

Groundwater Sampling and Analysis Report

**April 2017
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:

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May 2017

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

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APRIL 2017 SAMPLING EVENT**

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MAY 2017

TABLE OF CONTENTS

	<u>Page No.</u>
1.0 INTRODUCTION	1
2.0 GROUNDWATER SAMPLING AND ANALYSIS	3
3.0 RESULTS	5
4.0 DATA ASSESSMENT	7
5.0 CONCLUSIONS	13
6.0 CONTINGENCY TRIGGER EVALUATION AND NEXT STEPS.....	14
REFERENCES	

TABLES

Table 1	Groundwater Elevation Measurements (April 18, 2017)
Table 2	Groundwater Analytical Results April 2016 to April 2017
Table 3	Comparison of October 2016 to April 2017 Data
Table 4	Summary of Groundwater Monitoring Parameters

FIGURES

Figure 1	Site Location Map
Figure 2	Site Plan
Figure 3	Groundwater Elevation Map (April 18, 2017)
Figure 4	Summary of Freon Detections in Groundwater (2006 – 2017)
Figure 5	Freon 113 Concentrations, MW-03, MW-04, and MW-07R
Figure 6	Freon 113 Concentrations, GZ-06, MW-02, and MW-06
Figure 7	Freon 123a Concentrations
Figure 8	Freon 1113 Concentrations
Figure 9	Sulfate Concentrations

FIGURES (cont'd)

Figure 10	Methane Concentrations
Figure 11	Dissolved Oxygen Concentrations
Figure 12	Dissolved Oxygen vs Temperature, MW-02
Figure 13	Oxidation-Reduction Potential

APPENDICES

Appendix A	Low Flow Groundwater Purging/Sampling Logs
Appendix B	Historical Analytical Data Summary
Appendix C	Data Usability Summary Report

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 April 2017 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 April 2017 groundwater sampling event was the twenty-fifth site-wide sampling event since the interim remedial measure (IRM) began in November 2004 and the sixth site-wide sampling event following the October 2014 remedial injections.

2.0 GROUNDWATER SAMPLING AND ANALYSIS

On April 18, 2017, AECOM 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 April 18, 2017. The data are presented in Table 1 and Figure 3. Typically, general groundwater flow is to the north. The resulting groundwater contours for the April 18, 2017 data as shown in Figure 3 are consistent with this flow pattern. Monitoring of the Sheldrake River water surface level was discontinued in 2015 due to traffic safety concerns for the field personnel taking the measurements.

3.0 RESULTS

The analytical results for the April 2017 sampling event, along with the previous April and October 2016 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 April 2017 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 ($\mu\text{g/L}$).

The April 2017 results presented in Table 2 and Figure 4 show that only the samples from wells MW-02, MW-03, and MW-06 contained Freon 113 at concentrations above the 5 $\mu\text{g/L}$ guidance value for this compound. The Freon 113 concentration in these samples was 2,200 $\mu\text{g/L}$ in well MW-02, 140 $\mu\text{g/L}$ in well MW-03, and 5.5 $\mu\text{g/L}$ in well MW-06.

The April 2017 results show that only the samples from wells MW-02, MW-03, and MW-06 contained Freon 123a at a concentration above the 5 $\mu\text{g/L}$ guidance value for this compound. The Freon 123a concentration in these samples was 170 $\mu\text{g/L}$ in well MW-02, 52 $\mu\text{g/L}$ in well MW-03, and 13 $\mu\text{g/L}$ in well MW-06.

The April 2017 results show that only the samples from wells MW-02, MW-03, and MW-06 contained Freon 1113 at a concentration above the 5 $\mu\text{g/L}$ guidance value for this compound. The Freon 1113 concentration in these samples was 1,300 $\mu\text{g/L}$ in well MW-02, 230 $\mu\text{g/L}$ in well MW-03, and 60 $\mu\text{g/L}$ in well MW-06.

The groundwater samples collected in April 2017 were analyzed for dehalobacter and the sample from MW-02 was also analyzed for dehalococcoides. The analytical results, presented in Table 2, indicate that in April 2017 dehalobacter was only detected in wells MW-03 [6 gene copies per milliliter (GC/mL)] and MW-07R (3 GC/mL).

The dehalococcoides concentration in MW-02 was 400 colony equivalents per milliliter (CEQ/mL) in April 2017, which is an increase from October 2016 (90 CEQ/mL).

In general, the results of the semi-annual groundwater sampling event completed in April 2017 showed that concentrations of Freon 113, Freon 123a, and Freon 1113 have increased. Freon 113 concentrations increased in wells MW-02 and MW-03; Freon 123A concentrations increased in wells MW-02, MW-03, MW-06, and MW-07R; Freon 1113 concentrations increased in well MW-02 and decreased in wells MW-03, MW-04, MW-06, and MW-07R. The highest total Freon concentrations are in MW-02.

4.0 DATA ASSESSMENT

The groundwater analytical data for April 2017 is the sixth site-wide set of data collected following the October 2014 supplemental injection. The previous round of site-wide groundwater sampling occurred in October 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 2017. 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 October 2016 data compared to the April 2017 data followed by an assessment of the historical results over time. Table 3 presents a summary comparison of October 2016 and April 2017 parameter concentration trends.

Freon 113

In comparison with the October 2016 results, the analytical results for the April 2017 sampling events (Figures 5 and 6) indicate that Freon 113:

- Increased in MW-02 from 940 µg/L in October 2016 to 2,200 µg/L in April 2017;
- Increased in MW-03 from 11 µg/L in October 2016 to 140 µg/L in April 2017;
- Remained non-detect in MW-04 in October 2016 and April 2017;
- Increased in MW-06 from non-detect in October 2016 to 5.5 µg/L in April 2017; and
- Remained non-detect in MW-07R in October 2016 and April 2017.

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. Between November 2012 and October 2015, Freon 113 concentrations steadily decreased and were not detected above the groundwater criteria in 8 of the 14 sampling events performed during this period (Freon 113 was above the criteria in November 2012, April 2013, July 2014, March 2015, April 2015, and October 2015). Freon 113 concentrations detected at well MW-02 during the three most recent sampling events (April and October 2016 and April 2017) were significantly higher than levels detected since 2012 (960 µg/L, 940 µg/L, and 2,200 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 rebound of Freon 113 at MW-03 in March and April 2015, in April and October 2016, and again in April 2017 coincides with increases 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 in MW-07R (15 µg/L) in October 2014 decreased to non-detect in March, April, and October 2015, April and October 2016, and April 2017.

Freon 113 has not been detected in well MW-04 since April 2015. Freon 113 was not detected in MW-06 in the July and October 2014 sampling events, increased slightly to 1.6 µg/L in April 2015, and decreased to non-detect in October 2015 and April and October 2016. In April 2017, the concentration of Freon 113 increased slightly to 5.5 µg/L.

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 April 2017 Freon 123a results in comparison with the October 2016 results.

Compared to the October 2016 data, the analytical results for the April 2017 sampling event (Figure 7) indicate that Freon 123a:

- Increased in MW-02 from 37 µg/L in October 2016 to 170 µg/L in April 2017;
- Increased in MW-03 from 3.3 µg/L in October 2016 to 52 µg/L in April 2017;
- Remained non-detect in MW-04 in October 2016 and April 2017;

- Increased in MW-06 from 0.28 µg/L in October 2016 to 13 µg/L in April 2017; and
- Increased in MW-07R from non-detect in October 2016 to 0.32 µg/L in April 2017.

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. Concentrations increased again in April 2017 to 52 µg/L. Freon 123a concentrations in well MW-07R have remained well below TOGS 1.1.1 criteria since September 2012.

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, decreased to 0.28 µg/L in October 2016, and increased to 13 µg/L in April 2017. Freon 123a has never been detected in well MW-04.

Freon 1113

Compared to the October 2016 data, the analytical results for the April 2017 sampling event (Figure 8) indicate that Freon 1113:

- Increased in MW-02 from a concentration of 1,000 µg/L in October 2016 to 1,300 µg/L in April 2017;
- Decreased in MW-03 from a concentration of 290 µg/L in October 2016 to 230 µg/L in April 2017;
- Decreased in MW-04 from 4.3 µg/L in October 2016 to non-detect in April 2017;
- Decreased in MW-06 from 68 µg/L in October 2016 to 60 µg/L in April 2017; and
- Decreased in MW-07R from a concentration of 65 µg/L in October 2016 to 3.6 µg/L in April 2017.

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 and April 2017

concentrations of Freon 1113 in wells MW-02 and MW-03 were the highest levels detected in those wells.

Sulfate

In comparison with the October 2016 data, the April 2017 sulfate concentrations increased in MW-02, MW-03, and MW-07R and decreased in MW-04 and MW-06 (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 October 2016 data, the April 2017 methane concentrations (Figure 10) decreased in wells MW-03, MW-04, and MW-07R and increased in wells MW-02 and MW-06.

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 wells MW-03, MW-04, and MW-07R have been considerably lower (e.g., less than 3,000 µg/L) since April 2016, suggesting that conditions are becoming less favorable for methanogenesis. However, methane concentrations increased to above 3,000 µg/L in wells MW-02 and MW-06 in April 2017.

Dissolved Oxygen

In comparison with the October 2016 data, the April 2017 dissolved oxygen concentrations (Figure 11) decreased in all five wells to below the detection limit. 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 April 2017 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 April 2017 temperature measurements were as much as 7 degrees Celsius lower than measurements recorded in October 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 October 2016 data, the April 2017 oxidation-reduction potential values (Figure 13) increased significantly. The April 2017 values were all positive, ranging from 11 millivolts (mV) to 26 mV, except in well MW-02 with a value of -6.0 mV. Oxidation-reduction potential values have typically been negative 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 October 2016 was 90 CEQ/mL, and increased in April 2017 to 400 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 October 2016 data showed a dehalobacter concentration in MW-02 at 30 GC/mL and a concentration in MW-03 at 10 GC/mL. The April 2017 results showed a decrease in dehalobacter concentration in MW-02 to non-detect and a decrease in MW-03 to 6 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 dehalobacter concentrations in October 2015 (20 GC/mL), April 2016 (7 GC/mL), October 2016 (5 GC/mL), and April 2017 (3 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 dehalobacter 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 before decreasing to non-detect in April 2017.

5.0 CONCLUSIONS

The majority of the original Freon 113 release has been remediated over the past 14 years through anaerobic bioremediation. With the exception of MW-02, the Freon 113 concentrations detected during the April 2017 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 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

In response to increasing levels of Freon 113, particularly in well MW-02, AECOM will implement additional remedial injections in 2017. AECOM will work with Rohm and Haas technical staff to prepare a work plan for the remedial injections. The work plan will include the type and concentration of remedial amendments and the injection locations.

In accordance with the SMP, the 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). Following a discussion with Rohm and Haas, AECOM, and the NYSDEC in January 2017, the frequency of groundwater sampling has been increased from semi-annual to quarterly. The next sampling event will be in July 2017. Each groundwater sample will be analyzed for Freon-113, Freon-123a, and Freon-1113, as well as other water quality and natural attenuation parameters as listed in Table 4.

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TABLES

TABLE 1
GROUNDWATER ELEVATION MEASUREMENTS (April 18, 2017)
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location	Measuring Point Elevation¹ (ft.)	Depth to Water² (ft.)	Water Surface Elevation (ft.)
GZ-03 ³	26.16	5.32	20.84
GZ-06	28.02	6.85	21.17
MW-01	25.74	3.94	21.80
MW-02	25.63	4.96	20.67
MW-03	25.59	5.42	20.17
MW-04	25.31	5.11	20.20
MW-05	24.63	4.58	20.05
MW-06	25.77	5.55	20.22
MW-07R	25.63	5.52	20.11
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	10.43	16.98

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
APRIL 2016 TO APRIL 2017
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-03	MW-03
Sample ID			20160427MW-02	20161005MW-02	20170418MW-02	20160427MW-03	20161005MW-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/27/16	10/05/16	04/18/17	04/27/16	10/05/16
Parameter	Units	Criteria*					
Volatiles							
Chlorotrifluoroethene (Freon-1113)	UG/L	5	940	1,000	1,300	180	290
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	960 J	940	2,200	42	11
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	220	37	170	30	3.3
Dissolved Gases							
Methane	UG/L	-	2,600	2,400	5,800	2,100	2,300
Total Metals							
Iron	UG/L	300	63,100	53,800	61,800	23,700	22,200
Miscellaneous Parameters							
Alkalinity, Total (as CaCO ₃)	MG/L	-	261	250	281	313	297
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	261	250	281	313	297
Alkalinity, Carbonate (as CaCO ₃)	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	-	40	90	400 J	NA	NA
Dehalobacter	GC/mL	-	80 J	30	3.0 U	4 J	10
Hardness (as CaCO ₃)	MG/L	-	400	470	410	400	420
Nitrogen, Nitrate	MG/L	10	0.10 U	0.28	0.10 UJ	0.10 U	0.13
Nitrogen, Nitrite	MG/L	1	0.085 J	0.037 J	0.049 J-	0.076 J	0.036 J
Sulfate	MG/L	250	41.3	27.2	36.2	78.2	56.1
Total Organic Carbon	MG/L	-	6.0	6.2	7.1	7.6	5.8
Ferrous Iron (lab)	MG/L	-	NA	0.25 J	NA	NA	0.35 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

J - Analyte is reported below the PQL at an estimated concentration. (J-) - Estimated result biased low.

U - Non-Detect UJ - Not detected above the estimated quantitation limit. 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

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
APRIL 2016 TO APRIL 2017
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-03	MW-03
Sample ID			20160427MW-02	20161005MW-02	20170418MW-02	20160427MW-03	20161005MW-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/27/16	10/05/16	04/18/17	04/27/16	10/05/16
Parameter	Units	Criteria*					
Field Parameter							
Dissolved Oxygen	MG/L	-	0.66	0.40	0 U	0.54	0.32
Ferrous Iron	MG/L	-	4.5	11	11	6.5	5.5
Oxidation-Reduction Potential	mV	-	-102	-151	-6	-88	-125
pH	S.U.	-	6.14	6.49	6.40	6.31	6.52
Specific Conductance	MS/CM	-	2.71	2.69	2.23	2.08	2.03
Temperature	DEG C	-	12.03	18.91	11.27	13.90	20.15
Turbidity	NTU	-	7.2	0.1	0 U	4.5	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

J - Analyte is reported below the PQL at an estimated concentration. (J-) - Estimated result biased low.

U - Non-Detect UJ - Not detected above the estimated quantitation limit. 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

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
APRIL 2016 TO APRIL 2017
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-04	MW-04	MW-04	MW-06
Sample ID			20170418MW-03	20160427MW-04	20161005MW-04	20170418MW-04	20160427MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/18/17	04/27/16	10/05/16	04/18/17	04/27/16
Parameter	Units	Criteria*					
Volatiles							
Chlorotrifluoroethene (Freon-1113)	UG/L	5	230	0.52 J	4.3	1.0 U	51
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	140	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	52	1.0 U	1.0 U	1.0 U	1.1
Dissolved Gases							
Methane	UG/L	-	1,500	610	1,000	770	890
Total Metals							
Iron	UG/L	300	24,200	16,700	10,900	21,700	20,600
Miscellaneous Parameters							
Alkalinity, Total (as CaCO ₃)	MG/L	-	264	255	277	400	277
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	264	255	277	400	277
Alkalinity, Carbonate (as CaCO ₃)	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	-	6	3.0 U	3.0 U	3.0 U	3 J
Hardness (as CaCO ₃)	MG/L	-	390	450	320	540	380
Nitrogen, Nitrate	MG/L	10	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Nitrogen, Nitrite	MG/L	1	0.031 J	0.052 J	0.046 J	0.028 J	0.098 J
Sulfate	MG/L	250	56.6	5.0 U	7.2	5.0 U	36.3
Total Organic Carbon	MG/L	-	6.0	9.2	9.8	13.2	4.9
Ferrous Iron (lab)	MG/L	-	NA	NA	0.10 UJ	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

J - Analyte is reported below the PQL at an estimated concentration. (J-) - Estimated result biased low.

U - Non-Detect UJ - Not detected above the estimated quantitation limit. 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

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
APRIL 2016 TO APRIL 2017
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-04	MW-04	MW-04	MW-06
Sample ID			20170418MW-03	20160427MW-04	20161005MW-04	20170418MW-04	20160427MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/18/17	04/27/16	10/05/16	04/18/17	04/27/16
Parameter	Units	Criteria*					
Field Parameter							
Dissolved Oxygen	MG/L	-	0 U	0.54	0.28	0 U	0.59
Ferrous Iron	MG/L	-	10	5.5	6.0	8.0	7.0
Oxidation-Reduction Potential	mV	-	18	-79	-106	20	-97
pH	S.U.	-	6.51	6.33	6.61	6.56	6.35
Specific Conductance	MS/CM	-	1.63	2.90	2.02	2.15	1.97
Temperature	DEG C	-	12.91	14.79	21.54	13.83	13.61
Turbidity	NTU	-	0 U	0.0	1.5	0 U	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

J - Analyte is reported below the PQL at an estimated concentration. (J-) - Estimated result biased low.

U - Non-Detect UJ - Not detected above the estimated quantitation limit. 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

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
APRIL 2016 TO APRIL 2017
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-07R	MW-07R	MW-07R
Sample ID			20161005MW-06	20170418MW-06	20160427MW-07R	20161005MW-07R	20170418MW-07R
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/05/16	04/18/17	04/27/16	10/05/16	04/18/17
Parameter	Units	Criteria*					
Volatiles							
Chlorotrifluoroethene (Freon-1113)	UG/L	5	68	60	22	65	3.6
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1.0 U	5.5	1.0 U	1.0 U	1.0 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	0.28 J	13	1.0 U	1.0 U	0.32 J
Dissolved Gases							
Methane	UG/L	-	280	3,100	2,400	2,500	990
Total Metals							
Iron	UG/L	300	14,900	20,200	39,300	42,200	29,800
Miscellaneous Parameters							
Alkalinity, Total (as CaCO ₃)	MG/L	-	256	290	357	374	321
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	256	290	357	374	321
Alkalinity, Carbonate (as CaCO ₃)	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	-	4	3.0 U	7 J	5	3
Hardness (as CaCO ₃)	MG/L	-	320	360	630	510	560
Nitrogen, Nitrate	MG/L	10	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Nitrogen, Nitrite	MG/L	1	0.031 J	0.024 J	0.072 J	0.045 J	0.035 J
Sulfate	MG/L	250	30.7	26.5	5.0 U	5.0 U	5.4
Total Organic Carbon	MG/L	-	4.3	5.1	9.7	10.4	7.6
Ferrous Iron (lab)	MG/L	-	0.10 UJ	NA	NA	2.6 J	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

J - Analyte is reported below the PQL at an estimated concentration. (J-) - Estimated result biased low.

U - Non-Detect UJ - Not detected above the estimated quantitation limit. 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

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
APRIL 2016 TO APRIL 2017
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-07R	MW-07R	MW-07R
Sample ID			20161005MW-06	20170418MW-06	20160427MW-07R	20161005MW-07R	20170418MW-07R
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/05/16	04/18/17	04/27/16	10/05/16	04/18/17
Parameter	Units	Criteria*					
Field Parameter							
Dissolved Oxygen	MG/L	-	0.44	0 U	0.53	0.31	0 U
Ferrous Iron	MG/L	-	4.5	6.0	7.0	11	10
Oxidation-Reduction Potential	mV	-	-102	11	-95	-119	26
pH	S.U.	-	6.66	6.63	6.25	6.46	6.43
Specific Conductance	MS/CM	-	1.59	1.76	3.44	2.61	3.53
Temperature	DEG C	-	17.83	12.04	14.10	18.98	12.47
Turbidity	NTU	-	0 U	0 U	0.0	0 U	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

J - Analyte is reported below the PQL at an estimated concentration. (J-) - Estimated result biased low.

U - Non-Detect UJ - Not detected above the estimated quantitation limit. 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

Table 3
Comparison of April 2017 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	Field Parameters	Natural Attenuation Parameters
July 2017	MW-02	x	x	x	x	x	x	x
	MW-03	x	x	x	x	x	x	x
	MW-04	x	x	x	x	x	x	x
	MW-06	x	x	x	x	x	x	x
	MW-07R	x	x	x	x	x	x	x

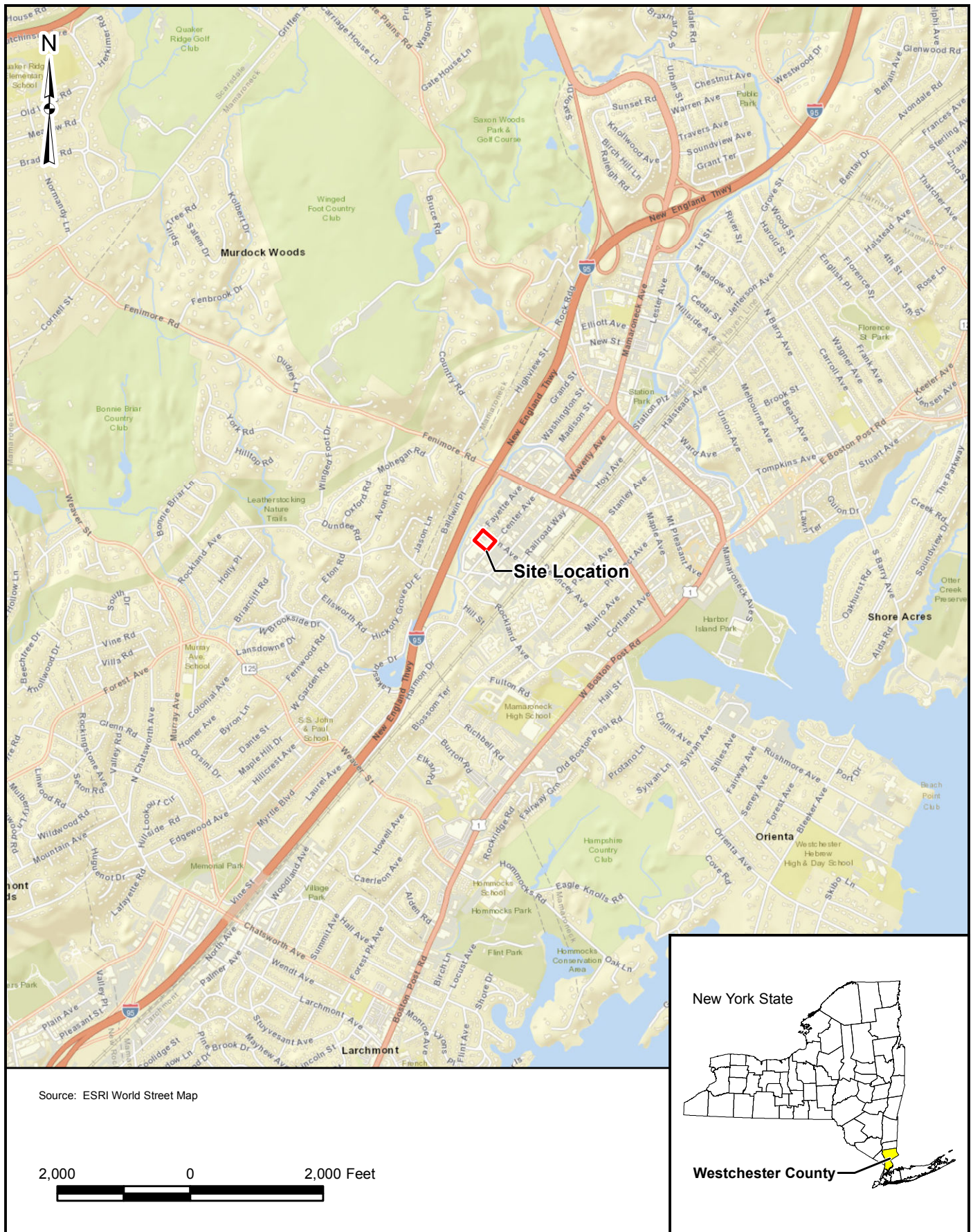
Notes:

