Enclosure 1
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. 442024

Site Name Roxy Cleaners

Site Address: Main Avenue (Route 66 at Route 150) Zip Code: 12198
City/Town: North Greenbush
County: Rensselaer
Allowable Use(s) (if applicable, does not address local zoning):
Site Acreage: 0.5
Owner: Ms. Karen Coleman
4 Nottingham Way, Cohoes, NY 12047

Reporting Period: March 2008-December 2009

Verification of Site Details **Box 2**

		YES	NO	
1.	Is the information in Box 1 correct?	☒	☐	
	If NO, are changes handwritten above or included on a separate sheet?	☐		
2.	Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☒	
	If YES, is documentation or evidence that documentation has been previously submitted included with this certification?	☐		
3.	Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☒	
	If YES, is documentation (or evidence that documentation has been previously submitted) included with this certification?	☐		
4.	If use of the site is restricted, is the current use of the site consistent with those restrictions?	☒	☐	
	If NO, is an explanation included with this certification?	☐		
5.	For non-significant-threat Brownfield Cleanup Program Sites subject to ECL 27-1415.7(c), has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?	☐	☐	NA
	If YES, is the new information or evidence that new information has been previously submitted included with this Certification?	☐		
6.	For non-significant-threat Brownfield Cleanup Program Sites subject to ECL 27-1415.7(c), are the assumptions in the Qualitative Exposure Assessment still valid (must be certified every five years)?	☐	☐	NA
	If NO, are changes in the assessment included with this certification?	☐		

SITE NO. 442024 **Box 3**

Description of Institutional Controls

Parcel	Institutional Control
S_B_L Image: **124.6-8-12**	Monitoring Plan O&M Plan

Box 4

Description of Engineering Controls

Parcel	Engineering Control
S_B_L Image: **124.6-8-12**	Groundwater Pump & Treat System

Attach documentation if IC/ECs cannot be certified or why IC/ECs are no longer applicable. (See instructions)

Control Description for Site No. 442024

Parcel: 124.6-8-12

Installation of a groundwater treatment system whereby contaminated groundwater will be collected from the on-site bedrock and overburden aquifers and off-site overburden aquifer via extraction wells, treated by air stripping with vapor phase carbon adsorption and discharged to the Wynantskill Creek.

Monitoring Plan consisting of sampling a comprehensive network of monitoring wells.

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
☒	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
☐	☒*

*Prior to certifying the site, the corrective action for extraction well RW-3 must demonstrate that downgradient migration is being controlled.

3. If this site has an Operation and Maintenance (O&M) Plan (or equivalent as required in the Decision Document);

   I certify by checking "YES" below that the O&M Plan Requirements (or equivalent as required in the Decision Document) are being met.

YES	NO
☒	☐

4. If this site has a Monitoring Plan (or equivalent as required in the remedy selection document);

   I certify by checking "YES" below that the requirements of the Monitoring Plan (or equivalent as required in the Decision Document) is being met.

YES	NO
☒	☐

IC CERTIFICATIONS
SITE NO. 442024

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 2 and/or 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I _____ at _____,
print name print business address

am certifying as _____(Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

_____ _____
Signature of Owner or Remedial Party Rendering Certification Date

IC/EC CERTIFICATIONS

Box 7

QUALIFIED ENVIRONMENTAL PROFESSIONAL (QEP) SIGNATURE

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I _____ at _____,
print name print business address

am certifying as a Qualified Environmental Professional for the _____

(Owner or Remedial Party) for the Site named in the Site Details Section of this form.

_____ _____ _____
Signature of Qualified Environmental Professional, for the Owner or Remedial Party, Rendering Certification Stamp (if Required) Date

Periodic Review Report
Roxy Cleaners (4-42-024)
North Greenbush, New York

Prepared for

New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Prepared by

EA Engineering, P.C. and Its Affiliate
EA Science and Technology
6712 Brooklawn Parkway, Suite 104
Syracuse, New York 13211
(315) 431-4610

March 2010
Revision: FINAL
EA Project No.: 14474.21

Periodic Review Report
Roxy Cleaners (4-42-024)
North Greenbush, New York

Prepared for

New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Prepared by

EA Engineering, P.C. and Its Affiliate
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6712 Brooklawn Parkway, Suite 104
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(315) 431-4610

25 March 2010
Christopher J. Canonica, P.E., Program Manager — Date
EA Engineering, P.C.

25 March 2010
Jim Hayward, P.E., Project Manager — Date
EA Engineering, P.C.

25 March 2010
Joe Von Uderitz, P.G., Site Manager — Date
EA Science and Technology

March 2010
Revision: FINAL
EA Project No.: 14474.21

CONTENTS

LIST OF FIGURES

LIST OF TABLES

Number

1. EXECUTIVE SUMMARY

EA Engineering, P.C. and its affiliate EA Science and Technology (EA) has prepared this Periodic Review Report (PRR) for the Roxy Cleaners site in the town of North Greenbush, Rensselaer County, New York. This work was performed for the NYSDEC under Work Assignment D004441-21 of EA's Superfund Standby Contract with NYSDEC. The NYSDEC has assigned the site ID No. 4-42-024. An active groundwater extraction and treatment system is in operation. This report describes activities and results at the site from March 2008 to December 2009.

In March 1994, a Record of Decision (ROD) was completed for the site. According to the ROD, the remedy includes a groundwater extraction system consisting of three pumping wells. The primary goals of the groundwater extraction and treatment system are:

- Reduce the mass and concentration of contaminants in the groundwater
- Control migration of the groundwater contamination.

Comparative analysis of historical and recent groundwater data suggest that the overall mass concentrations of chlorinated volatile organic compounds (VOCs) in the groundwater plume at the vicinity of the site are being reduced. However, recent tetrachloroethene (PCE) concentrations at a downgradient sentinel well indicate migration of the groundwater contaminants is not being controlled. A possible reason for this was a reduced flow rate observed from April 2008 to May 2009. One of the groundwater treatment system extraction wells was running below its designed flow rate. The extraction well was evaluated and optimized to reestablish its capture zone and a monitoring plan was implemented to observe how the optimized well is performing. Prior to certifying the site, this corrective action must demonstrate that downgradient migration is being controlled. Therefore, the Roxy Cleaners site cannot be certified at this time.

It is recommended that a desktop review of the PRR be conducted annually to evaluate the performance, effectiveness, and protectiveness of the pump and treat system at the site.

2. SITE OVERVIEW

This PRR has been prepared to document the ongoing performance, effectiveness, and protectiveness of the selected remedy at the Roxy Cleaners site as required by 6 New York Code of Rules and Regulations Part 375. The Roxy Cleaners site (New York State Department of Environmental Conservation [NYSDEC] Site No. 4-42-024) is located in a suburban portion of Rensselaer County, in East Greenbush, New York (Figure 1). Roxy Cleaners, Inc. operated a dry cleaning establishment at this site and allegedly spilled dry cleaning solvents, resulting in contamination of the site's soil and groundwater. Contaminants were found to be PCE, trichloroethene (TCE), and 1,2-dichloroethene (DCE).

2.1 OBJECTIVES OF THE PERIODIC REVIEW

The periodic review process is used for determining if a remedy continues to be properly managed, as set forth in the Site Management Plan (SMP). The objectives of the periodic review for sites in the State Superfund Program are as follows:

- Determine if the remedy remains in place, is performing properly and effectively, and is protective of public health and the environment.
- Evaluate compliance with the decision document(s) and, if available, the SMP.
- Evaluate all treatment units, and recommend repairs or changes, if necessary.
- Evaluate the condition of the remedy.
- Certify, if appropriate, that the intent of institutional controls (IC) continues to be met and that engineering controls (EC) remain in place, and are effective and protective of public health and the environment.
- Evaluate costs.

2.2 REMEDIAL HISTORY

From 1959 to 1998, Roxy Cleaners, Inc. operated a dry cleaning establishment at this site and allegedly spilled dry cleaning solvents, which resulted in contamination of the site's soil and groundwater. In 1990, NYSDEC initiated a Remedial Investigation/Feasibility Study to determine the extent of the contamination. Contaminants were found to be PCE, TCE, and DCE. In January 1992, a vacuum extraction system was installed at the site as an interim remedial measure. Approximately 350 lbs of PCE were extracted from the soil above the groundwater using this system.

In March 1994, a ROD was issued for the site. The ROD called for:

- Installation of on-site overburden and bedrock extraction wells. Installation of off-site overburden extraction wells.

- Operation and maintenance of a groundwater treatment system on-site and off-site.

- Discharge of treated wastewater to Wynantskill Creek.

- Extend the existing public water supply system to service the effected private water supply wells.

- Institute a long-term monitoring program for the site.

In June 1995, a Long-Term Monitoring Plan (LTMP) was prepared for the site and was subsequently updated in December 2004. Groundwater samples have been collected during 13 sampling events from October 1989 to August 2009 by several contractors.

A vapor intrusion evaluation investigation was completed in April 2006 to assess whether or not soil vapor contamination existed in the vicinity if the site. The assessment evaluated the extent to which the vapors, if detected, posed a threat to human health or the environment. From October 2007 to present, Aztech Environmental has performed weekly operation and maintenance visits. Influent and effluent samples are collected on a monthly basis to determine system efficiency and mass removal of contaminants. During that same period, EA has performed oversight and quarterly reporting of operation and maintenance activities.

3. REMEDY PERFORMANCE, EFFECTIVENESS, AND PROTECTIVENESS

Based on the site visit and a review of the January 1998 Operation, Monitoring, and Maintenance (OM&M) Plan[1], this treatment system consists of the following primary elements:

- Three extraction wells
- Treatment equipment building
- Water treatment system equipment
- Groundwater discharge system.

3.1 OPERATION, MONITORING, AND MAINTENANCE PLAN COMPLIANCE REPORT

The following summarizes the current OM&M program:

- The treatment system is currently operated and maintained by technicians from Aztech Environmental's Ballston Spa, New York office.

- Weekly visits are typically required to maintain the system. The system is not equipped with remote monitoring capabilities.

- Groundwater treatment system sampling (influent and effluent) is performed monthly for VOCs, metals, total suspended solids (TSS), and total dissolved solids.

- Water levels in 25 monitoring wells are currently measured on a quarterly basis

- Twenty-four monitoring wells are currently sampled on a 15-month basis and analyzed for VOCs.

- Inspection of three sub-slab depressurization systems (SSDS) performed by Yu & Associates.

3.1.1 Operation, Monitoring, and Maintenance Plan Compliance Report

From March 2008 to December 2009, the State Pollutant Discharge Elimination System values for the effluent samples were below the stated discharge limitations during the reporting period for VOCs, metals, total dissolved solids (TDS); the only exception is TSS. The discharge limitation for TSS is 20 mg/L and was exceeded in samples collected on 27 June 2008 (50.25 mg/L), 19 September 2008 (20.25 mg/L), 31 October 2008 (151 mg/L), 24 December 2008 (21.5 mg/L), 30 January 2009 (41.3 mg/L), and 29 May 2009 (73.8 mg/L). The increases of TSS results throughout the reporting period were believed to be caused by clogged sediment filters. Typically sediment filters are changed when there is an increase in influent pressure.

1. Malcolm Pirnie. 1998. Operation, Monitoring, and Maintenance Plan Report. January.

During the 22-month period from March 2008 to December 2009, the following OM&M compliance activities were accomplished as described in the table below:

CONFIRM COMPLIANCE WITH OM&M ACTIVITIES						
Activity	Required Frequency (X)					Compliance Dates
	Weekly	Monthly	Quarterly	Five-Quarter	As Needed	
Preventative Maintenance	X					2008-Present
Groundwater (influent & effluent) Sampling		X				2008-Present
Water Level Monitoring			X			2008-Present
Monitoring Well Sampling				X		2008-Present
Air Stripper and Pump Cleaning					X	2008-Present
Sediment Filters					X	2008-Present

3.1.2 Evaluation of Operation, Monitoring, and Maintenance Activities

3.1.2.1 Flow Rates

During the 22-month period of March 2008 to December 2009, the groundwater extraction and treatment system treated 8,889,300 gal of groundwater. The individual pumping rates varied from well to well. During the period, RW-01 averaged a flow rate of approximately 2 gal per minute (gpm), RW-02 averaged a flow rate of approximately 6 gpm, and RW-03 averaged a flow rate of approximately 6 gpm until 15 December 2008. Beginning 19 December 2008, the flow rate at RW-03 was slowly increased over the remainder of the period to approach the historical flow rate of 12 gpm on 29 May 2009[2]. The average approximate flow rate at RW-03 from December 2008 to May 2009 was 9.8 gpm. The average flow rates are calculated using the total operational time for the period, divided by the total gallons pumped during that time period. Actual operational flow rates may be higher, due to treatment system down time.

3.1.2.2 Groundwater Levels

During the groundwater sampling events completed in May 2008 and August 2009, groundwater elevations were monitored from the well network to ensure that the cones of influence created by the recovery wells were maintained (Figure 2). Recovery wells RW-02 and RW-03 are overburden wells. As shown in Figure 3A (interpolated overburden groundwater contour map), when RW-02 averages a flow rate of 6 gpm and RW-3 averages 12 gpm, there is a slight cone of influence created by both wells. Figure 3B (interpolated bedrock groundwater contour map) shows a slight influence on the bedrock groundwater table created from RW-03. The slight cone

2. Based on the Final Operations and Maintenance Manual Dated December 1998, the designed flow rates are as follows: 0.5 gpm for RW-01, 5 gpm for RW-02, and 16 gpm for RW-03.

of depression created by RW-03 in the bedrock water table suggests that the overburden and bedrock groundwater aquifers are connected. Water levels here suggest upwardly vertical hydraulic gradient from bedrock to overburden at this location and others, and downward in the vicinity of Roxy Cleaners.

A bedrock contour map was also generated from groundwater elevations from the August 2009 groundwater sampling event. RW-01, located on-site, is a bedrock recovery well. Based on Figure 3B, there is minimal influence from RW-01 on the bedrock groundwater table when RW-01 averages 2 gpm.

On 15 July 2008, 10 October 2008, 14 January 2009, 21 April 2009, 24 August 2009, and 19 October 2009 each of the monitoring wells were gauged with an oil water interface probe to determine depth to water. Tables 1A through 1F show the depth to groundwater observed at each monitoring well location during the gauging events.

3.1.2.3 Influent Analytical

Monthly samples were collected from the influent lines from each of the three extraction wells in conjunction with the treatment system effluent samples. These samples provide a basis for determining the mass of contaminants recovered from the groundwater at the three wells and are also used in determining the removal efficiency of the air stripper system. The results of these analyses are summarized in Table 2.

3.1.2.4 Effluent Analytical

The treatment system effluent met the discharge criteria throughout the period, with the exception of TSS for the samples collected on 27 June 2008, 19 September 2008, 31 October 2008, 24 December 2008, 30 January 2009, and 29 May 2009.

3.1.2.5 System Maintenance

From October 2007 to March 2008, Aztech Environmental, the inspection and response contractor on-site, performed weekly operation and maintenance visits. In March 2008, EA began to provide oversight of Aztech Environmental. Representatives from EA were on-site periodically to discuss system operation and performance, as well as any recurring issues. From October 2007 to December 2009, the system ran continuously and only minor upgrades were needed as described below.

- From 16 January to 27 February 2009 (with the exception of the site visit on 23 January), the pressure transducer was not working properly on RW-02.

- On 27 February 2009, the readout was inspected and it was determined that the pressure transducer was bad. A new transducer was ordered and the old one was replaced.

- The extraction pump in RW-03 malfunctioned from 6 to 18 March 2009 and was pulled for inspection and repairs.

- On 9 April 2009, the pump and piping in RW-03 were replaced. The pumping speed was slowly increased until groundwater flow reached 12 gpm on 29 May 2009.

3.2 MONITORING PLAN COMPLIANCE REPORT

The 1995 LTMP, 1998 OM&M Plan, and updated LTMP (2004) are the available elements of the SMP for the site. The 1995 LTMP required initial monthly samples for selected wells, followed by quarterly sampling. Other selected wells were required on a semi-annual and/or annual sampling. The OM&M manual required quarterly groundwater sampling from the monitoring well network, shown in Tables 1A though 1F, for the first year of operation. The 2004 updated LTMP required annual sampling for 2 years. Following the two years of sampling, the sampling frequency could be reduced as directed by the NYSDEC. Currently, as directed by the NYSDEC, the monitoring wells are sampled on a five-quarter basis (every 15 months) as directed under DER-10. The most recent event was completed in August 2009. Therefore, the monitoring plan compliance section of this PRR assesses whether the site has been managed accordingly.

