November 13, 2015

Mr. Ronnie Lee, P.E.
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233-7016

Re: Former EMCA Site, Mamaroneck, New York
Site Number 360025
Groundwater Sampling and Analysis Report
October 2015 Sampling Events

Dear Mr. Lee:

Enclosed is one CD containing the Groundwater Sampling and Analysis Report for the October 2015 sampling event completed at the above referenced site. This transmittal is being made on behalf of Rohm and Haas Company, a wholly owned subsidiary of The Dow Chemical Company.

If you have any questions or comments regarding the enclosed, please give me a call at 716-923-1215.

Sincerely,
URS Corporation

Kevin J. Shanahan
Project Manager

cc: Mr. Ian Ushe, NYSDOH (1 – CD)
Mr. Robert L.Casselberry, Dow (1 – Hard Copy, 1 - CD)
Mr. Louis Vetere, Cablevision (1 – Hard Copy)
Mr. Doug Gray, URS (1 – E-mail of Document)
Mr. James Moras, NYSDEC (E-mail of Transmittal Letter)
Ms. Margie Banzani, Dow (E-mail of Document)
File: 11172730/C-1

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Groundwater Sampling and Analysis Report

October 2015 Sampling Events

Former EMCA Site
Mamaroneck, New York

Prepared for:

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

Prepared by:

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

November 2015

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FORMER EMCA SITE

SITE NO. 360025

MAMARONECK, NEW YORK

GROUNDWATER SAMPLING AND ANALYSIS REPORT
OCTOBER 2015 SAMPLING EVENTS

Prepared for:

ROHM AND HAAS COMPANY

A WHOLLY-OWNED SUBSIDIARY OF THE DOW CHEMICAL COMPANY

Submitted by:

URS CORPORATION

257 WEST GENESEE STREET, SUITE 400

BUFFALO, NEW YORK 14202

NOVEMBER 2015

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1.0 INTRODUCTION

This report presents the results of semi-annual groundwater monitoring conducted in October 2015 at the former EMCA site located in Mamaroneck, New York (Figure 1) pursuant to the approved Site Management Plan ([SMP], URS, 2010) and to recommendations made in the *Groundwater Sampling and Analysis Report, March and April 2015 Sampling Events* (URS, 2015). The groundwater monitoring program generates data used to monitor the effectiveness of remedial actions performed at the site from 2003 to 2015.

Remedial actions were conducted at the site on the following occasions:

- 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

All involved the injections of food-grade emulsified soybean oil and sodium lactate into groundwater to stimulate anaerobic biodegradation and reductive dechlorination of 1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113; CAS No. 76-13-1) in site groundwater. The 2012, 2013, and 2014 supplemental injections 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. The most recent injection of emulsified soybean oil, sodium lactate and KB-1 Plus® bacteria was performed during the period of October 7 through 17, 2014.

The October 2015 groundwater sampling event was the twenty-second site-wide sampling event since the interim remedial measure (IRM) began in November 2004 and the third site-wide sampling event following the October 7 through 17, 2014 injection.

2.0 GROUNDWATER SAMPLING AND ANALYSIS

The groundwater samples collected on October 8, 2015 were from monitoring wells MW-02, MW-03, MW-04, MW-06 and MW-07R. The samples were collected using the low-flow sampling procedure. The well locations are shown in Figure 2.

Groundwater level and field 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. A copy of the field purging/sampling logs is 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 also performed on all five monitoring wells in order to collect additional natural attenuation groundwater data and to evaluate bacteria concentrations:

Parameter	Analytical Method
Total Iron	200.7
Ferrous Iron	SM 3500-Fe D
Nitrate-Nitrite	353.2
Nitrate	By Calculation
Nitrite	SM 4500-NO_2 B
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

Note, ferrous iron analyses were performed both in the field and laboratory. Both sets of results are presented in this report; the field results should be considered the most accurate.

A round of groundwater levels were recorded on October 8, 2015. The data are presented in Table 1 and Figure 2. The Sheldrake River water surface level was unable to be calculated. The Sheldrake River flows to the northeast. Typically, an upstream measurement is recorded at the Rockland Avenue bridge (Benchmark B) to the south of the site and a downstream measurement is recorded at the Fenimore Road bridge (Benchmark D) to the north of the site. The water surface level in the Sheldrake River in the area west of the site, referred to as Benchmark C (Figure 2), is calculated by taking the average surface elevation of Benchmark B and Benchmark D. However, an upstream measurement at Benchmark B was unable to be recorded during October 2015 due to a safety concern, thus an average Sheldrake River water surface level was unable to be determined.

Typically, general groundwater flow is to the north to northeast. The resulting groundwater contours for the October 8, 2015 data show that groundwater flow was to the northeast, which is typical for the site.

3.0 RESULTS

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

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

The October 2015 results presented in Table 2 and Figure 3 show that only the sample from MW-02 contained Freon 113 at a concentration above the 5 µg/L guidance value for this compound. The Freon 113 concentration in the sample was 21 µg/L.

The October 2015 results show that only the sample from MW-02 contained Freon 123a at a concentration above the 5 µg/L guidance value for this compound. The Freon 123a concentration in the sample was 7.7 µg/L.

The results show that Freon 1113 was detected at concentrations above the 5 µg/L groundwater standard in the samples from wells MW-02, MW-03, MW-06 and MW-07R. The detections are as follows: MW-02 - 260 µg/L, MW-03 - 140 µg/L, MW-06 - 51 µg/L, and MW-07R - 46 µg/L. The Freon 1113 concentration in well MW-04 did not exceed the groundwater standard.

The groundwater samples collected in October 2015 were analyzed for dehalobacter and the sample from MW-02 was analyzed for dehalobacter and dehalococcoides. The analytical results, presented in Table 2, indicate that the October 2015 dehalobacter concentration was relatively high in MW-02 [300 gene copies per milliliter (GC/mL)], very low in MW-03 and MW-06 (2 GC/mL and 1 GC/mL, respectively), and relatively higher in MW-07R (20 GC/mL). Dehalobacter was not detected in well MW-04.

The dehalococcoides concentration in MW-02 was relatively low [1 colony equivalents per milliliter (CEQ/mL)] in October 2015, which is a decrease from April 2015 (20 CEQ/mL).

In general, the results of the semi-annual groundwater sampling event completed in October 2015 showed that the remedial injections conducted in October 2014 continue to be effective, with Freon 113 concentrations below the 40 µg/L trigger value and with continued favorable results for Freon 123a and Freon 1113.

4.0 DATA ASSESSMENT

The groundwater analytical data for October 2015 is the third site-wide set of data collected following the October 7 through 17, 2014 supplemental injection. The previous round of site-wide groundwater sampling occurred on April 22, 2014. In March 2015, wells MW-02, MW-03, MW-07R were also sampled prior to the scheduled April 2015 semi-annual event to further gauge the effectiveness of the October 2014 supplemental injection.

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 over time are shown in plan view in Figure 3. The historical data was also used to create trend plots for the following parameters:

- Freon 113 - Figures 4 and 5
- Freon 123a - Figure 6
- Freon 1113 - Figure 7
- Sulfate - Figure 8
- Methane - Figure 9
- Dissolved Oxygen - Figure 10
- Dissolved Oxygen vs. Temperature in MW-02 – Figure 11
- Oxidation-Reduction Potential - Figure 12

The figures also show trend lines of parameter concentrations over time. The text below presents a discussion of the March and April 2015 data compared to the October 2015 data followed by an assessment of the historical results over time. Table 3 presents a summary comparison of March and April 2015 and October 2015 parameter concentrations.

Freon 113

In comparison with the March and April results, the analytical results for the October 2015 sampling events (Figures 4 and 5) indicate that Freon 113:

- Decreased in MW-02 from 45 µg/L in March 2015 to 24 µg/L in April 2015, and decreased to 21 µg/L in October 2015;
- Increased in MW-03 from 18 µg/L in March 2015 to 25 µg/L in April 2015 and decreased to 0.52 µg/L in October 2015;
- Decreased in MW-04 0.38 µg/L in April 2015 to non-detect in October 2015;
- Decreased in MW-06 from 1.6 µg/L in April 2015 to non-detect in October 2015; and

- Remained at non-detect in MW-07R in April 2015 and October 2015.

In well MW-02, the Freon 113 concentration decreased over the course of the treatment program. The highest concentration of 2,400 µg/L occurred in July 2001 prior to the treatment program. Since November 2012, Freon 113 concentrations have steadily decreased and have not been detected above the groundwater criteria in eight of the past twelve sampling events (Freon 113 was above the criteria in July 2014, March 2015, April 2015, and October 2015).

Wells MW-03 and MW-07R had the highest Freon 113 concentrations prior to the treatment program and showed the greatest reduction as a result of the treatment. The Freon 113 concentration of 0.81 µg/L (October 2014) in MW-03 was below TOGS 1.1.1 criteria and was non-detect in November and December 2014. A slight rebound of Freon 113 at MW-03 in the March and April 2015 coincides with an increase in the concentration of the Freon 123a and Freon 1113 daughter products, indicating ongoing reduction of Freon 113. The relatively low-level Freon 113 concentration from October 2014 in MW-07R (i.e., 15 µg/L) decreased to non-detect in March, April, and October 2015 confirms that Freon 113 is not significantly migrating downgradient.

For well MW-04, Freon 113 was not detected in October 2015, further confirming that Freon 113 is not migrating downgradient. Freon 113 was not detected in MW-06 in the October 2014 sampling event, increased slightly to 1.6 µg/L in April 2015, then decreased to non-detect in October 2015. This coincides with an increase in the concentration of the Freon 123a and Freon 1113 daughter products, indicating ongoing reduction of Freon 113.

Freon 123a

Freon 123a and Freon 1113 are the expected reductive dechlorination daughter products of Freon 113. Freon 123a holds one less chlorine than Freon 113, while Freon 1113 holds two less chlorines than Freon 113. With the reductive dechlorination of Freon 113, the concentrations of these daughter compounds are expected to increase and then eventually decline over time as reductive dechlorination continues and the residual source diminishes. The following text presents a discussion of the October 2015 Freon 123a results in comparison with results March and April 2015 results.

Compared to the March and April 2015 data, the analytical results for the October 2015 sampling events (Figure 6) indicate that Freon 123a:

- Decreased in MW-02 from 67 µg/L in March 2015 to 22 µg/L in April 2015, then to 7.7 µg/L in October 2015;

- Increased in MW-03 from 17 µg/L in March 2015 to 25 µg/L in April 2015, then decreased to 1.7 µg/L in October 2015;
- Non-detect in MW-04 for the October 2015 sample, similar to March and April 2015;
- Decreased in MW-06 from 8.1 µg/L in April 2015 to non-detect in October 2015; and
- Decreased in MW-07R from 0.78 µg/L in March 2015 to 0.39 µg/L in April 2015, then to non-detect in October 2015.

None of the Freon 123a concentrations for samples MW-04 and MW-07R collected in October 2015 exceeded TOGS 1,1,1 criteria. The Freon 123a concentrations for samples MW-02, MW-03, and MW-06 were below TOGS 1,1,1 criteria in October, November, and/or December 2014, then increased above criteria in March, April, and/or October 2015 which coincides with an increase in the concentration of the Freon 1113 daughter product, indicating ongoing reduction of Freon 113.

Freon 1113

Compared to the March and April 2015 data, the analytical results for the October 2015 sampling events (Figure 7) indicate that Freon 1113:

- Increased in MW-02 from a concentration of 300 µg/L in March 2015 to 310 µg/L in April 2015, then decreased to 260 µg/L in October 2015;
- Increased in MW-03 from a concentration of 110 µg/L in March 2015 to 120 µg/L in April 2015, then to 140 µg/L in October 2015;
- Slightly increased in MW-04 from 2.1 µg/L in April 2015 to 4.4 µg/L in October 2015;
- Decreased in MW-06 from a concentration of 110 µg/L in April 2015 to 51 µg/L in October 2015; and
- Decreased in MW-07R from a concentration of 130 µg/L in March 2015 to 10 µg/L in April 2015, then increased to 46 µg/L in October 2015.

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.

Sulfate

In comparison with the October 2014 data, the October 2015 sulfate concentrations increased in MW-02 and MW-03, and decreased in MW-04, MW-06, and MW-07R (Figure 8).

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 below 50 mg/L.

Methane

In comparison with the October 2014 data, the October 2015 methane concentrations (Figure 9) increased in MW-02, MW-03, MW-04, MW-06, and MW-07R.

Degradation of Freon is likely due to sulfate-reducing or methane-forming microbes (Horneman 2007). Historical site data shows increased methane concentrations during the treatment programs, suggesting that reduction of Freon concentrations may be due to contaminant degradation through methanogenesis, a process that was successfully stimulated as a result of the treatment injection program. The recent increase in methane concentrations at all of the wells indicate conditions returning to more favorable anaerobic conditions near the source area.

Dissolved Oxygen

In comparison with the March and April 2015 data, the October 2015 dissolved oxygen concentrations (Figure 10) generally decreased in MW-02, MW-03, MW-04, MW-06, and MW-07R. The dissolved oxygen concentrations measured in April and March 2015 ranged from 0.585 to 1.24 mg/L, compared to a range of 0.32 to 0.39 mg/L in October 2015. Historically, dissolved oxygen concentrations have fluctuated significantly, from highs around 7 mg/L down to non-detect levels. Review of the graphical presentation of the data in Figure 10 indicates that dissolved oxygen concentrations decreased following most of the injection events and rebounded afterwards.

Temperature

Comparison of the October 2015 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. The October 2015 temperature measurements were as much as 11 degrees Celsius higher than measurements recorded in April and March 2015. Review of historical groundwater temperature data suggests that groundwater in the site area is influenced by changes in seasonal weather conditions/precipitation infiltration. As an example, Figure 11 presents a graphical presentation of temperature data for well MW-02 dating back to February 2008. The graph shows seasonal fluctuations in groundwater temperatures. The graph also shows dissolved oxygen concentrations in MW-02.

Oxidation-Reduction Potential

In comparison with the March and April 2015 data, the October 2015 oxidation-reduction potential values (Figure 12) remained relatively stable in MW-02, MW-04, and MW-06, slightly increased in MW-03, and slightly decreased in MW-07R. The October 2015 values were all negative, ranging from -84 millivolts (mV) to -131 mV. Historically, oxidation-reduction potential values have remained at negative values throughout most of the treatment program.

Dehalococcoides

In October 2014, only the groundwater sample from MW-02 was analyzed for dehalococcoides (see Table 2). The dehalococcoides concentration detected in October 2014 was very low at 5 CEQ/mL. In November and December 2014, only the groundwater samples from MW-02 and MW-03 were analyzed for dehalococcoides. The dehalococcoides concentration in MW-02 showed a slight decrease in November 2014 (2 CEQ/mL) and in December 2014 (1 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 has not been analyzed for in MW-03 since December 2014. The dehalococcoides concentration significantly decreased from 500 CEQ/mL in November 2014 following the injection event to 20 CEQ/mL in December 2014.

Dehalobacter

The following samples were analyzed for dehalobacter: all five wells sampled in October 2014, April 2015, and October 2015; MW-02 and MW-03 sampled in November 2014 and March 2015; and MW-07R sampled in March 2015 (see Table 2). In October 2014, shortly following the injection events, concentrations ranged from 3 GC/mL at MW-04 to 9,000 GC/mL at MW-02, and 50 GC/mL at MW-03. The November 2014 results for MW-02 and MW-03 show a reduction in dehalobactor concentrations (i.e., 2,000 GC/mL and 10 GC/mL, respectively). The March 2015 results for MW-02 and MW-03 showed further reduction in dehalobactor concentrations (90 GC/mL and 3 GC/mL, respectively). The October 2015 showed an increase in dehalobactor concentrations in MW-02 (300 GC/mL) and a decrease in concentrations in MW-03 (2 GC/mL). Well MW-07R showed an increase from 3 GC/mL in October 2014 to 300 GC/mL in March 2015, and reduction to 90 GC/mL in April 2015. MW-07R showed further reduction in dehalobactor concentrations in October 2015 (20 GC/mL). MW-04 showed a reduction of dehalobacter concentration from 3 GC/mL in October 2014 to non-detect in April and October 2015.

MW-06 showed a reduction of dehalobactor concentrations, from 80 GC/mL in October 2014 to non-detect in April 2015, followed by a slight increase to 1 GC/mL in October 2015.

Iron

In October 2015, total iron concentration ranged from 51,800 µg/L to 61,800 µg/L. Similar to previous results, the highest iron concentration was at MW-02. The lowest total iron concentration was at MW-04, which is typically the lowest.

5.0 CONCLUSIONS

The majority of the original Freon 113 release has been remediated over the past 11 years through anaerobic bioremediation and only residual concentrations remain. The Freon 113 concentrations detected during the October 2015 sampling event remain orders of magnitude below initial contaminant concentrations documented prior to initiating remedial activities. The residual groundwater impacts remain localized to the original release area and are not migrating.

The presence and/or increase of Freon 123A and Freon 1113 in four of the five wells sampled confirms that reductive dechlorination of the residual Freon 113 continues. The data also show that concentrations of Freon 113 and the daughter products have remained relatively low with only slight rebound in the source area as residual Freon 113 contamination diminishes.

6.0 CONTINGENCY TRIGGER EVALUATION

Contingency measures, in accordance with Section 4.0 of the SMP, were not triggered at the site by the October 2015 data where Freon 113 was present in groundwater samples remained below 40 µg/L. The monitoring data presented in this report indicates the successful treatment of Freon 113.

7.0 NEXT STEPS

In accordance with the SMP, the semi-annual groundwater sampling program continued on the five long-term monitoring wells (i.e., MW-02, MW-03, MW-04, MW-06 and MW-07R). The next sampling event will be in April 2016. Each well will be sampled for Freon-113, Freon-123a, and Freon-1113, as well as other water quality, biological and natural attenuation parameters as listed in Table 4.

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TABLES

TABLE 1
GROUNDWATER ELEVATION MEASUREMENTS (October 8, 2015)
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location	Measuring Point Elevation[1] (ft.)	Depth to Water[2] (ft.)	Water Surface Elevation (ft.)
GZ-03[3]	26.16	5.66	20.50
GZ-06	28.02	7.43	20.59
MW-01	25.74	4.32	21.42
MW-02	25.63	5.85	19.78
MW-03	25.59	5.9	19.69
MW-04	25.31	4.59	20.72
MW-05	24.63	5.01	19.62
MW-06	25.77	6.01	19.76
MW-07R	25.63	5.98	19.65
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	10.55	16.86

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
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-03	MW-03
Sample ID			20150304MW-02	20150422MW-02	20151008MW-02	20150304MW-03	20150422MW-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/04/15	04/22/15	10/08/15	03/04/15	04/22/15
Parameter	**Units**	**Criteria***					
Volatiles							
Chlorotrifluoroethene (Freon-1113)	UG/L	5	300	310	260	110	120
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	45	24	21	18	25
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	67	22	7.7	17	25
Dissolved Gases							
Methane	UG/L	-	NA	6,200	12,000	NA	4,000
Total Metals							
Iron	UG/L	300	NA	60,500	61,800	NA	19,600
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	432	292	NA	196
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	432	292	NA	196
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	5.0 U	5.0 U	NA	5.0 U
Alkalinity, Hydroxide	MG/L	-	NA	5.0 U	5.0 U	NA	5.0 U
Dehalococcoides ethenogenes	CEQ/mL	-	NA	20 J	1 J	NA	NA
Dehalobacter	GC/mL	-	90	200	300	3	7
Hardness (as CaCO3)	MG/L	-	NA	525	424	NA	242
Nitrogen, Nitrate	MG/L	10	NA	0.10 U	2.0 U	NA	0.10 U
Nitrogen, Nitrite	MG/L	1	NA	0.10 U	0.034 J	NA	0.10 U
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	0.050 U	NA	NA	0.050 U
Sulfate	MG/L	250	NA	17.3	25.6	NA	32.5
Total Organic Carbon	MG/L	-	NA	13.8	6.2	NA	5.1
Ferrous Iron (lab)	MG/L	-	NA	12.5 J	2.5 J	NA	0.10 UJ

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect J - Estimated Result

NA - Not Analyzed

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

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

Detection Limits shown are PQL

Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
Printed: 11/10/2015 11:37:53 AM
[LOGDATE] > #3/1/2015# AND [LOCID] <> 'FIELDQC

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-03	MW-03
Sample ID			20150304MW-02	20150422MW-02	20151008MW-02	20150304MW-03	20150422MW-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/04/15	04/22/15	10/08/15	03/04/15	04/22/15
Parameter	**Units**	**Criteria***					
Field Parameter							
Dissolved Oxygen	MG/L	-	0.58	0.93	NA	1.24	0.65
Ferrous Iron	MG/L	-	NA	5.5	NA	NA	6.0
Oxidation-Reduction Potential	mV	-	-114	-135	NA	-82	-100
pH	S.U.	-	6.80	6.60	NA	6.84	6.69
Specific Conductance	MS/CM	-	2.53	2.86	NA	1.82	1.06
Temperature	DEG C	-	7.98	9.86	NA	8.58	11.87
Turbidity	NTU	-	0.0	8.0	NA	0.0	1.7

*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

U - Non-Detect J - Estimated Result

NA - Not Analyzed

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

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

Detection Limits shown are PQL

Advanced Selection: amk-temp
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[LOGDATE] > #3/1/2015# AND [LOCID] <> 'FIELDQC

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-04	MW-04	MW-06	MW-06
Sample ID			20151008MW-03	20150422MW-04	20151008MW-04	20150422MW-06	20151008MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/08/15	04/22/15	10/08/15	04/22/15	10/08/15
Parameter	**Units**	**Criteria***					
Volatiles							
Chlorotrifluoroethene (Freon-1113)	UG/L	5	140	2.1	4.4	110	51
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	0.52 J	0.38 J	1.0 U	1.6	1.0 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	1.7	1.0 U	1.0 U	8.1	1.0 U
Dissolved Gases							
Methane	UG/L	-	10,000	1,000	2,100	5,200	7,200
Total Metals							
Iron	UG/L	300	29,500	28,000	15,800	26,400	20,200
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	279	338	303	311	312
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	279	338	303	311	312
Alkalinity, Carbonate (as CaCO3)	MG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Alkalinity, Hydroxide	MG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	2 J	3.0 U	3.0 U	3.0 U	1 J
Hardness (as CaCO3)	MG/L	-	368	882	523	515	337
Nitrogen, Nitrate	MG/L	10	2.0 U	0.10 U	2.0 U	0.10 U	2.0 U
Nitrogen, Nitrite	MG/L	1	0.021 J	0.10 U	0.016 J	0.10 U	0.020 J
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	0.050 U	NA	0.050 U	NA
Sulfate	MG/L	250	48.2	29.8	7.4	29.9	16.7
Total Organic Carbon	MG/L	-	7.1	12.3	11.8	5.1	5.5
Ferrous Iron (lab)	MG/L	-	1.7 J	0.10 J	0.33 J	0.90 J	0.44 J

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect J - Estimated Result

NA - Not Analyzed

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

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

Detection Limits shown are PQL

Advanced Selection: amk-temp
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TABLE 2
GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-04	MW-04	MW-06	MW-06
Sample ID			20151008MW-03	20150422MW-04	20151008MW-04	20150422MW-06	20151008MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/08/15	04/22/15	10/08/15	04/22/15	10/08/15
Parameter	**Units**	**Criteria***					
Field Parameter							
Dissolved Oxygen	MG/L	-	NA	1.05	NA	0.72	NA
Ferrous Iron	MG/L	-	NA	5.5	NA	4.5	NA
Oxidation-Reduction Potential	mV	-	NA	-92	NA	-104	NA
pH	S.U.	-	NA	6.73	NA	6.83	NA
Specific Conductance	MS/CM	-	NA	4.47	NA	2.67	NA
Temperature	DEG C	-	NA	11.71	NA	12.18	NA
Turbidity	NTU	-	NA	1.1	NA	4.1	NA

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect J - Estimated Result

NA - Not Analyzed

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

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

Detection Limits shown are PQL

Advanced Selection: amk-temp
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TABLE 2
GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R	MW-07R	MW-07R
Sample ID			20150304MW-07R	20150422MW-07R	20151008MW-07R
Matrix			Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-
Date Sampled			03/04/15	04/22/15	10/08/15
Parameter	**Units**	**Criteria***			
Volatiles					
Chlorotrifluoroethene (Freon-1113)	UG/L	5	130	10	46
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1.0 U	1.0 U	1.0 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	0.78 J	0.39 J	1.0 U
Dissolved Gases					
Methane	UG/L	-	NA	1,700	9,800
Total Metals					
Iron	UG/L	300	NA	25,300	39,000
Miscellaneous Parameters					
Alkalinity, Total (as CaCO3)	MG/L	-	NA	240	450
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	240	450
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	5.0 U	5.0 U
Alkalinity, Hydroxide	MG/L	-	NA	5.0 U	5.0 U
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA
Dehalobacter	GC/mL	-	300	90	20
Hardness (as CaCO3)	MG/L	-	NA	641	475
Nitrogen, Nitrate	MG/L	10	NA	0.16	2.0 U
Nitrogen, Nitrite	MG/L	1	NA	0.018 J	0.028 J
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	0.18	NA
Sulfate	MG/L	250	NA	11.8	9.1
Total Organic Carbon	MG/L	-	NA	6.0	11.8
Ferrous Iron (lab)	MG/L	-	NA	2.2 J	0.49 J