* 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

J:\Projects\117172730.000001\ArcMap\Site Location (Portrait).mxd 2/2/2017

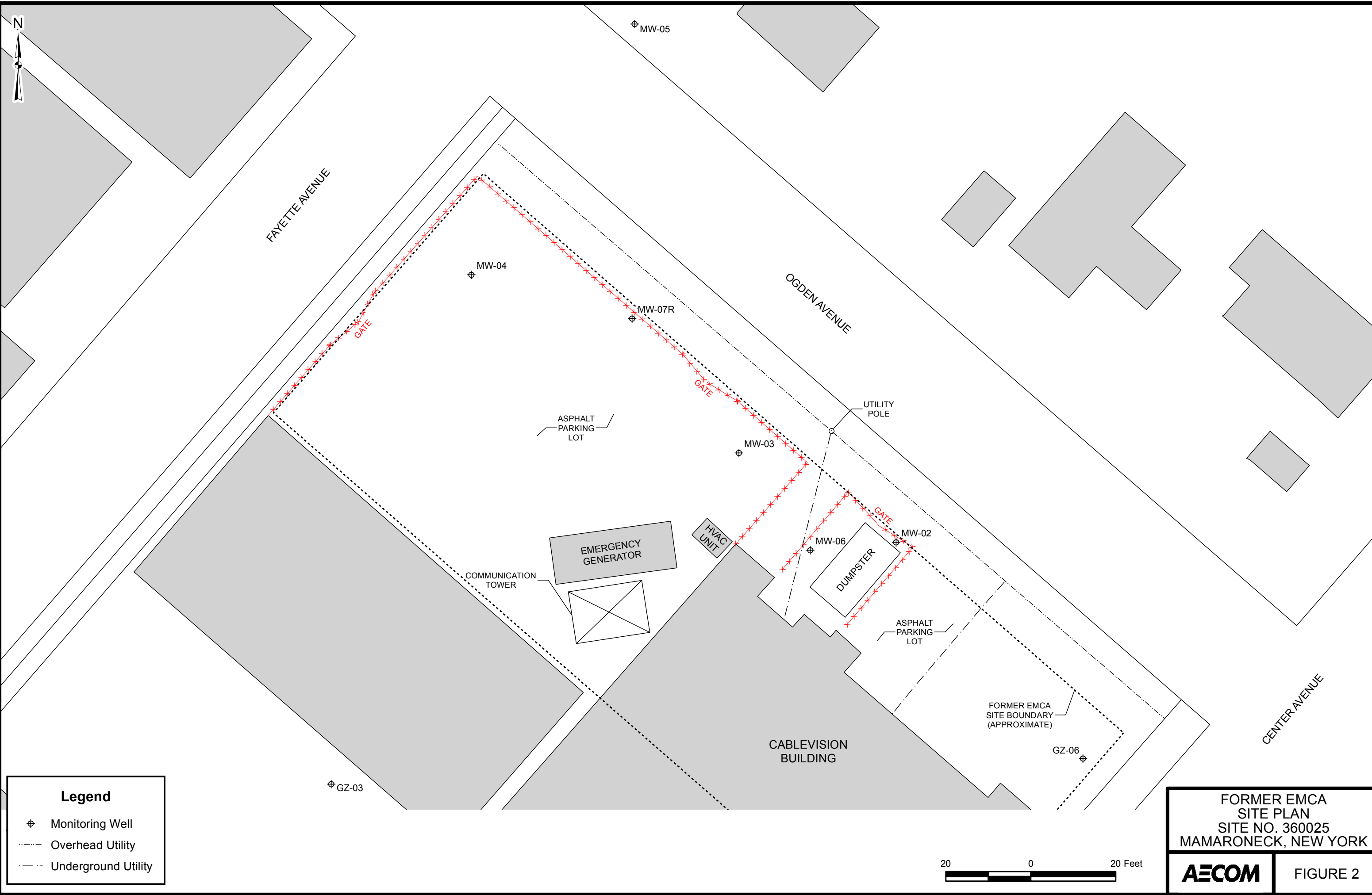


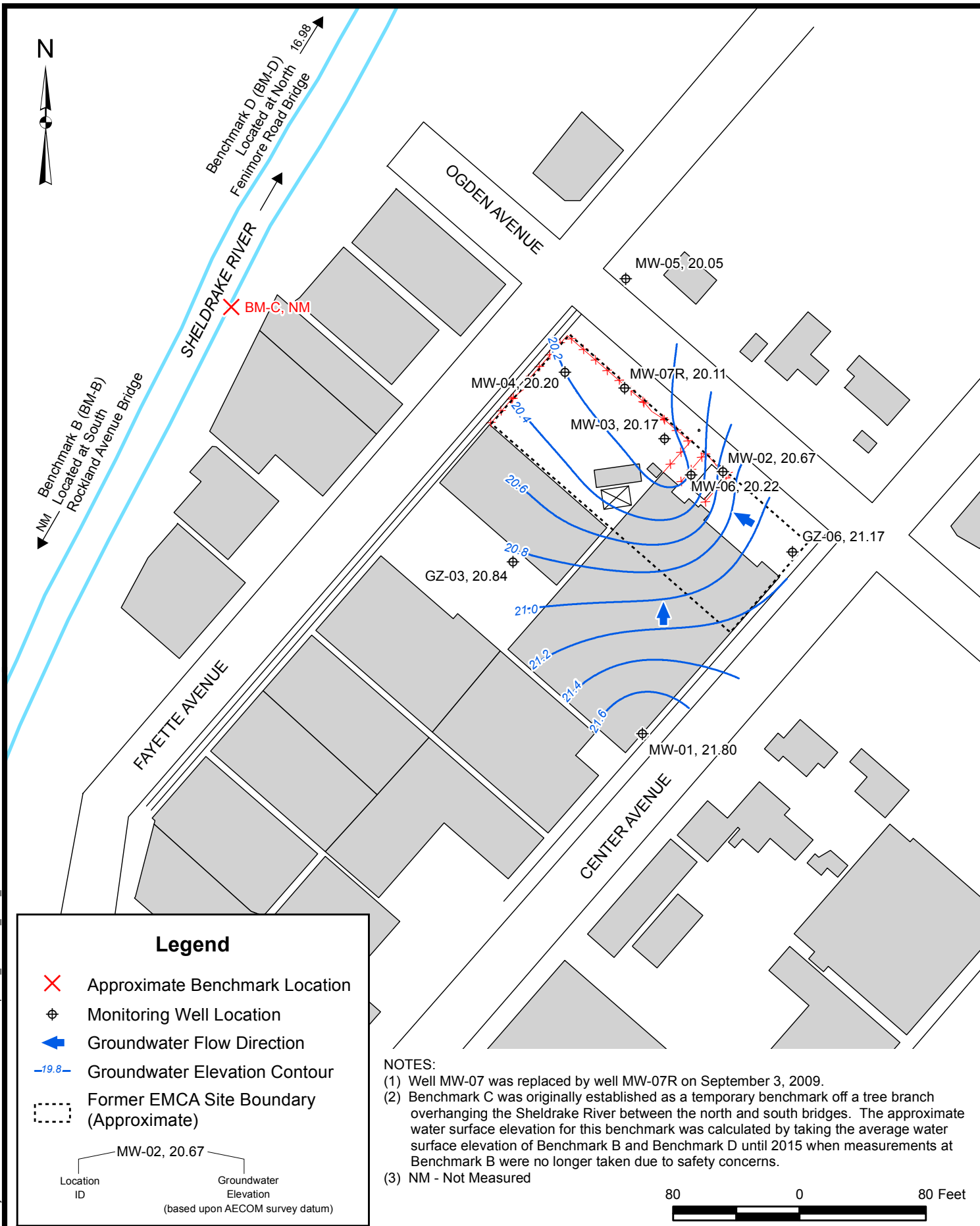
AECOM

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

FIGURE 1

J:\Projects\11172730.00\000\00\GIS\2001\ArcMap\SITE PLAN.mxd 2/2/2017





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SHELDRAKE RIVER

FAYETTE AVENUE

OGDEN AVENUE

CENTER AVENUE

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	04/17
Freon-113	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.38J	ND	ND	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	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	ND

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	04/17
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	140
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	52
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	230

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	04/17
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	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	0.32J
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	3.6

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	04/17
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	2200
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	170
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	1300

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	04/17
Freon-113	ND	3J	ND	ND	ND	2.0J	ND	ND	ND	33	ND	82J	3.3	0.19J	ND	26	ND	ND	1.6	ND	ND	ND	ND	5.5
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	13
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	60