3.2.1 Groundwater Sampling

The site includes a network of 26 groundwater monitoring wells that are currently used to monitor plume migration and provide a line of evidence necessary to demonstrate the effectiveness of the groundwater remediation. A total of 28 groundwater monitoring wells were originally included in the groundwater sampling program; however, MW-101A and MW-110B could no longer be located. In order to provide the data for compliance monitoring, groundwater sampling is performed on a five-quarter basis (every 15 months) to capture seasonal changes in groundwater elevation. Depth to groundwater measurements are collected at each well on a quarterly basis to verify groundwater flow direction and to determine the capture zone of the extraction wells.

The monitoring well network consists of overburden and bedrock monitoring wells. Interpreted overburden and bedrock groundwater monitoring well elevation maps illustrating the direction of groundwater flow for the May 2008 and August 2009 gauging events are shown in Figures 3a, 3b, 3c, and 3d. Hydraulic groundwater gradient across the site was determined to be 0.128 in the overburden wells and 0.011 in the bedrock wells. The observed groundwater flow direction in the overburden and bedrock wells was is in a westerly direction, which follows the same general direction as topography.

The GIS coverage doesn't accurately reflect the conditions in the field as there is a discrepancy between the surface contours and a spot elevation check. The elevation at MW-108A is 344.44 ft above mean sea level (amsl), which is on the 340 ft amsl surface contour interval. The surface contours on the maps were double checked (geo-referencing) and are correct. The groundwater elevation at MW-108A for the gauging events is consistent with historical elevations at that location. Recommendations to address this discrepancy is discussed in Section 5.2

During the most current sampling event in August 2009, 26 monitoring wells were found and inspected. Four monitoring wells were not sampled: MW-102 was not sampled due to concrete covering the well casing, there was not enough water in well MW-104A to collect a sample, MW-107A had an obstruction in the well riser, and MW-05B was blocked with debris.

During the October 2009 quarterly gauging event, the following well conditions were noted:

- MW-1 had a broken flushmount cover and the monitoring well needed a new plug.
- MW-111 had no well cap.
- MW-108A had a broken casing cover.
- MW-104A had a broken lock.
- MW-109 needed a new compression plug.
- MW-2B did not have a lock.
- MW-106 had a broken casing cover, the polyvinyl chloride stick up was broken, and there was no well cap.
- MW-106A had a broken casing cover.
- MW-107A had a cracked well cap.
- MW-4 and MW-4B did not have locks.

Currently, groundwater samples are analyzed for VOCs by United States Environmental Protection Agency (USEPA) Method 8260B. The following sections detail analytical results for the overburden and bedrock monitoring wells.

3.2.2 Overburden Monitoring Wells

Historically, five overburden monitoring wells (MW-2, MW-101A, MW-103A, MW-107A, and MW-111) have had concentrations of PCE, TCE, and DCE above the NYSDEC Ambient Water Quality Standard (AWQS) of 5 μg/L. Since initial sampling in October 1989, the general concentrations of these analytes have decreased in these monitoring wells. A sixth well, TW-5, has also had concentrations exceeding 5 μg/L.

In August 2009, three overburden monitoring wells (MW-2, MW-103A, and MW-105A) and TW-5 had detections of PCE over the AWQS and ranged from 15.3 μg/L to 397 μg/L. A concentration of PCE exceeding the AWQS was first detected in MW-105A during the May 2008 sampling event and remained present during the August 2009 sampling event at a concentration

of 15.3 µg/L. MW-105A is the furthest downgradient well from the site and is hydraulically downgradient of RW-03.

Groundwater analytical data for the May 2008 and August 2009 sampling event are summarized in Tables 3A and 3B, and shown on Figures 4A and 4B. Isopleths for PCE in the overburden wells are depicted on Figures 5A and 5B. The available historical data for the contaminants of concern (TCE, PCE, and DCE) are presented in Table 4. These data include 13 groundwater sampling events completed from October 1989 to May 2008. Trend graphs for available historical analytical data are provided in Figure 6.

3.2.3 Bedrock Monitoring Wells

Three bedrock monitoring wells (MW-101, MW-103, and MW-107) have historically had concentrations of one or more analyte (PCE, TCE, and DCE) over the AWQS. In August 2009, monitoring wells MW-101 and MW-107 were the only two bedrock monitoring wells with detections of PCE over the AWQS. MW-101 had a PCE detection of 29.3 µg/L and is located in the source area. MW-107 had a PCE detection of 24.9 µg/L and is located downgradient of the site.

3.2.4 Confirm Compliance with Monitoring Plan

During the 22-month period from March 2008 to December 2009 the following monitoring plan compliance activities were accomplished:

Activity	Required Frequency (X)					Compliance Dates
	Semi-Annual	Monthly	Quarterly	Five-Quarter	As Needed	
Groundwater Sampling				X		2008-Present
Water Level Monitoring			X			2008-Present

3.2.5 Confirm Performance Standards Are Being Met

Both present and available historical data (Table 4) were reviewed to determine if there are any notable trends in the data concentrations. Previous investigations at this site indicate that the primary contaminants of concern are DCE, TCE, and PCE. Historical data reveal that eight monitoring wells have had concentrations of one or more analyte (PCE, TCE, and DCE) over the AWQS standard of 5 µg/L: monitoring wells MW-2, MW-101, MW-101A, MW-103, MW-103A, MW-107, MW-107A, and MW-111. Based on historical trend graphs (Figure 6), the general concentrations of these analytes have decreased in these monitoring wells since initial sampling in October 1989. Historical analytical data reveal that several wells have been non-detect for chlorinated VOC analytes since initial sampling in October 1989: MW-1, MW-1B, MW-3, MW-4, MW-4B, MW-104A, MW-106A, MW-108A, and MW-109.

PCE was detected at a concentration above the AWQS of 5 µg/L in monitoring well MW-105A (21 µg/L) beginning in the May 2008 sampling event. Concentrations of PCE in MW-105A (15.3 µg/L) remained above the AWQS during the August 2009 sampling event. MW-105A is the furthest downgradient well from the site, and is hydraulically downgradient of RW-03.

Three monitoring wells (MW-102, MW-5B, and MW-107A) currently have obstructions and cannot be sampled. MW-102 and MW-5B historically have been non-detect for chlorinated VOCs. During the October 2005 sampling event, MW-107A revealed concentrations of PCE, TCE, and DCE over their respective AWQS standards.

3.3 SUB-SLAB DEPRESSURIZATION SYSTEM

As a result of the vapor intrusion investigation, three SSDSs were installed in January 2008 (Figure 7). In November 2009, the three SSDSs were inspected and determined to be in working order. The SSDS inspections included: a structural review, piping, slab and wall inspections, manometer readings, and confirmation of fan operation. This report certifies that the fans are in operation and that the SSDSs are in working order. This report does not certify the SSDS efficiency and effectiveness as this was not evaluated during the investigation.

3.4 INSTITUTIONAL CONTROL/ENGINEERING CONTROL CERTIFICATION PLAN REPORT

IC/ECs at the site currently consist of:

- Operation and maintenance of groundwater extraction and treatment system.
- Environmental monitoring to determine effectiveness of the remedy.
- Operation of three SSDSs.
- Maintaining restricted access and posted warning notifications.

3.4.1 Institutional Control/Engineering Control Requirements and Compliance

Determination of compliance with the IC/EC at the site is made based on the following criteria:

- The IC/EC(s) applied at the site are in place and unchanged from the previous certification (presented in the OM&M manual).
- Nothing has occurred that would impair the ability of such controls to protect the public health and the environment, or constitute a violation or failure to comply with any element of the OM&M plan for such controls.

- Access to the site will continue to be provided to the Department, to evaluate the remedy including access to evaluate the continued maintenance of such controls.

- Future access cannot be guaranteed, but access for maintenance and inspections has not been an issue to date and is not anticipated to change.

3.4.2 Institutional Control/Engineering Control Certification Forms

The completed IC/EC Certification Form is provided as Appendix A to this report. However, the form indicates that the site cannot be certified at this time as discussed in Section 5 of this PRR.

4. COST EVALUATION

4.1 SUMMARY OF COSTS

The costs incurred between March 2008 and December 2009 were for the site management field activities, which included, but were not limited to, the following:

- One groundwater sampling event occurred on 12-14 May 2008 at 23 monitoring wells. A second groundwater sampling event occurred on 24-25 August 2009 at 22 monitoring wells. Two duplicate samples were collected at MW-1 and MW-105 in May 2008, and one duplicate sample was collected at MW-111 in August 2009. Groundwater samples were analyzed for VOCs by USEPA Method 8260B. Historically, groundwater samples were analyzed by USEPA Method 624.

- Quarterly groundwater gauging and monitoring well inspections were completed on 15 July 2008, 10 October 2008, 14 January 2009, 21 April 2009, 24 August 2009, and 19 October 2009. Wells in the monitoring well network were gauged, and the integrity of each well was inspected and recorded on a monitoring well inspection list.

- Weekly system inspections were completed by Aztech Environmental between March 2008 and December 2009. Aztech Environmental completed weekly site visits to perform system operation checks and routine equipment maintenance. Monthly treatment system sampling was completed by Aztech Environmental.

- Two annual summary reports describing laboratory analytical results were prepared and submitted to the NYSDEC. All reported data and analysis were in tabular form and graphical form (e.g., figures with interpretive isopleths and temporal line graphs of contaminants of concern) characterizing the site. Reporting included Category A deliverables for laboratory data with an internal quality assurance/quality control report from the laboratory.

- The results of the quarterly gauging activities were included in the quarterly operations and maintenance reports.

- Site management also included preparation of this PRR. At a minimum, the PRR will be used to verify that IC/ECs are still in effect and performing as designed.

The total costs incurred at the site from March 2008 to December 2009 are tabulated below.

TASK	TOTALS
Task 1—Work Plan	$6,225
Task 2—O & M	$9,392
Task 3—Long-Term Monitoring	$26,516
Task 4—Remedial Site Optimization	$1,195
Task 5—Reporting	$30,762
Total	**$74,805**

Annual costs ($41,000) are anticipated to remain generally the same for the overall management of the site during 2010.

5. CONCLUSIONS / RECOMMENDATIONS

5.1 CONCLUSIONS

As described in the March 1994 ROD, the primary goals of the groundwater pump and treat system are:

- Reduce the mass and concentration of contaminants in the groundwater;
- Control migration of the groundwater contamination.

Based on historical analytical trend graphs (Figure 6), analytical data suggest that the overall mass concentrations of chlorinated VOCs in the groundwater at the vicinity of the site are being reduced.

However, based on the increasing trend in PCE concentrations at MW-105A, it appears that downgradient migration of the groundwater contaminants is not being controlled; MW-105A is located hydraulically downgradient of RW-03 and is furthest downgradient of the source area. The increase in PCE concentrations at MW-105A may have been attributed to the lower pumping rate in RW-03 early in the reporting period, which was later adjusted from 6 gpm to 12 gpm in May 2009.

Historical analytical data revealed no detections of PCE greater than the AWQS of 5 μg/L in samples collected from October 1989 to July 1999. During the May 2005 and October 2005 sampling events, PCE was detected in MW-105A at estimated concentrations of 1.1 μg/L and 1.4 μg/L, respectively. Concentrations of PCE in MW-105A during the May 2008 and August 2009 sampling events were 21 μg/L and 15.3 μg/L, respectively, both over the AWQS of 5 μg/L.

Therefore, the Roxy Cleaners site cannot be certified at this time due to the apparent migration of groundwater contamination along the downgradient edge of the plume. Prior to certifying the site, certain corrective action measures will need to be implemented to demonstrate that downgradient migration is being controlled, as discussed in Section 5.2.

5.2 RECOMMENDATIONS

Based on the activities completed during this period, the following are recommended:

- **Install additional wells**: Install two monitoring wells downgradient of MW-105A to further delineate the extent of the dissolved-phase plume. PCE was detected at a concentration above the AWQS of 5 μg/L in monitoring well MW-105A in May 2008 and August 2009 (21 μg/L and 15.3 μg/L respectively). MW-105A is the furthest downgradient well from the site and is hydraulically downgradient of RW-03.

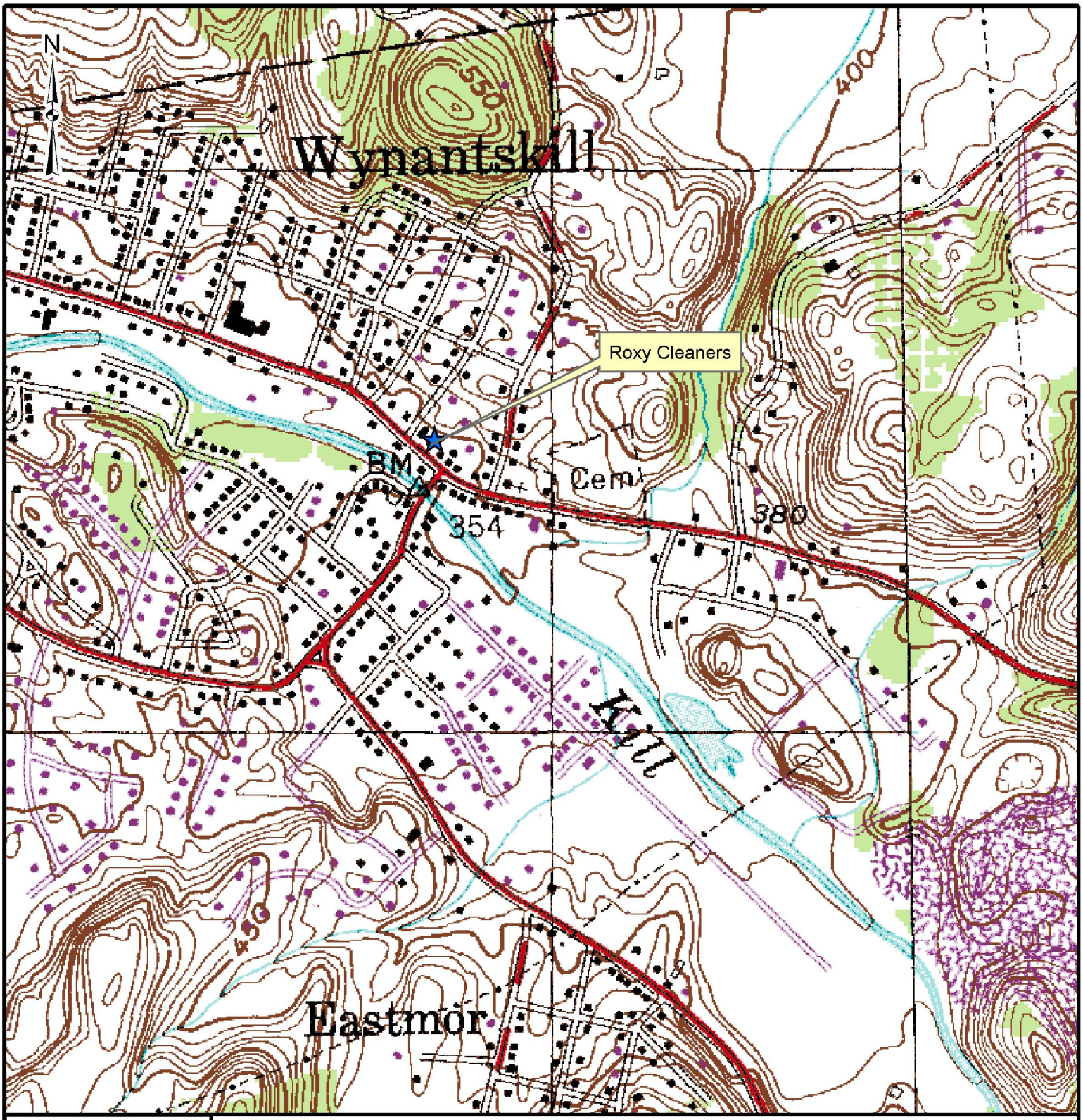
- **Remove select wells from the sampling schedule**: Based on the historical data, the following wells have been non-detect for chlorinated VOCs and can be removed from the sampling schedule: MW-3, MW-4, MW-4B, MW-106A, MW-108A, and MW-109. These monitoring wells should continue to be gauged during each sampling event and used in the determination of groundwater flow.