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect J - Estimated Result

NA - Not Analyzed

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

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

Detection Limits shown are PQL

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R	MW-07R	MW-07R
Sample ID			20150304MW-07R	20150422MW-07R	20151008MW-07R
Matrix			Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-
Date Sampled			03/04/15	04/22/15	10/08/15
Parameter	**Units**	**Criteria***			
Field Parameter					
Dissolved Oxygen	MG/L	-	0.91	0.91	NA
Ferrous Iron	MG/L	-	NA	4.0	NA
Oxidation-Reduction Potential	mV	-	-120	-75	NA
pH	S.U.	-	6.81	6.69	NA
Specific Conductance	MS/CM	-	2.56	4.17	NA
Temperature	DEG C	-	8.90	12.41	NA
Turbidity	NTU	-	0.0	0.9	NA

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect J - Estimated Result

NA - Not Analyzed

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

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

Detection Limits shown are PQL

Table 3

Comparison of April 2015 to October 2015 Data

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

Legend

↓ Decrease from previous event

↑ Increase from previous event

↔ No significant change from previous event

TABLE 4
SUMMARY OF GROUNDWATER MONITORING PARAMETERS

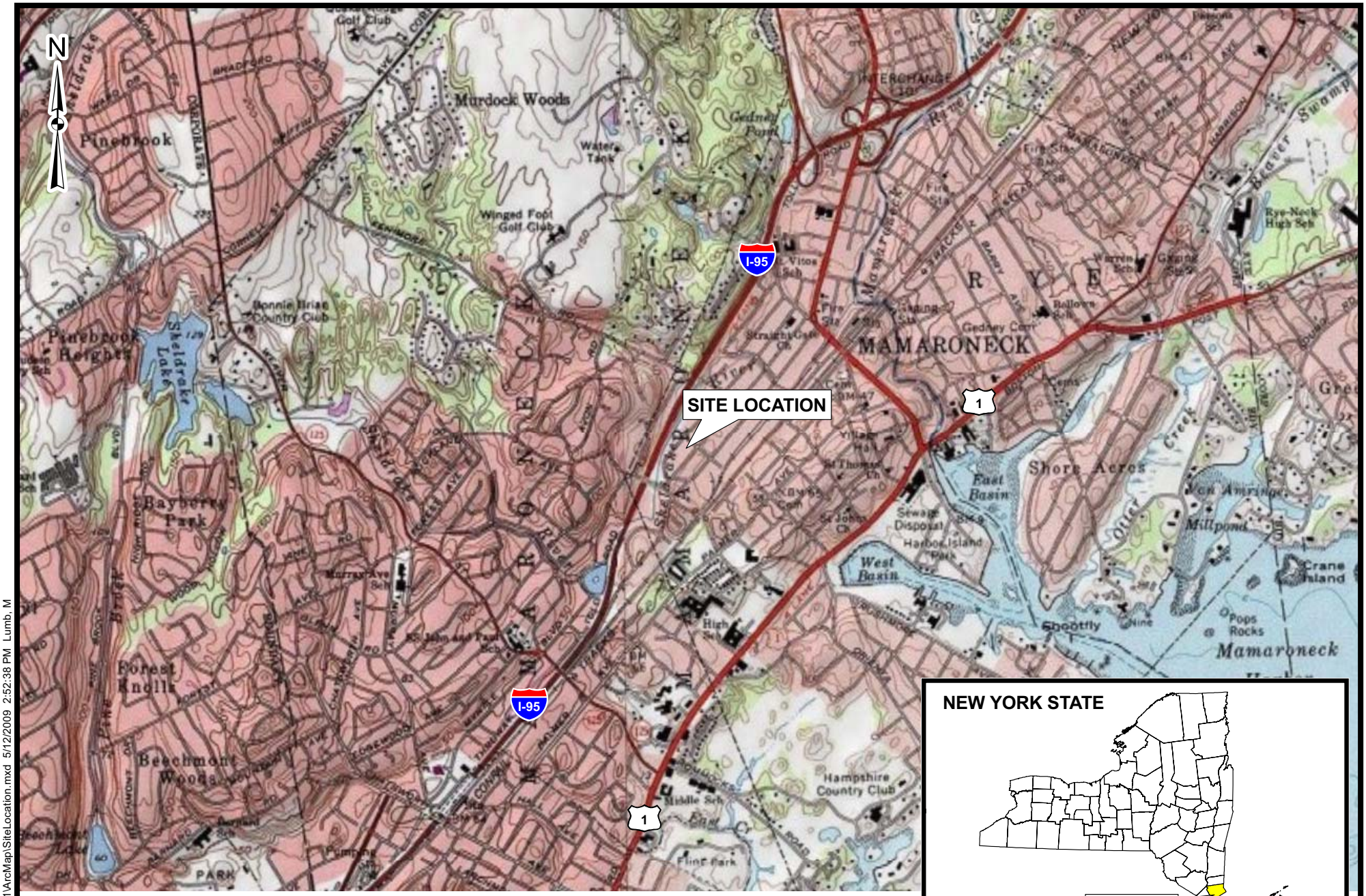
Date	Well	Sample Parameter or Parameter Group								
		Freon 113	Freon 123a	Freon1113	Methane	Sulfate	Dehalococcoides	Dehalobacter	Field Parameters	Natural Attenuation Parameters
April 2016	MW-02	x	x	x	x	x	x	x	x	x
	MW-03	x	x	x	x	x		x	x	x
	MW-04	x	x	x	x	x		x	x	x
	MW-06	x	x	x	x	x		x	x	x
	MW-07R	x	x	x	x	x		x	x	x

Notes:

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

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

FIGURES



SOURCE: USGS Topographical Quadrangle Mount Vernon, New York, 1979 and Mamaroneck, New York, 1985.

URS

SITE LOCATION MAP

FIGURE 1

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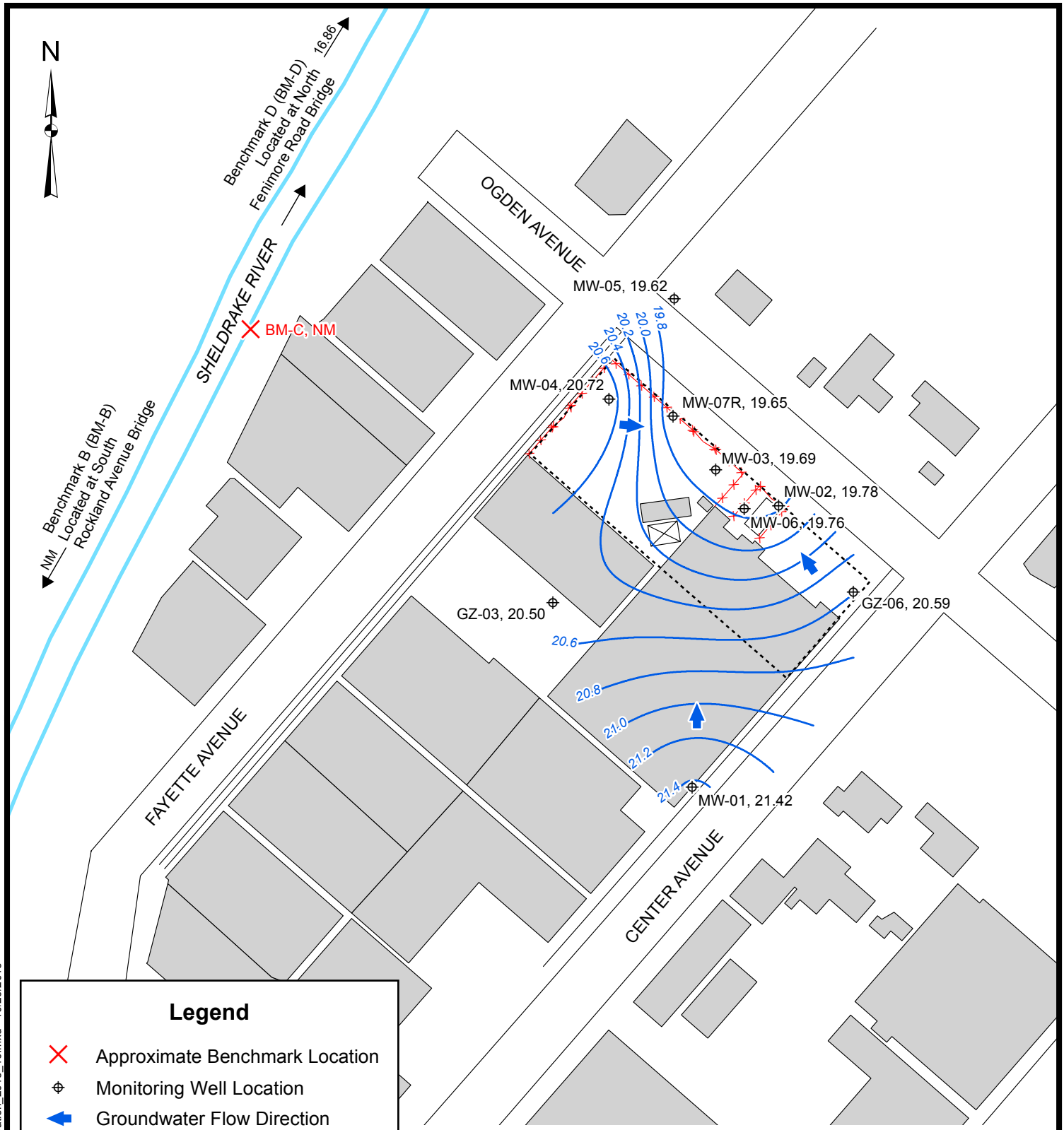

Legend

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

MW-02, 21.01
Location ID
Groundwater Elevation (based upon URS survey datum)

NOTES:
(1) Well MW-07 was replaced by well MW-07R on September 3, 2009.
(2) Benchmark C was originally established as a temporary benchmark off a tree branch overhanging the Sheldrake River between the north and south bridges. The approximate water surface elevation for this benchmark is now calculated by taking the average water surface elevation of Benchmark B and Benchmark D.
(3) NM - Not Measured

80 0 80 Feet

URS

GROUNDWATER ELEVATION MAP
(OCTOBER 8, 2015)

FIGURE 2

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N

SHELDRAKE RIVER

FAYETTE AVENUE

OGDEN AVENUE

CENTER AVENUE

MW-04	10/99	7/00	7/01	5/03	12/03	7/04	5/05	12/05	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
Freon-113	11	ND	ND	ND	ND	0.7J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.38J	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	ND	ND	ND	ND	ND
Freon-1113	ND	ND	ND	ND	ND	ND	1.0J	ND	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

MW-05	7/00	7/01	5/03	12/03	7/04
Freon-113	7	ND	ND	ND	0.5J
Freon-123A	ND	ND	ND	ND	ND
Freon-1113	ND	ND	ND	ND	ND

MW-03	10/99	7/00	7/01	5/03	7/03	9/03	12/03	7/04	5/05	12/05	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
Freon-113	17000	11000	13000	5800	68	26	150	4900J	2J	ND	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
Freon-123A	ND	ND	ND	78J	43	180	170	3900	14	1.0J	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
Freon-1113	ND	ND	ND	ND	7	6.2	ND	68J	83	2.0J	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

MW-07/07R	6/03	7/03	9/03	12/03	7/04	5/05	12/05	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
Freon-113	5400	8500	6100	370	110J	ND	ND	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
Freon-123A	68J	130J	130J	940	50	2.0J	ND	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
Freon-1113	ND	ND	ND	ND	210	140	47	97	89	82	92	170	150	370	150J	390	350	370J	26	630J	430	310J	390	2.1	69	130	130	10	46

MW-02	10/99	7/00	7/01	5/03	7/03	9/03	12/03	7/04	5/05	12/05	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
Freon-113	740	1700	2400	880	1000	54	12	21J	1200	110	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
Freon-123A	ND	ND	ND	40	41J	7.8	3.3J	4J	86J	15	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
Freon-1113	ND	ND	ND	ND	ND	ND	ND	14	120	18	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

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

GZ-06	5/88	3/89	10/99	7/00	7/01	5/03	7/03	9/03	12/03	7/04	5/05	12/05	8/06	11/06	2/07	8/07	2/08	8/08	2/09
Freon-113	1274	200	49	900	250	100	230	74	ND	100J	9J	ND	74	2.0J	14	13	ND	ND	ND
Freon-123A	ND	ND	ND	ND	ND	ND	20	41	26	0.7J	36	4.0J	2.0J	23	2.0J	4.0J	10	ND	ND	ND
Freon-1113	ND	ND	ND	ND	ND	ND	ND	5.4	ND	24	15	ND	13	2.0J	1.0J	2.0J	ND	ND	ND

MW-06	6/03	7/03	9/03	12/03	7/04	5/05	12/05	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
Freon-113	220	180	97	250	140J	1.0J	ND	ND	3J	ND	ND	ND	2.0J	ND	ND	ND	ND	33	ND	82J	3.3	0.19J	ND	26	ND	ND	1.6	ND
Freon-123A	8.8J	9.5	8.6	14	23	16	ND	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
Freon-1113	ND	5.7	ND	ND	5J	6.0J	6.0J	ND	100	21	8.0J	4.0J	34	6.4	35J	68J	61	96J	30	230J	140	61J	27	75	84	51	110	51

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
- 7/00 - Pre-Pilot Injection Sampling Dates
- 12/03 - Post-Pilot Injection/Pre-IRM Injection Sampling Dates
- 12/05 - Post-IRM Injection Sampling Dates
- 2/08 - Post-2007 Supplemental Injection Sampling Dates
- 10/09 - Post-2009 Supplemental Injection Sampling Dates
- 11/12 - Post-2012 Supplemental Injection Sampling Dates
- 7/13 - Post-2013 Supplemental Injection Sampling Dates
- 10/14 - Post-2014 Supplemental Injection Sampling Dates

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

100 0 100 Feet

FORMER EMCA SITE
SUMMARY OF FREON DETECTIONS IN GROUNDWATER

URS

FIGURE 3

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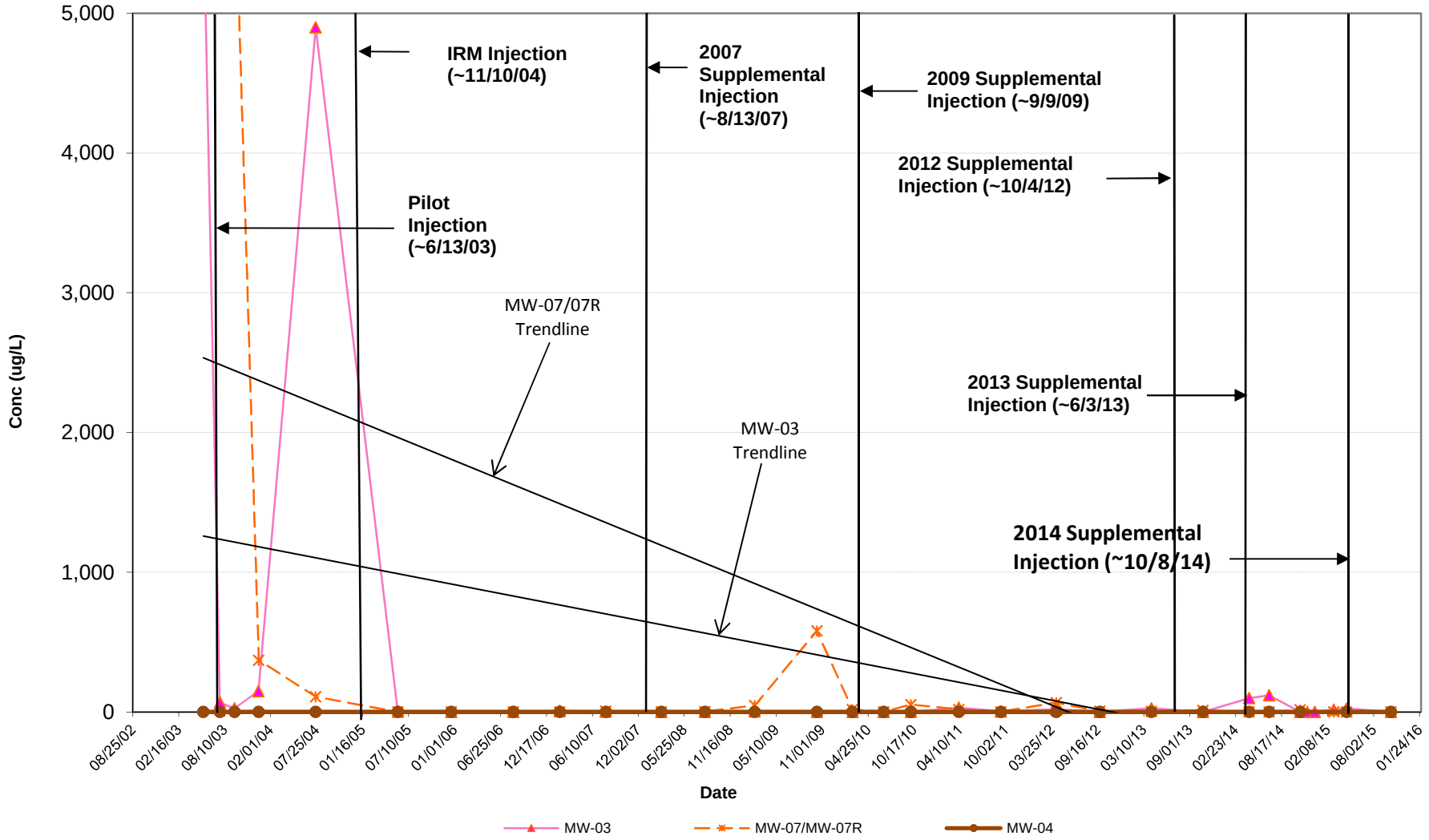
FIGURE 4
FORMER EMCA SITE
Freon 113 Concentrations, MW-03 , MW-04, and MW-07/07R



J:\Projects\11172730.00000\WORD\DRAFT\GW SAR Reports\Oct 2015 GW SAR\GW Data Plots_Time Scaled Long_Oct 2015.xls - Fig 4

FIGURE 5
FORMER EMCA SITE
Freon 113 Concentrations, GZ-06, MW-02, and MW-06

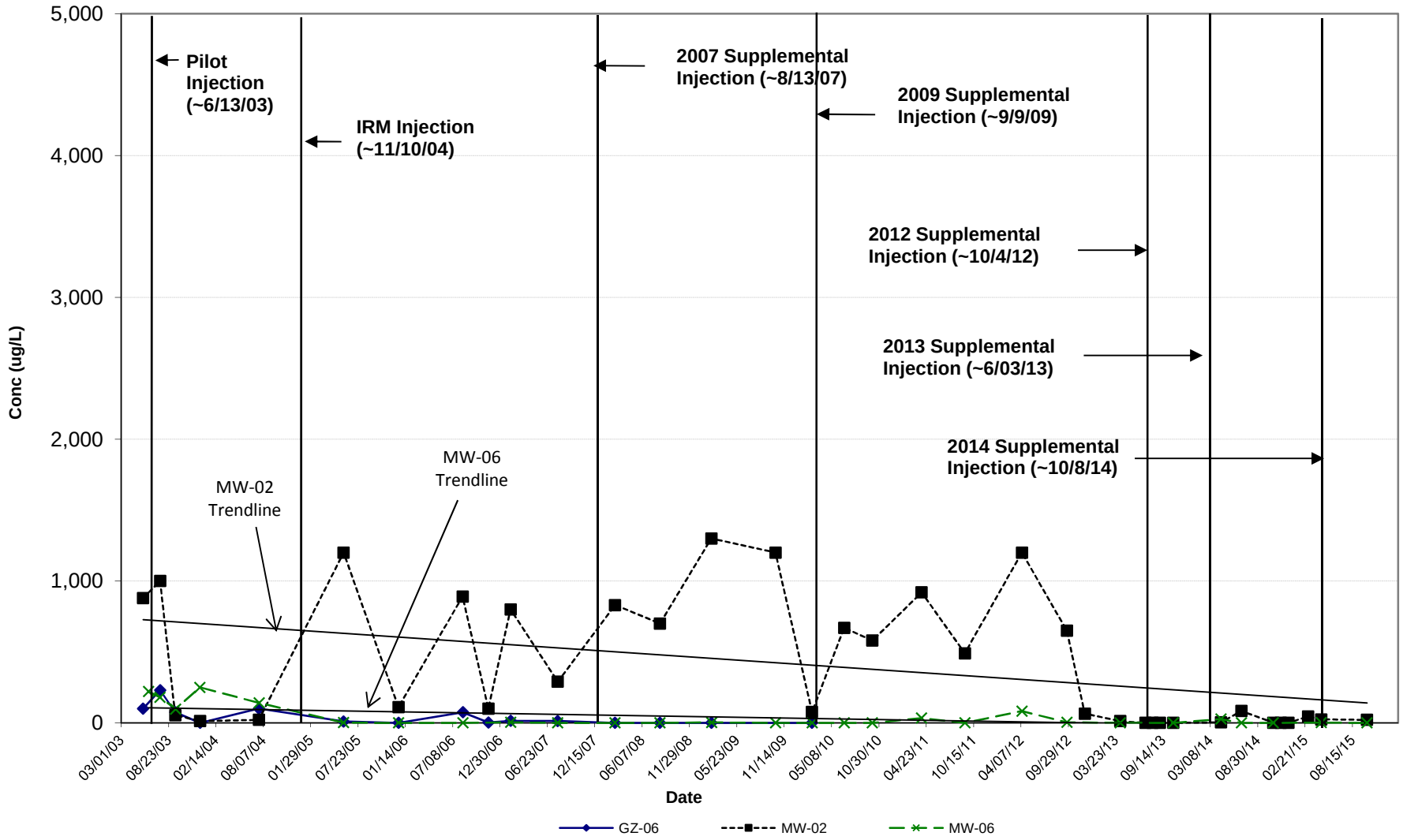


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FIGURE 6
FORMER EMCA SITE
Freon 123a Concentrations

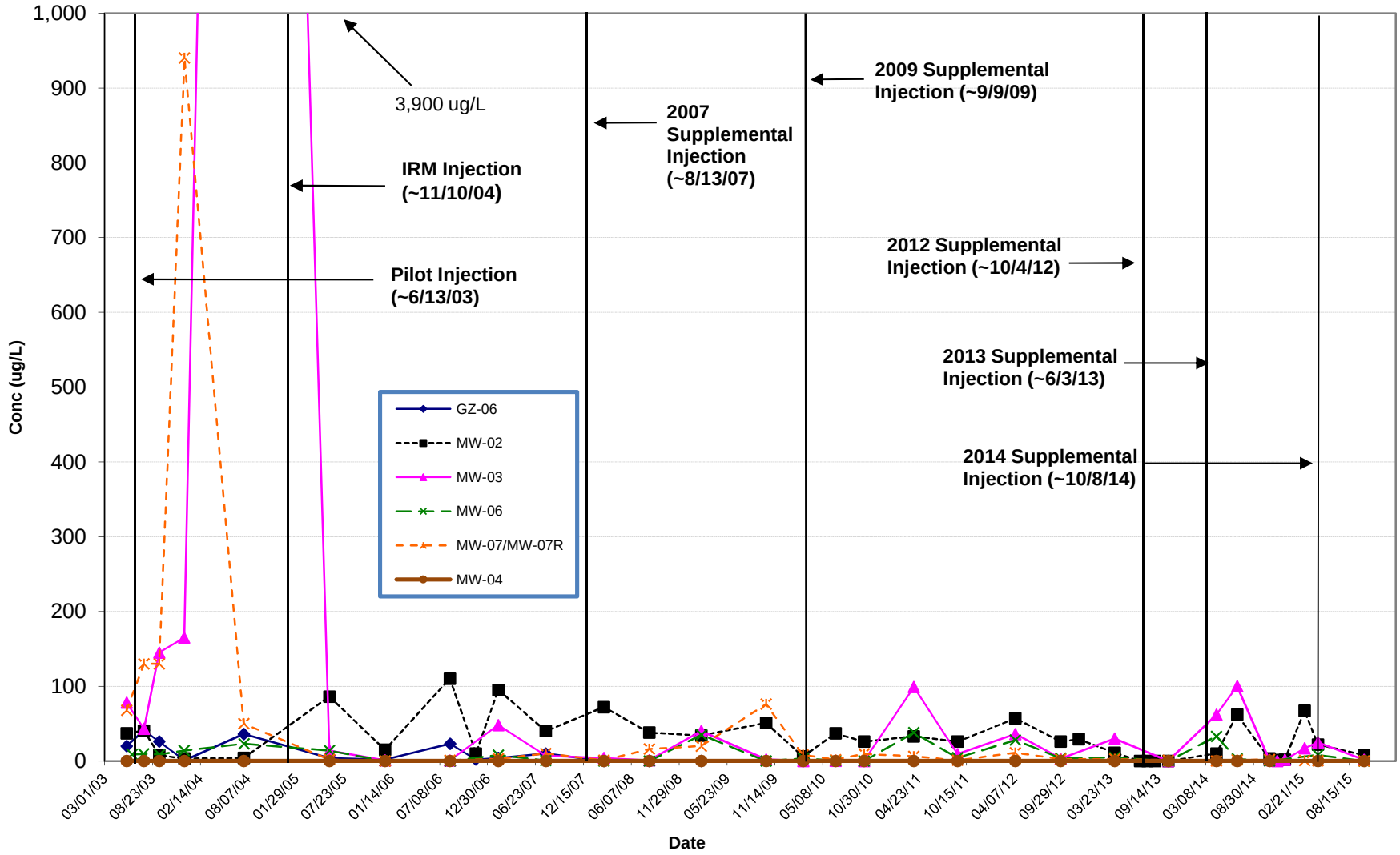

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FIGURE 7
FORMER EMCA SITE
Freon 1113 Concentrations

