304MW-07R	20150422MW-07R	20151008MW-07R	20160427MW-07R
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/27/14	03/04/15	04/22/15	10/08/15	04/27/16
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	394	NA	240	450	357
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	394	NA	240	450	357
Alkalinity, Carbonate (as CaCO3)	MG/L	-	5.0 U	NA	5.0 U	5.0 U	5.0 U
Alkalinity, Hydroxide	MG/L	-	5.0 U	NA	5.0 U	5.0 U	5.0 U
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	3	300	90	20	7 J
Hardness (as CaCO3)	MG/L	-	574	NA	641	475	630
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	1.0 U	NA	0.16	2.0 U	0.10 U
Nitrogen, Nitrite	MG/L	1	0.10 U	NA	0.018 J	0.028 J	0.072 J
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	0.18	NA	NA
Sulfate	MG/L	250	8.4	NA	11.8	9.1	5.0 U
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	15.2	NA	6.0	11.8	9.7
Ferrous Iron (lab)	MG/L	-	NA	NA	2.2 J	0.49 J	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect UJ - Estimated quantitation limit. NJ - Analyte is reported as tentatively identified compound at an estimated concentration.
J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data rejected.
S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20141027MW-07RV17N	20150304MW-07R	20150422MW-07R	20151008MW-07R	20160427MW-07R
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/27/14	03/04/15	04/22/15	10/08/15	04/27/16
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	2.86	0.91	0.91	0.37	0.53
Ferrous Iron	MG/L	-	4.65	NA	4.0	7.0	7.0
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-107	-120	-75	-100	-95
pH	S.U.	-	6.56	6.81	6.69	5.35	6.25
Specific Conductance	MS/CM	-	2.69	2.56	4.17	2.40	3.44
Temperature	DEG C	-	18.94	8.90	12.41	19.15	14.10
Turbidity	NTU	-	8.7	0.0	0.9	0.0	0.0

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect UJ - Estimated quantitation limit. NJ - Analyte is reported as tentatively identified compound at an estimated concentration.
J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data rejected.
S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R
Sample ID			20161005MW-07R
Matrix			Groundwater
Depth Interval (ft)			-
Date Sampled			10/05/16
Parameter	**Units**	**Criteria***	
Volatiles			
Acetone	UG/L	50	NA
Benzene	UG/L	1	NA
Bromodichloromethane	UG/L	50	NA
Bromoform	UG/L	50	NA
Bromomethane	UG/L	5	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA
Carbon Disulfide	UG/L	60	NA
Carbon Tetrachloride	UG/L	5	NA
Chlorobenzene	UG/L	5	NA
Chloroethane	UG/L	5	NA
Chloroform	UG/L	7	NA
Chloromethane	UG/L	5	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	65
Dibromochloromethane	UG/L	50	NA
1,1-Dichloroethane	UG/L	5	NA
1,2-Dichloroethane	UG/L	0.6	NA
1,1-Dichloroethene	UG/L	5	NA
cis-1,2-Dichloroethene	UG/L	5	NA
trans-1,2-Dichloroethene	UG/L	5	NA
1,2-Dichloropropane	UG/L	1	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect UJ - Estimated quantitation limit. NJ - Analyte is reported as tentatively identified compound at an estimated concentration.
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S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R
Sample ID			20161005MW-07R
Matrix			Groundwater
Depth Interval (ft)			-
Date Sampled			10/05/16
Parameter	**Units**	**Criteria***	
Volatiles			
Ethylbenzene	UG/L	5	NA
2-Hexanone	UG/L	50	NA
4-Methyl-2-Pentanone	UG/L	-	NA
Methylene Chloride	UG/L	5	NA
Styrene	UG/L	5	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA
Tetrachloroethene	UG/L	5	NA
1,1,1-Trichloroethane	UG/L	5	NA
1,1,2-Trichloroethane	UG/L	1	NA
Trichloroethene	UG/L	5	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1.0 U
Toluene	UG/L	5	NA
Vinyl Chloride	UG/L	2	NA
Xylene (total)	UG/L	5	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	1.0 U
Dissolved Gases			
Ethane	UG/L	-	NA
Ethene	UG/L	-	NA
Methane	UG/L	-	2,500
Total Metals			
Iron	UG/L	300	42,200

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data rejected.
S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalvents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R
Sample ID			20161005MW-07R
Matrix			Groundwater
Depth Interval (ft)			-
Date Sampled			10/05/16
Parameter	**Units**	**Criteria***	
Dissolved Metals			
Iron	UG/L	300	NA
Miscellaneous Parameters			
Alkalinity, Total (as CaCO3)	MG/L	-	374
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	374
Alkalinity, Carbonate (as CaCO3)	MG/L	-	5.0 U
Alkalinity, Hydroxide	MG/L	-	5.0 U
Chloride	MG/L	250	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA
Dehalobacter	GC/mL	-	5
Hardness (as CaCO3)	MG/L	-	510
Nitrogen, Ammonia (as N)	MG/L	2	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA
Nitrogen, Nitrate	MG/L	10	0.10 U
Nitrogen, Nitrite	MG/L	1	0.045 J
Nitrogen, Nitrate-Nitrite	MG/L	10	NA
Sulfate	MG/L	250	5.0 U
Sulfide	MG/L	0.05	NA
Total Organic Carbon	MG/L	-	10.4
Ferrous Iron (lab)	MG/L	-	2.6 J
Ferrous Iron (field)	MG/L	-	NA
Ferric Iron (lab)	MG/L	-	NA
Fluoride	MG/L	1.5	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalvents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R
Sample ID			20161005MW-07R
Matrix			Groundwater
Depth Interval (ft)			-
Date Sampled			10/05/16
Parameter	**Units**	**Criteria***	
Miscellaneous Parameters			
TPH	MG/L	-	NA
Oil & Grease	MG/L	-	NA
Volatile Fatty Acids			
Acetic Acid	MG/L	-	NA
Formic Acid	MG/L	-	NA
Lactic Acid	MG/L	-	NA
n-Butyric Acid	MG/L	-	NA
Propionic Acid	MG/L	-	NA
Pyruvic Acid	MG/L	-	NA
Field Parameter			
Dissolved Oxygen	MG/L	-	0.31
Ferrous Iron	MG/L	-	11
Ferric Iron (calculated)	MG/L	-	NA
Oxidation-Reduction Potential	mV	-	-119
pH	S.U.	-	6.46
Specific Conductance	MS/CM	-	2.61
Temperature	DEG C	-	18.98
Turbidity	NTU	-	0 U

