



Groundwater Sampling and Analysis Report February 2009 Sampling Event

**Former EMCA Site
Mamaroneck, New York**

Prepared for:

**The Dow Chemical Company
(Formerly Rohm and Haas Company)**

Prepared by:

URS

77 Goodell Street
Buffalo, New York 14203

April 2009

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

GROUNDWATER SAMPLING AND ANALYSIS REPORT

FEBRUARY 2009 SAMPLING EVENT

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1.0 INTRODUCTION

This report presents the results of groundwater monitoring conducted on February 18 and 19, 2009 at the former EMCA site located in Mamaroneck, New York (Figure 1). The semi-annual sampling and analyses of groundwater at this site is detailed in the Draft Operation Maintenance and Monitoring Plan (URS 2007b); the monitoring program generates data used to monitor the effectiveness of remedial actions performed at the site from 2003 to 2007.

The pilot program conducted in 2003, the interim remedial measure in 2004, and the supplemental injection event in 2007 involved the injections of food-grade emulsified soybean oil and sodium lactate into groundwater to stimulate anaerobic biodegradation and the reductive dechlorination of 1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113; CAS No. 76-13-1) in site groundwater. This was the eighth groundwater sampling event since the interim remedial measure in 2004 and the third following the supplemental injection event in 2007.

2.0 GROUNDWATER SAMPLING AND ANALYSIS

Groundwater samples were collected from a total of six monitoring wells using low-flow purging and sampling procedures. Static groundwater level measurements were taken prior to purging and sampling. Field purging and sampling logs are presented in Appendix A.

Chain-of-custody 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	USEPA CLP OLM 04.3
Freon 123a	USEPA CLP OLM 04.3
Freon 1113	USEPA CLP OLM 04.3
Methane	Method 3810
Sulfate	375.4

3.0 RESULTS

Groundwater level data are presented in Table 1 and a groundwater elevation contour map is shown on Figure 2. Surface water level gauging locations WS-01, WS-02 and WS-03 were unable to be found and were assumed to be washed away or removed. As found during previous sampling events, groundwater flow was generally northwestward towards the Sheldrake River.

Groundwater monitoring results for the current event are provided in Table 2. Historical groundwater analytical results are presented on Table 3. Laboratory data sheets and a data usability summary report for the February 2009 results are provided in Appendix B. Freon 113, 123a and 1113 concentrations are shown in plan view on Figure 3 and the trend plots are presented for Freon 113 (Figure 4 and 5), Freon 123a (Figure 6), sulfate (Figure 7), methane (Figure 8), dissolved oxygen (Figure 9) and oxidation-reduction potential (Figure 10). Dissolved oxygen and oxidation-reduction potential were measured in the field by real-time instrumentation. An obstruction was found in well MW-07 at 9.91 feet below ground surface making it impossible to set the sampling depth at the midpoint of the saturated screen. Thus, the sampling depth was set at 9 feet below ground surface and a minimum of 5 well volumes was purged before sampling occurred.

4.0 DATA ASSESSMENT

The groundwater analytical data collected in February 2009 is the third set of data collected following the supplemental injection of food-grade emulsified soybean oil and sodium lactate on August 13, 2007. The two previous rounds of groundwater sampling occurred after the injection on February 28, 2008 and August 12, 2008. These results are presented in the previous Groundwater Sampling and Analysis Reports for February 2008 (URS 2008) and August 2008 (URS 2008a). The groundwater analytical results for the February 2009 sampling event indicate that Freon 113 concentrations were either at or below the remedial goal of 5 µg/L or not detected at four of the six wells sampled. A Freon 113 concentration above 5 µg/L was noted at MW-02 (1300 µg/L), increasing from 700 µg/L, and at MW-07 (46 µg/L), increasing from 3.0 J µg/L in the August 2008 event.

Freon 123a and Freon 1113 are the expected reductive dechlorination daughter products of Freon 113. Minor fluctuations were seen in the concentrations of both compounds compared to the previous sampling round. Freon 123a, which holds one less chlorine than Freon 113, increased at MW-03 (1.0 J µg/L to 40 µg/L) and MW-06 (non-detect to 35 µg/L). Concentrations remained the same or similar at MW-02 (38 J µg/L to 34 µg/L), MW-07 (16 µg/L to 20 µg/L) and at MW-04 and GZ-06 at not-detected.

Overall, little change was seen in Freon 1113 concentrations. Freon 1113, which holds two less chlorines than Freon 113, decreased from previous concentrations at MW-02 (160 µg/L to 81 J µg/L). Concentrations increased at MW-03 (10 µg/L to 38 µg/L) and MW-06 (4.0 J µg/L to 34 µg/L). Concentrations remained the same or similar at MW-04 (not-detected to 1.0 J µg/L), MW-07 (170 µg/L to 150 µg/L) and at GZ-06 at not-detected.

The February 2009 sulfate concentrations increased at wells MW-03 and MW-06, decreased at wells MW-02, MW-07, and GZ-06, and remained the same at well MW-04 at not-detected. Conversely, methane concentrations increased at all locations except at well MW-06 where it decreased from 12,000 µg/L to 9,000 µg/L. These two trends indicate slightly more reducing (more anaerobic) conditions site-wide.

Dissolved oxygen concentrations have fluctuated widely since December 2005, but in August 2008 and continuing into February 2009, concentration dropped to 0 mg/L in all wells except GZ-06 (0.36 mg/L in February 2009). Dissolved oxygen concentrations were expected to drop to near zero following injection (as was the case following the November 2004 IRM injection).

Oxidation-reduction potentials fluctuated slightly in all wells from the previous event, generally falling slightly to between -91 to -185 millivolts.

5.0 CONCLUSIONS

The Freon data trends generally show a diminishing impact of the August 2007 supplemental injection event. Freon 113 concentrations increased in four of the six wells sampled in February 2009. The trending of the Freon 113 daughter products Freon 123a and

Freon 1113 was mixed. However, this is expected following injection, as daughter products are created as the parent is reduced and the daughter products are then in turn reduced.

Methane concentrations increased across the site except at well MW-06, while sulfate, which is a competing electron acceptor with Freon, increased at wells MW-03 and MW-06, and decreased at wells MW-02, MW-07 and GZ-06. These changes in methane and sulfate concentrations indicate that there are improving reducing conditions present; however, with the increased Freon 113 concentrations, the August 2007 supplemental injection may be nearing its limit of effectiveness.

Oxidation-reduction potentials fluctuated in all wells. Following the IRM injection in November 2004 (a period of strong Freon reduction), oxidation-reduction potentials in site wells except GZ-06 were observed to fall to approximately -135 to -155 millivolts. Currently, the oxidation-reduction potentials in site wells (excluding GZ-06) appear to have a larger range (-132 to -185 millivolts). The anaerobic conditions were the strongest at MW-03 and MW-04.

Dissolved oxygen concentrations were measured to be zero at all locations except GZ-06. This indicates continued favorable conditions for anaerobic biodegradation at the site; however the strength may be weakening as indicated by the results of the Freon analyses (conditions may no longer be sufficiently anaerobic or there may be insufficient electron donor material remaining to complete the biologically mediated reaction).

Reductions in Freon concentrations as a result of the August 2007 supplemental injection appear to be the greatest and longest-lasting at GZ-06, MW-03 and MW-06. The EOS injection product is advertised to last 1-3 years. Assuming the EOS product is not completely depleted and anaerobic conditions persist, contaminant reduction will continue at a rate greater than what would occur under unaltered groundwater conditions. However, the Freon 113 results indicate that the impact of the August 2007 supplemental injection may be diminishing.

6.0 RECOMMENDATIONS

1. As per the *Operation, Maintenance and Monitoring Plan (Draft)* dated March 2007, groundwater sampling will be discontinued at an individual well (except for MW-04) when remediation goals are achieved at that well for three consecutive monitoring events (URS, 2007b). Well GZ-06 has been analyzed as not-detected for Freon 113, Freon 123A and Freon 1113 and has achieved its remediation goals for three consecutive sampling rounds (February 2008, August 2008 and February 2009). It is recommended that well GZ-06 be discontinued from further sampling events and focus be maintained on the remaining monitoring wells.
2. Because the impact of the August 2007 injections appears to have diminished to ineffectiveness and Freon 113 concentrations are persistent in the vicinity of MW-02, it may be beneficial to conduct an additional injection of food-grade substances to reductively dechlorinate the remaining Freon in groundwater at the site. Such an event would emphasize injection in the MW-02 vicinity and the most current techniques for injection would be evaluated during plan preparation.
3. Prior to the next groundwater-monitoring event, it is recommended that:
 - monitoring wells MW-02, MW-03, MW-04, MW-06 and MW-07, should be re-developed prior to sampling efforts to continue to ensure that quality groundwater samples are obtained;
 - surface seals and caps should be inspected; and
 - an attempt should be made to determine the nature of, and clear the obstruction present in well MW-07.

The next routine groundwater-monitoring event is planned for August 2009.

REFERENCES

- URS Inc., 2005. *Groundwater Sampling and Analysis Report, May 2005 Sampling Event, Former EMCA Site, Site No. 360025, Mamaroneck, New York.* August.
- URS Inc., 2006a. *Groundwater Sampling and Analysis Report, December 2005 Sampling Event, Former EMCA Site, Site No. 360025, Mamaroneck, New York.* March.
- URS Inc., 2006b. *Groundwater Sampling and Analysis Report, August 2006 Sampling Event, Former EMCA Site, Site No. 360025, Mamaroneck, New York.* October.
- URS Inc., 2007a. *Groundwater Sampling and Analysis Report, February 2007 Sampling Event, Former EMCA Site, Site No. 360025, Mamaroneck, New York.* April.
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- URS Inc., 2007c. *Groundwater Sampling and Analysis Report, August 2007 Sampling Event & Summary of Supplemental Injection Event, Former EMCA Site, Site No. 360025, Mamaroneck, New York.* October.
- URS Inc., 2008. *Groundwater Sampling and Analysis Report, February 2008 Sampling Event, Former EMCA Site, Site No 360025, Mamaroneck, New York.* May.
- URS Inc., 2008a. *Groundwater Sampling and Analysis Report, August 2008 Sampling Event, Former EMCA Site, Site No 360025, Mamaroneck, New York.* October.

TABLES

TABLE 1
GROUNDWATER ELEVATION MEASUREMENTS (February 2009)
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location	Measuring Point Elevation (ft.)	Depth to Water (ft.)	Water Surface Elevation (ft.)
GZ-03 ¹	<i>102.71</i>	9.13	<i>93.58</i>
GZ-06	101.55	7.43	94.12
MW-01	99.22	4.89	94.33
MW-02	99.18	5.85	93.33
MW-03	99.35	6.12	93.23
MW-04 ¹	<i>98.61</i>	5.52	<i>93.09</i>
MW-05	98.14	4.99	93.15
MW-06	ND	6.05	ND
MW-07	ND	6.24	ND

Notes:

- 1) The riser and protective casing are damaged at monitoring well **GZ-03**.
Well **MW-04** is damaged, pushed up ~2" above ground surface. These (italicized) water surface elevations are not included in the Groundwater Elevation Contour Map (Figure 2).
- 2) ND = Not Determined

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

Location ID			GZ-06	MW-02	MW-03	MW-04	MW-04
Sample ID			20090218GZ-06V10N	20090218MW-02V10N	20090218MW-03V10N	20090218MW-04V08N	20090218MW-04V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/18/09	02/18/09	02/18/09	02/18/09	02/18/09
Parameter	Units	Criteria*				Field Duplicate (1-1)	
Volatiles							
Chlorotrifluoroethene (Freon-1113)	UG/L	5	10 U	81 J	38	1.0 J	1.0 J
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	10 U	1,300	5.0 J	10 U	10 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	10 U	34 J	40	10 U	10 U
Dissolved Gases							
Methane	UG/L	-	8,700	8,000	13,000	1,600	1,600
Miscellaneous Parameters							
Sulfate	MG/L	250	5 UJ	35.2 J	50.7 J	5 UJ	5 UJ
Field Parameter							
Dissolved Oxygen	MG/L	-	0.36	0 U	0 U	NA	0 U
Oxidation Reduction Potential	mV	-	-91	-154	-185	NA	-158
pH	S.U.	-	6.12	6.26	6.06	NA	6.33
Specific Conductance	MS/CM	-	2.13	2.55	2.08	NA	1.75
Temperature	DEG C	-	9.24	11.23	12.87	NA	9.36
Turbidity	NTU	-	16	5	5	NA	4

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

Flags assigned during chemistry validation are shown.



Concentration Exceeds Criteria

U - Non-Detect

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

NA - Not Analyzed

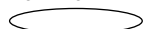
Detection Limits shown are PQL

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

Location ID			MW-06	MW-07
Sample ID			20090219MW-06V13N	20090218MW-07V09N
Matrix			Groundwater	Groundwater
Depth Interval (ft)			-	-
Date Sampled			02/19/09	02/18/09
Parameter	Units	Criteria*		
Volatiles				
Chlorotrifluoroethene (Freon-1113)	UG/L	5	34	150
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	2.0 J	46
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	35	20
Dissolved Gases				
Methane	UG/L	-	9,000	11,000
Miscellaneous Parameters				
Sulfate	MG/L	250	57.0 J	5 UJ
Field Parameter				
Dissolved Oxygen	MG/L	-	0 U	0 U
Oxidation Reduction Potential	mV	-	-132	-154
pH	S.U.	-	6.30	6.18
Specific Conductance	MS/CM	-	0.84	2.01
Temperature	DEG C	-	13.23	12.11
Turbidity	NTU	-	8	21

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

Flags assigned during chemistry validation are shown.



Concentration Exceeds Criteria

U - Non-Detect

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

NA - Not Analyzed

Detection Limits shown are PQL

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		GZ-03	GZ-06	GZ-06	GZ-06	GZ-06
Sample ID		20070801GZ-03V11N	GZ06_52103	GZ06	GZ06-091703	GZ-06-121803
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		08/01/07	05/21/03	07/23/03	09/17/03	12/18/03
Parameter	Units					
Volatiles						
Acetone	UG/L	NA	5.0 U	10 U	5.0 U	5.0 U
Benzene	UG/L	NA	5.0 U	10 U	5.0 U	5.0 U
Methyl ethyl ketone (2-Butanone)	UG/L	NA	R	R	R	R
Chlorotrifluoroethene (Freon-1113)	UG/L	10 U	0 U	0 U	5.4 NJ	0 U
1,1-Dichloroethene	UG/L	NA	0.8 J	1.5 J	2.0 U	2.0 U
cis-1,2-Dichloroethene	UG/L	NA	5.0 U	10 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	UG/L	NA	5.0 U	10 U	5.0 U	5.0 U
Ethylbenzene	UG/L	NA	4.0 U	8 U	4.0 U	4.0 U
2-Hexanone	UG/L	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
Tetrachloroethene	UG/L	NA	0.6 J	2 U	0.5 J	1.0 U
Trichloroethene	UG/L	NA	1.0 U	2 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	10 U	100	230	74	5.0 U
Vinyl Chloride	UG/L	NA	5.0 U	10 U	5.0 U	5.0 U
Xylene (total)	UG/L	NA	5.0 U	10 U	5.0 U	5.0 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	10 U	20	41	26	0.7 J
Dissolved Gases						
Methane	UG/L	5.0 U	140	98	89	5.9
Total Metals						
Iron	UG/L	NA	2,390	866	517 J	173
Dissolved Metals						
Iron	UG/L	NA	2,290	778	583 J	85.3 B

Flags assigned during chemistry validation are shown.

B - Value between Instrument Detection Limit and Contract Required Detection Limit.

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

UJ - Not detected above the estimated quantitation limit

U - Non-Detect

NA - Not Analyzed

R - Rejected

Only Detected Results Reported.

Detection Limits shown are PQL

Advanced Selection: WG Feb09 Tab:

N:\11172730.00000\BIPROGRAM\EDMS.mde

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((LOGDATE) BETWEEN #05/01/03# AND #02/19/09#) AND [MATRIX] = 'WG' AND ([SACODE] = 'N' OR [SACODE] = 'FD'

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		GZ-03	GZ-06	GZ-06	GZ-06	GZ-06
Sample ID		20070801GZ-03V11N	GZ06_52103	GZ06	GZ06-091703	GZ-06-121803
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		08/01/07	05/21/03	07/23/03	09/17/03	12/18/03
Parameter	Units					
Miscellaneous Parameters						
Chloride	MG/L	NA	559	474	477 J	218
Nitrogen, Ammonia (As N)	MG/L	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	NA	0.1 U	NA	0.58	0.1 U
Nitrogen, Nitrate-Nitrite	MG/L	NA	NA	0.12 J	NA	NA
Sulfate	MG/L	15.8	25.2	27.5	32.4	5.0 U
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	NA	0.1 U	0.1 U	0.1 U	0.32
Oil & Grease	MG/L	NA	NA	NA	R	NA
Field Parameter						
Dissolved Oxygen	MG/L	0.52	0.76	0.5	0.48	6.86
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

Flags assigned during chemistry validation are shown.

B - Value between Instrument Detection Limit and Contract Required Detection Limit.

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

UJ - Not detected above the estimated quantitation limit

U - Non-Detect

NA - Not Analyzed

R - Rejected

Only Detected Results Reported.

Detection Limits shown are PQL

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		GZ-06	GZ-06	GZ-06	GZ-06	GZ-06
Sample ID		GZ06	GZ-06	MW-GZ-06V08N	GZ-0608N	20061117GZ-0608
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		07/22/04	05/31/05	12/20/05	08/15/06	11/17/06
Parameter	Units					
Volatiles						
Acetone	UG/L	NA	NA	NA	NA	NA
Benzene	UG/L	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	24	15	10 U	13	2.0 J
1,1-Dichloroethene	UG/L	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	NA	NA	NA	NA	NA
Ethylbenzene	UG/L	NA	NA	NA	NA	NA
2-Hexanone	UG/L	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	NA	NA	NA	NA	NA
Trichloroethene	UG/L	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	100 J	9.0 J	10 U	74	2.0 J
Vinyl Chloride	UG/L	NA	NA	NA	NA	NA
Xylene (total)	UG/L	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	36	4.0 J	2.0 J	23	2.0 J
Dissolved Gases						
Methane	UG/L	48	310	74	140	180
Total Metals						
Iron	UG/L	NA	NA	NA	NA	NA
Dissolved Metals						
Iron	UG/L	NA	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

B - Value between Instrument Detection Limit and Contract Required Detection Limit.

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

UJ - Not detected above the estimated quantitation limit

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NA - Not Analyzed

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Only Detected Results Reported.

Detection Limits shown are PQL

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((LOGDATE) BETWEEN #05/01/03# AND #02/19/09#) AND [MATRIX] = 'WG' AND ([SACODE] = 'N' OR [SACODE] = 'FD'

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		GZ-06	GZ-06	GZ-06	GZ-06	GZ-06
Sample ID		GZ06	GZ-06	MW-GZ-06V08N	GZ-0608N	20061117GZ-0608
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		07/22/04	05/31/05	12/20/05	08/15/06	11/17/06
Parameter	Units					
Miscellaneous Parameters						
Chloride	MG/L	1,610	NA	NA	NA	NA
Nitrogen, Ammonia (As N)	MG/L	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	NA	NA	NA	NA	NA
Sulfate	MG/L	20.8	14.2	31.7	23.2	25.1
Ferrous Iron (field)	MG/L	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	NA	NA	NA	NA	NA
Fluoride	MG/L	1.00 U	NA	NA	NA	NA
Oil & Grease	MG/L	NA	NA	NA	NA	NA
Field Parameter						
Dissolved Oxygen	MG/L	1.15	0.11	0.03	5.67	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

Flags assigned during chemistry validation are shown.

B - Value between Instrument Detection Limit and Contract Required Detection Limit.