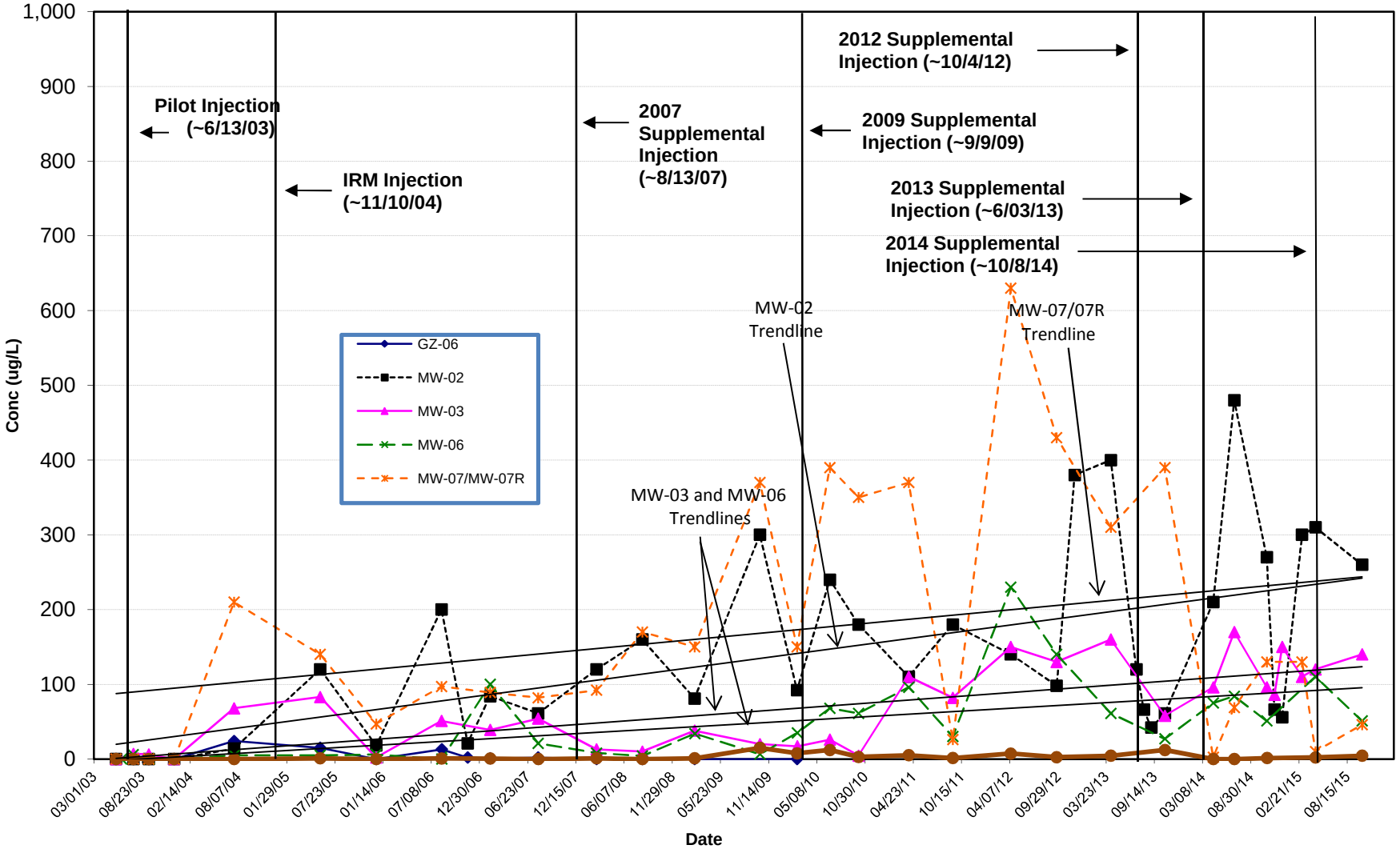

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FIGURE 8
FORMER EMCA SITE
Sulfate Concentrations

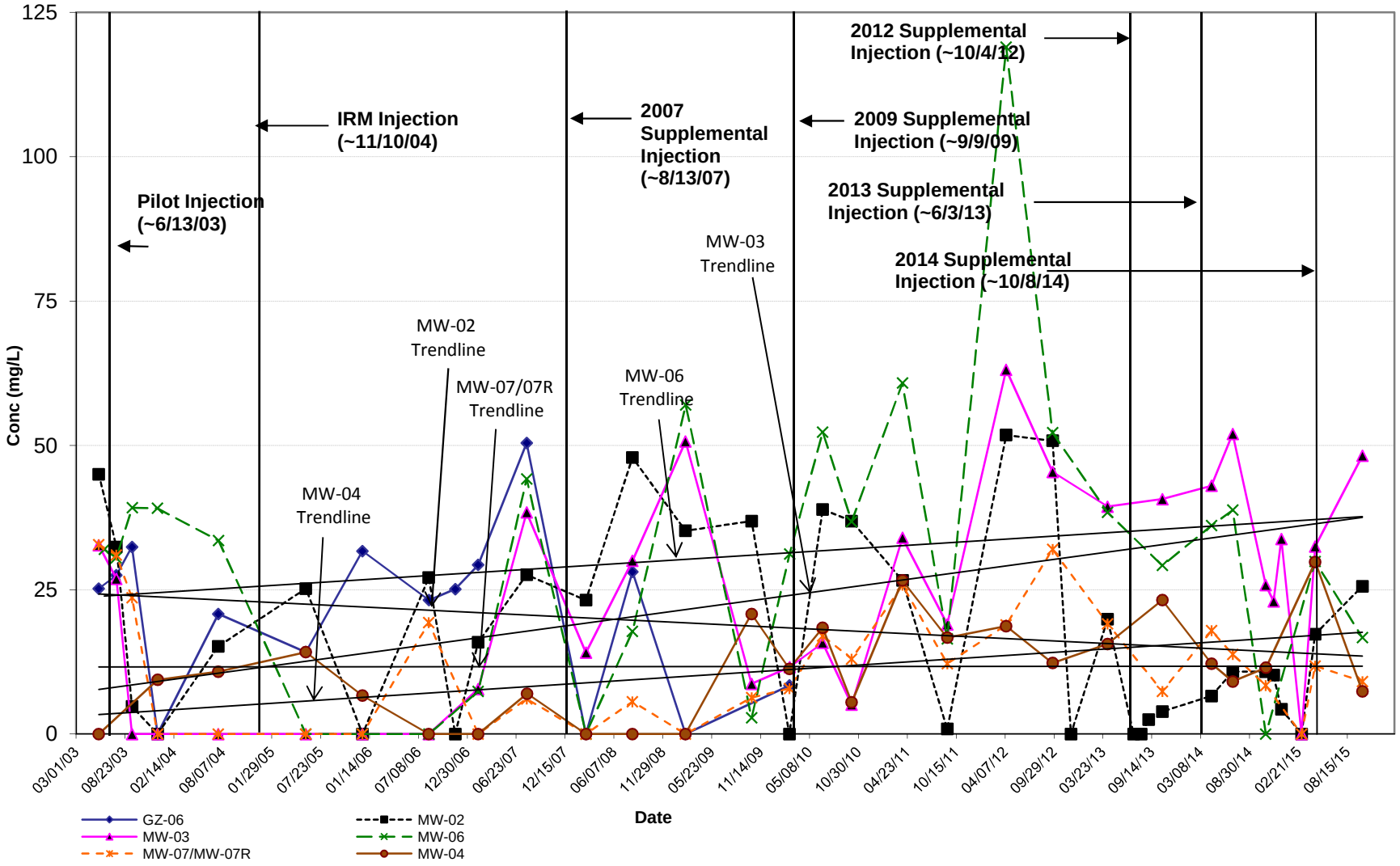

FIGURE 9
FORMER EMCA SITE
Methane Concentrations

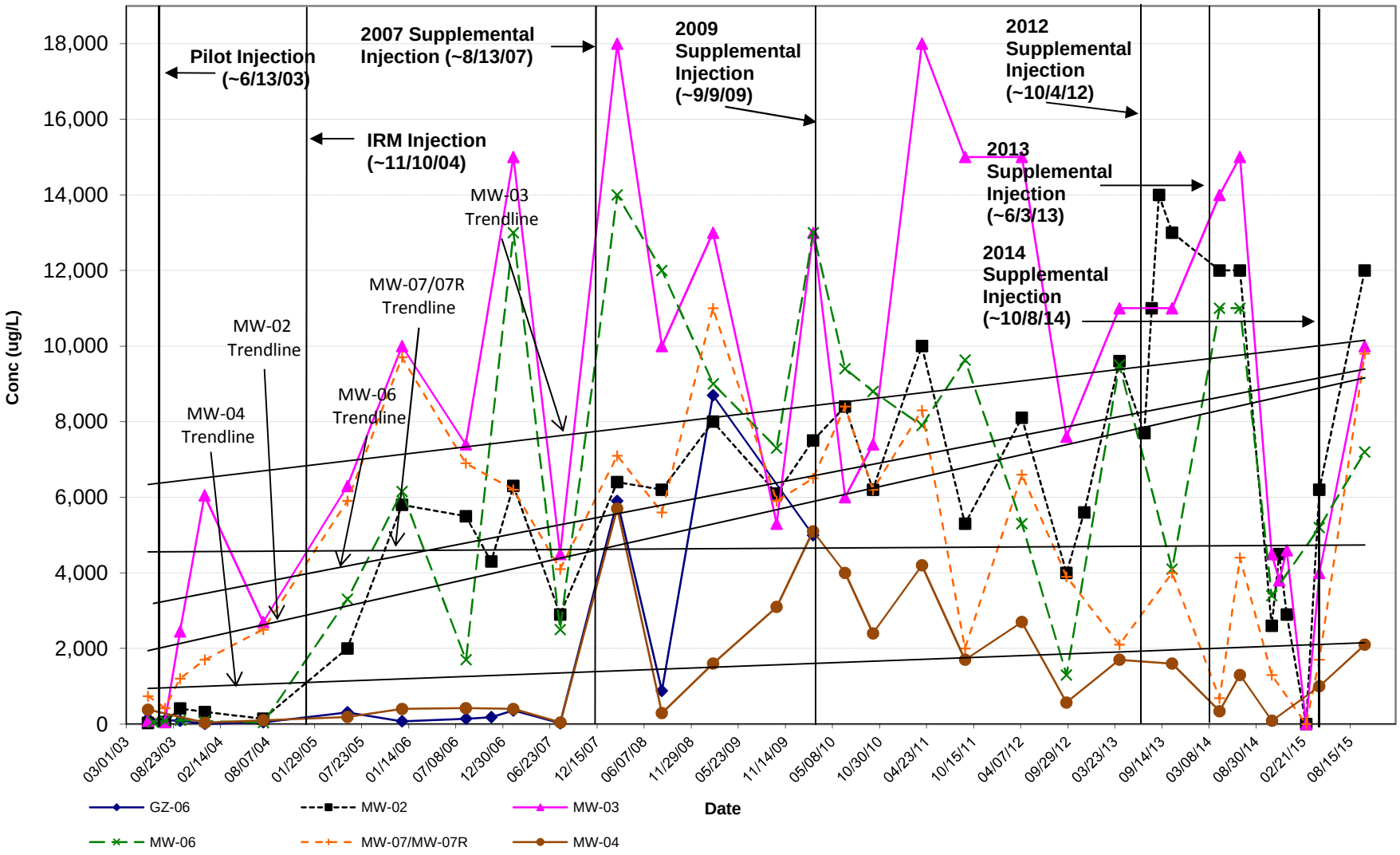

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FIGURE 10
FORMER EMCA SITE
Dissolved Oxygen Concentrations

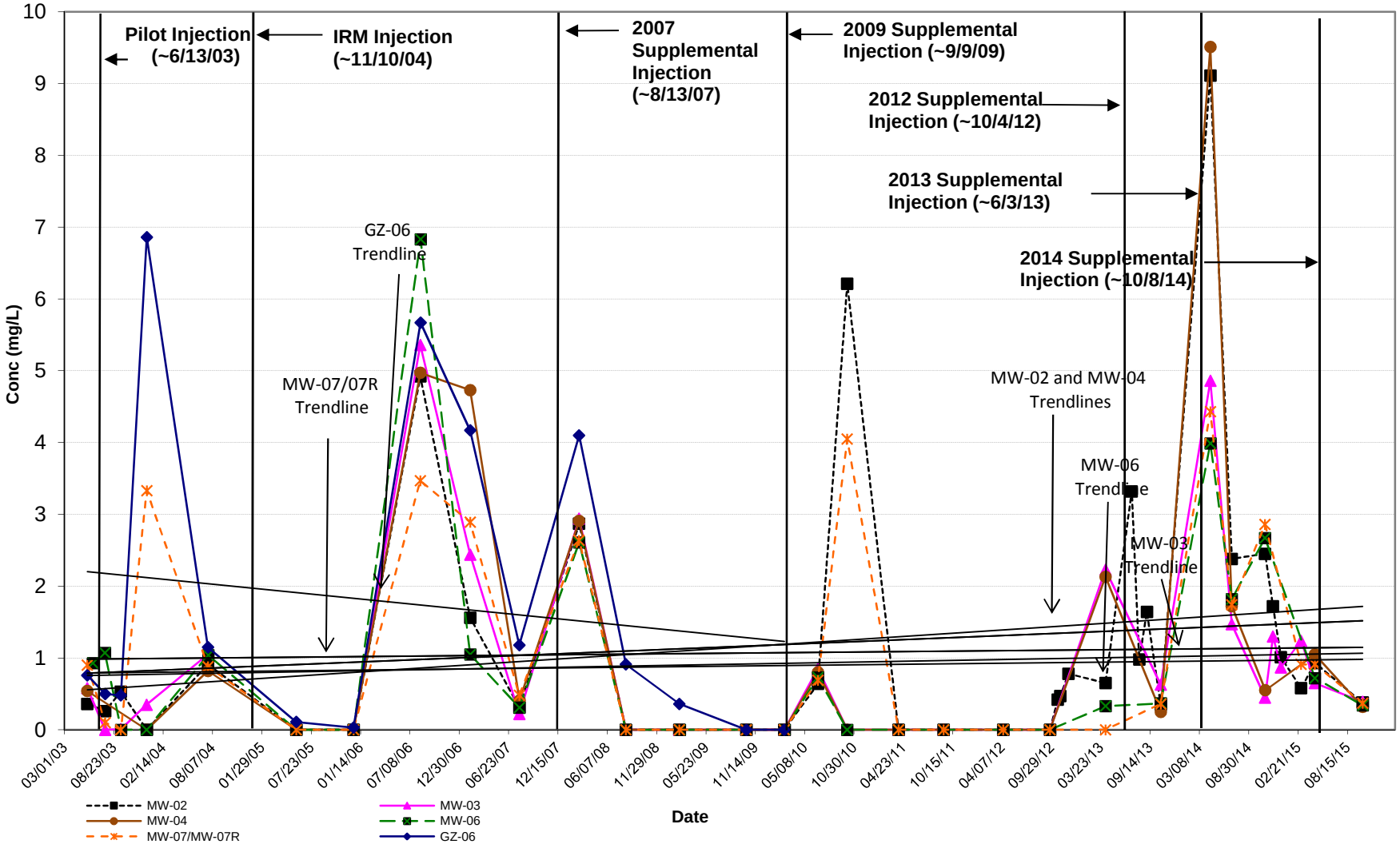

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FIGURE 11
FORMER EMCA SITE
MW-02
Dissolved Oxygen vs Temperature

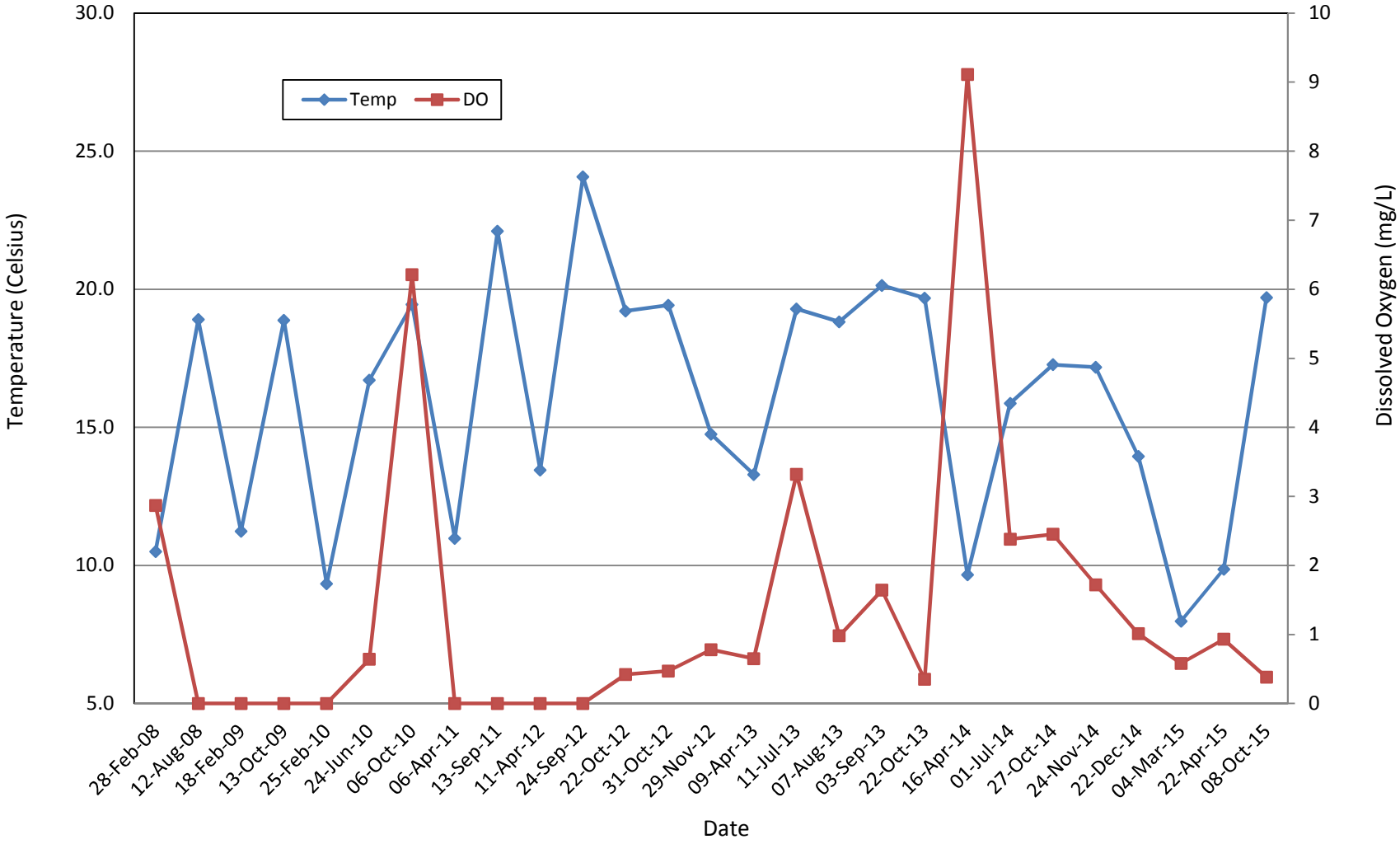

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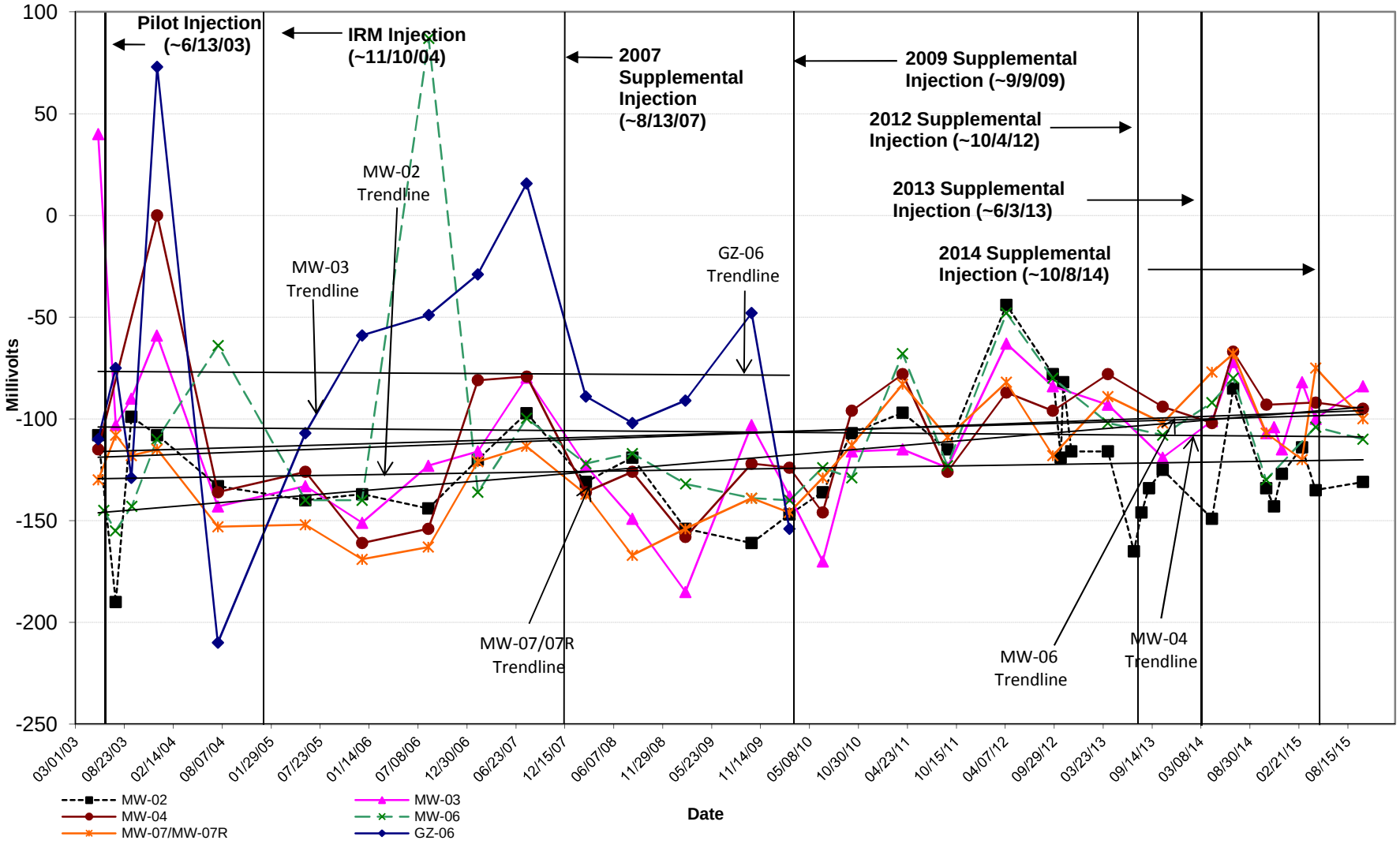
FIGURE 12
FORMER EMCA SITE
Oxidation-Reduction Potential



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APPENDIX A

LOW FLOW GROUNDWATER PURGING/SAMPLING LOGS

EMCA
Mamaroneck, NY
Date: ~~4/22/15~~ 10/8/15

Well ID	DTP	DTW 3Q14	DTB 3Q14	DTW	DTB
GZ-03	x	6.12	9.21	5.66	8.95
GZ-06	x	7.40	15.47	7.43	15.21
MW-01	x	5.23	8.35	4.32	8.07
MW-02	x	5.87	11.71	5.85	12.15
MW-03	x	5.87	14.28	5.90	14.05
MW-04	x	5.65	11.85	4.59	11.55
MW-05	x	4.90	15.48	5.01	15.27
MW-06	x	5.98	18.70	6.01	18.53
MW-07R	x	5.98	20.00	5.98	19.74
BM B	x	13.56	13.62	Removed blc of safety concerns	
BM D	x	10.78	11.29	10.55	10.75

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

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

Date: 10/8/15 (10/8/15) Sampling Personnel: Megan Dascoli Company: URS Corporation

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

Measuring Point: Below Top of Riser Initial Depth to Water: 5.85 Depth to Well Bottom: 12.15 Well Diameter: 1" Screen Length: 10'

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

Sample ID: 20151008, MW-02 Sample Time: 920 QA/QC: TB20151008

12/14 Sample Parameters: Freon 113, 123a, 1113; Methane; Sulfate- sent to TestAmerica, Edison, NJ + Iron, Alkalinity, Hardness, N_3-N_2, +TOC
Dehalobactor and Dehalococcoides - sent to SIREM in Ontario, Canada
all ↑ only MW-02

PURGE PARAMETERS

TIME	pH	TEMP (°C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP Eh (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
845	5.45	19.70	3.50	1.36	12.6	-123	300	
~~850~~	5.42	19.99	2.88	0.63	0.6	-130	300	6.05
~~855~~	5.40	19.65	2.78	0.56	0.3	-131	300	6.05
~~900~~	5.39	19.71	2.69	0.49	0.1	-131	300	6.05
905	5.37	19.70	2.60	0.43	0.0	-131	300	6.05
~~910~~	5.37	19.70	2.57	0.41	0.0	-131	300	6.05
915	5.36	19.70	2.52	0.38	0.0	-131	300	6.05
920								
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

Ferrous Iron @ ~~9:10~~ Ferrous Iron =<0.5 (reading is 0.0, but liquid is orange)

Redo Ferrous ~~Iron~~ Iron: @1330 >7.0 mg/L

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

Remarks: anaerobic odor on purge water. Angular Bacteria sheen on purge water noted.