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data rejected.
S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts
UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalvents per milliliter; GC/mL - Gene Copies per milliliter

Detection Limits shown are PQL

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[LOGDATE] >= #5/01/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

APPENDIX C

DATA USABILITY SUMMARY REPORT

APPENDIX C

DATA USABILITY SUMMARY REPORT

OCTOBER 2016 SAMPLING EVENT

FORMER EMCA SITE
SITE NO. 360025
MAMARONECK, NEW YORK

Analyses Performed by:

TESTAMERICA LABORATORIES, INC.
Edison, NJ
and
SiREM
Guelph, Ontario

Prepared for:

ROHM & HAAS Company
(A Wholly-Owned Subsidiary of The Dow Chemical Company)
3100 State Road
Croydon, PA 19021

Prepared by:

URS CORPORATION
257 West Genesee Street, Suite 400
Buffalo, New York 14202-2657

OCTOBER 2016

TABLE OF CONTENTS

TABLES
(Following Text)

ATTACHMENTS
(Following Tables)

I. INTRODUCTION

This Data Usability Summary Report (DUSR) has been prepared following the guidelines provided in New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation *DER-10, Technical Guidance for Site Investigation and Remediation, Appendix 2B - Guidance for Data Deliverables and the Development of Data Usability Summary Reports*, May 2010. This DUSR discusses the analytical data for five (5) groundwater samples, and one trip blank collected on October 5, 2016, as summarized on Table C-1. The samples were collected by URS personnel at the Former EMCA Site located in Mamaroneck, New York as part of the semi-annual groundwater monitoring event.

II. ANALYTICAL METHODOLOGIES

The groundwater samples were analyzed for the following parameters by TestAmerica Laboratories, Inc., (TA) located in Edison, New Jersey; and SiREM Laboratory located in Guelph, Ontario, Canada. Note, not all groundwater samples were analyzed for all parameters, as shown on Table C-1.

Parameter	Method No.	References
Volatile Organic Compounds (VOCs)*	SW8260C	1
Methane	RSK-175	2
Sulfate	ASTM D516-90, 02	3
Alkalinity (total, bicarbonate, carbonate, hydroxide)	SM 2320 B	4
Hardness	SM 2340 C	4
Total Iron	200.7	5
Ferrous Iron (Fe^{+2})	SM 3500-Fe D	4
Nitrate	SM 4500-NO_3 F	4
Total Organic Carbon (TOC)	SM 5310 B	4
Bacteria [*Dehalococcoides ethenogenes (Dhc) and Dehalobacter (Dhb)*]	QPCR**	SiREM SOP

Notes:
* - VOCs include 1,1,2-trichloro-1,2,2-trifluoroethane (Freon-113), 1,2-dichloro-1,1,2-trifluoroethane (Freon-123A), and chlorotrifluoroethene (Freon-1113).
** - Quantitative Polymerase Chain Reaction.

References:

1 NYSDEC Analytical Services Protocol, July 2005.
2 USEPA, R.S. Kerr Environmental Research Laboratory, Rev. 0, August 11, 1994.
3 ASTM International, most recent version.
4 Standard Methods of Examination of Water and Wastewater, 20th Edition, 1998.
5 40 CFR Part 136, most recent version.

III. DATA VALIDATION PROCEDURES

A limited data validation was performed in accordance with the following USEPA Region II guidelines:

- *Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B & 8260C, SOP No. HW-24, Rev. #4*, September 2014;
- *ICP-AES Data* Validation, SOP No. HW-2a, Revision 15, December 2012; and
- *Mercury and Cyanide Data Validation,* SOP No. HW-2c, Revision 15, December 2012.

The validated groundwater and field quality control (QC) analytical results are presented in Tables C-2 and C-3, respectively. Copies of the validated laboratory results (i.e., Form 1's) are presented in Attachment A. Copies of the case narrative, chain-of-custody, and documentation supporting the qualification of data are presented in Attachment B. Only problems affecting data usability are discussed in this report.

IV. DATA DELIVERABLE COMPLETENESS

The laboratory deliverable data packages were in accordance with NYSDEC Analytical Services Protocol (ASP) Category B requirements.

V. SAMPLE RECEIPT/PRESERVATION/HOLDING TIMES

All samples were received by the laboratory intact, properly preserved, and under proper chain-of-custody (COC).

All sample analyses were performed within method holding times, except for ferrous iron (Fe^{+2}), which were performed in the laboratory. Therefore, the laboratory Fe^{+2} results were qualified 'J'. Note, Fe^{+2} is typically analyzed in the field rather than in the laboratory because it quickly oxidizes to ferric iron (Fe^{+3}) upon exposure to air.

VI. NONCONFORMANCES

The percent recovery (%R) of nitrite in the Matrix Spike performed on sample 20161005MW-04 was below the quality control (QC) limit. The result for nitrite in this sample has been qualified 'J'.

There were no other non-conformances noted during the data review.

VII. SUMMARY

All sample analyses were found to be compliant with the method and validation criteria, except where previously noted. Those results qualified 'J' (estimated) during the data validation are considered conditonally usable.

Prepared By: Ann Marie Kropovitch, Chemist **Date:** 10/25/16

Reviewed By: George E. Kisluk, Senior Chemist **Date:** 10/25/16

DEFINITIONS OF USEPA REGION II DATA QUALIFIERS

U – The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J – The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R – The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

D – The sample results are reported from a separate secondary dilution analysis.

TABLE C-1
SAMPLE AND ANALYSIS SUMMARY - OCTOBER 2016
FORMER EMCA SITE, MAMARONECK, NEW YORK

SDG Nos.	Sample ID	Matrix	Date of Collection	VOCs*	Methane	Sulfate	Alkalinity (Total, HCO_3^-, CO_3^-, OH^-)	Hardness	Ferrous Iron	Total Iron	Nitrate	TOC	Dhc	Dhb	Comments
460-121529-1/S-4082	20161005MW-02	GW	10/05/16	X	X	X	X	X	X	X	X	X	X	X	---
	20161005MW-03	GW		X	X	X	X	X	X	X	X	X	---	X	---
	20161005MW-04	GW		X	X	X	X	X	X	X	X	X	---	X	---
	20161005MW-06	GW		X	X	X	X	X	X	X	X	X	---	X	---
	20161005MW-07R	GW		X	X	X	X	X	X	X	X	X	---	X	---
	TB20161005	Water		X	X	---	---	---	---	---	---	---	---	---	Trip Blank

Notes:

* - Volatile Organic Compounds (VOCs) include 1,1,2-trichloro-1,2,2-trifluoroethane (Freon-113); 1,2-dichloro-1,1,2-trifluoroethane (Freon-123a); and chlorotrifluoroethene (Freon-1113).