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

UJ - Not detected above the estimated quantitation limit

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NA - Not Analyzed

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Only Detected Results Reported.

Detection Limits shown are PQL

Advanced Selection: WG Feb09 Tab:
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([LOGDATE] BETWEEN #05/01/03# AND #02/19/09#) AND [MATRIX] = 'WG' AND ([SACODE] = 'N' OR [SACODE] = 'FD')

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		GZ-06	GZ-06	GZ-06	GZ-06	GZ-06
Sample ID		20061117GZ0608FD	20070207GZ-06V08N	20070731GZ-06V08	20080228GZ06V08	20080812GZ06V10N
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		11/17/06	02/07/07	07/31/07	02/28/08	08/12/08
Parameter	Units	Field Duplicate (1-1)				
Volatiles						
Acetone	UG/L	NA	NA	NA	NA	NA
Benzene	UG/L	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	2.0 J	1.0 J	2.0 J	10 U	10 U
1,1-Dichloroethene	UG/L	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	NA	NA	NA	NA	NA
Ethylbenzene	UG/L	NA	NA	NA	NA	NA
2-Hexanone	UG/L	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	NA	NA	NA	NA	NA
Trichloroethene	UG/L	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	2.0 J	14	13	10 UJ	10 U
Vinyl Chloride	UG/L	NA	NA	NA	NA	NA
Xylene (total)	UG/L	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	2.0 J	4.0 J	10	10 U	10 U
Dissolved Gases						
Methane	UG/L	210	360	23	5,900	880
Total Metals						
Iron	UG/L	NA	NA	NA	NA	NA
Dissolved Metals						
Iron	UG/L	NA	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

B - Value between Instrument Detection Limit and Contract Required Detection Limit.

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UJ - Not detected above the estimated quantitation limit

U - Non-Detect

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Only Detected Results Reported.

Detection Limits shown are PQL

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((LOGDATE) BETWEEN #05/01/03# AND #02/19/09#) AND [MATRIX] = 'WG' AND ([SACODE] = 'N' OR [SACODE] = 'FD'

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		GZ-06	GZ-06	GZ-06	GZ-06	GZ-06
Sample ID		20061117GZ0608FD	20070207GZ-06V08N	20070731GZ-06V08	20080228GZ06V08	20080812GZ06V10N
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		11/17/06	02/07/07	07/31/07	02/28/08	08/12/08
Parameter	Units	Field Duplicate (1-1)				
Miscellaneous Parameters						
Chloride	MG/L	NA	NA	NA	NA	NA
Nitrogen, Ammonia (As N)	MG/L	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	NA	NA	NA	NA	NA
Sulfate	MG/L	25.4	29.3	50.4	5 U	28.1
Ferrous Iron (field)	MG/L	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	NA	NA	NA	NA	NA
Fluoride	MG/L	NA	NA	NA	NA	NA
Oil & Grease	MG/L	NA	NA	NA	NA	NA
Field Parameter						
Dissolved Oxygen	MG/L	NA	4.17	1.18	4.1	0.91
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

Flags assigned during chemistry validation are shown.

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((LOGDATE) BETWEEN #05/01/03# AND #02/19/09#) AND [MATRIX] = 'WG' AND ([SACODE] = 'N' OR [SACODE] = 'FD'

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		GZ-06	MW-01	MW-02	MW-02	MW-02
Sample ID		20090218GZ-06V10N	20070801MW-01V08N	MW02-5-20-03	MW02-5-20-03DUP	DUP-7_22_03
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		02/18/09	08/01/07	05/20/03	05/20/03	07/22/03
Parameter	Units				Field Duplicate (1-1)	Field Duplicate (1-1)
Volatiles						
Acetone	UG/L	NA	NA	140 J	130 J	R
Benzene	UG/L	NA	NA	50 U	25 U	50 U
Methyl ethyl ketone (2-Butanone)	UG/L	NA	NA	R	R	R
Chlorotrifluoroethene (Freon-1113)	UG/L	10 U	20 U	0 U	0 U	0 U
1,1-Dichloroethene	UG/L	NA	20 U	4.4 J	5.1 J	8.2 J
cis-1,2-Dichloroethene	UG/L	NA	250	50 U	25 U	50 U
trans-1,2-Dichloroethene	UG/L	NA	4.0 J	50 U	25 U	50 U
Ethylbenzene	UG/L	NA	NA	40 U	20 U	40 U
2-Hexanone	UG/L	NA	NA	50 U	25 U	50 U
4-Methyl-2-Pentanone	UG/L	NA	NA	50 U	25 U	50 U
Tetrachloroethene	UG/L	NA	8.0 J	10 U	5.0 U	10 U
Trichloroethene	UG/L	NA	5.0 J	10 U	5.0 U	10 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	10 U	20 U	710	880	1,000
Vinyl Chloride	UG/L	NA	5.0 J	50 U	25 U	50 U
Xylene (total)	UG/L	NA	NA	50 U	25 U	7.1 J
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	10 U	20 U	34 J	40	40 J
Dissolved Gases						
Methane	UG/L	8,700	98	26	32	54
Total Metals						
Iron	UG/L	NA	NA	27,800	28,300	30,100
Dissolved Metals						
Iron	UG/L	NA	NA	27,900	28,200	30,500

Flags assigned during chemistry validation are shown.

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TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		GZ-06	MW-01	MW-02	MW-02	MW-02
Sample ID		20090218GZ-06V10N	20070801MW-01V08N	MW02-5-20-03	MW02-5-20-03DUP	DUP-7_22_03
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		02/18/09	08/01/07	05/20/03	05/20/03	07/22/03
Parameter	Units				Field Duplicate (1-1)	Field Duplicate (1-1)
Miscellaneous Parameters						
Chloride	MG/L	NA	NA	338	338	307
Nitrogen, Ammonia (As N)	MG/L	NA	NA	3.3	3.4	4.1
Nitrogen, Kjeldahl, Total	MG/L	NA	NA	6.6	6.2	6.6
Nitrogen, Nitrate	MG/L	NA	NA	0.15	0.16	0.1 U
Nitrogen, Nitrate-Nitrite	MG/L	NA	NA	NA	NA	NA
Sulfate	MG/L	5 U	39.2	44.0	46.0	32.3
Ferrous Iron (field)	MG/L	NA	NA	25.3	NA	25.7
Ferric Iron (lab)	MG/L	NA	NA	2.5	3	4.4
Fluoride	MG/L	NA	NA	0.28	0.3	0.37
Oil & Grease	MG/L	NA	NA	NA	NA	NA
Field Parameter						
Dissolved Oxygen	MG/L	0.36	0.99	0.36	NA	NA
Oxidation Reduction Potential	mV	-91	95.4	-108	NA	NA
pH	S.U.	6.12	6.25	NA	NA	NA
Specific Conductance	MS/CM	2.13	1.755	1.68	NA	NA
Temperature	DEG C	9.24	NA	NA	NA	NA
Turbidity	NTU	16	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

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TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID		MW02-7_22_03	MW02-091803	MW-02-121803	MW-02	MW-02
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		07/22/03	09/18/03	12/18/03	07/22/04	05/31/05
Parameter	Units					
Volatiles						
Acetone	UG/L	R	5.0 U	5.0 U	NA	NA
Benzene	UG/L	50 U	5.0 U	5.0 U	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	R	R	R	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	0 U	0 U	0 U	14	120
1,1-Dichloroethene	UG/L	7.5 J	2.0 U	2.0 U	NA	NA
cis-1,2-Dichloroethene	UG/L	50 U	5.0 U	5.0 U	NA	NA
trans-1,2-Dichloroethene	UG/L	50 U	5.0 U	5.0 U	NA	NA
Ethylbenzene	UG/L	3.4 J	4.0 U	4.0 U	NA	NA
2-Hexanone	UG/L	50 U	5.0 U	5.0 U	NA	NA
4-Methyl-2-Pentanone	UG/L	50 U	5.0 U	5.0 U	NA	NA
Tetrachloroethene	UG/L	10 U	1.0 U	1.0 U	NA	NA
Trichloroethene	UG/L	10 U	1.0 U	1.0 U	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	1,000	54	12	21 J	1,200
Vinyl Chloride	UG/L	50 U	5.0 U	5.0 U	NA	NA
Xylene (total)	UG/L	11 J	5.0 U	5.0 U	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	41 J	7.8	3.3 J	4 J	86 J
Dissolved Gases						
Methane	UG/L	52	410	320	140	2,000
Total Metals						
Iron	UG/L	30,900	63,800 J	69,000	NA	NA
Dissolved Metals						
Iron	UG/L	30,500	60,900 J	69,300	NA	NA

Flags assigned during chemistry validation are shown.

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((LOGDATE) BETWEEN #05/01/03# AND #02/19/09#) AND [MATRIX] = 'WG' AND ([SACODE] = 'N' OR [SACODE] = 'FD'

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID		MW02-7_22_03	MW02-091803	MW-02-121803	MW-02	MW-02
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		07/22/03	09/18/03	12/18/03	07/22/04	05/31/05
Parameter	Units					
Miscellaneous Parameters						
Chloride	MG/L	283	839	769	238	NA
Nitrogen, Ammonia (As N)	MG/L	3.8	11.5	11.9	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	6.1	17.1	16.9	NA	NA
Nitrogen, Nitrate	MG/L	0.1	0.1 U	0.1 U	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	NA	NA	NA	NA	NA
Sulfate	MG/L	32.5	4.80	5.0 U	15.2	25.2
Ferrous Iron (field)	MG/L	28.0	49.3	6.3	NA	NA
Ferric Iron (lab)	MG/L	2.9	48.3	62.7	NA	NA
Fluoride	MG/L	0.39	0.3	0.31	0.294	NA
Oil & Grease	MG/L	NA	5 U	NA	NA	NA
Field Parameter						
Dissolved Oxygen	MG/L	0.26	0.53	0 U	0.91	0 U
Oxidation Reduction Potential	mV	-190	-99	-108	-133	-140
pH	S.U.	NA	NA	NA	NA	NA
Specific Conductance	MS/CM	1.65	3.17	3.28	2.34	1.19
Temperature	DEG C	NA	NA	NA	NA	NA
Turbidity	NTU	NA	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

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R - Rejected

Only Detected Results Reported.

Detection Limits shown are PQL

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID		MW-02V06N	MW-02V15N	20061117MW02VISN	20070207MW-02V06N	20070731MW-02V15N
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		12/20/05	08/14/06	11/17/06	02/07/07	07/31/07
Parameter	Units					
Volatiles						
Acetone	UG/L	NA	NA	NA	NA	NA
Benzene	UG/L	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	18	200	21	84	61
1,1-Dichloroethene	UG/L	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	NA	NA	NA	NA	NA
Ethylbenzene	UG/L	NA	NA	NA	NA	NA
2-Hexanone	UG/L	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	NA	NA	NA	NA	NA
Trichloroethene	UG/L	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	110	890	100	800	290
Vinyl Chloride	UG/L	NA	NA	NA	NA	NA
Xylene (total)	UG/L	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	15	110	10	95	40
Dissolved Gases						
Methane	UG/L	5,800	5,500	4,300	6,300	2,900
Total Metals						
Iron	UG/L	NA	NA	NA	NA	NA
Dissolved Metals						
Iron	UG/L	NA	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

B - Value between Instrument Detection Limit and Contract Required Detection Limit.

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

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U - Non-Detect

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Only Detected Results Reported.

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TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-02	MW-02	MW-02	MW-02	MW-02
Sample ID		MW-02V06N	MW-02V15N	20061117MW02VISN	20070207MW-02V06N	20070731MW-02V15N
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		12/20/05	08/14/06	11/17/06	02/07/07	07/31/07
Parameter	Units					
Miscellaneous Parameters						
Chloride	MG/L	NA	NA	NA	NA	NA
Nitrogen, Ammonia (As N)	MG/L	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	NA	NA	NA	NA	NA
Sulfate	MG/L	5.0 U	27.1	5.0 U	15.9	27.6
Ferrous Iron (field)	MG/L	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	NA	NA	NA	NA	NA
Fluoride	MG/L	NA	NA	NA	NA	NA
Oil & Grease	MG/L	NA	NA	NA	NA	NA
Field Parameter						
Dissolved Oxygen	MG/L	0 U	4.92	NA	1.56	0.31
Oxidation Reduction Potential	mV	-137	-144	NA	-120	-97.2
pH	S.U.	NA	NA	NA	NA	6.39
Specific Conductance	MS/CM	2.51	1.55	NA	1.77	2.357
Temperature	DEG C	NA	NA	NA	NA	NA
Turbidity	NTU	NA	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

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Only Detected Results Reported.

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TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-02	MW-02	MW-02	MW-03	MW-03
Sample ID		20080228MW02V15N	20080812MW02V10N	20090218MW-02V10N	MW03_52103	MW03
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		02/28/08	08/12/08	02/18/09	05/21/03	07/23/03
Parameter	Units					
Volatiles						
Acetone	UG/L	NA	NA	NA	250 U	78
Benzene	UG/L	NA	NA	NA	250 U	2.3
Methyl ethyl ketone (2-Butanone)	UG/L	NA	NA	NA	R	130 J
Chlorotrifluoroethene (Freon-1113)	UG/L	120 J	160	81 J	0 U	7.0 NJ
1,1-Dichloroethene	UG/L	NA	NA	NA	33 J	2.0 U
cis-1,2-Dichloroethene	UG/L	NA	NA	NA	250 U	5.0 U
trans-1,2-Dichloroethene	UG/L	NA	NA	NA	250 U	5.0 U
Ethylbenzene	UG/L	NA	NA	NA	200 U	0.3 J
2-Hexanone	UG/L	NA	NA	NA	250 U	5.0 U
4-Methyl-2-Pentanone	UG/L	NA	NA	NA	250 U	5.0 U
Tetrachloroethene	UG/L	NA	NA	NA	50 U	1.0 U
Trichloroethene	UG/L	NA	NA	NA	50 U	1.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	830 J	700	1,300	5,800	68
Vinyl Chloride	UG/L	NA	NA	NA	250 U	5.0 U
Xylene (total)	UG/L	NA	NA	NA	250 U	1.1 J
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	72	38 J	34 J	78 J	43
Dissolved Gases						
Methane	UG/L	6,400	6,200	8,000	86	56
Total Metals						
Iron	UG/L	NA	NA	NA	1,170	150,000
Dissolved Metals						
Iron	UG/L	NA	NA	NA	267	152,000

Flags assigned during chemistry validation are shown.

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TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-02	MW-02	MW-02	MW-03	MW-03
Sample ID		20080228MW02V15N	20080812MW02V10N	20090218MW-02V10N	MW03_52103	MW03
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		02/28/08	08/12/08	02/18/09	05/21/03	07/23/03
Parameter	Units					
Miscellaneous Parameters						
Chloride	MG/L	NA	NA	NA	113	143
Nitrogen, Ammonia (As N)	MG/L	NA	NA	NA	0.36	2.7
Nitrogen, Kjeldahl, Total	MG/L	NA	NA	NA	1.3	10.8
Nitrogen, Nitrate	MG/L	NA	NA	NA	2	NA
Nitrogen, Nitrate-Nitrite	MG/L	NA	NA	NA	NA	0.1 UJ
Sulfate	MG/L	23.2	47.9	35.2	32.7	26.9
Ferrous Iron (field)	MG/L	NA	NA	NA	0.5	3.7
Ferric Iron (lab)	MG/L	NA	NA	NA	0.67	146
Fluoride	MG/L	NA	NA	NA	0.28	0.44
Oil & Grease	MG/L	NA	NA	NA	NA	NA
Field Parameter						
Dissolved Oxygen	MG/L	2.87	0 U	0 U	0.58	0 U
Oxidation Reduction Potential	mV	-131.0	-119	-154	40	-103
pH	S.U.	6.38	6.40	6.26	NA	NA
Specific Conductance	MS/CM	2.18	2.14	2.55	0.638	4.35
Temperature	DEG C	10.5	18.9	11.23	NA	NA
Turbidity	NTU	28	3	5	NA	NA

Flags assigned during chemistry validation are shown.

B - Value between Instrument Detection Limit and Contract Required Detection Limit.

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

UJ - Not detected above the estimated quantitation limit

U - Non-Detect

NA - Not Analyzed

R - Rejected

Only Detected Results Reported.

Detection Limits shown are PQL

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID		DUP-91703	MW03-091703	DUP1_121703	MW-03_121703	MW-03
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		09/17/03	09/17/03	12/17/03	12/17/03	07/23/04
Parameter	Units	Field Duplicate (1-1)		Field Duplicate (1-1)		
Volatiles						
Acetone	UG/L	110	110	130 J	120 J	NA
Benzene	UG/L	2.2	1.8	10 U	10 U	NA
Methyl ethyl ketone (2-Butanone)	UG/L	69 J	65 J	39 J	38 J	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	6.2 NJ	0 U	0 U	0 U	68 J
1,1-Dichloroethene	UG/L	2.0 U	2.0 U	4.0 U	4 U	NA
cis-1,2-Dichloroethene	UG/L	5.0 U	5.0 U	10 U	10 U	NA
trans-1,2-Dichloroethene	UG/L	5.0 U	5.0 U	10 U	10 U	NA
Ethylbenzene	UG/L	4.0 U	4.0 U	8.0 U	8 U	NA
2-Hexanone	UG/L	19	16	10 U	10 U	NA
4-Methyl-2-Pentanone	UG/L	11	11	10 U	10 U	NA
Tetrachloroethene	UG/L	1.0 U	1.0 U	4.9	4.6	NA
Trichloroethene	UG/L	1.0 U	1.0 U	2.0 U	2 U	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	26	16	150	150	4,900 J
Vinyl Chloride	UG/L	5.0 U	5.0 U	10 U	10 U	NA
Xylene (total)	UG/L	5.0 U	5.0 U	10 U	10 U	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	180	110	170	160	3,900
Dissolved Gases						
Methane	UG/L	2,400	2,500	7,200	4,900	2,700
Total Metals						
Iron	UG/L	174,000 J	178,000 J	156,000	164,000	NA
Dissolved Metals						
Iron	UG/L	187,000 J	186,000 J	167,000	176,000	NA

Flags assigned during chemistry validation are shown.

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Only Detected Results Reported.

Detection Limits shown are PQL

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((LOGDATE) BETWEEN #05/01/03# AND #02/19/09#) AND [MATRIX] = 'WG' AND ([SACODE] = 'N' OR [SACODE] = 'FD'

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID		DUP-91703	MW03-091703	DUP1_121703	MW-03_121703	MW-03
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		09/17/03	09/17/03	12/17/03	12/17/03	07/23/04
Parameter	Units	Field Duplicate (1-1)		Field Duplicate (1-1)		
Miscellaneous Parameters						
Chloride	MG/L	99.2 J	91.5 J	224	192	71.7
Nitrogen, Ammonia (As N)	MG/L	0.86	0.95	1.4	1.2	NA
Nitrogen, Kjeldahl, Total	MG/L	4.5	4.4	4.0	4.0	NA
Nitrogen, Nitrate	MG/L	0.1 U	0.1 U	0.1 U	0.1 U	NA
Nitrogen, Nitrate-Nitrite	MG/L	NA	NA	NA	NA	NA
Sulfate	MG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Ferrous Iron (field)	MG/L	25.5	27.9	23.5	30.0	NA
Ferric Iron (lab)	MG/L	67.0	93.0	132	134	NA
Fluoride	MG/L	0.27	0.2	0.22	0.25	0.397
Oil & Grease	MG/L	R	R	NA	NA	NA
Field Parameter						
Dissolved Oxygen	MG/L	NA	0.01	NA	0.35	1.05
Oxidation Reduction Potential	mV	NA	-90	NA	-59	-143
pH	S.U.	NA	NA	NA	NA	NA
Specific Conductance	MS/CM	NA	1.64	NA	1.99	2.40
Temperature	DEG C	NA	NA	NA	NA	NA
Turbidity	NTU	NA	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

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((LOGDATE) BETWEEN #05/01/03# AND #02/19/09#) AND [MATRIX] = 'WG' AND ([SACODE] = 'N' OR [SACODE] = 'FD'

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID		MW-03	MW-03VION	MW-03V15N	20070207MW-03V10N	20070731MW-03V10N
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					
Volatiles						
Acetone	UG/L	NA	NA	NA	NA	NA
Benzene	UG/L	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	83	2.0 J	51	39	54
1,1-Dichloroethene	UG/L	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	NA	NA	NA	NA	NA
Ethylbenzene	UG/L	NA	NA	NA	NA	NA
2-Hexanone	UG/L	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	NA	NA	NA	NA	NA
Trichloroethene	UG/L	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	2.0 J	10 U	10 U	10	2.0 J
Vinyl Chloride	UG/L	NA	NA	NA	NA	NA
Xylene (total)	UG/L	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	14	1.0 J	0.8 J	48	7.0 J
Dissolved Gases						
Methane	UG/L	6,300	10,000	7,400	15,000	4,500
Total Metals						
Iron	UG/L	NA	NA	NA	NA	NA
Dissolved Metals						
Iron	UG/L	NA	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

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Only Detected Results Reported.