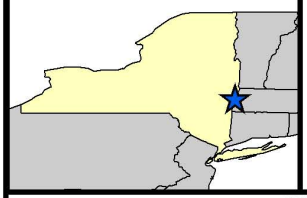
- **Well Abandonment**: Two monitoring wells, MW-5B and MW-102, have obstructions and cannot be sampled. Historical data have shown no concentrations above the AWQS and, therefore, that these wells be properly abandoned.

- **Well replacement**: Monitoring well MW-107A currently has an obstruction and has historically had concentrations of PCE, TCE, and DCE over the AWQS. MW-107A should be properly abandoned and replaced.

- **Corrective Action Measures**: Due to the detection of PCE in downgradient well MW-105A above the AWQS in the May 2008 sample, a corrective action is required to ensure the treatment system is meeting the intent of the remedial design (i.e., prevent migration of plume). The detection of PCE in the downgradient monitoring well may have been attributed to the lower pumping rate in RW-03 early in the reporting period, which was later adjusted from 6 gpm to 12 gpm in May 2009. It is recommended that the frequency of groundwater sampling at MW-105A be increased to a quarterly basis to provide additional data to determine the effect of the increased pumping rate on the concentration of PCE in MW-105A, or whether additional remedial measures are required to control downgradient migration of the plume.

- **Spot Check Elevation Survey**: Due to a discrepancy in the groundwater elevation at MW-108A and the surface contour interval, a spot check elevation survey will be completed during the next quarterly event. Several well top of casings will be checked with a GPS survey and compared to the surface contour interval to determine accuracy of both elevations.





LEGEND

★ Site Location

Miles

0 0.125 0.25 0.5

Source: USGS Seamless Data Distribution 2007

ROXY CLEANERS SITE (Site No. 4-42-024)
PERIODIC REVIEW REPORT
NORTH GREENBUSH, NEW YORK

FIGURE 1
SITE LOCATION MAP

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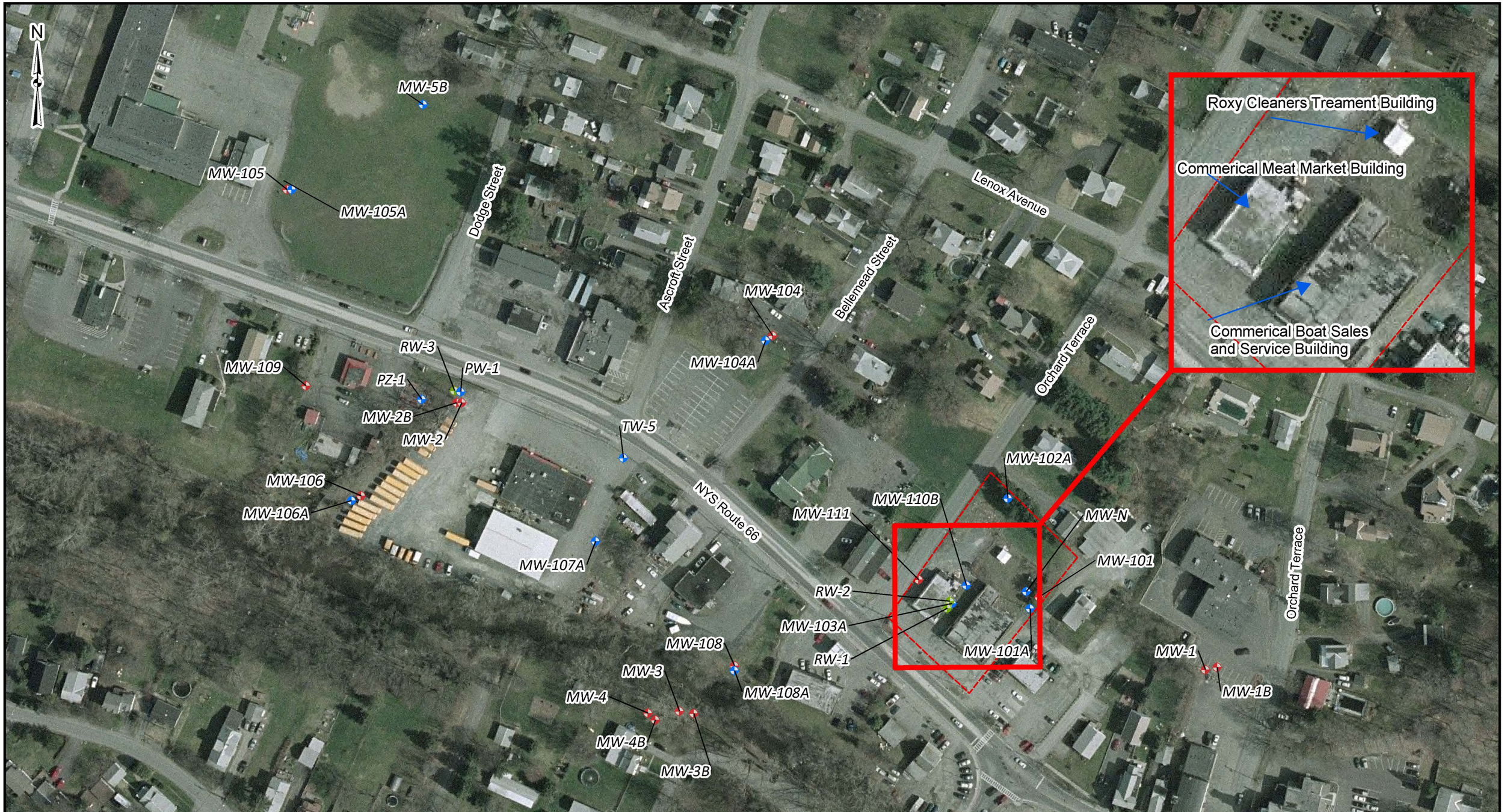
JCH	MJS	MJS	JAV	AS SHOWN	MARCH 2010	14474.21	GIS/PROJECTS/ FIGURE1.MXD



Legend

- Overburden Monitoring Well
- Bedrock Monitoring Well
- Recovery Well
- Roxy Cleaners

Source: NYS GIS Clearing House

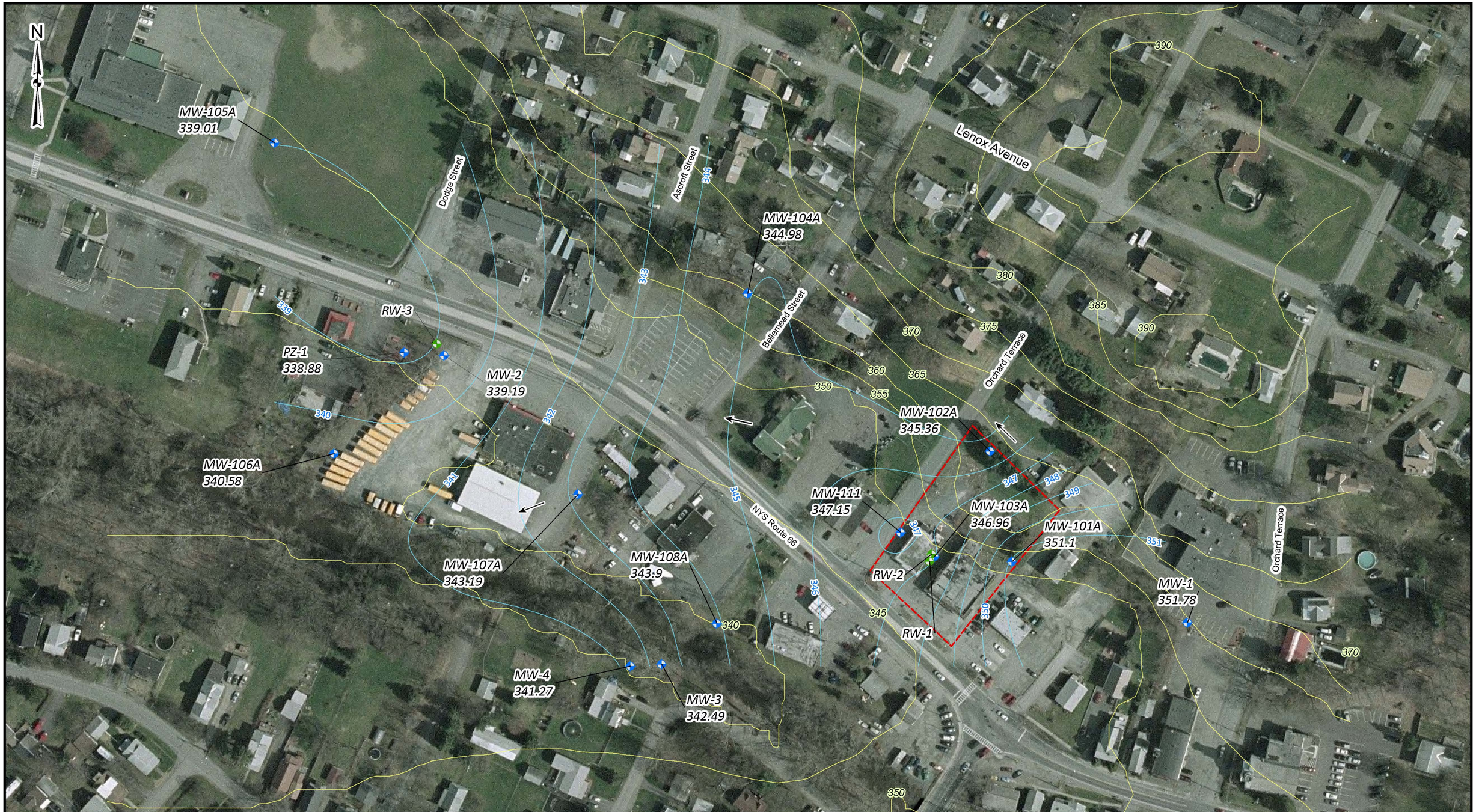
ROXY CLEANERS SITE (Site No. 4-42-024)
PERIODIC REVIEW REPORT
NORTH GREENBUSH, NEW YORK

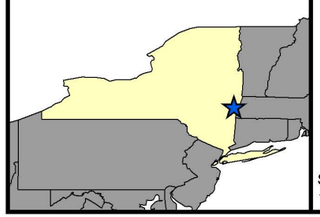
FIGURE 2
MONITORING WELL
LOCATIONS

0 150 300
Feet

1 inch = 125 feet

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	MJS	MJS	JAV	AS SHOWN	MARCH 2010	1447402	GIS/PROJECTS/ FIGURE2.MXD





Legend

- Overburden Monitoring Well
- Recovery Well
- Groundwater Contour 1-ft Interval Above Mean Sea Level (AMSL)
- Surface Elevation Contour 5-ft Interval Above Mean Sea Level (AMSL)
- Interpreted Groundwater Flow Direction
- Roxy Cleaners
- 999 Groundwater Elevation Ft Above Mean Level (AMSL)
- 999 Surfave Elevation Ft Above Mean Level (AMSL)

Source: NYS GIS Clearinghouse/ USGS DEM

**Not used in interpolation of groundwater contours*

ROXY CLEANERS SITE (Site No. 4-42-024)
PERIODIC REVIEW REPORT
NORTH GREENBUSH, NEW YORK

FIGURE 3a
INTERPOLATED OVERBURDEN GROUNDWATER CONTOUR MAP
MAY 2008

0 150 300
Feet

1 inch = 125 feet

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	MJS	MJS	JAV	AS SHOWN	MARCH 2010	1447421	GIS/PROJECTS/ FIGURE3A.MXD

Legend

- Bedrock Monitoring Wells
- Recovery Well
- Groundwater Contour 1-ft Interval Above Mean Sea Level (AMSL)
- Surface Elevation Contour 5-ft Interval Above Mean Sea Level (AMSL)
- Interpreted Groundwater Flow Direction
- Roxy Cleaners
- 999 Groundwater Elevation Ft Above Mean Level (AMSL)
- 999 Surfave Elevation Ft Above Mean Level (AMSL)

Source: NYS GIS Clearinghouse/ USGS DEM
*Not used in interpolation of groundwater contours

ROXY CLEANERS SITE (Site No. 4-42-024)
PERIODIC REVIEW REPORT
NORTH GREENBUSH, NEW YORK

FIGURE 3b
INTERPOLATED BEDROCK GROUNDWATER CONTOUR MAP
MAY 2008

0 150 300
Feet
1 inch = 125 feet

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	MJS	MJS	JAV	AS SHOWN	MARCH 2010	1447421	GIS/PROJECTS/ FIGURE3B.MXD

Legend

- Overburden Monitoring Well
- Recovery Well
- Groundwater Contour 1-ft Interval Above Mean Sea Level (AMSL)
- Surface Elevation Contour 5-ft Interval Above Mean Sea Level (AMSL)
- Interpreted Groundwater Flow Direction
- Roxy Cleaners
- 999 Groundwater Elevation Ft Above Mean Level (AMSL)
- 999 Surfave Elevation Ft Above Mean Level (AMSL)

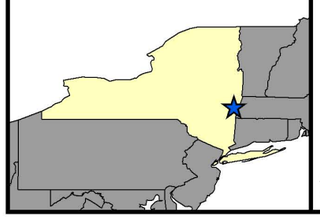
Source: NYS GIS Clearinghouse/ USGS DEM
*Not used in interpolation of groundwater contours

ROXY CLEANERS SITE (Site No. 4-42-024)
PERIODIC REVIEW REPORT
NORTH GREENBUSH, NEW YORK

FIGURE 3c
INTERPOLATED OVERBURDEN GROUNDWATER CONTOUR MAP
AUGUST 2009

0 150 300
Feet
1 inch = 125 feet

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	MJS	JCP	JAV	AS SHOWN	MARCH 2010	1447421	GIS/PROJECTS/ FIGURE3A.MXD



Legend

- Bedrock Monitoring Wells
- Recovery Well
- Groundwater Contour 1-ft Interval Above Mean Sea Level (AMSL)
- Surface Elevation Contour 5-ft Interval Above Mean Sea Level (AMSL)
- Interpreted Groundwater Flow Direction
- Roxy Cleaners
- 999 Groundwater Elevation Ft Above Mean Level (AMSL)
- 999 Surfave Elevation Ft Above Mean Level (AMSL)

Source: NYS GIS Clearinghouse/ USGS DEM
**Not used in interpolation of groundwater contours*

ROXY CLEANERS SITE (Site No. 4-42-024)
PERIODIC REVIEW REPORT
NORTH GREENBUSH, NEW YORK

FIGURE 3d
INTERPOLATED BEDROCK GROUNDWATER CONTOUR MAP
AUGUST 2009

0 150 300
Feet
1 inch = 125 feet

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	MJS	JCP	JAV	AS SHOWN	MARCH 2010	1447421	GIS/PROJECTS/ FIGURE3B.MXD

Legend

- Monitoring Well, Sampled
- Recovery Well
- Well Not Sampled
- Roxy Cleaners

MW-99 / PCE 999 — ----- Well ID / ----- Analyte ($\mu g/L$)

Source: NYS GIS Clearing House

ROXY CLEANERS SITE (Site No. 4-42-024)
PERIODIC REVIEW REPORT
NORTH GREENBUSH, NEW YORK

FIGURE 4a
CVOC Concentrations
May 2008

0 125 250
Feet
1 inch = 125 feet

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	MJS	MJS	JAV	AS SHOWN	MARCH 2010	1447421	GIS/PROJECTS/ FIGURE4.MXD

N

MW-105
DCE ND
PCE ND
TCE ND

MW-105A
DCE 3.02
PCE 15.3
TCE 0.14

MW-5B

Dodge Street

Ascroft Street

MW-104
DCE ND
PCE ND
TCE ND

Lenox Avenue

MW-2
DCE 4.62
PCE ND
TCE ND

MW-104A

PW-1
RW-3
PZ-1

Bellemead Street

MW-2
DCE 2.56
PCE 36.7
TCE ND

MW-109
DCE ND
PCE ND
TCE ND

Orchard Terrace

MW-102A
DCE ND
PCE 1.29
TCE ND

MW-111
DCE ND
PCE 4.45
TCE 0.16

MW-107
DCE 3.94
PCE 24.9
TCE 2.23

MW-N

MW-106A
DCE ND
PCE ND
TCE ND

TW-5
DCE 1.68
PCE 34.7
TCE 2.88

MW-110B

NYS Route 66

MW-101
DCE 0.40
PCE 29.3
TCE 0.37

Orchard Terrace

MW-106
DCE ND
PCE ND
TCE ND

MW-108
DCE ND
PCE 1.58
TCE ND

RW-2

RW-1

MW-3
DCE ND
PCE ND
TCE ND

MW-108A
DCE 0.19
PCE ND
TCE ND

MW-1B
DCE ND
PCE ND
TCE ND

MW-4
DCE ND
PCE ND
TCE ND

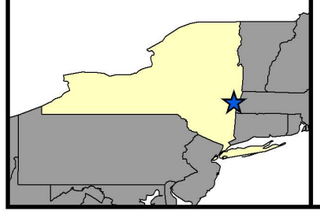
MW-101A

MW-3B
DCE ND
PCE 0.22 J
TCE ND

MW-1
DCE ND
PCE ND
TCE ND

MW-4B
DCE ND
PCE ND
TCE ND

MW-103A
DCE 14.8
PCE 397
TCE 8.00



Legend

- Monitoring Well, Sampled
- Recovery Well
- Well Not Sampled
- Roxy Cleaners

MW-99 ----- Well ID
PCE 999 ----- Analyte ($\mu g/L$)