X - Parameter requested.
--- - Parameter not requested/analyzed or no comment.
Dhc - Dehalococcoides ethenogenes
Dhb - Dehalobacter
GW - Groundwater
TOC - Total Organic Carbon

TABLE C-2
GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-03	MW-04	MW-06	MW-07R
Sample ID			20161005MW-02	20161005MW-03	20161005MW-04	20161005MW-06	20161005MW-07R
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/05/16	10/05/16	10/05/16	10/05/16	10/05/16
Parameter	**Units**	**Criteria***					
Volatiles							
Chlorotrifluoroethene (Freon-1113)	UG/L	5	1,000	290	4.3	68	65
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	940	11	1.0 U	1.0 U	1.0 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	37	3.3	1.0 U	0.28 J	1.0 U
Dissolved Gases							
Methane	UG/L	-	2,400	2,300	1,000	280	2,500
Total Metals							
Iron	UG/L	300	53,800	22,200	10,900	14,900	42,200
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	250	297	277	256	374
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	250	297	277	256	374
Alkalinity, Carbonate (as CaCO3)	MG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Alkalinity, Hydroxide	MG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dehalococcoides ethenogenes	CEQ/mL	-	90	NA	NA	NA	NA
Dehalobacter	GC/mL	-	30	10	3.0 U	4	5
Hardness (as CaCO3)	MG/L	-	470	420	320	320	510
Nitrogen, Nitrate	MG/L	10	0.28	0.13	0.10 U	0.10 U	0.10 U
Nitrogen, Nitrite	MG/L	1	0.037 J	0.036 J	0.046 J	0.031 J	0.045 J
Sulfate	MG/L	250	27.2	56.1	7.2	30.7	5.0 U
Total Organic Carbon	MG/L	-	6.2	5.8	9.8	4.3	10.4
Ferrous Iron (lab)	MG/L	-	0.25 J	0.35 J	0.10 UJ	0.10 UJ	2.6 J

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect

J - Analyte is reported below the PQL at an estimated concentration.

MADE BY: 10/25/16

CHECKED BY: 10/25/16

Detection Limits shown are PQL

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TABLE C-3
FIELD QC ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			FIELDQC
Sample ID			TB20161005
Matrix			Water
Depth Interval (ft)			-
Date Sampled			10/05/16
Parameter	**Units**	**Criteria***	Trip Blank (1-1)
Volatiles			
Chlorotrifluoroethene (Freon-1113)	UG/L	5	0.30 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	0.34 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	0.17 U
Dissolved Gases			
Methane	UG/L	-	6.9

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, Revised April 2000.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect

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CHECKED BY: 10/25/16

Detection Limits shown are MDL

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[LOGDATE] = #10/5/2016# AND [MATRIX] = 'WQ' AND [PRCODE] = 'FLD'

ATTACHMENT A

VALIDATED ANALYTICAL RESULTS (FORM 1's)

Client: URS Corporation

Job Number: 460-121529-1

Client Sample ID: **20161005MW-02**

Lab Sample ID: 460-121529-1
Client Matrix: Water

Date Sampled: 10/05/2016 0950
Date Received: 10/06/2016 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-398017	Instrument ID:	CVOAMS1
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	A28587.D
Dilution:	5.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/18/2016 1253			Final Weight/Volume:	5 mL
Prep Date:	10/18/2016 1253				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Freon TF	940		1.7	5.0
Chlorotrifluoroethene	1000		1.5	5.0
1,2-Dichloro-1,1,2-trifluoroethane	37		0.85	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	110		74 - 132
Toluene-d8 (Surr)	104		80 - 120
Bromofluorobenzene	95		77 - 124
Dibromofluoromethane (Surr)	107		72 - 131

Client: URS Corporation

Job Number: 460-121529-1

Client Sample ID: **20161005MW-03**

Lab Sample ID: 460-121529-2
Client Matrix: Water

Date Sampled: 10/05/2016 1200
Date Received: 10/06/2016 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-397957	Instrument ID:	CVOAMS1
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	A28566.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/18/2016 0516			Final Weight/Volume:	5 mL
Prep Date:	10/18/2016 0516				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Freon TF	11		0.34	1.0
Chlorotrifluoroethene	290		0.30	1.0
1,2-Dichloro-1,1,2-trifluoroethane	3.3		0.17	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	109		74 - 132
Toluene-d8 (Surr)	99		80 - 120
Bromofluorobenzene	94		77 - 124
Dibromofluoromethane (Surr)	108		72 - 131

Client: URS Corporation

Job Number: 460-121529-1

Client Sample ID: **20161005MW-07R**

Lab Sample ID: 460-121529-3
Client Matrix: Water

Date Sampled: 10/05/2016 1315
Date Received: 10/06/2016 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-397957	Instrument ID:	CVOAMS1
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	A28567.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/18/2016 0538			Final Weight/Volume:	5 mL
Prep Date:	10/18/2016 0538				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Freon TF	0.34	U	0.34	1.0
Chlorotrifluoroethene	65		0.30	1.0
1,2-Dichloro-1,1,2-trifluoroethane	0.17	U	0.17	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	109		74 - 132
Toluene-d8 (Surr)	100		80 - 120
Bromofluorobenzene	96		77 - 124
Dibromofluoromethane (Surr)	109		72 - 131

Client: URS Corporation

Job Number: 460-121529-1

Client Sample ID: **20161005MW-04**

Lab Sample ID: 460-121529-4
Client Matrix: Water

Date Sampled: 10/05/2016 1440
Date Received: 10/06/2016 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-398017	Instrument ID:	CVOAMS1
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	A28579.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/18/2016 0959			Final Weight/Volume:	5 mL
Prep Date:	10/18/2016 0959				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Freon TF	0.34	U	0.34	1.0
Chlorotrifluoroethene	4.3		0.30	1.0
1,2-Dichloro-1,1,2-trifluoroethane	0.17	U	0.17	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	110		74 - 132
Toluene-d8 (Surr)	102		80 - 120
Bromofluorobenzene	96		77 - 124
Dibromofluoromethane (Surr)	108		72 - 131