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TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID		MW-03	MW-03VION	MW-03V15N	20070207MW-03V10N	20070731MW-03V10N
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					
Miscellaneous Parameters						
Chloride	MG/L	NA	NA	NA	NA	NA
Nitrogen, Ammonia (As N)	MG/L	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	NA	NA	NA	NA	NA
Sulfate	MG/L	5.0 U	5.0 U	5.0 U	7.80	38.4
Ferrous Iron (field)	MG/L	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	NA	NA	NA	NA	NA
Fluoride	MG/L	NA	NA	NA	NA	NA
Oil & Grease	MG/L	NA	NA	NA	NA	NA
Field Parameter						
Dissolved Oxygen	MG/L	1.24	0 U	5.36	2.44	0.22
Oxidation Reduction Potential	mV	-133	-151	-123	-116	-79.7
pH	S.U.	NA	NA	NA	NA	6.15
Specific Conductance	MS/CM	3.19	1.20	0.946	0.91	1.309
Temperature	DEG C	NA	NA	NA	NA	NA
Turbidity	NTU	NA	NA	NA	NA	NA

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TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-03	MW-03	MW-03	MW-03	MW-04
Sample ID		20080228MW03V10N	20080812MW03V10FD	20080812MW03V10N	20090218MW-03V10N	MW04-5-20-03
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		02/28/08	08/12/08	08/12/08	02/18/09	05/20/03
Parameter	Units		Field Duplicate (1-1)			
Volatiles						
Acetone	UG/L	NA	NA	NA	NA	5.0 U
Benzene	UG/L	NA	NA	NA	NA	5.0 U
Methyl ethyl ketone (2-Butanone)	UG/L	NA	NA	NA	NA	R
Chlorotrifluoroethene (Freon-1113)	UG/L	13 J	10	10	38	0 U
1,1-Dichloroethene	UG/L	NA	NA	NA	NA	2.0 U
cis-1,2-Dichloroethene	UG/L	NA	NA	NA	NA	5.0 U
trans-1,2-Dichloroethene	UG/L	NA	NA	NA	NA	5.0 U
Ethylbenzene	UG/L	NA	NA	NA	NA	4.0 U
2-Hexanone	UG/L	NA	NA	NA	NA	5.0 U
4-Methyl-2-Pentanone	UG/L	NA	NA	NA	NA	5.0 U
Tetrachloroethene	UG/L	NA	NA	NA	NA	1.0 U
Trichloroethene	UG/L	NA	NA	NA	NA	1.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	0.5 J	10 U	10 U	5.0 J	5.0 U
Vinyl Chloride	UG/L	NA	NA	NA	NA	5.0 U
Xylene (total)	UG/L	NA	NA	NA	NA	5.0 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	4.0 J	1.0 J	1.0 J	40	5.0 U
Dissolved Gases						
Methane	UG/L	18,000	10,000	8,400	13,000	380
Total Metals						
Iron	UG/L	NA	NA	NA	NA	18,400
Dissolved Metals						
Iron	UG/L	NA	NA	NA	NA	18,500

Flags assigned during chemistry validation are shown.

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Only Detected Results Reported.

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((LOGDATE) BETWEEN #05/01/03# AND #02/19/09#) AND [MATRIX] = 'WG' AND ([SACODE] = 'N' OR [SACODE] = 'FD')

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-03	MW-03	MW-03	MW-03	MW-04
Sample ID		20080228MW03V10N	20080812MW03V10FD	20080812MW03V10N	20090218MW-03V10N	MW04-5-20-03
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		02/28/08	08/12/08	08/12/08	02/18/09	05/20/03
Parameter	Units		Field Duplicate (1-1)			
Miscellaneous Parameters						
Chloride	MG/L	NA	NA	NA	NA	238
Nitrogen, Ammonia (As N)	MG/L	NA	NA	NA	NA	1.6
Nitrogen, Kjeldahl, Total	MG/L	NA	NA	NA	NA	6.2
Nitrogen, Nitrate	MG/L	NA	NA	NA	NA	0.1 U
Nitrogen, Nitrate-Nitrite	MG/L	NA	NA	NA	NA	NA
Sulfate	MG/L	14.1	30.0	28.1	50.7	5.0 U
Ferrous Iron (field)	MG/L	NA	NA	NA	NA	17.6
Ferric Iron (lab)	MG/L	NA	NA	NA	NA	0.76
Fluoride	MG/L	NA	NA	NA	NA	0.27
Oil & Grease	MG/L	NA	NA	NA	NA	NA
Field Parameter						
Dissolved Oxygen	MG/L	2.94	NA	0 U	0 U	0.54
Oxidation Reduction Potential	mV	-123.0	NA	-149	-185	-115
pH	S.U.	6.15	NA	6.36	6.06	NA
Specific Conductance	MS/CM	1.36	NA	1.69	2.08	1.61
Temperature	DEG C	11.6	NA	17.8	12.87	NA
Turbidity	NTU	41	NA	2	5	NA

Flags assigned during chemistry validation are shown.

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Only Detected Results Reported.

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TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID		MW-04_121703	Dup1	MW-04	MW-04	MW-04VION
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		12/17/03	07/22/04	07/22/04	05/31/05	12/20/05
Parameter	Units		Field Duplicate (1-1)			
Volatiles						
Acetone	UG/L	5.0 U	NA	NA	NA	NA
Benzene	UG/L	5.0 U	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	R	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	0 U	10 U	10 U	1.0 J	10 U
1,1-Dichloroethene	UG/L	2.0 U	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	5.0 U	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	5.0 U	NA	NA	NA	NA
Ethylbenzene	UG/L	4.0 U	NA	NA	NA	NA
2-Hexanone	UG/L	5.0 U	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	5.0 U	NA	NA	NA	NA
Tetrachloroethene	UG/L	1.0 U	NA	NA	NA	NA
Trichloroethene	UG/L	1.0 U	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5.0 U	10 UJ	0.7 J	10 U	10 U
Vinyl Chloride	UG/L	5.0 U	NA	NA	NA	NA
Xylene (total)	UG/L	5.0 U	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5.0 U	10 U	10 U	10 U	10 U
Dissolved Gases						
Methane	UG/L	35	69	99	190	400
Total Metals						
Iron	UG/L	3,640	NA	NA	NA	NA
Dissolved Metals						
Iron	UG/L	3,760	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

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

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U - Non-Detect

NA - Not Analyzed

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Only Detected Results Reported.

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((LOGDATE) BETWEEN #05/01/03# AND #02/19/09#) AND [MATRIX] = 'WG' AND ([SACODE] = 'N' OR [SACODE] = 'FD'

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID		MW-04_121703	Dup1	MW-04	MW-04	MW-04VION
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		12/17/03	07/22/04	07/22/04	05/31/05	12/20/05
Parameter	Units		Field Duplicate (1-1)			
Miscellaneous Parameters						
Chloride	MG/L	294	158	161	NA	NA
Nitrogen, Ammonia (As N)	MG/L	1.2	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	1.9	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	0.1 U	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	NA	NA	NA	NA	NA
Sulfate	MG/L	9.40	10.8	10.8	14.2	6.66
Ferrous Iron (field)	MG/L	2.2	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	1.3	NA	NA	NA	NA
Fluoride	MG/L	0.19	0.304	0.302	NA	NA
Oil & Grease	MG/L	NA	NA	NA	NA	NA
Field Parameter						
Dissolved Oxygen	MG/L	0 U	NA	0.82	0 U	0 U
Oxidation Reduction Potential	mV	0 U	NA	-136	-126	-161
pH	S.U.	NA	NA	NA	NA	NA
Specific Conductance	MS/CM	0.99	NA	1.05	1.85	1.47
Temperature	DEG C	NA	NA	NA	NA	NA
Turbidity	NTU	NA	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

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UJ - Not detected above the estimated quantitation limit

U - Non-Detect

NA - Not Analyzed

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Only Detected Results Reported.

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TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID		MW-04V15N	20070207MW-04V10N	20070801MW-04V10N	20080228MW04V10N	20080812MW04V08N
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		08/14/06	02/07/07	08/01/07	02/28/08	08/12/08
Parameter	Units					
Volatiles						
Acetone	UG/L	NA	NA	NA	NA	NA
Benzene	UG/L	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	0.7 J	0.6 J	10 U	1.0 J	10 U
1,1-Dichloroethene	UG/L	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	NA	NA	NA	NA	NA
Ethylbenzene	UG/L	NA	NA	NA	NA	NA
2-Hexanone	UG/L	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	NA	NA	NA	NA	NA
Trichloroethene	UG/L	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	10 U	10 U	10 U	10 UJ	10 U
Vinyl Chloride	UG/L	NA	NA	NA	NA	NA
Xylene (total)	UG/L	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	10 U	10 U	10 U	10 U	10 U
Dissolved Gases						
Methane	UG/L	420	400	43	5,700	290
Total Metals						
Iron	UG/L	NA	NA	NA	NA	NA
Dissolved Metals						
Iron	UG/L	NA	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

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

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TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-04	MW-04	MW-04	MW-04	MW-04
Sample ID		MW-04V15N	20070207MW-04V10N	20070801MW-04V10N	20080228MW04V10N	20080812MW04V08N
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		08/14/06	02/07/07	08/01/07	02/28/08	08/12/08
Parameter	Units					
Miscellaneous Parameters						
Chloride	MG/L	NA	NA	NA	NA	NA
Nitrogen, Ammonia (As N)	MG/L	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	NA	NA	NA	NA	NA
Sulfate	MG/L	5.0 U	5.0 U	7.0	5 U	5 U
Ferrous Iron (field)	MG/L	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	NA	NA	NA	NA	NA
Fluoride	MG/L	NA	NA	NA	NA	NA
Oil & Grease	MG/L	NA	NA	NA	NA	NA
Field Parameter						
Dissolved Oxygen	MG/L	4.97	4.73	0.41	2.91	0 U
Oxidation Reduction Potential	mV	-154	-81	-79.2	-136.0	-126
pH	S.U.	NA	NA	6.59	6.45	6.65
Specific Conductance	MS/CM	1.14	0.804	1.241	1.16	0.531
Temperature	DEG C	NA	NA	NA	9.19	21.3
Turbidity	NTU	NA	NA	NA	9	2

Flags assigned during chemistry validation are shown.

B - Value between Instrument Detection Limit and Contract Required Detection Limit.

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

UJ - Not detected above the estimated quantitation limit

U - Non-Detect

NA - Not Analyzed

R - Rejected

Only Detected Results Reported.

Detection Limits shown are PQL

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-04	MW-04	MW-05	MW-05	MW-05
Sample ID		20090218MW-04V08FD	20090218MW-04V08N	MW05_52103	MW-05-121803	MW-05
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		02/18/09	02/18/09	05/21/03	12/18/03	07/23/04
Parameter	Units	Field Duplicate (1-1)				
Volatiles						
Acetone	UG/L	NA	NA	5.0 U	5.0 U	NA
Benzene	UG/L	NA	NA	5.0 U	5.0 U	NA
Methyl ethyl ketone (2-Butanone)	UG/L	NA	NA	R	R	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	1.0 J	1.0 J	0 U	0 U	10 U
1,1-Dichloroethene	UG/L	NA	NA	2.0 U	2.0 U	NA
cis-1,2-Dichloroethene	UG/L	NA	NA	5.0 U	5.0 U	NA
trans-1,2-Dichloroethene	UG/L	NA	NA	5.0 U	5.0 U	NA
Ethylbenzene	UG/L	NA	NA	4.0 U	4.0 U	NA
2-Hexanone	UG/L	NA	NA	5.0 U	5.0 U	NA
4-Methyl-2-Pentanone	UG/L	NA	NA	5.0 U	5.0 U	NA
Tetrachloroethene	UG/L	NA	NA	0.4 J	1.0 U	NA
Trichloroethene	UG/L	NA	NA	1.0 U	1.0 U	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	10 U	10 U	5.0 U	5.0 U	0.5 J
Vinyl Chloride	UG/L	NA	NA	5.0 U	5.0 U	NA
Xylene (total)	UG/L	NA	NA	5.0 U	5.0 U	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	10 U	10 U	5.0 U	5.0 U	10 U
Dissolved Gases						
Methane	UG/L	1,600	1,600	27	6.7	47
Total Metals						
Iron	UG/L	NA	NA	2,110	15,500	NA
Dissolved Metals						
Iron	UG/L	NA	NA	1,670	39.7 U	NA

Flags assigned during chemistry validation are shown.

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

UJ - Not detected above the estimated quantitation limit

U - Non-Detect

NA - Not Analyzed

R - Rejected

Only Detected Results Reported.

Detection Limits shown are PQL

Advanced Selection: WG Feb09 Tab:

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((LOGDATE) BETWEEN #05/01/03# AND #02/19/09#) AND [MATRIX] = 'WG' AND ([SACODE] = 'N' OR [SACODE] = 'FD'

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-04	MW-04	MW-05	MW-05	MW-05
Sample ID		20090218MW-04V08FD	20090218MW-04V08N	MW05_52103	MW-05-121803	MW-05
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		02/18/09	02/18/09	05/21/03	12/18/03	07/23/04
Parameter	Units	Field Duplicate (1-1)				
Miscellaneous Parameters						
Chloride	MG/L	NA	NA	49.8	27.5	63.9
Nitrogen, Ammonia (As N)	MG/L	NA	NA	0.25	0.1 U	NA
Nitrogen, Kjeldahl, Total	MG/L	NA	NA	3.6	0.61	NA
Nitrogen, Nitrate	MG/L	NA	NA	0.22	0.18	NA
Nitrogen, Nitrate-Nitrite	MG/L	NA	NA	NA	NA	NA
Sulfate	MG/L	5 U	5 U	50.1	61.4	42.3
Ferrous Iron (field)	MG/L	NA	NA	1.7	0.07	NA
Ferric Iron (lab)	MG/L	NA	NA	0.43	15.4	NA
Fluoride	MG/L	NA	NA	0 U	0.12	0.103
Oil & Grease	MG/L	NA	NA	NA	NA	NA
Field Parameter						
Dissolved Oxygen	MG/L	NA	0 U	0.37	0 U	0.97
Oxidation Reduction Potential	mV	NA	-158	26	121	46
pH	S.U.	NA	6.33	NA	NA	NA
Specific Conductance	MS/CM	NA	1.75	0.426	0.629	0.463
Temperature	DEG C	NA	9.36	NA	NA	NA
Turbidity	NTU	NA	4	NA	NA	NA

Flags assigned during chemistry validation are shown.

B - Value between Instrument Detection Limit and Contract Required Detection Limit.

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

UJ - Not detected above the estimated quantitation limit

U - Non-Detect

NA - Not Analyzed

R - Rejected

Only Detected Results Reported.

Detection Limits shown are PQL

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID		MW06-6-10-03	MW06-7_22_03	MW06-091803	MW-06_121703	MW-06
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		06/10/03	07/22/03	09/18/03	12/17/03	07/23/04
Parameter	Units					
Volatiles						
Acetone	UG/L	10 U	5.0 U	5.0 U	10 U	NA
Benzene	UG/L	10 U	5.0 U	5.0 U	10 U	NA
Methyl ethyl ketone (2-Butanone)	UG/L	R	R	R	R	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	0 U	5.7 NJ	0 U	0 U	5 J
1,1-Dichloroethene	UG/L	4 U	1.2 J	2.0 U	4 U	NA
cis-1,2-Dichloroethene	UG/L	10 U	1.7 J	1.4 J	1.3 J	NA
trans-1,2-Dichloroethene	UG/L	10 U	5.0 U	5.0 U	10 U	NA
Ethylbenzene	UG/L	8 U	4.0 U	4.0 U	8 U	NA
2-Hexanone	UG/L	10 U	5.0 U	5.0 U	10 U	NA
4-Methyl-2-Pentanone	UG/L	10 U	5.0 U	5.0 U	10 U	NA
Tetrachloroethene	UG/L	2 U	1.0 U	1.0 U	2 U	NA
Trichloroethene	UG/L	2 U	1.0 U	1.0 U	2 U	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	220	180	97	250	140 J
Vinyl Chloride	UG/L	10 U	1.2 J	5.0 U	10 U	NA
Xylene (total)	UG/L	10 U	5.0 U	5.0 U	10 U	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	8.8 J	9.5	8.6	14	23
Dissolved Gases						
Methane	UG/L	49	81	99	78	40
Total Metals						
Iron	UG/L	14,400	10,500	8,370 J	7,690	NA
Dissolved Metals						
Iron	UG/L	14,300	10,300	8,470 J	7,670	NA

Flags assigned during chemistry validation are shown.

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NA - Not Analyzed

R - Rejected

Only Detected Results Reported.

Detection Limits shown are PQL

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID		MW06-6-10-03	MW06-7_22_03	MW06-091803	MW-06_121703	MW-06
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		06/10/03	07/22/03	09/18/03	12/17/03	07/23/04
Parameter	Units					
Miscellaneous Parameters						
Chloride	MG/L	184	82.3	74.6	84.0	60.5
Nitrogen, Ammonia (As N)	MG/L	0.19	0.33	0.31	0.36	NA
Nitrogen, Kjeldahl, Total	MG/L	0.72	1.1	0.88	0.79	NA
Nitrogen, Nitrate	MG/L	0.33	0.1 U	0.1 U	0.1 UJ	NA
Nitrogen, Nitrate-Nitrite	MG/L	NA	NA	NA	NA	NA
Sulfate	MG/L	32.0	30.5	39.2	39.1	33.5
Ferrous Iron (field)	MG/L	14.3	8.6	6.0	8.7	NA
Ferric Iron (lab)	MG/L	0.12	1.9	8.4	1.0 U	NA
Fluoride	MG/L	0.46	0.56	0.37	0.42	0.467
Oil & Grease	MG/L	NA	NA	5 U	NA	NA
Field Parameter						
Dissolved Oxygen	MG/L	0.93	1.07	0 U	0 U	1.04
Oxidation Reduction Potential	mV	-145	-155	-143	-110	-64
pH	S.U.	NA	NA	NA	NA	NA
Specific Conductance	MS/CM	0.741	0.866	0.581	0.602	0.513
Temperature	DEG C	NA	NA	NA	NA	NA
Turbidity	NTU	NA	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

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

UJ - Not detected above the estimated quantitation limit

U - Non-Detect

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Only Detected Results Reported.