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



FORMER EMCA
SUMMARY OF FREON
DETECTIONS IN GROUNDWATER
(2006 - 2017)
SITE NO. 360025
MAMARONECK, NEW YORK

AECOM

FIGURE 4

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

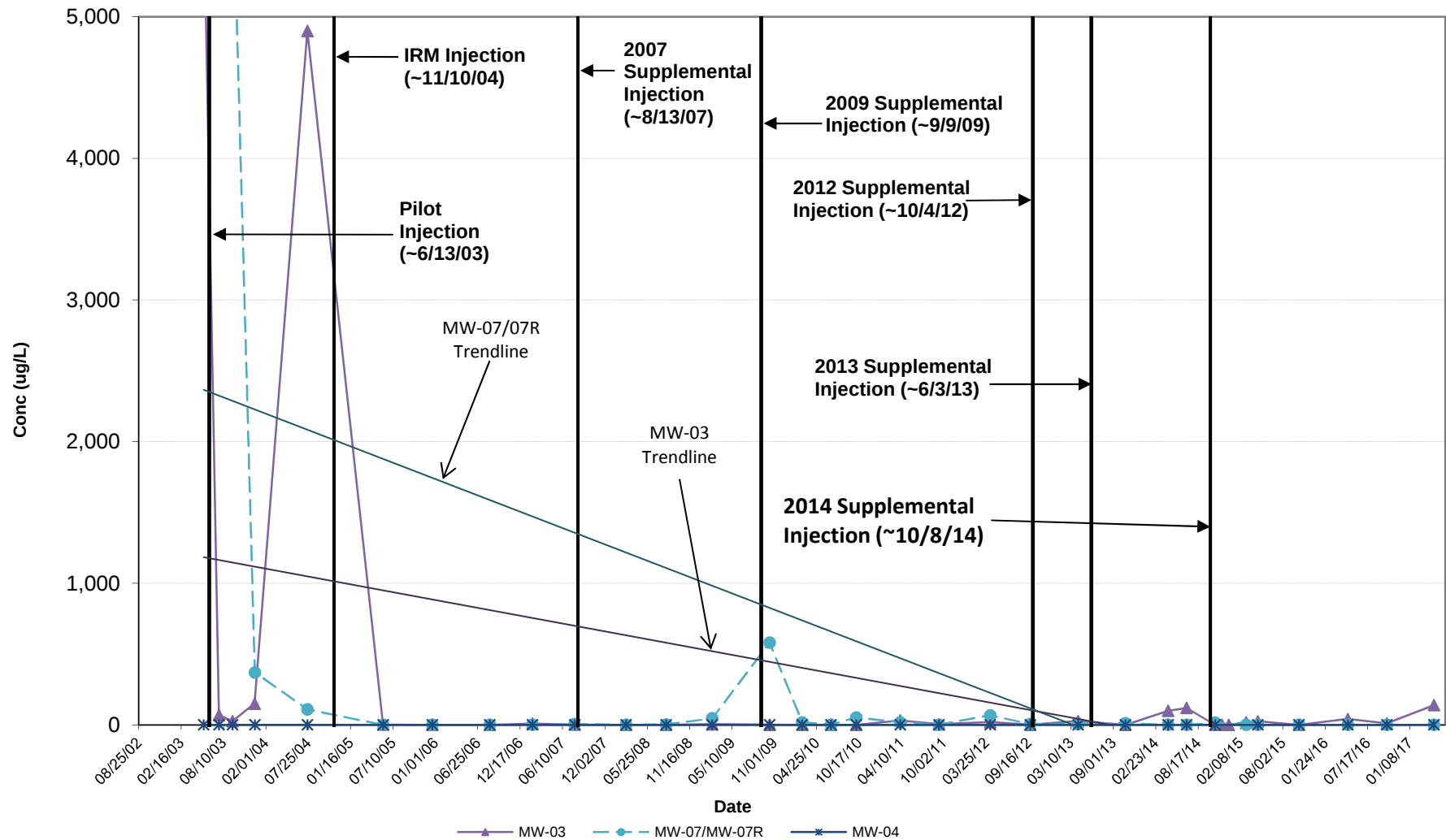


FIGURE 6 FORMER EMCA SITE

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

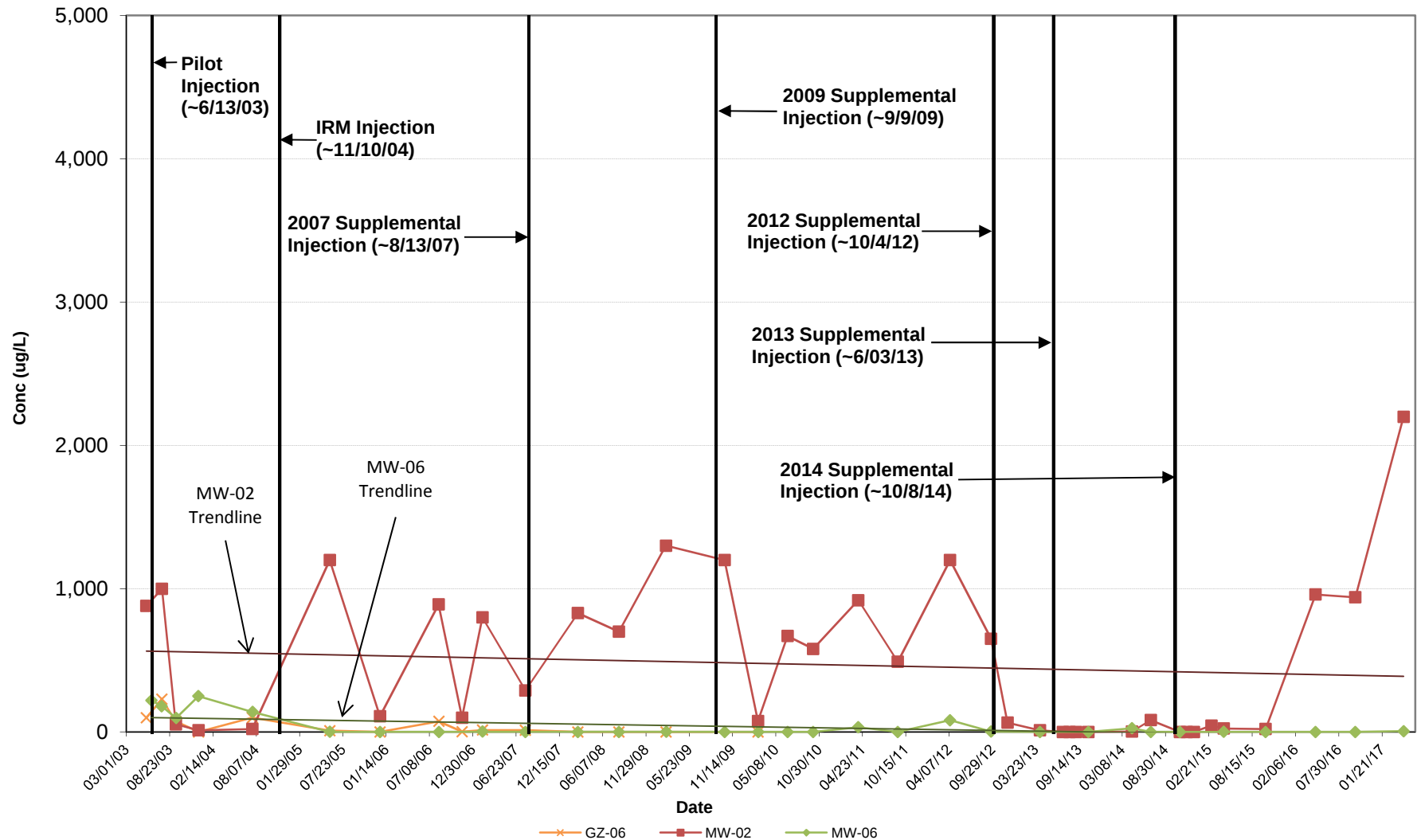


FIGURE 7
FORMER EMCA SITE
Freon 123a Concentrations

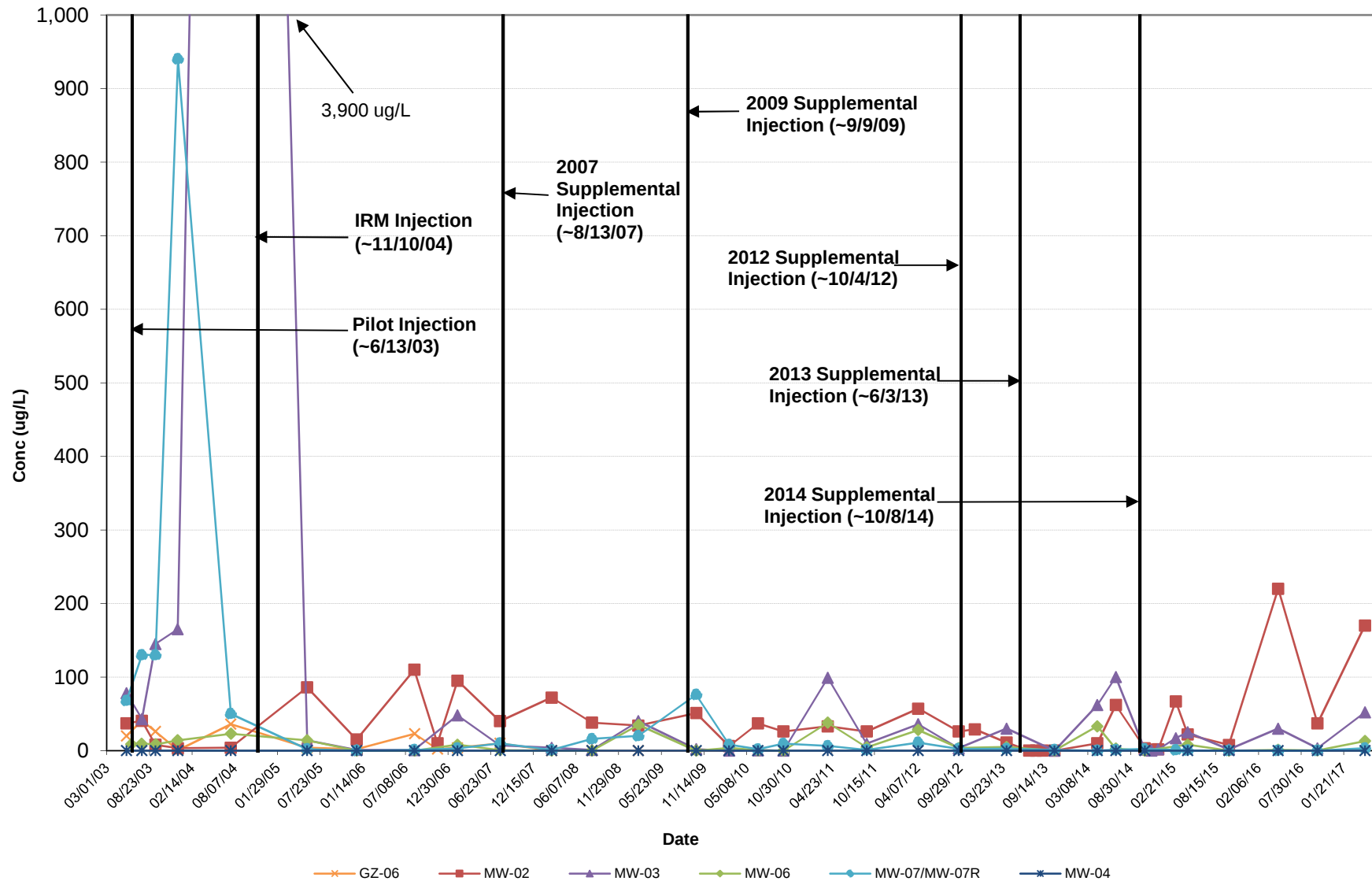


FIGURE 8
FORMER EMCA SITE
Freon 1113 Concentrations

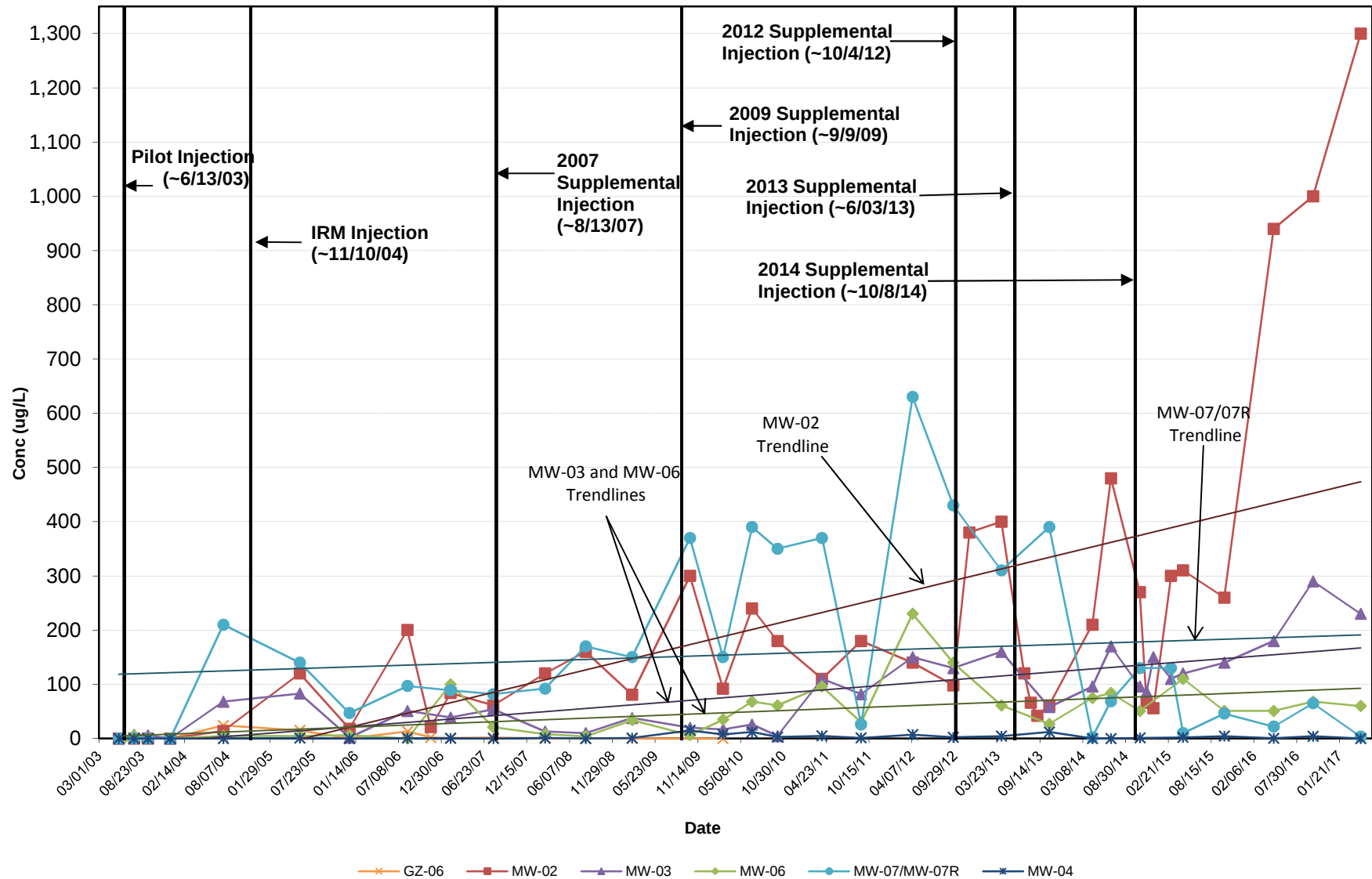


FIGURE 9 FORMER EMCA SITE

Sulfate Concentrations

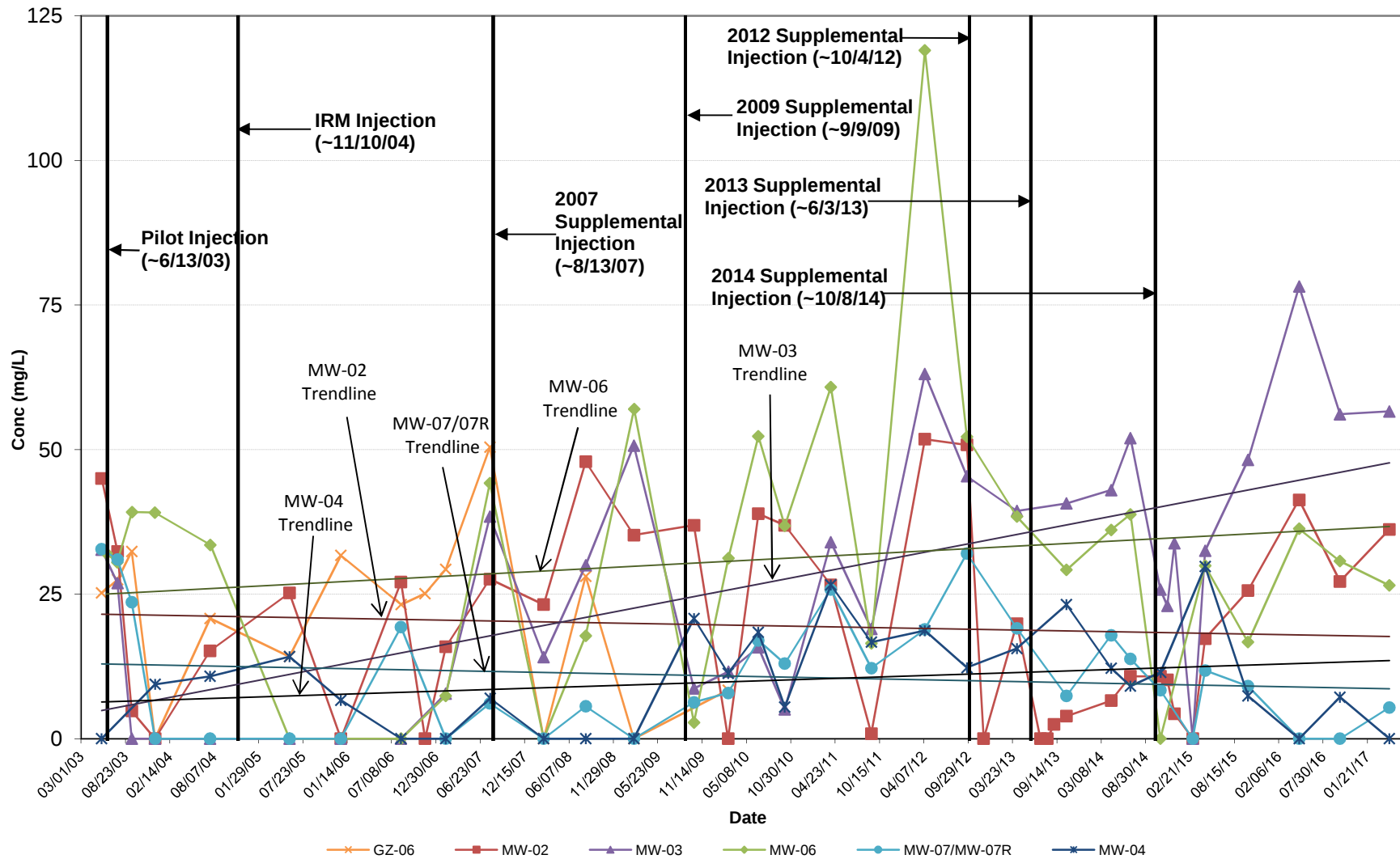


FIGURE 10
FORMER EMCA SITE
Methane Concentrations

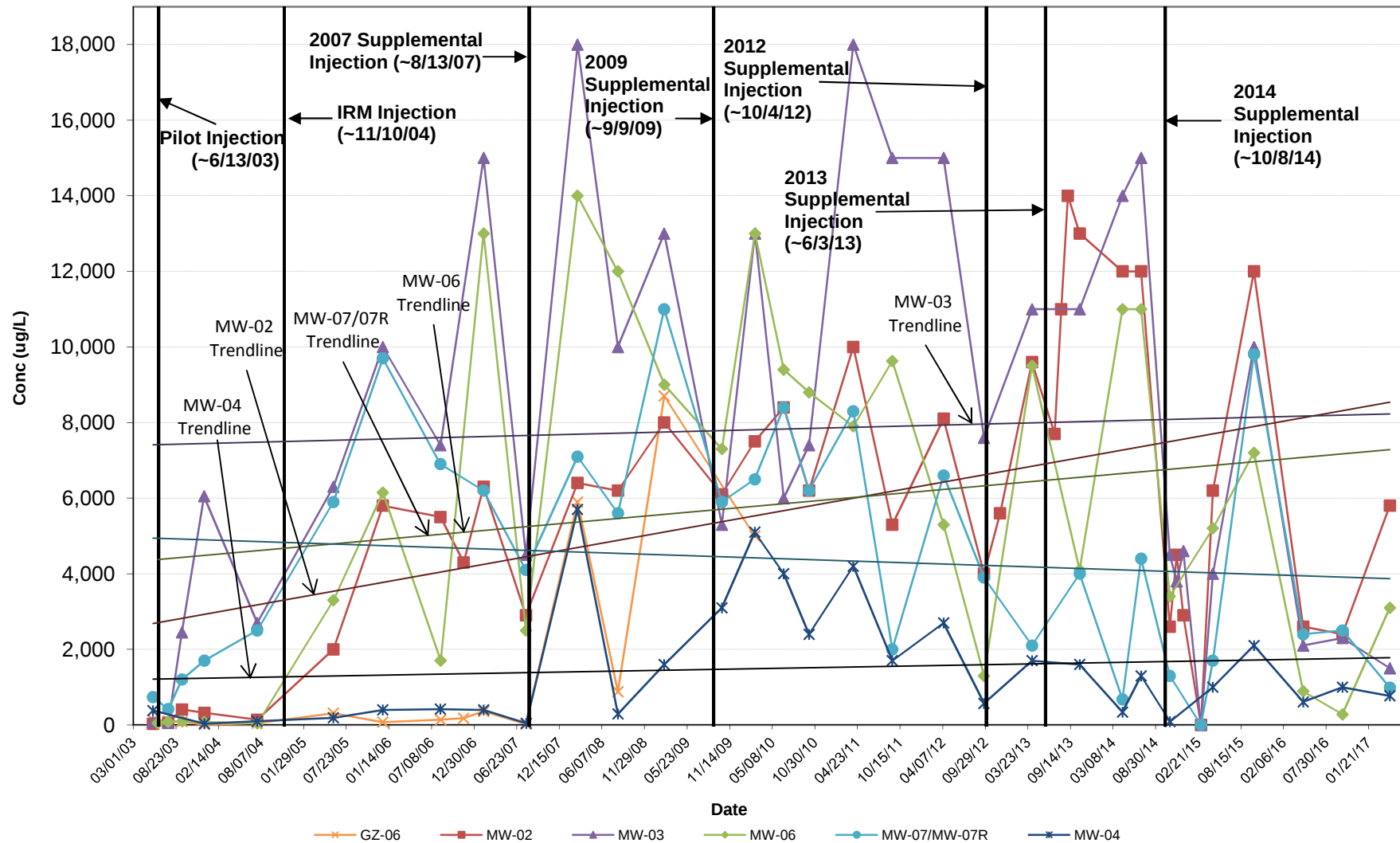


FIGURE 11 FORMER EMCA SITE

Dissolved Oxygen Concentrations

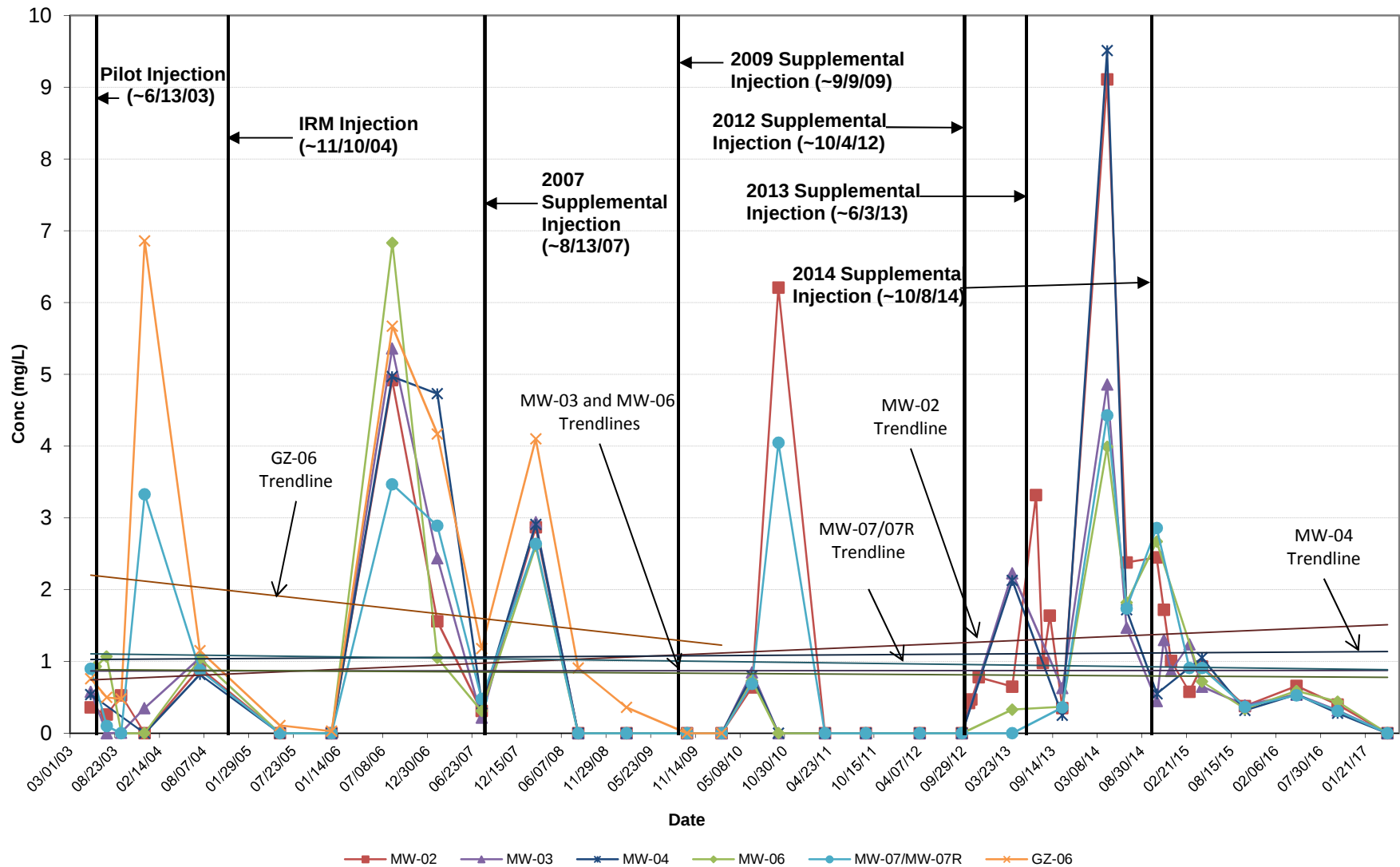


FIGURE 12
FORMER EMCA SITE
MW-02
Dissolved Oxygen vs Temperature

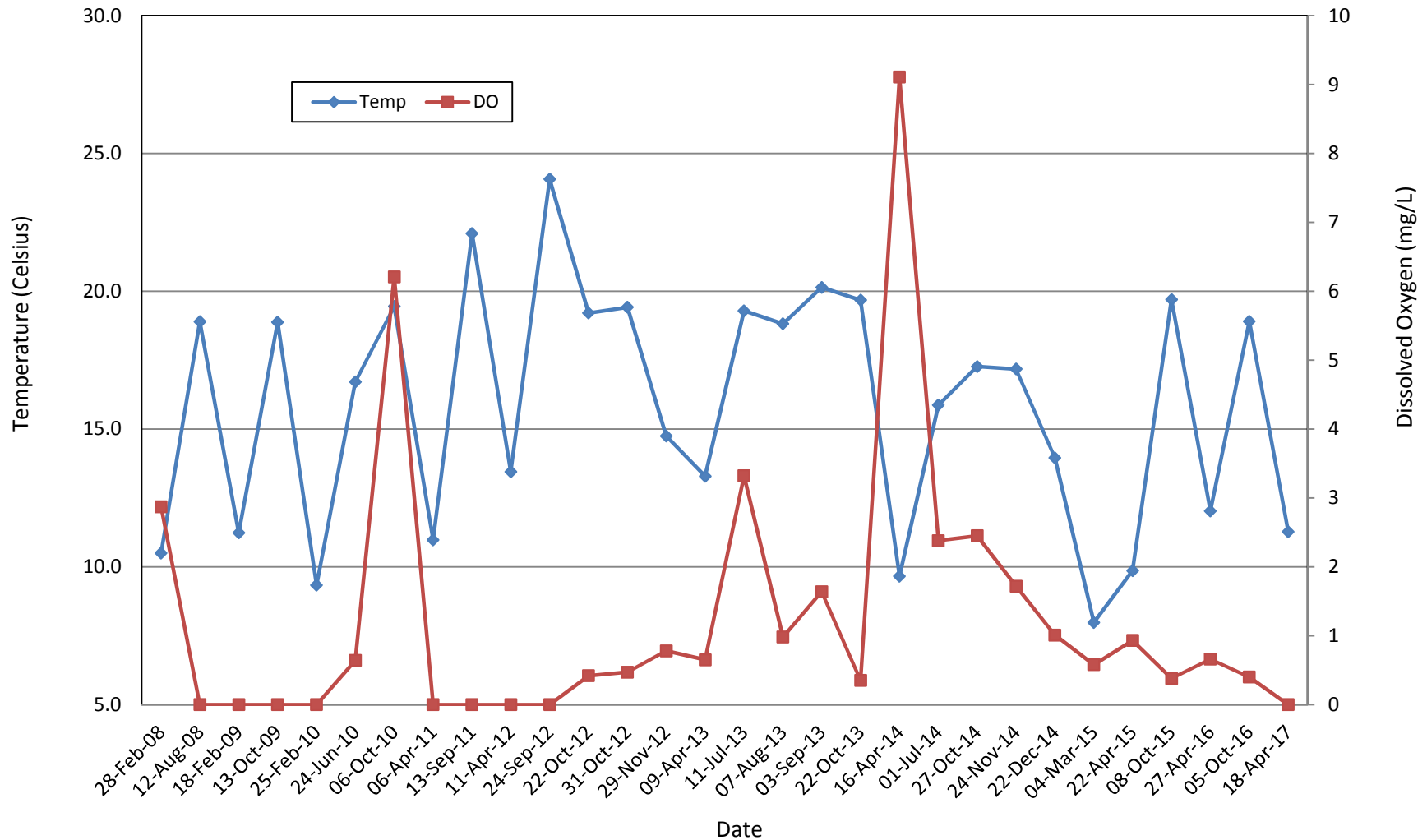
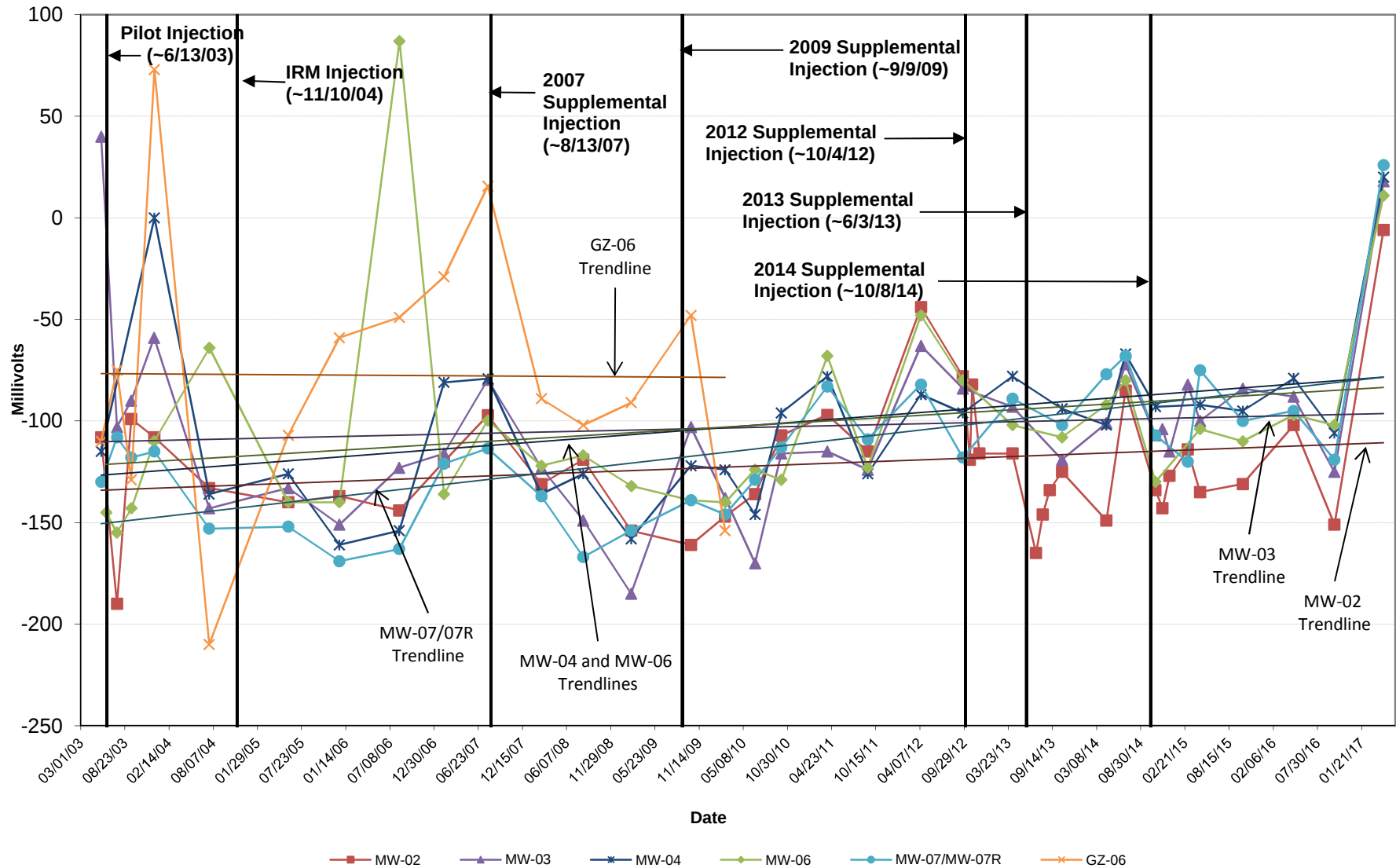


FIGURE 13
FORMER EMCA SITE
Oxidation-Reduction Potential



APPENDIX A

LOW FLOW GROUNDWATER PURGING/SAMPLING LOGS

EMCA
Mamaroneck, NY
Date: 4/18/17

Well ID	DTP	DTW 4Q16	DTB 4Q16	DTW	DTB
GZ-03	x	6.69	9.81	5.32	8.92
GZ-06	x	8.09	15.20	6.85	15.21
MW-01	x	5.48	8.02	3.94	7.88
MW-02	x	6.11	11.99	4.96	12.04
MW-03	x	5.99	13.98	5.42	13.95
MW-04	x	5.01	11.59	5.11	11.59
MW-05	x	5.44	15.18	4.58	15.21
MW-06	x	6.52	18.49	5.55	18.45
MW-07R	x	6.48	19.74	5.52	12.28
BM D	x	10.39	10.79	10.43	11.15

take p. 12 ✓

- concrete pad is crumbling

- Road box is not covered in

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: Dow/ Rohm& Haas, former EMCA

Site: Mamaroneck, NY

Well I.D.:

NW-02

Date: 4/18/2017

Sampling Personnel: Megan Dascoli

Company: URS Corporation

Purging/
Sampling
Device:

Low Flow/ Peristaltic Pump- Geopump

Tubing Type: HDPE & Silicone

Pump/Tubing
Inlet
Location:

11' 6 TOR

Measuring Point: Below Top of Riser Initial Depth to Water:

4.96

Depth to Well Bottom: 12.04

Well
Diameter:

1"

Screen Length: 10'

**Casing
Type:**

PVC

Volume in 1
Well Casing
(liters):

Estimated
Purge
Volume
(liters):

Sample ID:

20170418 MW-02

Sample
Time:

850

QA/QC:

— TB20170418

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

PURGE PARAMETERS

[illegible]

original sample
diluted
by $\frac{1}{2}$

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 ($\text{vol}_{\text{cyl}} = \pi r^2 h$)

Remarks:

water: clear, no odor

Note: Dilute 25mg sample + reagent, Take 12.5mg + added 12.5mg of pure water.

No. It was $\leftarrow$ in $\rightarrow$ 11.10.10

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: Dow/Rohm & Haas, former EMCA Site: Mamaroneck, NY Well I.D.: MW-03
Date: 4/18/2017 Sampling Personnel: Megan Dascoli Company: URS Corporation

Purging/
Sampling
Device: Low Flow/ Peristaltic Pump- Geopump Tubing Type: HDPE & Silicone Pump/Tubing
Inlet Location: 13'
Measuring Point: Below Top of Riser Initial Depth to Water: 5.42 Depth to Well Bottom: 13.95 Well Diameter: 1" Screen Length: 10'
Casing Type: PVC Volume in 1 Well Casing (liters): Estimated Purge Volume (liters):

Sample ID: 20170418 MW-03 Sample Time: 1157 QA/QC: TB 20170418

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

PURGE PARAMETERS

[illegible]

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 ($\text{vol}_{\text{cyl}} = \pi r^2 h$)

Remarks:

$\frac{1}{2}$ of 25 ug + reagent diluted w/ sample water = 5.0 ug/l x 2 = 10 ug/l

Remarks:

Project: Dow/ Rohm & Haas, former EMCA Site: Mamaroneck, NY Well I.D.: MW-06
Date: 4/18/2017 Sampling Personnel: Megan Dascoli Company: URS Corporation

Purging/ Sampling	Pump/Tubing Inlet	
Device: <u>Low Flow/ Peristaltic Pump- Geopump</u>	Tubing Type: <u>HDPE & Silicone</u>	Location: <u>17.5</u>
Measuring Point: <u>Below Top of Riser</u>	Initial Depth to Water: <u>5.55</u>	Depth to Well Bottom: <u>18.45</u>
	Well Diameter: <u>1"</u>	Screen Length: <u>10'</u>
Casing Type: <u>PVC</u>	Volume in 1 Well Casing (liters): <u></u>	Estimated Purge Volume (liters): <u></u>

Sample ID: 20170418 MJN-06 Sample Time: 1010 QA/QC: TB 20170418

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

[illegible]

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 ($\text{vol}_{\text{cyl}} = \pi r^2 h$)

Remarks:

water is clear, no odor

Project: Dow/ Rohm& Haas, former EMCA Site: Mamaroneck, NY Well I.D.: MW-01R
Date: 4/18/2017 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:	5.52		Depth to Well Bottom:	12.28		Well Diameter:	1"	Screen Length:	10'
Casing Type:	PVC		Volume in 1 Well Casing (liters):		Estimated Purge Volume (liters):						

Sample ID: 20170418MW-07R Sample Time: 1315 QA/QC: TB 20170418

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

[illegible]

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 ($\text{vol}_{\text{cyl}} = \pi r^2 h$)

Remarks:

took $\frac{1}{2}$ of 25 ng + reagent sample +
diluted w/ ~~sample~~ purge water (sample $\times 2 = 20$)

APPENDIX B

HISTORICAL ANALYTICAL DATA SUMMARY

APPENDIX B

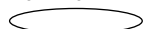
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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	5.0 UR	10 UR	5.0 UR	5.0 UR
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

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

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APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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.

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APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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 CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	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 CaCO ₃)	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.

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APPENDIX B

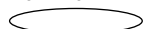
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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	5.21 UR	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.

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APPENDIX B

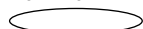
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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

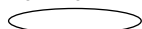
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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

APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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 CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	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 CaCO ₃)	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

J - Analyte is reported below the PQL at an estimated concentration. (J-) - Estimated result biased low.

U - Non-Detect J - Estimated Result NA - Not Analyzed. R - Rejected.

UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalent 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

APPENDIX B

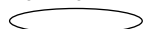
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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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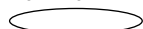
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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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APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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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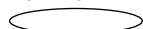
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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 CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	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 CaCO ₃)	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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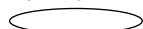
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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.

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Detection Limits shown are PQL

APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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	50 UR	25 UR
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

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HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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.

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HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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 CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	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 CaCO ₃)	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.

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 Equivalent 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

APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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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APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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	50 UR	50 UR	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	50 UR	50 UR	5.0 UR	5.0 UR	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

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APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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.

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APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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 CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	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 CaCO ₃)	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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APPENDIX B

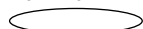
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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.

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APPENDIX B

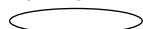
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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.

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APPENDIX B

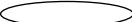
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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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APPENDIX B

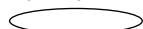
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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 CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	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 CaCO ₃)	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.

Flags assigned during chemistry validation are shown.



Concentration Exceeds Criteria

J - Analyte is reported below the PQL at an estimated concentration. (J-) - Estimated result biased low.

U - Non-Detect J - Estimated Result NA - Not Analyzed. R - Rejected.

UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalent 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

APPENDIX B

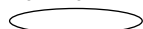
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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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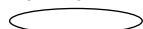
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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.

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APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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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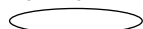
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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 CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	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 CaCO ₃)	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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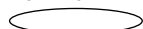
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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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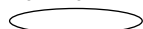
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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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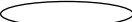
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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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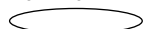
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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 CaCO ₃)	MG/L	-	NA	NA	NA	NA	361
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	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 CaCO ₃)	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.

Flags assigned during chemistry validation are shown.



Concentration Exceeds Criteria

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U - Non-Detect J - Estimated Result NA - Not Analyzed. R - Rejected.

UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalent 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

APPENDIX B

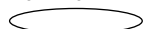
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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

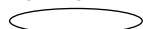
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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.

Flags assigned during chemistry validation are shown.



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

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Detection Limits shown are PQL

APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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

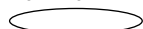
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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 CaCO ₃)	MG/L	-	NA	245	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	245	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	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 CaCO ₃)	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

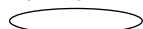
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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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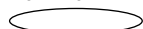
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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-02V09N	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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Detection Limits shown are PQL

APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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-02V09N	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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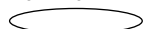
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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-02V09N	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 CaCO ₃)	MG/L	-	NA	NA	510	249	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	510	249	NA
Alkalinity, Carbonate (as CaCO ₃)	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 CaCO ₃)	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.

Flags assigned during chemistry validation are shown.



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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalent 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

APPENDIX B

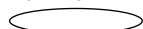
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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-02V09N	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

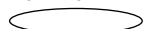
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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-02V09N	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 GROUNDWATER ANALYTICAL RESULTS

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-02V09N	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

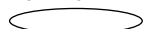
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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-02V09N	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 CaCO ₃)	MG/L	-	NA	NA	230	233	456
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	456
Alkalinity, Carbonate (as CaCO ₃)	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 CaCO ₃)	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

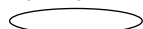
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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-02V09N	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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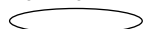
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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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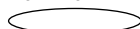
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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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APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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 CaCO ₃)	MG/L	-	456	254	292	367	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	456	254	292	367	NA
Alkalinity, Carbonate (as CaCO ₃)	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 CaCO ₃)	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

J - Analyte is reported below the PQL at an estimated concentration. (J-) - Estimated result biased low.

U - Non-Detect J - Estimated Result NA - Not Analyzed. R - Rejected.

UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalent 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

APPENDIX B

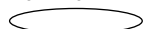
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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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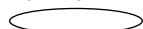
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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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APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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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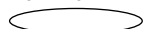
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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 CaCO ₃)	MG/L	-	NA	NA	432	292	261
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	432	292	261
Alkalinity, Carbonate (as CaCO ₃)	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 CaCO ₃)	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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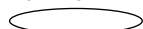
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

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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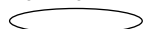
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-03	MW-03	MW-03
Sample ID			20161005MW-02	20170418MW-02	MW03_52103	MW03	DUP-91703
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/05/16	04/18/17	05/21/03	07/23/03	09/17/03
Parameter	Units	Criteria*					Field Duplicate (1-1)
Volatiles							
Acetone	UG/L	50	NA	NA	250 U	78	110
Benzene	UG/L	1	NA	NA	250 U	2.3	2.2
Bromodichloromethane	UG/L	50	NA	NA	50 U	1.0 U	1.0 U
Bromoform	UG/L	50	NA	NA	200 U	4.0 U	4.0 U
Bromomethane	UG/L	5	NA	NA	250 U	5.0 U	5.0 U
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	250 UR	130 J	69 J
Carbon Disulfide	UG/L	60	NA	NA	250 U	5.0 U	5.0 U
Carbon Tetrachloride	UG/L	5	NA	NA	100 U	2.0 U	2.0 U
Chlorobenzene	UG/L	5	NA	NA	250 U	5.0 U	5.0 U
Chloroethane	UG/L	5	NA	NA	250 U	5.0 U	5.0 U
Chloroform	UG/L	7	NA	NA	250 U	5.0 U	5.0 U
Chloromethane	UG/L	5	NA	NA	250 U	5.0 U	5.0 U
Chlorotrifluoroethene (Freon-1113)	UG/L	5	1,000	1,300	0 U	7.0 NJ	6.2 NJ
Dibromochloromethane	UG/L	50	NA	NA	250 U	5.0 U	5.0 U
1,1-Dichloroethane	UG/L	5	NA	NA	250 U	5.0 U	5.0 U
1,2-Dichloroethane	UG/L	0.6	NA	NA	100 U	2.0 U	2.0 U
1,1-Dichloroethene	UG/L	5	NA	NA	33 J	2.0 U	2.0 U
cis-1,2-Dichloroethene	UG/L	5	NA	NA	250 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	UG/L	5	NA	NA	250 U	5.0 U	5.0 U
1,2-Dichloropropane	UG/L	1	NA	NA	50 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	250 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	250 U	5.0 U	5.0 U

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APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-03	MW-03	MW-03
Sample ID			20161005MW-02	20170418MW-02	MW03_52103	MW03	DUP-91703
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/05/16	04/18/17	05/21/03	07/23/03	09/17/03
Parameter	Units	Criteria*					Field Duplicate (1-1)
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	200 U	0.3 J	4.0 U
2-Hexanone	UG/L	50	NA	NA	250 U	5.0 U	19
4-Methyl-2-Pentanone	UG/L	-	NA	NA	250 U	5.0 U	11
Methylene Chloride	UG/L	5	NA	NA	150 U	3.0 U	3.0 U
Styrene	UG/L	5	NA	NA	250 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	50 U	1.0 U	1.0 U
Tetrachloroethene	UG/L	5	NA	NA	50 U	1.0 U	1.0 U
1,1,1-Trichloroethane	UG/L	5	NA	NA	250 U	5.0 U	5.0 U
1,1,2-Trichloroethane	UG/L	1	NA	NA	150 U	3.0 U	3.0 U
Trichloroethene	UG/L	5	NA	NA	50 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	940	2,200	5,800	68	26
Toluene	UG/L	5	NA	NA	250 U	5.0 U	5.0 U
Vinyl Chloride	UG/L	2	NA	NA	250 U	5.0 U	5.0 U
Xylene (total)	UG/L	5	NA	NA	250 U	1.1 J	5.0 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	37	170	78 J	43	180
Dissolved Gases							
Ethane	UG/L	-	NA	NA	5.0 U	5 U	250 U
Ethene	UG/L	-	NA	NA	5.0 U	5 U	250 U
Methane	UG/L	-	2,400	5,800	86	56	2,400
Total Metals							
Iron	UG/L	300	53,800	61,800	1,170	150,000	174,000 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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S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts

Detection Limits shown are PQL

APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-03	MW-03	MW-03
Sample ID			20161005MW-02	20170418MW-02	MW03_52103	MW03	DUP-91703
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/05/16	04/18/17	05/21/03	07/23/03	09/17/03
Parameter	Units	Criteria*					Field Duplicate (1-1)
Dissolved Metals							
Iron	UG/L	300	NA	NA	267	152,000	187,000 J
Miscellaneous Parameters							
Alkalinity, Total (as CaCO ₃)	MG/L	-	250	281	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	250	281	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	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	113	143	99.2 J
Dehalococcoides ethenogenes	CEQ/mL	-	90	400 J	NA	NA	NA
Dehalobacter	GC/mL	-	30	3.0 U	NA	NA	NA
Hardness (as CaCO ₃)	MG/L	-	470	410	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	0.36	2.7	0.86
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	1.3	10.8	4.5
Nitrogen, Nitrate	MG/L	10	0.28	0.10 UJ	2	NA	0.1 U
Nitrogen, Nitrite	MG/L	1	0.037 J	0.049 J-	0.1 U	NA	0.1 U
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	0.1 UJ	NA
Sulfate	MG/L	250	27.2	36.2	32.7	26.9	5.0 U
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	6.2	7.1	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	0.25 J	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	0.5	3.7	25.5
Ferric Iron (lab)	MG/L	-	NA	NA	0.67	146	67.0
Fluoride	MG/L	1.5	NA	NA	0.28	0.44	0.27

*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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U - Non-Detect J - Estimated Result NA - Not Analyzed. R - Rejected.

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APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-03	MW-03	MW-03
Sample ID			20161005MW-02	20170418MW-02	MW03_52103	MW03	DUP-91703
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/05/16	04/18/17	05/21/03	07/23/03	09/17/03
Parameter	Units	Criteria*					Field Duplicate (1-1)
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	5 U	5 U	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	9.26 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 U	0.58	0 U	NA
Ferrous Iron	MG/L	-	11	11	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-151	-6	40	-103	NA
pH	S.U.	-	6.49	6.40	NA	NA	NA
Specific Conductance	MS/CM	-	2.69	2.23	0.638	4.35	NA
Temperature	DEG C	-	18.91	11.27	NA	NA	NA
Turbidity	NTU	-	0.1	0 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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APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			MW03-091703	DUP1_121703	MW-03_121703	MW-03	MW-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/17/03	12/17/03	12/17/03	07/23/04	05/31/05
Parameter	Units	Criteria*		Field Duplicate (1-1)			
Volatiles							
Acetone	UG/L	50	110	130 J	120 J	NA	NA
Benzene	UG/L	1	1.8	10 U	10 U	NA	NA
Bromodichloromethane	UG/L	50	1.0 U	2.0 U	2 U	NA	NA
Bromoform	UG/L	50	4.0 U	8.0 U	8 U	NA	NA
Bromomethane	UG/L	5	5.0 U	10 U	10 U	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	65 J	39 J	38 J	NA	NA
Carbon Disulfide	UG/L	60	5.0 U	10 U	10 U	NA	NA
Carbon Tetrachloride	UG/L	5	2.0 U	4.0 U	4 U	NA	NA
Chlorobenzene	UG/L	5	5.0 U	10 U	10 U	NA	NA
Chloroethane	UG/L	5	5.0 U	10 U	10 U	NA	NA
Chloroform	UG/L	7	5.0 U	10 U	10 U	NA	NA
Chloromethane	UG/L	5	5.0 U	10 U	10 U	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	0 U	0 U	0 U	68 J	83
Dibromochloromethane	UG/L	50	5.0 U	10 U	10 U	NA	NA
1,1-Dichloroethane	UG/L	5	5.0 U	10 U	10 U	NA	NA
1,2-Dichloroethane	UG/L	0.6	2.0 U	4.0 U	4 U	NA	NA
1,1-Dichloroethene	UG/L	5	2.0 U	4.0 U	4 U	NA	NA
cis-1,2-Dichloroethene	UG/L	5	5.0 U	10 U	10 U	NA	NA
trans-1,2-Dichloroethene	UG/L	5	5.0 U	10 U	10 U	NA	NA
1,2-Dichloropropane	UG/L	1	1.0 U	2.0 U	2 U	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	5.0 U	10 U	10 U	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	5.0 U	10 U	10 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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APPENDIX B

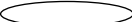
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			MW03-091703	DUP1_121703	MW-03_121703	MW-03	MW-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/17/03	12/17/03	12/17/03	07/23/04	05/31/05
Parameter	Units	Criteria*		Field Duplicate (1-1)			
Volatiles							
Ethylbenzene	UG/L	5	4.0 U	8.0 U	8 U	NA	NA
2-Hexanone	UG/L	50	16	10 U	10 U	NA	NA
4-Methyl-2-Pentanone	UG/L	-	11	10 U	10 U	NA	NA
Methylene Chloride	UG/L	5	3.0 U	6.0 U	6 U	NA	NA
Styrene	UG/L	5	5.0 U	10 U	10 U	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	1.0 U	2.0 U	2 U	NA	NA
Tetrachloroethene	UG/L	5	1.0 U	4.9	4.6	NA	NA
1,1,1-Trichloroethane	UG/L	5	5.0 U	10 U	10 U	NA	NA
1,1,2-Trichloroethane	UG/L	1	3.0 U	6.0 U	6 U	NA	NA
Trichloroethene	UG/L	5	1.0 U	2.0 U	2 U	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	16	150	150	4,900 J	2.0 J
Toluene	UG/L	5	5.0 U	10 U	10 U	NA	NA
Vinyl Chloride	UG/L	2	5.0 U	10 U	10 U	NA	NA
Xylene (total)	UG/L	5	5.0 U	10 U	10 U	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	110	170	160	3,900	14
Dissolved Gases							
Ethane	UG/L	-	250 U	500 U	250 U	NA	500 U
Ethene	UG/L	-	250 U	500 U	250 U	NA	500 U
Methane	UG/L	-	2,500	7,200	4,900	2,700	6,300
Total Metals							
Iron	UG/L	300	178,000 J	156,000	164,000	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

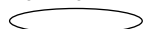
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			MW03-091703	DUP1_121703	MW-03_121703	MW-03	MW-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/17/03	12/17/03	12/17/03	07/23/04	05/31/05
Parameter	Units	Criteria*		Field Duplicate (1-1)			
Dissolved Metals							
Iron	UG/L	300	186,000 J	167,000	176,000	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	91.5 J	224	192	71.7	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	0.95	1.4	1.2	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	4.4	4.0	4.0	NA	NA
Nitrogen, Nitrate	MG/L	10	0.1 U	0.1 U	0.1 U	NA	NA
Nitrogen, Nitrite	MG/L	1	0.1 U	0.1 U	0.1 U	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	1.0 U	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	-	27.9	23.5	30.0	NA	NA
Ferric Iron (lab)	MG/L	-	93.0	132	134	NA	NA
Fluoride	MG/L	1.5	0.2	0.22	0.25	0.397	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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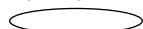
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			MW03-091703	DUP1_121703	MW-03_121703	MW-03	MW-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/17/03	12/17/03	12/17/03	07/23/04	05/31/05
Parameter	Units	Criteria*		Field Duplicate (1-1)			
Miscellaneous Parameters							
TPH	MG/L	-	NA	5.38 U	5.21 U	NA	NA
Oil & Grease	MG/L	-	9.26 R	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	-	0.01	NA	0.35	1.05	1.24
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-90	NA	-59	-143	-133
pH	S.U.	-	NA	NA	NA	NA	NA
Specific Conductance	MS/CM	-	1.64	NA	1.99	2.40	3.19
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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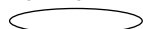
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			MW-03V10N	MW-03V15N	20070207MW-03V10N	20070731MW-03V10N	20080228MW03V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/20/05	08/14/06	02/07/07	07/31/07	02/28/08
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	2.0 J	51	39	54	13 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 GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			MW-03V10N	MW-03V15N	20070207MW-03V10N	20070731MW-03V10N	20080228MW03V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/20/05	08/14/06	02/07/07	07/31/07	02/28/08
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	2.0 J	0.5 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	0.8 J	48	7.0 J	4.0 J
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	10,000	7,400	15,000	4,500	18,000
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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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalent per milliliter; GC/mL - Gene Copies per milliliter

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Detection Limits shown are PQL

APPENDIX B

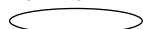
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			MW-03V10N	MW-03V15N	20070207MW-03V10N	20070731MW-03V10N	20080228MW03V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/20/05	08/14/06	02/07/07	07/31/07	02/28/08
Parameter	Units	Criteria*					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	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 CaCO ₃)	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	7.80	38.4	14.1
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.

Flags assigned during chemistry validation are shown.



Concentration Exceeds Criteria

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APPENDIX B

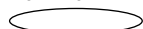
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			MW-03V10N	MW-03V15N	20070207MW-03V10N	20070731MW-03V10N	20080228MW03V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/20/05	08/14/06	02/07/07	07/31/07	02/28/08
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	-	0 U	5.36	2.44	0.22	2.94
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-151	-123	-116	-79.7	-123
pH	S.U.	-	NA	NA	NA	6.15	6.15
Specific Conductance	MS/CM	-	1.20	0.946	0.91	1.309	1.36
Temperature	DEG C	-	NA	NA	NA	NA	11.6
Turbidity	NTU	-	NA	NA	NA	NA	41

*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

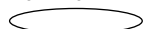
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20080812MW03V10FD	20080812MW03V10N	20090218MW-03V10N	20091013MW-03V10FD	20091013MW-03V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/12/08	08/12/08	02/18/09	10/13/09	10/13/09
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	10	38	20	19
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 GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20080812MW03V10FD	20080812MW03V10N	20090218MW-03V10N	20091013MW-03V10FD	20091013MW-03V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/12/08	08/12/08	02/18/09	10/13/09	10/13/09
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	5.0 J	0.92 J	0.82 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	1.0 J	40	2.1	1.9
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	10,000	8,400	13,000	5,300	4,800
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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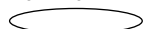
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20080812MW03V10FD	20080812MW03V10N	20090218MW-03V10N	20091013MW-03V10FD	20091013MW-03V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/12/08	08/12/08	02/18/09	10/13/09	10/13/09
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 CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	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 CaCO ₃)	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	30.0	28.1	50.7 J	4.6 J	8.7
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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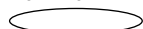
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20080812MW03V10FD	20080812MW03V10N	20090218MW-03V10N	20091013MW-03V10FD	20091013MW-03V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/12/08	08/12/08	02/18/09	10/13/09	10/13/09
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 U	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	-149	-185	NA	-103
pH	S.U.	-	NA	6.36	6.06	NA	5.87
Specific Conductance	MS/CM	-	NA	1.69	2.08	NA	1.85
Temperature	DEG C	-	NA	17.8	12.87	NA	18.68
Turbidity	NTU	-	NA	2	5	NA	8.7

*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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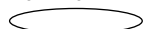
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20100226MW-03V09N	20100624MW-03V09N	20101006MW-03V09N	20110406MW-03V09N	20110913MW03V09FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/26/10	06/24/10	10/06/10	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	17 J	26	4.6	110 J	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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Detection Limits shown are PQL

APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20100226MW-03V09N	20100624MW-03V09N	20101006MW-03V09N	20110406MW-03V09N	20110913MW03V09FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/26/10	06/24/10	10/06/10	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 UJ	1 U	1 U	32	4.2
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	0.5 J	1 U	99 J	8.3
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	13,000	6,000	7,400	18,000	12,000
Total Metals							
Iron	UG/L	300	NA	NA	NA	NA	35,300

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

Detection Limits shown are PQL

APPENDIX B

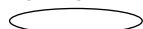
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20100226MW-03V09N	20100624MW-03V09N	20101006MW-03V09N	20110406MW-03V09N	20110913MW03V09FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/26/10	06/24/10	10/06/10	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 CaCO ₃)	MG/L	-	NA	NA	NA	NA	596
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	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	1,820
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	520
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	11.6	15.8	5.1 J	34.0	19
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	27.1
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.

Flags assigned during chemistry validation are shown.



Concentration Exceeds Criteria

J - Analyte is reported below the PQL at an estimated concentration. (J-) - Estimated result biased low.

U - Non-Detect J - Estimated Result NA - Not Analyzed. R - Rejected.

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

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Detection Limits shown are PQL

APPENDIX B

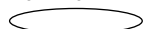
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20100226MW-03V09N	20100624MW-03V09N	20101006MW-03V09N	20110406MW-03V09N	20110913MW03V09FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/26/10	06/24/10	10/06/10	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	-	0.0	0.85	0.0	0.0	NA
Ferrous Iron	MG/L	-	NA	NA	NA	NA	29.8
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	5.5
Oxidation-Reduction Potential	mV	-	-138	-170	-116	-115	NA
pH	S.U.	-	6.32	9.28	6.73	6.38	NA
Specific Conductance	MS/CM	-	3.39	1.50	1.68	1.55	NA
Temperature	DEG C	-	8.95	16.51	20.19	11.90	NA
Turbidity	NTU	-	94	5.1	6.3	3.6	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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APPENDIX B

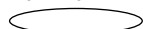
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20110913MW03V09N	20120411MW-03V09N	20120924MW-03V09N	20130409MW-03V10N	20131022MW-03V12N
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	82	150 J	130	160 J	58
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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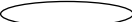
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20110913MW03V09N	20120411MW-03V09N	20120924MW-03V09N	20130409MW-03V10N	20131022MW-03V12N
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	5.4	20 J	1.1	27	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	9.4	36	3.2	30	1.0 U
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	15,000	15,000	7,600	11,000	11,000
Total Metals							
Iron	UG/L	300	35,700	NA	21,800	27,900	29,400

*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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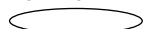
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20110913MW03V09N	20120411MW-03V09N	20120924MW-03V09N	20130409MW-03V10N	20131022MW-03V12N
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 CaCO ₃)	MG/L	-	596	NA	292	367	237
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	292	367	NA
Alkalinity, Carbonate (as CaCO ₃)	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	-	3,780	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	700	40	100
Hardness (as CaCO ₃)	MG/L	-	510	NA	248	396	65.3
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	0.1 U	NA	0.10 U	0.21 J	0.23 J
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	0.025 J
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	18.2	63.1	45.4	39.4	40.7
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	26.7	NA	7.2	8.7	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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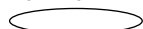
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20110913MW03V09N	20120411MW-03V09N	20120924MW-03V09N	20130409MW-03V10N	20131022MW-03V12N
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	2.23	0.63
Ferrous Iron	MG/L	-	29.8	NA	3.5	26.0	16.9
Ferric Iron (calculated)	MG/L	-	5.9	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-124	-63	-84	-93	-119
pH	S.U.	-	6.85	6.64	6.64	6.39	6.21
Specific Conductance	MS/CM	-	1.99	1.02	0.697	3.37	1.35
Temperature	DEG C	-	20.7	13.35	23.57	15.42	19.3
Turbidity	NTU	-	21.8	0.0	0.0	17.9	0.4

*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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APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20140416MW-03V12N	20140701MW-03V012N	20141027MW-03V12N	20141124MW-03V12N	20141222MW-03V12N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/16/14	07/01/14	10/27/14	11/24/14	12/22/14
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	96	170	96	86	150
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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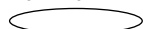
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20140416MW-03V12N	20140701MW-03V012N	20141027MW-03V12N	20141124MW-03V12N	20141222MW-03V12N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/16/14	07/01/14	10/27/14	11/24/14	12/22/14
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	100	120	0.81 J	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	62	100	1.3	1.0 U	1.7
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	14,000	15,000	4,500	3,800	4,600
Total Metals							
Iron	UG/L	300	19,700	26,800	26,600	NA	NA

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

Flags assigned during chemistry validation are shown.



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U - Non-Detect J - Estimated Result NA - Not Analyzed. R - Rejected.

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

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Detection Limits shown are PQL

APPENDIX B

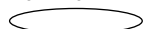
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20140416MW-03V12N	20140701MW-03V012N	20141027MW-03V12N	20141124MW-03V12N	20141222MW-03V12N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/16/14	07/01/14	10/27/14	11/24/14	12/22/14
Parameter	Units	Criteria*					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO ₃)	MG/L	-	220	253	329	NA	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	220	253	329	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	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	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	500	NA	500	20
Dehalobacter	GC/mL	-	10	20	50	10	NA
Hardness (as CaCO ₃)	MG/L	-	249	337	386	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	0.40	0.10 U	1.0 U	NA	NA
Nitrogen, Nitrite	MG/L	1	0.038 J	0.017 J	0.10 U	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	43.0	52.0	25.8	23.0	33.8
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	6.3	7.0	27.1	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

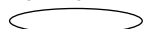
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20140416MW-03V12N	20140701MW-03V12N	20141027MW-03V12N	20141124MW-03V12N	20141222MW-03V12N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/16/14	07/01/14	10/27/14	11/24/14	12/22/14
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	-	4.86	1.47	0.45	1.30	0.87
Ferrous Iron	MG/L	-	5.5	4.5	8.3	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-101	-72	-107	-104	-115
pH	S.U.	-	6.85	6.69	6.54	6.68	6.58
Specific Conductance	MS/CM	-	1.12	1.26	1.72	1.28	1.38
Temperature	DEG C	-	10.69	19.59	17.99	17.52	14.88
Turbidity	NTU	-	0	5.4	0.2	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

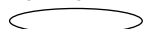
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20150304MW-03	20150422MW-03	20151008MW-03	20160427MW-03	20161005MW-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/04/15	04/22/15	10/08/15	04/27/16	10/05/16
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	110	120	140	180	290
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 GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20150304MW-03	20150422MW-03	20151008MW-03	20160427MW-03	20161005MW-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/04/15	04/22/15	10/08/15	04/27/16	10/05/16
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	18	25	0.52 J	42	11
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	17	25	1.7	30	3.3
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	NA	4,000	10,000	2,100	2,300
Total Metals							
Iron	UG/L	300	NA	19,600	29,500	23,700	22,200

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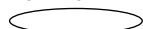
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20150304MW-03	20150422MW-03	20151008MW-03	20160427MW-03	20161005MW-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/04/15	04/22/15	10/08/15	04/27/16	10/05/16
Parameter	Units	Criteria*					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO ₃)	MG/L	-	NA	196	279	313	297
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	196	279	313	297
Alkalinity, Carbonate (as CaCO ₃)	MG/L	-	NA	5.0 U	5.0 U	5.0 U	5.0 U
Alkalinity, Hydroxide	MG/L	-	NA	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	7	2 J	4 J	10
Hardness (as CaCO ₃)	MG/L	-	NA	242	368	400	420
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	2.0 U	0.10 U	0.13
Nitrogen, Nitrite	MG/L	1	NA	0.10 U	0.021 J	0.076 J	0.036 J
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	0.050 U	NA	NA	NA
Sulfate	MG/L	250	NA	32.5	48.2	78.2	56.1
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	5.1	7.1	7.6	5.8
Ferrous Iron (lab)	MG/L	-	NA	0.10 UJ	1.7 J	NA	0.35 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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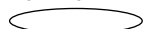
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20150304MW-03	20150422MW-03	20151008MW-03	20160427MW-03	20161005MW-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/04/15	04/22/15	10/08/15	04/27/16	10/05/16
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	-	1.24	0.65	0.39	0.54	0.32
Ferrous Iron	MG/L	-	NA	6.0	6.5	6.5	5.5
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-82	-100	-84	-88	-125
pH	S.U.	-	6.84	6.69	5.27	6.31	6.52
Specific Conductance	MS/CM	-	1.82	1.06	1.69	2.08	2.03
Temperature	DEG C	-	8.58	11.87	19.94	13.90	20.15
Turbidity	NTU	-	0.0	1.7	0.0	4.5	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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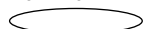
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-04	MW-04	MW-04	MW-04
Sample ID			20170418MW-03	MW04-5-20-03	MW-04_121703	Dup1	MW-04
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/18/17	05/20/03	12/17/03	07/22/04	07/22/04
Parameter	Units	Criteria*				Field Duplicate (1-1)	
Volatiles							
Acetone	UG/L	50	NA	5.0 U	5.0 U	NA	NA
Benzene	UG/L	1	NA	5.0 U	5.0 U	NA	NA
Bromodichloromethane	UG/L	50	NA	1.0 U	1.0 U	NA	NA
Bromoform	UG/L	50	NA	4.0 U	4.0 U	NA	NA
Bromomethane	UG/L	5	NA	5.0 U	5.0 U	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	5.0 UR	5.0 UR	NA	NA
Carbon Disulfide	UG/L	60	NA	5.0 U	5.0 U	NA	NA
Carbon Tetrachloride	UG/L	5	NA	2.0 U	2.0 U	NA	NA
Chlorobenzene	UG/L	5	NA	5.0 U	5.0 U	NA	NA
Chloroethane	UG/L	5	NA	5.0 U	5.0 U	NA	NA
Chloroform	UG/L	7	NA	5.0 U	5.0 U	NA	NA
Chloromethane	UG/L	5	NA	5.0 U	5.0 U	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	230	0 U	0 U	10 U	10 U
Dibromochloromethane	UG/L	50	NA	5.0 U	5.0 U	NA	NA
1,1-Dichloroethane	UG/L	5	NA	5.0 U	5.0 U	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	2.0 U	2.0 U	NA	NA
1,1-Dichloroethene	UG/L	5	NA	2.0 U	2.0 U	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	5.0 U	5.0 U	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	5.0 U	5.0 U	NA	NA
1,2-Dichloropropane	UG/L	1	NA	1.0 U	1.0 U	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	5.0 U	5.0 U	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	5.0 U	5.0 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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APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-04	MW-04	MW-04	MW-04
Sample ID			20170418MW-03	MW04-5-20-03	MW-04_121703	Dup1	MW-04
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/18/17	05/20/03	12/17/03	07/22/04	07/22/04
Parameter	Units	Criteria*				Field Duplicate (1-1)	
Volatiles							
Ethylbenzene	UG/L	5	NA	4.0 U	4.0 U	NA	NA
2-Hexanone	UG/L	50	NA	5.0 U	5.0 U	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	5.0 U	5.0 U	NA	NA
Methylene Chloride	UG/L	5	NA	3.0 U	3.0 U	NA	NA
Styrene	UG/L	5	NA	5.0 U	5.0 U	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	1.0 U	1.0 U	NA	NA
Tetrachloroethene	UG/L	5	NA	1.0 U	1.0 U	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	5.0 U	5.0 U	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	3.0 U	3.0 U	NA	NA
Trichloroethene	UG/L	5	NA	1.0 U	1.0 U	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	140	5.0 U	5.0 U	10 UJ	0.7 J
Toluene	UG/L	5	NA	5.0 U	5.0 U	NA	NA
Vinyl Chloride	UG/L	2	NA	5.0 U	5.0 U	NA	NA
Xylene (total)	UG/L	5	NA	5.0 U	5.0 U	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	52	5.0 U	5.0 U	10 U	10 U
Dissolved Gases							
Ethane	UG/L	-	NA	25 U	5.0 U	NA	NA
Ethene	UG/L	-	NA	25 U	5.0 U	NA	NA
Methane	UG/L	-	1,500	380	35	69	99
Total Metals							
Iron	UG/L	300	24,200	18,400	3,640	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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U - Non-Detect J - Estimated Result NA - Not Analyzed. R - Rejected.

UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalent 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

APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-04	MW-04	MW-04	MW-04
Sample ID			20170418MW-03	MW04-5-20-03	MW-04_121703	Dup1	MW-04
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/18/17	05/20/03	12/17/03	07/22/04	07/22/04
Parameter	Units	Criteria*				Field Duplicate (1-1)	
Dissolved Metals							
Iron	UG/L	300	NA	18,500	3,760	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO ₃)	MG/L	-	264	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	264	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	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	238	294	158	161
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	6	NA	NA	NA	NA
Hardness (as CaCO ₃)	MG/L	-	390	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	1.6	1.2	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	6.2	1.9	NA	NA
Nitrogen, Nitrate	MG/L	10	0.10 U	0.1 U	0.1 U	NA	NA
Nitrogen, Nitrite	MG/L	1	0.031 J	0.1 U	0.1 U	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	56.6	5.0 U	9.40	10.8	10.8
Sulfide	MG/L	0.05	NA	NA	NA	1.0 U	1.0 U
Total Organic Carbon	MG/L	-	6.0	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	17.6	2.2	NA	NA
Ferric Iron (lab)	MG/L	-	NA	0.76	1.3	NA	NA
Fluoride	MG/L	1.5	NA	0.27	0.19	0.304	0.302

*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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APPENDIX B

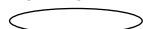
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-04	MW-04	MW-04	MW-04
Sample ID			20170418MW-03	MW04-5-20-03	MW-04_121703	Dup1	MW-04
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/18/17	05/20/03	12/17/03	07/22/04	07/22/04
Parameter	Units	Criteria*				Field Duplicate (1-1)	
Miscellaneous Parameters							
TPH	MG/L	-	NA	5 U	5.38 U	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	0.54	0 U	NA	0.82
Ferrous Iron	MG/L	-	10	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	18	-115	0 U	NA	-136
pH	S.U.	-	6.51	NA	NA	NA	NA
Specific Conductance	MS/CM	-	1.63	1.61	0.99	NA	1.05
Temperature	DEG C	-	12.91	NA	NA	NA	NA
Turbidity	NTU	-	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.

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APPENDIX B

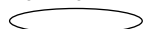
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			MW-04	MW-04V10N	MW-04V15N	20070207MW-04V10N	20070801MW-04V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/31/05	12/20/05	08/14/06	02/07/07	08/01/07
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	1.0 J	10 U	0.7 J	0.6 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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APPENDIX B

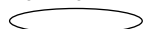
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			MW-04	MW-04V10N	MW-04V15N	20070207MW-04V10N	20070801MW-04V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/31/05	12/20/05	08/14/06	02/07/07	08/01/07
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	10 U	10 U	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	10 U	10 U	10 U	10 U	10 U
Dissolved Gases							
Ethane	UG/L	-	10 U	NA	NA	NA	NA
Ethene	UG/L	-	10 U	NA	NA	NA	NA
Methane	UG/L	-	190	400	420	400	43
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

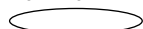
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			MW-04	MW-04V10N	MW-04V15N	20070207MW-04V10N	20070801MW-04V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/31/05	12/20/05	08/14/06	02/07/07	08/01/07
Parameter	Units	Criteria*					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	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 CaCO ₃)	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	14.2	6.66	5.0 U	5.0 U	7.0
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.

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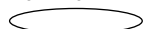
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			MW-04	MW-04V10N	MW-04V15N	20070207MW-04V10N	20070801MW-04V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/31/05	12/20/05	08/14/06	02/07/07	08/01/07
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	4.97	4.73	0.41
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-126	-161	-154	-81	-79.2
pH	S.U.	-	NA	NA	NA	NA	6.59
Specific Conductance	MS/CM	-	1.85	1.47	1.14	0.804	1.241
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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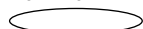
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20080228MW04V10N	20080812MW04V08N	20090218MW-04V08N	20090218MW-04V08N	20091013MW-04V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/28/08	08/12/08	02/18/09	02/18/09	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	1.0 J	10 U	1.0 J	1.0 J	15
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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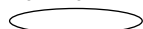
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20080228MW04V10N	20080812MW04V08N	20090218MW-04V08N	20090218MW-04V08N	20091013MW-04V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/28/08	08/12/08	02/18/09	02/18/09	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	10 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	10 U	10 U	10 U	10 U	1 U
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	5,700	290	1,600	1,600	3,100
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.

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 Equivalent per milliliter; GC/mL - Gene Copies per milliliter

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Detection Limits shown are PQL

APPENDIX B

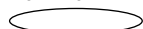
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20080228MW04V10N	20080812MW04V08N	20090218MW-04V08N	20090218MW-04V08N	20091013MW-04V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/28/08	08/12/08	02/18/09	02/18/09	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 CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	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 CaCO ₃)	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	5 UJ	5 UJ	20.8
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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Detection Limits shown are PQL

APPENDIX B

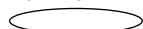
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20080228MW04V10N	20080812MW04V08N	20090218MW-04V08N	20090218MW-04V08N	20091013MW-04V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/28/08	08/12/08	02/18/09	02/18/09	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	-	2.91	0 U	NA	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	-	-136	-126	NA	-158	-122
pH	S.U.	-	6.45	6.65	NA	6.33	6.43
Specific Conductance	MS/CM	-	1.16	0.531	NA	1.75	1.83
Temperature	DEG C	-	9.19	21.3	NA	9.36	19.37
Turbidity	NTU	-	9	2	NA	4	4.6

*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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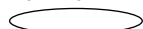
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20100225MW04V08FD	20100225MW-04V08N	20100624MW-04V08N	20101006MW-04V08N	20110406MW-04V08FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/25/10	02/25/10	06/24/10	10/06/10	04/06/11
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	6.6 J	7.7 J	12	2.8	5 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

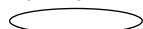
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20100225MW04V08FD	20100225MW-04V08N	20100624MW-04V08N	20101006MW-04V08N	20110406MW-04V08FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/25/10	02/25/10	06/24/10	10/06/10	04/06/11
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	1 UJ	1 UJ	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 U	1 U	1 UJ
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	5,200	5,100	4,000	2,400	4,200
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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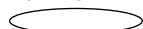
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20100225MW-04V08FD	20100225MW-04V08N	20100624MW-04V08N	20101006MW-04V08N	20110406MW-04V08FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/25/10	02/25/10	06/24/10	10/06/10	04/06/11
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 CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	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 CaCO ₃)	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	13	11.3	18.4	5.5 J	26.6
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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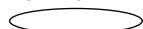
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20100225MW04V08FD	20100225MW-04V08N	20100624MW-04V08N	20101006MW-04V08N	20110406MW-04V08FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/25/10	02/25/10	06/24/10	10/06/10	04/06/11
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	0.0	0.80	0.0	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	-124	-146	-96	NA
pH	S.U.	-	NA	6.50	8.99	6.86	NA
Specific Conductance	MS/CM	-	NA	2.14	1.84	1.48	NA
Temperature	DEG C	-	NA	8.34	18.45	21.38	NA
Turbidity	NTU	-	NA	1.5	1.9	3.7	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 GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20110406MW-04V08N	20110913MW04V08N	20120411MW-04V08N	20120924MW-04V08N	20120924MW-04V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/06/11	09/13/11	04/11/12	09/24/12	09/24/12
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	4.3 J	1.2	7.2 J	2.1	2.5
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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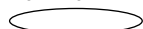
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20110406MW-04V08N	20110913MW04V08N	20120411MW-04V08N	20120924MW-04V08N	20120924MW-04V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/06/11	09/13/11	04/11/12	09/24/12	09/24/12
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	1 U	1 U	1 UJ	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 UJ	1 U	1 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	-	4,300	1,700	2,700	570	550
Total Metals							
Iron	UG/L	300	NA	NA	NA	7,430	7,280

*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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U - Non-Detect J - Estimated Result NA - Not Analyzed. R - Rejected.

UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalent 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

APPENDIX B

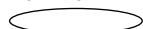
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20110406MW-04V08N	20110913MW04V08N	20120411MW-04V08N	20120924MW-04V08N	20120924MW-04V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/06/11	09/13/11	04/11/12	09/24/12	09/24/12
Parameter	Units	Criteria*				Field Duplicate (1-1)	
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO ₃)	MG/L	-	NA	NA	NA	211	210
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	211	210
Alkalinity, Carbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	5.0 U	5.0 U
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	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	-	NA	NA	NA	NA	4 U
Hardness (as CaCO ₃)	MG/L	-	NA	NA	NA	188	185
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	0.10 U	0.10 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	22.3	16.7	18.7	12.3	12.0
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	10.2	10
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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APPENDIX B

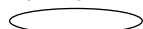
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20110406MW-04V08N	20110913MW04V08N	20120411MW-04V08N	20120924MW-04V08N	20120924MW-04V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/06/11	09/13/11	04/11/12	09/24/12	09/24/12
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	-	0.0	0.0	0.0	NA	0.0
Ferrous Iron	MG/L	-	NA	14.3	NA	NA	27.7
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-78	-126	-87	NA	-96
pH	S.U.	-	6.40	6.83	6.80	NA	6.91
Specific Conductance	MS/CM	-	2.19	2.29	1.38	NA	0.519
Temperature	DEG C	-	12.86	22.5	14.07	NA	25.40
Turbidity	NTU	-	0.0	0.2	8.9	NA	8.0

*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 GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20130409MW-04V09N	20131022MW-04V09N	20140428MW-04V09N	20140701MW-04V09N	20141028MW-04V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/09/13	10/22/13	04/28/14	07/01/14	10/28/14
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	4.4 J	12	1.0 U	1.0 U	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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Detection Limits shown are PQL

APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20130409MW-04V09N	20131022MW-04V09N	20140428MW-04V09N	20140701MW-04V09N	20141028MW-04V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/09/13	10/22/13	04/28/14	07/01/14	10/28/14
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	1.0 U	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	1.0 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	-	1,700	1,600	340	1,300	87
Total Metals							
Iron	UG/L	300	16,100	17,700	18,900	17,900	8,820

*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

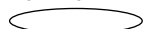
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20130409MW-04V09N	20131022MW-04V09N	20140428MW-04V09N	20140701MW-04V09N	20141028MW-04V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/09/13	10/22/13	04/28/14	07/01/14	10/28/14
Parameter	Units	Criteria*					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO ₃)	MG/L	-	5.0 U	243	239	295	208
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	5.0 U	NA	239	295	208
Alkalinity, Carbonate (as CaCO ₃)	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 U	3 U	3 U	3 U	3
Hardness (as CaCO ₃)	MG/L	-	426	73.3	525	614	267
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 UJ	0.10 U	0.10 U	0.10 U
Nitrogen, Nitrite	MG/L	1	NA	0.014 J	0.10 U	0.013 J	0.10 U
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	15.6	23.2	12.2	9.1	11.5
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	7.2	7.0	8.4	11.4	8.4
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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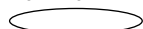
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20130409MW-04V09N	20131022MW-04V09N	20140428MW-04V09N	20140701MW-04V09N	20141028MW-04V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/09/13	10/22/13	04/28/14	07/01/14	10/28/14
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	-	2.13	0.25	9.51	1.72	0.55
Ferrous Iron	MG/L	-	14.9	13.9	7.0	6.5	5.2
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-78	-94	-102	-67	-93
pH	S.U.	-	6.43	6.44	6.76	6.62	6.57
Specific Conductance	MS/CM	-	3.98	1.27	2.65	2.47	1.62
Temperature	DEG C	-	16.39	19.44	12.11	21.90	17.78
Turbidity	NTU	-	1.7	5.7	0	52.9	2.1

*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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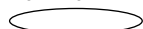
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20150422MW-04	20151008MW-04	20160427MW-04	20161005MW-04	20170418MW-04
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/22/15	10/08/15	04/27/16	10/05/16	04/18/17
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	2.1	4.4	0.52 J	4.3	1.0 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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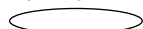
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20150422MW-04	20151008MW-04	20160427MW-04	20161005MW-04	20170418MW-04
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/22/15	10/08/15	04/27/16	10/05/16	04/18/17
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	0.38 J	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	1.0 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	-	1,000	2,100	610	1,000	770
Total Metals							
Iron	UG/L	300	28,000	15,800	16,700	10,900	21,700

*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.



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

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APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20150422MW-04	20151008MW-04	20160427MW-04	20161005MW-04	20170418MW-04
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/22/15	10/08/15	04/27/16	10/05/16	04/18/17
Parameter	Units	Criteria*					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO ₃)	MG/L	-	338	303	255	277	400
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	338	303	255	277	400
Alkalinity, Carbonate (as CaCO ₃)	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	-	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Hardness (as CaCO ₃)	MG/L	-	882	523	450	320	540
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	2.0 U	0.10 U	0.10 U	0.10 U
Nitrogen, Nitrite	MG/L	1	0.10 U	0.016 J	0.052 J	0.046 J	0.028 J
Nitrogen, Nitrate-Nitrite	MG/L	10	0.050 U	NA	NA	NA	NA
Sulfate	MG/L	250	29.8	7.4	5.0 U	7.2	5.0 U
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	12.3	11.8	9.2	9.8	13.2
Ferrous Iron (lab)	MG/L	-	0.10 J	0.33 J	NA	0.10 UJ	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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S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts

Detection Limits shown are PQL

APPENDIX B

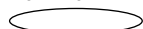
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20150422MW-04	20151008MW-04	20160427MW-04	20161005MW-04	20170418MW-04
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/22/15	10/08/15	04/27/16	10/05/16	04/18/17
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	-	1.05	0.32	0.54	0.28	0 U
Ferrous Iron	MG/L	-	5.5	6.0	5.5	6.0	8.0
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-92	-95	-79	-106	20
pH	S.U.	-	6.73	5.42	6.33	6.61	6.56
Specific Conductance	MS/CM	-	4.47	3.05	2.90	2.02	2.15
Temperature	DEG C	-	11.71	21.26	14.79	21.54	13.83
Turbidity	NTU	-	1.1	0.0	0.0	1.5	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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APPENDIX B

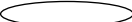
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-05	MW-05	MW-05	MW-06	MW-06
Sample ID			MW05_52103	MW-05-121803	MW-05	MW06-6-10-03	MW06-7_22_03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/21/03	12/18/03	07/23/04	06/10/03	07/22/03
Parameter	Units	Criteria*					
Volatiles							
Acetone	UG/L	50	5.0 U	5.0 U	NA	10 U	5.0 U
Benzene	UG/L	1	5.0 U	5.0 U	NA	10 U	5.0 U
Bromodichloromethane	UG/L	50	1.0 U	1.0 U	NA	2 U	1.0 U
Bromoform	UG/L	50	4.0 U	4.0 U	NA	8 U	4.0 U
Bromomethane	UG/L	5	5.0 U	5.0 U	NA	10 U	5.0 U
Methyl ethyl ketone (2-Butanone)	UG/L	50	5.0 UR	5.0 UR	NA	10 UR	5.0 UR
Carbon Disulfide	UG/L	60	5.0 U	5.0 U	NA	10 U	5.0 U
Carbon Tetrachloride	UG/L	5	2.0 U	2.0 U	NA	4 U	2.0 U
Chlorobenzene	UG/L	5	5.0 U	5.0 U	NA	10 U	5.0 U
Chloroethane	UG/L	5	5.0 U	5.0 U	NA	10 U	5.0 U
Chloroform	UG/L	7	5.0 U	5.0 U	NA	10 U	5.0 U
Chloromethane	UG/L	5	5.0 U	5.0 U	NA	10 U	5.0 U
Chlorotrifluoroethene (Freon-1113)	UG/L	5	0 U	0 U	10 U	0 U	5.7 NJ
Dibromochloromethane	UG/L	50	5.0 U	5.0 U	NA	10 U	5.0 U
1,1-Dichloroethane	UG/L	5	5.0 U	5.0 U	NA	10 U	5.0 U
1,2-Dichloroethane	UG/L	0.6	2.0 U	2.0 U	NA	4 U	2.0 U
1,1-Dichloroethene	UG/L	5	2.0 U	2.0 U	NA	4 U	1.2 J
cis-1,2-Dichloroethene	UG/L	5	5.0 U	5.0 U	NA	10 U	1.7 J
trans-1,2-Dichloroethene	UG/L	5	5.0 U	5.0 U	NA	10 U	5.0 U
1,2-Dichloropropane	UG/L	1	1.0 U	1.0 U	NA	2 U	1.0 U
cis-1,3-Dichloropropene	UG/L	0.4	5.0 U	5.0 U	NA	10 U	5.0 U
trans-1,3-Dichloropropene	UG/L	0.4	5.0 U	5.0 U	NA	10 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.

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APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-05	MW-05	MW-05	MW-06	MW-06
Sample ID			MW05_52103	MW-05-121803	MW-05	MW06-6-10-03	MW06-7_22_03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/21/03	12/18/03	07/23/04	06/10/03	07/22/03
Parameter	Units	Criteria*					
Volatiles							
Ethylbenzene	UG/L	5	4.0 U	4.0 U	NA	8 U	4.0 U
2-Hexanone	UG/L	50	5.0 U	5.0 U	NA	10 U	5.0 U
4-Methyl-2-Pentanone	UG/L	-	5.0 U	5.0 U	NA	10 U	5.0 U
Methylene Chloride	UG/L	5	3.0 U	3.0 U	NA	6 U	3.0 U
Styrene	UG/L	5	5.0 U	5.0 U	NA	10 U	5.0 U
1,1,2,2-Tetrachloroethane	UG/L	5	1.0 U	1.0 U	NA	2 U	1.0 U
Tetrachloroethene	UG/L	5	0.4 J	1.0 U	NA	2 U	1.0 U
1,1,1-Trichloroethane	UG/L	5	5.0 U	5.0 U	NA	10 U	5.0 U
1,1,2-Trichloroethane	UG/L	1	3.0 U	3.0 U	NA	6 U	3.0 U
Trichloroethene	UG/L	5	1.0 U	1.0 U	NA	2 U	1.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	5.0 U	5.0 U	0.5 J	220	180
Toluene	UG/L	5	5.0 U	5.0 U	NA	10 U	5.0 U
Vinyl Chloride	UG/L	2	5.0 U	5.0 U	NA	10 U	1.2 J
Xylene (total)	UG/L	5	5.0 U	5.0 U	NA	10 U	5.0 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	5.0 U	5.0 U	10 U	8.8 J	9.5
Dissolved Gases							
Ethane	UG/L	-	5.0 U	5.0 U	NA	5.0 U	5 U
Ethene	UG/L	-	5.0 U	5.0 U	NA	5.0 U	5 U
Methane	UG/L	-	27	6.7	47	49	81
Total Metals							
Iron	UG/L	300	2,110	15,500	NA	14,400	10,500

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APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-05	MW-05	MW-05	MW-06	MW-06
Sample ID			MW05_52103	MW-05-121803	MW-05	MW06-6-10-03	MW06-7_22_03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/21/03	12/18/03	07/23/04	06/10/03	07/22/03
Parameter	Units	Criteria*					
Dissolved Metals							
Iron	UG/L	300	1,670	39.7 U	NA	14,300	10,300
Miscellaneous Parameters							
Alkalinity, Total (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	49.8	27.5	63.9	184	82.3
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	0.25	0.1 U	NA	0.19	0.33
Nitrogen, Kjeldahl, Total	MG/L	-	3.6	0.61	NA	0.72	1.1
Nitrogen, Nitrate	MG/L	10	0.22	0.18	NA	0.33	0.1 U
Nitrogen, Nitrite	MG/L	1	0.1 U	0.1 U	NA	0.1 U	0.1 U
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	50.1	61.4	42.3	32.0	30.5
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	-	1.7	0.07	NA	14.3	8.6
Ferric Iron (lab)	MG/L	-	0.43	15.4	NA	0.12	1.9
Fluoride	MG/L	1.5	0 U	0.12	0.103	0.46	0.56

*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

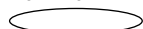
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-05	MW-05	MW-05	MW-06	MW-06
Sample ID			MW05_52103	MW-05-121803	MW-05	MW06-6-10-03	MW06-7_22_03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/21/03	12/18/03	07/23/04	06/10/03	07/22/03
Parameter	Units	Criteria*					
Miscellaneous Parameters							
TPH	MG/L	-	5 U	5 U	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	-	0.37	0 U	0.97	0.93	1.07
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	26	121	46	-145	-155
pH	S.U.	-	NA	NA	NA	NA	NA
Specific Conductance	MS/CM	-	0.426	0.629	0.463	0.741	0.866
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

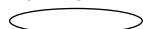
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			MW06-091803	MW-06_121703	MW-06	Field-Dup	MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/18/03	12/17/03	07/23/04	05/31/05	05/31/05
Parameter	Units	Criteria*				Field Duplicate (1-1)	
Volatiles							
Acetone	UG/L	50	5.0 U	10 U	NA	NA	NA
Benzene	UG/L	1	5.0 U	10 U	NA	NA	NA
Bromodichloromethane	UG/L	50	1.0 U	2 U	NA	NA	NA
Bromoform	UG/L	50	4.0 U	8 U	NA	NA	NA
Bromomethane	UG/L	5	5.0 U	10 U	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	5.0 UR	10 UR	NA	NA	NA
Carbon Disulfide	UG/L	60	5.0 U	10 U	NA	NA	NA
Carbon Tetrachloride	UG/L	5	2.0 U	4 U	NA	NA	NA
Chlorobenzene	UG/L	5	5.0 U	10 U	NA	NA	NA
Chloroethane	UG/L	5	5.0 U	10 U	NA	NA	NA
Chloroform	UG/L	7	5.0 U	10 U	NA	NA	NA
Chloromethane	UG/L	5	5.0 U	10 U	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	0 U	0 U	5 J	6.0 J	5.0 J
Dibromochloromethane	UG/L	50	5.0 U	10 U	NA	NA	NA
1,1-Dichloroethane	UG/L	5	5.0 U	10 U	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	2.0 U	4 U	NA	NA	NA
1,1-Dichloroethene	UG/L	5	2.0 U	4 U	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	1.4 J	1.3 J	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	5.0 U	10 U	NA	NA	NA
1,2-Dichloropropane	UG/L	1	1.0 U	2 U	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	5.0 U	10 U	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	5.0 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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APPENDIX B

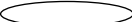
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			MW06-091803	MW-06_121703	MW-06	Field-Dup	MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/18/03	12/17/03	07/23/04	05/31/05	05/31/05
Parameter	Units	Criteria*				Field Duplicate (1-1)	
Volatiles							
Ethylbenzene	UG/L	5	4.0 U	8 U	NA	NA	NA
2-Hexanone	UG/L	50	5.0 U	10 U	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	5.0 U	10 U	NA	NA	NA
Methylene Chloride	UG/L	5	3.0 U	6 U	NA	NA	NA
Styrene	UG/L	5	5.0 U	10 U	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	1.0 U	2 U	NA	NA	NA
Tetrachloroethene	UG/L	5	1.0 U	2 U	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	5.0 U	10 U	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	3.0 U	6 U	NA	NA	NA
Trichloroethene	UG/L	5	1.0 U	2 U	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	97	250	140 J	1.0 J	1.0 J
Toluene	UG/L	5	5.0 U	10 U	NA	NA	NA
Vinyl Chloride	UG/L	2	5.0 U	10 U	NA	NA	NA
Xylene (total)	UG/L	5	5.0 U	10 U	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	8.6	14	23	16	14
Dissolved Gases							
Ethane	UG/L	-	5.0 U	5.0 U	NA	250 U	250 U
Ethene	UG/L	-	5.0 U	5.0 U	NA	250 U	250 U
Methane	UG/L	-	99	78	40	3,600	3,300
Total Metals							
Iron	UG/L	300	8,370 J	7,690	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

J - Analyte is reported below the PQL at an estimated concentration. (J-) - Estimated result biased low.

U - Non-Detect J - Estimated Result NA - Not Analyzed. R - Rejected.

UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalent 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

APPENDIX B **HISTORICAL GROUNDWATER ANALYTICAL RESULTS** **FORMER EMCA SITE, MAMARONECK, NEW YORK**

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			MW06-091803	MW-06_121703	MW-06	Field-Dup	MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/18/03	12/17/03	07/23/04	05/31/05	05/31/05
Parameter	Units	Criteria*				Field Duplicate (1-1)	
Dissolved Metals							
Iron	UG/L	300	8,470 J	7,670	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	74.6	84.0	60.5	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	0.31	0.36	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	0.88	0.79	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	0.1 U	0.1 UJ	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	0.1 U	0.1 UJ	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	39.2	39.1	33.5	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	-	6.0	8.7	NA	NA	NA
Ferric Iron (lab)	MG/L	-	8.4	1.0 U	NA	NA	NA
Fluoride	MG/L	1.5	0.37	0.42	0.467	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 Equivalent 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

APPENDIX B

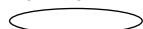
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			MW06-091803	MW-06_121703	MW-06	Field-Dup	MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/18/03	12/17/03	07/23/04	05/31/05	05/31/05
Parameter	Units	Criteria*				Field Duplicate (1-1)	
Miscellaneous Parameters							
TPH	MG/L	-	NA	5.26 U	NA	NA	NA
Oil & Grease	MG/L	-	5 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	0 U	1.04	NA	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	-	-143	-110	-64	NA	-140
pH	S.U.	-	NA	NA	NA	NA	NA
Specific Conductance	MS/CM	-	0.581	0.602	0.513	NA	1.13
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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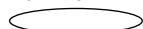
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			MW-06V15FD	MW-06V15N	MW-06V15FD	MW-06V15N	20070207MW-06V15FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/20/05	12/20/05	08/15/06	08/15/06	02/07/07
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	6.0 J	10 U	10 U	100
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 GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			MW-06V15FD	MW-06V15N	MW-06V15FD	MW-06V15N	20070207MW-06V15FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/20/05	12/20/05	08/15/06	08/15/06	02/07/07
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	10 U	10 U	10 U	10 U	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	10 UJ	10 UJ	10 U	10 U	8.0 J
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	6,700	5,600	1,600	1,700	12,000
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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Detection Limits shown are PQL

APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			MW-06V15FD	MW-06V15N	MW-06V15FD	MW-06V15N	20070207MW-06V15FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/20/05	12/20/05	08/15/06	08/15/06	02/07/07
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 CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	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 CaCO ₃)	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	7.40
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

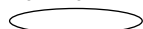
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			MW-06V15FD	MW-06V15N	MW-06V15FD	MW-06V15N	20070207MW-06V15FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/20/05	12/20/05	08/15/06	08/15/06	02/07/07
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	6.83	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	87	NA
pH	S.U.	-	NA	NA	NA	NA	NA
Specific Conductance	MS/CM	-	NA	1.29	NA	0.033	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

APPENDIX B

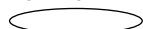
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20070207MW-06V15N	20070731MW-06V15FD	20070731MW-06V15N	20080228MW06V15FD	20080228MW06V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/07/07	07/31/07	07/31/07	02/28/08	02/28/08
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	100	18	21	8.0 J	8.0 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.

Flags assigned during chemistry validation are shown.



Concentration Exceeds Criteria

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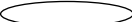
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20070207MW-06V15N	20070731MW-06V15FD	20070731MW-06V15N	20080228MW06V15FD	20080228MW06V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/07/07	07/31/07	07/31/07	02/28/08	02/28/08
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	3.0 J	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	8.0 J	0.5 J	0.6 J	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	-	13,000	3,800	2,500	12,000	14,000
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

J - Analyte is reported below the PQL at an estimated concentration. (J-) - Estimated result biased low.

U - Non-Detect J - Estimated Result NA - Not Analyzed. R - Rejected.

UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalent 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

APPENDIX B

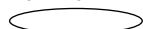
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20070207MW-06V15N	20070731MW-06V15FD	20070731MW-06V15N	20080228MW06V15FD	20080228MW06V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/07/07	07/31/07	07/31/07	02/28/08	02/28/08
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 CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	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 CaCO ₃)	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	7.00	41.8	44.2	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.

Flags assigned during chemistry validation are shown.



Concentration Exceeds Criteria

J - Analyte is reported below the PQL at an estimated concentration. (J-) - Estimated result biased low.

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

Detection Limits shown are PQL

APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20070207MW-06V15N	20070731MW-06V15FD	20070731MW-06V15N	20080228MW06V15FD	20080228MW06V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/07/07	07/31/07	07/31/07	02/28/08	02/28/08
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	-	1.05	NA	0.31	NA	2.61
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-136	NA	-99.7	NA	-122
pH	S.U.	-	NA	NA	6.38	NA	6.24
Specific Conductance	MS/CM	-	0.79	NA	1.050	NA	1.21
Temperature	DEG C	-	NA	NA	NA	NA	12.2
Turbidity	NTU	-	NA	NA	NA	NA	9

*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 GROUNDWATER ANALYTICAL RESULTS** **FORMER EMCA SITE, MAMARONECK, NEW YORK**

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20080812MW06V13N	20090219MW-06V13N	20091013MW-06V13N	20100226MW-06V13N	20100624MW-06V13N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/12/08	02/19/09	10/13/09	02/26/10	06/24/10
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	4.0 J	34	6.4	35 J	68 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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S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts

Detection Limits shown are PQL

APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20080812MW06V13N	20090219MW-06V13N	20091013MW-06V13N	20100226MW-06V13N	20100624MW-06V13N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/12/08	02/19/09	10/13/09	02/26/10	06/24/10
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	2.0 J	1 U	1 UJ	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	35	1 U	3.6	0.57 J
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	12,000	9,000	7,300	13,000	9,400
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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Detection Limits shown are PQL

APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20080812MW06V13N	20090219MW-06V13N	20091013MW-06V13N	20100226MW-06V13N	20100624MW-06V13N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/12/08	02/19/09	10/13/09	02/26/10	06/24/10
Parameter	Units	Criteria*					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	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 CaCO ₃)	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	17.8	57.0 J	2.8 J	31.2	52.3
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.

Flags assigned during chemistry validation are shown.



Concentration Exceeds Criteria

J - Analyte is reported below the PQL at an estimated concentration. (J-) - Estimated result biased low.

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APPENDIX B

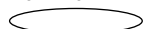
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20080812MW06V13N	20090219MW-06V13N	20091013MW-06V13N	20100226MW-06V13N	20100624MW-06V13N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/12/08	02/19/09	10/13/09	02/26/10	06/24/10
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	0.0	0.0	0.73
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-117	-132	-139	-140	-124
pH	S.U.	-	6.37	6.30	6.57	6.46	8.81
Specific Conductance	MS/CM	-	1.47	0.84	1.79	2.48	0.958
Temperature	DEG C	-	17.0	13.23	17.80	11.80	17.79
Turbidity	NTU	-	5	8	2.2	39	0.45

*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

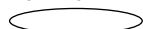
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20101006MW-06V13N	20101006MW-06V13N	20110406MW-06V13N	20110913MW06V13N	20120411MW-06V13N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/06/10	10/06/10	04/06/11	09/13/11	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	61	57	96 J	30	230 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 GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20101006MW-06V13N	20101006MW-06V13N	20110406MW-06V13N	20110913MW06V13N	20120411MW-06V13N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/06/10	10/06/10	04/06/11	09/13/11	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	1 U	1 U	33	1 U	82 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 U	1 U	38 J	4.4	28
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	8,300	8,800	7,900	1,800	5,300
Total Metals							
Iron	UG/L	300	NA	NA	NA	9,630	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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S.U. - Standard Units; MS/CM - Microsiemens per Centimeter; DEG C - Degrees Celsius; NTU - Nephelometric Turbidity Units; mV - Millivolts

Detection Limits shown are PQL

APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20101006MW-06V13N	20101006MW-06V13N	20110406MW-06V13N	20110913MW06V13N	20120411MW-06V13N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/06/10	10/06/10	04/06/11	09/13/11	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 CaCO ₃)	MG/L	-	NA	NA	NA	388	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	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	353,000 J	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO ₃)	MG/L	-	NA	NA	NA	235	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	0.1 U	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	36.8 J	34.5 J	60.8	16.5	119
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	10.9	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

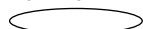
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20101006MW-06V13N	20101006MW-06V13N	20110406MW-06V13N	20110913MW06V13N	20120411MW-06V13N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/06/10	10/06/10	04/06/11	09/13/11	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	-	NA	0.0	0.0	0.0	0.0
Ferrous Iron	MG/L	-	NA	NA	NA	7.4	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	2.23	NA
Oxidation-Reduction Potential	mV	-	NA	-129	-68	-123	-48
pH	S.U.	-	NA	6.97	7.08	7.08	6.81
Specific Conductance	MS/CM	-	NA	0.879	1.61	0.801	1.06
Temperature	DEG C	-	NA	18.25	12.46	22.4	14.04
Turbidity	NTU	-	NA	0.0	0.0	5.3	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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Detection Limits shown are PQL

APPENDIX B

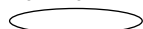
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20120924MW-06V13N	20130409MW-06V12N	20131022MW-06V15N	20140416MW-06V15N	20140701MW-06V15N
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	140	61 J	27	75	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.

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Detection Limits shown are PQL

APPENDIX B

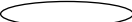
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20120924MW-06V13N	20130409MW-06V12N	20131022MW-06V15N	20140416MW-06V15N	20140701MW-06V15N
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	3.3	0.19 J	1.0 U	26	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	3.6	4.9	1.0 U	33	2.7
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	1,300	9,500	4,100	11,000	11,000
Total Metals							
Iron	UG/L	300	12,100	24,700	20,500	20,900	17,100

*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

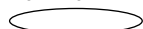
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20120924MW-06V13N	20130409MW-06V12N	20131022MW-06V15N	20140416MW-06V15N	20140701MW-06V15N
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 CaCO ₃)	MG/L	-	304	244	245	240	259
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	304	244	NA	240	259
Alkalinity, Carbonate (as CaCO ₃)	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	NA	NA
Dehalobacter	GC/mL	-	1 J	3 U	2 J	3 U	3 U
Hardness (as CaCO ₃)	MG/L	-	308	337	99.0	370	317
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	0.25 J	0.10 UJ	0.10 UJ	0.10 U
Nitrogen, Nitrite	MG/L	1	NA	NA	0.017 J	0.051 J	0.0092 J
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	52.2	38.4	29.2	36.1	38.8
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	6.9	5.9	5.6	5.8	6.0
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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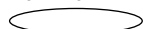
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20120924MW-06V13N	20130409MW-06V12N	20131022MW-06V15N	20140416MW-06V15N	20140701MW-06V15N
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	0.33	0.37	3.99	1.82
Ferrous Iron	MG/L	-	9.9	23.7	3.6	6.0	5.0
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-80	-102	-108	-92	-80
pH	S.U.	-	6.82	6.47	6.45	7.02	6.78
Specific Conductance	MS/CM	-	0.636	2.91	1.4	1.73	1.33
Temperature	DEG C	-	22.01	16.34	18.41	12.71	19.20
Turbidity	NTU	-	0.0	0.2	1.4	0	7.3

*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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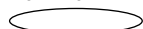
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20141027MW-06V15N	DUP20141027	20150422MW-06	20151008MW-06	20160427MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/27/14	10/27/14	04/22/15	10/08/15	04/27/16
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	44	110	51	51
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 GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20141027MW-06V15N	DUP20141027	20150422MW-06	20151008MW-06	20160427MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/27/14	10/27/14	04/22/15	10/08/15	04/27/16
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	1.6	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	1.0 U	1.0 U	8.1	1.0 U	1.1
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	3,400	2,700	5,200	7,200	890
Total Metals							
Iron	UG/L	300	31,000	33,200	26,400	20,200	20,600

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

Detection Limits shown are PQL

APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20141027MW-06V15N	DUP20141027	20150422MW-06	20151008MW-06	20160427MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/27/14	10/27/14	04/22/15	10/08/15	04/27/16
Parameter	Units	Criteria*		Field Duplicate (1-1)			
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO ₃)	MG/L	-	740	726	311	312	277
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	740	726	311	312	277
Alkalinity, Carbonate (as CaCO ₃)	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	-	80	NA	3.0 U	1 J	3 J
Hardness (as CaCO ₃)	MG/L	-	297	564	515	337	380
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	0.58 J	0.10 U	2.0 U	0.10 U
Nitrogen, Nitrite	MG/L	1	0.10 U	0.10 U	0.10 U	0.020 J	0.098 J
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	0.050 U	NA	NA
Sulfate	MG/L	250	5.0 U	5.0 U	29.9	16.7	36.3
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	314	298	5.1	5.5	4.9
Ferrous Iron (lab)	MG/L	-	NA	NA	0.90 J	0.44 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

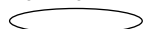
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20141027MW-06V15N	DUP20141027	20150422MW-06	20151008MW-06	20160427MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/27/14	10/27/14	04/22/15	10/08/15	04/27/16
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	-	2.67	NA	0.72	0.34	0.59
Ferrous Iron	MG/L	-	6.7	NA	4.5	7.0	7.0
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-130	NA	-104	-110	-97
pH	S.U.	-	6.66	NA	6.83	5.50	6.35
Specific Conductance	MS/CM	-	2.34	NA	2.67	1.60	1.97
Temperature	DEG C	-	17.32	NA	12.18	18.70	13.61
Turbidity	NTU	-	5.6	NA	4.1	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

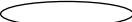
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-07	MW-07	MW-07
Sample ID			20161005MW-06	20170418MW-06	MW07-6-10-03	MW07	MW07-91703
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/05/16	04/18/17	06/10/03	07/23/03	09/17/03
Parameter	Units	Criteria*					
Volatiles							
Acetone	UG/L	50	NA	NA	250 U	500 U	250 U
Benzene	UG/L	1	NA	NA	250 U	500 U	250 U
Bromodichloromethane	UG/L	50	NA	NA	50 U	100 U	50 U
Bromoform	UG/L	50	NA	NA	200 U	400 U	200 U
Bromomethane	UG/L	5	NA	NA	250 U	500 U	250 U
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	250 UR	500 UR	250 UR
Carbon Disulfide	UG/L	60	NA	NA	250 U	500 U	250 U
Carbon Tetrachloride	UG/L	5	NA	NA	100 U	200 U	100 U
Chlorobenzene	UG/L	5	NA	NA	250 U	500 U	250 U
Chloroethane	UG/L	5	NA	NA	250 U	500 U	250 U
Chloroform	UG/L	7	NA	NA	250 U	500 U	250 U
Chloromethane	UG/L	5	NA	NA	250 U	500 U	250 U
Chlorotrifluoroethene (Freon-1113)	UG/L	5	68	60	0 U	0 U	0 U
Dibromochloromethane	UG/L	50	NA	NA	250 U	500 U	250 U
1,1-Dichloroethane	UG/L	5	NA	NA	250 U	500 U	250 U
1,2-Dichloroethane	UG/L	0.6	NA	NA	100 U	200 U	100 U
1,1-Dichloroethene	UG/L	5	NA	NA	100 U	68 J	100 U
cis-1,2-Dichloroethene	UG/L	5	NA	NA	250 U	500 U	250 U
trans-1,2-Dichloroethene	UG/L	5	NA	NA	250 U	500 U	250 U
1,2-Dichloropropane	UG/L	1	NA	NA	50 U	100 U	50 U
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	250 U	500 U	250 U
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	250 U	500 U	250 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 GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-07	MW-07	MW-07
Sample ID			20161005MW-06	20170418MW-06	MW07-6-10-03	MW07	MW07-91703
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/05/16	04/18/17	06/10/03	07/23/03	09/17/03
Parameter	Units	Criteria*					
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	200 U	400 U	200 U
2-Hexanone	UG/L	50	NA	NA	250 U	500 U	250 U
4-Methyl-2-Pentanone	UG/L	-	NA	NA	250 U	500 U	250 U
Methylene Chloride	UG/L	5	NA	NA	150 U	300 U	150 U
Styrene	UG/L	5	NA	NA	250 U	500 U	250 U
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	50 U	100 U	50 U
Tetrachloroethene	UG/L	5	NA	NA	50 U	100 U	50 U
1,1,1-Trichloroethane	UG/L	5	NA	NA	250 U	500 U	250 U
1,1,2-Trichloroethane	UG/L	1	NA	NA	150 U	300 U	150 U
Trichloroethene	UG/L	5	NA	NA	50 U	100 U	50 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1.0 U	5.5	5,400	8,500	6,100
Toluene	UG/L	5	NA	NA	250 U	500 U	250 U
Vinyl Chloride	UG/L	2	NA	NA	250 U	500 U	250 U
Xylene (total)	UG/L	5	NA	NA	250 U	500 U	250 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	0.28 J	13	68 J	130 J	130 J
Dissolved Gases							
Ethane	UG/L	-	NA	NA	50 U	50 U	50 U
Ethene	UG/L	-	NA	NA	50 U	50 U	50 U
Methane	UG/L	-	280	3,100	740	420	1,200
Total Metals							
Iron	UG/L	300	14,900	20,200	21,300	21,200	32,700 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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APPENDIX B

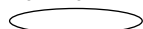
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-07	MW-07	MW-07
Sample ID			20161005MW-06	20170418MW-06	MW07-6-10-03	MW07	MW07-91703
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/05/16	04/18/17	06/10/03	07/23/03	09/17/03
Parameter	Units	Criteria*					
Dissolved Metals							
Iron	UG/L	300	NA	NA	20,800	20,800	32,500 J
Miscellaneous Parameters							
Alkalinity, Total (as CaCO ₃)	MG/L	-	256	290	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	256	290	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	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	140	168	300 J
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	4	3.0 U	NA	NA	NA
Hardness (as CaCO ₃)	MG/L	-	320	360	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	0.39	0.6	0.66
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	1.2	1.8	2.1
Nitrogen, Nitrate	MG/L	10	0.10 U	0.10 U	0.1 U	NA	0.1 U
Nitrogen, Nitrite	MG/L	1	0.031 J	0.024 J	0.1 U	NA	0.1 U
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	0.1 UJ	NA
Sulfate	MG/L	250	30.7	26.5	32.8	31.0	23.6
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	4.3	5.1	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	0.10 UJ	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	20.2	19.8	33.8
Ferric Iron (lab)	MG/L	-	NA	NA	1	1.4	14.1
Fluoride	MG/L	1.5	NA	NA	0.33	0.25	0.24

*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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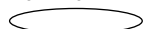
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-07	MW-07	MW-07
Sample ID			20161005MW-06	20170418MW-06	MW07-6-10-03	MW07	MW07-91703
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/05/16	04/18/17	06/10/03	07/23/03	09/17/03
Parameter	Units	Criteria*					
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	5 U	5 U	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	5.44 U
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	-	0.44	0 U	0.9	0.1	0 U
Ferrous Iron	MG/L	-	4.5	6.0	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-102	11	-130	-108	-118
pH	S.U.	-	6.66	6.63	NA	NA	NA
Specific Conductance	MS/CM	-	1.59	1.76	0.93	1.11	1.44
Temperature	DEG C	-	17.83	12.04	NA	NA	NA
Turbidity	NTU	-	0 U	0 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 GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID			MW-07_121703	MW-07	MW-07	MW-07V15N	MW-07V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/17/03	07/22/04	05/31/05	12/20/05	08/14/06
Parameter	Units	Criteria*					
Volatiles							
Acetone	UG/L	50	50 U	NA	NA	NA	NA
Benzene	UG/L	1	14	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	10 U	NA	NA	NA	NA
Bromoform	UG/L	50	40 U	NA	NA	NA	NA
Bromomethane	UG/L	5	50 U	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	50 UR	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	50 U	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	20 U	NA	NA	NA	NA
Chlorobenzene	UG/L	5	50 U	NA	NA	NA	NA
Chloroethane	UG/L	5	50 U	NA	NA	NA	NA
Chloroform	UG/L	7	50 U	NA	NA	NA	NA
Chloromethane	UG/L	5	50 U	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	0 U	210	140	47	97
Dibromochloromethane	UG/L	50	50 U	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	50 U	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	20 U	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	20 U	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	50 U	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	50 U	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	10 U	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	50 U	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	50 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.

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Detection Limits shown are PQL

APPENDIX B

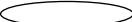
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID			MW-07_121703	MW-07	MW-07	MW-07V15N	MW-07V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/17/03	07/22/04	05/31/05	12/20/05	08/14/06
Parameter	Units	Criteria*					
Volatiles							
Ethylbenzene	UG/L	5	49	NA	NA	NA	NA
2-Hexanone	UG/L	50	50 U	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	50 U	NA	NA	NA	NA
Methylene Chloride	UG/L	5	30 U	NA	NA	NA	NA
Styrene	UG/L	5	50 U	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	10 U	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	10 U	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	50 U	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	30 U	NA	NA	NA	NA
Trichloroethene	UG/L	5	10 U	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	370	110 J	10 U	10 U	10 U
Toluene	UG/L	5	50 U	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	50 U	NA	NA	NA	NA
Xylene (total)	UG/L	5	50 U	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	940	50	2.0 J	10 U	1.0 J
Dissolved Gases							
Ethane	UG/L	-	120 U	NA	250 U	NA	NA
Ethene	UG/L	-	120 U	NA	250 U	NA	NA
Methane	UG/L	-	1,700	2,500	5,900	9,700	6,900
Total Metals							
Iron	UG/L	300	38,900	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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U - Non-Detect J - Estimated Result NA - Not Analyzed. R - Rejected.

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

Detection Limits shown are PQL

APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID			MW-07_121703	MW-07	MW-07	MW-07V15N	MW-07V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/17/03	07/22/04	05/31/05	12/20/05	08/14/06
Parameter	Units	Criteria*					
Dissolved Metals							
Iron	UG/L	300	38,900	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	328	303	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	0.99	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	2.8	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	5.0 U	5.0 U	5.0 U	5.0 U	19.3
Sulfide	MG/L	0.05	NA	1.0 U	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	-	19.5	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	19.4	NA	NA	NA	NA
Fluoride	MG/L	1.5	0.19	0.190	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

Detection Limits shown are PQL

APPENDIX B

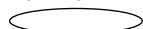
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID			MW-07_121703	MW-07	MW-07	MW-07V15N	MW-07V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/17/03	07/22/04	05/31/05	12/20/05	08/14/06
Parameter	Units	Criteria*					
Miscellaneous Parameters							
TPH	MG/L	-	5.26 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	-	3.33	0.88	0 U	0 U	3.47
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-115	-153	-152	-169	-163
pH	S.U.	-	NA	NA	NA	NA	NA
Specific Conductance	MS/CM	-	1.94	1.69	1.75	1.65	1.44
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

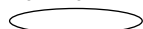
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID			20070207MW-07V15N	20070731MW-07V15N	20080228MW07V15N	20080812MW07V09N	20090218MW-07V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/07/07	07/31/07	02/28/08	08/12/08	02/18/09
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	89	82	92	170	150
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

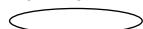
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID			20070207MW-07V15N	20070731MW-07V15N	20080228MW07V15N	20080812MW07V09N	20090218MW-07V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/07/07	07/31/07	02/28/08	08/12/08	02/18/09
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	10 U	6.0 J	10 UJ	3.0 J	46
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	3.0 J	10	0.9 J	16	20
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	6,200	4,100	7,100	5,600	11,000
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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Detection Limits shown are PQL

APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID			20070207MW-07V15N	20070731MW-07V15N	20080228MW07V15N	20080812MW07V09N	20090218MW-07V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/07/07	07/31/07	02/28/08	08/12/08	02/18/09
Parameter	Units	Criteria*					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	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 CaCO ₃)	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	6.1	5 U	5.6	5 UJ
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

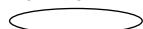
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID			20070207MW-07V15N	20070731MW-07V15N	20080228MW07V15N	20080812MW07V09N	20090218MW-07V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/07/07	07/31/07	02/28/08	08/12/08	02/18/09
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	-	2.89	0.48	2.64	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	-	-121	-113.5	-137	-167	-154
pH	S.U.	-	NA	6.78	6.32	6.48	6.18
Specific Conductance	MS/CM	-	2.02	2.182	1.62	1.99	2.01
Temperature	DEG C	-	NA	NA	9.03	17.3	12.11
Turbidity	NTU	-	NA	NA	54	25	21

*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 GROUNDWATER ANALYTICAL RESULTS** **FORMER EMCA SITE, MAMARONECK, NEW YORK**

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20091013MW-07RV15N	20100225MW-07RV15N	20100624MW-07RV15FD	20100624MW-07RV15N	20101006MW-07RV15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/13/09	02/25/10	06/24/10	06/24/10	10/06/10
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	370 D	150 J	350 J	390	350
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

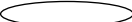
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20091013MW-07DV15N	20100225MW-07DV15N	20100624MW-07DV15FD	20100624MW-07DV15N	20101006MW-07DV15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/13/09	02/25/10	06/24/10	06/24/10	10/06/10
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	580 D	18 J	1.1 J	1	53 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	76	8.1	1.7 J	1.8	9.5
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	5,900	6,500	8,100	8,400	6,200
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

J - Analyte is reported below the PQL at an estimated concentration. (J-) - Estimated result biased low.

U - Non-Detect J - Estimated Result NA - Not Analyzed. R - Rejected.

UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalent 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

APPENDIX B **HISTORICAL GROUNDWATER ANALYTICAL RESULTS** **FORMER EMCA SITE, MAMARONECK, NEW YORK**

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20091013MW-07RV15N	20100225MW-07RV15N	20100624MW-07RV15FD	20100624MW-07RV15N	20101006MW-07RV15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/13/09	02/25/10	06/24/10	06/24/10	10/06/10
Parameter	Units	Criteria*			Field Duplicate (1-1)		
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO ₃)	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 CaCO ₃)	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	6.3	7.9	17	11.2	13 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.

Flags assigned during chemistry validation are shown.



Concentration Exceeds Criteria

J - Analyte is reported below the PQL at an estimated concentration. (J-) - Estimated result biased low.

U - Non-Detect J - Estimated Result NA - Not Analyzed. R - Rejected.

UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalent 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

APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20091013MW-07RV15N	20100225MW-07RV15N	20100624MW-07RV15FD	20100624MW-07RV15N	20101006MW-07RV15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/13/09	02/25/10	06/24/10	06/24/10	10/06/10
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	-	0.0	0.0	NA	0.69	4.05
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-139	-146	NA	-129	-113
pH	S.U.	-	6.45	6.52	NA	8.83	6.82
Specific Conductance	MS/CM	-	2.74	2.79	NA	2.09	2.03
Temperature	DEG C	-	18.36	10.69	NA	16.45	21.42
Turbidity	NTU	-	1.1	1.1	NA	0.35	14.3

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

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Detection Limits shown are PQL

APPENDIX B **HISTORICAL GROUNDWATER ANALYTICAL RESULTS** **FORMER EMCA SITE, MAMARONECK, NEW YORK**

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20110406MW-07RV15N	20110913MW07RV15N	20120411MW-07RV15FD	20120411MW-07RV15N	20120924MW-07RV15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/06/11	09/13/11	04/11/12	04/11/12	09/24/12
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	370 J	26	630 J	540 J	430
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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U - Non-Detect J - Estimated Result NA - Not Analyzed. R - Rejected.

UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalent 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

APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20110406MW-07RV15N	20110913MW07RV15N	20120411MW-07RV15FD	20120411MW-07RV15N	20120924MW-07RV15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/06/11	09/13/11	04/11/12	04/11/12	09/24/12
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	18	1.6	67 J	59 J	5.9 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	6.3 J	0.94 J	11	9.7	2.4 J
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	8,300	2,000	6,400	6,600	3,900
Total Metals							
Iron	UG/L	300	NA	23,600	NA	NA	29,900

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

Detection Limits shown are PQL

APPENDIX B **HISTORICAL GROUNDWATER ANALYTICAL RESULTS** **FORMER EMCA SITE, MAMARONECK, NEW YORK**

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20110406MW-07RV15N	20110913MW07RV15N	20120411MW-07RV15FD	20120411MW-07RV15N	20120924MW-07RV15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/06/11	09/13/11	04/11/12	04/11/12	09/24/12
Parameter	Units	Criteria*			Field Duplicate (1-1)		
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO ₃)	MG/L	-	NA	406	NA	NA	335
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	NA	NA	NA	335
Alkalinity, Carbonate (as CaCO ₃)	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	-	NA	248	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	10
Hardness (as CaCO ₃)	MG/L	-	NA	637	NA	NA	414
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	0.1 U	NA	NA	0.10 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	25.8	12.2	18.9	17.7	32.0
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	11.3	NA	NA	11.8
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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Concentration Exceeds Criteria

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

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Detection Limits shown are PQL

APPENDIX B **HISTORICAL GROUNDWATER ANALYTICAL RESULTS** **FORMER EMCA SITE, MAMARONECK, NEW YORK**

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20110406MW-07RV15N	20110913MW07RV15N	20120411MW-07RV15FD	20120411MW-07RV15N	20120924MW-07RV15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/06/11	09/13/11	04/11/12	04/11/12	09/24/12
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	-	0.0	0.0	NA	0.0	0.0
Ferrous Iron	MG/L	-	NA	20.1	NA	NA	30.4
Ferric Iron (calculated)	MG/L	-	NA	3.5	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-83	-109	NA	-82	-118
pH	S.U.	-	6.39	6.86	NA	6.72	6.69
Specific Conductance	MS/CM	-	3.40	3.28	NA	2.10	1.78
Temperature	DEG C	-	12.08	22.4	NA	13.63	22.35
Turbidity	NTU	-	0.0	0.1	NA	8.2	0.0

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Detection Limits shown are PQL

APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20130409MW-07DV13N	20131022MW-07DV17N	20140416MW-07DV17N	20140701MW-07DV17N	20141027MW-07DV17N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/09/13	10/22/13	04/16/14	07/01/14	10/27/14
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	310 J	390	2.4	69	130
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

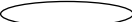
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20130409MW-07DV13N	20131022MW-07DV17N	20140416MW-07DV17N	20140701MW-07DV17N	20141027MW-07DV17N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/09/13	10/22/13	04/16/14	07/01/14	10/27/14
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	5.5	12	1.0 U	1.0 U	15
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	2.6	1.1	1.0 U	1.2	2.2
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	2,100	4,000	680	4,400	1,300
Total Metals							
Iron	UG/L	300	29,000	30,900	24,500	28,700	31,600

*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

J - Analyte is reported below the PQL at an estimated concentration. (J-) - Estimated result biased low.

U - Non-Detect J - Estimated Result NA - Not Analyzed. R - Rejected.

UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalent 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

APPENDIX B **HISTORICAL GROUNDWATER ANALYTICAL RESULTS** **FORMER EMCA SITE, MAMARONECK, NEW YORK**

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20130409MW-07RW13N	20131022MW-07RW17N	20140416MW-07RW17N	20140701MW-07RW17N	20141027MW-07RW17N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/09/13	10/22/13	04/16/14	07/01/14	10/27/14
Parameter	Units	Criteria*					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO ₃)	MG/L	-	263	291	305	399	394
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	263	NA	305	399	394
Alkalinity, Carbonate (as CaCO ₃)	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	70	NA	NA
Dehalobacter	GC/mL	-	4	5	3 U	4 U	3
Hardness (as CaCO ₃)	MG/L	-	515	208	594	545	574
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	0.066 J	0.36 J	0.10 U	0.076 J	1.0 U
Nitrogen, Nitrite	MG/L	1	NA	0.015 J	0.038 J	0.014 J	0.10 U
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	19.1	7.4	17.9	13.8	8.4
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	9.3	12.3	7.8	11.4	15.2
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

J - Analyte is reported below the PQL at an estimated concentration. (J-) - Estimated result biased low.

U - Non-Detect J - Estimated Result NA - Not Analyzed. R - Rejected.

UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalent 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

APPENDIX B

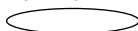
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20130409MW-07DV13N	20131022MW-07DV17N	20140416MW-07DV17N	20140701MW-07DV17N	20141027MW-07DV17N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/09/13	10/22/13	04/16/14	07/01/14	10/27/14
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	0.36	4.43	1.74	2.86
Ferrous Iron	MG/L	-	27.5	15.3	6.0	6.0	4.65
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-89	-102	-77	-68	-107
pH	S.U.	-	6.35	6.31	6.89	6.64	6.56
Specific Conductance	MS/CM	-	4.84	1.84	3.31	2.58	2.69
Temperature	DEG C	-	17.93	19.42	11.39	19.41	18.94
Turbidity	NTU	-	53.9	0.2	0	20.7	8.7

*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

J - Analyte is reported below the PQL at an estimated concentration. (J-) - Estimated result biased low.

U - Non-Detect J - Estimated Result NA - Not Analyzed. R - Rejected.

UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalent 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

APPENDIX B **HISTORICAL GROUNDWATER ANALYTICAL RESULTS** **FORMER EMCA SITE, MAMARONECK, NEW YORK**

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20150304MW-07R	20150422MW-07R	20151008MW-07R	20160427MW-07R	20161005MW-07R
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/04/15	04/22/15	10/08/15	04/27/16	10/05/16
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	10	46	22	65
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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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalent 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

APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20150304MW-07R	20150422MW-07R	20151008MW-07R	20160427MW-07R	20161005MW-07R
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/04/15	04/22/15	10/08/15	04/27/16	10/05/16
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	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	0.78 J	0.39 J	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	-	NA	1,700	9,800	2,400	2,500
Total Metals							
Iron	UG/L	300	NA	25,300	39,000	39,300	42,200

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

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

Detection Limits shown are PQL

APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20150304MW-07R	20150422MW-07R	20151008MW-07R	20160427MW-07R	20161005MW-07R
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/04/15	04/22/15	10/08/15	04/27/16	10/05/16
Parameter	Units	Criteria*					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO ₃)	MG/L	-	NA	240	450	357	374
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	NA	240	450	357	374
Alkalinity, Carbonate (as CaCO ₃)	MG/L	-	NA	5.0 U	5.0 U	5.0 U	5.0 U
Alkalinity, Hydroxide	MG/L	-	NA	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	-	300	90	20	7 J	5
Hardness (as CaCO ₃)	MG/L	-	NA	641	475	630	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	0.16	2.0 U	0.10 U	0.10 U
Nitrogen, Nitrite	MG/L	1	NA	0.018 J	0.028 J	0.072 J	0.045 J
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	0.18	NA	NA	NA
Sulfate	MG/L	250	NA	11.8	9.1	5.0 U	5.0 U
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	6.0	11.8	9.7	10.4
Ferrous Iron (lab)	MG/L	-	NA	2.2 J	0.49 J	NA	2.6 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.

Flags assigned during chemistry validation are shown.



Concentration Exceeds Criteria

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U - Non-Detect J - Estimated Result NA - Not Analyzed. R - Rejected.

UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalent 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

APPENDIX B

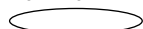
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20150304MW-07R	20150422MW-07R	20151008MW-07R	20160427MW-07R	20161005MW-07R
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/04/15	04/22/15	10/08/15	04/27/16	10/05/16
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	-	0.91	0.91	0.37	0.53	0.31
Ferrous Iron	MG/L	-	NA	4.0	7.0	7.0	11
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-120	-75	-100	-95	-119
pH	S.U.	-	6.81	6.69	5.35	6.25	6.46
Specific Conductance	MS/CM	-	2.56	4.17	2.40	3.44	2.61
Temperature	DEG C	-	8.90	12.41	19.15	14.10	18.98
Turbidity	NTU	-	0.0	0.9	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

J - Analyte is reported below the PQL at an estimated concentration. (J-) - Estimated result biased low.

U - Non-Detect J - Estimated Result NA - Not Analyzed. R - Rejected.

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

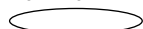
APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R
Sample ID			20170418MW-07R
Matrix			Groundwater
Depth Interval (ft)			-
Date Sampled			04/18/17
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	3.6
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

J - Analyte is reported below the PQL at an estimated concentration. (J-) - Estimated result biased low.

U - Non-Detect J - Estimated Result NA - Not Analyzed. R - Rejected.

UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalent 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

APPENDIX B

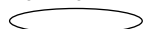
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R
Sample ID			20170418MW-07R
Matrix			Groundwater
Depth Interval (ft)			-
Date Sampled			04/18/17
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	0.32 J
Dissolved Gases			
Ethane	UG/L	-	NA
Ethene	UG/L	-	NA
Methane	UG/L	-	990
Total Metals			
Iron	UG/L	300	29,800

*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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U - Non-Detect J - Estimated Result NA - Not Analyzed. R - Rejected.

UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalent 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

APPENDIX B

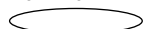
HISTORICAL GROUNDWATER ANALYTICAL RESULTS

FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R
Sample ID			20170418MW-07R
Matrix			Groundwater
Depth Interval (ft)			-
Date Sampled			04/18/17
Parameter	Units	Criteria*	
Dissolved Metals			
Iron	UG/L	300	NA
Miscellaneous Parameters			
Alkalinity, Total (as CaCO ₃)	MG/L	-	321
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	321
Alkalinity, Carbonate (as CaCO ₃)	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	-	3
Hardness (as CaCO ₃)	MG/L	-	560
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	0.035 J
Nitrogen, Nitrate-Nitrite	MG/L	10	NA
Sulfate	MG/L	250	5.4
Sulfide	MG/L	0.05	NA
Total Organic Carbon	MG/L	-	7.6
Ferrous Iron (lab)	MG/L	-	NA
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

J - Analyte is reported below the PQL at an estimated concentration. (J-) - Estimated result biased low.

U - Non-Detect J - Estimated Result NA - Not Analyzed. R - Rejected.

UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalent 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

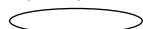
APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R
Sample ID			20170418MW-07R
Matrix			Groundwater
Depth Interval (ft)			-
Date Sampled			04/18/17
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 U
Ferrous Iron	MG/L	-	10
Ferric Iron (calculated)	MG/L	-	NA
Oxidation-Reduction Potential	mV	-	26
pH	S.U.	-	6.43
Specific Conductance	MS/CM	-	3.53
Temperature	DEG C	-	12.47
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

J - Analyte is reported below the PQL at an estimated concentration. (J-) - Estimated result biased low.

U - Non-Detect J - Estimated Result NA - Not Analyzed. R - Rejected.

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

APPENDIX C

DATA USABILITY SUMMARY REPORT

APPENDIX C

DATA USABILITY SUMMARY REPORT

APRIL 2017 SAMPLING EVENT

FORMER EMCA SITE

SITE NO. 360025

MAMARONECK, NEW YORK

Analyses Performed by:

TESTAMERICA LABORATORIES, INC.

Edison, NJ/Amherst, NY

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:

AECOM

257 West Genesee Street, Suite 400

Buffalo, New York 14202-2657

MAY 2017

TABLE OF CONTENTS

	<u>Page No.</u>
I. INTRODUCTION	C-1
II. ANALYTICAL METHODOLOGIES.....	C-1
III. DATA VALIDATION PROCEDURES.....	C-1
IV. DATA DELIVERABLE COMPLETENESS	C-2
V. SAMPLE RECEIPT/PRESERVATION/HOLDING TIMES	C-2
VI. NONCONFORMANCES	C-2
VII. SUMMARY	C-3

TABLES (Following Text)

Table C-1	Sample and Analysis Summary – April 2017
Table C-2	Groundwater Analytical Results – April 2017
Table C-3	Field QC Analytical Results – April 2017

ATTACHMENTS (Following Tables)

Attachment A – Validated Analytical Results (Form 1's)
Attachment B – Support Documentation

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 April 18, 2017, as summarized on Table C-1. The April 2017 samples were collected 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 Amherst, New York; 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})	Field Parameter	6
Nitrate	SM 4500- NO_3	4
Nitrite	SM 4500- NO_2	4
Total Organic Carbon (TOC)	SM 5310 B	4
Bacteria [<i>Dehalococcoides ethenogenes</i> (Dhc) and <i>Dehalobacter</i> (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.
- 6 Hach Color Disc Test Kit, Model IR-18C using 1,10-Phenanthroline.

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 the nitrate and nitrite analyses for sample MW-02, which were performed 13 minutes outside the 48-hour holding time. The nitrate and nitrite results for this sample were qualified 'UJ' and 'J-', respectively.

VI. NONCONFORMANCES

Blank Contamination

The TOC initial calibration blank associated with all groundwater samples exhibited contamination below the reporting limit (RL). Since the TOC results for groundwater samples are 10 times the blank concentration, no data qualification was necessary.

Laboratory Control Samples

The *Dehalococcoides (Dhc)* low-level laboratory control sample (LCS) associated with sample MW-02 was slightly above QC limits. The detected *Dhc* result for this sample was qualified 'J'.

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), 'J-' (estimated biased low) or 'UJ' (non-detect, estimated quantitation limit) during the data validation are considered conditionally usable.

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 - APRIL 2017
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	Nitrite	TOC	Dhc	Dhb	Comments
460-131878-1/ S-4300	20170418MW-02	GW	04/18/17	X	X	X	X	X	X	X	X	X	X	X	X	---
	20170418MW-03	GW		X	X	X	X	X	X	X	X	X	X	---	X	---
	20170418MW-04	GW		X	X	X	X	X	X	X	X	X	X	---	X	---
	20170418MW-06	GW		X	X	X	X	X	X	X	X	X	X	---	X	---
	20170418MW-07R	GW		X	X	X	X	X	X	X	X	X	X	---	X	---
	TB20170418	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 - APRIL 2017
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-03	MW-04	MW-06	MW-07R
Sample ID			20170418MW-02	20170418MW-03	20170418MW-04	20170418MW-06	20170418MW-07R
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/18/17	04/18/17	04/18/17	04/18/17	04/18/17
Parameter	Units	Criteria*					
Volatiles							
Chlorotrifluoroethene (Freon-1113)	UG/L	5	1,300	230	1.0 U	60	3.6
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	2,200	140	1.0 U	5.5	1.0 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	170	52	1.0 U	13	0.32 J
Dissolved Gases							
Methane	UG/L	-	5,800	1,500	770	3,100	990
Total Metals							
Iron	UG/L	300	61,800	24,200	21,700	20,200	29,800
Miscellaneous Parameters							
Alkalinity, Total (as CaCO ₃)	MG/L	-	281	264	400	290	321
Alkalinity, Bicarbonate (as CaCO ₃)	MG/L	-	281	264	400	290	321
Alkalinity, Carbonate (as CaCO ₃)	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	-	400 J	NA	NA	NA	NA
Dehalobacter	GC/mL	-	3.0 U	6	3.0 U	3.0 U	3
Hardness (as CaCO ₃)	MG/L	-	410	390	540	360	560
Nitrogen, Nitrate	MG/L	10	0.10 UJ	0.10 U	0.10 U	0.10 U	0.10 U
Nitrogen, Nitrite	MG/L	1	0.049 J-	0.031 J	0.028 J	0.024 J	0.035 J
Sulfate	MG/L	250	36.2	56.6	5.0 U	26.5	5.4
Total Organic Carbon	MG/L	-	7.1	6.0	13.2	5.1	7.6
Field Parameter							
Dissolved Oxygen	MG/L	-	0 U	0 U	0 U	0 U	0 U
Ferrous Iron	MG/L	-	11	10	8.0	6.0	10

*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

J - Analyte is reported below the PQL at an estimated concentration. (J-) - Estimated result biased low.

U - Non-Detect

UJ - Not detected above the estimated quantitation limit. 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

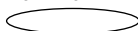
Detection Limits shown are PQL

TABLE C-2
GROUNDWATER ANALYTICAL RESULTS - APRIL 2017
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-03	MW-04	MW-06	MW-07R
Sample ID			20170418MW-02	20170418MW-03	20170418MW-04	20170418MW-06	20170418MW-07R
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/18/17	04/18/17	04/18/17	04/18/17	04/18/17
Parameter	Units	Criteria*					
Field Parameter							
Oxidation-Reduction Potential	mV	-	-6	18	20	11	26
pH	S.U.	-	6.40	6.51	6.56	6.63	6.43
Specific Conductance	MS/CM	-	2.23	1.63	2.15	1.76	3.53
Temperature	DEG C	-	11.27	12.91	13.83	12.04	12.47
Turbidity	NTU	-	0 U	0 U	0 U	0 U	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

J - Analyte is reported below the PQL at an estimated concentration. (J-) - Estimated result biased low.

U - Non-Detect UJ - Not detected above the estimated quantitation limit. 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

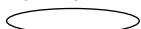
Detection Limits shown are PQL

TABLE C-3
FIELD QC ANALYTICAL RESULTS - APRIL 2017
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			FIELDQC
Sample ID			TB20170418
Matrix			Water
Depth Interval (ft)			-
Date Sampled			04/18/17
Parameter	Units	Criteria*	Trip Blank (1-1)
Volatiles			
Chlorotrifluoroethene (Freon-1113)	UG/L	5	1.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1.0 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	1.0 U
Dissolved Gases			
Methane	UG/L	-	3.2 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

J - Analyte is reported below the PQL at an estimated concentration.

U - Non-Detect

Detection Limits shown are PQL

ATTACHMENT A

VALIDATED ANALYTICAL RESULTS (FORM 1's)

Analytical Data

Client: URS Corporation

Job Number: 460-131878-1

Client Sample ID: 20170418MW-02

Lab Sample ID: 460-131878-1

Client Matrix: Water

Date Sampled: 04/18/2017 0850

Date Received: 04/19/2017 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-434004	Instrument ID:	CVOAMS8
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J54735.D
Dilution:	5.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/30/2017 1705			Final Weight/Volume:	5 mL
Prep Date:	04/30/2017 1705				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Freon TF	2200		1.7	5.0
Chlorotrifluoroethene	1300		1.5	5.0
1,2-Dichloro-1,1,2-trifluoroethane	170		0.85	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	101		74 - 132
Toluene-d8 (Surr)	91		80 - 120
Bromofluorobenzene	103		77 - 124
Dibromofluoromethane (Surr)	106		72 - 131

Analytical Data

Client: URS Corporation

Job Number: 460-131878-1

Client Sample ID: 20170418MW-06

Lab Sample ID: 460-131878-2

Client Matrix: Water

Date Sampled: 04/18/2017 1010

Date Received: 04/19/2017 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-434004	Instrument ID:	CVOAMS8
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J54731.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/30/2017 1519			Final Weight/Volume:	5 mL
Prep Date:	04/30/2017 1519				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Freon TF	5.5		0.34	1.0
Chlorotrifluoroethene	60		0.30	1.0
1,2-Dichloro-1,1,2-trifluoroethane	13		0.17	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102		74 - 132
Toluene-d8 (Surr)	93		80 - 120
Bromofluorobenzene	102		77 - 124
Dibromofluoromethane (Surr)	104		72 - 131

Analytical Data

Client: URS Corporation

Job Number: 460-131878-1

Client Sample ID: 20170418MW-03

Lab Sample ID: 460-131878-3

Client Matrix: Water

Date Sampled: 04/18/2017 1157

Date Received: 04/19/2017 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-434004	Instrument ID:	CVOAMS8
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J54732.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/30/2017 1545			Final Weight/Volume:	5 mL
Prep Date:	04/30/2017 1545				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Freon TF	140		0.34	1.0
Chlorotrifluoroethene	230		0.30	1.0
1,2-Dichloro-1,1,2-trifluoroethane	52		0.17	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102		74 - 132
Toluene-d8 (Surr)	93		80 - 120
Bromofluorobenzene	99		77 - 124
Dibromofluoromethane (Surr)	103		72 - 131

Analytical Data

Client: URS Corporation

Job Number: 460-131878-1

Client Sample ID: 20170418MW-07R

Lab Sample ID: 460-131878-4

Client Matrix: Water

Date Sampled: 04/18/2017 1315

Date Received: 04/19/2017 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-434279	Instrument ID:	CVOAMS8
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J54804.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	05/01/2017 2338			Final Weight/Volume:	5 mL
Prep Date:	05/01/2017 2338				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Freon TF	0.34	U	0.34	1.0
Chlorotrifluoroethene	3.6		0.30	1.0
1,2-Dichloro-1,1,2-trifluoroethane	0.32	J	0.17	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96		74 - 132
Toluene-d8 (Surr)	91		80 - 120
Bromofluorobenzene	93		77 - 124
Dibromofluoromethane (Surr)	102		72 - 131

Analytical Data

Client: URS Corporation

Job Number: 460-131878-1

Client Sample ID: 20170418MW-04

Lab Sample ID: 460-131878-5

Client Matrix: Water

Date Sampled: 04/18/2017 1425

Date Received: 04/19/2017 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-434004	Instrument ID:	CVOAMS8
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J54734.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/30/2017 1638			Final Weight/Volume:	5 mL
Prep Date:	04/30/2017 1638				

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)	99		74 - 132
Toluene-d8 (Surr)	93		80 - 120
Bromofluorobenzene	100		77 - 124
Dibromofluoromethane (Surr)	101		72 - 131

Analytical Data

Client: URS Corporation

Job Number: 460-131878-1

Client Sample ID: TB20170418

Lab Sample ID: 460-131878-6TB

Client Matrix: Water

Date Sampled: 04/18/2017 1455

Date Received: 04/19/2017 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-434004	Instrument ID:	CVOAMS8
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J54716.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/30/2017 0842			Final Weight/Volume:	5 mL
Prep Date:	04/30/2017 0842				

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)	97		74 - 132
Toluene-d8 (Surr)	92		80 - 120
Bromofluorobenzene	98		77 - 124
Dibromofluoromethane (Surr)	99		72 - 131

Analytical Data

Client: URS Corporation

Job Number: 460-131878-1

Client Sample ID: 20170418MW-02

Lab Sample ID: 460-131878-1

Client Matrix: Water

Date Sampled: 04/18/2017 0850

Date Received: 04/19/2017 1800

RSK-175 Dissolved Gases (GC)

Analysis Method: RSK-175

Analysis Batch: 480-353462

Instrument ID: HP5890-21

N/A

N/A

Initial Weight/Volume: 17 mL

Dilution: 100

Final Weight/Volume: 17 mL

Analysis Date: 04/22/2017 1530

Injection Volume: 5 mL

Prep Date: N/A

Result Type: PRIMARY

Analyte

Result (ug/L)

Qualifier

MDL

RL

Methane

5800

100

400

Analytical Data

Client: URS Corporation

Job Number: 460-131878-1

Client Sample ID: 20170418MW-06

Lab Sample ID: 460-131878-2

Date Sampled: 04/18/2017 1010

Client Matrix: Water

Date Received: 04/19/2017 1800

RSK-175 Dissolved Gases (GC)

Analysis Method: RSK-175

Analysis Batch: 480-353462

Instrument ID: HP5890-21

N/A

N/A

Initial Weight/Volume: 17 mL

Dilution: 100

Final Weight/Volume: 17 mL

Analysis Date: 04/22/2017 1548

Injection Volume: 5 mL

Prep Date: N/A

Result Type: PRIMARY

Analyte

Result (ug/L)

Qualifier

MDL

RL

Methane

3100

100

400

Analytical Data

Client: URS Corporation

Job Number: 460-131878-1

Client Sample ID: 20170418MW-03

Lab Sample ID: 460-131878-3

Date Sampled: 04/18/2017 1157

Client Matrix: Water

Date Received: 04/19/2017 1800

RSK-175 Dissolved Gases (GC)

Analysis Method: RSK-175

Analysis Batch: 480-353463

Instrument ID: PE-03

N/A

N/A

Initial Weight/Volume: 17 mL

Dilution: 100

Final Weight/Volume:

Analysis Date: 04/22/2017 1444

Injection Volume: 5 mL

Prep Date: N/A

Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methane	1500		100	400

Analytical Data

Client: URS Corporation

Job Number: 460-131878-1

Client Sample ID: 20170418MW-07R

Lab Sample ID: 460-131878-4

Date Sampled: 04/18/2017 1315

Client Matrix: Water

Date Received: 04/19/2017 1800

RSK-175 Dissolved Gases (GC)

Analysis Method: RSK-175

Analysis Batch: 480-353463

Instrument ID: PE-03

N/A

N/A

Initial Weight/Volume: 17 mL

Dilution: 100

Final Weight/Volume:

Analysis Date: 04/22/2017 1502

Injection Volume: 5 mL

Prep Date: N/A

Result Type: PRIMARY

Analyte

Result (ug/L)

Qualifier

MDL

RL

Methane

990

100

400

Analytical Data

Client: URS Corporation

Job Number: 460-131878-1

Client Sample ID: 20170418MW-04

Lab Sample ID: 460-131878-5

Date Sampled: 04/18/2017 1425

Client Matrix: Water

Date Received: 04/19/2017 1800

RSK-175 Dissolved Gases (GC)

Analysis Method: RSK-175

Analysis Batch: 480-353463

Instrument ID: PE-03

N/A

N/A

Initial Weight/Volume: 17 mL

Dilution: 100

Final Weight/Volume:

Analysis Date: 04/22/2017 1519

Injection Volume: 5 mL

Prep Date: N/A

Result Type: PRIMARY

Analyte

Result (ug/L)

Qualifier

MDL

RL

Methane

770

100

400

Analytical Data

Client: URS Corporation

Job Number: 460-131878-1

Client Sample ID: TB20170418

Lab Sample ID: 460-131878-6TB

Client Matrix: Water

Date Sampled: 04/18/2017 1455

Date Received: 04/19/2017 1800

RSK-175 Dissolved Gases (GC)

Analysis Method: RSK-175

Analysis Batch: 480-353462

Instrument ID: HP5890-21

N/A

N/A

Initial Weight/Volume: 17 mL

Dilution: 1.0

Final Weight/Volume: 17 mL

Analysis Date: 04/22/2017 1438

Injection Volume: 5 mL

Prep Date: N/A

Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methane	3.2	J	1.0	4.0

Analytical Data

Client: URS Corporation

Job Number: 460-131878-1

Client Sample ID: 20170418MW-02

Lab Sample ID: 460-131878-1

Client Matrix: Water

Date Sampled: 04/18/2017 0850

Date Received: 04/19/2017 1800

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method: 200.7 Rev 4.4

Analysis Batch: 460-433391

Instrument ID: ICP4

Prep Method: 200.7

Prep Batch: 460-433353

Lab File ID: 433261.asc

Dilution: 1.0

Initial Weight/Volume: 50 mL

Analysis Date: 04/28/2017 0010

Final Weight/Volume: 50 mL

Prep Date: 04/27/2017 1118

Analyte	Result (ug/L)	Qualifier	MDL	RL
Iron	61800		78.3	150

Analytical Data

Client: URS Corporation

Job Number: 460-131878-1

Client Sample ID: 20170418MW-06

Lab Sample ID: 460-131878-2

Client Matrix: Water

Date Sampled: 04/18/2017 1010

Date Received: 04/19/2017 1800

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method: 200.7 Rev 4.4

Analysis Batch: 460-433391

Instrument ID: ICP4

Prep Method: 200.7

Prep Batch: 460-433353

Lab File ID: 433261.asc

Dilution: 1.0

Initial Weight/Volume: 50 mL

Analysis Date: 04/28/2017 0015

Final Weight/Volume: 50 mL

Prep Date: 04/27/2017 1118

Analyte	Result (ug/L)	Qualifier	MDL	RL
Iron	20200		78.3	150

Analytical Data

Client: URS Corporation

Job Number: 460-131878-1

Client Sample ID: 20170418MW-03

Lab Sample ID: 460-131878-3

Client Matrix: Water

Date Sampled: 04/18/2017 1157

Date Received: 04/19/2017 1800

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method: 200.7 Rev 4.4

Analysis Batch: 460-433391

Instrument ID: ICP4

Prep Method: 200.7

Prep Batch: 460-433353

Lab File ID: 433261.asc

Dilution: 1.0

Initial Weight/Volume: 50 mL

Analysis Date: 04/28/2017 0030

Final Weight/Volume: 50 mL

Prep Date: 04/27/2017 1118

Analyte	Result (ug/L)	Qualifier	MDL	RL
Iron	24200		78.3	150

Analytical Data

Client: URS Corporation

Job Number: 460-131878-1

Client Sample ID: 20170418MW-07R

Lab Sample ID: 460-131878-4

Date Sampled: 04/18/2017 1315

Client Matrix: Water

Date Received: 04/19/2017 1800

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method: 200.7 Rev 4.4

Analysis Batch: 460-433391

Instrument ID: ICP4

Prep Method: 200.7

Prep Batch: 460-433353

Lab File ID: 433261.asc

Dilution: 1.0

Initial Weight/Volume: 50 mL

Analysis Date: 04/28/2017 0034

Final Weight/Volume: 50 mL

Prep Date: 04/27/2017 1118

Analyte	Result (ug/L)	Qualifier	MDL	RL
Iron	29800		78.3	150

Analytical Data

Client: URS Corporation

Job Number: 460-131878-1

Client Sample ID: 20170418MW-04

Lab Sample ID: 460-131878-5

Client Matrix: Water

Date Sampled: 04/18/2017 1425

Date Received: 04/19/2017 1800

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method: 200.7 Rev 4.4

Analysis Batch: 460-433391

Instrument ID: ICP4

Prep Method: 200.7

Prep Batch: 460-433353

Lab File ID: 433261.asc

Dilution: 1.0

Initial Weight/Volume: 50 mL

Analysis Date: 04/28/2017 0038

Final Weight/Volume: 50 mL

Prep Date: 04/27/2017 1118

Analyte	Result (ug/L)	Qualifier	MDL	RL
Iron	21700		78.3	150

Analytical Data

Client: URS Corporation

Job Number: 460-131878-1

General Chemistry

Client Sample ID: 20170418MW-02

Lab Sample ID: 460-131878-1

Client Matrix: Water

Date Sampled: 04/18/2017 0850

Date Received: 04/19/2017 1800

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	36.2		mg/L	1.4	5.0	1.0	D516-90, 02
	Analysis Batch: 460-432658	Analysis Date: 04/24/2017	1452				
Bicarbonate Alkalinity as CaCO ₃	281		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 460-432103	Analysis Date: 04/21/2017	1217				
Carbonate Alkalinity as CaCO ₃	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 460-432103	Analysis Date: 04/21/2017	1217				
Alkalinity	281		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 460-432103	Analysis Date: 04/21/2017	1217				
Hydroxide Alkalinity	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 460-432103	Analysis Date: 04/21/2017	1217				
Hardness as calcium carbonate	410		mg/L	25.0	25.0	1.0	SM 2340C
	Analysis Batch: 460-433680	Analysis Date: 04/28/2017	1236				
Nitrate as N	0.010	U 15	mg/L	0.010	0.10	1.0	SM 4500 NO3 F
	Analysis Batch: 460-431768	Analysis Date: 04/20/2017	0903				
Nitrite as N	0.049	15 5	mg/L	0.0030	0.10	1.0	SM 4500 NO3 F
	Analysis Batch: 460-431768	Analysis Date: 04/20/2017	0903				
Total Organic Carbon	7.1		mg/L	0.22	1.0	1.0	SM 5310B
	Analysis Batch: 460-432106	Analysis Date: 04/20/2017	1452				

5/5/17
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Analytical Data

Client: URS Corporation

Job Number: 460-131878-1

General Chemistry**Client Sample ID: 20170418MW-06**

Lab Sample ID: 460-131878-2

Date Sampled: 04/18/2017 1010

Client Matrix: Water

Date Received: 04/19/2017 1800

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	26.5		mg/L	1.4	5.0	1.0	D516-90, 02
	Analysis Batch: 460-432658	Analysis Date: 04/24/2017 1452					
Bicarbonate Alkalinity as CaCO3	290		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 460-432103	Analysis Date: 04/21/2017 1225					
Carbonate Alkalinity as CaCO3	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 460-432103	Analysis Date: 04/21/2017 1225					
Alkalinity	290		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 460-432103	Analysis Date: 04/21/2017 1225					
Hydroxide Alkalinity	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 460-432103	Analysis Date: 04/21/2017 1225					
Hardness as calcium carbonate	360		mg/L	25.0	25.0	1.0	SM 2340C
	Analysis Batch: 460-433680	Analysis Date: 04/28/2017 1236					
Nitrate as N	0.010	U	mg/L	0.010	0.10	1.0	SM 4500 NO3 F
	Analysis Batch: 460-431768	Analysis Date: 04/20/2017 0905					
Nitrite as N	0.024	J	mg/L	0.0030	0.10	1.0	SM 4500 NO3 F
	Analysis Batch: 460-431768	Analysis Date: 04/20/2017 0905					
Total Organic Carbon	5.1		mg/L	0.22	1.0	1.0	SM 5310B
	Analysis Batch: 460-432106	Analysis Date: 04/20/2017 1556					

Analytical Data

Client: URS Corporation

Job Number: 460-131878-1

General Chemistry**Client Sample ID: 20170418MW-03**

Lab Sample ID: 460-131878-3

Client Matrix: Water

Date Sampled: 04/18/2017 1157

Date Received: 04/19/2017 1800

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	56.6		mg/L	2.7	10.0	2.0	D516-90, 02
	Analysis Batch: 460-432658	Analysis Date: 04/24/2017	1542				
Bicarbonate Alkalinity as CaCO ₃	264		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 460-432103	Analysis Date: 04/21/2017	1233				
Carbonate Alkalinity as CaCO ₃	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 460-432103	Analysis Date: 04/21/2017	1233				
Alkalinity	264		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 460-432103	Analysis Date: 04/21/2017	1233				
Hydroxide Alkalinity	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 460-432103	Analysis Date: 04/21/2017	1233				
Hardness as calcium carbonate	390		mg/L	25.0	25.0	1.0	SM 2340C
	Analysis Batch: 460-433680	Analysis Date: 04/28/2017	1236				
Nitrate as N	0.010	U	mg/L	0.010	0.10	1.0	SM 4500 NO3 F
	Analysis Batch: 460-431768	Analysis Date: 04/20/2017	0907				
Nitrite as N	0.031	J	mg/L	0.0030	0.10	1.0	SM 4500 NO3 F
	Analysis Batch: 460-431768	Analysis Date: 04/20/2017	0907				
Total Organic Carbon	6.0		mg/L	0.22	1.0	1.0	SM 5310B
	Analysis Batch: 460-432106	Analysis Date: 04/20/2017	1616				

Analytical Data

Client: URS Corporation

Job Number: 460-131878-1

General Chemistry

Client Sample ID: 20170418MW-07R

Lab Sample ID: 460-131878-4

Client Matrix: Water

Date Sampled: 04/18/2017 1315

Date Received: 04/19/2017 1800

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	5.4		mg/L	1.4	5.0	1.0	D516-90, 02
	Analysis Batch: 460-432658	Analysis Date: 04/24/2017	1452				
Bicarbonate Alkalinity as CaCO ₃	321		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 460-432103	Analysis Date: 04/21/2017	1241				
Carbonate Alkalinity as CaCO ₃	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 460-432103	Analysis Date: 04/21/2017	1241				
Alkalinity	321		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 460-432103	Analysis Date: 04/21/2017	1241				
Hydroxide Alkalinity	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 460-432103	Analysis Date: 04/21/2017	1241				
Hardness as calcium carbonate	560		mg/L	25.0	25.0	1.0	SM 2340C
	Analysis Batch: 460-433680	Analysis Date: 04/28/2017	1236				
Nitrate as N	0.010	U	mg/L	0.010	0.10	1.0	SM 4500 NO ₃ F
	Analysis Batch: 460-431768	Analysis Date: 04/20/2017	0916				
Nitrite as N	0.035	J	mg/L	0.0030	0.10	1.0	SM 4500 NO ₃ F
	Analysis Batch: 460-431768	Analysis Date: 04/20/2017	0916				
Total Organic Carbon	7.6		mg/L	0.22	1.0	1.0	SM 5310B
	Analysis Batch: 460-432106	Analysis Date: 04/20/2017	1637				

Analytical Data

Client: URS Corporation

Job Number: 460-131878-1

General Chemistry**Client Sample ID: 20170418MW-04**

Lab Sample ID: 460-131878-5

Client Matrix: Water

Date Sampled: 04/18/2017 1425

Date Received: 04/19/2017 1800

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	1.4	U	mg/L	1.4	5.0	1.0	D516-90, 02
	Analysis Batch: 460-432658	Analysis Date: 04/24/2017	1452				
Bicarbonate Alkalinity as CaCO ₃	400		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 460-432103	Analysis Date: 04/21/2017	1310				
Carbonate Alkalinity as CaCO ₃	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 460-432103	Analysis Date: 04/21/2017	1310				
Alkalinity	400		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 460-432103	Analysis Date: 04/21/2017	1310				
Hydroxide Alkalinity	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 460-432103	Analysis Date: 04/21/2017	1310				
Hardness as calcium carbonate	540		mg/L	25.0	25.0	1.0	SM 2340C
	Analysis Batch: 460-433680	Analysis Date: 04/28/2017	1236				
Nitrate as N	0.010	U	mg/L	0.010	0.10	1.0	SM 4500 NO ₃ F
	Analysis Batch: 460-431768	Analysis Date: 04/20/2017	0918				
Nitrite as N	0.028	J	mg/L	0.0030	0.10	1.0	SM 4500 NO ₃ F
	Analysis Batch: 460-431768	Analysis Date: 04/20/2017	0918				
Total Organic Carbon	13.2		mg/L	0.22	1.0	1.0	SM 5310B
	Analysis Batch: 460-432106	Analysis Date: 04/20/2017	1658				

Certificate of Analysis: Gene-Trac® *Dehalococcoides* Assay

Customer: Kevin Shanahan, AECOM
Project: DOW Former EMCA, Mamaroneck
Customer Reference: 60538245.2

SiREM Reference: S-4300
Report Date: 2-May-17
Data Files: iQ5B-DHC-TM-QPCR-1429
iQ5B-DB-DHC-TM-QPCR-0768
iQ5B-TBA-TM-QPCR-0258

Table 1a: Test Results

Sample ID	<i>Dehalococcoides</i> (Dhc)	
	Percent Dhc ⁽¹⁾	Enumeration/Liter ⁽²⁾
20170418 MW-02	0.05 - 0.1 %	4 x 10 ⁵ J

See final page for notes.

400 JCEQ/mL

5/5/17 PR

Analyst: J Wilkinson
Jennifer Wilkinson
Senior Laboratory Technician

Approved: Ximena Druar
Ximena Druar, B.Sc.
Genetic Testing Coordinator

Certificate of Analysis: Gene-Trac® *Dehalobacter* Assay

Customer: Kevin Shanahan, AECOM
Project: DOW Former EMCA, Mamaroneck
Customer Reference: 60538245.2

SiREM Reference: S-4300
Report Date: 2-May-17
Data Files: MyiQ-DHB-QPCR-0414
MyiQ-DB-DHB-QPCR-0227

Table 1b: Test Results

Sample ID	<i>Dehalobacter</i> (Dhb)	
	Percent Dhb ⁽¹⁾	Gene Copies/Liter
20170418 MW-02	NA	3 x 10 ³ U <i>3 U GC/mL</i>
20170418 MW-06	NA	3 x 10 ³ U <i>3 U GC/mL</i>
20170418 MW-03	0.0006 - 0.002 %	6 x 10 ³ <i>6 GC/mL</i>
20170418 MW-07R	0.003 - 0.01 %	3 x 10 ³ <i>3 GC/mL</i>
20170418 MW-04	NA	3 x 10 ³ U <i>3 U GC/mL</i>

See final page for notes.

5/5/17
~

Analyst: *J Wilkinson*
Jennifer Wilkinson
Senior Laboratory Technician

Approved: *Ximena Druar*
Ximena Druar, B.Sc.
Genetic Testing Coordinator

ATTACHMENT B

SUPPORT DOCUMENTATION

CHAIN OF CUSTODY / ANALYSIS REQUEST

Page 1 of 1

Name (for report and invoice) Kevin Shanahan		Samplers Name (Printed) Megan Dascoli		Site/Project Identification Don Farmer EMEA, Mamaroneck	
Company AECOM		P.O.# 4505503059		State (Location of site): NJ: ☐ NY: ☒ Other: ☐	
Address 257 W Genesee St, Ste 400		Analysis Turnaround Time Standard ☒ Rush Charges Authorized For: 2 Week ☐ 1 Week ☐ Other ☐		Regulatory Program: DKQP: ☐	
City Buffalo		State NY		LAB USE ONLY Project No:	
Phone 716-923-1215		Fax		Job No: 131078	
Sample Identification		Date		Sample Numbers	
20170418 MW-02	4/18/17	0850	GW	11	1
20170418 MW-06	4/18/17	1000	GW	11	2
20170418 MW-03	4/18/17	1157	GW	11	3
20170418 MW-07R	4/18/17	1315	GW	11	4
20170418 MW-04	4/18/17	1455	GW	11	5
TB20170418	4/18/17	1455	W	6	6
Preservation Used: 1 = ICE, 2 = HCl, 3 = H ₂ SO ₄ , 4 = HNO ₃ , 5 = NaOH 6 = Other, 7 = Other		Soil: Water: 2, 1, 2, 1, 1, 4, 1, 1, 3, 1		460-131878 Chain of Custody	

Special Instructions DON PO # 4505503059

Relinquished by Megan Dascoli	Company AECOM	Date / Time 4/18/17 16:00	Received by [Signature]	Company [Signature]
Relinquished by [Signature]	Company T. V.	Date / Time 4/17/17 18:00	Received by [Signature]	Company [Signature]
Relinquished by	Company	Date / Time	Received by	Company
Relinquished by	Company	Date / Time	Received by	Company
Relinquished by	Company	Date / Time	Received by	Company

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).

Massachusetts (M-NJ312), North Carolina (No. 578)

2.2 (2.2 JN #8 WOC)

SHORT HOLD

Client Information (Sub Contract Lab)					
Sampler:	Lab P/N:	Carrier Tracking Note:	COC No:		
Phone:	E-Mail:	State of Origin:	Page:		
Company:	TestAmerica Laboratories, Inc.	NELAP - New York	Job #:	460-131878-1	
Address:		Preservation Codes:			
City:	PO #:	A-HCL	M-Hexane		
State, Zip:	WO #:	B-NaOH	N-None		
Phone:	Project #:	C-Zn Acetate	O-Ash/O2		
Email:	DOW Former EMCA Site, Mamaroneck	D-Nitric Acid	P-Na2OAS		
	Site:	E-NaHSO4	Q-Na2SO3		
	URS - EMCA	F-MeOH	R-Na2S2O3		
		G-Amchlor	S-H2SO4		
		H-Ascorbic Acid	T-TSP Dodecylhydrate		
		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)		Total Number of Containers	Special Instructions/Note:		
20170418MW-02 (460-131878-1)	X	3			
20170418MW-06 (460-131878-2)	X	3			
20170418MW-03 (460-131878-3)	X	3			
20170418MW-07R (460-131878-4)	X	3			
20170418MW-04 (460-131878-5)	X	2			
TB20170418 (460-131878-6)	X	2			

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped back to the TestAmerica Laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification		
Unconfirmed		
Deliverable Requested: I, II, III, IV, Other (Specify)	Primary Deliverable Rank: 4	Months
Special Instructions/QC Requirements:		
Return To Client Disposal By Lab Archive For		
Date:	Time:	Method of Shipment
Date/Time: 4/20/17 1800	Company: VAB	Received by: [Signature]
Date/Time:	Company:	Received by:
Date/Time:	Company:	Received by:
Relinquished by:		Custody Seal No.: A Yes A No
Relinquished by:		Cooler Temperature(°) °C and Other Remarks: H / 33°C

CHAIN OF CUSTODY / ANALYSIS REQUEST

Page 1 of 1

THE LEADER IN ENVIRONMENTAL TESTING

Name (for report and invoice)		Samplers Name (Printed)		Site/Project Identification	
Company		P.O. #		State (Location of site): NJ: ☐ NY: ☒ Other: ☐	
Address		Analysts Turnaround Time		Regulatory Program:	
City		Standard ☒		DKOP: ☐	
State		Rush Charges Authorized For		LAB USE ONLY	
Phone		2 Week ☐		Project No:	
Fax		1 Week ☐		Job No:	
		Other ☐		Sample Numbers	
257 W Genesee St, Site 400		No. of Cont.			
Buffalo, NY 14202		Time Matrix			
716-923-1215		No. of Cont.			
Sample Identification		Time Matrix			
Date		No. of Cont.			
20170418 MW-02		4/18/17			
20170418 MW-06		1010			
20170418 MW-03		1157			
20170418 MW-07R		1315			
20170418 MW-04		4/18/17			

Water Metals Filtered (Yes/No)?

Special Instructions AECOM PO: 60538245.2 // Ship per FedEx

Relinquished by	Company	Date / Time	Received by	Company
Megan Donald	AECom	4/18/17 1000	1) [Signature]	SCTE
	Company	Date / Time	Received by	Company
2)			2)	
Relinquished by	Company	Date / Time	Received by	Company
3)			3)	
Relinquished by	Company	Date / Time	Received by	Company
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-0018 (0715)

CASE NARRATIVE

Client: URS Corporation

Project: DOW Former EMCA Site, Mamaroneck

Report Number: 460-131878-1

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 4/19/2017 6:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.2° C.

Receipt Exceptions

The following samples were canceled by the client on 4/20/2017 for ferrous iron analysis.: 20170418MW-02 (460-131878-1), 20170418MW-06 (460-131878-2), 20170418MW-03 (460-131878-3) and 20170418MW-07R (460-131878-4).

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 (GC-MS)

Samples 20170418MW-02 (460-131878-1), 20170418MW-06 (460-131878-2), 20170418MW-03 (460-131878-3), 20170418MW-07R (460-131878-4), 20170418MW-04 (460-131878-5) and TB20170418 (460-131878-6) were analyzed for Volatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 8260C. The samples were analyzed on 04/30/2017 and 05/01/2017.

Sample 20170418MW-02 (460-131878-1)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the volatiles analysis.

All quality control parameters were within the acceptance limits.

DISSOLVED GASES

Samples 20170418MW-02 (460-131878-1), 20170418MW-06 (460-131878-2), 20170418MW-03 (460-131878-3), 20170418MW-07R (460-131878-4), 20170418MW-04 (460-131878-5) and TB20170418 (460-131878-6) were analyzed for dissolved gases in accordance with RSK_175. The samples were analyzed on 04/22/2017.

The following samples were diluted to bring the concentration of target analytes within the calibration range: 20170418MW-03 (460-131878-3), 20170418MW-07R (460-131878-4) and 20170418MW-04 (460-131878-5). Elevated reporting limits (RLs) are provided.

The following sample was diluted to bring the concentration of target analytes within the calibration range: 20170418MW-02 (460-131878-1) and 20170418MW-06 (460-131878-2). 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 20170418MW-02 (460-131878-1), 20170418MW-06 (460-131878-2), 20170418MW-03 (460-131878-3), 20170418MW-07R (460-131878-4) and 20170418MW-04 (460-131878-5) were analyzed for total recoverable metals in accordance with EPA Method 200.7 (ICP). The samples were prepared on 04/27/2017 and analyzed on 04/28/2017.

No difficulties were encountered during the metals analysis.

All quality control parameters were within the acceptance limits.

ALKALINITY

Samples 20170418MW-02 (460-131878-1), 20170418MW-06 (460-131878-2), 20170418MW-03 (460-131878-3), 20170418MW-07R (460-131878-4) and 20170418MW-04 (460-131878-5) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 04/21/2017.

No difficulties were encountered during the alkalinity analysis.

All quality control parameters were within the acceptance limits.

HARDNESS

Samples 20170418MW-02 (460-131878-1), 20170418MW-06 (460-131878-2), 20170418MW-03 (460-131878-3), 20170418MW-07R (460-131878-4) and 20170418MW-04 (460-131878-5) were analyzed for hardness in accordance with SM 2340C. The samples were analyzed on 04/28/2017.

No difficulties were encountered during the hardness analysis.

All quality control parameters were within the acceptance limits.

SULFATE

Samples 20170418MW-02 (460-131878-1), 20170418MW-06 (460-131878-2), 20170418MW-03 (460-131878-3), 20170418MW-07R (460-131878-4) and 20170418MW-04 (460-131878-5) were analyzed for sulfate in accordance with ASTM Method D516-90. The samples were analyzed on 04/24/2017.

Sample 20170418MW-03 (460-131878-3)[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 20170418MW-02 (460-131878-1), 20170418MW-06 (460-131878-2), 20170418MW-03 (460-131878-3), 20170418MW-07R (460-131878-4) and 20170418MW-04 (460-131878-5) were analyzed for Nitrogen-Nitrate in accordance with SM 4500 NO3 F. The samples were analyzed on 04/20/2017.

The following sample(s) was received with less than 2 days remaining on the holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: 20170418MW-02 (460-131878-1).

No difficulties were encountered during the Nitrate analysis.

All quality control parameters were within the acceptance limits.

TOTAL ORGANIC CARBON

Samples 20170418MW-02 (460-131878-1), 20170418MW-06 (460-131878-2), 20170418MW-03 (460-131878-3), 20170418MW-07R (460-131878-4) and 20170418MW-04 (460-131878-5) were analyzed for total organic carbon in accordance with SM 5310B. The samples were analyzed on 04/20/2017.

No difficulties were encountered during the TOC analysis.

All quality control parameters were within the acceptance limits.

Table 3: Gene-Trac Dhc Control Results, Test Reference S-4300

Laboratory Control	Analysis Date	Control Description	Dhc 16S rRNA		Comments
			Spiked Gene Copies per Liter	Recovered Gene Copies per Liter	
Positive Control Low Concentration	25-Apr-17	Genomic DNA (CSLD-1067)	1.3×10^7	2.0×10^7 ⁽⁴⁾	See Note 4
Positive Control High Concentration	25-Apr-17	Genomic DNA (CSHD-1067)	2.2×10^9	2.4×10^9	Passed
Extraction Control	25-Apr-17	Extraction Control (KB-0545)	2.6×10^{11}	2.7×10^{11}	Passed
DNA Extraction Blank	25-Apr-17	Sterile Water (FB-2805)	0	2.6×10^3 U	Passed
Negative Control	25-Apr-17	Reagent Blank (TBD-1026)	0	2.6×10^3 U	Passed

See final page for notes.