Client: URS Corporation

Job Number: 460-121529-1

Client Sample ID: **20161005MW-06**

Lab Sample ID: 460-121529-5
Client Matrix: Water

Date Sampled: 10/05/2016 1545
Date Received: 10/06/2016 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-397957	Instrument ID:	CVOAMS1
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	A28569.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/18/2016 0622			Final Weight/Volume:	5 mL
Prep Date:	10/18/2016 0622				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Freon TF	0.34	U	0.34	1.0
Chlorotrifluoroethene	68		0.30	1.0
1,2-Dichloro-1,1,2-trifluoroethane	0.28	J	0.17	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	110		74 - 132
Toluene-d8 (Surr)	102		80 - 120
Bromofluorobenzene	98		77 - 124
Dibromofluoromethane (Surr)	108		72 - 131

Client: URS Corporation

Job Number: 460-121529-1

Client Sample ID: **TB20161005**

Lab Sample ID: 460-121529-6TB
Client Matrix: Water

Date Sampled: 10/05/2016 1545
Date Received: 10/06/2016 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-397957	Instrument ID:	CVOAMS1
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	A28553.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/18/2016 0035			Final Weight/Volume:	5 mL
Prep Date:	10/18/2016 0035				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Freon TF	0.34	U	0.34	1.0
Chlorotrifluoroethene	0.30	U	0.30	1.0
1,2-Dichloro-1,1,2-trifluoroethane	0.17	U	0.17	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	106		74 - 132
Toluene-d8 (Surr)	102		80 - 120
Bromofluorobenzene	98		77 - 124
Dibromofluoromethane (Surr)	109		72 - 131

Client: URS Corporation

Job Number: 460-121529-1

Client Sample ID: **20161005MW-02**

Lab Sample ID: 460-121529-1
Client Matrix: Water

Date Sampled: 10/05/2016 0950
Date Received: 10/06/2016 1800

RSK-175 Dissolved Gases (GC)

Analysis Method:	RSK-175	Analysis Batch:	480-324673	Instrument ID:	HP5890-21
	N/A		N/A	Initial Weight/Volume:	17 mL
Dilution:	50			Final Weight/Volume:	17 mL
Analysis Date:	10/10/2016 1303			Injection Volume:	5 mL
Prep Date:	N/A			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methane	2400		50	200

Client: URS Corporation

Job Number: 460-121529-1

Client Sample ID: **20161005MW-03**

Lab Sample ID: 460-121529-2
Client Matrix: Water

Date Sampled: 10/05/2016 1200
Date Received: 10/06/2016 1800

RSK-175 Dissolved Gases (GC)

Analysis Method:	RSK-175	Analysis Batch:	480-324673	Instrument ID:	HP5890-21
	N/A		N/A	Initial Weight/Volume:	17 mL
Dilution:	50			Final Weight/Volume:	17 mL
Analysis Date:	10/10/2016 1320			Injection Volume:	5 mL
Prep Date:	N/A			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methane	2300		50	200

Client: URS Corporation

Job Number: 460-121529-1

Client Sample ID: **20161005MW-07R**

Lab Sample ID: 460-121529-3
Client Matrix: Water

Date Sampled: 10/05/2016 1315
Date Received: 10/06/2016 1800

RSK-175 Dissolved Gases (GC)

Analysis Method:	RSK-175	Analysis Batch:	480-324673	Instrument ID:	HP5890-21
	N/A		N/A	Initial Weight/Volume:	17 mL
Dilution:	50			Final Weight/Volume:	17 mL
Analysis Date:	10/10/2016 1338			Injection Volume:	5 mL
Prep Date:	N/A			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methane	2500		50	200

Client: URS Corporation

Job Number: 460-121529-1

Client Sample ID: **20161005MW-04**

Lab Sample ID: 460-121529-4
Client Matrix: Water

Date Sampled: 10/05/2016 1440
Date Received: 10/06/2016 1800

RSK-175 Dissolved Gases (GC)

Analysis Method:	RSK-175	Analysis Batch:	480-324673	Instrument ID:	HP5890-21
	N/A		N/A	Initial Weight/Volume:	17 mL
Dilution:	50			Final Weight/Volume:	17 mL
Analysis Date:	10/10/2016 1355			Injection Volume:	5 mL
Prep Date:	N/A			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methane	1000		50	200

Client: URS Corporation

Job Number: 460-121529-1

Client Sample ID: **20161005MW-06**

Lab Sample ID: 460-121529-5
Client Matrix: Water

Date Sampled: 10/05/2016 1545
Date Received: 10/06/2016 1800

RSK-175 Dissolved Gases (GC)

Analysis Method:	RSK-175	Analysis Batch:	480-324673	Instrument ID:	HP5890-21
	N/A		N/A	Initial Weight/Volume:	17 mL
Dilution:	50			Final Weight/Volume:	17 mL
Analysis Date:	10/10/2016 1413			Injection Volume:	5 mL
Prep Date:	N/A			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methane	280		50	200

Client: URS Corporation

Job Number: 460-121529-1

Client Sample ID: **TB20161005**

Lab Sample ID: 460-121529-6TB
Client Matrix: Water

Date Sampled: 10/05/2016 1545
Date Received: 10/06/2016 1800

RSK-175 Dissolved Gases (GC)

Analysis Method:	RSK-175	Analysis Batch:	480-324673	Instrument ID:	HP5890-21
	N/A		N/A	Initial Weight/Volume:	17 mL
Dilution:	1.0			Final Weight/Volume:	17 mL
Analysis Date:	10/10/2016 1135			Injection Volume:	5 mL
Prep Date:	N/A			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methane	6.9		1.0	4.0

Client: URS Corporation

Job Number: 460-121529-1

Client Sample ID: **20161005MW-02**

Lab Sample ID: 460-121529-1
Client Matrix: Water

Date Sampled: 10/05/2016 0950
Date Received: 10/06/2016 1800

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	460-397074	Instrument ID:	ICP5
Prep Method:	200.7	Prep Batch:	460-396661	Lab File ID:	396981D1.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	10/13/2016 2313			Final Weight/Volume:	50 mL
Prep Date:	10/12/2016 0812				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Iron	53800		78.3	150