DCE = cis-1,2 Dichloroethene
PCE = Tetrachloroethene
TCE = Trichloroethene

Source: NYS GIS Clearing House

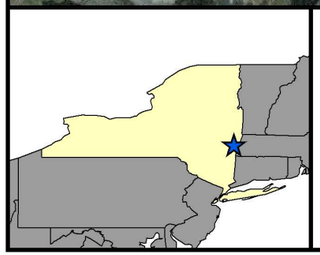
ROXY CLEANERS SITE (Site No. 4-42-024)
PERIODIC REVIEW REPORT
NORTH GREENBUSH, NEW YORK

FIGURE 4b
CVOC Concentrations
August 2009

0 120 240
Feet

1 inch = 125 feet

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	MJS	MJS	JAV	AS SHOWN	MARCH 2010	1447421	GIS/PROJECTS/ FIGURE4.MXD



Legend

- Overburden Monitoring Well
- Bedrock Monitoring Wells
- Recovery Well
- Roxy Cleaners
- PCE Isopleth

MW-99 / PCE 999 ----- Well ID / ----- Analyte ($\mu g/L$)

Source: NYS GIS Clearing House

ROXY CLEANERS SITE (Site No. 4-42-024)
PERIODIC REVIEW REPORT
NORTH GREENBUSH, NEW YORK

FIGURE 5a
Overburden PCE Isopleth Map
May 2008

0 150 300
Feet
1 inch = 125 feet

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	MJS	MJS	JAV	AS SHOWN	JANUARY 2010	1447402	GIS/PROJECTS/ FIGURE5.MXD

N

MW-5B

MW-105

MW-105A
PCE 15.3

Dodge Street

Ascroft Street

Lenox Avenue

MW-2B

MW-104A

MW-104

RW-3
PCE 280

PW-1

MW-2
PCE 36.7

Bellemead Street

Orchard Terrace

200

50

100

MW-109

PZ-1

TW-5
PCE 34.7

MW-106A
PCE ND

MW-102A

RW-2
PCE 390

MW-107A
PCE 24.9

MW-111
PCE 4.45

25

MW-106

5

NYS Route 66

MW-N

MW-101
PCE 29.3

300

200

100

50

25

5

MW-101A

MW-110B

MW-3
PCE ND

MW-108

MW-4
PCE ND

MW-4B

MW-3B

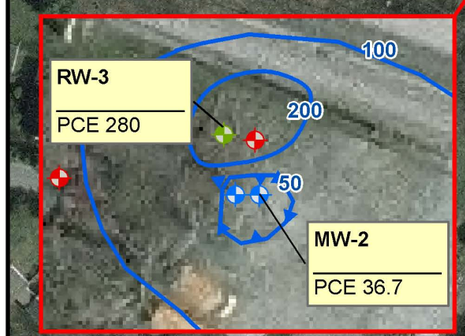
RW-1
PCE 520

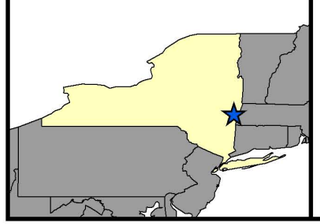
MW-1B

MW-103A
PCE 397

MW-108A
PCE ND

MW-1
PCE ND





Legend

- PCE Isopleth
- Monitoring Well, Sampled
- Recovery Well
- Well Not Sampled
- Roxy Cleaners

MW-99
PCE 999
----- Well ID
----- Analyte ($\mu g/L$)

Source: NYS GIS Clearing House

ROXY CLEANERS SITE (Site No. 4-42-024)
PERIODIC REVIEW REPORT
NORTH GREENBUSH, NEW YORK

FIGURE 5b
Overburden PCE Isopleth Map
August 2009

0 125 250
Feet
1 inch = 125 feet

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	MJS	MJS	JAV	AS SHOWN	MARCH 2010	1447421	GIS/PROJECTS/ FIGURE4.MXD

Figure 6a

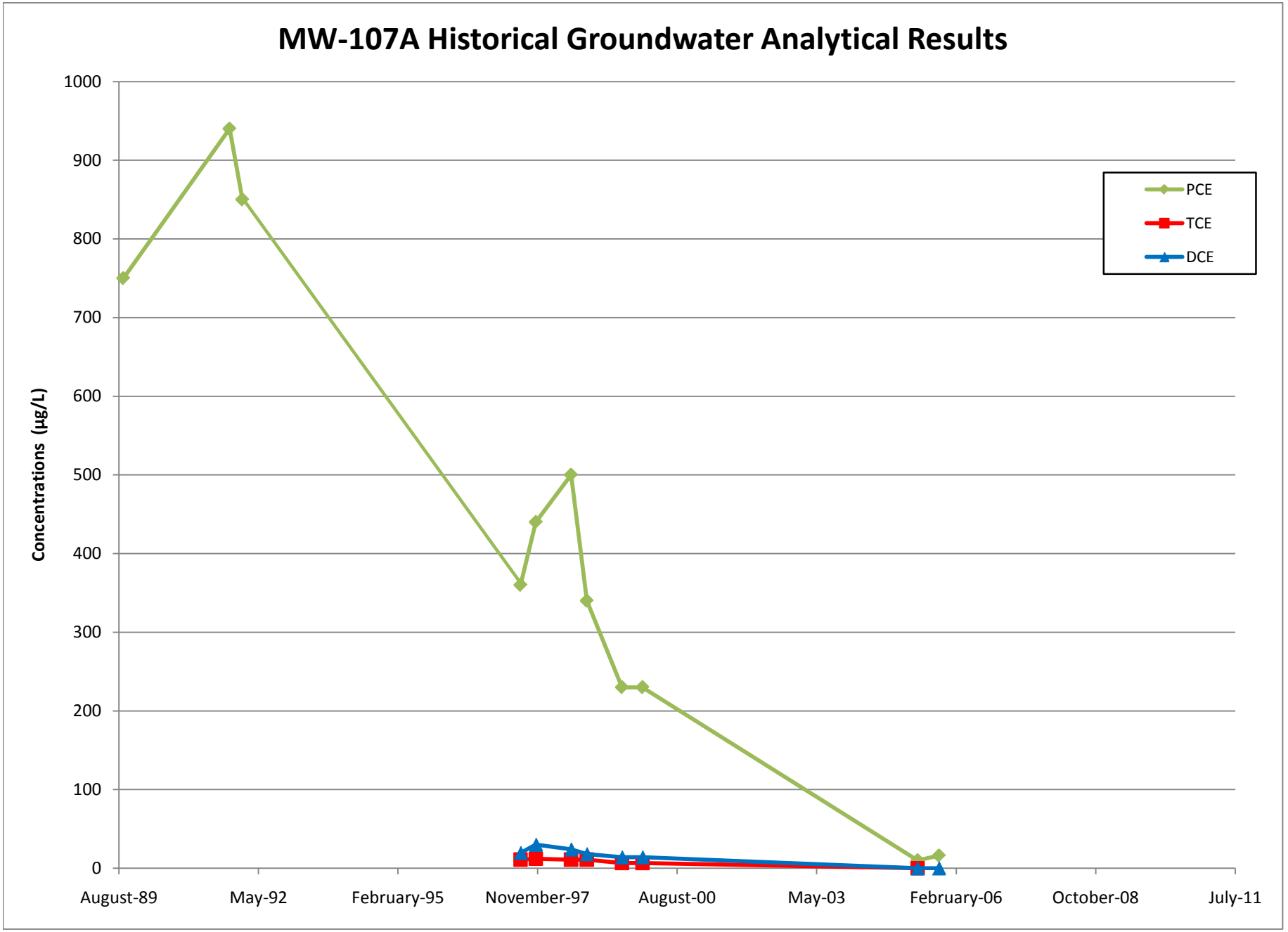

MW-107A Historical Groundwater Analytical Results
Concentrations (µg/L)
1000
900
800
700
600
500
400
300
200
100
0
August-89
May-92
February-95
November-97
August-00
May-03
February-06
October-08
July-11
PCE
TCE
DCE

Figure 6b

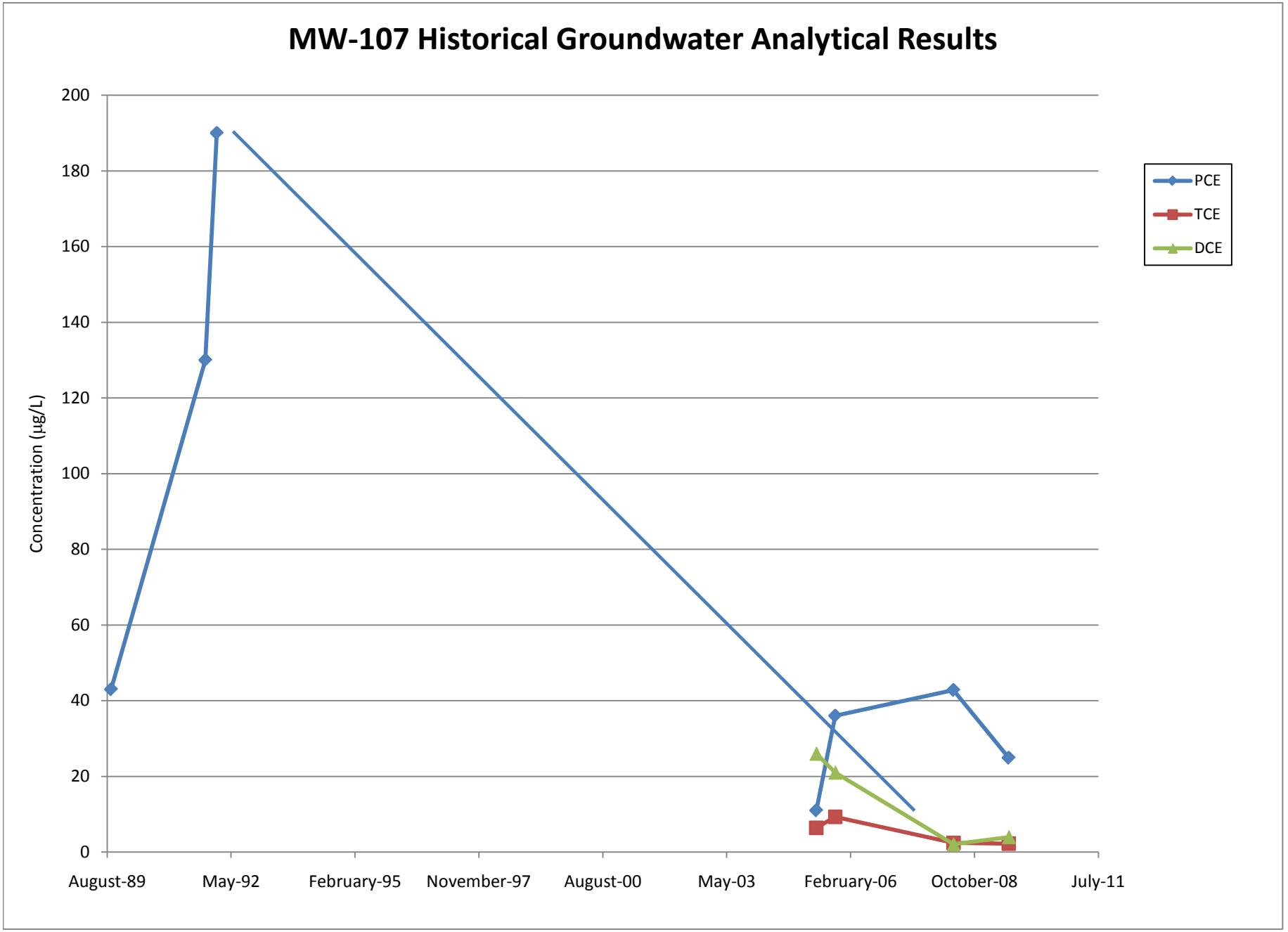

MW-107 Historical Groundwater Analytical Results
Concentration (µg/L)
200
180
160
140
120
100
80
60
40
20
0
August-89
May-92
February-95
November-97
August-00
May-03
February-06
October-08
July-11
PCE
TCE
DCE

Figure 6c

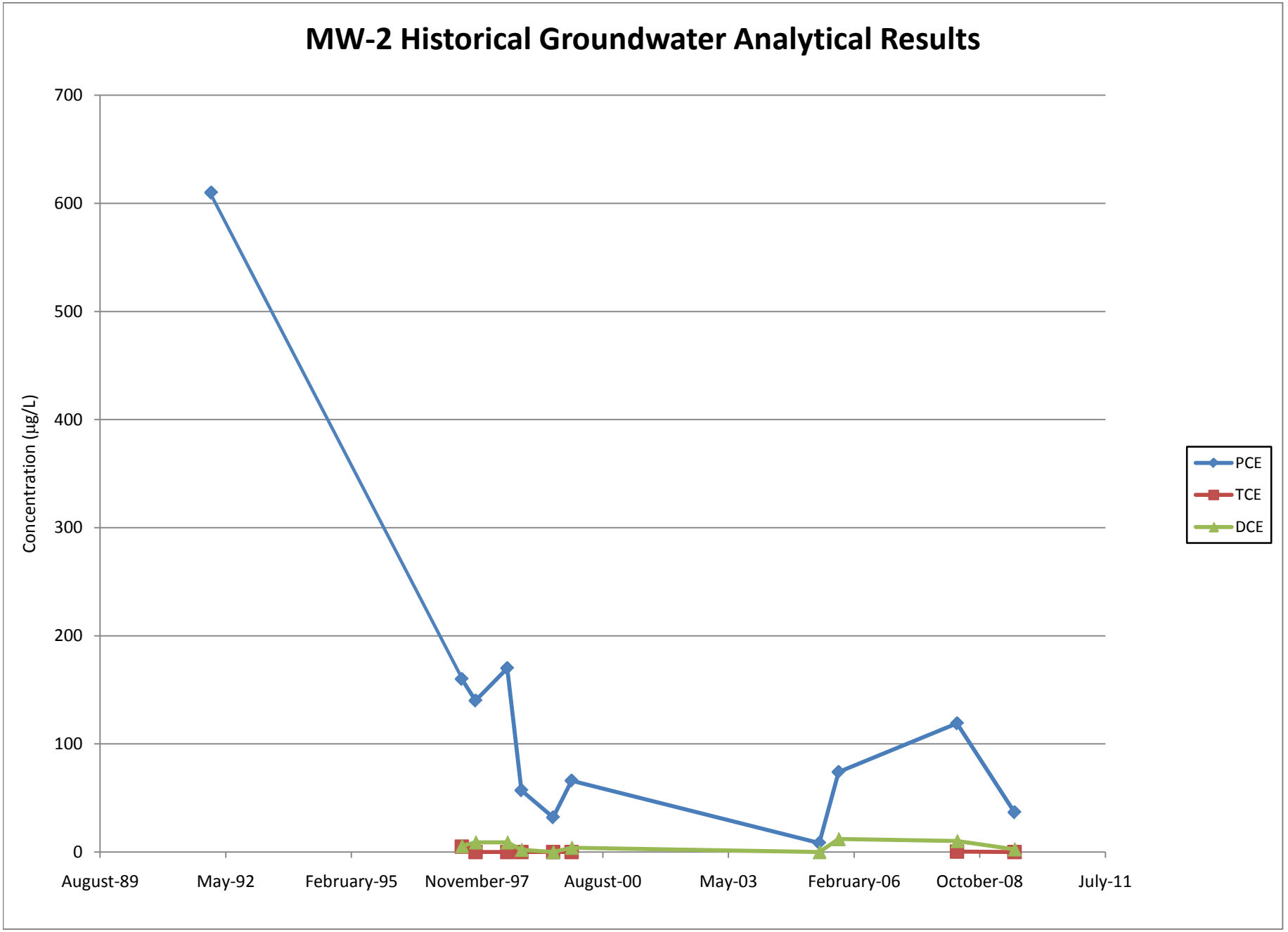

MW-2 Historical Groundwater Analytical Results
Concentration (µg/L)
700
600
500
400
300
200
100
0
August-89
May-92
February-95
November-97
August-00
May-03
February-06
October-08
July-11
PCE
TCE
DCE

Figure 6d

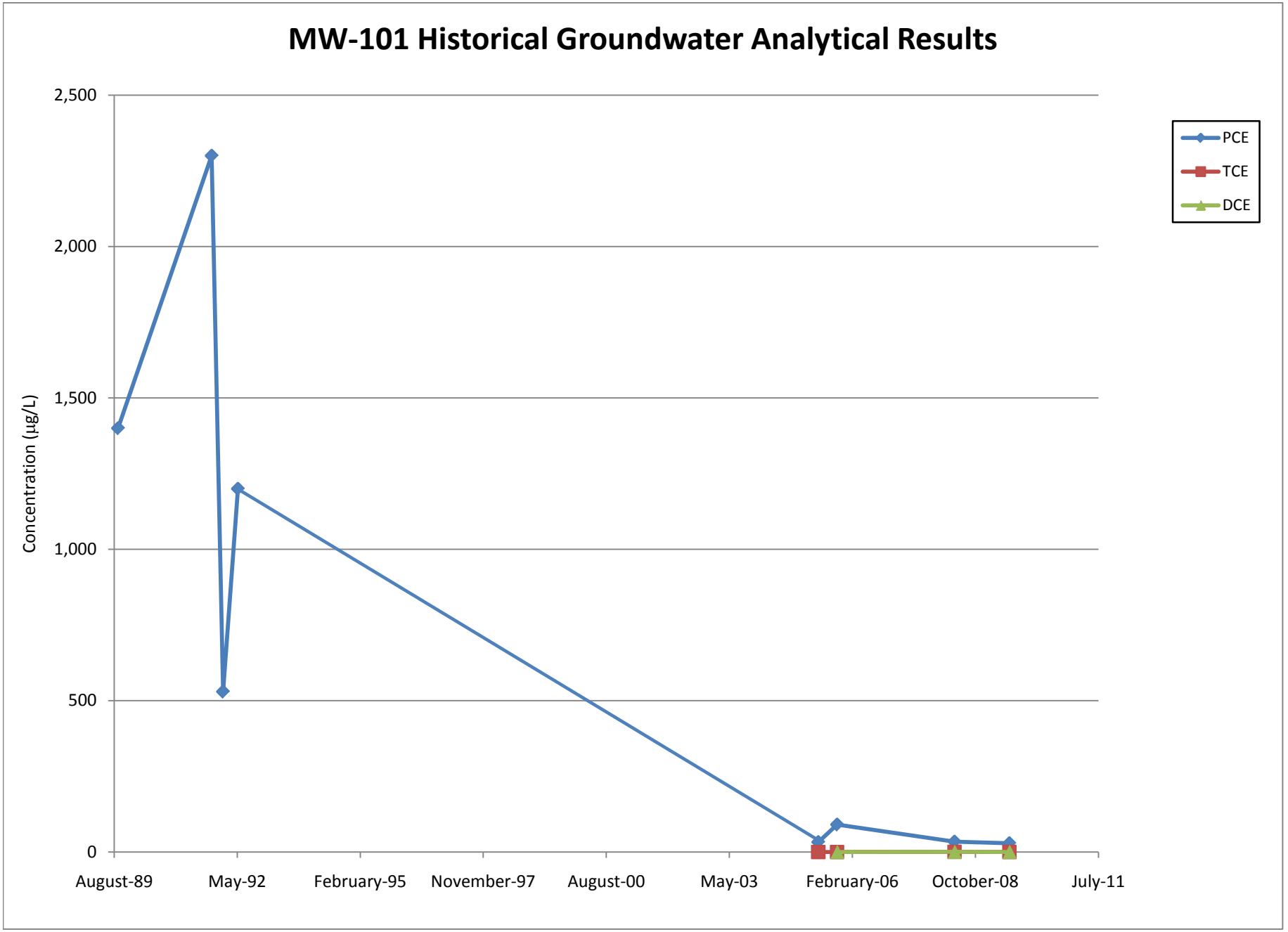

MW-101 Historical Groundwater Analytical Results
2,500
2,000
1,500
1,000
500
0
Concentration (µg/L)
August-89
May-92
February-95
November-97
August-00
May-03
February-06
October-08
July-11
PCE
TCE
DCE

Figure 6e

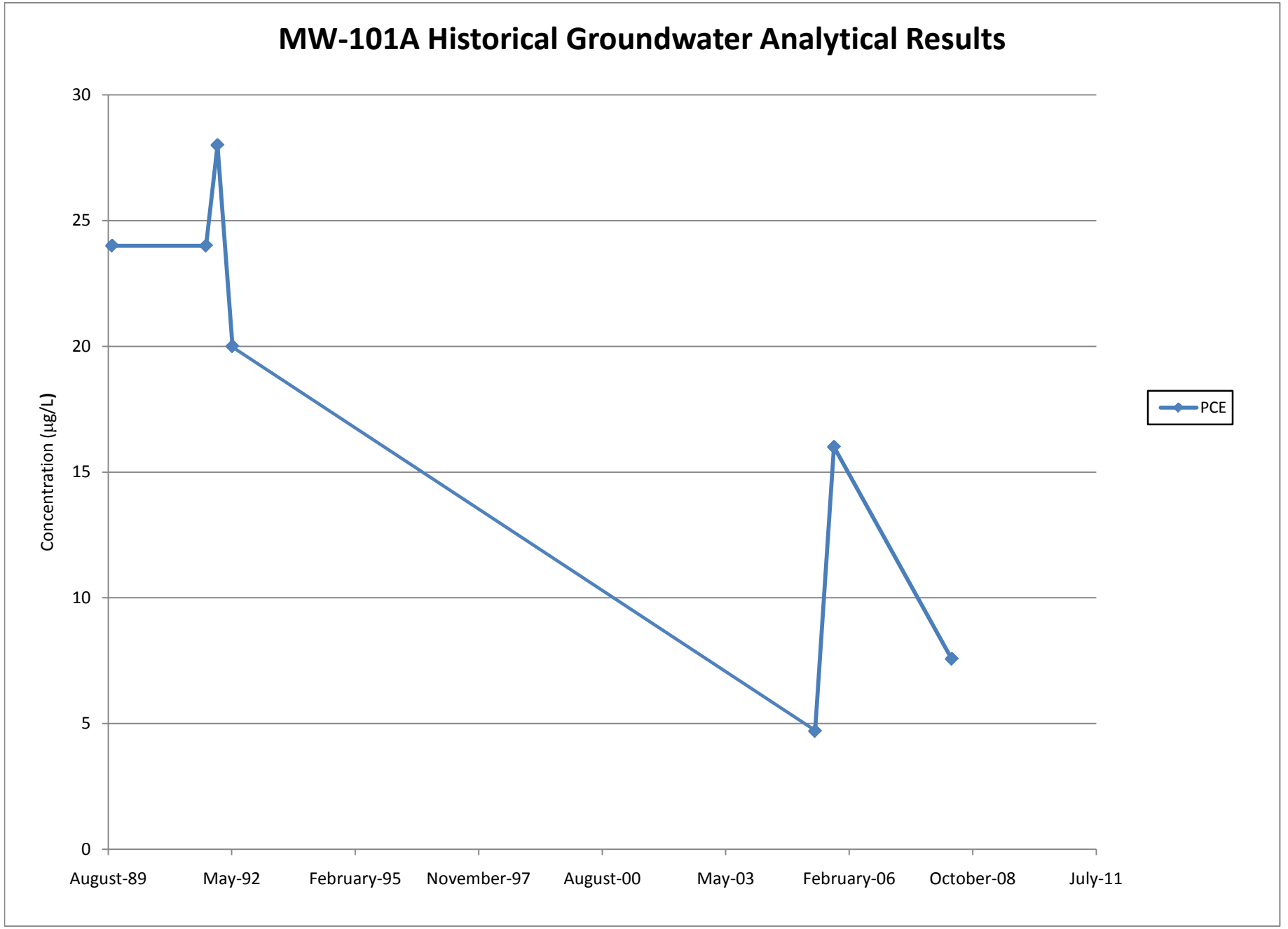

MW-101A Historical Groundwater Analytical Results
30
25
20
15
10
5
0
Concentration (µg/L)
August-89
May-92
February-95
November-97
August-00
May-03
February-06
October-08
July-11
PCE

Figure 6f

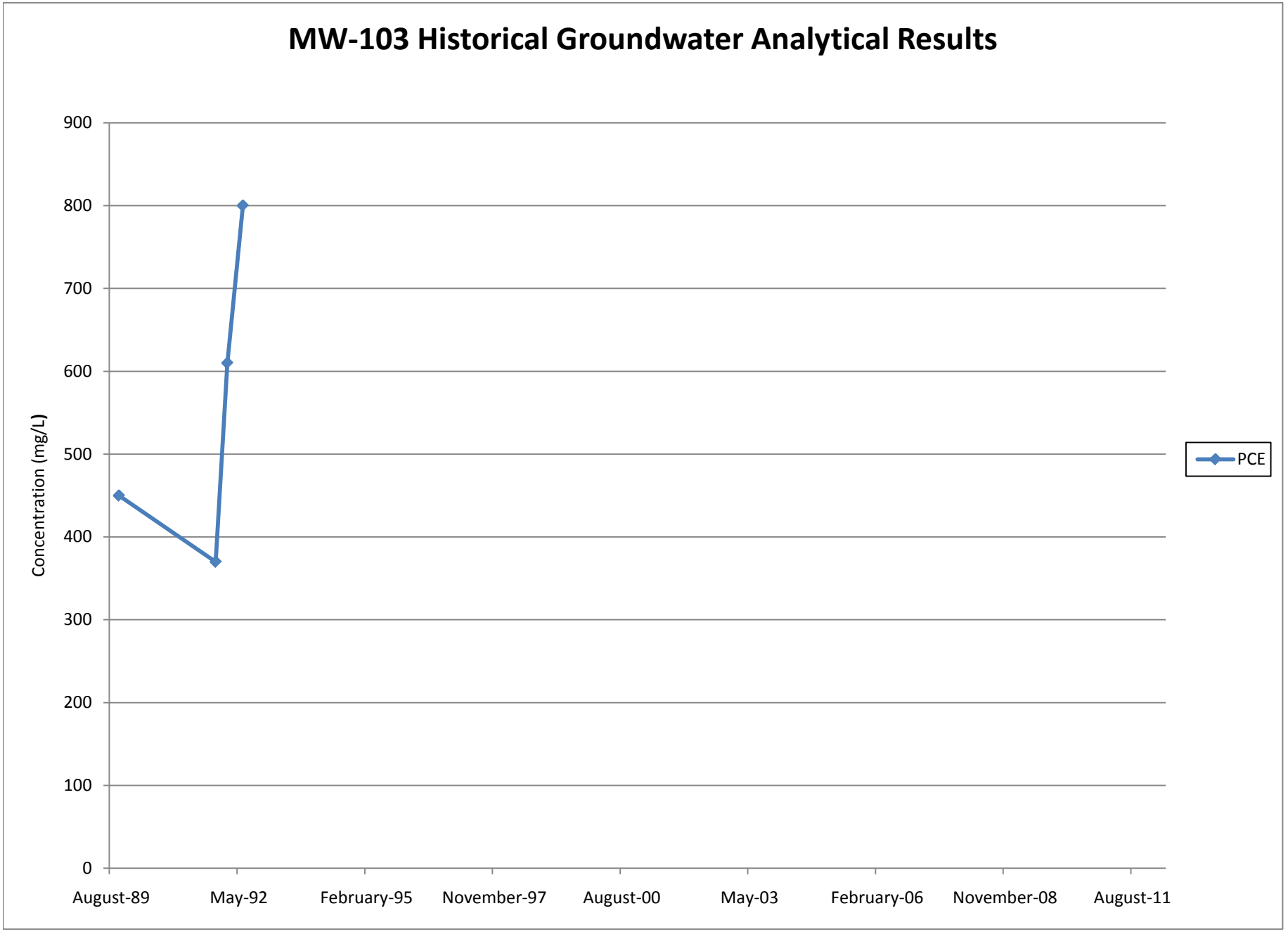

MW-103 Historical Groundwater Analytical Results
900
800
700
600
500
400
300
200
100
0
Concentration (mg/L)
August-89
May-92
February-95
November-97
August-00
May-03
February-06
November-08
August-11
PCE

Figure 6g

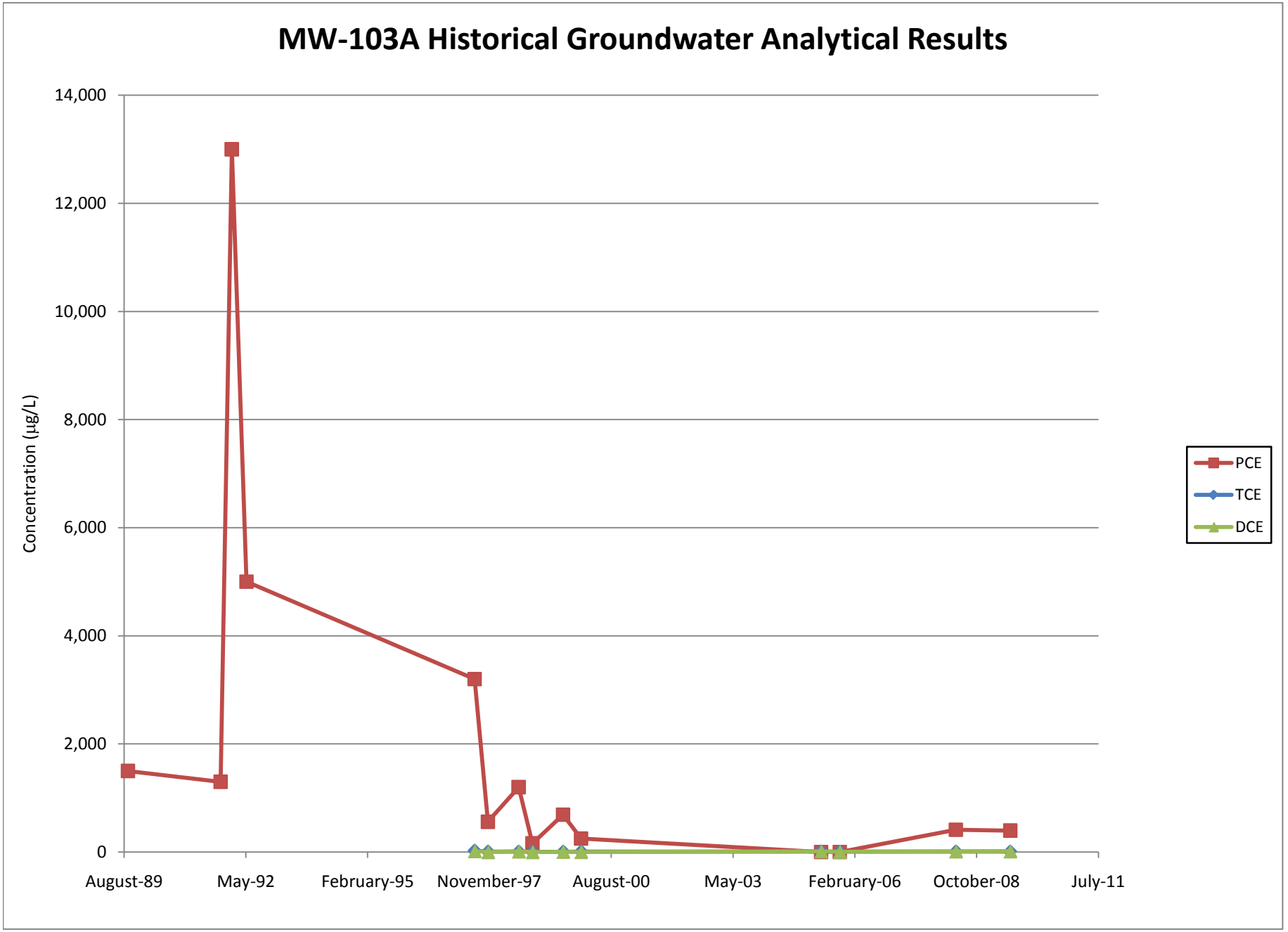

MW-103A Historical Groundwater Analytical Results
Concentration (µg/L)
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
August-89
May-92
February-95
November-97
August-00
May-03
February-06
October-08
July-11
PCE
TCE
DCE

Figure 6h

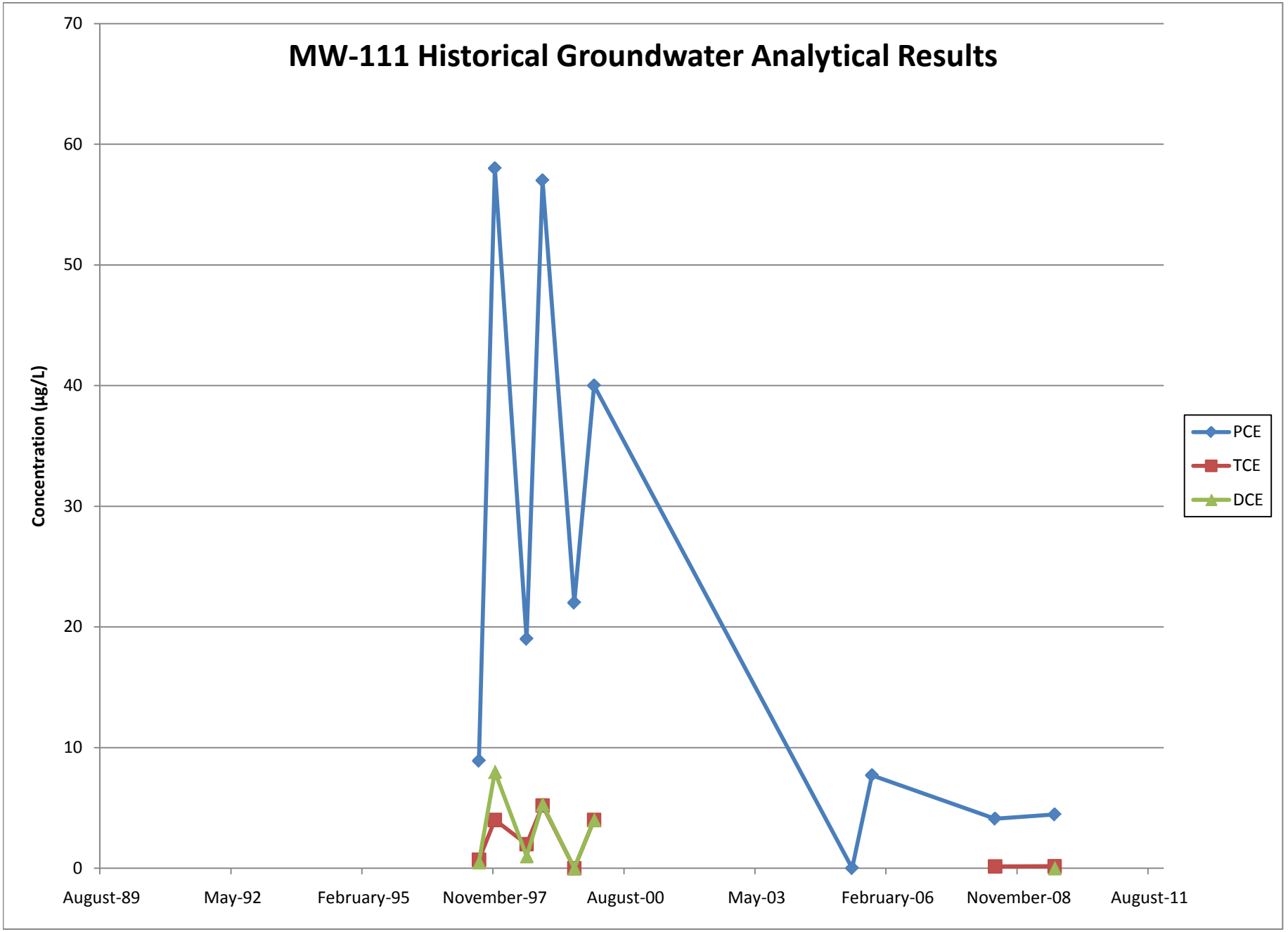
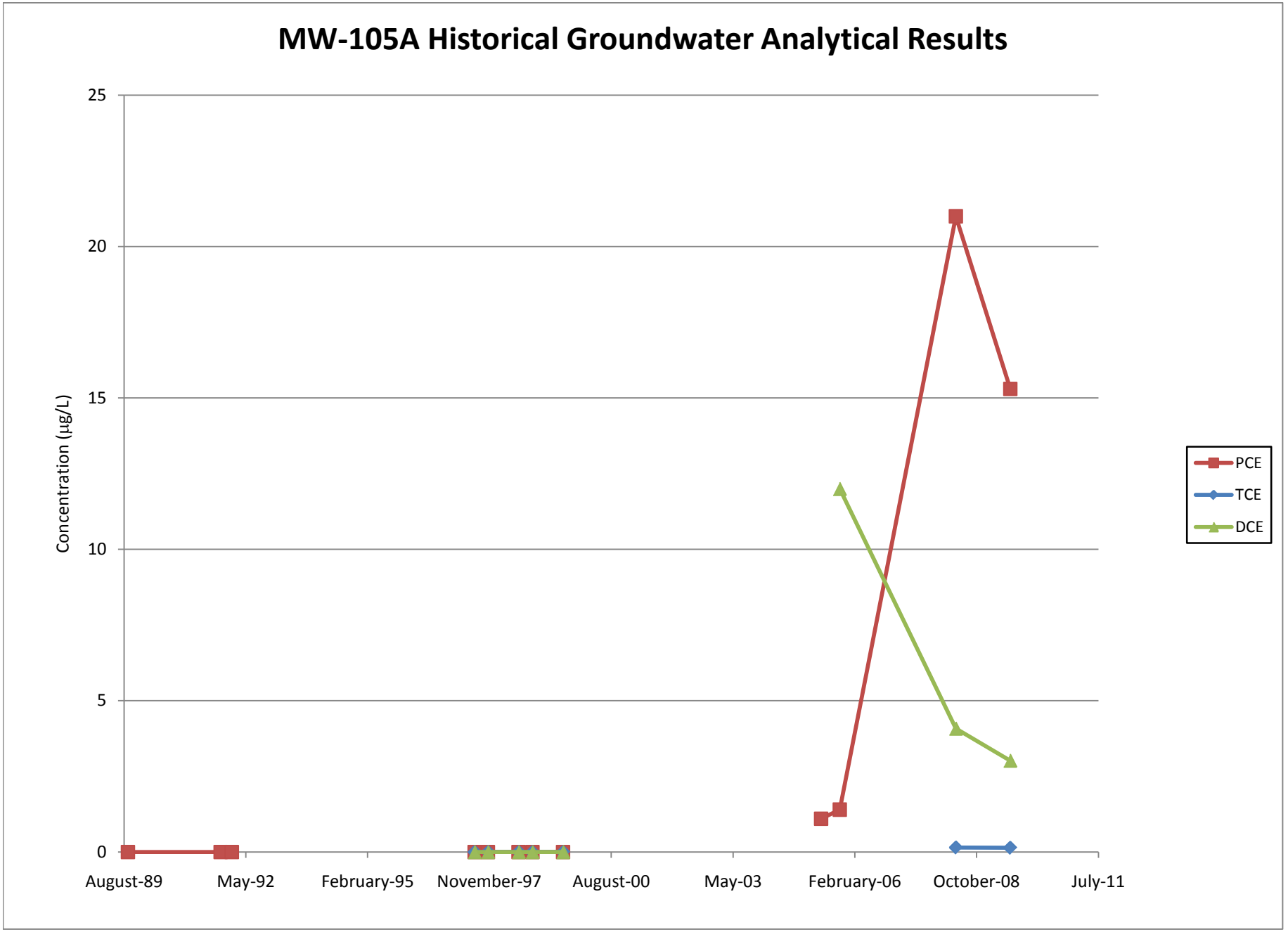
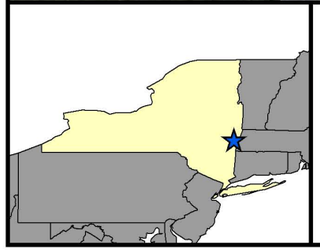

MW-111 Historical Groundwater Analytical Results
Concentration (µg/L)
70
60
50
40
30
20
10
0
August-89
May-92
February-95
November-97
August-00
May-03
February-06
November-08
August-11
PCE
TCE
DCE

Figure 6i


MW-105A Historical Groundwater Analytical Results
Concentration (µg/L)
25
20
15
10
5
0
August-89
May-92
February-95
November-97
August-00
May-03
February-06
October-08
July-11
PCE
TCE
DCE



Legend

Roxy Cleaners

Source: NYS GIS Clearing House

ROXY CLEANERS SITE (Site No. 4-42-024)
PERIODIC REVIEW REPORT
NORTH GREENBUSH, NEW YORK

FIGURE 7
Sub-Slab Depressurization Systems

0 50 100
Feet

1 inch = 55.252632 feet

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JCH	MJS	MJS	JAV	AS SHOWN	MARCH 2010	1447421	GIS/PROJECTS/ FIGURE4.MXD

TABLE 1A SUMMARY OF GROUNDWATER TABLE ELEVATIONS (12 MAY 2008)

Well Number	TOIC Elevation (ft AMSL)	Depth to Water Level (ft)	Groundwater Table Elevation (ft AMSL)
OVERBURDEN MONITORING WELLS			
MW-1	363.51	11.73	351.78
MW-2	352.41	13.22	339.19
MW-3	350.93	8.44	342.49
MW-4	348.77	7.50	341.27
MW-101A	357.41	6.31	351.10
MW-102A	355.94	10.58	345.36
MW-103A	356.61	9.65	346.96
MW-104A	368.47	23.49	344.98
MW-105A	346.12	7.11	339.01
MW-106A	351.68	11.10	340.58
MW-107A	352.74	9.55	343.19
MW-108A	351.19	7.29	343.90
MW-111	356.15	9.00	347.15
BEDROCK MONITORING WELLS			
MW-1B	363.77	11.99	351.78
MW-2B	352.21	12.42	339.79
MW-3B	349.92	7.16	342.76
MW-4B	348.75	7.44	341.31
MW-5B	349.91	NOT GAUGED, WELL OBSTRUCTED	
MW-101	356.75	7.54	349.21
MW-102	356.44	NOT GAUGED, WELL OBSTRUCTED	
MW-104	368.12	23.09	345.03
MW-105	346.94	7.47	339.47
MW-106	351.91	11.29	340.62
MW-107	353.43	NOT GAUGED, WELL OBSTRUCTED	
MW-108	351.02	7.05	343.97
MW-109	345.80	6.97	338.83
MW-110B	354.09	WELL NOT LOCATED	
RECOVERY WELLS			
RW-01	351.58	RECOVERY WELL - NOT GAUGED	
RW-02	348.75	RECOVERY WELL - NOT GAUGED	
RW-03	348.03	RECOVERY WELL - NOT GAUGED	
TW, PIEZOMETER, AND UNKNOWN WELLS			
TW-01	---	WELL NOT LOCATED	
TW-02	---	WELL NOT LOCATED	
TW-03	---	WELL NOT LOCATED	
TW-04	356.39	WELL NOT LOCATED	
TW-05	---	10.12	
PZ-01	352.17	9.87	338.88
PZ-02	361.96	WELL NOT LOCATED	
PZ-03	---	WELL NOT LOCATED	
PZ-04	---	WELL NOT LOCATED	
PW-01	---	WELL NOT LOCATED	
SSI	---	WELL NOT LOCATED	
MW-N	---	WELL NOT LOCATED	
UNKN1	---	WELL NOT LOCATED	

NOTE: TOIC = Top of Inner Casing
AMSL = Above Mean Sea Level

TABLE 1B SUMMARY OF GROUNDWATER TABLE ELEVATIONS (15 JULY 2008)

Well Number	TOIC Elevation (ft AMSL)	Depth to Water Level (ft)	Groundwater Table Elevation (ft AMSL)
OVERBURDEN MONITORING WELLS			
MW-1	363.51	12.47	351.04
MW-2	352.41	13.34	339.07
MW-3	350.93	8.56	342.37
MW-4	348.77	7.73	341.04
MW-101A	357.41	6.64	350.77
MW-102A	355.94	10.94	345.00
MW-103A	356.61	9.37	347.24
MW-104A	368.47	DRY	
MW-105A	346.12	7.54	338.58
MW-106A	351.68	11.17	340.51
MW-107A	352.74	9.61	343.13
MW-108A	351.19	7.90	343.29
MW-111	356.15	9.37	346.78
BEDROCK MONITORING WELLS			
MW-1B	363.77	12.63	351.14
MW-2B	352.21	12.31	339.90
MW-3B	349.92	7.31	342.61
MW-4B	348.75	7.68	341.07
MW-5B	349.91	NOT GAUGED, WELL OBSTRUCTED	
MW-101	356.75	7.94	348.81
MW-102	356.44	NOT GAUGED, WELL OBSTRUCTED	
MW-104	368.12	23.54	344.58
MW-105	346.94	7.8	339.14
MW-106	351.91	11.18	340.73
MW-107	353.43	NOT GAUGED, WELL OBSTRUCTED	
MW-108	351.02	7.09	343.93
MW-109	345.80	6.84	338.96
MW-110B	354.09	WELL NOT LOCATED	
RECOVERY WELLS			
RW-01	351.58	RECOVERY WELL - NOT GAUGED	
RW-02	348.75	RECOVERY WELL - NOT GAUGED	
RW-03	348.03	RECOVERY WELL - NOT GAUGED	
TW, PIEZOMETER, AND UNKNOWN WELLS			
TW-01	---	WELL NOT LOCATED	
TW-02	---	WELL NOT LOCATED	
TW-03	---	WELL NOT LOCATED	
TW-04	356.39	WELL NOT LOCATED	
TW-05	---	10.28	
PZ-01	352.17	9.99	342.18
PZ-02	361.96	WELL NOT LOCATED	
PZ-03	---	WELL NOT LOCATED	
PZ-04	---	WELL NOT LOCATED	
PW-01	---	WELL NOT LOCATED	
SSI	---	WELL NOT LOCATED	
MW-N	---	WELL NOT LOCATED	
UNKN1	---	WELL NOT LOCATED	

NOTE: TOIC = Top of Inner Casing
AMSL = Above Mean Sea Level

TABLE 1C SUMMARY OF GROUNDWATER TABLE ELEVATIONS (10 OCTOBER 2008)

Well Number	TOIC Elevation (ft AMSL)	Depth to Water Level (ft)	Groundwater Table Elevation (ft AMSL)
OVERBURDEN MONITORING WELLS			
MW-1	363.51	12.62	350.89
MW-2	352.41	13.32	339.09
MW-3	350.93	8.20	342.73
MW-4	348.77	7.77	341.00
MW-101A	357.41	DRY	
MW-102A	355.94		
MW-103A	356.61	9.89	346.72
MW-104A	368.47	DRY	
MW-105A	346.12	7.58	338.54
MW-106A	351.68	11.27	340.41
MW-107A	352.74	NOT GAUGED, WELL OBSTRUCTED	
MW-108A	351.19	7.24	343.95
MW-111	356.15	9.49	346.66
BEDROCK MONITORING WELLS			
MW-1B	363.77	12.91	350.86
MW-2B	352.21	13.01	339.20
MW-3B	349.92	7.32	342.60
MW-4B	348.75	8.38	340.37
MW-5B	349.91	NOT GAUGED, WELL OBSTRUCTED	
MW-101	356.75	8.14	348.61
MW-102	356.44	NOT GAUGED, WELL OBSTRUCTED	
MW-104	368.12	23.7	344.42
MW-105	346.94	8.05	338.89
MW-106	351.91	11.57	340.34
MW-107	353.43	NOT GAUGED, WELL OBSTRUCTED	
MW-108	351.02	7	344.02
MW-109	345.80	7.35	338.45
MW-110B	354.09	WELL NOT LOCATED	
RECOVERY WELLS			
RW-01	351.58	RECOVERY WELL - NOT GAUGED	
RW-02	348.75	RECOVERY WELL - NOT GAUGED	
RW-03	348.03	RECOVERY WELL - NOT GAUGED	
TW, PIEZOMETER, AND UNKNOWN WELLS			
TW-01	---	WELL NOT LOCATED	
TW-02	---	WELL NOT LOCATED	
TW-03	---	WELL NOT LOCATED	
TW-04	356.39	WELL NOT LOCATED	
TW-05	---	10.39	
PZ-01	352.17	9.99	342.18
PZ-02	361.96	WELL NOT LOCATED	
PZ-03	---	WELL NOT LOCATED	
PZ-04	---	WELL NOT LOCATED	
PW-01	---	WELL NOT LOCATED	
SSI	---	WELL NOT LOCATED	
MW-N	---	WELL NOT LOCATED	
UNKN1	---	WELL NOT LOCATED	

NOTE: TOIC = Top of Inner Casing
AMSL = Above Mean Sea Level

TABLE 1D SUMMARY OF GROUNDWATER TABLE ELEVATIONS (14 JANUARY 2009)

Well Number	TOIC Elevation (ft AMSL)	Depth to Water Level (ft)	Groundwater Table Elevation (ft AMSL)
OVERBURDEN MONITORING WELLS			
MW-1	363.51	- -	- -
MW-2	352.41	12.05	340.36
MW-3	350.93	6.71	344.22
MW-4	348.77	6.84	341.93
MW-101A	357.41	- -	- -
MW-102A	355.94	9.71	346.23
MW-103A	356.61	6.87	349.74
MW-104A	368.47	23.40	345.07
MW-105A	346.12	7.05	339.07
MW-106A	351.68	10.88	340.80
MW-107A	352.74	- -	- -
MW-108A	351.19	6.91	344.28
MW-111	356.15	8.82	347.33
BEDROCK MONITORING WELLS			
MW-1B	363.77	- -	- -
MW-2B	352.21	13.45	338.76
MW-3B	349.92	6.94	342.98
MW-4B	348.75	7.38	341.37
MW-5B	349.91	- -	- -
MW-101	356.75	- -	- -
MW-102	356.44	- -	- -
MW-104	368.12	23.17	344.95
MW-105	346.94	7.38	339.56
MW-106	351.91	11.3	340.61
MW-107	353.43	- -	- -
MW-108	351.02	6.8	344.22
MW-109	345.80	7.04	338.76
MW-110B	354.09	- -	- -
RECOVERY WELLS			
RW-01	351.58	RECOVERY WELL - NOT GAUGED	
RW-02	348.75	RECOVERY WELL - NOT GAUGED	
RW-03	348.03	RECOVERY WELL - NOT GAUGED	
TW, PIEZOMETER, AND UNKNOWN WELLS			
TW-01	---	WELL NOT LOCATED	
TW-02	---	WELL NOT LOCATED	
TW-03	---	WELL NOT LOCATED	
TW-04	356.39	WELL NOT LOCATED	
TW-05	---	- -	- -
PZ-01	352.17	- -	- -
PZ-02	361.96	WELL NOT LOCATED	
PZ-03	---	WELL NOT LOCATED	
PZ-04	---	WELL NOT LOCATED	
PW-01	---	WELL NOT LOCATED	
SSI	---	WELL NOT LOCATED	
MW-N	---	WELL NOT LOCATED	
UNKN1	---	WELL NOT LOCATED	

NOTE: TOIC = Top of Inner Casing
AMSL = Above Mean Sea Level

TABLE 1E SUMMARY OF GROUNDWATER TABLE ELEVATIONS (21 APRIL 2009)

Well Number	TOIC Elevation (ft/amsl)	Depth to Water Level (ft)	Groundwater Table Elevation (ft AMSL)
MW-1	363.51	12.22	351.29
MW-1B	363.77	12.35	351.42
MW-2	352.41	13.55	338.86
MW-2B	352.21	12.75	339.46
MW-3	350.93	7.1	343.83
MW-3B	349.92	8.46	341.46
MW-4	348.77	7.51	341.26
MW-4B	348.75	7.42	341.33
MW-5B	349.91	---	
MW-101	356.75	7.78	348.97
MW-101A	357.41		---
MW-102	356.44		---
MW-102A	355.94	10.75	345.19
MW-103A	356.61	9.65	346.96
MW-104	368.12	23.42	344.70
MW-104A	368.47	- -	- - -
MW-105	346.94	7.86	339.08
MW-105A	346.12	7.24	338.88
MW-106	351.91	11.44	340.47
MW-106A	351.68	11.05	340.63
MW-107	353.43	NOT GAUGED, WELL OBSTRUCTED	
MW-107A	352.74		NA
MW-108	351.02	7	344.02
MW-108A	351.19	7.2	343.99
MW-109	345.80	7.09	338.71
MW-110B	354.09	WELL NOT LOCATED	
MW-111	356.15	9.22	346.93
TW-01	---	WELL NOT LOCATED	
TW-02	---	WELL NOT LOCATED	
TW-03	---	WELL NOT LOCATED	
TW-04	---	WELL NOT LOCATED	
TW-05	---	10.18	
RW-01	356.39	RECOVERY WELL - NOT GAUGED	
RW-02	356.12	RECOVERY WELL - NOT GAUGED	
RW-03	351.58	RECOVERY WELL - NOT GAUGED	
PZ-01	348.75	10.15	338.60
PZ-02	348.03	WELL NOT LOCATED	
PZ-03	352.17	WELL NOT LOCATED	
PZ-04	361.96	WELL NOT LOCATED	
PW-01	---	WELL NOT LOCATED	
SSI	---	WELL NOT LOCATED	
MW-N	---	WELL NOT LOCATED	
UNKN1	---	WELL NOT LOCATED	

NOTE: TOIC = Top of Inner Casing
AMSL = Above Mean Sea Level

TABLE 1F SUMMARY OF GROUNDWATER TABLE ELEVATIONS (24 AUGUST 2009)

Well Number	TOIC Elevation (ft AMSL)	Depth to Water Level (ft)	Groundwater Table Elevation (ft AMSL)
OVERBURDEN MONITORING WELLS			
MW-1	363.51	11.93	351.58
MW-2	352.41	13.23	339.18
MW-3	350.93	8.01	342.92
MW-4	348.77	7.03	341.74
MW-101A	357.41	NA	---
MW-102A	355.94	10.2	345.74
MW-103A	356.61	9.18	347.43
MW-104A	368.47	Dry	Dry
MW-105A	346.12	6.86	339.26
MW-106A	351.68	10.55	341.13
MW-107A	352.74	NOT GAUGED	
MW-108A	351.19	6.86	344.33
MW-111	356.15	8.61	347.54
BEDROCK MONITORING WELLS			
MW-1B	363.77	11.99	351.78
MW-2B	352.21	12.3	339.91
MW-3B	349.92	6.72	343.20
MW-4B	348.75	7.98	340.77
MW-5B	349.91	NOT GAUGED, WELL OBSTRUCTED	
MW-101	356.75	7.2	349.55
MW-102	356.44	NOT GAUGED, WELL OBSTRUCTED	
MW-104	368.12	23.3	344.82
MW-105	346.94	7.5	339.44
MW-106	351.91	NA	---
MW-107	353.43	9.21	344.22
MW-108	351.02	6.65	344.37
MW-109	345.80	6.6	339.20
MW-110B	354.09	WELL NOT LOCATED	
RECOVERY WELLS			
RW-01	351.58	RECOVERY WELL - NOT GAUGED	
RW-02	348.75	RECOVERY WELL - NOT GAUGED	
RW-03	348.03	RECOVERY WELL - NOT GAUGED	
TW, PIEZOMETER, AND UNKNOWN WELLS			
TW-01	---	WELL NOT LOCATED	
TW-02	---	WELL NOT LOCATED	
TW-03	---	WELL NOT LOCATED	
TW-04	356.39	WELL NOT LOCATED	
TW-05	---	9.7	---
PZ-01	352.17	NOT GAUGED	
PZ-02	361.96	WELL NOT LOCATED	
PZ-03	---	WELL NOT LOCATED	
PZ-04	---	WELL NOT LOCATED	
PW-01	---	WELL NOT LOCATED	
SSI	---	WELL NOT LOCATED	
MW-N	---	WELL NOT LOCATED	
UNKN1	---	WELL NOT LOCATED	

NOTE: TOIC = Top of Inner Casing
AMSL = Above Mean Sea Level

TABLE 2 SUMMARY OF DETECTED VOLATILE ORGANIC COMPOUNDS FOR TREATMENT SYSTEM SAMPLES (JULY 2008-DECEMBER 2009)

Parameter	RW-01 27-Jun-08	24-Jul-08	22-Aug-08	19-Sep-08	31-Oct-08	26-Nov-08	24-Dec-08	30-Jan-09	27-Feb-09	27-Mar-09	NYSDEC Ambient Water Quality Standard Values (µg/L)
Tetrachloroethene (PCE)		**420** E	**870** E	**950**	**570** D	**710** D	**950** ED	**540** D	**650** BD	**1,100** EBD	5
Trichloroethene (TCE)		**39**	**34**	**32**	**34**	**37**	**28**	**27**	**30**	**47**	5
cis 1,2-dichloroethene (DCE)		**99**	**91**	**83**	**130**	**130**	**94**	**97**	**86**	**170**	5
Total Flow (gallons)	413,504	415,270	418,550	421,950	423,840	424,510	425,450	428,670	431,380	433,600	
Gallons Between Samples		1,766	3,280	3,400	1,890	670	940	3,220	2,710	2,220	

Parameter	RW-02 27-Jun-08	24-Jul-08	22-Aug-08	19-Sep-08	31-Oct-08	26-Nov-08	24-Dec-08	30-Jan-09	27-Feb-09	27-Mar-09	NYSDEC Ambient Water Quality Standard Values (µg/L)
Tetrachloroethene (PCE)		**230** E	**230** E	**320**	**270** D	**380**	**260** D	**220** D	**320** BD	**410** BD	5
Trichloroethene (TCE)		5 J	3 J	4	4 J	4	3 J	3 J	4 J	4 J	5
cis 1,2-dichloroethene (DCE)		**10**	5 J	**7**	**8** J	**10**	**5** J	**6** J	**7** J	**8** J	5
Total Flow (gallons)	4,147,089	4,225,550	4,320,130	4,388,730	4,486,300	4,549,000	4,607,060	4,697,630	4,764,720	4,841,610	
Gallons Between Samples		78,461	94,580	68,600	97,570	62,700	58,060	90,570	67,090	76,890	

Parameter	RW-03 27-Jun-08	24-Jul-08	22-Aug-08	19-Sep-08	31-Oct-08	26-Nov-08	24-Dec-08	30-Jan-09	27-Feb-09	27-Mar-09	NYSDEC Ambient Water Quality Standard Values (µg/L)
Tetrachloroethene (PCE)		**220** E	**12**	**320**	**270** D	**410** BD	**270** D	**250** D	**310** BD		5
Trichloroethene (TCE)		3 J	2 J	3	2 J	2 J	2 J	2 J	3 J		5
cis 1,2-dichloroethene (DCE)		**15**	**330** E	**12**	**15**	**16**	**11**	**12**	**13**		5
Total Flow (gallons)	6,902,144	7,149,270	7,460,060	7,745,380	8,084,570	8,285,390	8,468,840	8,863,740	9,165,280	9,177,280	
Gallons Between Samples		247,126	310,790	285,320	339,190	200,820	183,450	394,900	301,540	12,000	

Parameter	SYSTEM EFFLUENT 27-Jun-08	24-Jul-08	22-Aug-08	19-Sep-08	31-Oct-08	26-Nov-08	24-Dec-08	30-Jan-09	27-Feb-09	27-Mar-09	Effluent Limitations Daily Max. Load [a]
Tetrachloroethene (PCE)		1 J	ND	ND	1 J	1	2 J	ND	ND	1 J	10
Trichloroethene (TCE)		ND	ND	ND	ND	ND	ND	ND	ND	ND	10
cis 1,2-dichloroethene (DCE)		ND	ND	ND	ND	ND	ND	ND	ND	ND	10
Total Flow (gallons)	11,462,737	11,790,090	12,198,740	12,556,060	12,994,710	13,258,900	13,501,350	13,990,040	14,361,380	14,452,490	
Gallons Between Samples		327,353	408,650	357,320	438,650	264,190	242,450	488,690	371,340	91,110	

(a) Treatment effluent limitations and monitoring requirements set forth in the Treatment System Operations and Maintenance Manual Dated July 1997

NOTE: NYSDEC = New State Department of Environmental Conservation
D = Sample was diluted to meet range of instrument
E = Value exceeds the instrument calibration range
B = Method blank
J = Estimated value, concentration below laboratory reporting limit.
ND = Not Detected
All samples analyzed by U.S. Environmental Protection Agency Method 624
All samples are reported in micrograms per liter (µg/L)
Bold values indicate that the analyte was detected above the NYSDEC Ambient Water Quality Standards.
All analytical data results provided by NYSDEC Laboratories

TABLE 2 SUMMARY OF DETECTED VOLATILE ORGANIC COMPOUNDS FOR TREATMENT SYSTEM SAMPLES (JULY 2008-DECEMBER 2009)

	RW-01																		NYSDEC Ambient Water Quality
Parameter	**24-Apr-09**		**29-May-09**		**26-Jun-09**		**24-Jul-09**		**28-Aug-09**		**25-Sep-09**		**30-Oct-09**		**20-Nov-09**		**18-Dec-09**		Standard Values (µg/L)
Tetrachloroethene (PCE)	**490**	**D**	**440**	**D**	**840**	**ED**	**500**	**D**	**520**	**D**	**540**		**420**		**490**		**290**		5
Trichloroethene (TCE)	**32**		**25**		**29**		**24**		**24**		**39**		**31**		**52**		**25**		5
cis 1,2-dichloroethene (DCE)	**75**		**66**		**29**		**58**		**60**		**64**		ND		**140**		**57**		5
Total Flow (gallons)	436,940		439,460		441,710		442,970		447,400		451,460		455,010		456,910		458,184		
Gallons Between Samples	3,340		2,520		2,250		1,260		4,430		4,060		3,550		1,900		1,274		

	RW-02																		NYSDEC Ambient Water Quality
Parameter	**24-Apr-09**		**29-May-09**		**26-Jun-09**		**24-Jul-09**		**28-Aug-09**		**25-Sep-09**		**30-Oct-09**		**20-Nov-09**		**18-Dec-09**		Standard Values (µg/L)
Tetrachloroethene (PCE)	**290**	**D**	**610**		**410**	**D**	**470**	**D**	**390**	**D**	**360**		**340**		**340**		**200**		5
Trichloroethene (TCE)	4	J	4		4	J	4	J	4	J	ND		ND		ND		ND		5
cis 1,2-dichloroethene (DCE)	**7**	**J**	**6**		**6**	**J**	**6**	**J**	**6**	**J**	**13**		**12**		ND		ND		5
Total Flow (gallons)	4,897,820		4,971,190		5,026,610		5,079,670		5,147,900		5,196,990		5,208,670		5,304,480		5,342,366		
Gallons Between Samples	56,210		73,370		55,420		53,060		68,230		49,090		11,680		95,810		37,886		

	RW-03																		NYSDEC Ambient Water Quality
Parameter	**24-Apr-09**		**29-May-09**		**26-Jun-09**		**24-Jul-09**		**28-Aug-09**		**25-Sep-09**		**30-Oct-09**		**20-Nov-09**		**18-Dec-09**		Standard Values (µg/L)
Tetrachloroethene (PCE)	**310**	**D**	**460**	**D**	**360**	**D**	**380**	**D**	**280**	**D**	**240**		**240**		**280**		**130**		5
Trichloroethene (TCE)	3	J	2	J	3	J	2	J	2	J	ND		ND		ND		ND		5
cis 1,2-dichloroethene (DCE)	**13**		**10**	**J**	**9**	**J**	**8**	**J**	**7**	**J**	**11**		ND		**22**		**9.8**		5
Total Flow (gallons)	9,347,460		9,866,870		10,344,800		10,703,350		11,302,600		11,741,850		11,859,320		12,678,400		13,140,565		
Gallons Between Samples	170,180		519,410		477,930		358,550		599,250		439,250		117,470		819,080		462,165		

	SYSTEM EFFLUENT																		Effluent Limitations
Parameter	**24-Apr-09**		**29-May-09**		**26-Jun-09**		**24-Jul-09**		**28-Aug-09**		**25-Sep-09**		**30-Oct-09**		**20-Nov-09**		**18-Dec-09**		Daily Max. Load [(1)]
Tetrachloroethene (PCE)	ND		ND		ND		ND		ND		ND		ND		ND		ND		10
Trichloroethene (TCE)	ND		ND		ND		ND		ND		ND		ND		ND		ND		10
cis 1,2-dichloroethene (DCE)	ND		ND		ND		ND		ND		ND		ND		ND		ND		10
Total Flow (gallons)	14,682,220		15,277,520		15,813,120		16,225,990		16,897,900		17,390,300		17,523,000		18,439,790		18,941,115		
Gallons Between Samples	229,730		595,300		535,600		412,870		671,910		492,400		132,700		916,790		501,325		

TABLE 3A SUMMARY OF DETECTED VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER SAMPLES COLLECTED 12 AND 13 MAY 2008

Parameters List	MW-1		MW-1B		MW-2		MW-2B		MW-3		MW-3B		MW-4		MW-4B		NYSDEC Ambient Water Quality Standards (µg/L)
VOLATILE ORGANIC COMPOUNDS BY U.S. ENVIRONMENTAL PROTECTION AGENCY METHOD 8260B (µg/L)																	
Acetone		U		U		U		U		U		U		U		U	50 (g)
Bromodichloromethane		U		U		U		U		U		U		U		U	50 (g)
Chloroform		U		U	0.18	J		U		U	0.51			U		U	7
cis-1,2 Dichloroethene		U		U	**10.2**		3.85			U		U		U		U	5
trans-1,2 Dichloroethene		U		U	0.33	J	0.24	J		U		U		U		U	5
Methyl tert-butyl ether		U		U	0.66	J		U		U		U		U		U	10 (g)
Methylcyclohexane		U		U		U		U		U		U		U		U	
Tetrachloroethene		U		U	**119**	D		U		U	0.38	J		U		U	5
Toluene		U		U		U		U		U		U		U		U	5
Trichloroethene		U		U	0.42	J		U		U		U		U		U	5
Vinyl chloride		U		U		U	0.58	J		U		U		U		U	2

Parameters List	TW-5		MW-101		MW-101A		MW-102A		MW-103A		MW-104		MW-105		MW-105A		NYSDEC Ambient Water Quality Standards (µg/L)
Acetone		U		U	3.14	J		U		U		U		U		U	50 (g)
Bromodichloromethane		U		U		U		U	0.17	J		U		U		U	50 (g)
Chloroform	0.2	J		U		U	3.04		2.06			U		U		U	7
cis-1,2 Dichloroethene	1.5		0.54			U		U	**13.7**			U	0.29	J	4.08		5
trans-1,2 Dichloroethene	0.17	J		U		U		U	1.11			U		U		U	5
Methyl tert-butyl ether		U		U		U		U		U		U		U	1.19		10 (g)
Methylcyclohexane		U		U		U		U		U		U		U		U	
Tetrachloroethene	**40.4**	D	**34.5**		**7.57**		1.65		**412**	D		U	0.11	J	**21**		5
Toluene		U		U		U		U		U	0.13	J		U		U	5
Trichloroethene	2.73		0.81			U		U	**9.33**		0.13	J		U	0.15	J	5
Vinyl chloride		U		U		U		U		U		U		U		U	2

Parameters List	MW-106		MW-106A		MW-107A		MW-108		MW-108A		MW-109		MW-111		DUPLICATE #1 [a]		NYSDEC Ambient Water Quality Standards (µg/L)
Acetone		U		U		U		U		U		U		U		U	50 (g)
Bromodichloromethane		U		U		U		U		U		U		U		U	50 (g)
Chloroform		U		U	0.18	J	0.44	J	0.58			U	0.9			U	7
cis-1,2 Dichloroethene		U		U	2.07			U		U		U		U		U	5
trans-1,2 Dichloroethene		U		U	0.24	J		U		U		U		U		U	5
Methyl tert-butyl ether		U		U		U		U		U		U		U		U	10 (g)
Methylcyclohexane		U		U	0.77			U		U		U		U		U	
Tetrachloroethene		U		U	**42.8**	D	3.01			U		U	4.1			U	5
Toluene	**67**	D		U	0.1	J		U		U		U		U		U	5
Trichloroethene		U		U	2.42			U		U		U	0.15	J		U	5
Vinyl chloride		U		U		U		U		U		U		U		U	2

Parameters List	DUPLICATE #2 [b]		NYSDEC Ambient Water Quality Standards (µg/L)
Acetone		U	50 (g)
Bromodichloromethane		U	50 (g)
Chloroform		U	7
cis-1,2 Dichloroethene	0.3	J	5
trans-1,2 Dichloroethene		U	5
Methyl tert-butyl ether		U	10 (g)
Methylcyclohexane		U	
Tetrachloroethene	0.12	J	5
Toluene		U	5
Trichloroethene		U	5
Vinyl chloride		U	2

(a) Duplicate sample was collected from MW-1

(b) Duplicate sample was collected from MW-105

NOTE: NYSDEC = New York State Department of Environmental Conservation
RL = Analytical Reporting Limit
(g) = NYSDEC Ambient Water Quality Standards guidance value
All analytical data results provided by Chemtech Consulting Group. Data validation completed by Environmental Data Validation, Inc.
Bold values indicate that the analyte was detected above the NYSDEC Ambient Water Quality Standards.

TABLE 3B SUMMARY OF DETECTED VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER SAMPLES COLLECTED 24 AND 25 AUGUST 2009

Parameters List	MW-1		MW-1B		MW-2		MW-2B		MW-3		MW-3B		MW-4		MW-4B		NYSDEC AWQS (µg/L)
VOLATILE ORGANIC COMPUNDS BY U.S. ENVIRONMENTAL PROTECTION AGENCY METHOD 8260B (µg/L)																	
Acetone	1.07	J		U	6.16	J		U		U		U		U		U	50 (g)
Bromodichloromethane		U		U		U		U		U		U		U		U	50 (g)
Chloroform	0.11	J		U		U		U		U	0.29	J		U		U	7
cis-1,2 Dichloroethene		U		U	2.56		4.62			U		U		U		U	5
trans-1,2 Dichloroethene		U		U		U	0.24	J		U		U		U		U	5
Methyl tert-butyl ether		U		U	1.60	J		U		U		U		U		U	10 (g)
Methylcyclohexane		U		U		U		U		U		U		U		U	
Tetrachloroethene		U		U	**36.7**			U		U	0.22	J		U		U	5
Toluene		U		U		U		U		U		U		U		U	5
Trichloroethene		U		U		U		U		U		U		U		U	5
Vinyl chloride		U		U		U	0.75	J		U		U		U		U	2

Parameters List	TW-5		MW-101		MW-102A		MW-103A		MW-104		MW-105		MW-105A		MW-106		NYSDEC AWQS (µg/L)
Acetone	6.52	J		U		U		U		U		U		U		U	50 (g)
Bromodichloromethane		U		U		U		U		U		U		U		U	50 (g)
Chloroform	0.24	J	0.15	J	1.76			U		U		U		U		U	7
cis-1,2 Dichloroethene	1.68		0.40	J		U	**14.8**			U		U	3.02			U	5
trans-1,2 Dichloroethene		U		U		U		U		U		U		U		U	5
Methyl tert-butyl ether		U		U		U		U	0.71	J		U	1.33			U	10 (g)
Methylcyclohexane		U		U		U		U		U		U		U		U	
Tetrachloroethene	**34.7**		**29.3**		1.29		**397**			U		U	**15.3**			U	5
Toluene		U		U		U		U	0.41	J		U		U		U	5
Trichloroethene	2.88		0.37	J		U	**8.00**	J		U		U	0.14	J		U	5
Vinyl chloride		U		U		U		U		U		U		U		U	2

Parameters List	MW-106A		MW-107		MW-108		MW-108A		MW-109		MW-111		DUPLICATE #1 [(a)]			NYSDEC AWQS (µg/L)
Acetone		U	7.09	J		U		U		U		U		U		50 (g)
Bromodichloromethane		U		U		U		U		U		U		U		50 (g)
Chloroform		U		U	0.32	J	0.41	J		U	0.89		0.94			7
cis-1,2 Dichloroethene		U	3.94			U	0.19	J		U		U		U		5
trans-1,2 Dichloroethene		U	0.23	J		U		U		U		U		U		5
Methyl tert-butyl ether		U	0.68	J		U		U		U		U		U		10 (g)
Methylcyclohexane		U		U		U		U		U		U		U		
Tetrachloroethene		U	**24.9**		1.58			U		U	4.45		4.56			5
Toluene		U		U		U		U		U		U		U		5
Trichloroethene		U	2.23			U		U		U	0.16	J	0.17	J		5
Vinyl chloride		U		U		U		U		U		U		U		2

(a) Duplicate sample was collected from MW-111

NOTE: NYSDEC = New York State Department of Environmental Conservation
AWQS = Ambient Water Quality Standard
J = Analyte detected below the PQL
U = Analyte was analyzed for, but not detected below the laboratory reporting limit
(g) = NYSDEC Ambient Water Quality Standards guidance value
All analytical data results provided by Chemtech Consulting Group.
Bold values indicate that the analyte was detected above the NYSDEC Ambient Water Quality Standards.

TABLE 4 HISTORICAL GROUNDWATER ANALYTICAL RESULTS

	MW-1			MW-1B			MW-2			MW-2B			MW-3			MW-3B			MW-4			MW-4B		
DATE	PCE	TCE	DCE	PCE	TCE	DCE	PCE	TCE	DCE	PCE	TCE	DCE	PCE	TCE	DCE	PCE	TCE	DCE	PCE	TCE	DCE	PCE	TCE	DCE
October 1989																								
November 1991																								
February 1992	<1			<1			**610**			<1			<1			6			<1			<1		
June 1992																5								
17 July 1997							**160**	**5**	**5.6**	0	0	0	0	0	0	0	0	0						
4 November 1997							**140**	0	**9**	1	0	0	ns	ns	ns	ns	ns	ns						
14 July 1998							**170**	0	**9**	0	0	0.3	0	0	0	0.6	0	0						
4 November 1998							**57**	0	2.1	0	0	0	ns	ns	ns	ns	ns	ns						
14 July 1999							**32**	0	0	0	0	0	0	0	0	0	0	0						
8 December 1999							**66**	0	4	0	0	1	ns	ns	ns	ns	ns	ns						
May 2005							**8.3**		1.0J			1.7												
October 2005							**74**		**12**			1.2				0.3 J								
1 September 2008	ND	ND	ND	ND	ND	ND	**119**	0.42	**10.2**	ND	ND	3.85	ND	ND	ND	0.38	ND	ND	ND	ND	ND	ND	ND	ND
24 August 2009	ND	ND	ND	ND	ND	ND	**36.7**	ND	2.56	ND	ND	4.62	ND	ND	ND	0.22 J	ND	ND	ND	ND	ND	ND	ND	ND

	MW-101			MW-101A			MW-102			MW-102A			MW-103			MW-103A			MW-104			MW-104A		
DATE	PCE	TCE	DCE	PCE	TCE	DCE	PCE	TCE	DCE	PCE	TCE	DCE	PCE	TCE	DCE	PCE	TCE	DCE	PCE	TCE	DCE	PCE	TCE	DCE
October 1989	**1,400**			**24**			<5			<5			**450**			**1,500**			<5			<5		
November 1991	**2,300**			**24**			<5			<5			**370**			**1,300**			<5			<5		
February 1992	**530**			**28**			<1			2			**610**			**13,000**			<1			<1		
June 1992	**1,200**			**20**									**800**			**5,000**								
17 July 1997																**3,200**	**24**	**18**	0	0	0			
4 November 1997																**560**	**7**	0	0	0	0			
14 July 1998																**1,200**	**8**	**12**	0	0	0			
4 November 1998																**160**	2.6	0	0	0	0			
14 July 1999																**690**	**6**	**6.1**	0	0	0			
8 December 1999																**250**	**10**	2	ns	ns	ns			
May 2005	**33**	1.1 J		4.7 J						0.83 J						**260 D**	**10**	**14**						
October 2005	**91**	4.4 J	4.4 J	**16**												**240 D**	**7.2**	**6.4**						
12 and 13 May 2008	**34.5**	0.81	0.54	**7.57**	ND	ND	1.65	ND	ND							**412**	**9.33**	**13.7**	ND	0.13	ND			
24 August 2009	**29.3**	0.37 J	0.40 J				NS	NS	NS	1.29	ND	ND				**397**	**8.00 J**	**14.8**	ND	ND	ND			

	MW-105			MW-105A			MW-106			MW-106A			MW-107			MW-107A			MW-108			MW-108A		
DATE	PCE	TCE	DCE	PCE	TCE	DCE	PCE	TCE	DCE	PCE	TCE	DCE	PCE	TCE	DCE	PCE	TCE	DCE	PCE	TCE	DCE	PCE	TCE	DCE
October 1989	<5			<5			<5			<5			**43**			**750**			**9**			<5		
November 1991	<5			<5			<5			<5			**130**			**940**			<5			<5		
February 1992	<1			<1			<1			<1			**190**			**850**			4			<1		
June 1992																								
17 July 1997	0	0	0	0	0	0	0	0	0	0	0	0				**360**	**11**	**19.5**	0	0	0	0	0	0
4 November 1997	0	0	0	0	0	0	ns	ns	ns	ns	ns	ns				**440**	**12**	**30**	3	0	0	0	0	0
14 July 1998	0	0	0	0	0	0	0	0	0	0	0	0				**500**	**11**	**24**	5	0	0	0	0	0
4 November 1998	0	0	0	0	0	0	ns	ns	ns	ns	ns	ns				**340**	**11**	**18**	2	0	0	0	0	0
14 July 1999	0	0	0	0	0	0	0	0	0	0	0	0				**230**	**6.7**	**14**	2.2	0	0	0	0	0
8 December 1999	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns				**230**	**6.7**	**14**	3	0	0	0	0	0
May 2005			0.3 J	1.1 J									**11**	**6.4**	**26**	**10**	1.4 J	1.6 J	2.9					
October 2005				1.4 J		**12**							**36**	**9.3**	**21**	**16**		4.1 J	1.2					
12 and 13 May 2008	0.11	ND	0.29	**21**	0.15	4.08	ND	0.13	ND	ND	ND	ND				**42.8**	2.42	2.07	3.01	ND	ND	ND	ND	ND
24 August 2009	ND	ND	ND	**15.3**	0.14 J	3.02	ND	ND	ND	ND	ND	ND	**24.9**	2.23	3.94				1.58	ND	ND	ND	ND	0.19 J

	MW-109			MW-111			TW-5		
DATE	PCE	TCE	DCE	PCE	TCE	DCE	PCE	TCE	DCE
October 1989									
November 1991									
February 1992									
June 1992									
17 July 1997	0	0	0	**8.9**	0.7	0.5			
4 November 1997	ns	ns	ns	**58**	4	**8**			
14 July 1998	0	0	0	**19**	2	1			
4 November 1998	ns	ns	ns	**57**	**5.2**	**5.3**			
14 July 1999	0	0	0	**22**	0	0			
8 December 1999	ns	ns	ns	**40**	4	4			
May 2005				1.4 J					
October 2005				**7.7**					
12 and 13 May 2008	ND	ND	ND	4.1	0.15	ND	**40.4**	2.73	1.5
24 August 2009	ND	ND	ND	4.45	0.16 J	ND	**34.7**	2.88	1.68

NOTE: PCE = Tetrachloroethene
TCE = Trichloroethene
DCE = cis 1,2-dichloroethene
ND = The analyte was analyzed for, but was not detected above the sample reporting limit.
NS = Monitoring well not sampled
All samples are reported in micrograms per liter (µg/L)
Bold values indicate that the analyte was detected above the NYSDEC AWQS of 5 µg/L per each analyte .