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

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

Date: 10/8/14 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: 5.90 Depth to Well Bottom: 14.05 Well Diameter: 1" Screen Length: 10'

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

Sample ID: 20150808 MW-03 Sample Time: 1310 QA/QC: TB20151008

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

PURGE PARAMETERS

TIME	pH	TEMP (°C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP Eh (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)	Ferrous Iron (mg/l)
1235	5.20	20.28	1.48	1.04	4.3	-46	240	5.90	
1240	5.21	20.24	1.55	0.64	0.7	-57	240		
1245	5.23	20.14	1.60	0.47	0.1	-65	240		
1250	5.24	20.06	1.64	0.40	0.0	-72	240	5.90	
1255	5.25	20.03	1.66	0.38	0.0	-77			
1300	5.26	19.96	1.68	0.36	0.0	-81	240	5.90	
1305	5.27	19.94	1.69	0.39	0.0	-84	240	5.90	
									* 6.5 mg/L
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---		

Ferrous Iron @ 1317 = 6.5 mg/L

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

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

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

Date: 10/8/15 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: 4.59 Depth to Well Bottom: 11.55 Well Diameter: 1" Screen Length: 10'

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

Sample ID: 20151008MW-04 Sample Time: 1145 QA/QC: TB20151008

12/14 Sample Parameters: Freon 113, 123a, 1113; Methane; Sulfate- sent to TestAmerica, Edison, NJ
Dehalobactor ~~and Dehalococcoides~~ - sent to SIREM in Ontario, Canada

PURGE PARAMETERS

TIME	pH	TEMP (°C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP Eh (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1110	5.47	22.25	2.47	0.69	8.3	-80	280	4.59
1115	5.43	22.00	2.97	0.48	2.2	-82	310	4.59
1120	5.42	21.93	3.04	0.38	0.0	-87	300	4.59
1125	5.42	21.86	3.07	0.35	0.0	-90	300	4.59
1130	5.42	21.86	3.07	0.34	0.0	-92	300	4.59
1135	5.42	21.85	3.05	0.32	0.0	-94	300	4.59
1140	5.42	21.76	3.05	0.32	0.0	-95	300	4.59
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

Ferrous Iron 6.0 mg/L @ 1155

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

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

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

Date: 10/8/15 Sampling Personnel: Megan Dascoli Company: URS Corporation

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

Measuring Point: Below Top of Riser Initial Depth to Water: 6.01 Depth to Well Bottom: 18.53 Well Diameter: 1" Screen Length: 10'

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

Sample ID: 2015/008 MW-06 Sample Time: 1027 QA/QC: TB 2015/008

12/14 Sample Parameters: Freon 113, 123a, 1113; Methane; Sulfate- sent to TestAmerica, Edison, NJ + Iron, Alkalinity, Hardness, N_3-N_2, +TOC

Dehalobactor and Dehalococcoides - sent to SIREM in Ontario, Canada

all only MW-02

PURGE PARAMETERS

TIME	pH	TEMP (°C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP Eh (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
~~947~~	~~5.46~~	5						
947	5.46	18.28	1.16	1.65	18.2	-82	220	6.15
952	5.47	18.55	1.26	0.60	7.6	-84		6.18
957	5.49	18.58	1.42	0.45	3.9	-95	260	6.22
1002	5.50	18.60	1.47	0.42	2.5	-98		6.22
1007	5.50	18.61	1.51	0.38	1.2	-103	260	6.23
1012	5.50	18.63	1.55	0.36	0.9	-106	~~270~~	6.23
1017	5.50	18.64	1.58	0.35	0.0	-108	250	6.23
1022	5.50	18.70	1.60	0.34	0.0	-110	240	6.23
1027								
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

Ferrous Iron

@ 1022

Ferrous Iron [redacted]

(reading is 0.0 mg/L, but liquid is orange)

Redo:

Ferrous Iron = 7.0 mg/L

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

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

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

Date: 10/8/15 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: 5.98 Depth to Well Bottom: 19.74 Well Diameter: 1" Screen Length: 10'

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

Sample ID: 20151008MW-07R Sample Time: 1423 QA/QC: TB 20151008

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

PURGE PARAMETERS

TIME	pH	TEMP (°C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP Eh (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)	Ferrous Iron (mg/l)
1348	5.38	18.81	2.49	1.22	22.2	-70	280	6.01	
1353	5.36	19.23	2.42	0.57	0.1	-85	280	6.02	
1358	5.36	19.19	2.41	0.50	0.0	-89	280	6.02	
1403	5.36	19.17	2.40	0.40	0.0	-95	280		
1408	5.36	19.16	2.40	0.38	0.0	-97	280		
1413	5.35	19.15	2.40	0.36	0.0	-98	280	6.02	
1418	5.35	19.15	2.40	0.37	0.0	-100	280		
1423									
1428									
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---		

Ferrous Iron @ 1435 7.0 mg/L

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

Remarks:

APPENDIX B

HISTORICAL ANALYTICAL DATA SUMMARY

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

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

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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

J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data 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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

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

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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

J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data 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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

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

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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

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

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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

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

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

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

Location ID			GZ-06	GZ-06	GZ-06	GZ-06	GZ-06
Sample ID			GZ06	GZ-06	MW-GZ-06V08N	GZ-0608N	20061117GZ-0608
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/22/04	05/31/05	12/20/05	08/15/06	11/17/06
Parameter	**Units**	**Criteria***					
Volatiles							
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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Detection Limits shown are PQL

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

Location ID			GZ-06	GZ-06	GZ-06	GZ-06	GZ-06
Sample ID			GZ06	GZ-06	MW-GZ-06V08N	GZ-0608N	20061117GZ-0608
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/22/04	05/31/05	12/20/05	08/15/06	11/17/06
Parameter	**Units**	**Criteria***					
Volatiles							
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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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

J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data 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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

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

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data rejected.

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

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

Detection Limits shown are PQL

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

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

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

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Detection Limits shown are PQL

Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
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[LOGDATE] >= #5/1/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

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

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

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

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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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

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

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

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Detection Limits shown are PQL

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

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

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

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

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

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

Flags assigned during chemistry validation are shown.

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

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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

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

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

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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

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

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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

J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data rejected.

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

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

Detection Limits shown are PQL

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

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

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

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Concentration Exceeds Criteria

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

Detection Limits shown are PQL

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

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

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

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

Detection Limits shown are PQL

Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
Printed: 11/6/2015 2:44:07 PM
[LOGDATE] >= #5/1/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

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

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

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

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

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

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

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

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

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

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

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			20070731MW-02V15N	20080228MW02V15N	20080812MW02V10N	20090218MW-02V10N	20091013MW-02V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/31/07	02/28/08	08/12/08	02/18/09	10/13/09
Parameter	**Units**	**Criteria***					
Volatiles							
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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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

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

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

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Detection Limits shown are PQL

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

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

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

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J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data rejected.

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

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Detection Limits shown are PQL

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

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			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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U - Non-Detect UJ - Not detected above the estimated quantitation limit

J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data 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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
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[LOGDATE] >= #5/1/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

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

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

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

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

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

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

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

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

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

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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID			20130115MW-02V10N	20130219MW-02V10N	20130409MW-02V09ED	20130409MW-02V09N	20130711MW-02V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			01/15/13	02/19/13	04/09/13	04/09/13	07/11/13
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		
Volatiles							
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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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

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

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

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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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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

J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data 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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

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

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

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

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Detection Limits shown are PQL

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

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

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

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

Location ID			MW-02	MW-02	MW-02	MW-02	MW-03
Sample ID			20141222MW-02V09N	20150304MW-02	20150422MW-02	20151008MW-02	MW03_52103
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/22/14	03/04/15	04/22/15	10/08/15	05/21/03
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	250 U
Benzene	UG/L	1	NA	NA	NA	NA	250 U
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	50 U
Bromoform	UG/L	50	NA	NA	NA	NA	200 U
Bromomethane	UG/L	5	NA	NA	NA	NA	250 U
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	R
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	250 U
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	100 U
Chlorobenzene	UG/L	5	NA	NA	NA	NA	250 U
Chloroethane	UG/L	5	NA	NA	NA	NA	250 U
Chloroform	UG/L	7	NA	NA	NA	NA	250 U
Chloromethane	UG/L	5	NA	NA	NA	NA	250 U
Chlorotrifluoroethene (Freon-1113)	UG/L	5	56	300	310	260	0 U
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	250 U
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	250 U
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	100 U
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	33 J
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	250 U
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	250 U
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	50 U
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	250 U
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-02	MW-02	MW-02	MW-02	MW-03
Sample ID			20141222MW-02V09N	20150304MW-02	20150422MW-02	20151008MW-02	MW03_52103
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/22/14	03/04/15	04/22/15	10/08/15	05/21/03
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	200 U
2-Hexanone	UG/L	50	NA	NA	NA	NA	250 U
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	250 U
Methylene Chloride	UG/L	5	NA	NA	NA	NA	150 U
Styrene	UG/L	5	NA	NA	NA	NA	250 U
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	50 U
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	50 U
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	250 U
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	150 U
Trichloroethene	UG/L	5	NA	NA	NA	NA	50 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1.0 U	45	24	21	5,800
Toluene	UG/L	5	NA	NA	NA	NA	250 U
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	250 U
Xylene (total)	UG/L	5	NA	NA	NA	NA	250 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	1.7	67	22	7.7	78 J
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	5.0 U
Ethene	UG/L	-	NA	NA	NA	NA	5.0 U
Methane	UG/L	-	2,900	NA	6,200	12,000	86
Total Metals							
Iron	UG/L	300	NA	NA	60,500	61,800	1,170

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

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

Location ID			MW-02	MW-02	MW-02	MW-02	MW-03
Sample ID			20141222MW-02V09N	20150304MW-02	20150422MW-02	20151008MW-02	MW03_52103
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/22/14	03/04/15	04/22/15	10/08/15	05/21/03
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	267
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	432	292	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	432	292	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	5.0 U	5.0 U	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	5.0 U	5.0 U	NA
Chloride	MG/L	250	NA	NA	NA	NA	113
Dehalococcoides ethenogenes	CEQ/mL	-	1 J	NA	20 J	1 J	NA
Dehalobacter	GC/mL	-	NA	90	200	300	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	525	424	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	0.36
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	1.3
Nitrogen, Nitrate	MG/L	10	NA	NA	0.10 U	2.0 U	2
Nitrogen, Nitrite	MG/L	1	NA	NA	0.10 U	0.034 J	0.1 U
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	32.7
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	13.8	6.2	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	12.5 J	2.5 J	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	0.5
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	0.67
Fluoride	MG/L	1.5	NA	NA	NA	NA	0.28

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

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

Location ID			MW-02	MW-02	MW-02	MW-02	MW-03
Sample ID			20141222MW-02V09N	20150304MW-02	20150422MW-02	20151008MW-02	MW03_52103
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/22/14	03/04/15	04/22/15	10/08/15	05/21/03
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	5 U
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	1.01	0.58	0.93	NA	0.58
Ferrous Iron	MG/L	-	NA	NA	5.5	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-127	-114	-135	NA	40
pH	S.U.	-	6.78	6.80	6.60	NA	NA
Specific Conductance	MS/CM	-	2.60	2.53	2.86	NA	0.638
Temperature	DEG C	-	13.95	7.98	9.86	NA	NA
Turbidity	NTU	-	0.0	0.0	8.0	NA	NA

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

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			MW03	DUP-91703	MW03-091703	DUP1_121703	MW-03_121703
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/23/03	09/17/03	09/17/03	12/17/03	12/17/03
Parameter	Units	Criteria*		Field Duplicate (1-1)		Field Duplicate (1-1)	
Volatiles							
Acetone	UG/L	50	78	110	110	130 J	120 J
Benzene	UG/L	1	2.3	2.2	1.8	10 U	10 U
Bromodichloromethane	UG/L	50	1.0 U	1.0 U	1.0 U	2.0 U	2 U
Bromoform	UG/L	50	4.0 U	4.0 U	4.0 U	8.0 U	8 U
Bromomethane	UG/L	5	5.0 U	5.0 U	5.0 U	10 U	10 U
Methyl ethyl ketone (2-Butanone)	UG/L	50	130 J	69 J	65 J	39 J	38 J
Carbon Disulfide	UG/L	60	5.0 U	5.0 U	5.0 U	10 U	10 U
Carbon Tetrachloride	UG/L	5	2.0 U	2.0 U	2.0 U	4.0 U	4 U
Chlorobenzene	UG/L	5	5.0 U	5.0 U	5.0 U	10 U	10 U
Chloroethane	UG/L	5	5.0 U	5.0 U	5.0 U	10 U	10 U
Chloroform	UG/L	7	5.0 U	5.0 U	5.0 U	10 U	10 U
Chloromethane	UG/L	5	5.0 U	5.0 U	5.0 U	10 U	10 U
Chlorotrifluoroethene (Freon-1113)	UG/L	5	7.0 NJ	6.2 NJ	0 U	0 U	0 U
Dibromochloromethane	UG/L	50	5.0 U	5.0 U	5.0 U	10 U	10 U
1,1-Dichloroethane	UG/L	5	5.0 U	5.0 U	5.0 U	10 U	10 U
1,2-Dichloroethane	UG/L	0.6	2.0 U	2.0 U	2.0 U	4.0 U	4 U
1,1-Dichloroethene	UG/L	5	2.0 U	2.0 U	2.0 U	4.0 U	4 U
cis-1,2-Dichloroethene	UG/L	5	5.0 U	5.0 U	5.0 U	10 U	10 U
trans-1,2-Dichloroethene	UG/L	5	5.0 U	5.0 U	5.0 U	10 U	10 U
1,2-Dichloropropane	UG/L	1	1.0 U	1.0 U	1.0 U	2.0 U	2 U
cis-1,3-Dichloropropene	UG/L	0.4	5.0 U	5.0 U	5.0 U	10 U	10 U
trans-1,3-Dichloropropene	UG/L	0.4	5.0 U	5.0 U	5.0 U	10 U	10 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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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalvents per milliliter; GC/mL - Gene Copies per milliliter

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

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			MW03	DUP-91703	MW03-091703	DUP1_121703	MW-03_121703
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/23/03	09/17/03	09/17/03	12/17/03	12/17/03
Parameter	**Units**	**Criteria***		Field Duplicate (1-1)		Field Duplicate (1-1)	
Volatiles							
Ethylbenzene	UG/L	5	0.3 J	4.0 U	4.0 U	8.0 U	8 U
2-Hexanone	UG/L	50	5.0 U	19	16	10 U	10 U
4-Methyl-2-Pentanone	UG/L	-	5.0 U	11	11	10 U	10 U
Methylene Chloride	UG/L	5	3.0 U	3.0 U	3.0 U	6.0 U	6 U
Styrene	UG/L	5	5.0 U	5.0 U	5.0 U	10 U	10 U
1,1,2,2-Tetrachloroethane	UG/L	5	1.0 U	1.0 U	1.0 U	2.0 U	2 U
Tetrachloroethene	UG/L	5	1.0 U	1.0 U	1.0 U	4.9	4.6
1,1,1-Trichloroethane	UG/L	5	5.0 U	5.0 U	5.0 U	10 U	10 U
1,1,2-Trichloroethane	UG/L	1	3.0 U	3.0 U	3.0 U	6.0 U	6 U
Trichloroethene	UG/L	5	1.0 U	1.0 U	1.0 U	2.0 U	2 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	68	26	16	150	150
Toluene	UG/L	5	5.0 U	5.0 U	5.0 U	10 U	10 U
Vinyl Chloride	UG/L	2	5.0 U	5.0 U	5.0 U	10 U	10 U
Xylene (total)	UG/L	5	1.1 J	5.0 U	5.0 U	10 U	10 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	43	180	110	170	160
Dissolved Gases							
Ethane	UG/L	-	5 U	250 U	250 U	500 U	250 U
Ethene	UG/L	-	5 U	250 U	250 U	500 U	250 U
Methane	UG/L	-	56	2,400	2,500	7,200	4,900
Total Metals							
Iron	UG/L	300	150,000	174,000 J	178,000 J	156,000	164,000

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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

J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data 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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			MW03	DUP-91703	MW03-091703	DUP1_121703	MW-03_121703
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/23/03	09/17/03	09/17/03	12/17/03	12/17/03
Parameter	**Units**	**Criteria***		Field Duplicate (1-1)		Field Duplicate (1-1)	
Dissolved Metals							
Iron	UG/L	300	152,000	187,000 J	186,000 J	167,000	176,000
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	143	99.2 J	91.5 J	224	192
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	2.7	0.86	0.95	1.4	1.2
Nitrogen, Kjeldahl, Total	MG/L	-	10.8	4.5	4.4	4.0	4.0
Nitrogen, Nitrate	MG/L	10	NA	0.1 U	0.1 U	0.1 U	0.1 U
Nitrogen, Nitrite	MG/L	1	NA	0.1 U	0.1 U	0.1 U	0.1 U
Nitrogen, Nitrate-Nitrite	MG/L	10	0.1 UJ	NA	NA	NA	NA
Sulfate	MG/L	250	26.9	5.0 U	5.0 U	5.0 U	5.0 U
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	3.7	25.5	27.9	23.5	30.0
Ferric Iron (lab)	MG/L	-	146	67.0	93.0	132	134
Fluoride	MG/L	1.5	0.44	0.27	0.2	0.22	0.25

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

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

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			MW03	DUP-91703	MW03-091703	DUP1_121703	MW-03_121703
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/23/03	09/17/03	09/17/03	12/17/03	12/17/03
Parameter	**Units**	**Criteria***		Field Duplicate (1-1)		Field Duplicate (1-1)	
Miscellaneous Parameters							
TPH	MG/L	-	5 U	NA	NA	5.38 U	5.21 U
Oil & Grease	MG/L	-	NA	R	R	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0 U	NA	0.01	NA	0.35
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-103	NA	-90	NA	-59
pH	S.U.	-	NA	NA	NA	NA	NA
Specific Conductance	MS/CM	-	4.35	NA	1.64	NA	1.99
Temperature	DEG C	-	NA	NA	NA	NA	NA
Turbidity	NTU	-	NA	NA	NA	NA	NA

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

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

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			MW-03	MW-03	MW-03VION	MW-03V15N	20070207MW-03V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/23/04	05/31/05	12/20/05	08/14/06	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	68 J	83	2.0 J	51	39
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

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

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

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			MW-03	MW-03	MW-03VION	MW-03V15N	20070207MW-03V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/23/04	05/31/05	12/20/05	08/14/06	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	4,900 J	2.0 J	10 U	10 U	10
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	3,900	14	1.0 J	0.8 J	48
Dissolved Gases							
Ethane	UG/L	-	NA	500 U	NA	NA	NA
Ethene	UG/L	-	NA	500 U	NA	NA	NA
Methane	UG/L	-	2,700	6,300	10,000	7,400	15,000
Total Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA

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

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			MW-03	MW-03	MW-03VION	MW-03V15N	20070207MW-03V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/23/04	05/31/05	12/20/05	08/14/06	02/07/07
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	71.7	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	5.0 U	5.0 U	5.0 U	5.0 U	7.80
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	0.397	NA	NA	NA	NA

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

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

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			MW-03	MW-03	MW-03VION	MW-03V15N	20070207MW-03V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/23/04	05/31/05	12/20/05	08/14/06	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	-	1.05	1.24	0 U	5.36	2.44
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-143	-133	-151	-123	-116
pH	S.U.	-	NA	NA	NA	NA	NA
Specific Conductance	MS/CM	-	2.40	3.19	1.20	0.946	0.91
Temperature	DEG C	-	NA	NA	NA	NA	NA
Turbidity	NTU	-	NA	NA	NA	NA	NA

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

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

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20070731MW-03V10N	20080228MW03V10N	20080812MW03V10FD	20080812MW03V10N	20090218MW-03V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/31/07	02/28/08	08/12/08	08/12/08	02/18/09
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	54	13 J	10	10	38
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

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

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20070731MW-03V10N	20080228MW03V10N	20080812MW03V10FD	20080812MW03V10N	20090218MW-03V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/31/07	02/28/08	08/12/08	08/12/08	02/18/09
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	2.0 J	0.5 J	10 U	10 U	5.0 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	7.0 J	4.0 J	1.0 J	1.0 J	40
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	4,500	18,000	10,000	8,400	13,000
Total Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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

J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data 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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20070731MW-03V10N	20080228MW03V10N	20080812MW03V10FD	20080812MW03V10N	20090218MW-03V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/31/07	02/28/08	08/12/08	08/12/08	02/18/09
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	38.4	14.1	30.0	28.1	50.7 J
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

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

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

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20070731MW-03V10N	20080228MW03V10N	20080812MW03V10FD	20080812MW03V10N	20090218MW-03V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/31/07	02/28/08	08/12/08	08/12/08	02/18/09
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	-	0.22	2.94	NA	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	-	-79.7	-123	NA	-149	-185
pH	S.U.	-	6.15	6.15	NA	6.36	6.06
Specific Conductance	MS/CM	-	1.309	1.36	NA	1.69	2.08
Temperature	DEG C	-	NA	11.6	NA	17.8	12.87
Turbidity	NTU	-	NA	41	NA	2	5

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

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20091013MW-03V10FD	20091013MW-03V10N	20100226MW-03V09N	20100624MW-03V09N	20101006MW-03V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/13/09	10/13/09	02/26/10	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	20	19	17 J	26	4.6
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

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

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

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20091013MW-03V10FD	20091013MW-03V10N	20100226MW-03V09N	20100624MW-03V09N	20101006MW-03V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/13/09	10/13/09	02/26/10	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	0.92 J	0.82 J	1 UJ	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	2.1	1.9	1 U	0.5 J	1 U
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	5,300	4,800	13,000	6,000	7,400
Total Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA

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

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

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20091013MW-03V10FD	20091013MW-03V10N	20100226MW-03V09N	20100624MW-03V09N	20101006MW-03V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/13/09	10/13/09	02/26/10	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 CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	4.6 J	8.7	11.6	15.8	5.1 J
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

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

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

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20091013MW-03V10FD	20091013MW-03V10N	20100226MW-03V09N	20100624MW-03V09N	20101006MW-03V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/13/09	10/13/09	02/26/10	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	-	NA	0.0	0.0	0.85	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	-103	-138	-170	-116
pH	S.U.	-	NA	5.87	6.32	9.28	6.73
Specific Conductance	MS/CM	-	NA	1.85	3.39	1.50	1.68
Temperature	DEG C	-	NA	18.68	8.95	16.51	20.19
Turbidity	NTU	-	NA	8.7	94	5.1	6.3

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

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20110406MW-03V09N	20110913MW03V09FD	20110913MW03V09N	20120411MW-03V09N	20120924MW-03V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/06/11	09/13/11	09/13/11	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	110 J	69	82	150 J	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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20110406MW-03V09N	20110913MW03V09FD	20110913MW03V09N	20120411MW-03V09N	20120924MW-03V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/06/11	09/13/11	09/13/11	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	32	4.2	5.4	20 J	1.1
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	99 J	8.3	9.4	36	3.2
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	18,000	12,000	15,000	15,000	7,600
Total Metals							
Iron	UG/L	300	NA	35,300	35,700	NA	21,800

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

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

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20110406MW-03V09N	20110913MW03V09FD	20110913MW03V09N	20120411MW-03V09N	20120924MW-03V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/06/11	09/13/11	09/13/11	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 CaCO3)	MG/L	-	NA	596	596	NA	292
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	292
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	5.0 U
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	5.0 U
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	1,820	3,780	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	700
Hardness (as CaCO3)	MG/L	-	NA	520	510	NA	248
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	0.1 U	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	34.0	19	18.2	63.1	45.4
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	27.1	26.7	NA	7.2
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.