Client: URS Corporation

Job Number: 460-121529-1

Client Sample ID: **20161005MW-03**

Lab Sample ID: 460-121529-2
Client Matrix: Water

Date Sampled: 10/05/2016 1200
Date Received: 10/06/2016 1800

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	460-397074	Instrument ID:	ICP5
Prep Method:	200.7	Prep Batch:	460-396661	Lab File ID:	396981D1.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	10/13/2016 2317			Final Weight/Volume:	50 mL
Prep Date:	10/12/2016 0812				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Iron	22200		78.3	150

Client: URS Corporation

Job Number: 460-121529-1

Client Sample ID: **20161005MW-07R**

Lab Sample ID: 460-121529-3
Client Matrix: Water

Date Sampled: 10/05/2016 1315
Date Received: 10/06/2016 1800

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	460-397074	Instrument ID:	ICP5
Prep Method:	200.7	Prep Batch:	460-396661	Lab File ID:	396981D1.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	10/13/2016 2336			Final Weight/Volume:	50 mL
Prep Date:	10/12/2016 0812				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Iron	42200		78.3	150

Client: URS Corporation

Job Number: 460-121529-1

Client Sample ID: **20161005MW-04**

Lab Sample ID: 460-121529-4
Client Matrix: Water

Date Sampled: 10/05/2016 1440
Date Received: 10/06/2016 1800

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	460-397074	Instrument ID:	ICP5
Prep Method:	200.7	Prep Batch:	460-396661	Lab File ID:	396981D1.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	10/13/2016 2340			Final Weight/Volume:	50 mL
Prep Date:	10/12/2016 1051				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Iron	10900		78.3	150

Client: URS Corporation

Job Number: 460-121529-1

Client Sample ID: **20161005MW-06**

Lab Sample ID: 460-121529-5
Client Matrix: Water

Date Sampled: 10/05/2016 1545
Date Received: 10/06/2016 1800

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	460-397074	Instrument ID:	ICP5
Prep Method:	200.7	Prep Batch:	460-396661	Lab File ID:	396981D1.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	10/13/2016 2344			Final Weight/Volume:	50 mL
Prep Date:	10/12/2016 1051				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Iron	14900		78.3	150

General Chemistry

Client Sample ID: **20161005MW-02**

Lab Sample ID: 460-121529-1
Client Matrix: Water

Date Sampled: 10/05/2016 0950
Date Received: 10/06/2016 1800

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	27.2		mg/L	2.0	5.0	1.0	D516-90, 02
Analysis Batch: 460-395722	Analysis Date: 10/07/2016 1327						
Bicarbonate Alkalinity as CaCO3	250		mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-398286	Analysis Date: 10/18/2016 1708						
Carbonate Alkalinity as CaCO3	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-398286	Analysis Date: 10/18/2016 1708						
Alkalinity	250		mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-398286	Analysis Date: 10/18/2016 1708						
Hydroxide Alkalinity	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-398286	Analysis Date: 10/18/2016 1708						
Hardness as calcium carbonate	470		mg/L	25.0	25.0	1.0	SM 2340C
Analysis Batch: 460-398410	Analysis Date: 10/19/2016 1635						
Ferrous Iron	0.25	HF 5	mg/L	0.048	0.10	1.0	SM 3500 FE D
Analysis Batch: 460-398379	Analysis Date: 10/19/2016 1322						
Nitrate as N	0.28		mg/L	0.010	0.10	1.0	SM 4500 NO3 F
Analysis Batch: 460-395627	Analysis Date: 10/07/2016 0903						
Nitrite as N	0.037	J	mg/L	0.0030	0.10	1.0	SM 4500 NO3 F
Analysis Batch: 460-395627	Analysis Date: 10/07/2016 0903						
Total Organic Carbon	6.2		mg/L	0.22	1.0	1.0	SM 5310B
Analysis Batch: 460-396188	Analysis Date: 10/08/2016 1625						

10/24/16

General Chemistry

Client Sample ID: 20161005MW-03

Lab Sample ID: 460-121529-2
Client Matrix: Water

Date Sampled: 10/05/2016 1200
Date Received: 10/06/2016 1800

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	56.1		mg/L	3.9	10.0	2.0	D516-90, 02
Analysis Batch: 460-395722	Analysis Date: 10/07/2016 1452						
Bicarbonate Alkalinity as CaCO3	297		mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-398286	Analysis Date: 10/18/2016 1715						
Carbonate Alkalinity as CaCO3	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-398286	Analysis Date: 10/18/2016 1715						
Alkalinity	297		mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-398286	Analysis Date: 10/18/2016 1715						
Hydroxide Alkalinity	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-398286	Analysis Date: 10/18/2016 1715						
Hardness as calcium carbonate	420		mg/L	25.0	25.0	1.0	SM 2340C
Analysis Batch: 460-398410	Analysis Date: 10/19/2016 1635						
Ferrous Iron	0.35	HF 5	mg/L	0.048	0.10	1.0	SM 3500 FE D
Analysis Batch: 460-398379	Analysis Date: 10/19/2016 1322						
Nitrate as N	0.13		mg/L	0.010	0.10	1.0	SM 4500 NO3 F
Analysis Batch: 460-395627	Analysis Date: 10/07/2016 0904						
Nitrite as N	0.036	J	mg/L	0.0030	0.10	1.0	SM 4500 NO3 F
Analysis Batch: 460-395627	Analysis Date: 10/07/2016 0904						
Total Organic Carbon	5.8		mg/L	0.22	1.0	1.0	SM 5310B
Analysis Batch: 460-396188	Analysis Date: 10/08/2016 1809						