Detection Limits shown are PQL

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID		Field-Dup	MW-06	MW-06V15FD	MW-06V15N	MW-06V15FD
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		05/31/05	05/31/05	12/20/05	12/20/05	08/15/06
Parameter	Units	Field Duplicate (1-1)		Field Duplicate (1-1)		Field Duplicate (1-1)
Volatiles						
Acetone	UG/L	NA	NA	NA	NA	NA
Benzene	UG/L	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	6.0 J	5.0 J	6.0 J	6.0 J	10 U
1,1-Dichloroethene	UG/L	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	NA	NA	NA	NA	NA
Ethylbenzene	UG/L	NA	NA	NA	NA	NA
2-Hexanone	UG/L	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	NA	NA	NA	NA	NA
Trichloroethene	UG/L	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	1.0 J	1.0 J	10 U	10 U	10 U
Vinyl Chloride	UG/L	NA	NA	NA	NA	NA
Xylene (total)	UG/L	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	16	14	10 UJ	10 UJ	10 U
Dissolved Gases						
Methane	UG/L	3,600	3,300	6,700	5,600	1,600
Total Metals						
Iron	UG/L	NA	NA	NA	NA	NA
Dissolved Metals						
Iron	UG/L	NA	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

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Detection Limits shown are PQL

Advanced Selection: WG Feb09 Tab:

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((LOGDATE) BETWEEN #05/01/03# AND #02/19/09#) AND [MATRIX] = 'WG' AND ([SACODE] = 'N' OR [SACODE] = 'FD'

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID		Field-Dup	MW-06	MW-06V15FD	MW-06V15N	MW-06V15FD
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		05/31/05	05/31/05	12/20/05	12/20/05	08/15/06
Parameter	Units	Field Duplicate (1-1)		Field Duplicate (1-1)		Field Duplicate (1-1)
Miscellaneous Parameters						
Chloride	MG/L	NA	NA	NA	NA	NA
Nitrogen, Ammonia (As N)	MG/L	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	NA	NA	NA	NA	NA
Sulfate	MG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Ferrous Iron (field)	MG/L	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	NA	NA	NA	NA	NA
Fluoride	MG/L	NA	NA	NA	NA	NA
Oil & Grease	MG/L	NA	NA	NA	NA	NA
Field Parameter						
Dissolved Oxygen	MG/L	NA	0 U	NA	0 U	NA
Oxidation Reduction Potential	mV	NA	-140	NA	-140	NA
pH	S.U.	NA	NA	NA	NA	NA
Specific Conductance	MS/CM	NA	1.13	NA	1.29	NA
Temperature	DEG C	NA	NA	NA	NA	NA
Turbidity	NTU	NA	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

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NA - Not Analyzed

R - Rejected

Only Detected Results Reported.

Detection Limits shown are PQL

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID		MW-06V15N	20070207MW-06V15FD	20070207MW-06V15N	20070731MW-06V15FD	20070731MW-06V15N
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		08/15/06	02/07/07	02/07/07	07/31/07	07/31/07
Parameter	Units		Field Duplicate (1-1)		Field Duplicate (1-1)	
Volatiles						
Acetone	UG/L	NA	NA	NA	NA	NA
Benzene	UG/L	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	10 U	100	100	18	21
1,1-Dichloroethene	UG/L	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	NA	NA	NA	NA	NA
Ethylbenzene	UG/L	NA	NA	NA	NA	NA
2-Hexanone	UG/L	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	NA	NA	NA	NA	NA
Trichloroethene	UG/L	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	10 U	3.0 J	3.0 J	10 U	10 U
Vinyl Chloride	UG/L	NA	NA	NA	NA	NA
Xylene (total)	UG/L	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	10 U	8.0 J	8.0 J	0.5 J	0.6 J
Dissolved Gases						
Methane	UG/L	1,700	12,000	13,000	3,800	2,500
Total Metals						
Iron	UG/L	NA	NA	NA	NA	NA
Dissolved Metals						
Iron	UG/L	NA	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

B - Value between Instrument Detection Limit and Contract Required Detection Limit.

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

UJ - Not detected above the estimated quantitation limit

U - Non-Detect

NA - Not Analyzed

R - Rejected

Only Detected Results Reported.

Detection Limits shown are PQL

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-06	MW-06	MW-06	MW-06	MW-06
Sample ID		MW-06V15N	20070207MW-06V15FD	20070207MW-06V15N	20070731MW-06V15FD	20070731MW-06V15N
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		08/15/06	02/07/07	02/07/07	07/31/07	07/31/07
Parameter	Units		Field Duplicate (1-1)		Field Duplicate (1-1)	
Miscellaneous Parameters						
Chloride	MG/L	NA	NA	NA	NA	NA
Nitrogen, Ammonia (As N)	MG/L	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	NA	NA	NA	NA	NA
Sulfate	MG/L	5.0 U	7.40	7.00	41.8	44.2
Ferrous Iron (field)	MG/L	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	NA	NA	NA	NA	NA
Fluoride	MG/L	NA	NA	NA	NA	NA
Oil & Grease	MG/L	NA	NA	NA	NA	NA
Field Parameter						
Dissolved Oxygen	MG/L	6.83	NA	1.05	NA	0.31
Oxidation Reduction Potential	mV	87	NA	-136	NA	-99.7
pH	S.U.	NA	NA	NA	NA	6.38
Specific Conductance	MS/CM	0.033	NA	0.79	NA	1.050
Temperature	DEG C	NA	NA	NA	NA	NA
Turbidity	NTU	NA	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

B - Value between Instrument Detection Limit and Contract Required Detection Limit.

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

UJ - Not detected above the estimated quantitation limit

U - Non-Detect

NA - Not Analyzed

R - Rejected

Only Detected Results Reported.

Detection Limits shown are PQL

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-06	MW-06	MW-06	MW-06	MW-07
Sample ID		20080228MW06V15FD	20080228MW06V15N	20080812MW06V13N	20090219MW-06V13N	MW07-6-10-03
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		02/28/08	02/28/08	08/12/08	02/19/09	06/10/03
Parameter	Units	Field Duplicate (1-1)				
Volatiles						
Acetone	UG/L	NA	NA	NA	NA	250 U
Benzene	UG/L	NA	NA	NA	NA	250 U
Methyl ethyl ketone (2-Butanone)	UG/L	NA	NA	NA	NA	R
Chlorotrifluoroethene (Freon-1113)	UG/L	8.0 J	8.0 J	4.0 J	34	0 U
1,1-Dichloroethene	UG/L	NA	NA	NA	NA	100 U
cis-1,2-Dichloroethene	UG/L	NA	NA	NA	NA	250 U
trans-1,2-Dichloroethene	UG/L	NA	NA	NA	NA	250 U
Ethylbenzene	UG/L	NA	NA	NA	NA	200 U
2-Hexanone	UG/L	NA	NA	NA	NA	250 U
4-Methyl-2-Pentanone	UG/L	NA	NA	NA	NA	250 U
Tetrachloroethene	UG/L	NA	NA	NA	NA	50 U
Trichloroethene	UG/L	NA	NA	NA	NA	50 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	10 UJ	10 U	10 U	2.0 J	5,400
Vinyl Chloride	UG/L	NA	NA	NA	NA	250 U
Xylene (total)	UG/L	NA	NA	NA	NA	250 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	10 U	10 U	10 U	35	68 J
Dissolved Gases						
Methane	UG/L	12,000	14,000	12,000	9,000	740
Total Metals						
Iron	UG/L	NA	NA	NA	NA	21,300
Dissolved Metals						
Iron	UG/L	NA	NA	NA	NA	20,800

Flags assigned during chemistry validation are shown.

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UJ - Not detected above the estimated quantitation limit

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R - Rejected

Only Detected Results Reported.

Detection Limits shown are PQL

Advanced Selection: WG Feb09 Tab:

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((LOGDATE) BETWEEN #05/01/03# AND #02/19/09#) AND [MATRIX] = 'WG' AND ([SACODE] = 'N' OR [SACODE] = 'FD'

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-06	MW-06	MW-06	MW-06	MW-07
Sample ID		20080228MW06V15FD	20080228MW06V15N	20080812MW06V13N	20090219MW-06V13N	MW07-6-10-03
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		02/28/08	02/28/08	08/12/08	02/19/09	06/10/03
Parameter	Units	Field Duplicate (1-1)				
Miscellaneous Parameters						
Chloride	MG/L	NA	NA	NA	NA	140
Nitrogen, Ammonia (As N)	MG/L	NA	NA	NA	NA	0.39
Nitrogen, Kjeldahl, Total	MG/L	NA	NA	NA	NA	1.2
Nitrogen, Nitrate	MG/L	NA	NA	NA	NA	0.1 U
Nitrogen, Nitrate-Nitrite	MG/L	NA	NA	NA	NA	NA
Sulfate	MG/L	5 U	5 U	17.8	57.0	32.8
Ferrous Iron (field)	MG/L	NA	NA	NA	NA	20.2
Ferric Iron (lab)	MG/L	NA	NA	NA	NA	1
Fluoride	MG/L	NA	NA	NA	NA	0.33
Oil & Grease	MG/L	NA	NA	NA	NA	NA
Field Parameter						
Dissolved Oxygen	MG/L	NA	2.61	0 U	0 U	0.9
Oxidation Reduction Potential	mV	NA	-122.0	-117	-132	-130
pH	S.U.	NA	6.24	6.37	6.30	NA
Specific Conductance	MS/CM	NA	1.21	1.47	0.84	0.93
Temperature	DEG C	NA	12.2	17.0	13.23	NA
Turbidity	NTU	NA	9	5	8	NA

Flags assigned during chemistry validation are shown.

B - Value between Instrument Detection Limit and Contract Required Detection Limit.

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

UJ - Not detected above the estimated quantitation limit

U - Non-Detect

NA - Not Analyzed

R - Rejected

Only Detected Results Reported.

Detection Limits shown are PQL

Advanced Selection: WG Feb09 Tab:

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Printed: 3/23/2009 10:55:46 AM

((LOGDATE) BETWEEN #05/01/03# AND #02/19/09#) AND [MATRIX] = 'WG' AND ([SACODE] = 'N' OR [SACODE] = 'FD'

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID		MW07	MW07-91703	MW-07_121703	MW-07	MW-07
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		07/23/03	09/17/03	12/17/03	07/22/04	05/31/05
Parameter	Units					
Volatiles						
Acetone	UG/L	500 U	250 U	50 U	NA	NA
Benzene	UG/L	500 U	250 U	14	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	R	R	R	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	0 U	0 U	0 U	210	140
1,1-Dichloroethene	UG/L	68 J	100 U	20 U	NA	NA
cis-1,2-Dichloroethene	UG/L	500 U	250 U	50 U	NA	NA
trans-1,2-Dichloroethene	UG/L	500 U	250 U	50 U	NA	NA
Ethylbenzene	UG/L	400 U	200 U	49	NA	NA
2-Hexanone	UG/L	500 U	250 U	50 U	NA	NA
4-Methyl-2-Pentanone	UG/L	500 U	250 U	50 U	NA	NA
Tetrachloroethene	UG/L	100 U	50 U	10 U	NA	NA
Trichloroethene	UG/L	100 U	50 U	10 U	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	8,500	6,100	370	110 J	10 U
Vinyl Chloride	UG/L	500 U	250 U	50 U	NA	NA
Xylene (total)	UG/L	500 U	250 U	50 U	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	130 J	130 J	940	50	2.0 J
Dissolved Gases						
Methane	UG/L	420	1,200	1,700	2,500	5,900
Total Metals						
Iron	UG/L	21,200	32,700 J	38,900	NA	NA
Dissolved Metals						
Iron	UG/L	20,800	32,500 J	38,900	NA	NA

Flags assigned during chemistry validation are shown.

B - Value between Instrument Detection Limit and Contract Required Detection Limit.

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

UJ - Not detected above the estimated quantitation limit

U - Non-Detect

NA - Not Analyzed

R - Rejected

Only Detected Results Reported.

Detection Limits shown are PQL

Advanced Selection: WG Feb09 Tab:

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((LOGDATE) BETWEEN #05/01/03# AND #02/19/09#) AND [MATRIX] = 'WG' AND ([SACODE] = 'N' OR [SACODE] = 'FD'

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID		MW07	MW07-91703	MW-07_121703	MW-07	MW-07
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		07/23/03	09/17/03	12/17/03	07/22/04	05/31/05
Parameter	Units					
Miscellaneous Parameters						
Chloride	MG/L	168	300 J	328	303	NA
Nitrogen, Ammonia (As N)	MG/L	0.6	0.66	0.99	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	1.8	2.1	2.8	NA	NA
Nitrogen, Nitrate	MG/L	NA	0.1 U	0.1 U	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	0.1 UJ	NA	NA	NA	NA
Sulfate	MG/L	31.0	23.6	5.0 U	5.0 U	5.0 U
Ferrous Iron (field)	MG/L	19.8	33.8	19.5	NA	NA
Ferric Iron (lab)	MG/L	1.4	14.1	19.4	NA	NA
Fluoride	MG/L	0.25	0.24	0.19	0.190	NA
Oil & Grease	MG/L	NA	5.44 U	NA	NA	NA
Field Parameter						
Dissolved Oxygen	MG/L	0.1	0 U	3.33	0.88	0 U
Oxidation Reduction Potential	mV	-108	-118	-115	-153	-152
pH	S.U.	NA	NA	NA	NA	NA
Specific Conductance	MS/CM	1.11	1.44	1.94	1.69	1.75
Temperature	DEG C	NA	NA	NA	NA	NA
Turbidity	NTU	NA	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

B - Value between Instrument Detection Limit and Contract Required Detection Limit.

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

UJ - Not detected above the estimated quantitation limit

U - Non-Detect

NA - Not Analyzed

R - Rejected

Only Detected Results Reported.

Detection Limits shown are PQL

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID		MW-07V15N	MW-07V15N	20070207MW-07V15N	20070731MW-07V15N	20080228MW07V15N
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		12/20/05	08/14/06	02/07/07	07/31/07	02/28/08
Parameter	Units					
Volatiles						
Acetone	UG/L	NA	NA	NA	NA	NA
Benzene	UG/L	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	NA	NA	NA	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	47	97	89	82	92
1,1-Dichloroethene	UG/L	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	UG/L	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	NA	NA	NA	NA	NA
Ethylbenzene	UG/L	NA	NA	NA	NA	NA
2-Hexanone	UG/L	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	UG/L	NA	NA	NA	NA	NA
Tetrachloroethene	UG/L	NA	NA	NA	NA	NA
Trichloroethene	UG/L	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	10 U	10 U	10 U	6.0 J	10 UJ
Vinyl Chloride	UG/L	NA	NA	NA	NA	NA
Xylene (total)	UG/L	NA	NA	NA	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	10 U	1.0 J	3.0 J	10	0.9 J
Dissolved Gases						
Methane	UG/L	9,700	6,900	6,200	4,100	7,100
Total Metals						
Iron	UG/L	NA	NA	NA	NA	NA
Dissolved Metals						
Iron	UG/L	NA	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

B - Value between Instrument Detection Limit and Contract Required Detection Limit.

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

UJ - Not detected above the estimated quantitation limit

U - Non-Detect

NA - Not Analyzed

R - Rejected

Only Detected Results Reported.

Detection Limits shown are PQL

Advanced Selection: WG Feb09 Tab:

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((LOGDATE) BETWEEN #05/01/03# AND #02/19/09#) AND [MATRIX] = 'WG' AND ([SACODE] = 'N' OR [SACODE] = 'FD'

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-07	MW-07	MW-07	MW-07	MW-07
Sample ID		MW-07V15N	MW-07V15N	20070207MW-07V15N	20070731MW-07V15N	20080228MW-07V15N
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		12/20/05	08/14/06	02/07/07	07/31/07	02/28/08
Parameter	Units					
Miscellaneous Parameters						
Chloride	MG/L	NA	NA	NA	NA	NA
Nitrogen, Ammonia (As N)	MG/L	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	NA	NA	NA	NA	NA
Nitrogen, Nitrate	MG/L	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	NA	NA	NA	NA	NA
Sulfate	MG/L	5.0 U	19.3	5.0 U	6.1	5 U
Ferrous Iron (field)	MG/L	NA	NA	NA	NA	NA
Ferric Iron (lab)	MG/L	NA	NA	NA	NA	NA
Fluoride	MG/L	NA	NA	NA	NA	NA
Oil & Grease	MG/L	NA	NA	NA	NA	NA
Field Parameter						
Dissolved Oxygen	MG/L	0 U	3.47	2.89	0.48	2.64
Oxidation Reduction Potential	mV	-169	-163	-121	-113.5	-137.0
pH	S.U.	NA	NA	NA	6.78	6.32
Specific Conductance	MS/CM	1.65	1.44	2.02	2.182	1.62
Temperature	DEG C	NA	NA	NA	NA	9.03
Turbidity	NTU	NA	NA	NA	NA	54

Flags assigned during chemistry validation are shown.

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UJ - Not detected above the estimated quantitation limit

U - Non-Detect

NA - Not Analyzed

R - Rejected

Only Detected Results Reported.

Detection Limits shown are PQL

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([LOGDATE] BETWEEN #05/01/03# AND #02/19/09#) AND [MATRIX] = 'WG' AND ([SACODE] = 'N' OR [SACODE] = 'FD')

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-07	MW-07
Sample ID		20080812MW07V09N	20090218MW-07V09N
Matrix		Groundwater	Groundwater
Depth Interval (ft)		-	-
Date Sampled		08/12/08	02/18/09
Parameter	Units		
Volatiles			
Acetone	UG/L	NA	NA
Benzene	UG/L	NA	NA
Methyl ethyl ketone (2-Butanone)	UG/L	NA	NA
Chlorotrifluoroethene (Freon-1113)	UG/L	170	150
1,1-Dichloroethene	UG/L	NA	NA
cis-1,2-Dichloroethene	UG/L	NA	NA
trans-1,2-Dichloroethene	UG/L	NA	NA
Ethylbenzene	UG/L	NA	NA
2-Hexanone	UG/L	NA	NA
4-Methyl-2-Pentanone	UG/L	NA	NA
Tetrachloroethene	UG/L	NA	NA
Trichloroethene	UG/L	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	3.0 J	46
Vinyl Chloride	UG/L	NA	NA
Xylene (total)	UG/L	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	16	20
Dissolved Gases			
Methane	UG/L	5,600	11,000
Total Metals			
Iron	UG/L	NA	NA
Dissolved Metals			
Iron	UG/L	NA	NA

Flags assigned during chemistry validation are shown.

B - Value between Instrument Detection Limit and Contract Required Detection Limit.

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

UJ - Not detected above the estimated quantitation limit

U - Non-Detect

NA - Not Analyzed

R - Rejected

Only Detected Results Reported.

Detection Limits shown are PQL

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER EMCA SITE, MAMARONECK, NEW YORK

Location ID		MW-07	MW-07
Sample ID		20080812MW07V09N	20090218MW-07V09N
Matrix		Groundwater	Groundwater
Depth Interval (ft)		-	-
Date Sampled		08/12/08	02/18/09
Parameter	Units		
Miscellaneous Parameters			
Chloride	MG/L	NA	NA
Nitrogen, Ammonia (As N)	MG/L	NA	NA
Nitrogen, Kjeldahl, Total	MG/L	NA	NA
Nitrogen, Nitrate	MG/L	NA	NA
Nitrogen, Nitrate-Nitrite	MG/L	NA	NA
Sulfate	MG/L	5.6	5 U
Ferrous Iron (field)	MG/L	NA	NA
Ferric Iron (lab)	MG/L	NA	NA
Fluoride	MG/L	NA	NA
Oil & Grease	MG/L	NA	NA
Field Parameter			
Dissolved Oxygen	MG/L	0 U	0 U
Oxidation Reduction Potential	mV	-167	-154
pH	S.U.	6.48	6.18
Specific Conductance	MS/CM	1.99	2.01
Temperature	DEG C	17.3	12.11
Turbidity	NTU	25	21

Flags assigned during chemistry validation are shown.