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

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20110406MW-03V09N	20110913MW03V09FD	20110913MW03V09N	20120411MW-03V09N	20120924MW-03V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/06/11	09/13/11	09/13/11	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	NA	0.0	0.0	0.0
Ferrous Iron	MG/L	-	NA	29.8	29.8	NA	3.5
Ferric Iron (calculated)	MG/L	-	NA	5.5	5.9	NA	NA
Oxidation-Reduction Potential	mV	-	-115	NA	-124	-63	-84
pH	S.U.	-	6.38	NA	6.85	6.64	6.64
Specific Conductance	MS/CM	-	1.55	NA	1.99	1.02	0.697
Temperature	DEG C	-	11.90	NA	20.7	13.35	23.57
Turbidity	NTU	-	3.6	NA	21.8	0.0	0.0

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

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20130409MW-03V10N	20131022MW-03V12N	20140416MW-03V12N	20140701MW-03V012N	20141027MW-03V12N
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	160 J	58	96	170	96
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

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

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20130409MW-03V10N	20131022MW-03V12N	20140416MW-03V12N	20140701MW-03V012N	20141027MW-03V12N
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	27	1.0 U	100	120	0.81 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	30	1.0 U	62	100	1.3
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	11,000	11,000	14,000	15,000	4,500
Total Metals							
Iron	UG/L	300	27,900	29,400	19,700	26,800	26,600

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

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20130409MW-03V10N	20131022MW-03V12N	20140416MW-03V12N	20140701MW-03V012N	20141027MW-03V12N
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 CaCO3)	MG/L	-	367	237	220	253	329
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	367	NA	220	253	329
Alkalinity, Carbonate (as CaCO3)	MG/L	-	5.0 U	NA	5.0 U	5.0 U	5.0 U
Alkalinity, Hydroxide	MG/L	-	5.0 U	NA	5.0 U	5.0 U	5.0 U
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	500	NA
Dehalobacter	GC/mL	-	40	100	10	20	50
Hardness (as CaCO3)	MG/L	-	396	65.3	249	337	386
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	0.21 J	0.23 J	0.40	0.10 U	1.0 U
Nitrogen, Nitrite	MG/L	1	NA	0.025 J	0.038 J	0.017 J	0.10 U
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	39.4	40.7	43.0	52.0	25.8
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	8.7	5.6	6.3	7.0	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

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

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20130409MW-03V10N	20131022MW-03V12N	20140416MW-03V12N	20140701MW-03V012N	20141027MW-03V12N
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	-	2.23	0.63	4.86	1.47	0.45
Ferrous Iron	MG/L	-	26.0	16.9	5.5	4.5	8.3
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-93	-119	-101	-72	-107
pH	S.U.	-	6.39	6.21	6.85	6.69	6.54
Specific Conductance	MS/CM	-	3.37	1.35	1.12	1.26	1.72
Temperature	DEG C	-	15.42	19.3	10.69	19.59	17.99
Turbidity	NTU	-	17.9	0.4	0	5.4	0.2

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

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20141124MW-03V12N	20141222MW-03V12N	20150304MW-03	20150422MW-03	20151008MW-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			11/24/14	12/22/14	03/04/15	04/22/15	10/08/15
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	86	150	110	120	140
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

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

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20141124MW-03V12N	20141222MW-03V12N	20150304MW-03	20150422MW-03	20151008MW-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			11/24/14	12/22/14	03/04/15	04/22/15	10/08/15
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1.0 U	1.0 U	18	25	0.52 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 U	1.7	17	25	1.7
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	3,800	4,600	NA	4,000	10,000
Total Metals							
Iron	UG/L	300	NA	NA	NA	19,600	29,500

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

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20141124MW-03V12N	20141222MW-03V12N	20150304MW-03	20150422MW-03	20151008MW-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			11/24/14	12/22/14	03/04/15	04/22/15	10/08/15
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	196	279
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	196	279
Alkalinity, Carbonate (as CaCO3)	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	-	500	20	NA	NA	NA
Dehalobacter	GC/mL	-	10	NA	3	7	2 J
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	242	368
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	2.0 U
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	0.10 U	0.021 J
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	0.050 U	NA
Sulfate	MG/L	250	23.0	33.8	NA	32.5	48.2
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	5.1	7.1
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	0.10 UJ	1.7 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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Concentration Exceeds Criteria

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

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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID			20141124MW-03V12N	20141222MW-03V12N	20150304MW-03	20150422MW-03	20151008MW-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			11/24/14	12/22/14	03/04/15	04/22/15	10/08/15
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	1.30	0.87	1.24	0.65	NA
Ferrous Iron	MG/L	-	NA	NA	NA	6.0	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-104	-115	-82	-100	NA
pH	S.U.	-	6.68	6.58	6.84	6.69	NA
Specific Conductance	MS/CM	-	1.28	1.38	1.82	1.06	NA
Temperature	DEG C	-	17.52	14.88	8.58	11.87	NA
Turbidity	NTU	-	0.0	0.0	0.0	1.7	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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			MW04-5-20-03	MW-04_121703	Dup1	MW-04	MW-04
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/20/03	12/17/03	07/22/04	07/22/04	05/31/05
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		
Volatiles							
Acetone	UG/L	50	5.0 U	5.0 U	NA	NA	NA
Benzene	UG/L	1	5.0 U	5.0 U	NA	NA	NA
Bromodichloromethane	UG/L	50	1.0 U	1.0 U	NA	NA	NA
Bromoform	UG/L	50	4.0 U	4.0 U	NA	NA	NA
Bromomethane	UG/L	5	5.0 U	5.0 U	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	R	R	NA	NA	NA
Carbon Disulfide	UG/L	60	5.0 U	5.0 U	NA	NA	NA
Carbon Tetrachloride	UG/L	5	2.0 U	2.0 U	NA	NA	NA
Chlorobenzene	UG/L	5	5.0 U	5.0 U	NA	NA	NA
Chloroethane	UG/L	5	5.0 U	5.0 U	NA	NA	NA
Chloroform	UG/L	7	5.0 U	5.0 U	NA	NA	NA
Chloromethane	UG/L	5	5.0 U	5.0 U	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	0 U	0 U	10 U	10 U	1.0 J
Dibromochloromethane	UG/L	50	5.0 U	5.0 U	NA	NA	NA
1,1-Dichloroethane	UG/L	5	5.0 U	5.0 U	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	2.0 U	2.0 U	NA	NA	NA
1,1-Dichloroethene	UG/L	5	2.0 U	2.0 U	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	5.0 U	5.0 U	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	5.0 U	5.0 U	NA	NA	NA
1,2-Dichloropropane	UG/L	1	1.0 U	1.0 U	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	5.0 U	5.0 U	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	5.0 U	5.0 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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			MW04-5-20-03	MW-04_121703	Dup1	MW-04	MW-04
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/20/03	12/17/03	07/22/04	07/22/04	05/31/05
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		
Volatiles							
Ethylbenzene	UG/L	5	4.0 U	4.0 U	NA	NA	NA
2-Hexanone	UG/L	50	5.0 U	5.0 U	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	5.0 U	5.0 U	NA	NA	NA
Methylene Chloride	UG/L	5	3.0 U	3.0 U	NA	NA	NA
Styrene	UG/L	5	5.0 U	5.0 U	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	1.0 U	1.0 U	NA	NA	NA
Tetrachloroethene	UG/L	5	1.0 U	1.0 U	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	5.0 U	5.0 U	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	3.0 U	3.0 U	NA	NA	NA
Trichloroethene	UG/L	5	1.0 U	1.0 U	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	5.0 U	5.0 U	10 UJ	0.7 J	10 U
Toluene	UG/L	5	5.0 U	5.0 U	NA	NA	NA
Vinyl Chloride	UG/L	2	5.0 U	5.0 U	NA	NA	NA
Xylene (total)	UG/L	5	5.0 U	5.0 U	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	5.0 U	5.0 U	10 U	10 U	10 U
Dissolved Gases							
Ethane	UG/L	-	25 U	5.0 U	NA	NA	10 U
Ethene	UG/L	-	25 U	5.0 U	NA	NA	10 U
Methane	UG/L	-	380	35	69	99	190
Total Metals							
Iron	UG/L	300	18,400	3,640	NA	NA	NA

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

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

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			MW04-5-20-03	MW-04_121703	Dup1	MW-04	MW-04
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/20/03	12/17/03	07/22/04	07/22/04	05/31/05
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		
Dissolved Metals							
Iron	UG/L	300	18,500	3,760	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	238	294	158	161	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	1.6	1.2	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	6.2	1.9	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	0.1 U	0.1 U	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	0.1 U	0.1 U	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	5.0 U	9.40	10.8	10.8	14.2
Sulfide	MG/L	0.05	NA	NA	1.0 U	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	-	17.6	2.2	NA	NA	NA
Ferric Iron (lab)	MG/L	-	0.76	1.3	NA	NA	NA
Fluoride	MG/L	1.5	0.27	0.19	0.304	0.302	NA

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

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

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			MW04-5-20-03	MW-04_121703	Dup1	MW-04	MW-04
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/20/03	12/17/03	07/22/04	07/22/04	05/31/05
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		
Miscellaneous Parameters							
TPH	MG/L	-	5 U	5.38 U	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0.54	0 U	NA	0.82	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	-	-115	0 U	NA	-136	-126
pH	S.U.	-	NA	NA	NA	NA	NA
Specific Conductance	MS/CM	-	1.61	0.99	NA	1.05	1.85
Temperature	DEG C	-	NA	NA	NA	NA	NA
Turbidity	NTU	-	NA	NA	NA	NA	NA

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

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

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			MW-04VION	MW-04V15N	20070207MW-04V10N	20070801MW-04V10N	20080228MW04V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/20/05	08/14/06	02/07/07	08/01/07	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	10 U	0.7 J	0.6 J	10 U	1.0 J
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

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

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

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			MW-04VION	MW-04V15N	20070207MW-04V10N	20070801MW-04V10N	20080228MW04V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/20/05	08/14/06	02/07/07	08/01/07	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 U	10 U	10 UJ
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	10 U	10 U	10 U	10 U	10 U
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	400	420	400	43	5,700
Total Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA

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

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			MW-04VION	MW-04V15N	20070207MW-04V10N	20070801MW-04V10N	20080228MW04V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/20/05	08/14/06	02/07/07	08/01/07	02/28/08
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	6.66	5.0 U	5.0 U	7.0	5 U
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

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

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

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			MW-04VION	MW-04V15N	20070207MW-04V10N	20070801MW-04V10N	20080228MW04V10N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/20/05	08/14/06	02/07/07	08/01/07	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	4.97	4.73	0.41	2.91
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-161	-154	-81	-79.2	-136
pH	S.U.	-	NA	NA	NA	6.59	6.45
Specific Conductance	MS/CM	-	1.47	1.14	0.804	1.241	1.16
Temperature	DEG C	-	NA	NA	NA	NA	9.19
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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Concentration Exceeds Criteria

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J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data rejected.

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

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

Detection Limits shown are PQL

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

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20080812MW04V08N	20090218MW-04V08FD	20090218MW-04V08N	20091013MW-04V08N	20100225MW04V08FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/12/08	02/18/09	02/18/09	10/13/09	02/25/10
Parameter	**Units**	**Criteria***		Field Duplicate (1-1)			Field Duplicate (1-1)
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	10 U	1.0 J	1.0 J	15	6.6 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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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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20080812MW04V08N	20090218MW-04V08FD	20090218MW-04V08N	20091013MW-04V08N	20100225MW04V08FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/12/08	02/18/09	02/18/09	10/13/09	02/25/10
Parameter	**Units**	**Criteria***		Field Duplicate (1-1)			Field Duplicate (1-1)
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	10 U	10 U	10 U	1 U	1 UJ
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	10 U	10 U	10 U	1 U	1 U
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	290	1,600	1,600	3,100	5,200
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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Detection Limits shown are PQL

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

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20080812MW04V08N	20090218MW-04V08FD	20090218MW-04V08N	20091013MW-04V08N	20100225MW04V08FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/12/08	02/18/09	02/18/09	10/13/09	02/25/10
Parameter	**Units**	**Criteria***		Field Duplicate (1-1)			Field Duplicate (1-1)
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	5 U	5 UJ	5 UJ	20.8	13
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

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

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

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20080812MW04V08N	20090218MW-04V08FD	20090218MW-04V08N	20091013MW-04V08N	20100225MW04V08FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/12/08	02/18/09	02/18/09	10/13/09	02/25/10
Parameter	**Units**	**Criteria***		Field Duplicate (1-1)			Field Duplicate (1-1)
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0 U	NA	0 U	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	-	-126	NA	-158	-122	NA
pH	S.U.	-	6.65	NA	6.33	6.43	NA
Specific Conductance	MS/CM	-	0.531	NA	1.75	1.83	NA
Temperature	DEG C	-	21.3	NA	9.36	19.37	NA
Turbidity	NTU	-	2	NA	4	4.6	NA

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

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

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20100225MW-04V08N	20100624MW-04V08N	20101006MW-04V08N	20110406MW-04V08FD	20110406MW-04V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/25/10	06/24/10	10/06/10	04/06/11	04/06/11
Parameter	Units	Criteria*				Field Duplicate (1-1)	
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	7.7 J	12	2.8	5 J	4.3 J
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

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

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

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20100225MW-04V08N	20100624MW-04V08N	20101006MW-04V08N	20110406MW-04V08FD	20110406MW-04V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/25/10	06/24/10	10/06/10	04/06/11	04/06/11
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)	
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1 UJ	1 U	1 U	1 U	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 UJ	1 UJ
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	5,100	4,000	2,400	4,200	4,300
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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20100225MW-04V08N	20100624MW-04V08N	20101006MW-04V08N	20110406MW-04V08FD	20110406MW-04V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/25/10	06/24/10	10/06/10	04/06/11	04/06/11
Parameter	Units	Criteria*				Field Duplicate (1-1)	
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	11.3	18.4	5.5 J	26.6	22.3
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

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

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

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20100225MW-04V08N	20100624MW-04V08N	20101006MW-04V08N	20110406MW-04V08FD	20110406MW-04V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/25/10	06/24/10	10/06/10	04/06/11	04/06/11
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)	
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0.0	0.80	0.0	NA	0.0
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-124	-146	-96	NA	-78
pH	S.U.	-	6.50	8.99	6.86	NA	6.40
Specific Conductance	MS/CM	-	2.14	1.84	1.48	NA	2.19
Temperature	DEG C	-	8.34	18.45	21.38	NA	12.86
Turbidity	NTU	-	1.5	1.9	3.7	NA	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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J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data 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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20110913MW04V08N	20120411MW-04V08N	20120924MW-04V08FD	20120924MW-04V08N	20130409MW-04V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/13/11	04/11/12	09/24/12	09/24/12	04/09/13
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	1.2	7.2 J	2.1	2.5	4.4 J
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

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

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

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20110913MW04V08N	20120411MW-04V08N	20120924MW-04V08FD	20120924MW-04V08N	20130409MW-04V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/13/11	04/11/12	09/24/12	09/24/12	04/09/13
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1 U	1 UJ	1.0 U	1.0 U	1.0 U
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	1 U	1 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	2,700	570	550	1,700
Total Metals							
Iron	UG/L	300	NA	NA	7,430	7,280	16,100

*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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Detection Limits shown are PQL

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

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20110913MW04V08N	20120411MW-04V08N	20120924MW-04V08FD	20120924MW-04V08N	20130409MW-04V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/13/11	04/11/12	09/24/12	09/24/12	04/09/13
Parameter	Units	Criteria*			Field Duplicate (1-1)		
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	211	210	5.0 U
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	211	210	5.0 U
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	5.0 U	5.0 U	5.0 U
Alkalinity, Hydroxide	MG/L	-	NA	NA	5.0 U	5.0 U	5.0 U
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	4 U	3 U
Hardness (as CaCO3)	MG/L	-	NA	NA	188	185	426
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	0.10 U	0.10 UJ
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	16.7	18.7	12.3	12.0	15.6
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	10.2	10	7.2
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.

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

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

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20110913MW04V08N	20120411MW-04V08N	20120924MW-04V08FD	20120924MW-04V08N	20130409MW-04V09N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/13/11	04/11/12	09/24/12	09/24/12	04/09/13
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0.0	0.0	NA	0.0	2.13
Ferrous Iron	MG/L	-	14.3	NA	NA	27.7	14.9
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-126	-87	NA	-96	-78
pH	S.U.	-	6.83	6.80	NA	6.91	6.43
Specific Conductance	MS/CM	-	2.29	1.38	NA	0.519	3.98
Temperature	DEG C	-	22.5	14.07	NA	25.40	16.39
Turbidity	NTU	-	0.2	8.9	NA	8.0	1.7

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

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20131022MW-04V09N	20140428MW-04V09N	20140701MW-04V09N	20141028MW-04V09N	20150422MW-04
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/22/13	04/28/14	07/01/14	10/28/14	04/22/15
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	12	1.0 U	1.0 U	1.2	2.1
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

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

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

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20131022MW-04V09N	20140428MW-04V09N	20140701MW-04V09N	20141028MW-04V09N	20150422MW-04
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/22/13	04/28/14	07/01/14	10/28/14	04/22/15
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1.0 U	1.0 U	1.0 U	1.0 U	0.38 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 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	-	1,600	340	1,300	87	1,000
Total Metals							
Iron	UG/L	300	17,700	18,900	17,900	8,820	28,000

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

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

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20131022MW-04V09N	20140428MW-04V09N	20140701MW-04V09N	20141028MW-04V09N	20150422MW-04
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/22/13	04/28/14	07/01/14	10/28/14	04/22/15
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	243	239	295	208	338
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	239	295	208	338
Alkalinity, Carbonate (as CaCO3)	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 U	3 U	3 U	3	3.0 U
Hardness (as CaCO3)	MG/L	-	73.3	525	614	267	882
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	0.10 UJ	0.10 U	0.10 U	0.10 U	0.10 U
Nitrogen, Nitrite	MG/L	1	0.014 J	0.10 U	0.013 J	0.10 U	0.10 U
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	0.050 U
Sulfate	MG/L	250	23.2	12.2	9.1	11.5	29.8
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	7.0	8.4	11.4	8.4	12.3
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	0.10 J
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

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

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

Location ID			MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID			20131022MW-04V09N	20140428MW-04V09N	20140701MW-04V09N	20141028MW-04V09N	20150422MW-04
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/22/13	04/28/14	07/01/14	10/28/14	04/22/15
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0.25	9.51	1.72	0.55	1.05
Ferrous Iron	MG/L	-	13.9	7.0	6.5	5.2	5.5
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-94	-102	-67	-93	-92
pH	S.U.	-	6.44	6.76	6.62	6.57	6.73
Specific Conductance	MS/CM	-	1.27	2.65	2.47	1.62	4.47
Temperature	DEG C	-	19.44	12.11	21.90	17.78	11.71
Turbidity	NTU	-	5.7	0	52.9	2.1	1.1

*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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J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data rejected.

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

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Detection Limits shown are PQL

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

Location ID			MW-04	MW-05	MW-05	MW-05	MW-06
Sample ID			20151008MW-04	MW05_52103	MW-05-121803	MW-05	MW06-6-10-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/08/15	05/21/03	12/18/03	07/23/04	06/10/03
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	NA	5.0 U	5.0 U	NA	10 U
Benzene	UG/L	1	NA	5.0 U	5.0 U	NA	10 U
Bromodichloromethane	UG/L	50	NA	1.0 U	1.0 U	NA	2 U
Bromoform	UG/L	50	NA	4.0 U	4.0 U	NA	8 U
Bromomethane	UG/L	5	NA	5.0 U	5.0 U	NA	10 U
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	R	R	NA	R
Carbon Disulfide	UG/L	60	NA	5.0 U	5.0 U	NA	10 U
Carbon Tetrachloride	UG/L	5	NA	2.0 U	2.0 U	NA	4 U
Chlorobenzene	UG/L	5	NA	5.0 U	5.0 U	NA	10 U
Chloroethane	UG/L	5	NA	5.0 U	5.0 U	NA	10 U
Chloroform	UG/L	7	NA	5.0 U	5.0 U	NA	10 U
Chloromethane	UG/L	5	NA	5.0 U	5.0 U	NA	10 U
Chlorotrifluoroethene (Freon-1113)	UG/L	5	4.4	0 U	0 U	10 U	0 U
Dibromochloromethane	UG/L	50	NA	5.0 U	5.0 U	NA	10 U
1,1-Dichloroethane	UG/L	5	NA	5.0 U	5.0 U	NA	10 U
1,2-Dichloroethane	UG/L	0.6	NA	2.0 U	2.0 U	NA	4 U
1,1-Dichloroethene	UG/L	5	NA	2.0 U	2.0 U	NA	4 U
cis-1,2-Dichloroethene	UG/L	5	NA	5.0 U	5.0 U	NA	10 U
trans-1,2-Dichloroethene	UG/L	5	NA	5.0 U	5.0 U	NA	10 U
1,2-Dichloropropane	UG/L	1	NA	1.0 U	1.0 U	NA	2 U
cis-1,3-Dichloropropene	UG/L	0.4	NA	5.0 U	5.0 U	NA	10 U
trans-1,3-Dichloropropene	UG/L	0.4	NA	5.0 U	5.0 U	NA	10 U

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

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Concentration Exceeds Criteria

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J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data rejected.

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

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

Detection Limits shown are PQL

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

Location ID			MW-04	MW-05	MW-05	MW-05	MW-06
Sample ID			20151008MW-04	MW05_52103	MW-05-121803	MW-05	MW06-6-10-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/08/15	05/21/03	12/18/03	07/23/04	06/10/03
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	NA	4.0 U	4.0 U	NA	8 U
2-Hexanone	UG/L	50	NA	5.0 U	5.0 U	NA	10 U
4-Methyl-2-Pentanone	UG/L	-	NA	5.0 U	5.0 U	NA	10 U
Methylene Chloride	UG/L	5	NA	3.0 U	3.0 U	NA	6 U
Styrene	UG/L	5	NA	5.0 U	5.0 U	NA	10 U
1,1,2,2-Tetrachloroethane	UG/L	5	NA	1.0 U	1.0 U	NA	2 U
Tetrachloroethene	UG/L	5	NA	0.4 J	1.0 U	NA	2 U
1,1,1-Trichloroethane	UG/L	5	NA	5.0 U	5.0 U	NA	10 U
1,1,2-Trichloroethane	UG/L	1	NA	3.0 U	3.0 U	NA	6 U
Trichloroethene	UG/L	5	NA	1.0 U	1.0 U	NA	2 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1.0 U	5.0 U	5.0 U	0.5 J	220
Toluene	UG/L	5	NA	5.0 U	5.0 U	NA	10 U
Vinyl Chloride	UG/L	2	NA	5.0 U	5.0 U	NA	10 U
Xylene (total)	UG/L	5	NA	5.0 U	5.0 U	NA	10 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	1.0 U	5.0 U	5.0 U	10 U	8.8 J
Dissolved Gases							
Ethane	UG/L	-	NA	5.0 U	5.0 U	NA	5.0 U
Ethene	UG/L	-	NA	5.0 U	5.0 U	NA	5.0 U
Methane	UG/L	-	2,100	27	6.7	47	49
Total Metals							
Iron	UG/L	300	15,800	2,110	15,500	NA	14,400

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

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

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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-04	MW-05	MW-05	MW-05	MW-06
Sample ID			20151008MW-04	MW05_52103	MW-05-121803	MW-05	MW06-6-10-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/08/15	05/21/03	12/18/03	07/23/04	06/10/03
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	1,670	39.7 U	NA	14,300
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	303	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	303	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	5.0 U	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	5.0 U	NA	NA	NA	NA
Chloride	MG/L	250	NA	49.8	27.5	63.9	184
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	3.0 U	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	523	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	0.25	0.1 U	NA	0.19
Nitrogen, Kjeldahl, Total	MG/L	-	NA	3.6	0.61	NA	0.72
Nitrogen, Nitrate	MG/L	10	2.0 U	0.22	0.18	NA	0.33
Nitrogen, Nitrite	MG/L	1	0.016 J	0.1 U	0.1 U	NA	0.1 U
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	7.4	50.1	61.4	42.3	32.0
Sulfide	MG/L	0.05	NA	NA	NA	1.0 U	NA
Total Organic Carbon	MG/L	-	11.8	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	0.33 J	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	1.7	0.07	NA	14.3
Ferric Iron (lab)	MG/L	-	NA	0.43	15.4	NA	0.12
Fluoride	MG/L	1.5	NA	0 U	0.12	0.103	0.46

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

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Detection Limits shown are PQL

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

Location ID			MW-04	MW-05	MW-05	MW-05	MW-06
Sample ID			20151008MW-04	MW05_52103	MW-05-121803	MW-05	MW06-6-10-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/08/15	05/21/03	12/18/03	07/23/04	06/10/03
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	NA	5 U	5 U	NA	5 U
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	NA	0.37	0 U	0.97	0.93
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	NA	26	121	46	-145
pH	S.U.	-	NA	NA	NA	NA	NA
Specific Conductance	MS/CM	-	NA	0.426	0.629	0.463	0.741
Temperature	DEG C	-	NA	NA	NA	NA	NA
Turbidity	NTU	-	NA	NA	NA	NA	NA

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

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Detection Limits shown are PQL

Advanced Selection: amk-temp
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[LOGDATE] >= #5/1/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

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

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			MW06-7_22_03	MW06-091803	MW-06_121703	MW-06	Field-Dup
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/22/03	09/18/03	12/17/03	07/23/04	05/31/05
Parameter	Units	Criteria*					Field Duplicate (1-1)
Volatiles							
Acetone	UG/L	50	5.0 U	5.0 U	10 U	NA	NA
Benzene	UG/L	1	5.0 U	5.0 U	10 U	NA	NA
Bromodichloromethane	UG/L	50	1.0 U	1.0 U	2 U	NA	NA
Bromoform	UG/L	50	4.0 U	4.0 U	8 U	NA	NA
Bromomethane	UG/L	5	5.0 U	5.0 U	10 U	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	R	R	R	NA	NA
Carbon Disulfide	UG/L	60	5.0 U	5.0 U	10 U	NA	NA
Carbon Tetrachloride	UG/L	5	2.0 U	2.0 U	4 U	NA	NA
Chlorobenzene	UG/L	5	5.0 U	5.0 U	10 U	NA	NA
Chloroethane	UG/L	5	5.0 U	5.0 U	10 U	NA	NA
Chloroform	UG/L	7	5.0 U	5.0 U	10 U	NA	NA
Chloromethane	UG/L	5	5.0 U	5.0 U	10 U	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	5.7 NJ	0 U	0 U	5 J	6.0 J
Dibromochloromethane	UG/L	50	5.0 U	5.0 U	10 U	NA	NA
1,1-Dichloroethane	UG/L	5	5.0 U	5.0 U	10 U	NA	NA
1,2-Dichloroethane	UG/L	0.6	2.0 U	2.0 U	4 U	NA	NA
1,1-Dichloroethene	UG/L	5	1.2 J	2.0 U	4 U	NA	NA
cis-1,2-Dichloroethene	UG/L	5	1.7 J	1.4 J	1.3 J	NA	NA
trans-1,2-Dichloroethene	UG/L	5	5.0 U	5.0 U	10 U	NA	NA
1,2-Dichloropropane	UG/L	1	1.0 U	1.0 U	2 U	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	5.0 U	5.0 U	10 U	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	5.0 U	5.0 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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			MW06-7_22_03	MW06-091803	MW-06_121703	MW-06	Field-Dup
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/22/03	09/18/03	12/17/03	07/23/04	05/31/05
Parameter	**Units**	**Criteria***					Field Duplicate (1-1)
Volatiles							
Ethylbenzene	UG/L	5	4.0 U	4.0 U	8 U	NA	NA
2-Hexanone	UG/L	50	5.0 U	5.0 U	10 U	NA	NA
4-Methyl-2-Pentanone	UG/L	-	5.0 U	5.0 U	10 U	NA	NA
Methylene Chloride	UG/L	5	3.0 U	3.0 U	6 U	NA	NA
Styrene	UG/L	5	5.0 U	5.0 U	10 U	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	1.0 U	1.0 U	2 U	NA	NA
Tetrachloroethene	UG/L	5	1.0 U	1.0 U	2 U	NA	NA
1,1,1-Trichloroethane	UG/L	5	5.0 U	5.0 U	10 U	NA	NA
1,1,2-Trichloroethane	UG/L	1	3.0 U	3.0 U	6 U	NA	NA
Trichloroethene	UG/L	5	1.0 U	1.0 U	2 U	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	180	97	250	140 J	1.0 J
Toluene	UG/L	5	5.0 U	5.0 U	10 U	NA	NA
Vinyl Chloride	UG/L	2	1.2 J	5.0 U	10 U	NA	NA
Xylene (total)	UG/L	5	5.0 U	5.0 U	10 U	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	9.5	8.6	14	23	16
Dissolved Gases							
Ethane	UG/L	-	5 U	5.0 U	5.0 U	NA	250 U
Ethene	UG/L	-	5 U	5.0 U	5.0 U	NA	250 U
Methane	UG/L	-	81	99	78	40	3,600
Total Metals							
Iron	UG/L	300	10,500	8,370 J	7,690	NA	NA

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

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

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			MW06-7_22_03	MW06-091803	MW-06_121703	MW-06	Field-Dup
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/22/03	09/18/03	12/17/03	07/23/04	05/31/05
Parameter	**Units**	**Criteria***					Field Duplicate (1-1)
Dissolved Metals							
Iron	UG/L	300	10,300	8,470 J	7,670	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	82.3	74.6	84.0	60.5	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	0.33	0.31	0.36	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	1.1	0.88	0.79	NA	NA
Nitrogen, Nitrate	MG/L	10	0.1 U	0.1 U	0.1 UJ	NA	NA
Nitrogen, Nitrite	MG/L	1	0.1 U	0.1 U	0.1 UJ	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	30.5	39.2	39.1	33.5	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	-	8.6	6.0	8.7	NA	NA
Ferric Iron (lab)	MG/L	-	1.9	8.4	1.0 U	NA	NA
Fluoride	MG/L	1.5	0.56	0.37	0.42	0.467	NA

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

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

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			MW06-7_22_03	MW06-091803	MW-06_121703	MW-06	Field-Dup
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/22/03	09/18/03	12/17/03	07/23/04	05/31/05
Parameter	**Units**	**Criteria***					Field Duplicate (1-1)
Miscellaneous Parameters							
TPH	MG/L	-	5 U	NA	5.26 U	NA	NA
Oil & Grease	MG/L	-	NA	5 U	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	-	1.07	0 U	0 U	1.04	NA
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-155	-143	-110	-64	NA
pH	S.U.	-	NA	NA	NA	NA	NA
Specific Conductance	MS/CM	-	0.866	0.581	0.602	0.513	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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Concentration Exceeds Criteria

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

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Detection Limits shown are PQL

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

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			MW-06	MW-06V15FD	MW-06V15N	MW-06V15FD	MW-06V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/31/05	12/20/05	12/20/05	08/15/06	08/15/06
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	5.0 J	6.0 J	6.0 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.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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

J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data 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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			MW-06	MW-06V15FD	MW-06V15N	MW-06V15FD	MW-06V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/31/05	12/20/05	12/20/05	08/15/06	08/15/06
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	1.0 J	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	14	10 UJ	10 UJ	10 U	10 U
Dissolved Gases							
Ethane	UG/L	-	250 U	NA	NA	NA	NA
Ethene	UG/L	-	250 U	NA	NA	NA	NA
Methane	UG/L	-	3,300	6,700	5,600	1,600	1,700
Total Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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Detection Limits shown are PQL

Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
Printed: 11/6/2015 2:44:17 PM
[LOGDATE] >= #5/1/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

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

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

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

Flags assigned during chemistry validation are shown.

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Detection Limits shown are PQL

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

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			MW-06	MW-06V15FD	MW-06V15N	MW-06V15FD	MW-06V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/31/05	12/20/05	12/20/05	08/15/06	08/15/06
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	-	0 U	NA	0 U	NA	6.83
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-140	NA	-140	NA	87
pH	S.U.	-	NA	NA	NA	NA	NA
Specific Conductance	MS/CM	-	1.13	NA	1.29	NA	0.033
Temperature	DEG C	-	NA	NA	NA	NA	NA
Turbidity	NTU	-	NA	NA	NA	NA	NA

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

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

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

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

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20070207MW-06V15FD	20070207MW-06V15N	20070731MW-06V15FD	20070731MW-06V15N	20080228MW06V15FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/07/07	02/07/07	07/31/07	07/31/07	02/28/08
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	3.0 J	3.0 J	10 U	10 U	10 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	8.0 J	8.0 J	0.5 J	0.6 J	10 U
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	12,000	13,000	3,800	2,500	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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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20070207MW-06V15FD	20070207MW-06V15N	20070731MW-06V15FD	20070731MW-06V15N	20080228MW06V15FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/07/07	02/07/07	07/31/07	07/31/07	02/28/08
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)		Field Duplicate (1-1)		Field Duplicate (1-1)
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	7.40	7.00	41.8	44.2	5 U
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

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

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

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20070207MW-06V15FD	20070207MW-06V15N	20070731MW-06V15FD	20070731MW-06V15N	20080228MW06V15FD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/07/07	02/07/07	07/31/07	07/31/07	02/28/08
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	1.05	NA	0.31	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	-136	NA	-99.7	NA
pH	S.U.	-	NA	NA	NA	6.38	NA
Specific Conductance	MS/CM	-	NA	0.79	NA	1.050	NA
Temperature	DEG C	-	NA	NA	NA	NA	NA
Turbidity	NTU	-	NA	NA	NA	NA	NA

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

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

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20080228MW06V15N	20080812MW06V13N	20090219MW-06V13N	20091013MW-06V13N	20100226MW-06V13N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/28/08	08/12/08	02/19/09	10/13/09	02/26/10
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	8.0 J	4.0 J	34	6.4	35 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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Concentration Exceeds Criteria

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J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data rejected.

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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20080228MW06V15N	20080812MW06V13N	20090219MW-06V13N	20091013MW-06V13N	20100226MW-06V13N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/28/08	08/12/08	02/19/09	10/13/09	02/26/10
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	10 U	2.0 J	1 U	1 UJ
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	10 U	10 U	35	1 U	3.6
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	14,000	12,000	9,000	7,300	13,000
Total Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA

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

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

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20080228MW06V15N	20080812MW06V13N	20090219MW-06V13N	20091013MW-06V13N	20100226MW-06V13N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/28/08	08/12/08	02/19/09	10/13/09	02/26/10
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	5 U	17.8	57.0 J	2.8 J	31.2
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

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

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

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20080228MW06V15N	20080812MW06V13N	20090219MW-06V13N	20091013MW-06V13N	20100226MW-06V13N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/28/08	08/12/08	02/19/09	10/13/09	02/26/10
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	-	2.61	0 U	0 U	0.0	0.0
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-122	-117	-132	-139	-140
pH	S.U.	-	6.24	6.37	6.30	6.57	6.46
Specific Conductance	MS/CM	-	1.21	1.47	0.84	1.79	2.48
Temperature	DEG C	-	12.2	17.0	13.23	17.80	11.80
Turbidity	NTU	-	9	5	8	2.2	39

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

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20100624MW-06V13N	20101006MW-06V13FD	20101006MW-06V13N	20110406MW-06V13N	20110913MW06V13N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/24/10	10/06/10	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	68 J	61	57	96 J	30
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

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

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

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20100624MW-06V13N	20101006MW-06V13FD	20101006MW-06V13N	20110406MW-06V13N	20110913MW06V13N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/24/10	10/06/10	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 U	1 U	1 U	33	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	0.57 J	1 U	1 U	38 J	4.4
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	9,400	8,300	8,800	7,900	1,800
Total Metals							
Iron	UG/L	300	NA	NA	NA	NA	9,630

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

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

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20100624MW-06V13N	20101006MW-06V13FD	20101006MW-06V13N	20110406MW-06V13N	20110913MW06V13N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/24/10	10/06/10	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 CaCO3)	MG/L	-	NA	NA	NA	NA	388
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	353,000 J
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	235
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	52.3	36.8 J	34.5 J	60.8	16.5
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	10.9
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

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

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

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20100624MW-06V13N	20101006MW-06V13FD	20101006MW-06V13N	20110406MW-06V13N	20110913MW06V13N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/24/10	10/06/10	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	-	0.73	NA	0.0	0.0	0.0
Ferrous Iron	MG/L	-	NA	NA	NA	NA	7.4
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	2.23
Oxidation-Reduction Potential	mV	-	-124	NA	-129	-68	-123
pH	S.U.	-	8.81	NA	6.97	7.08	7.08
Specific Conductance	MS/CM	-	0.958	NA	0.879	1.61	0.801
Temperature	DEG C	-	17.79	NA	18.25	12.46	22.4
Turbidity	NTU	-	0.45	NA	0.0	0.0	5.3

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

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20120411MW-06V13N	20120924MW-06V13N	20130409MW-06V12N	20131022MW-06V15N	20140416MW-06V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/11/12	09/24/12	04/09/13	10/22/13	04/16/14
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	230 J	140	61 J	27	75
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

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

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

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20120411MW-06V13N	20120924MW-06V13N	20130409MW-06V12N	20131022MW-06V15N	20140416MW-06V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/11/12	09/24/12	04/09/13	10/22/13	04/16/14
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	82 J	3.3	0.19 J	1.0 U	26
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	28	3.6	4.9	1.0 U	33
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	5,300	1,300	9,500	4,100	11,000
Total Metals							
Iron	UG/L	300	NA	12,100	24,700	20,500	20,900

*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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Concentration Exceeds Criteria

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

J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data 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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20120411MW-06V13N	20120924MW-06V13N	20130409MW-06V12N	20131022MW-06V15N	20140416MW-06V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/11/12	09/24/12	04/09/13	10/22/13	04/16/14
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	304	244	245	240
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	304	244	NA	240
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	5.0 U	5.0 U	NA	5.0 U
Alkalinity, Hydroxide	MG/L	-	NA	5.0 U	5.0 U	NA	5.0 U
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	1 J	3 U	2 J	3 U
Hardness (as CaCO3)	MG/L	-	NA	308	337	99.0	370
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	0.10 U	0.25 J	0.10 UJ	0.10 UJ
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	0.017 J	0.051 J
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	119	52.2	38.4	29.2	36.1
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	6.9	5.9	5.6	5.8
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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UG/L - Micrograms per Liter; MG/L - Milligrams per Liter; CEQ/mL - Count Equivalvents per milliliter; GC/mL - Gene Copies per milliliter

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

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

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20120411MW-06V13N	20120924MW-06V13N	20130409MW-06V12N	20131022MW-06V15N	20140416MW-06V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/11/12	09/24/12	04/09/13	10/22/13	04/16/14
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0.0	0.0	0.33	0.37	3.99
Ferrous Iron	MG/L	-	NA	9.9	23.7	3.6	6.0
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-48	-80	-102	-108	-92
pH	S.U.	-	6.81	6.82	6.47	6.45	7.02
Specific Conductance	MS/CM	-	1.06	0.636	2.91	1.4	1.73
Temperature	DEG C	-	14.04	22.01	16.34	18.41	12.71
Turbidity	NTU	-	0.0	0.0	0.2	1.4	0

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

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20140701MW-06V15N	20141027MW-06V15N	DUP20141027	20150422MW-06	20151008MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/01/14	10/27/14	10/27/14	04/22/15	10/08/15
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	84	51	44	110	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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20140701MW-06V15N	20141027MW-06V15N	DUP20141027	20150422MW-06	20151008MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/01/14	10/27/14	10/27/14	04/22/15	10/08/15
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1.0 U	1.0 U	1.0 U	1.6	1.0 U
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	2.7	1.0 U	1.0 U	8.1	1.0 U
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	11,000	3,400	2,700	5,200	7,200
Total Metals							
Iron	UG/L	300	17,100	31,000	33,200	26,400	20,200

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

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20140701MW-06V15N	20141027MW-06V15N	DUP20141027	20150422MW-06	20151008MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/01/14	10/27/14	10/27/14	04/22/15	10/08/15
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	259	740	726	311	312
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	259	740	726	311	312
Alkalinity, Carbonate (as CaCO3)	MG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Alkalinity, Hydroxide	MG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	3 U	80	NA	3.0 U	1 J
Hardness (as CaCO3)	MG/L	-	317	297	564	515	337
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	0.10 U	1.0 U	0.58 J	0.10 U	2.0 U
Nitrogen, Nitrite	MG/L	1	0.0092 J	0.10 U	0.10 U	0.10 U	0.020 J
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	0.050 U	NA
Sulfate	MG/L	250	38.8	5.0 U	5.0 U	29.9	16.7
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	6.0	314	298	5.1	5.5
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	0.90 J	0.44 J
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

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

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

Location ID			MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID			20140701MW-06V15N	20141027MW-06V15N	DUP20141027	20150422MW-06	20151008MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/01/14	10/27/14	10/27/14	04/22/15	10/08/15
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	1.82	2.67	NA	0.72	NA
Ferrous Iron	MG/L	-	5.0	6.7	NA	4.5	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-80	-130	NA	-104	NA
pH	S.U.	-	6.78	6.66	NA	6.83	NA
Specific Conductance	MS/CM	-	1.33	2.34	NA	2.67	NA
Temperature	DEG C	-	19.20	17.32	NA	12.18	NA
Turbidity	NTU	-	7.3	5.6	NA	4.1	NA

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

Location ID			MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID			MW07-6-10-03	MW07	MW07-91703	MW-07_121703	MW-07
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/10/03	07/23/03	09/17/03	12/17/03	07/22/04
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	250 U	500 U	250 U	50 U	NA
Benzene	UG/L	1	250 U	500 U	250 U	14	NA
Bromodichloromethane	UG/L	50	50 U	100 U	50 U	10 U	NA
Bromoform	UG/L	50	200 U	400 U	200 U	40 U	NA
Bromomethane	UG/L	5	250 U	500 U	250 U	50 U	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	R	R	R	R	NA
Carbon Disulfide	UG/L	60	250 U	500 U	250 U	50 U	NA
Carbon Tetrachloride	UG/L	5	100 U	200 U	100 U	20 U	NA
Chlorobenzene	UG/L	5	250 U	500 U	250 U	50 U	NA
Chloroethane	UG/L	5	250 U	500 U	250 U	50 U	NA
Chloroform	UG/L	7	250 U	500 U	250 U	50 U	NA
Chloromethane	UG/L	5	250 U	500 U	250 U	50 U	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	0 U	0 U	0 U	0 U	210
Dibromochloromethane	UG/L	50	250 U	500 U	250 U	50 U	NA
1,1-Dichloroethane	UG/L	5	250 U	500 U	250 U	50 U	NA
1,2-Dichloroethane	UG/L	0.6	100 U	200 U	100 U	20 U	NA
1,1-Dichloroethene	UG/L	5	100 U	68 J	100 U	20 U	NA
cis-1,2-Dichloroethene	UG/L	5	250 U	500 U	250 U	50 U	NA
trans-1,2-Dichloroethene	UG/L	5	250 U	500 U	250 U	50 U	NA
1,2-Dichloropropane	UG/L	1	50 U	100 U	50 U	10 U	NA
cis-1,3-Dichloropropene	UG/L	0.4	250 U	500 U	250 U	50 U	NA
trans-1,3-Dichloropropene	UG/L	0.4	250 U	500 U	250 U	50 U	NA

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

Location ID			MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID			MW07-6-10-03	MW07	MW07-91703	MW-07_121703	MW-07
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/10/03	07/23/03	09/17/03	12/17/03	07/22/04
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	200 U	400 U	200 U	49	NA
2-Hexanone	UG/L	50	250 U	500 U	250 U	50 U	NA
4-Methyl-2-Pentanone	UG/L	-	250 U	500 U	250 U	50 U	NA
Methylene Chloride	UG/L	5	150 U	300 U	150 U	30 U	NA
Styrene	UG/L	5	250 U	500 U	250 U	50 U	NA
1,1,2,2-Tetrachloroethane	UG/L	5	50 U	100 U	50 U	10 U	NA
Tetrachloroethene	UG/L	5	50 U	100 U	50 U	10 U	NA
1,1,1-Trichloroethane	UG/L	5	250 U	500 U	250 U	50 U	NA
1,1,2-Trichloroethane	UG/L	1	150 U	300 U	150 U	30 U	NA
Trichloroethene	UG/L	5	50 U	100 U	50 U	10 U	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	5,400	8,500	6,100	370	110 J
Toluene	UG/L	5	250 U	500 U	250 U	50 U	NA
Vinyl Chloride	UG/L	2	250 U	500 U	250 U	50 U	NA
Xylene (total)	UG/L	5	250 U	500 U	250 U	50 U	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	68 J	130 J	130 J	940	50
Dissolved Gases							
Ethane	UG/L	-	50 U	50 U	50 U	120 U	NA
Ethene	UG/L	-	50 U	50 U	50 U	120 U	NA
Methane	UG/L	-	740	420	1,200	1,700	2,500
Total Metals							
Iron	UG/L	300	21,300	21,200	32,700 J	38,900	NA

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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J (or B inorganics) - Analyte is reported below the PQL at an estimated concentration. NA - Not Analyzed. R - Data rejected.

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

Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
Printed: 11/6/2015 2:44:20 PM
[LOGDATE] >= #5/1/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

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

Location ID			MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID			MW07-6-10-03	MW07	MW07-91703	MW-07_121703	MW-07
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/10/03	07/23/03	09/17/03	12/17/03	07/22/04
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	20,800	20,800	32,500 J	38,900	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	140	168	300 J	328	303
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	0.39	0.6	0.66	0.99	NA
Nitrogen, Kjeldahl, Total	MG/L	-	1.2	1.8	2.1	2.8	NA
Nitrogen, Nitrate	MG/L	10	0.1 U	NA	0.1 U	0.1 U	NA
Nitrogen, Nitrite	MG/L	1	0.1 U	NA	0.1 U	0.1 U	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	0.1 UJ	NA	NA	NA
Sulfate	MG/L	250	32.8	31.0	23.6	5.0 U	5.0 U
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	-	20.2	19.8	33.8	19.5	NA
Ferric Iron (lab)	MG/L	-	1	1.4	14.1	19.4	NA
Fluoride	MG/L	1.5	0.33	0.25	0.24	0.19	0.190

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

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

Location ID			MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID			MW07-6-10-03	MW07	MW07-91703	MW-07_121703	MW-07
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/10/03	07/23/03	09/17/03	12/17/03	07/22/04
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	5 U	5 U	NA	5.26 U	NA
Oil & Grease	MG/L	-	NA	NA	5.44 U	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	0.9	0.1	0 U	3.33	0.88
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-130	-108	-118	-115	-153
pH	S.U.	-	NA	NA	NA	NA	NA
Specific Conductance	MS/CM	-	0.93	1.11	1.44	1.94	1.69
Temperature	DEG C	-	NA	NA	NA	NA	NA
Turbidity	NTU	-	NA	NA	NA	NA	NA

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

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

Location ID			MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID			MW-07	MW-07V15N	MW-07V15N	20070207MW-07V15N	20070731MW-07V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/31/05	12/20/05	08/14/06	02/07/07	07/31/07
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	140	47	97	89	82
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

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

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

Location ID			MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID			MW-07	MW-07V15N	MW-07V15N	20070207MW-07V15N	20070731MW-07V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/31/05	12/20/05	08/14/06	02/07/07	07/31/07
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	6.0 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	2.0 J	10 U	1.0 J	3.0 J	10
Dissolved Gases							
Ethane	UG/L	-	250 U	NA	NA	NA	NA
Ethene	UG/L	-	250 U	NA	NA	NA	NA
Methane	UG/L	-	5,900	9,700	6,900	6,200	4,100
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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APPENDIX B
HISTORICAL ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID			MW-07	MW-07V15N	MW-07V15N	20070207MW-07V15N	20070731MW-07V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/31/05	12/20/05	08/14/06	02/07/07	07/31/07
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	5.0 U	5.0 U	19.3	5.0 U	6.1
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

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

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

Location ID			MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID			MW-07	MW-07V15N	MW-07V15N	20070207MW-07V15N	20070731MW-07V15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/31/05	12/20/05	08/14/06	02/07/07	07/31/07
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	3.47	2.89	0.48
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-152	-169	-163	-121	-113.5
pH	S.U.	-	NA	NA	NA	NA	6.78
Specific Conductance	MS/CM	-	1.75	1.65	1.44	2.02	2.182
Temperature	DEG C	-	NA	NA	NA	NA	NA
Turbidity	NTU	-	NA	NA	NA	NA	NA

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

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

Location ID			MW-07	MW-07	MW-07	MW-07R	MW-07R
Sample ID			20080228MW07V15N	20080812MW07V09N	20090218MW-07V09N	20091013MW-07RV15N	20100225MW-07RV15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/28/08	08/12/08	02/18/09	10/13/09	02/25/10
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	92	170	150	370 D	150 J
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

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

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

Location ID			MW-07	MW-07	MW-07	MW-07R	MW-07R
Sample ID			20080228MW07V15N	20080812MW07V09N	20090218MW-07V09N	20091013MW-07RV15N	20100225MW-07RV15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/28/08	08/12/08	02/18/09	10/13/09	02/25/10
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 UJ	3.0 J	46	580 D	18 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	0.9 J	16	20	76	8.1
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	7,100	5,600	11,000	5,900	6,500
Total Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA

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

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Detection Limits shown are PQL

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

Location ID			MW-07	MW-07	MW-07	MW-07R	MW-07R
Sample ID			20080228MW07V15N	20080812MW07V09N	20090218MW-07V09N	20091013MW-07RV15N	20100225MW-07RV15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/28/08	08/12/08	02/18/09	10/13/09	02/25/10
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Ammonia (as N)	MG/L	2	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	10	NA	NA	NA	NA	NA
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	5 U	5.6	5 UJ	6.3	7.9
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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U - Non-Detect UJ - Not detected above the estimated quantitation limit

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

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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07	MW-07	MW-07	MW-07R	MW-07R
Sample ID			20080228MW07V15N	20080812MW07V09N	20090218MW-07V09N	20091013MW-07RV15N	20100225MW-07RV15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/28/08	08/12/08	02/18/09	10/13/09	02/25/10
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	-	2.64	0 U	0 U	0.0	0.0
Ferrous Iron	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-137	-167	-154	-139	-146
pH	S.U.	-	6.32	6.48	6.18	6.45	6.52
Specific Conductance	MS/CM	-	1.62	1.99	2.01	2.74	2.79
Temperature	DEG C	-	9.03	17.3	12.11	18.36	10.69
Turbidity	NTU	-	54	25	21	1.1	1.1

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

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

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20100624MW-07RV15FD	20100624MW-07RV15N	20101006MW-07RV15N	20110406MW-07RV15N	20110913MW07RV15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/24/10	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	350 J	390	350	370 J	26
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

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

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

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20100624MW-07RV15FD	20100624MW-07RV15N	20101006MW-07RV15N	20110406MW-07RV15N	20110913MW07RV15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/24/10	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	1.1 J	1	53 J	18	1.6
Toluene	UG/L	5	NA	NA	NA	NA	NA
Vinyl Chloride	UG/L	2	NA	NA	NA	NA	NA
Xylene (total)	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	1.7 J	1.8	9.5	6.3 J	0.94 J
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	8,100	8,400	6,200	8,300	2,000
Total Metals							
Iron	UG/L	300	NA	NA	NA	NA	23,600

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

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20100624MW-07RV15FD	20100624MW-07RV15N	20101006MW-07RV15N	20110406MW-07RV15N	20110913MW07RV15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/24/10	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 CaCO3)	MG/L	-	NA	NA	NA	NA	406
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	248
Dehalobacter	GC/mL	-	NA	NA	NA	NA	NA
Hardness (as CaCO3)	MG/L	-	NA	NA	NA	NA	637
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	17	11.2	13 J	25.8	12.2
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	NA	NA	11.3
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

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

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

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20100624MW-07RV15FD	20100624MW-07RV15N	20101006MW-07RV15N	20110406MW-07RV15N	20110913MW07RV15N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/24/10	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	-	NA	0.69	4.05	0.0	0.0
Ferrous Iron	MG/L	-	NA	NA	NA	NA	20.1
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	3.5
Oxidation-Reduction Potential	mV	-	NA	-129	-113	-83	-109
pH	S.U.	-	NA	8.83	6.82	6.39	6.86
Specific Conductance	MS/CM	-	NA	2.09	2.03	3.40	3.28
Temperature	DEG C	-	NA	16.45	21.42	12.08	22.4
Turbidity	NTU	-	NA	0.35	14.3	0.0	0.1

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

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20120411MW-07RV15FD	20120411MW-07RV15N	20120924MW-07RV15N	20130409MW-07RV13N	20131022MW-07RV17N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/11/12	04/11/12	09/24/12	04/09/13	10/22/13
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)				
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	630 J	540 J	430	310 J	390
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

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

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

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20120411MW-07RV15FD	20120411MW-07RV15N	20120924MW-07RV15N	20130409MW-07RV13N	20131022MW-07RV17N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/11/12	04/11/12	09/24/12	04/09/13	10/22/13
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)				
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	67 J	59 J	5.9 J	5.5	12
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	9.7	2.4 J	2.6	1.1
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	6,400	6,600	3,900	2,100	4,000
Total Metals							
Iron	UG/L	300	NA	NA	29,900	29,000	30,900

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

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20120411MW-07RV15FD	20120411MW-07RV15N	20120924MW-07RV15N	20130409MW-07RV13N	20131022MW-07RV17N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/11/12	04/11/12	09/24/12	04/09/13	10/22/13
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)				
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	335	263	291
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	NA	NA	335	263	NA
Alkalinity, Carbonate (as CaCO3)	MG/L	-	NA	NA	5.0 U	5.0 U	NA
Alkalinity, Hydroxide	MG/L	-	NA	NA	5.0 U	5.0 U	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA	NA	NA	NA	NA
Dehalobacter	GC/mL	-	NA	NA	10	4	5
Hardness (as CaCO3)	MG/L	-	NA	NA	414	515	208
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	0.066 J	0.36 J
Nitrogen, Nitrite	MG/L	1	NA	NA	NA	NA	0.015 J
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	NA
Sulfate	MG/L	250	18.9	17.7	32.0	19.1	7.4
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	NA	NA	11.8	9.3	12.3
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

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

Flags assigned during chemistry validation are shown.

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

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 ANALYTICAL DATA SUMMARY
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20120411MW-07RV15FD	20120411MW-07RV15N	20120924MW-07RV15N	20130409MW-07RV13N	20131022MW-07RV17N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/11/12	04/11/12	09/24/12	04/09/13	10/22/13
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)				
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	NA	0.0	0.0	0.0	0.36
Ferrous Iron	MG/L	-	NA	NA	30.4	27.5	15.3
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	NA	-82	-118	-89	-102
pH	S.U.	-	NA	6.72	6.69	6.35	6.31
Specific Conductance	MS/CM	-	NA	2.10	1.78	4.84	1.84
Temperature	DEG C	-	NA	13.63	22.35	17.93	19.42
Turbidity	NTU	-	NA	8.2	0.0	53.9	0.2

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

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Detection Limits shown are PQL

Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mdb
Printed: 11/6/2015 2:44:22 PM
[LOGDATE] >= #5/1/2003# AND [MATRIX] = 'WG' AND [PRCCODE] <> 'TIC

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

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20140416MW-07RV17N	20140701MW-07RV17N	20141027MW-07RV17N	20150304MW-07R	20150422MW-07R
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/16/14	07/01/14	10/27/14	03/04/15	04/22/15
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	NA	NA	NA	NA	NA
Benzene	UG/L	1	NA	NA	NA	NA	NA
Bromodichloromethane	UG/L	50	NA	NA	NA	NA	NA
Bromoform	UG/L	50	NA	NA	NA	NA	NA
Bromomethane	UG/L	5	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	50	NA	NA	NA	NA	NA
Carbon Disulfide	UG/L	60	NA	NA	NA	NA	NA
Carbon Tetrachloride	UG/L	5	NA	NA	NA	NA	NA
Chlorobenzene	UG/L	5	NA	NA	NA	NA	NA
Chloroethane	UG/L	5	NA	NA	NA	NA	NA
Chloroform	UG/L	7	NA	NA	NA	NA	NA
Chloromethane	UG/L	5	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	5	2.4	69	130	130	10
Dibromochloromethane	UG/L	50	NA	NA	NA	NA	NA
1,1-Dichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloroethane	UG/L	0.6	NA	NA	NA	NA	NA
1,1-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,2-Dichloropropane	UG/L	1	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	0.4	NA	NA	NA	NA	NA

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

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

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20140416MW-07RV17N	20140701MW-07RV17N	20141027MW-07RV17N	20150304MW-07R	20150422MW-07R
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/16/14	07/01/14	10/27/14	03/04/15	04/22/15
Parameter	**Units**	**Criteria***					
Volatiles							
Ethylbenzene	UG/L	5	NA	NA	NA	NA	NA
2-Hexanone	UG/L	50	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	-	NA	NA	NA	NA	NA
Methylene Chloride	UG/L	5	NA	NA	NA	NA	NA
Styrene	UG/L	5	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/L	1	NA	NA	NA	NA	NA
Trichloroethene	UG/L	5	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1.0 U	1.0 U	15	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	1.2	2.2	0.78 J	0.39 J
Dissolved Gases							
Ethane	UG/L	-	NA	NA	NA	NA	NA
Ethene	UG/L	-	NA	NA	NA	NA	NA
Methane	UG/L	-	680	4,400	1,300	NA	1,700
Total Metals							
Iron	UG/L	300	24,500	28,700	31,600	NA	25,300

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

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

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20140416MW-07RV17N	20140701MW-07RV17N	20141027MW-07RV17N	20150304MW-07R	20150422MW-07R
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/16/14	07/01/14	10/27/14	03/04/15	04/22/15
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	305	399	394	NA	240
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	305	399	394	NA	240
Alkalinity, Carbonate (as CaCO3)	MG/L	-	5.0 U	5.0 U	5.0 U	NA	5.0 U
Alkalinity, Hydroxide	MG/L	-	5.0 U	5.0 U	5.0 U	NA	5.0 U
Chloride	MG/L	250	NA	NA	NA	NA	NA
Dehalococcoides ethenogenes	CEQ/mL	-	70	NA	NA	NA	NA
Dehalobacter	GC/mL	-	3 U	4 U	3	300	90
Hardness (as CaCO3)	MG/L	-	594	545	574	NA	641
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	0.076 J	1.0 U	NA	0.16
Nitrogen, Nitrite	MG/L	1	0.038 J	0.014 J	0.10 U	NA	0.018 J
Nitrogen, Nitrate-Nitrite	MG/L	10	NA	NA	NA	NA	0.18
Sulfate	MG/L	250	17.9	13.8	8.4	NA	11.8
Sulfide	MG/L	0.05	NA	NA	NA	NA	NA
Total Organic Carbon	MG/L	-	7.8	11.4	15.2	NA	6.0
Ferrous Iron (lab)	MG/L	-	NA	NA	NA	NA	2.2 J
Ferrous Iron (field)	MG/L	-	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	-	NA	NA	NA	NA	NA
Fluoride	MG/L	1.5	NA	NA	NA	NA	NA

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

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

Location ID			MW-07R	MW-07R	MW-07R	MW-07R	MW-07R
Sample ID			20140416MW-07RV17N	20140701MW-07RV17N	20141027MW-07RV17N	20150304MW-07R	20150422MW-07R
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/16/14	07/01/14	10/27/14	03/04/15	04/22/15
Parameter	**Units**	**Criteria***					
Miscellaneous Parameters							
TPH	MG/L	-	NA	NA	NA	NA	NA
Oil & Grease	MG/L	-	NA	NA	NA	NA	NA
Volatile Fatty Acids							
Acetic Acid	MG/L	-	NA	NA	NA	NA	NA
Formic Acid	MG/L	-	NA	NA	NA	NA	NA
Lactic Acid	MG/L	-	NA	NA	NA	NA	NA
n-Butyric Acid	MG/L	-	NA	NA	NA	NA	NA
Propionic Acid	MG/L	-	NA	NA	NA	NA	NA
Pyruvic Acid	MG/L	-	NA	NA	NA	NA	NA
Field Parameter							
Dissolved Oxygen	MG/L	-	4.43	1.74	2.86	0.91	0.91
Ferrous Iron	MG/L	-	6.0	6.0	4.65	NA	4.0
Ferric Iron (calculated)	MG/L	-	NA	NA	NA	NA	NA
Oxidation-Reduction Potential	mV	-	-77	-68	-107	-120	-75
pH	S.U.	-	6.89	6.64	6.56	6.81	6.69
Specific Conductance	MS/CM	-	3.31	2.58	2.69	2.56	4.17
Temperature	DEG C	-	11.39	19.41	18.94	8.90	12.41
Turbidity	NTU	-	0	20.7	8.7	0.0	0.9

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

Location ID			MW-07R
Sample ID			20151008MW-07R
Matrix			Groundwater
Depth Interval (ft)			-
Date Sampled			10/08/15
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	46
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.

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

Location ID			MW-07R
Sample ID			20151008MW-07R
Matrix			Groundwater
Depth Interval (ft)			-
Date Sampled			10/08/15
Parameter	**Units**	**Criteria***	
Volatiles			
Ethylbenzene	UG/L	5	NA
2-Hexanone	UG/L	50	NA
4-Methyl-2-Pentanone	UG/L	-	NA
Methylene Chloride	UG/L	5	NA
Styrene	UG/L	5	NA
1,1,2,2-Tetrachloroethane	UG/L	5	NA
Tetrachloroethene	UG/L	5	NA
1,1,1-Trichloroethane	UG/L	5	NA
1,1,2-Trichloroethane	UG/L	1	NA
Trichloroethene	UG/L	5	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	1.0 U
Toluene	UG/L	5	NA
Vinyl Chloride	UG/L	2	NA
Xylene (total)	UG/L	5	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	1.0 U
Dissolved Gases			
Ethane	UG/L	-	NA
Ethene	UG/L	-	NA
Methane	UG/L	-	9,800
Total Metals			
Iron	UG/L	300	39,000

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

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

Location ID			MW-07R
Sample ID			20151008MW-07R
Matrix			Groundwater
Depth Interval (ft)			-
Date Sampled			10/08/15
Parameter	**Units**	**Criteria***	
Dissolved Metals			
Iron	UG/L	300	NA
Miscellaneous Parameters			
Alkalinity, Total (as CaCO3)	MG/L	-	450
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	450
Alkalinity, Carbonate (as CaCO3)	MG/L	-	5.0 U
Alkalinity, Hydroxide	MG/L	-	5.0 U
Chloride	MG/L	250	NA
Dehalococcoides ethenogenes	CEQ/mL	-	NA
Dehalobacter	GC/mL	-	20
Hardness (as CaCO3)	MG/L	-	475
Nitrogen, Ammonia (as N)	MG/L	2	NA
Nitrogen, Kjeldahl, Total	MG/L	-	NA
Nitrogen, Nitrate	MG/L	10	2.0 U
Nitrogen, Nitrite	MG/L	1	0.028 J
Nitrogen, Nitrate-Nitrite	MG/L	10	NA
Sulfate	MG/L	250	9.1
Sulfide	MG/L	0.05	NA
Total Organic Carbon	MG/L	-	11.8
Ferrous Iron (lab)	MG/L	-	0.49 J
Ferrous Iron (field)	MG/L	-	NA
Ferric Iron (lab)	MG/L	-	NA
Fluoride	MG/L	1.5	NA

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

Location ID			MW-07R
Sample ID			20151008MW-07R
Matrix			Groundwater
Depth Interval (ft)			-
Date Sampled			10/08/15
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	-	NA
Ferrous Iron	MG/L	-	NA
Ferric Iron (calculated)	MG/L	-	NA
Oxidation-Reduction Potential	mV	-	NA
pH	S.U.	-	NA
Specific Conductance	MS/CM	-	NA
Temperature	DEG C	-	NA
Turbidity	NTU	-	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 C

DATA USABILITY SUMMARY REPORT

APPENDIX C

DATA USABILITY SUMMARY REPORT

OCTOBER 2015 SAMPLING EVENT

FORMER EMCA SITE
SITE NO. 360025
MAMARONECK, NEW YORK

Analyses Performed by:

TESTAMERICA LABORATORIES, INC.
Edison, NJ/Amherst, NY/North Canton, OH
and
SiREM
Guelph, Ontario

Prepared for:

ROHM & HAAS Company
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I. INTRODUCTION

This Data Usability Summary Report (DUSR) has been prepared following the guidelines provided in New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation *DER-10, Technical Guidance for Site Investigation and Remediation, Appendix 2B - Guidance for Data Deliverables and the Development of Data Usability Summary Reports*, May 2010. This DUSR discusses the analytical data for five (5) groundwater samples, and one trip blank collected on October 8, 2015, as summarized on Table C-1. The samples were collected by URS personnel at the Former EMCA Site located in Mamaroneck, New York as part of the semi-annual groundwater monitoring event.

II. ANALYTICAL METHODOLOGIES

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

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

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

References:

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

III. DATA VALIDATION PROCEDURES

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

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

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

IV. DATA DELIVERABLE COMPLETENESS

The laboratory deliverable data packages were in accordance with NYSDEC Analytical Services Protocol (ASP) Category B requirements.

V. SAMPLE RECEIPT/PRESERVATION/HOLDING TIMES

All samples were received by the laboratory intact, properly preserved, and under proper chain-of-custody (COC).

All sample analyses were performed within method holding times, except for ferrous iron (Fe^{+2}), which were performed in the laboratory. Therefore, the laboratory Fe^{+2} results were qualified 'J'. Note, Fe^{+2} is typically analyzed in the field rather than in the laboratory because it quickly oxidizes to ferric iron (Fe^{+3}) upon exposure to air.

VI. NONCONFORMANCES

Except for the Fe^{+2} holding time exceedances noted above, there were no other non-conformances noted during the data review.

VII. SUMMARY

All sample analyses were found to be compliant with the method and validation criteria, except where previously noted. Those results qualified 'J' (estimated) during the data validation are considered conditonally usable.

DEFINITIONS OF USEPA REGION II DATA QUALIFIERS

U – The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J – The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R – The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

D – The sample results are reported from a separate secondary dilution analysis.

TABLE C-1
SAMPLE AND ANALYSIS SUMMARY - OCTOBER 2015
FORMER EMCA SITE, MAMARONECK, NEW YORK

SDG Nos.	Sample ID	Matrix	Date of Collection	VOCs*	Methane	Sulfate	Alkalinity (Total, HCO_3^-, CO_3^-, OH^-)	Hardness	Ferrous Iron	Total Iron	Nitrate	TOC	Dhc	Dhb	Comments
460-102440-1/ S-3714	20151008MW-02	GW	10/08/15	X	X	X	X	X	X	X	X	X	X	X	---
	20151008MW-03	GW		X	X	X	X	X	X	X	X	X	---	X	---
	20151008MW-04	GW		X	X	X	X	X	X	X	X	X	---	X	---
	20151008MW-06	GW		X	X	X	X	X	X	X	X	X	---	X	---
	20151008MW-07R	GW		X	X	X	X	X	X	X	X	X	---	X	---
	TB20151008	Water		X	X	---	---	---	---	---	---	---	---	---	Trip Blank

Notes:

* - Volatile Organic Compounds (VOCs) include 1,1,2-trichloro-1,2,2-trifluoroethane (Freon-113); 1,2-dichloro-1,1,2-trifluoroethane (Freon-123a); and chlorotrifluoroethene (Freon-1113).

X - Parameter requested.
--- - Parameter not requested/analyzed or no comment.
Dhc - Dehalococcoides ethenogenes
Dhb - Dehalobacter
GW - Groundwater
TOC - Total Organic Carbon

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

Location ID			MW-02	MW-03	MW-04	MW-06	MW-07R
Sample ID			20151008MW-02	20151008MW-03	20151008MW-04	20151008MW-06	20151008MW-07R
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/08/15	10/08/15	10/08/15	10/08/15	10/08/15
Parameter	**Units**	*					
Volatiles							
Chlorotrifluoroethene (Freon-1113)	UG/L	5	260	140	4.4	51	46
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	21	0.52 J	1.0 U	1.0 U	1.0 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	7.7	1.7	1.0 U	1.0 U	1.0 U
Dissolved Gases							
Methane	UG/L	-	12,000	10,000	2,100	7,200	9,800
Total Metals							
Iron	UG/L	300	61,800	29,500	15,800	20,200	39,000
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	292	279	303	312	450
Alkalinity, Bicarbonate (as CaCO3)	MG/L	-	292	279	303	312	450
Alkalinity, Carbonate (as CaCO3)	MG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Alkalinity, Hydroxide	MG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dehalococcoides ethenogenes	CEQ/mL	-	1 J	NA	NA	NA	NA
Dehalobacter	GC/mL	-	300	2 J	3.0 U	1 J	20
Hardness (as CaCO3)	MG/L	-	424	368	523	337	475
Nitrogen, Nitrate	MG/L	10	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Nitrogen, Nitrite	MG/L	1	0.034 J	0.021 J	0.016 J	0.020 J	0.028 J
Sulfate	MG/L	250	25.6	48.2	7.4	16.7	9.1
Total Organic Carbon	MG/L	-	6.2	7.1	11.8	5.5	11.8
Ferrous Iron (lab)	MG/L	-	2.5 J	1.7 J	0.33 J	0.44 J	0.49 J

*- 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

U - Non-Detect

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

MADE BY: __PRF_11/06/15___ CHKD BY: __AMK 11/06/15___

Detection Limits shown are PQL

Advanced Selection: amk-temp
J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mde
Printed 11/6/2015 1:40:00 PM
[LOGDATE] = #10/8/2015# AND [MATRIX] = 'WG'

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

Location ID			FIELDQC
Sample ID			TB20151008
Matrix			Water
Depth Interval (ft)			-
Date Sampled			10/08/15
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	-	4.0 U

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Non-Detect

MADE BY: __PRF_11/06/15___ CHKD BY: __AMK_11/06/15__

Detection Limits shown are PQL

J:\Projects\11172730.00000\DB\PROGRAM\EDMS.mde
Printed 11/6/2015 12:05:45 PM
[LOGDATE] = #10/8/2015# AND [MATRIX] = 'WQ'

ATTACHMENT A

VALIDATED ANALYTICAL RESULTS (FORM 1's)

Client: URS Corporation

Job Number: 460-102440-1

Client Sample ID: **20151008MW-02**

Lab Sample ID: 460-102440-1
Client Matrix: Water

Date Sampled: 10/08/2015 0920
Date Received: 10/08/2015 1810

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-329746	Instrument ID:	CVOAMS1
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	A14170.D
Dilution:	2.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/19/2015 1427			Final Weight/Volume:	5 mL
Prep Date:	10/19/2015 1427				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Freon TF	21		0.68	2.0
Chlorotrifluoroethene	260		0.60	2.0
1,2-Dichloro-1,1,2-trifluoroethane	7.7		0.34	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	103		70 - 137
Toluene-d8 (Surr)	100		74 - 120
Bromofluorobenzene	97		70 - 131
Dibromofluoromethane (Surr)	104		72 - 136

Client: URS Corporation

Job Number: 460-102440-1

Client Sample ID: **20151008MW-06**

Lab Sample ID: 460-102440-2
Client Matrix: Water

Date Sampled: 10/08/2015 1027
Date Received: 10/08/2015 1810

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-329746	Instrument ID:	CVOAMS1
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	A14168.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/19/2015 1339			Final Weight/Volume:	5 mL
Prep Date:	10/19/2015 1339				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Freon TF	0.34	U	0.34	1.0
Chlorotrifluoroethene	51		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)	103		70 - 137
Toluene-d8 (Surr)	100		74 - 120
Bromofluorobenzene	95		70 - 131
Dibromofluoromethane (Surr)	102		72 - 136

Client: URS Corporation

Job Number: 460-102440-1

Client Sample ID: **20151008MW-04**

Lab Sample ID: 460-102440-3
Client Matrix: Water

Date Sampled: 10/08/2015 1145
Date Received: 10/08/2015 1810

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-329746	Instrument ID:	CVOAMS1
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	A14166.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/19/2015 1252			Final Weight/Volume:	5 mL
Prep Date:	10/19/2015 1252				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Freon TF	0.34	U	0.34	1.0
Chlorotrifluoroethene	4.4		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)	102		70 - 137
Toluene-d8 (Surr)	101		74 - 120
Bromofluorobenzene	96		70 - 131
Dibromofluoromethane (Surr)	104		72 - 136

Client: URS Corporation

Job Number: 460-102440-1

Client Sample ID: **20151008MW-03**

Lab Sample ID: 460-102440-4
Client Matrix: Water

Date Sampled: 10/08/2015 1310
Date Received: 10/08/2015 1810

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-329746	Instrument ID:	CVOAMS1
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	A14169.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/19/2015 1403			Final Weight/Volume:	5 mL
Prep Date:	10/19/2015 1403				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Freon TF	0.52	J	0.34	1.0
Chlorotrifluoroethene	140		0.30	1.0
1,2-Dichloro-1,1,2-trifluoroethane	1.7		0.17	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	79		70 - 137
Toluene-d8 (Surr)	77		74 - 120
Bromofluorobenzene	76		70 - 131
Dibromofluoromethane (Surr)	81		72 - 136

Client: URS Corporation

Job Number: 460-102440-1

Client Sample ID: **20151008MW-07R**

Lab Sample ID: 460-102440-5
Client Matrix: Water

Date Sampled: 10/08/2015 0000
Date Received: 10/08/2015 1810

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-329746	Instrument ID:	CVOAMS1
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	A14167.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/19/2015 1316			Final Weight/Volume:	5 mL
Prep Date:	10/19/2015 1316				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Freon TF	0.34	U	0.34	1.0
Chlorotrifluoroethene	46		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)	102		70 - 137
Toluene-d8 (Surr)	101		74 - 120
Bromofluorobenzene	96		70 - 131
Dibromofluoromethane (Surr)	103		72 - 136

Client: URS Corporation

Job Number: 460-102440-1

Client Sample ID: **TB20151008**

Lab Sample ID: 460-102440-6TB
Client Matrix: Water

Date Sampled: 10/08/2015 0000
Date Received: 10/08/2015 1810

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-329746	Instrument ID:	CVOAMS1
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	A14165.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/19/2015 1228			Final Weight/Volume:	5 mL
Prep Date:	10/19/2015 1228				

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)	94		70 - 137
Toluene-d8 (Surr)	92		74 - 120
Bromofluorobenzene	87		70 - 131
Dibromofluoromethane (Surr)	95		72 - 136

Client: URS Corporation

Job Number: 460-102440-1

Client Sample ID: **20151008MW-02**

Lab Sample ID: 460-102440-1
Client Matrix: Water

Date Sampled: 10/08/2015 0920
Date Received: 10/08/2015 1810

RSK-175 Dissolved Gases (GC)

Analysis Method:	RSK-175	Analysis Batch:	480-268423	Instrument ID:	HP5890-21
	N/A		N/A	Initial Weight/Volume:	17 mL
Dilution:	100			Final Weight/Volume:	
Analysis Date:	10/13/2015 1236			Injection Volume:	5 mL
Prep Date:	N/A			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methane	12000		100	400

Client: URS Corporation

Job Number: 460-102440-1

Client Sample ID: **20151008MW-06**

Lab Sample ID: 460-102440-2
Client Matrix: Water

Date Sampled: 10/08/2015 1027
Date Received: 10/08/2015 1810

RSK-175 Dissolved Gases (GC)

Analysis Method:	RSK-175	Analysis Batch:	480-268423	Instrument ID:	HP5890-21
	N/A		N/A	Initial Weight/Volume:	17 mL
Dilution:	100			Final Weight/Volume:	
Analysis Date:	10/13/2015 1254			Injection Volume:	5 mL
Prep Date:	N/A			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methane	7200		100	400

Client: URS Corporation

Job Number: 460-102440-1

Client Sample ID: **20151008MW-04**

Lab Sample ID: 460-102440-3
Client Matrix: Water

Date Sampled: 10/08/2015 1145
Date Received: 10/08/2015 1810

RSK-175 Dissolved Gases (GC)

Analysis Method:	RSK-175	Analysis Batch:	480-268423	Instrument ID:	HP5890-21
	N/A		N/A	Initial Weight/Volume:	17 mL
Dilution:	100			Final Weight/Volume:	
Analysis Date:	10/13/2015 1311			Injection Volume:	5 mL
Prep Date:	N/A			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methane	2100		100	400

Client: URS Corporation

Job Number: 460-102440-1

Client Sample ID: **20151008MW-03**

Lab Sample ID: 460-102440-4
Client Matrix: Water

Date Sampled: 10/08/2015 1310
Date Received: 10/08/2015 1810

RSK-175 Dissolved Gases (GC)

Analysis Method:	RSK-175	Analysis Batch:	480-268423	Instrument ID:	HP5890-21
	N/A		N/A	Initial Weight/Volume:	17 mL
Dilution:	100			Final Weight/Volume:	
Analysis Date:	10/13/2015 1329			Injection Volume:	5 mL
Prep Date:	N/A			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methane	10000		100	400

Client: URS Corporation

Job Number: 460-102440-1

Client Sample ID: **20151008MW-07R**

Lab Sample ID: 460-102440-5
Client Matrix: Water

Date Sampled: 10/08/2015 0000
Date Received: 10/08/2015 1810

RSK-175 Dissolved Gases (GC)

Analysis Method:	RSK-175	Analysis Batch:	480-268423	Instrument ID:	HP5890-21
	N/A		N/A	Initial Weight/Volume:	17 mL
Dilution:	100			Final Weight/Volume:	
Analysis Date:	10/13/2015 1346			Injection Volume:	5 mL
Prep Date:	N/A			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methane	9800		100	400

Client: URS Corporation

Job Number: 460-102440-1

Client Sample ID: **TB20151008**

Lab Sample ID: 460-102440-6TB
Client Matrix: Water

Date Sampled: 10/08/2015 0000
Date Received: 10/08/2015 1810

RSK-175 Dissolved Gases (GC)

Analysis Method:	RSK-175	Analysis Batch:	480-268423	Instrument ID:	HP5890-21
	N/A		N/A	Initial Weight/Volume:	17 mL
Dilution:	1.0			Final Weight/Volume:	
Analysis Date:	10/13/2015 1219			Injection Volume:	5 mL
Prep Date:	N/A			Result Type:	PRIMARY