10/24/16

General Chemistry

Client Sample ID: **20161005MW-07R**

Lab Sample ID: 460-121529-3
Client Matrix: Water

Date Sampled: 10/05/2016 1315
Date Received: 10/06/2016 1800

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	2.0	U	mg/L	2.0	5.0	1.0	D516-90, 02
Analysis Batch: 460-395722	Analysis Date: 10/07/2016 1327						
Bicarbonate Alkalinity as CaCO3	374		mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-398286	Analysis Date: 10/18/2016 1725						
Carbonate Alkalinity as CaCO3	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-398286	Analysis Date: 10/18/2016 1725						
Alkalinity	374		mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-398286	Analysis Date: 10/18/2016 1725						
Hydroxide Alkalinity	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-398286	Analysis Date: 10/18/2016 1725						
Hardness as calcium carbonate	510		mg/L	25.0	25.0	1.0	SM 2340C
Analysis Batch: 460-398410	Analysis Date: 10/19/2016 1635						
Ferrous Iron	2.6	HF 5	mg/L	0.048	0.10	1.0	SM 3500 FE D
Analysis Batch: 460-398379	Analysis Date: 10/19/2016 1322						
Nitrate as N	0.010	U	mg/L	0.010	0.10	1.0	SM 4500 NO3 F
Analysis Batch: 460-395627	Analysis Date: 10/07/2016 0906						
Nitrite as N	0.045	J	mg/L	0.0030	0.10	1.0	SM 4500 NO3 F
Analysis Batch: 460-395627	Analysis Date: 10/07/2016 0906						
Total Organic Carbon	10.4		mg/L	0.22	1.0	1.0	SM 5310B
Analysis Batch: 460-396188	Analysis Date: 10/08/2016 1829						

10/24/16

General Chemistry

Client Sample ID: **20161005MW-04**

Lab Sample ID: 460-121529-4
Client Matrix: Water

Date Sampled: 10/05/2016 1440
Date Received: 10/06/2016 1800

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	7.2		mg/L	2.0	5.0	1.0	D516-90, 02
Analysis Batch: 460-395722	Analysis Date: 10/07/2016 1338						
Bicarbonate Alkalinity as CaCO3	277		mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-398286	Analysis Date: 10/18/2016 1732						
Carbonate Alkalinity as CaCO3	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-398286	Analysis Date: 10/18/2016 1732						
Alkalinity	277		mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-398286	Analysis Date: 10/18/2016 1732						
Hydroxide Alkalinity	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-398286	Analysis Date: 10/18/2016 1732						
Hardness as calcium carbonate	320		mg/L	25.0	25.0	1.0	SM 2340C
Analysis Batch: 460-398410	Analysis Date: 10/19/2016 1635						
Ferrous Iron	0.048	U HF	mg/L	0.048	0.10	1.0	SM 3500 FE D
Analysis Batch: 460-398379	Analysis Date: 10/19/2016 1322						
Nitrate as N	0.010	U	mg/L	0.010	0.10	1.0	SM 4500 NO3 F
Analysis Batch: 460-395627	Analysis Date: 10/07/2016 0907						
Nitrite as N	0.046	J F1	mg/L	0.0030	0.10	1.0	SM 4500 NO3 F
Analysis Batch: 460-395627	Analysis Date: 10/07/2016 0907						
Total Organic Carbon	9.8		mg/L	0.22	1.0	1.0	SM 5310B
Analysis Batch: 460-396188	Analysis Date: 10/08/2016 1849						

10/24/16

General Chemistry

Client Sample ID: **20161005MW-06**

Lab Sample ID: 460-121529-5
Client Matrix: Water

Date Sampled: 10/05/2016 1545
Date Received: 10/06/2016 1800

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	30.7		mg/L	2.0	5.0	1.0	D516-90, 02
Analysis Batch: 460-395722	Analysis Date: 10/07/2016 1338						
Bicarbonate Alkalinity as CaCO3	256		mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-398286	Analysis Date: 10/18/2016 1740						
Carbonate Alkalinity as CaCO3	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-398286	Analysis Date: 10/18/2016 1740						
Alkalinity	256		mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-398286	Analysis Date: 10/18/2016 1740						
Hydroxide Alkalinity	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-398286	Analysis Date: 10/18/2016 1740						
Hardness as calcium carbonate	320		mg/L	25.0	25.0	1.0	SM 2340C
Analysis Batch: 460-398410	Analysis Date: 10/19/2016 1635						
Ferrous Iron	0.048	U HF	mg/L	0.048	0.10	1.0	SM 3500 FE D
Analysis Batch: 460-398379	Analysis Date: 10/19/2016 1322						
Nitrate as N	0.010	U	mg/L	0.010	0.10	1.0	SM 4500 NO3 F
Analysis Batch: 460-395627	Analysis Date: 10/07/2016 0909						
Nitrite as N	0.031	J	mg/L	0.0030	0.10	1.0	SM 4500 NO3 F
Analysis Batch: 460-395627	Analysis Date: 10/07/2016 0909						
Total Organic Carbon	4.3		mg/L	0.22	1.0	1.0	SM 5310B
Analysis Batch: 460-396188	Analysis Date: 10/08/2016 1908						

10/24/16

SiREM
Leading Science · Lasting Solutions

130 Stone Rd. W
Guelph, ON N1G 3Z2
(519) 822-2265

Certificate of Analysis: Gene-Trac® *Dehalococcoides* Assay

Customer: Kevin Shanahan, AECOM
Project: Dow, Former EMCA, Mamaroneck, NY
Customer Reference: 60483432.20000

SiREM Reference: S-4082
Report Date: 20-Oct-16
Data Files: MyiQ-DHC-QPCR-1392
MyiQ-DB-DHC-QPCR-0736

Table 1a: Test Results

Sample ID	*Dehalococcoides* (*Dhc*)	
	Percent Dhc[1]	Enumeration/Liter[2]
20161005 MW-02	0.03 - 0.08 %	9×10^4

See final page for notes

Analyst: Kela Bartle
Kela Bartle, B.Sc.
Laboratory Technician

Approved: J. Wilkinson
Jennifer Wilkinson
Senior Laboratory Technician

SiREM
Leading Science · Lasting Solutions

130 Stone Rd. W
Guelph, ON N1G 3Z2
(519) 822-2265

Certificate of Analysis: Gene-Trac® *Dehalobacter* Assay

Customer: Kevin Shanahan, AECOM
Project: Dow, Former EMCA, Mamaroneck, NY
Customer Reference: 60483432.20000

SiREM Reference: S-4082
Report Date: 20-Oct-16
Data Files: iQ5-DHB-QPCR-0397
iQ5-DB-DHB-QPCR-0210
iQ5-TBA-QPCR-0225