B - Value between Instrument Detection Limit and Contract Required Detection Limit.

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

UJ - Not detected above the estimated quantitation limit

U - Non-Detect

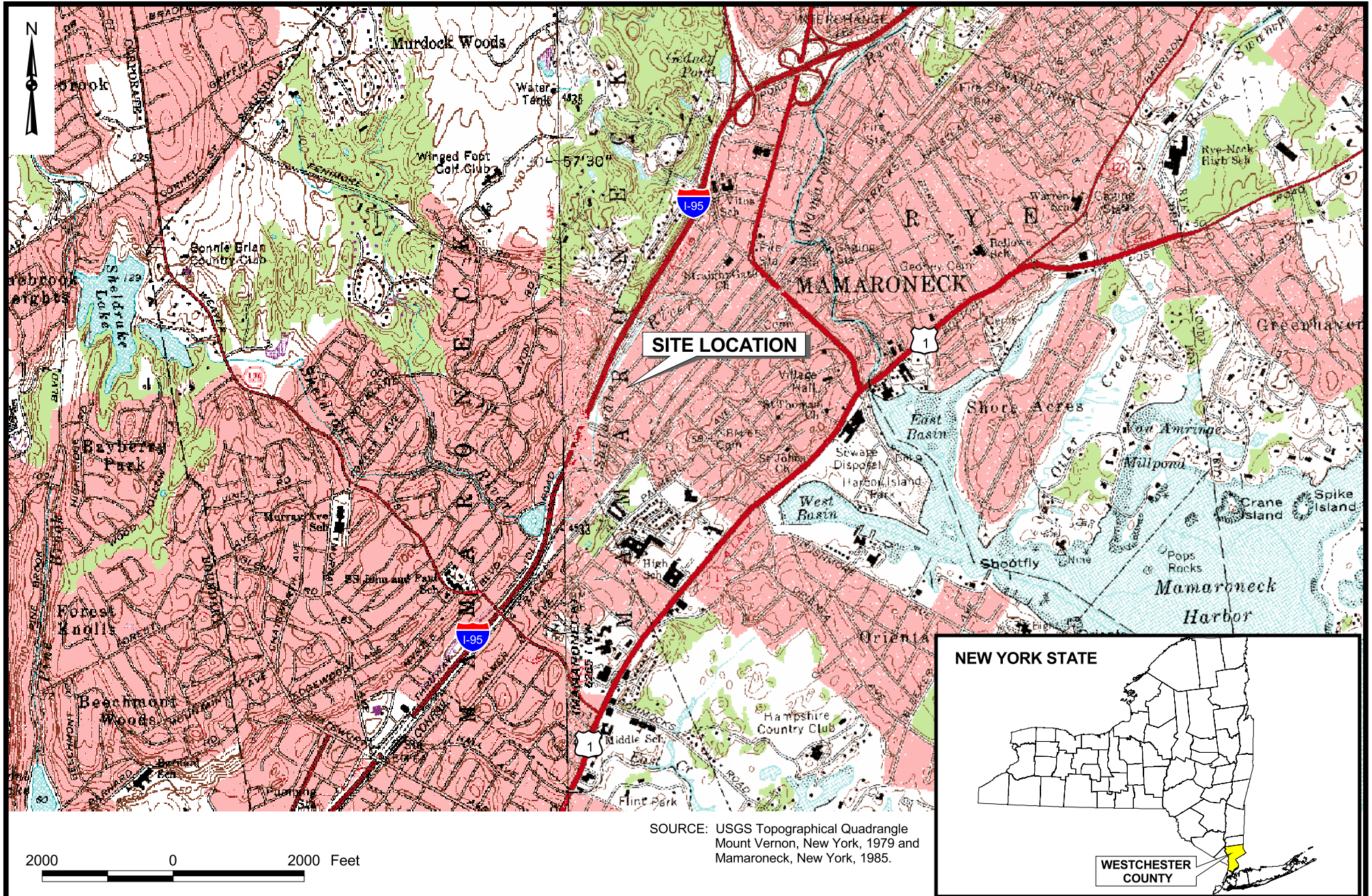
NA - Not Analyzed

R - Rejected

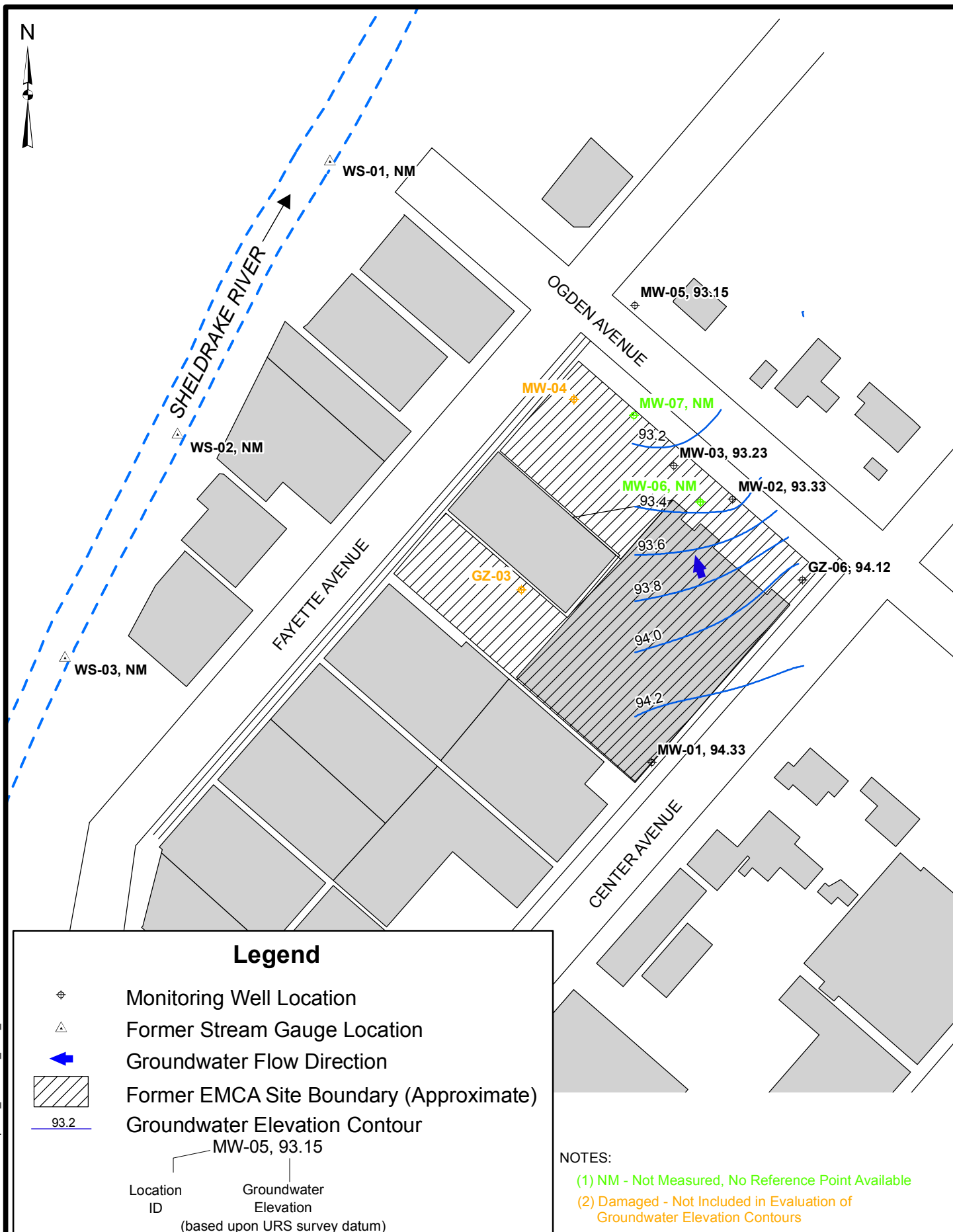
Only Detected Results Reported.

Detection Limits shown are PQL

FIGURES



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GROUNDWATER ELEVATION CONTOUR MAP (FEBRUARY 2009)

FIGURE 2

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MW-04	10/99	07/00	07/01	05/03	12/03	07/04	05/05	12/05	08/06	02/07	8/07	2/08	8/08	2/09
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	11	ND	ND	ND	ND	0.7 J	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorotrifluoroethene (Freon-1113)	ND	ND	ND	ND	ND	ND	1.0 J	ND	0.7 J	0.6 J	ND	1.0 J	ND	1.0J

MW-05	07/00	07/01	05/03	12/03	07/04
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	7	ND	ND	ND	0.5 J
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	ND	ND	ND	ND	ND
Chlorotrifluoroethene (Freon-1113)	ND	ND	ND	ND	ND

MW-03	10/99	07/00	07/01	05/03	07/03	09/03	12/03	07/04	05/05	12/05	08/06	02/07	8/07	2/08	8/08	2/09
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	17000	11000	13000	5800	68	26	150	4900 J	2 J	ND	ND	10	2.0 J	0.5 J	ND	5.0J
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	ND	ND	ND	78 J	43	180	170	3900	14	1.0 J	0.8 J	48	7.0 J	4.0 J	1.0 J	40
Chlorotrifluoroethene (Freon-1113)	ND	ND	ND	ND	7	6.2	ND	68 J	83	2.0 J	51	39	54	13 J	10	38

MW-07	06/03	07/03	09/03	12/03	07/04	05/05	12/05	08/06	02/07	08/07	2/08	8/08	2/09
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	5400	8500	6100	370	110 J	ND	ND	ND	ND	6.0 J	ND	3.0 J	46
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	68 J	130 J	130 J	940	50	2.0 J	ND	1.0 J	3.0 J	10	0.9 J	16	20
Chlorotrifluoroethene (Freon-1113)	ND	ND	ND	ND	210	140	47	97	89	82	92	170	150

GZ-03	08/07
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	ND
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	ND
Chlorotrifluoroethene (Freon-1113)	ND

MW-02	10/99	07/00	07/01	05/03	07/03	09/03	12/03	07/04	05/05	12/05	08/06	11/06	02/07	8/07	2/08	8/08	2/09
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	740	1700	2400	880	1000	54	12	21 J	1200	110	890	100	800	290	830 J	700	1300
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	ND	ND	ND	40	41 J	7.8	3.3 J	4 J	86 J	15	110	10	95	40	72	38 J	34J
Chlorotrifluoroethene (Freon-1113)	ND	ND	ND	ND	ND	ND	ND	14	120	18	200	21	84	61	120 J	160	81J

MW-06	06/03	07/03	09/03	12/03	07/04	05/05	12/05	08/06	02/07	08/07	2/08	8/08	2/09
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	220	180	97	250	140 J	1.0 J	ND	ND	3 J	ND	ND	ND	2.0J
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	8.8 J	9.5	8.6	14	23	16	ND	ND	8 J	0.6 J	ND	ND	35
Chlorotrifluoroethene (Freon-1113)	ND	5.7	ND	ND	5 J	6.0 J	6.0 J	ND	100	21	8.0 J	4.0 J	34

GZ-06	05/88	03/89	10/99	07/00	07/01	05/03	07/03	09/03	12/03	07/04	05/05	12/05	08/06	11/06	02/07	08/07	2/08	8/08	2/09
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	1274	200	49	900	250	100	230	74	ND	100 J	9 J	ND	74	2.0 J	14	13	ND	ND	ND
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	ND	ND	ND	ND	ND	20	41	26	0.7 J	36	4.0 J	2.0 J	23	2.0 J	4.0 J	10	ND	ND	ND
Chlorotrifluoroethene (Freon-1113)	ND	ND	ND	ND	ND	ND	ND	5.4	ND	24	15	ND	13	2.0 J	1.0 J	2.0 J	ND	ND	ND

MW-01	08/07
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	ND
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	ND
Chlorotrifluoroethene (Freon-1113)	ND

Legend

- ⊕ Existing Monitoring Well Location
- ➡ Generalized Groundwater Flow Direction
- Concentration Exceeds NYSDEC TOGS (1.1.1) Class GA Standards
- All Analytical Results are Reported in UG/L

NOTES: ND - Not Detected
07/00 - 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-Supplemental Injection Sampling Dates