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

Client: URS Corporation

Job Number: 460-102440-1

Client Sample ID: **20151008MW-02**

Lab Sample ID: 460-102440-1
Client Matrix: Water

Date Sampled: 10/08/2015 0920
Date Received: 10/08/2015 1810

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	460-330119	Instrument ID:	ICP4
Prep Method:	200.7	Prep Batch:	460-327696	Lab File ID:	329657.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	10/20/2015 1751			Final Weight/Volume:	50 mL
Prep Date:	10/09/2015 0757				

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

Client: URS Corporation

Job Number: 460-102440-1

Client Sample ID: **20151008MW-06**

Lab Sample ID: 460-102440-2
Client Matrix: Water

Date Sampled: 10/08/2015 1027
Date Received: 10/08/2015 1810

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	460-330119	Instrument ID:	ICP4
Prep Method:	200.7	Prep Batch:	460-327696	Lab File ID:	329657.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	10/20/2015 1755			Final Weight/Volume:	50 mL
Prep Date:	10/09/2015 0757				

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

Client: URS Corporation

Job Number: 460-102440-1

Client Sample ID: **20151008MW-04**

Lab Sample ID: 460-102440-3
Client Matrix: Water

Date Sampled: 10/08/2015 1145
Date Received: 10/08/2015 1810

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	460-328310	Instrument ID:	ICP4
Prep Method:	200.7	Prep Batch:	460-328214	Lab File ID:	328038.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	10/12/2015 2141			Final Weight/Volume:	50 mL
Prep Date:	10/12/2015 0827				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Iron	15800		78.3	150

Client: URS Corporation

Job Number: 460-102440-1

Client Sample ID: **20151008MW-03**

Lab Sample ID: 460-102440-4
Client Matrix: Water

Date Sampled: 10/08/2015 1310
Date Received: 10/08/2015 1810

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	460-328310	Instrument ID:	ICP4
Prep Method:	200.7	Prep Batch:	460-328214	Lab File ID:	328038.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	10/12/2015 2156			Final Weight/Volume:	50 mL
Prep Date:	10/12/2015 0827				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Iron	29500		78.3	150

Client: URS Corporation

Job Number: 460-102440-1

Client Sample ID: **20151008MW-07R**

Lab Sample ID: 460-102440-5
Client Matrix: Water

Date Sampled: 10/08/2015 0000
Date Received: 10/08/2015 1810

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	460-328310	Instrument ID:	ICP4
Prep Method:	200.7	Prep Batch:	460-328214	Lab File ID:	328038.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	10/12/2015 2200			Final Weight/Volume:	50 mL
Prep Date:	10/12/2015 0827				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Iron	39000		78.3	150

General Chemistry

Client Sample ID: **20151008MW-02**

Lab Sample ID: 460-102440-1
Client Matrix: Water

Date Sampled: 10/08/2015 0920
Date Received: 10/08/2015 1810

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	25.6		mg/L	2.0	5.0	1.0	D516-90, 02
Analysis Batch: 460-328894	Analysis Date: 10/14/2015 1439						
Bicarbonate Alkalinity as CaCO3	292		mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-328300	Analysis Date: 10/09/2015 1419						
Carbonate Alkalinity as CaCO3	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-328300	Analysis Date: 10/09/2015 1419						
Alkalinity	292		mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-328300	Analysis Date: 10/09/2015 1419						
Hydroxide Alkalinity	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-328300	Analysis Date: 10/09/2015 1419						
Hardness as calcium carbonate	424		mg/L	10.0	10.0	1.0	SM 2340C
Analysis Batch: 460-329378	Analysis Date: 10/16/2015 1100						
Ferrous Iron	2.5	J ~~HF~~	mg/L	0.048	0.10	1.0	SM 3500 FE D
Analysis Batch: 460-329361	Analysis Date: 10/16/2015 1049						
Nitrate as N	0.52	U	mg/L	0.52	2.0	20	SM 4500 NO3 F
Analysis Batch: 460-327823	Analysis Date: 10/09/2015 1538						
Nitrite as N	0.034	J	mg/L	0.0081	0.10	1.0	SM 4500 NO3 F
Analysis Batch: 460-327823	Analysis Date: 10/09/2015 1529						
Total Organic Carbon	6.2		mg/L	0.11	1.0	1.0	SM 5310B
Analysis Batch: 460-327973	Analysis Date: 10/09/2015 1405						

11/6/15

General Chemistry

Client Sample ID: **20151008MW-06**

Lab Sample ID: 460-102440-2
Client Matrix: Water

Date Sampled: 10/08/2015 1027
Date Received: 10/08/2015 1810

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	16.7		mg/L	2.0	5.0	1.0	D516-90, 02
Analysis Batch: 460-328894	Analysis Date: 10/14/2015 1441						
Bicarbonate Alkalinity as CaCO3	312		mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-328300	Analysis Date: 10/09/2015 1428						
Carbonate Alkalinity as CaCO3	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-328300	Analysis Date: 10/09/2015 1428						
Alkalinity	312		mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-328300	Analysis Date: 10/09/2015 1428						
Hydroxide Alkalinity	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-328300	Analysis Date: 10/09/2015 1428						
Hardness as calcium carbonate	337		mg/L	10.0	10.0	1.0	SM 2340C
Analysis Batch: 460-329378	Analysis Date: 10/16/2015 1100						
Ferrous Iron	0.44	J ~~HF~~	mg/L	0.048	0.10	1.0	SM 3500 FE D
Analysis Batch: 460-329361	Analysis Date: 10/16/2015 1049						
Nitrate as N	0.52	U	mg/L	0.52	2.0	20	SM 4500 NO3 F
Analysis Batch: 460-327823	Analysis Date: 10/09/2015 1542						
Nitrite as N	0.020	J	mg/L	0.0081	0.10	1.0	SM 4500 NO3 F
Analysis Batch: 460-327823	Analysis Date: 10/09/2015 1530						
Total Organic Carbon	5.5		mg/L	0.11	1.0	1.0	SM 5310B
Analysis Batch: 460-327973	Analysis Date: 10/09/2015 1424						

11/6/15

General Chemistry

Client Sample ID: 20151008MW-04

Lab Sample ID: 460-102440-3
Client Matrix: Water

Date Sampled: 10/08/2015 1145
Date Received: 10/08/2015 1810

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	7.4		mg/L	2.0	5.0	1.0	D516-90, 02
Analysis Batch: 460-328894	Analysis Date: 10/14/2015 1441						
Bicarbonate Alkalinity as CaCO3	303		mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-328300	Analysis Date: 10/09/2015 1437						
Carbonate Alkalinity as CaCO3	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-328300	Analysis Date: 10/09/2015 1437						
Alkalinity	303		mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-328300	Analysis Date: 10/09/2015 1437						
Hydroxide Alkalinity	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-328300	Analysis Date: 10/09/2015 1437						
Hardness as calcium carbonate	523		mg/L	10.0	10.0	1.0	SM 2340C
Analysis Batch: 460-329378	Analysis Date: 10/16/2015 1100						
Ferrous Iron	0.33	HF	mg/L	0.048	0.10	1.0	SM 3500 FE D
Analysis Batch: 460-329361	Analysis Date: 10/16/2015 1049						
Nitrate as N	0.52	U	mg/L	0.52	2.0	20	SM 4500 NO3 F
Analysis Batch: 460-327823	Analysis Date: 10/09/2015 1543						
Nitrite as N	0.016	J	mg/L	0.0081	0.10	1.0	SM 4500 NO3 F
Analysis Batch: 460-327823	Analysis Date: 10/09/2015 1532						
Total Organic Carbon	11.8		mg/L	0.11	1.0	1.0	SM 5310B
Analysis Batch: 460-327973	Analysis Date: 10/09/2015 1443						

General Chemistry

Client Sample ID: **20151008MW-03**

Lab Sample ID: 460-102440-4
Client Matrix: Water

Date Sampled: 10/08/2015 1310
Date Received: 10/08/2015 1810

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	48.2		mg/L	3.9	10.0	2.0	D516-90, 02
Analysis Batch: 460-328894	Analysis Date: 10/14/2015 1517						
Bicarbonate Alkalinity as CaCO3	279		mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-328300	Analysis Date: 10/09/2015 1445						
Carbonate Alkalinity as CaCO3	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-328300	Analysis Date: 10/09/2015 1445						
Alkalinity	279		mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-328300	Analysis Date: 10/09/2015 1445						
Hydroxide Alkalinity	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-328300	Analysis Date: 10/09/2015 1445						
Hardness as calcium carbonate	368		mg/L	10.0	10.0	1.0	SM 2340C
Analysis Batch: 460-329378	Analysis Date: 10/16/2015 1100						
Ferrous Iron	1.7	HF	mg/L	0.048	0.10	1.0	SM 3500 FE D
Analysis Batch: 460-329361	Analysis Date: 10/16/2015 1049						
Nitrate as N	0.52	U	mg/L	0.52	2.0	20	SM 4500 NO3 F
Analysis Batch: 460-327823	Analysis Date: 10/09/2015 1547						
Nitrite as N	0.021	J	mg/L	0.0081	0.10	1.0	SM 4500 NO3 F
Analysis Batch: 460-327823	Analysis Date: 10/09/2015 1533						
Total Organic Carbon	7.1		mg/L	0.11	1.0	1.0	SM 5310B
Analysis Batch: 460-327973	Analysis Date: 10/09/2015 1502						

General Chemistry

Client Sample ID: **20151008MW-07R**

Lab Sample ID: 460-102440-5
Client Matrix: Water

Date Sampled: 10/08/2015 0000
Date Received: 10/08/2015 1810

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	9.1		mg/L	2.0	5.0	1.0	D516-90, 02
Analysis Batch: 460-328894	Analysis Date: 10/14/2015 1441						
Bicarbonate Alkalinity as CaCO3	450		mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-328300	Analysis Date: 10/09/2015 1457						
Carbonate Alkalinity as CaCO3	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-328300	Analysis Date: 10/09/2015 1457						
Alkalinity	450		mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-328300	Analysis Date: 10/09/2015 1457						
Hydroxide Alkalinity	5.0	U	mg/L	5.0	5.0	1.0	SM 2320B
Analysis Batch: 460-328300	Analysis Date: 10/09/2015 1457						
Hardness as calcium carbonate	475		mg/L	10.0	10.0	1.0	SM 2340C
Analysis Batch: 460-329378	Analysis Date: 10/16/2015 1100						
Ferrous Iron	0.49	HF	mg/L	0.048	0.10	1.0	SM 3500 FE D
Analysis Batch: 460-329361	Analysis Date: 10/16/2015 1049						
Nitrate as N	0.52	U	mg/L	0.52	2.0	20	SM 4500 NO3 F
Analysis Batch: 460-327823	Analysis Date: 10/09/2015 1548						
Nitrite as N	0.028	J	mg/L	0.0081	0.10	1.0	SM 4500 NO3 F
Analysis Batch: 460-327823	Analysis Date: 10/09/2015 1535						
Total Organic Carbon	11.8		mg/L	0.11	1.0	1.0	SM 5310B
Analysis Batch: 460-327973	Analysis Date: 10/09/2015 1521						

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130 Research Lane, Ste 2
Guelph ON N1G 5G3
(519) 822-2265

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

Customer: Peter Fairbanks, AECOM
Project: DOW/EMCA Mamaroneck, NY
Customer Reference: 60400748

SiREM Reference: S-3714
Report Date: 26-Oct-15
Data Files: iQ5-DHC-QPCR-1285
iQ5-DB-DHC-QPCR-0639
iQ5-TBA-QPCR-0152

Table 1a: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent Dhc *	*Dehalococcoides* Enumeration/Liter **
20151008 MW-02	DHC-12267	8-Oct-15	Groundwater	0.00007 - 0.0002 %	1 x 10^3 J

Notes:

* Percent *Dehalococcoides* (Dhc) in microbial population. This value is calculated by dividing the number of Dhc 16S ribosomal ribonucleic acid (rRNA) gene copies by the total number of bacteria as estimated by the mass of DNA extracted from the sample. Range represents normal variation in Dhc enumeration.

** Based on quantification of Dhc 16S rRNA gene copies. Dhc are generally reported to contain one 16S rRNA gene copy per cell; therefore, this number is often interpreted to represent the number of Dhc cells present in the sample.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was detected in the method blank within an order of magnitude of the test sample
NA Not applicable as *Dehalococcoides* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.
E Extracted genomic DNA was not detected in sample.

Analyst: _____
Milana Madzarac B.Sc.
Laboratory Technician

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

SiREM
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130 Research Lane, Ste 2
Guelph ON N1G 5G3
(519) 822-2265

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

Customer: Peter Fairbanks, AECOM
Project: DOW/EMCA Mamaroneck, NY
Customer Reference: 60400748

SiREM Reference: S-3714
Report Date: 26-Oct-15
Data Files: MyiQ-DHB-QPCR-0366
MyiQ-DB-DHB-QPCR-0180

Table 1b: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent Dhb *	*Dehalobacter* 16S rRNA Gene Copies/Liter
20151008 MW-02	DHB-1582	8-Oct-15	Groundwater	0.02 - 0.05 %	3×10^5
20151008 MW-06	DHB-1583	8-Oct-15	Groundwater	0.00008 - 0.0002 %	1×10^3 J
2015/008 MW-04	DHB-1584	8-Oct-15	Groundwater	NA	3×10^3 U
20151008 MW-03	DHB-1585	8-Oct-15	Groundwater	0.00009 - 0.0003 %	2×10^3 J
20151008 MW-07R	DHB-1586	8-Oct-15	Groundwater	NA	2×10^4

Notes:

* Percent *Dehalobacter* (Dhb) in microbial population. This value is calculated by dividing the number of Dhb 16S ribosomal ribonucleic acid (rRNA) gene copies by the total number of bacteria as estimated by the mass of DNA extracted from the sample. Range represents normal variation in Dhb enumeration.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantitation limit.
B Analyte was also detected in the method blank.
NA Not applicable as *Dehalobacter* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.
E Extracted genomic DNA was not detected in the sample.

Analyst: _____
Milana Madzarac
Laboratory Technician

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

ATTACHMENT B

SUPPORT DOCUMENTATION

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY / ANALYSIS RE

460-102440 Chain of Custody

7
ax: (732) 549-3679

1 of 1

Name (for report and invoice)	Samplers Name (Printed)	Site/Project Identification
Peter Fairbanks	Megan Dascoli	Dow/EMCA Mamaroneck, NY
Company: URS/AECOM	P. O. #: 4501286332	State (Location of site): NJ: ☐ NY: ☒ Other:
Address:	Analysis Turnaround Time: Standard ☒; Rush Charges Authorized For: 2 Week ☐ 1 Week ☐ Other ☐	Regulatory Program:
City: Buffalo, NY State:		LAB USE ONLY Project No:
Phone: 716-856-5636 Fax:		Job No: 102440

ANALYSIS REQUESTED (ENTER 'X' BELOW TO INDICATE REQUEST)

Sample Identification	Date	Time	Matrix	No. of. Cont.	Methane	Freon 113, 123a + 1113	Sulfate	Iron, Total	Iron ferrous	Alkalinity	Hardness	TOC	nitrogen-nitrate			Sample Numbers
2015/008MW-02	10/8/15	920	GW	10	X	X	X	X	X	X	X	X	X			1
2015/008 MW-06	↓	1027	↓	10	X	X	X	X	X	X	X	X	X			2
2015/008MW-04	↓	1145	↓	10	X	X	X	X	X	X	X	X	X			3
2015/008 MW-03	↓	1310	↓	10	X	X	X	X	X	X	X	X	X			4
2015/008MW-07R	↓		↓	10	X	X	X	X	X	X	X	X	X			5
~~FB1008~~ TB2015/008	↓		W		X	X										6

SHORT HOLD

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH
6 = Other ________, 7 = Other ________ Soil: Water:

Special Instructions job # 60400748 ~~41569901.0000~~

Water Metals Filtered (Yes/No)? ________

Relinquished by	Company	Date / Time	Received by	Company
1) Megan Dascoli	URS/AECOM	10/8/15 16:00	1) [signature]	TA
2) [signature]	[illegible]	10/8/15 18:00	2) [signature]	TA 10/8/15 1810
3)			3)	
4)			4)	

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132). Massachusetts (M-NJ312), North Carolina (No. 578)

TAL-0016 (0814)

1.8 / 3.5 IR#5 no c.s.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

S:REM

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

S-3714

CHAIN OF CUSTODY / ANALYSIS REQUEST

Page 1 of 1

Name (for report and invoice) Peter Fairbanks	Samplers Name (Printed) Megan Dascoli	Site/Project Identification Dow/EMCA Manaroneck, NY
Company URS/AECom	P. O. # AECom# 60400748	State (Location of site): NJ: ☐ NY: ☒ Other:
Address 77	Analysis Turnaround Time: Standard ☒	Regulatory Program:
City Buffalo State NY USA	Rush Charges Authorized For: 2 Week ☐ 1 Week ☐ Other ☐	
Phone 716-856-5636 Fax		

ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)

LAB USE ONLY
Project No:
Job No:

Sample Identification	Date	Time	Matrix	No. of Cont.	Dehalo bacter	Dehalococcoides	Sample Numbers
20151008 MW-02	10/8/15	920	GW	2	X	X	
20151008 MW-06	"	1027	GW	1	X		
20151008 MW-04	"	1145	GW	1	X		
20151008 MW-03	"	1310	GW	1	X		
20151008 MW-07R	"	1423	GW	1	X		

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH
6 = Other _____, 7 = Other _____

Soil:
Water:

10C, cooler=good
wet ice present

Special Instructions: Shipped FedEx - 805866108632 - tracking #

Water Metals Filtered (Yes/No)? _____

Relinquished by	Company	Date / Time	Received by	Company
1) Megan Dascoli	URS/AECom	10/8/15 2000	1)	SiREM 10/09/15 3pm
Relinquished by 2)	Company	Date / Time	Received by 2)	Company
Relinquished by 3)	Company	Date / Time	Received by 3)	Company
Relinquished by 4)	Company	Date / Time	Received by 4)	Company

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132). TAL - 0016 (0814)

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

CASE NARRATIVE

Client: URS Corporation

Project: DOW Former EMCA Mamaroneck, NY

Report Number: 460-102440-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 10/8/2015 6:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.5° C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

One VOA vial was received empty for the following sample: 20151008MW-06 (460-102440-2).

VOLATILE ORGANICS
Samples 20151008MW-02 (460-102440-1), 20151008MW-06 (460-102440-2), 20151008MW-04 (460-102440-3), 20151008MW-03 (460-102440-4), 20151008MW-07R (460-102440-5) and TB20151008 (460-102440-6) were analyzed for Volatile organics in accordance with EPA SW-846 Methods 8260C. The samples were analyzed on 10/19/2015.

Sample 20151008MW-02 (460-102440-1)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the Volatile organics analysis.

All other quality control parameters were within the acceptance limits.

DISSOLVED GASES
Samples 20151008MW-02 (460-102440-1), 20151008MW-06 (460-102440-2), 20151008MW-04 (460-102440-3), 20151008MW-03 (460-102440-4), 20151008MW-07R (460-102440-5) and TB20151008 (460-102440-6) were analyzed for dissolved gases in accordance with RSK_175. The samples were analyzed on 10/13/2015.

Samples 20151008MW-02 (460-102440-1)[100X], 20151008MW-06 (460-102440-2)[100X], 20151008MW-04 (460-102440-3)[100X], 20151008MW-03 (460-102440-4)[100X] and 20151008MW-07R (460-102440-5)[100X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the dissolved gases analysis.

All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS
Samples 20151008MW-02 (460-102440-1), 20151008MW-06 (460-102440-2), 20151008MW-04 (460-102440-3), 20151008MW-03 (460-102440-4) and 20151008MW-07R (460-102440-5) were analyzed for total recoverable metals in accordance with EPA Method 200.7 (ICP). The samples were prepared on 10/09/2015 and 10/12/2015 and analyzed on 10/12/2015 and 10/20/2015.

Iron failed the recovery criteria low for the MS of sample 460-102358-2 in batch 460-330119.

The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

Refer to the QC report for details.

No other difficulties were encountered during the metals analysis.

All other quality control parameters were within the acceptance limits.

ALKALINITY
Samples 20151008MW-02 (460-102440-1), 20151008MW-06 (460-102440-2), 20151008MW-04 (460-102440-3), 20151008MW-03 (460-102440-4) and 20151008MW-07R (460-102440-5) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 10/09/2015.

No difficulties were encountered during the alkalinity analysis.

All quality control parameters were within the acceptance limits.

HARDNESS
Samples 20151008MW-02 (460-102440-1), 20151008MW-06 (460-102440-2), 20151008MW-04 (460-102440-3), 20151008MW-03 (460-102440-4) and 20151008MW-07R (460-102440-5) were analyzed for hardness in accordance with SM 2340C. The samples were analyzed on 10/16/2015.

No difficulties were encountered during the hardness analysis.

All quality control parameters were within the acceptance limits.

FERROUS IRON
Samples 20151008MW-02 (460-102440-1), 20151008MW-06 (460-102440-2), 20151008MW-04 (460-102440-3), 20151008MW-03 (460-102440-4) and 20151008MW-07R (460-102440-5) were analyzed for ferrous iron in accordance with SM 3500 FE D. The samples were analyzed on 10/16/2015.

No difficulties were encountered during the ferrous iron analysis.

All quality control parameters were within the acceptance limits.

SULFATE
Samples 20151008MW-02 (460-102440-1), 20151008MW-06 (460-102440-2), 20151008MW-04 (460-102440-3), 20151008MW-03 (460-102440-4) and 20151008MW-07R (460-102440-5) were analyzed for sulfate in accordance with ASTM Method D516-90. The samples were analyzed on 10/14/2015.

Sample 20151008MW-03 (460-102440-4)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the sulfate analysis.

All other quality control parameters were within the acceptance limits.

NITROGEN-NITRATE
Samples 20151008MW-02 (460-102440-1), 20151008MW-06 (460-102440-2), 20151008MW-04 (460-102440-3), 20151008MW-03 (460-102440-4) and 20151008MW-07R (460-102440-5) were analyzed for Nitrogen-Nitrate in accordance with SM 4500 NO3 F. The samples were analyzed on 10/09/2015.

Samples 20151008MW-02 (460-102440-1)[20X], 20151008MW-06 (460-102440-2)[20X], 20151008MW-04 (460-102440-3)[20X], 20151008MW-03 (460-102440-4)[20X] and 20151008MW-07R (460-102440-5)[20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the Niitrate analysis.

All other quality control parameters were within the acceptance limits.

TOTAL ORGANIC CARBON
Samples 20151008MW-02 (460-102440-1), 20151008MW-06 (460-102440-2), 20151008MW-04 (460-102440-3), 20151008MW-03 (460-102440-4) and 20151008MW-07R (460-102440-5) were analyzed for total organic carbon in accordance with SM 5310B. The samples were analyzed on 10/09/2015.

No difficulties were encountered during the TOC analysis.

All quality control parameters were within the acceptance limits.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Edison Job No.: 460-102440-1

SDG No.:

Batch Number: 329361 Batch Start Date: 10/16/15 09:38 Batch Analyst: Hernandez, Marie

Batch Method: SM 3500 FE D Batch End Date: 10/16/15 11:24

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	CalcMsg	LCS Fe+2 00176	WTfeSP1 00024	WTfeSP2 00023	
ICV 460-329361/1		SM 3500 FE D		50 mL	Color Resp. is Blank			0.5 mL	
ICB 460-329361/2		SM 3500 FE D			Color Resp. is Blank				
CCV 460-329361/3		SM 3500 FE D		50 mL	Color Resp. is Blank			0.5 mL	
CCB 460-329361/4		SM 3500 FE D			Color Resp. is Blank				
MB 460-329361/5		SM 3500 FE D			Color Resp. is Blank				
LCS 460-329361/6		SM 3500 FE D		50 mL	Color Resp. is Blank	50 mL			
460-102440-H-1	20151008MW-02	SM 3500 FE D	T		Color Resp. is Blank				
460-102440-I-2	20151008MW-06	SM 3500 FE D	T		Color Resp. is Blank				
460-102440-H-3	20151008MW-04	SM 3500 FE D	T		Color Resp. is Blank				
460-102440-H-4	20151008MW-03	SM 3500 FE D	T		Color Resp. is Blank				
460-102440-H-5	20151008MW-07R	SM 3500 FE D	T		Color Resp. is Blank				
CCV 460-329361/15		SM 3500 FE D		50 mL	Color Resp. is Blank			0.5 mL	
CCB 460-329361/16		SM 3500 FE D			Color Resp. is Blank				
CCV 460-329361/21		SM 3500 FE D		50 mL	Color Resp. is Blank			0.5 mL	
CCB 460-329361/22		SM 3500 FE D			Color Resp. is Blank				
MB 460-329361/23		SM 3500 FE D			Color Resp. is Blank				
LCS 460-329361/24		SM 3500 FE D		50 mL	Color Resp. is Blank	50 mL			
460-102440-H-1 MS	20151008MW-02	SM 3500 FE D	T	50 mL	Color Resp. is Blank		0.5 mL		
460-102440-H-1 MSD	20151008MW-02	SM 3500 FE D	T	50 mL	Color Resp. is Blank		0.5 mL		
CCV 460-329361/32		SM 3500 FE D		50 mL	Color Resp. is Blank			0.5 mL	
CCB 460-329361/33		SM 3500 FE D			Color Resp. is Blank				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.