Table 1b: Test Results

Sample ID	*Dehalobacter* (Dhb)	
	Percent Dhb[1]	Enumeration/Liter[2]
20161005 MW-02	0.009 - 0.03 %	3×10^4
20161005 MW-03	0.002 - 0.007 %	1×10^4
20161005 MW-07R	0.01 - 0.04 %	5×10^3
20161005 MW-04	NA	3×10^3 U
20161005 MW-06	0.0009 - 0.003 %	4×10^3

See final page for notes

Analyst: Kela Bartle
Kela Bartle, B.Sc.
Laboratory Technician

Approved: J Wilkinson
Jennifer Wilkinson
Senior Laboratory Technician

ATTACHMENT B

SUPPORT DOCUMENTATION

460-121529 Chain of Custody

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

SIS REQUEST

Page 1 of 1

Name (for report and invoice): Kevin Shanahan	Samplers Name (Printed): Megan Dascoli	Site/Project Identification: Dow Former EMCA, Mamaroneck
Company: AECOM ~~W. Genesee St~~	P. O. #: 4502386358	State (Location of site): NJ: ☐ NY: ☒ Other:
		Regulatory Program: DKQP: ☐
Address: W. Genesee St	Analysis Turnaround Time: Standard ☒; Rush Charges Authorized For: 2 Week ☐, 1 Week ☐, Other ☐	LAB USE ONLY Project No:
City: Buffalo State: NY		Job No: 121529
Phone: 716-923-1215 Fax:		

ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)

Sample Identification	Date	Time	Matrix	No. of Cont.	Freon 113, 123a, 1113	Methane RSK-175	Sulfates 8016	Iron 6010, 200.7	Alkalinity 2320B	Hardness 2340	Nitrogen-Nitrate	TOC 5310B				Sample Numbers
20161005 MW-02	10/5/16	0950	GW	11	X	X	X	X	X	X	X	X				1
20161005 MW-03	↓	1200	↓	11	X	X	X	X	X	X	X	X				2
20161005 MW-07R	↓	1315	↓	11	X	X	X	X	X	X	X	X				3
20161005 MW-04	↓	1440	↓	11	X	X	X	X	X	X	X	X				4
20161005 MW-06	10/5/16	1545	↓	11	X	X	X	X	X	X	X	X				5
TB20161005	10/5/16	1545	W	6	X	X										6
Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH, 6 = Other ____, 7 = Other ____				Soil:												
				Water:	1,2	1,2	1	1,4	1	1,4	1	1,3				

SHORT HOLD

Special Instructions ________ Water Metals Filtered (Yes/No)? ____

Relinquished by	Company	Date / Time	Received by	Company
1) Megan Dascoli	AECOM	10/6/16 1034	1) [signature]	[signature]
2) [signature]	[illegible]	10/6/16 18:30	2) [signature]	[signature]
3)			3)	10/6/16 18:00
4)			4)	

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132). Massachusetts (M-NJ312), North Carolina (No. 578)

TAL - 0016 (0715)

2.5 / 2.5 IR#7 No CS

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

TestAmerica / SIREM

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY / ANALYSIS REQUEST

Page 1 of 1

Name (for report and invoice) Kevin Shanahan	Samplers Name (Printed) Megan Dascoli	Site/Project Identification DOW former EMC A, Mamaroneck, NY
Company AECOM (formerly URS)	P. O. # 60483432, 20000	State (Location of site): NJ: ☐ NY: ☒ Other:
Address W. Genesee St	Analysis Turnaround Time: Standard ☒	Regulatory Program: DKQP: ☐
City Buffalo, State NY	Rush Charges Authorized For: 2 Week ☐ 1 Week ☐ Other ☐	
Phone 716-923-1215 Fax		

ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)

Sample Identification	Date	Time	Matrix	No. of Cont.	Dehalococcoides	Dehalobacter									LAB USE ONLY Sample Numbers
20161005 MW-02	10/5/16	0950	GW	2	X	X									
20161005 MW-03		1200		1		X									
20161005 MW-07S		1315		1		X									
20161005 MW-04		1440		1		X									
20161005 MW-06	10/5/16	1545		1		X									
Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH 6 = Other _____, 7 = Other _____				Soil:											
				Water:	1	1									

Special Instructions

Water Metals Filtered (Yes/No)? _____

Relinquished by	Company	Date / Time	Received by	Company
1) Megan Dascoli	AECOM	10/5/16 2000	1)	
Relinquished by 2)	Company	Date / Time 10/7/16 1125	Received by 2)	Company
Relinquished by 3)	Company	Date / Time	Received by 3)	Company
Relinquished by 4)	Company	Date / Time	Received by 4)	Company

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132). TAL - 0016 (0715)

Massachusetts (M-NJ312), North Carolina (No. 578)

Note: Shipped via FedEX

336614

CMS

TestAmerica Edison
777 New Durham Road
Edison, NJ 08817
Phone (732) 549-3900 Fax (732) 549-3679

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: DeGraw, Kristin B	Carrier Tracking No(s):	COC No: 460-46784.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: kristin.degraw@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 460-121529-1
Address: 10 Hazelwood Drive, ,	Due Date Requested: 10/18/2016			
City: Amherst	TAT Requested (days):			
State, Zip: NY, 14228-2298				
Phone: 716-691-2600(Tel) 716-691-7991(Fax)	PO #:			
Email:	WO #:			
Project Name: DOW Former EMCA, Mama	Project #: 46004368			
Site: URS - EMCA	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	RSK_175/ Methane, Ethane, Ethene	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
20161005MW-02 (460-121529-1)	10/5/16	09:50 Eastern		Water			X	3	
20161005MW-03 (460-121529-2)	10/5/16	12:00 Eastern		Water			X	3	
20161005MW-07R (460-121529-3)	10/5/16	13:15 Eastern		Water			X	3	
20161005MW-04 (460-121529-4)	10/5/16	14:40 Eastern		Water			X	3	
20161005MW-06 (460-121529-5)	10/5/16	15:45 Eastern		Water			X	3	
TB20161005 (460-121529-6)	10/5/16	15:45 Eastern		Water			X	3	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 4

Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 10/7/16	Company	Received by:	Date/Time: 10/8/16 0900	Company TABU.	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: #1 3.5°C			

GC VOA
Method(s) RSK-175: The following samples were diluted to bring the concentration of target analytes within the calibration range: 20161005MW-02 (460-121529-1), 20161005MW-03 (460-121529-2), 20161005MW-07R (460-121529-3), 20161005MW-04 (460-121529-4) and 20161005MW-06 (460-121529-5). Elevated reporting limits (RLs) are provided.