80 0 80 Feet

FORMER EMCA SITE SUMMARY OF FREON DETECTIONS IN GROUNDWATER

URS

FIGURE 3

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

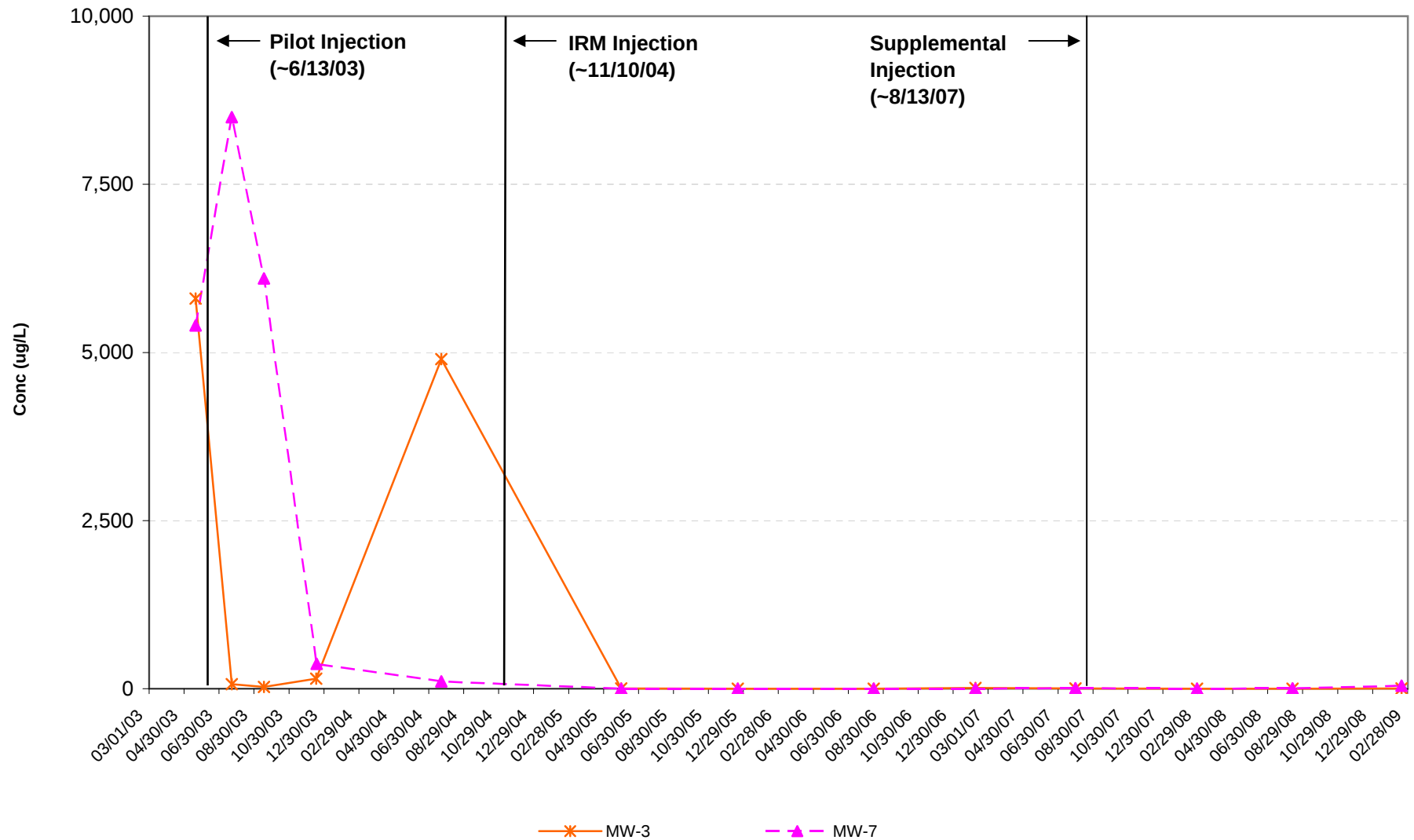


FIGURE 5
FORMER EMCA SITE
Freon 113 Concentrations, GZ-06, MW-02, and MW-06

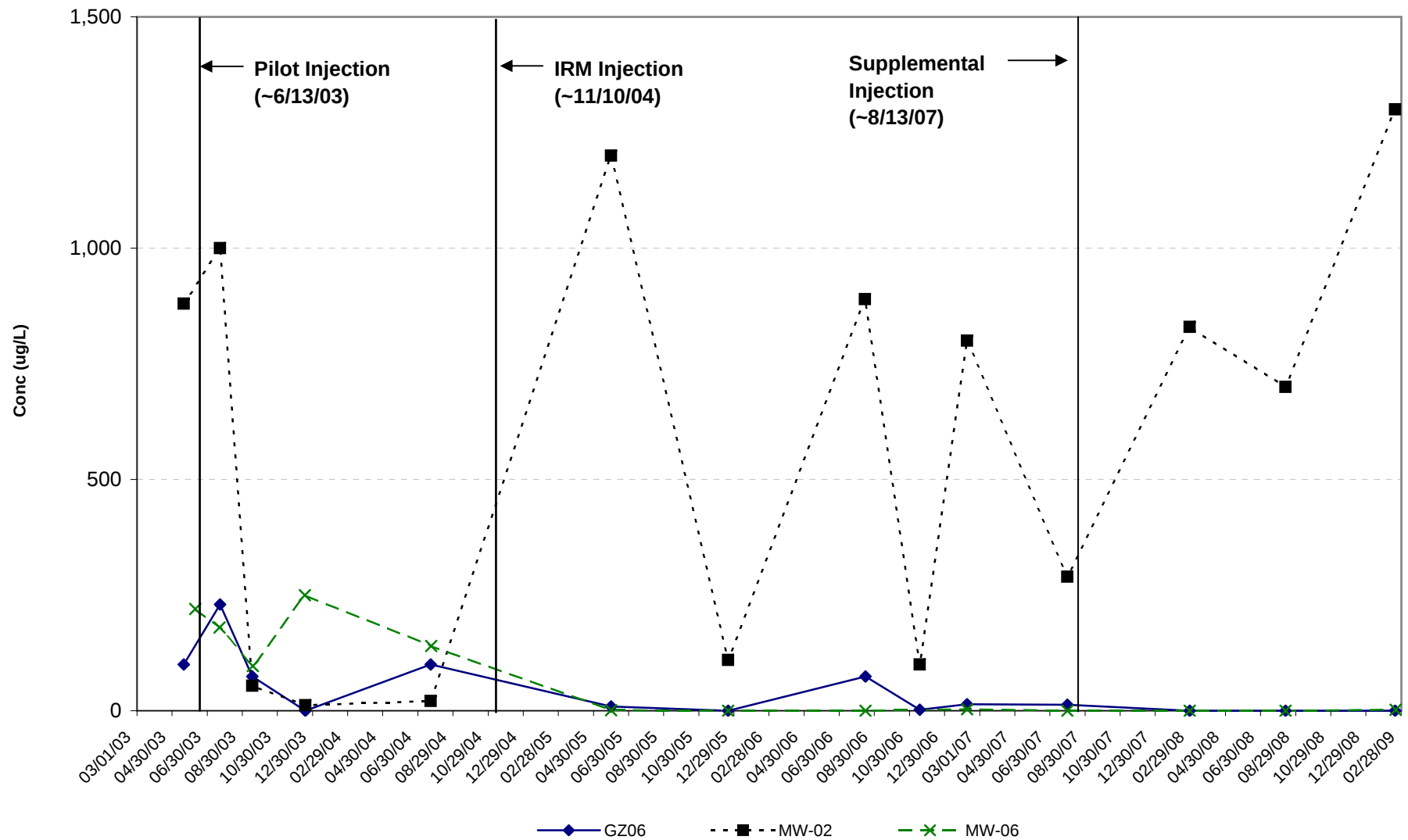


FIGURE 6
FORMER EMCA SITE
Freon 123a Concentrations

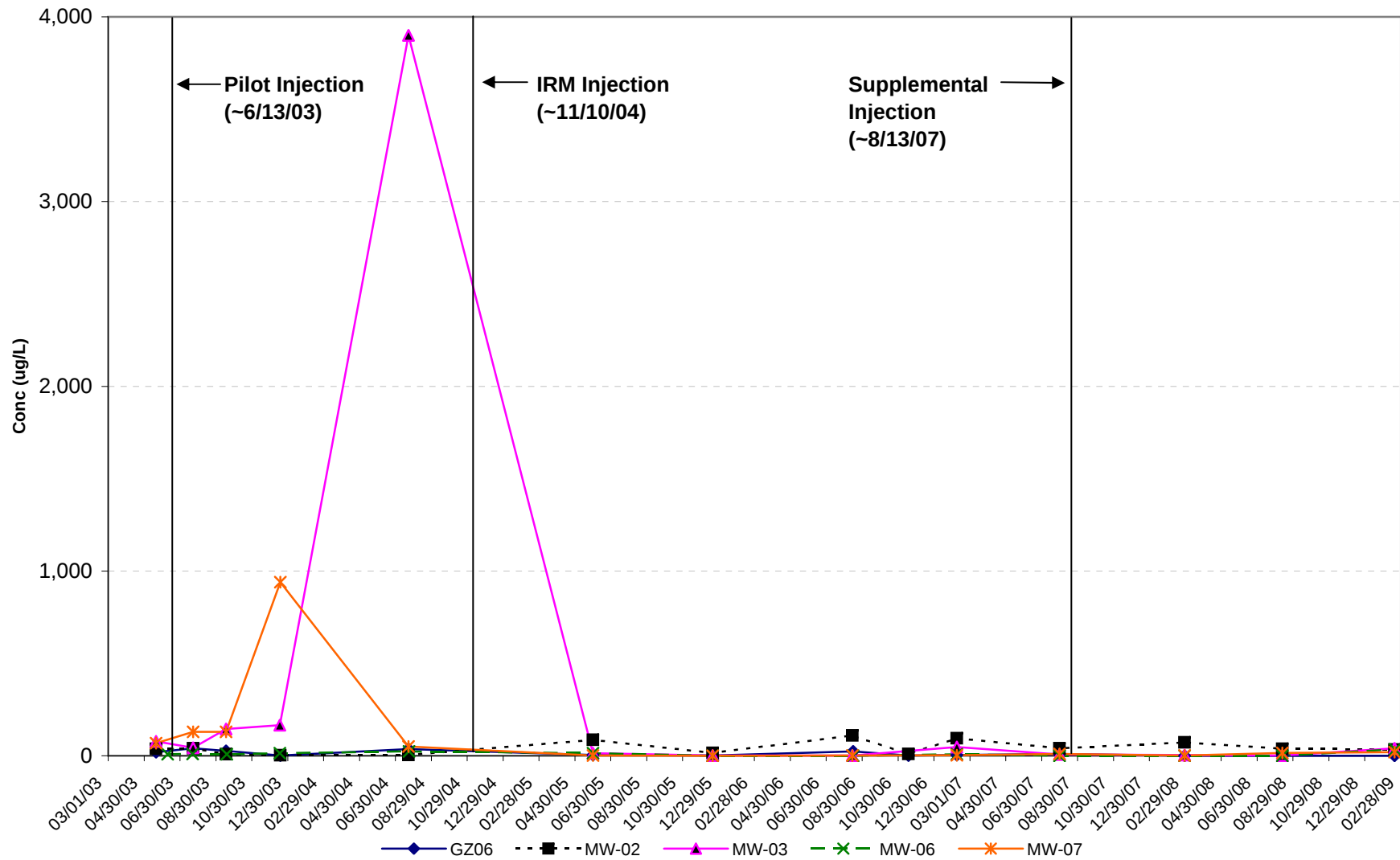


FIGURE 7
FORMER EMCA SITE
Sulfate Concentrations

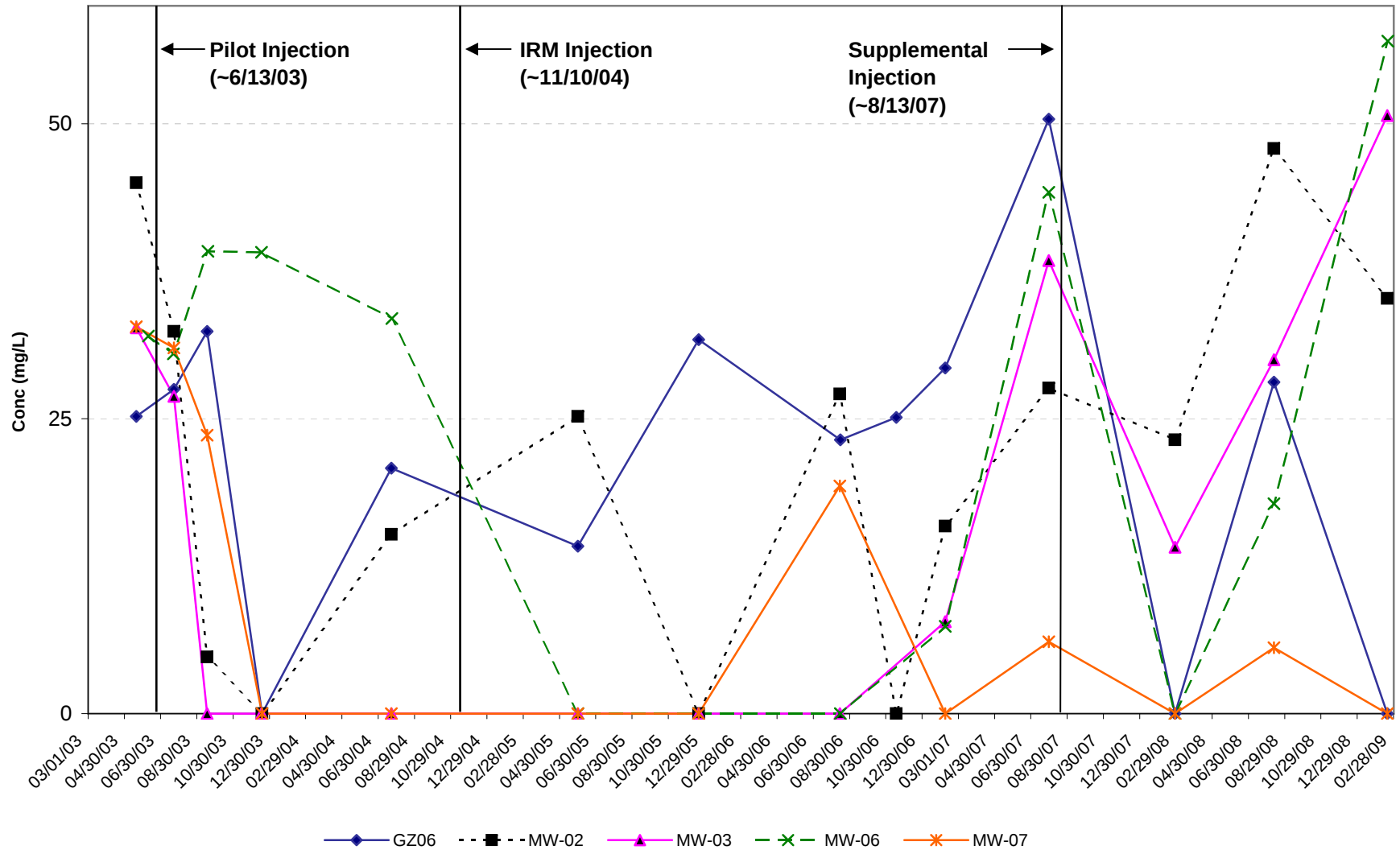


FIGURE 8
FORMER EMCA SITE
Methane Concentrations

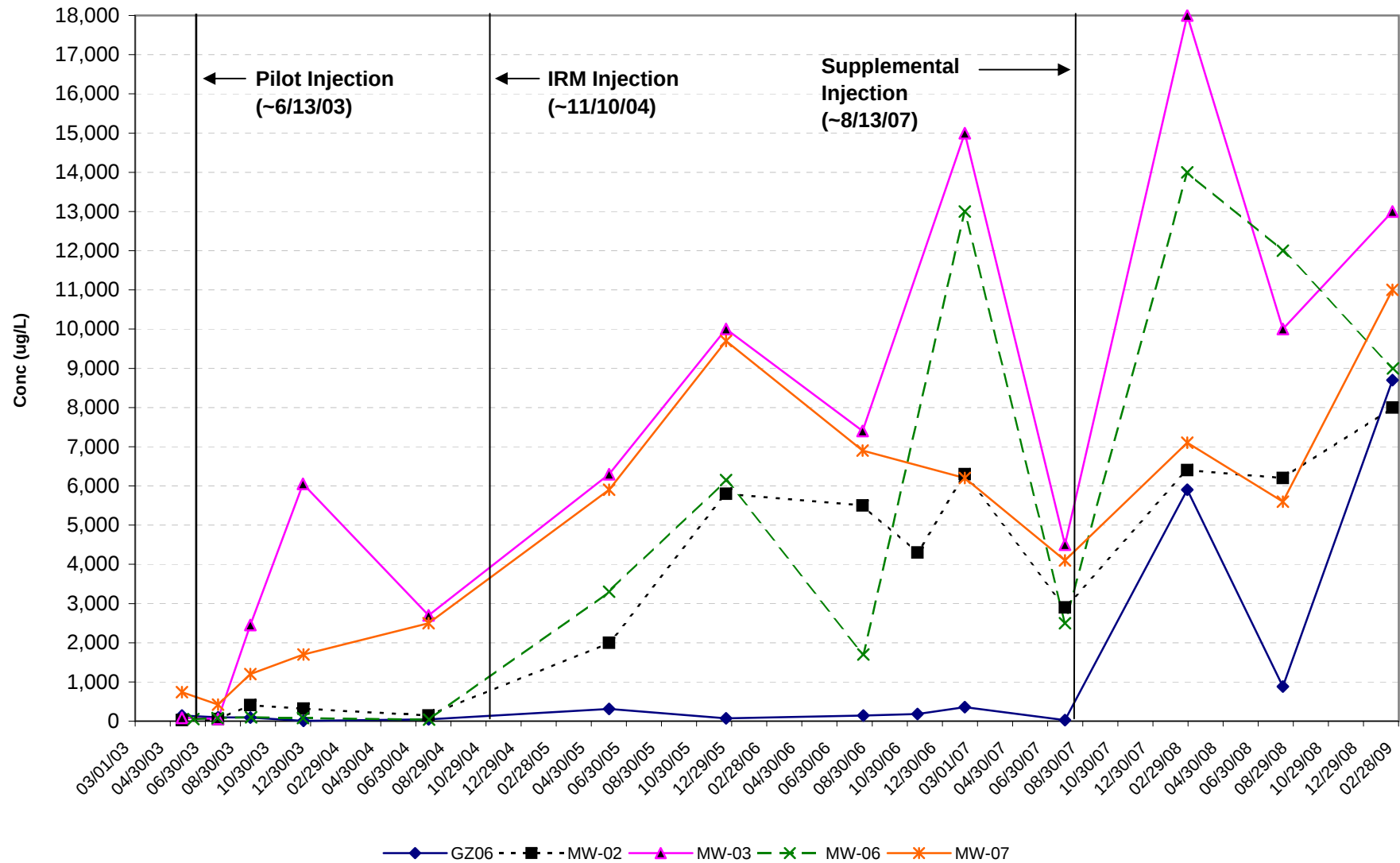


FIGURE 9
FORMER EMCA SITE
Dissolved Oxygen Concentrations

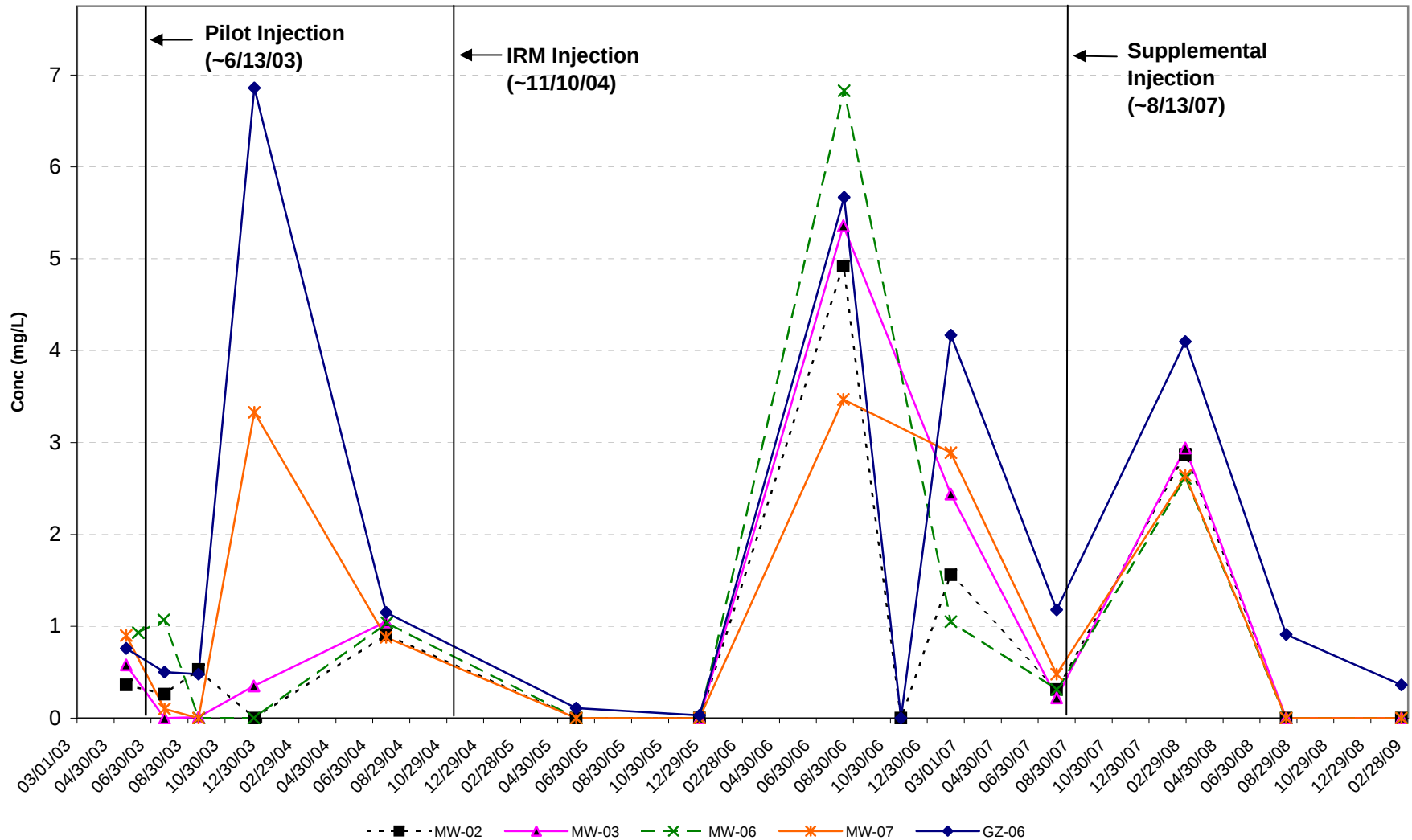


FIGURE 10
FORMER EMCA SITE
Oxidation Reduction Potential

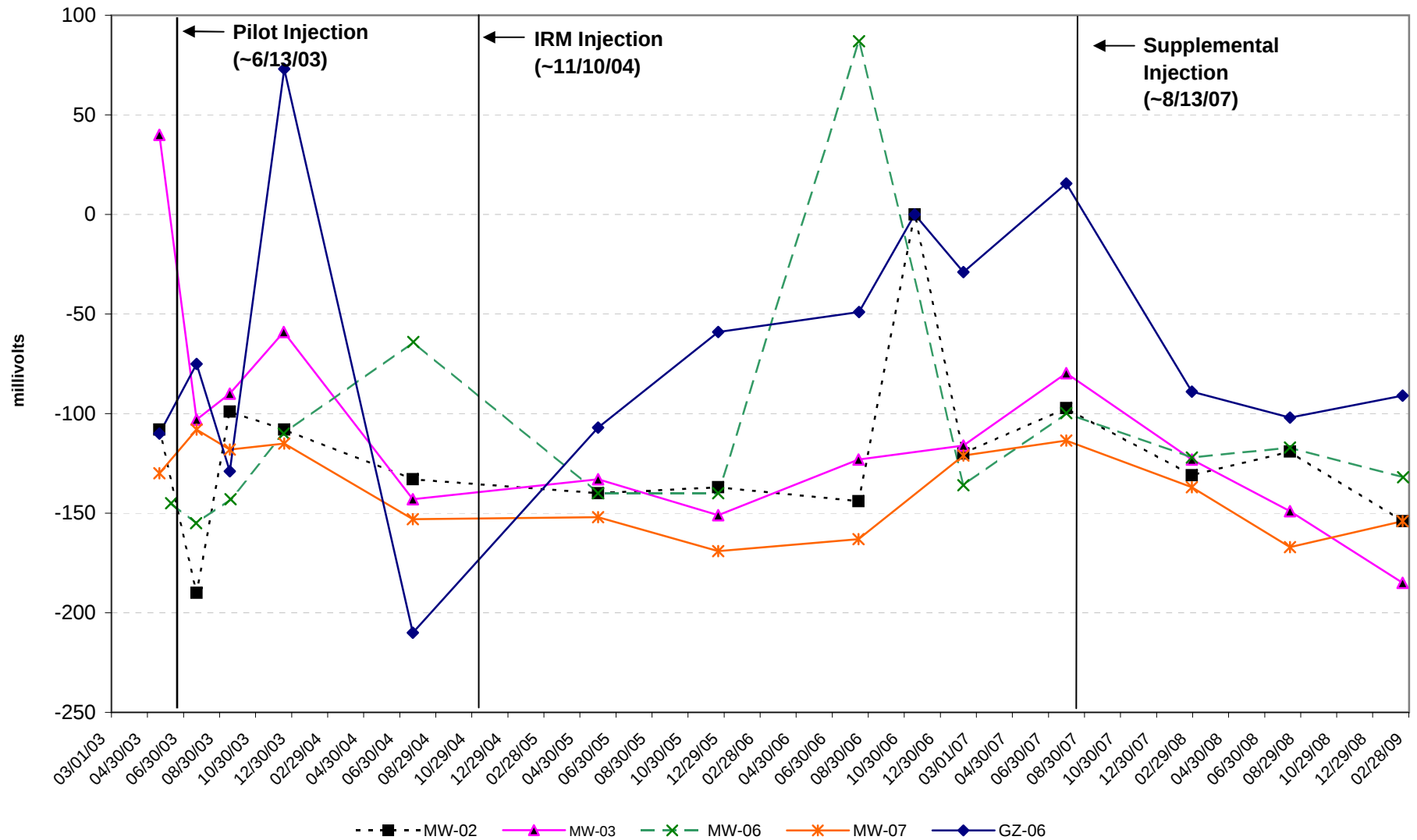
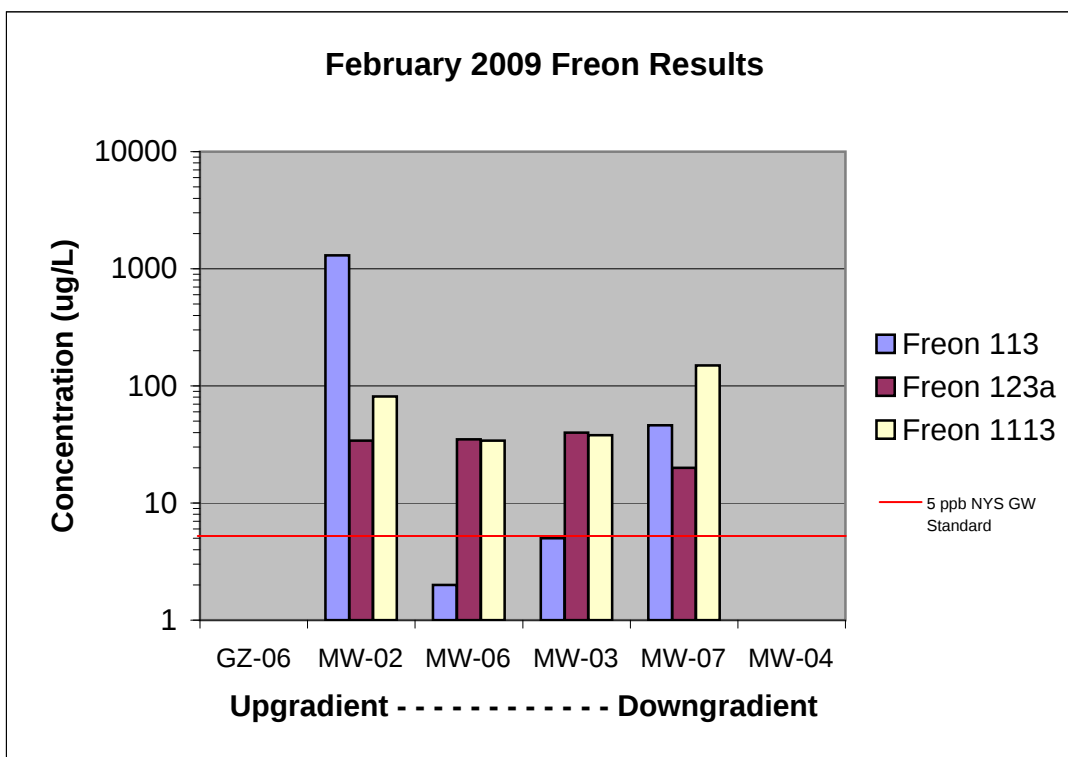
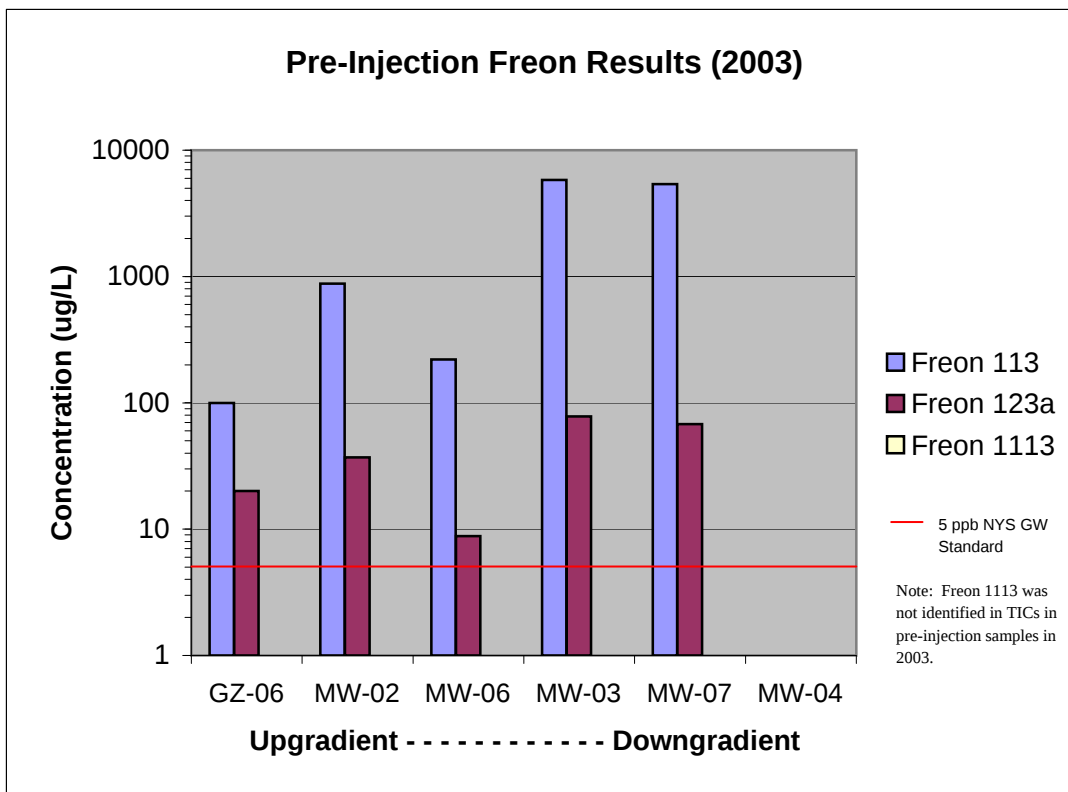


FIGURE 11
FORMER EMCA SITE - FREON CONCENTRATIONS
PRE-INJECTION AND CURRENT RESULTS



APPENDIX A

**LOW FLOW GROUNDWATER
PURGING/SAMPLING LOGS**

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: Rohm and Haas - Former EMCA Site Site: Former EMCA Site Well I.D.: MW-02

Date: 2/18/2009 Sampling Personnel: Tim Ifkovich Company: URS Corporation

Purging/ Sampling Device:	Low Flow Peristaltic Pump (GeoPump 2)	Tubing Type:	HDPE and Silicone	Pump/Tubing Inlet Location:	Midpoint of Saturated Screen
---------------------------------	---------------------------------------	--------------	-------------------	-----------------------------------	---------------------------------

Measuring Point:	Below Top of Riser	Initial Depth to Water:	5.85	Depth to Well Bottom:	11.58	Well Diameter:	1"	Screen Length:	10'
------------------	--------------------	-------------------------	------	-----------------------	-------	----------------	----	----------------	-----

Casing Type:	PVC	Volume in 1 Well Casing (liters):	0.88	Estimated Purge Volume (liters):	13.6
--------------	-----	-----------------------------------	------	----------------------------------	------

Sample ID:	20090218MW-02V10N	Sample Time:	1442	QA/QC:	None
------------	-------------------	--------------	------	--------	------

Sample Parameters: Freon 113, 1113, 123A, Methane and Sulfate

Notes: blackish tint, very slight sheen, very slight odor, small black flecks, clear at sampling

PURGE PARAMETERS

[illegible]

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

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: Rohm and Haas - Former EMCA Site Site: Former EMCA Site Well I.D.: MW-03

Date: 2/18/2009 Sampling Personnel: Tim Ifkovich Company: URS Corporation

Purging/ Sampling Device:	Low Flow Peristaltic Pump (GeoPump 2)	Tubing Type:	HDPE and Silicone	Pump/Tubing Inlet Location:	Midpoint of Saturated Screen
---------------------------------	---------------------------------------	--------------	-------------------	-----------------------------------	---------------------------------

Measuring Point:	Below Top of Riser	Initial Depth to Water:	6.12	Depth to Well Bottom:	14.40	Well Diameter:	1"	Screen Length:	10'
------------------	--------------------	-------------------------	------	-----------------------	-------	----------------	----	----------------	-----

Casing Type:	PVC	Volume in 1 Well Casing (liters):	1.28	Estimated Purge Volume (liters):	17.9
--------------	-----	-----------------------------------	------	----------------------------------	------

Sample ID:	20090218MW-03V10N	Sample Time:	1030	QA/QC:	MS/MSD
------------	-------------------	--------------	------	--------	--------

Sample Parameters: Freon 113, 1113, 123A, Methane and Sulfate

Notes: slight sheen, small black flecks

PURGE PARAMETERS

[illegible]

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

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: Rohm and Haas - Former EMCA Site Site: Former EMCA Site Well I.D.: MW-04

Date: 2/18/2009 Sampling Personnel: Tim Ifkovich Company: URS Corporation

Purging/ Sampling Device:	Low Flow Peristaltic Pump (GeoPump 2)	Tubing Type:	HDPE and Silicone	Pump/Tubing Inlet Location:	Midpoint of Saturated Screen
---------------------------------	---------------------------------------	--------------	-------------------	-----------------------------------	---------------------------------

Measuring Point:	Below Top of Riser	Initial Depth to Water:	5.52	Depth to Well Bottom:	10.92	Well Diameter:	1"	Screen Length:	10'
------------------	--------------------	-------------------------	------	-----------------------	-------	----------------	----	----------------	-----

Casing Type:	PVC	Volume in 1 Well Casing (liters):	0.83	Estimated Purge Volume (liters):	11.3
--------------	-----	-----------------------------------	------	----------------------------------	------

Sample ID:	20090218MW-04V08N	Sample Time:	1210	QA/QC:	Field Duplicate
------------	-------------------	--------------	------	--------	-----------------

Sample Parameters: Freon 113, 1113, 123A, Methane and Sulfate

Notes: slightly cloudy to start, clear at sampling

PURGE PARAMETERS

[illegible]

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

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: Rohm and Haas - Former EMCA Site Site: Former EMCA Site Well I.D.: MW-06

Date: 2/19/2009 Sampling Personnel: Tim Ifkovich Company: URS Corporation

Purging/ Sampling Device:	Low Flow Peristaltic Pump (GeoPump 2)	Tubing Type:	HDPE and Silicone	Pump/Tubing Inlet Location:	Midpoint of Saturated Screen
---------------------------------	---------------------------------------	--------------	-------------------	-----------------------------------	---------------------------------

Measuring Point:	Below Top of Riser	Initial Depth to Water:	6.05	Depth to Well Bottom:	18.69	Well Diameter:	1"	Screen Length:	10'
------------------	--------------------	-------------------------	------	-----------------------	-------	----------------	----	----------------	-----

Casing Type:	PVC	Volume in 1 Well Casing (liters):	1.98	Estimated Purge Volume (liters):	10.5
--------------	-----	-----------------------------------	------	----------------------------------	------

Sample ID:	20090219MW-06V13N	Sample Time:	0850	QA/QC:	None
------------	-------------------	--------------	------	--------	------

Sample Parameters: Freon 113, 1113, 123A, Methane and Sulfate

Notes: cloudy, very slight odor, clear at sampling with small black flecks

PURGE PARAMETERS

[illegible]

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

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: Rohm and Haas - Former EMCA Site Site: Former EMCA Site Well I.D.: MW-07

Date: 2/18/2009 Sampling Personnel: Tim Ifkovich Company: URS Corporation

Purging/ Sampling				Pump/Tubing Inlet	
Device:	Low Flow Peristaltic Pump (GeoPump 2)	Tubing Type:	HDPE and Silicone	Location:	~9'

Measuring Point:	Below Top of Riser	Initial Depth to Water:	6.24	Depth to Well Bottom:	9.91 (18.82)*	Well Diameter:	1"	Screen Length:	10'
------------------	--------------------	-------------------------	------	-----------------------	---------------	----------------	----	----------------	-----

Casing Type:	PVC	Volume in 1 Well Casing (liters):	0.57 (1.94)*	Estimated Purge Volume (liters):	10.2
--------------	-----	-----------------------------------	--------------	----------------------------------	------

Sample ID:	20090218MW-07V09N	Sample Time:	1325	QA/QC:	None
------------	-------------------	--------------	------	--------	------

Sample Parameters: Freon 113, 1113, 123A, Methane and Sulfate

Notes: Could not extend water level meter or tubing past 9.91 ft bgs, well may have been filled with foreign debris.

* Value in parenthesis represent depth and volume using depth from February 2008 sampling event.

PURGE PARAMETERS

TIME	pH	TEMP (°C)	COND. (mS/cm)	DISS. O₂ (mg/l)	TURB. (NTU)	Eh (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1250	6.34	11.46	1.74	0.0	453	-144	240	7.60
1255	6.24	11.85	1.78	0.0	302	-154	300	7.73
1300	6.22	11.94	1.82	0.0	115	-154	300	7.77
1305	6.20	12.02	1.89	0.0	67	-153	300	7.79
1310	6.20	12.08	1.94	0.0	34	-152	300	7.80
1315	6.19	12.09	1.97	0.0	25	-153	300	7.79
1320	6.19	12.08	1.99	0.0	23	-153	300	7.79
1325	6.18	12.11	2.01	0.0	21	-154	300	7.79
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

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

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: Rohm and Haas - Former EMCA Site Site: Former EMCA Site Well I.D.: GZ-06

Date: 2/18/2009 Sampling Personnel: Tim Ifkovich Company: URS Corporation

Purging/ Sampling Device:	Low Flow Peristaltic Pump (GeoPump 2)	Tubing Type:	HDPE and Silicone	Pump/Tubing Inlet Location:	Midpoint of Saturated Screen
---------------------------------	---------------------------------------	--------------	-------------------	-----------------------------------	---------------------------------

Measuring Point:	Below Top of Riser	Initial Depth to Water:	7.43	Depth to Well Bottom:	15.38	Well Diameter:	2"	Screen Length:	10'
------------------	--------------------	-------------------------	------	-----------------------	-------	----------------	----	----------------	-----

Casing Type:	PVC	Volume in 1 Well Casing (liters):	4.91	Estimated Purge Volume (liters):	7.04
--------------	-----	-----------------------------------	------	----------------------------------	------

Sample ID:	20090218GZ-06V10N	Sample Time:	1651	QA/QC:	None
------------	-------------------	--------------	------	--------	------

Sample Parameters: Freon 113, 1113, 123A, Methane and Sulfate

Notes: slightly turbid, slight sheen, small black flecks

PURGE PARAMETERS

[illegible]

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

APPENDIX B

DATA USABILITY SUMMARY REPORT

APPENDIX B

DATA USABILITY SUMMARY REPORT

FEBRUARY 2009 SAMPLING EVENT

FORMER EMCA SITE

SITE NO. 360025

MAMARONECK, NEW YORK

Analyses Performed by:

TESTAMERICA ANALYTICAL TESTING CORPORATION

777 New Durham Road

Edison, New Jersey 08817

Prepared for:

The Dow Chemical Company

(Formerly ROHM & HAAS Company)

3100 State Road

Croydon, PA 19021

Prepared by:

URS CORPORATION

77 Goodell Street

Buffalo, New York 14203

APRIL 2009

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II. ANALYTICAL METHODOLOGIES.....	B-1
III. DATA VALIDATION.....	B-2
IV. DATA DELIVERABLE COMPLETENESS	B-2
V. PRESERVATION/ SAMPLE RECEIPT/HOLDING TIMES	B-2
VI. NONCONFORMANCES	B-2
VII. SUMMARY	B-3

TABLES (Following Text)

Table B-1	Sample and Analysis Summary – February 2009
Table B-2	Groundwater Analytical Results
Table B-3	Field QC Analytical Results

ATTACHMENTS (Following Tables)

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

I. INTRODUCTION

This Data Usability Summary Report (DUSR) has been prepared following the guidelines provided in New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation *Draft DER-10, Technical Guidance for Site Investigation and Remediation, Appendix 2B - Guidance for the Development of Data Usability Summary Reports*, December 2002. This DUSR discusses the analytical data for six (6) groundwater samples, one field duplicate, one matrix spike/matrix spike duplicate (MS/MSD) pair, and one trip blank collected by URS personnel on February 18 and 19, 2009, as summarized on Table B-1. The samples were collected as part of the semi-annual groundwater monitoring event at the Former EMCA Site located in Mamaroneck, New York.

II. ANALYTICAL METHODOLOGIES

The groundwater samples were analyzed by TestAmerica Laboratories, Inc., located in Edison, New Jersey, for the following parameters:

<u>Parameter</u>	<u>Method No.</u>	<u>References</u>
Volatile Organic Compounds (VOCs)*	OLM04.3	1
Methane	Method 3810	2
Sulfate	375.4	1

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).

References:

- 1 NYSDEC Analytical Services Protocol, June 2000.
- 2 USEPA, R.S. Kerr Environmental Research Laboratory, March 15, 1989.

III. DATA VALIDATION

A limited data validation was performed following the guidelines in USEPA Region II *Contract Laboratory Program Organics Data Review and Preliminary Review for Statement of Work OLM04.3*, SOP No. HW-6, Revision 14, September 2006 and the intent of USEPA Region II *Evaluation of Metals Data for the Contract Laboratory Program, based on SOW – ILM05.3*, SOP No. HW-2, Revision 13, September 2006. The validated analytical results are presented in Tables B-2 and B-3. Copies of the validated laboratory results (i.e., Form 1's) are presented in Attachment A. Copies of the case narratives, chain-of-custodies, 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. PRESERVATION/ SAMPLE RECEIPT/HOLDING TIMES

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

VI. NONCONFORMANCES

Matrix Spikes

The matrix spike (MS) analysis for groundwater sample 20090218MW-03V10N exhibited a percent recovery (%R) below QC limits (i.e., <59%) for sulfate. All groundwater results for sulfate were qualified 'J' or 'UJ', as summarized on Table B-2.

Documentation supporting the qualification of data (i.e., QC summary) is presented in Attachment B.

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) or 'UJ' (estimated quantitation limit) are considered conditionally usable. URS does not recommend the re-collection of any samples at this time.

TABLE B-1
SAMPLE AND ANALYSIS SUMMARY - FEBRUARY 2009
FORMER EMCA SITE, MAMARONECK, NEW YORK

SDG Nos.	Sample ID	Matrix	Date of Collection	VOCs*	Methane	Sulfate	Comments
F173/1731	20090218MW-02V10N	GW	02/18/09	X	X	X	---
	20090218MW-03V10N	GW		X	X	X	MS/MSD
	20090218MW-04V10N	GW		X	X	X	---
	20090218MW-04V10FD	GW		X	X	X	Field Duplicate of MW-04
	20090218MW-06V13N	GW		X	X	X	---
	20090218MW-07V09N	GW		X	X	X	---
	20090218GZ-06V10N	GW	02/19/09	X	X	X	---
	20090219TB	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.

GW - Groundwater

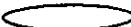
MS/MSD - Matrix Spike/Matrix Spike Duplicate

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

Location ID			GZ-06	MW-02	MW-03	MW-04	MW-04
Sample ID			20090218GZ-06V10N	20090218MW-02V10N	20090218MW-03V10N	20090218MW-04V08N	20090218MW-04V08N
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/18/09	02/18/09	02/18/09	02/18/09	02/18/09
Parameter	Units	Criteria*				Field Duplicate (1-1)	
Volatiles							
Chlorotrifluoroethene (Freon-1113)	UG/L	5	10 U	81 J	38	1.0 J	1.0 J
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	10 U	1,300	5.0 J	10 U	10 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	10 U	34 J	40	10 U	10 U
Dissolved Gases							
Methane	UG/L	-	8,700	8,000	13,000	1,600	1,600
Miscellaneous Parameters							
Sulfate	MG/L	250	5 UJ	35.2 J	50.7 J	5 UJ	5 UJ
Field Parameter							
Dissolved Oxygen	MG/L	-	0.36	0 U	0 U	NA	0 U
Oxidation Reduction Potential	mV	-	-91	-154	-185	NA	-158
pH	S.U.	-	6.12	6.26	6.06	NA	6.33
Specific Conductance	MS/CM	-	2.13	2.55	2.08	NA	1.75
Temperature	DEG C	-	9.24	11.23	12.87	NA	9.36
Turbidity	NTU	-	16	5	5	NA	4

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

Flags assigned during chemistry validation are shown.

 Concentration Exceeds Criteria

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

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

NA - Not Analyzed

MADE BY: PRF_04/07/09 CHKD BY: AMK_04/07/09

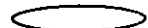
Detection Limits shown are PQL

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

Location ID			MW-06	MW-07
Sample ID			20090219MW-06V13N	20090218MW-07V09N
Matrix			Groundwater	Groundwater
Depth Interval (ft)			-	-
Date Sampled			02/19/09	02/18/09
Parameter	Units	Criteria*		
Volatiles				
Chlorotrifluoroethene (Freon-1113)	UG/L	5	34	150
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	2.0 J	46
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	35	20
Dissolved Gases				
Methane	UG/L	-	9,000	11,000
Miscellaneous Parameters				
Sulfate	MG/L	250	57.0 J	5 UJ
Field Parameter				
Dissolved Oxygen	MG/L	-	0 U	0 U
Oxidation Reduction Potential	mV	-	-132	-154
pH	S.U.	-	6.30	6.18
Specific Conductance	MS/CM	-	0.84	2.01
Temperature	DEG C	-	13.23	12.11
Turbidity	NTU	-	8	21

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

NA - Not Analyzed

MADE BY: __PRF_04/07/09__ CHKD BY: __AMK_04/07/09__

Detection Limits shown are PQL

N:\11172730.0000\08\PROGRAMEDMS.mde

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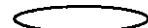
((LOGDATE) BETWEEN #02/18/09# AND #02/19/09#) AND (MATRIX) = 'WG' AND ((SACODE) = 'N' OR (SACODE) = 'FD')

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

Location ID			FIELDQC
Sample ID			20090219TB
Matrix			Water
Depth Interval (ft)			-
Date Sampled			02/18/09
Parameter	Units	Criteria*	Trip Blank (1-1)
Volatiles			
Chlorotrifluoroethene (Freon-1113)	UG/L	5	10 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	UG/L	5	10 U
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	UG/L	5	10 U
Dissolved Gases			
Methane	UG/L	-	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

MADE BY: __PRF_04/07/09__ CHKD BY: __AMK_04/07/09__

Detection Limits shown are PQL

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.

ATTACHMENT A

VALIDATED ANALYTICAL RESULTS (FORM 1's)

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-03V10N

Lab Name: TESTAMERICA EDISON

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: F1731

Matrix: (soil/water) WATER

Lab Sample ID: 985527

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V10987

Level: (low/med) LOW

Date Received: 02/19/09

% Moisture: not dec. _____

Date Analyzed: 02/27/09

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.

COMPOUND

CONCENTRATION UNITS:

(ug/L or ug/Kg)

UG/L

Q

76-13-1	112-Trichlorotrifluoroethane	5	J
79-38-9	Chlorotrifluoroethene	38	_____
354-23-4	1,2-Dichlorotrifluoroethane	40	_____

FORM I VOA-1

OLM04.2

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-04V08N

Lab Name: TESTAMERICA EDISON

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: F1731

Matrix: (soil/water) WATER

Lab Sample ID: 985528

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V10988

Level: (low/med) LOW

Date Received: 02/19/09

% Moisture: not dec. _____

Date Analyzed: 02/27/09

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.

COMPOUND

CONCENTRATION UNITS:

(ug/L or ug/Kg)

UG/L

Q

76-13-1	112-Trichlorotrifluoroethane	10	U
79-38-9	Chlorotrifluoroethene	1	J
354-23-4	1,2-Dichlorotrifluoroethane	10	U

FORM I VOA-1

OLM04.2

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-04V08FD

Lab Name: TESTAMERICA EDISON

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: F1731

Matrix: (soil/water) WATER

Lab Sample ID: 985529

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V10989

Level: (low/med) LOW

Date Received: 02/19/09

% Moisture: not dec. _____

Date Analyzed: 02/27/09

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.

COMPOUND

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Q

76-13-1	112-Trichlorotrifluoroethane	10	U
79-38-9	Chlorotrifluoroethene	1	J
354-23-4	1,2-Dichlorotrifluoroethane	10	U

FORM I VOA-1

OLM04.2

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-07V09N

Lab Name: TESTAMERICA EDISON

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: F1731

Matrix: (soil/water) WATER

Lab Sample ID: 985530

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V10990

Level: (low/med) LOW

Date Received: 02/19/09

% Moisture: not dec. _____

Date Analyzed: 02/27/09

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

76-13-1	112-Trichlorotrifluoroethane	46	
79-38-9	Chlorotrifluoroethene	150	
354-23-4	1,2-Dichlorotrifluoroethane	20	

FORM I VOA-1

OLM04.2

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-02V10N

Lab Name: TESTAMERICA EDISON

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: F1731

Matrix: (soil/water) WATER

Lab Sample ID: 985531

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V10998

Level: (low/med) LOW

Date Received: 02/19/09

% Moisture: not dec. _____

Date Analyzed: 02/28/09

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 10.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

76-13-1	112-Trichlorotrifluoroethane	1300	
79-38-9	Chlorotrifluoroethene	81	J
354-23-4	1,2-Dichlorotrifluoroethane	34	J

FORM I VOA-1

OLM04.2

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GZ-06V10N

Lab Name: TESTAMERICA EDISON

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: F1731

Matrix: (soil/water) WATER

Lab Sample ID: 985532

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V10993

Level: (low/med) LOW

Date Received: 02/19/09

% Moisture: not dec. _____

Date Analyzed: 02/27/09

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.

COMPOUND

CONCENTRATION UNITS:

(ug/L or ug/Kg)

UG/L

Q

76-13-1	112-Trichlorotrifluoroethane	10	U
79-38-9	Chlorotrifluoroethene	10	U
354-23-4	1,2-Dichlorotrifluoroethane	10	U

FORM I VOA-1

OLM04.2

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-06V13N

Lab Name: TESTAMERICA EDISON

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: F1731

Matrix: (soil/water) WATER

Lab Sample ID: 985533

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V10997

Level: (low/med) LOW

Date Received: 02/19/09

% Moisture: not dec. _____

Date Analyzed: 02/28/09

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

76-13-1	112-Trichlorotrifluoroethane	2	J
79-38-9	Chlorotrifluoroethene	34	_____
354-23-4	1,2-Dichlorotrifluoroethane	35	_____

FORM I VOA-1

OLM04.2

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

20090219TB

Lab Name: TESTAMERICA EDISON

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: F1731

Matrix: (soil/water) WATER

Lab Sample ID: 985534

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: V10992

Level: (low/med) LOW

Date Received: 02/19/09

% Moisture: not dec.

Date Analyzed: 02/27/09

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CAS NO.

COMPOUND

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L Q

76-13-1	112-Trichlorotrifluoroethane	10	U
79-38-9	Chlorotrifluoroethene	10	U
354-23-4	1,2-Dichlorotrifluoroethane	10	U

FORM I VOA-1

OLM04.2

Client ID: MW-03V10N
Site: Fmr EMCA Site

Lab Sample No: 985527
Lab Job No: F173

Date Sampled: 02/18/09
Date Received: 02/19/09
Date Analyzed: 02/27/09
GC Column: GS-Q
Instrument ID: VSCREEN5.i
Lab File ID: scr6879.d

Matrix: WATER
Level: MED
Purge Volume: 10.0 ml
Final Volume: 0.0 mL
Dilution Factor: 50.0

METHANE, ETHANE, ETHENE
METHOD 3810

<u>Parameter</u>	<u>Analytical Result</u> <u>Units: ug/l</u>	<u>Quantitation</u> <u>Limit</u> <u>Units: ug/l</u>
Methane	13000	250

Client ID: MW-04V08N
Site: Fmr EMCA Site

Lab Sample No: 985528
Lab Job No: F173

Date Sampled: 02/18/09
Date Received: 02/19/09
Date Analyzed: 02/27/09
GC Column: GS-Q
Instrument ID: VSCREEN5.i
Lab File ID: scr6873.d

Matrix: WATER
Level: MED
Purge Volume: 10.0 ml
Final Volume: 0.0 mL
Dilution Factor: 5.0

METHANE, ETHANE, ETHENE
METHOD 3810

<u>Parameter</u>	<u>Analytical Result</u> <u>Units: ug/l</u>	<u>Quantitation</u> <u>Limit</u> <u>Units: ug/l</u>
Methane	1600	25

Client ID: MW-04V08FD
Site: Fmr EMCA Site

Lab Sample No: 985529
Lab Job No: F173

Date Sampled: 02/18/09
Date Received: 02/19/09
Date Analyzed: 02/27/09
GC Column: GS-Q
Instrument ID: VSCREEN5.i
Lab File ID: scr6874.d

Matrix: WATER
Level: MED
Purge Volume: 10.0 ml
Final Volume: 0.0 mL
Dilution Factor: 5.0

METHANE, ETHANE, ETHENE
METHOD 3810

<u>Parameter</u>	<u>Analytical Result</u> <u>Units: ug/l</u>	<u>Quantitation</u> <u>Limit</u> <u>Units: ug/l</u>
Methane	1600	25

Client ID: MW-07V09N
Site: Fmr EMCA Site

Lab Sample No: 985530
Lab Job No: F173

Date Sampled: 02/18/09
Date Received: 02/19/09
Date Analyzed: 02/27/09
GC Column: GS-Q
Instrument ID: VSCREEN5.i
Lab File ID: scr6875.d

Matrix: WATER
Level: MED
Purge Volume: 10.0 ml
Final Volume: 0.0 mL
Dilution Factor: 25.0

METHANE, ETHANE, ETHENE
METHOD 3810

<u>Parameter</u>	<u>Analytical Result</u> <u>Units: ug/l</u>	<u>Quantitation</u> <u>Limit</u> <u>Units: ug/l</u>
Methane	11000	120

Client ID: MW-02V10N
Site: Fmr EMCA Site

Lab Sample No: 985531
Lab Job No: F173

Date Sampled: 02/18/09
Date Received: 02/19/09
Date Analyzed: 02/27/09
GC Column: GS-Q
Instrument ID: VSCREEN5.i
Lab File ID: scr6876.d

Matrix: WATER
Level: MED
Purge Volume: 10.0 ml
Final Volume: 0.0 mL
Dilution Factor: 20.0

METHANE, ETHANE, ETHENE
METHOD 3810

<u>Parameter</u>	<u>Analytical Result</u> <u>Units: ug/l</u>	<u>Quantitation</u> <u>Limit</u> <u>Units: ug/l</u>
Methane	8000	100

Client ID: GZ-06V10N
Site: Fmr EMCA Site

Lab Sample No: 985532
Lab Job No: F173

Date Sampled: 02/18/09
Date Received: 02/19/09
Date Analyzed: 02/27/09
GC Column: GS-Q
Instrument ID: VSCREEN5.i
Lab File ID: scr6877.d

Matrix: WATER
Level: MED
Purge Volume: 10.0 ml
Final Volume: 0.0 mL
Dilution Factor: 25.0

METHANE, ETHANE, ETHENE
METHOD 3810

<u>Parameter</u>	<u>Analytical Result</u> <u>Units: ug/l</u>	<u>Quantitation</u> <u>Limit</u> <u>Units: ug/l</u>
Methane	8700	120

Client ID: MW-06V13N
Site: Fmr EMCA Site

Lab Sample No: 985533
Lab Job No: F173

Date Sampled: 02/19/09
Date Received: 02/19/09
Date Analyzed: 02/27/09
GC Column: GS-Q
Instrument ID: VSCREEN5.i
Lab File ID: scr6878.d

Matrix: WATER
Level: MED
Purge Volume: 10.0 ml
Final Volume: 0.0 mL
Dilution Factor: 20.0

METHANE, ETHANE, ETHENE
METHOD 3810

<u>Parameter</u>	<u>Analytical Result</u> <u>Units: ug/l</u>	<u>Quantitation</u> <u>Limit</u> <u>Units: ug/l</u>
Methane	9000	100

Client ID: 20090219TB
Site: Fmr EMCA Site

Lab Sample No: 985534
Lab Job No: F173

Date Sampled: 02/18/09
Date Received: 02/19/09
Date Analyzed: 02/26/09
GC Column: GS-Q
Instrument ID: VSCREEN5.i
Lab File ID: scr6850.d

Matrix: WATER
Level: MED
Purge Volume: 10.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

METHANE, ETHANE, ETHENE
METHOD 3810

<u>Parameter</u>	<u>Analytical Result</u> <u>Units: ug/l</u>	<u>Quantitation</u> <u>Limit</u> <u>Units: ug/l</u>
Methane	ND	5.0

Lab Job No: F173

Matrix: WATER

Site: Fmr EMCA Site

QA Batch: 2676

Sulfate

Lab ID	Client ID	Date Sampled	Date Analyzed	Percent Moisture	DF	Analytical Result Units: mg/l	Reporting Limit Units: mg/l
985527	MW-03V10N	02/18/09	03/02/09	-	2.0	50.7 J	10.00*
985528	MW-04V08N	02/18/09	03/02/09	-	1.0	ND WJ	5.00*
985529	MW-04V08FD	02/18/09	03/02/09	-	1.0	ND J	5.00*
985530	MW-07V09N	02/18/09	03/02/09	-	1.0	ND J	5.00*
985531	MW-02V10N	02/18/09	03/02/09	-	2.0	35.2 J	10.00*
985532	GZ-06V10N	02/18/09	03/02/09	-	1.0	ND WJ	5.00*
985533	MW-06V13N	02/19/09	03/02/09	-	2.0	57.0 J	10.00*

* Reported RL is adjusted for Dilution Factor and/or Percent Moisture.

** The unadjusted RL for Sulfate = 5.0 mg/l.

4/6/09
2

ATTACHMENT B

SUPPORT DOCUMENTATION

CHAIN OF CUSTODY RECORD

PROJECT NO: 11174947.00000
 SITE NAME: Former EMCA Site
 SAMPLERS (PRINT/SIGNATURE): Tim I. Florovich

DELIVERY SERVICE: FedEx
 AIRBILL NO.: 8645 1193 8517

DELIVERY SERVICE: FedEx
 AIRBILL NO.: 8645 1193 8517

LOCATION IDENTIFIER	DATE	TIME	COMP/GRAB	SAMPLE ID	MATRIX
MW-03	2/18/09	1030	G	20090218 MW-03V10N	WG
MW-03	2/18/09	1030		20090218 MW-03V10M5	
MW-03	2/18/09	1030		20090218 MW-03V10S0	
MW-04	2/18/09	1210		20090218 MW-04V08N	
MW-04	2/18/09	1210		20090218 MW-04V08F0	
MW-07	2/18/09	1325		20090218 MW-07V09N	
MW-02	2/18/09	1442		20090218 MW-02V10N	
MW-06	2/18/09	1651		20090218 MW-06V10N	
MW-06	2/19/09	0852	V	20090219 MW-06V13N	V
Trip Blank	-	-	-	20090219 TB	WG

MATRIX CODES	AA - AMBIENT AIR	SE - SEDIMENT	SH - HAZARDOUS SOLID WASTE	SL - SLUDGE	WP - DRINKING WATER	WW - WASTE WATER	WG - GROUND WATER	SO - SOIL	DC - DRILL CUTTINGS	WL - LEACHATE	GS - SOIL GAS	WC - DRILLING WATER	WO - OCEAN WATER	WS - SURFACE WATER	WQ - WATER FIELD QC	LH - HAZARDOUS LIQUID WASTE	LF - FLOATING/FREE PRODUCT ON GW TABLE
SAMPLE TYPE CODES	TB# - TRIP BLANK	SD# - MATRIX SPIKE DUPLICATE	RB# - RINSE BLANK	FR# - FIELD REPLICATE	N# - NORMAL ENVIRONMENTAL SAMPLE	MS# - MATRIX SPIKE	TOTAL NO. # OF CONTAINERS	40 mL Vial (HCL)	40 mL Vial (HCL)	40 mL Vial (HCL)	500 mL Poly	SC Rate (375-4)	(R&K-175)	Meatone (CLP OMWY 2A)	Freon 113, 1113, 1284		

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME
Tim I. Florovich	2/18/09	0915	Ed	2/19/09	0915

RELINQUISHED BY (SIGNATURE): Tim I. Florovich
 DATE: 2/18/09
 TIME: 0915

RECEIVED FOR LAB BY (SIGNATURE): Ed
 DATE: 2/19/09
 TIME: 0915

Distribution: Original accompanies shipment, copy to coordinator field files

6 mays

TESTS

BOTTLE TYPE AND PRESERVATIVE

REMARKS

SAMPLE TYPE

BEGINNING DEPTH (IN FEET)

ENDING DEPTH (IN FEET)

FIELD LOT NO. # (HRPMS)

LAB Test America Edison

COOLER 1 of 1

PAGE 1 of 1

URS

For questions contact

Peter Fairbanks @ 716-856-5636
 2/20/09 10:00 3rd fl

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

777 New Durham Rd

Edison, NJ 08817

Ph. 732 549-3900 * Fax 732 549-3679

SDG NARRATIVE

TestAmerica

SDG No. F1731

TestAmerican Edison Sample

Client ID

985527
985528
985529
985530
985531
985532
985533
985534

MW-03V10N
MW-04V08N
MW-04V08FD
MW-07V09N
MW-02V10N
GZ-06V10N
MW-06V13N
20090219TB

Fraction

Problems Encountered

Corrective Action Taken

Volatiles

None

N/A

TestAmerica

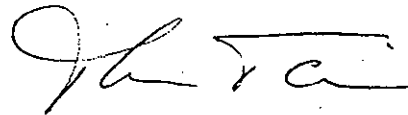
THE LEADER IN ENVIRONMENTAL TESTING

777 New Durham Rd

Edison, NJ 08817

Ph. 732 549-3900 * Fax 732 549-3679

I certify that this data package is in compliance with the terms of the contract (OLM04.2) both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this data package has been authorized by the laboratory manager or his designee.



Thomas Tanico
Project Manager

Nonconformance Summary

TestAmerica Edison Job # : F173

Client: URS Greiner-NY

Date: 3/10/2009

Sample Receipt:

Sample delivery conforms with requirements.

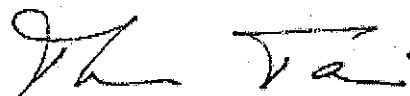
Volatile Organic Analysis (GC):

QA batch 1610: MS/MSD recovery of Methane outside QC limits due to high sample concentration. Blank Spike meets all QC limits.

Wet Chemistry:

QA Batch 2676 : Matrix spike/MSD % recoveries of Sulfate are outside Q.C. limits due to matrix interference(LCS recovery is within Q.C. limits)

I certify that the test results contained in this data package meet all requirements of NELAC both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this package has been authorized by the Laboratory Director or their designee, as verified by the following signature.

A handwritten signature in black ink, appearing to read 'TH Tanico', with a stylized flourish at the end.

Thomas Tanico
Project Manager

SULFATE

Matrix: WATER

Lab Sample No.: 985527

QA Batch No.: 2676

Lab Job No.: F173

Laboratory Blank	
Blank Conc Units: mg/l	Quant Limit Units: mg/l
ND	5.0

Matrix Spike				
Spike Added Units: mg/l	Sample Conc Units: mg/l	MS Conc Units: mg/l	MS % Rec	MS %Rec Limits
20.0	50.7	59.4	43.5	59-111

Matrix Spike Duplicate					
Spike Added Units: mg/l	MSD Conc Units: mg/l	MSD % Rec	% RPD	QC LIMITS	
20.0	60.7	50.0	2.2	RPD 12.0	REC 59-111

Laboratory Control Sample				
Vendor	Lot #	True Value Units: mg/l	Acceptable Range: mg/l	Measured Value: mg/l
ERA	P142-506	35.3	30.9-37.1	35.3