CASE NARRATIVE

Client: URS Corporation

Project: DOW Former EMCA, Mama

Report Number: 460-121529-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 10/6/2016 6:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.5° C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

VOLATILE ORGANIC COMPOUNDS
Samples 20161005MW-02 (460-121529-1), 20161005MW-03 (460-121529-2), 20161005MW-07R (460-121529-3), 20161005MW-04 (460-121529-4), 20161005MW-06 (460-121529-5) and TB20161005 (460-121529-6) were analyzed for Volatile organics in accordance with EPA SW-846 Methods 8260C. The samples were analyzed on 10/18/2016.

The following sample was diluted to bring the concentration of target analytes within the calibration range: 20161005MW-02 (460-121529-1). Elevated reporting limits (RLs) are provided.

Sample 20161005MW-02 (460-121529-1)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the Volatile organics analysis.

All quality control parameters were within the acceptance limits.

DISSOLVED GASES
Samples 20161005MW-02 (460-121529-1), 20161005MW-03 (460-121529-2), 20161005MW-07R (460-121529-3), 20161005MW-04 (460-121529-4), 20161005MW-06 (460-121529-5) and TB20161005 (460-121529-6) were analyzed for dissolved gases in accordance with RSK_175. The samples were analyzed on 10/10/2016.

Samples 20161005MW-02 (460-121529-1)[50X], 20161005MW-03 (460-121529-2)[50X], 20161005MW-07R (460-121529-3)[50X], 20161005MW-04 (460-121529-4)[50X] and 20161005MW-06 (460-121529-5)[50X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The following samples were diluted to bring the concentration of target analytes within the calibration range: 20161005MW-02 (460-121529-1), 20161005MW-03 (460-121529-2), 20161005MW-07R (460-121529-3), 20161005MW-04 (460-121529-4) and 20161005MW-06 (460-121529-5). Elevated reporting limits (RLs) are provided.

No difficulties were encountered during the dissolved gases analysis.

All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS
Samples 20161005MW-02 (460-121529-1), 20161005MW-03 (460-121529-2), 20161005MW-07R (460-121529-3), 20161005MW-04 (460-121529-4) and 20161005MW-06 (460-121529-5) were analyzed for total recoverable metals in accordance with EPA Method 200.7 (ICP). The samples were prepared on 10/12/2016 and analyzed on 10/13/2016.

No difficulties were encountered during the metals analysis.

All quality control parameters were within the acceptance limits.

ALKALINITY
Samples 20161005MW-02 (460-121529-1), 20161005MW-03 (460-121529-2), 20161005MW-07R (460-121529-3), 20161005MW-04 (460-121529-4) and 20161005MW-06 (460-121529-5) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 10/18/2016.

No difficulties were encountered during the alkalinity analysis.

All quality control parameters were within the acceptance limits.

HARDNESS
Samples 20161005MW-02 (460-121529-1), 20161005MW-03 (460-121529-2), 20161005MW-07R (460-121529-3), 20161005MW-04 (460-121529-4) and 20161005MW-06 (460-121529-5) were analyzed for hardness in accordance with SM 2340C. The samples were analyzed on 10/19/2016.

No difficulties were encountered during the hardness analysis.

All quality control parameters were within the acceptance limits.

FERROUS IRON
Samples 20161005MW-02 (460-121529-1), 20161005MW-03 (460-121529-2), 20161005MW-07R (460-121529-3), 20161005MW-04 (460-121529-4) and 20161005MW-06 (460-121529-5) were analyzed for ferrous iron in accordance with SM 3500 FE D. The samples were analyzed on 10/19/2016.

No difficulties were encountered during the ferrous iron analysis.

All quality control parameters were within the acceptance limits.

SULFATE
Samples 20161005MW-02 (460-121529-1), 20161005MW-03 (460-121529-2), 20161005MW-07R (460-121529-3), 20161005MW-04 (460-121529-4) and 20161005MW-06 (460-121529-5) were analyzed for sulfate in accordance with ASTM Method D516-90. The samples were analyzed on 10/07/2016.

Sample 20161005MW-03 (460-121529-2)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the sulfate analysis.

All quality control parameters were within the acceptance limits.

NITROGEN-NITRATE
Samples 20161005MW-02 (460-121529-1), 20161005MW-03 (460-121529-2), 20161005MW-07R (460-121529-3), 20161005MW-04 (460-121529-4) and 20161005MW-06 (460-121529-5) were analyzed for Nitrogen-Nitrate in accordance with SM 4500 NO3 F. The samples were analyzed on 10/07/2016.

Nitrite as N failed the recovery criteria low for the MSD of sample 20161005MW-04MSD (460-121529-4) in batch 460-395627.

Refer to the QC report for details.

The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

Refer to the QC report for details.

No other difficulties were encountered during the Niitrate analysis.

All other quality control parameters were within the acceptance limits.

TOTAL ORGANIC CARBON

Samples 20161005MW-02 (460-121529-1), 20161005MW-03 (460-121529-2), 20161005MW-07R (460-121529-3), 20161005MW-04 (460-121529-4) and 20161005MW-06 (460-121529-5) were analyzed for total organic carbon in accordance with SM 5310B. The samples were analyzed on 10/08/2016.

No difficulties were encountered during the TOC analysis.

All quality control parameters were within the acceptance limits.

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-121529-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 395722 Date: 10/07/2016 14:50											
D516-90, 02	460-121529-4 MSD	Sulfate	25.69		mg/L	20.0	93	62-135	6	10	
Batch ID: 398379 Date: 10/19/2016 14:25											
SM 3500 FE D	460-121529-4 MSD	Ferrous Iron	2.33		mg/L	2.00	117	75-120	1	11	
Batch ID: 395627 Date: 10/07/2016 09:16											
SM 4500 NO3 F	460-121529-4 MSD	Nitrate as N	0.437		mg/L	0.500	87	53-135	0	12	
SM 4500 NO3 F	460-121529-4 MSD	Nitrite as N	0.430		mg/L	0.500	77	81-111	6	10	F1
Batch ID: 396188 Date: 10/08/2016 14:48											
SM 5310B	460-121416-D-7 MSD	Total Organic Carbon	49.38		mg/L	50.0	97	85-115	0	10	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN