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. **442021**

Site Name Storonske Cooperage

Site Address: 6 Kraft Road Zip Code: 12033
City/Town: Schodack
County: Rensselaer
Allowable Use(s) (if applicable, does not address local zoning):
Site Acreage: 5.0
Owner: M. Cristo Inc.
20 Old Troy Rd., East Greenbush, NY 12061

Reporting Period: November 30, 1999 to October 16, 2006

Box 2

Verification of Site Details

		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? Not Applicable	☐	
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information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?	☐	☐
	If YES, is the new information or evidence that new information has been previously submitted included with this Certification? Not Applicable	☐	
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)?	☐	☐
	If NO, are changes in the assessment included with this certification? Not Applicable	☐	

SITE NO. 442021 **Box 3**

Description of Institutional Controls

Parcel	Institutional Control
S_B_L Image: **178.-12-6**	Monitoring Plan

Box 4

Description of Engineering Controls

None Required

Attach documentation if IC/ECs cannot be certified or why IC/ECs are no longer applicable.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

Control Description for Site No. 442021

Parcel: 178.-12-6
Monitoring for natural attenuation of contaminates.

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
X ☐	☐

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.

Not Applicable

YES	NO
☐	☐

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.

Not Applicable

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
X ☐	☐

IC CERTIFICATIONS
SITE NO. 442021

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 James C. Hayward, P.E. at 6712 Brooklawn Parkway, Syracuse, NY 13211,
print name print business address

am certifying as a Qualified Environmental Professional for the Storonske Cooperage site.

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

James C. Hayward

______________________ ______________ 9/28/2009
Signature of Qualified Environmental Professional, for the Owner or Remedial Party, Rendering Certification Stamp (if Required) Date

Enclosure 2

Certification Instructions

I. Verification of Site Details (Box 1 and Box 2):

Answer the six questions in the Verification of Site Details Section. Questions 5 and 6 only refer to sites in the Brownfield Cleanup Program. The Owner and/or Qualified Environmental Professional (QEP) may include handwritten changes and/or other supporting documentation, as necessary.

II. Certification of Institutional / Engineering Controls (Boxes 3, 4, and 5)

1. Review the listed IC/ECs, confirming that all existing controls are listed, and that all existing controls are still applicable. If there is a control that is no longer applicable the Owner / Remedial Party is to petition the Department requesting approval to remove the control.

2. In Box 5, complete certifications for all Plan components, as applicable, by checking the corresponding checkbox.

3. If you cannot certify "YES" for each Control and/or certify the other SM Plan components that are applicable, continue to complete the remainder of this **Certification** form. Attach supporting documentation that explains why the **Certification** cannot be rendered, as well as a statement of proposed corrective measures, and an associated schedule for completing the corrective measures. Note that this **Certification** form must be submitted even if an IC or EC cannot be certified; however, the certification process will not be considered complete until corrective action is completed.

   If the Department concurs with the explanation, the proposed corrective measures, and the proposed schedule, a letter authorizing the implementation of those corrective measures will be issued by the Department's Project Manager. Once the corrective measures are complete, a new Periodic Review Report (with IC/EC Certification) is to be submitted within 45 days to the Department. If the Department has any questions or concerns regarding the PRR and/or completion of the IC/EC Certification, the Project Manager will contact you.

III. IC/EC Certification by Signature (Box 6 and Box 7**):**

If you certified "YES" for each Control, please complete and sign the IC/EC Certifications page. Where the only control is an Institutional Control on the use of the property the certification statement in Box 6 shall be completed and may be made by the property owner. Where the site has Institutional and Engineering Controls, the certification statement in Box 7 must be completed by a Professional Engineer or Qualified Environmental Professional (see table below).

Table 1. Signature Requirements for Control Certification Page

Type of Control	Example of IC/EC	Required Signatures
EC which does not include a treatment system or engineered caps.	Fence, Clean Soil Cover, Individual House Water Treatment System, Vapor Mitigation System	A site or property owner or remedial party, and a QEP. (P.E. license not required)
EC that includes treatment system or an engineered cap.	Pump & Treat System providing hydraulic control of a plume, Part 360 Cap.	A site or property owner or remedial party, and a QEP with a P.E. license.

WHERE to mail the signed Certification Form by **Wednesday, September 30, 2009**:

New York State Department of Environmental Conservation

625 Broadway, BURE
Albany, NY 12233

Attn: Gerald Pratt, Project Manager

Please note that extra postage may be required.

Periodic Review Report
For Storonske Cooperage Site (4-42-021)
Town of Schodack, 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

September 2009
Revision: FINAL
EA Project No.: 14474.22

Periodic Review Report
For Storonske Cooperage Site (4-42-021)
Town of Schodack, 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
Syracuse, New York 13211
(315) 431-4610

24 September 2009

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

24 September 2009

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

24 September 2009

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

September 2009
Revision: FINAL
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1. EXECUTIVE SUMMARY

This Periodic Review Report (PRR) has been prepared to document the ongoing performance, effectiveness, and protectiveness of the selected remedy at the Storonske Cooperage site as required by 6 New York Code of Rules and Regulations (NYCRR) Part 375. The Storonske Cooperage site (New York State Department of Environmental Conservation [NYSDEC] Site No. 4-42-021) is located in a suburban portion of Rensselaer County, in the town of Schodack, New York (Figure 1). The Storonske Cooperage facility was responsible for discharges of solvent via accidental spills (resulting in contaminated wastewater) and poor waste management (during on-site disposal) which lead to the contamination of soil and groundwater.

A Record of Decision (ROD) was issued for Operable Unit No. 1 (OU1) in March 1992. The selected remedy for OU1 addressed the on-site soil contamination/source control and consisted of *in-situ* vacuum extraction and off-site disposal of soils contaminated with heavy metals. A second ROD was subsequently issued for Operable Unit No. 2 (OU2) in March 1993. The selected remedy for OU2 addressed groundwater contamination and consisted of granular activated carbon (GAC) filter systems on residential supply wells and monitoring for natural attenuation of groundwater contamination.

The overall purpose of this report is to demonstrate that the remedy stated in the ROD (monitored natural attenuation [MNA]) is protecting groundwater and reducing the current contamination concentrations to levels which are protective of human health and the environment. Currently, the groundwater monitoring program at the Storonske Cooperage site consists of collecting groundwater samples from 26 monitoring wells (Figure 2) every 15 months. Based on evaluation of historical and current groundwater analytical results, and groundwater quality parameters collected during this reporting period, there appears to be a reduction of contaminants over time and that conditions are favorable for natural attenuation to occur at the site.

A component of the ROD called for the reevaluation of site groundwater conditions at the end of the 5 year monitoring period. Monitoring wells will be removed from the sampling program if analytical results from the sampling period indicate that the concentration of the analytes is below the laboratory reporting limits. Based on the current frequency of the groundwater monitoring program (i.e., sampling every 15 months), it is recommended that a desktop review of the PRR also be conducted every 5 years to evaluate the performance, effectiveness, and protectiveness of MNA at the site.

2. SITE OVERVIEW

The Storonske Cooperage site is an approximate 5-acre parcel of land located on the north side of Kraft Road immediately east of the intersection of Routes 9 and 20 in the town of Schodack, Rensselaer County, New York.

The site is situated immediately adjacent to both residential and commercial establishments: to the north is a trailer park (Rensselaer Estates), to the east is a low-lying wooded area and a small apartment complex (on Lisa Lane), to the south are seven residences on Kraft Road with private well water supplies and the Schodack Plaza water supply, and to the west there are businesses on Routes 9 and 20 (Figure 2).

The Storonske Cooperage facility was used for the cleaning and reconditioning of 55 gal drums from 1973 until it closed in 1992. Prior to 1973, the property was utilized by the Albany-Nassau Bus Company as a bus garage and depot. Wastewater from the operation was stored in an unlined concrete block lagoon which eventually leaked into the soil and groundwater.

The site came to the attention of NYSDEC in March 1984 when NYSDEC staff conducted a facility inspection under the Resources Conservation and Recovery Act program. The sludge in the former wastewater lagoon was sampled and found to fail the U.S. Environmental Protection Agency (USEPA) toxicity test for lead. This resulted in Storonske Cooperage, Inc., entering into a Consent Order with New York State in March 1986 to remove the lagoon from operation and to conduct an investigation of the impacts of the lagoon.

Based on the results of the Remedial Investigation/Feasibility Study (RI/FS) performed between 1988 and 1990, the soil at the site was found to be contaminated with various volatile organic compounds (VOCs), semivolatile organic compounds, metals, and polychlorinated biphenyls. A ROD was subsequently issued for OU1 to address the soil contamination. Further investigation resulted in additional clean up of soil in the area east of the site building. Contaminated soils on the property were excavated in 1999 and a soil vapor extraction system was installed at the site.

In addition, the results from the RI/FS concluded that the groundwater on-site and downgradient of the site was contaminated with VOCs and heavy metals at concentrations above drinking water standards. Initially, GAC filters were installed on the private water supplies for private well protection. After a ROD was released for OU2, the existing GAC filter systems were upgraded to more effective systems. A municipal water line was installed during summer 2001 and eliminated the need for GAC systems. Groundwater monitoring was included in the ROD for OU2 and has been performed regularly to monitor groundwater resources as part of the site management program. Groundwater sampling events were completed in August 1999, September 2001, November 2002, and May and October 2005 by Earth Tech; another event was completed in April 2008 by EA Engineering, P.C., and its affiliate EA Science and Technology (EA).

3. REMEDY PERFORMANCE, EFFECTIVENESS, AND PROTECTIVENESS

3.1 INSTITUTIONAL CONTROLS/ENGINEERING CONTROLS CERTIFICATION PLAN REPORT

Institutional Controls (IC) and Engineering Controls (EC) are not listed in the March 1993 ROD for the site. However, the groundwater monitoring program established under OU2 meets the intent of an EC.

3.2 MONITORING PLAN COMPLIANCE REPORT

As set forth in the ROD, long-term monitoring is being completed to demonstrate that MNA is occurring. The original Long-Term Monitoring Plan (LTMP)[1] was prepared in December 2004 and is the only previous monitoring document available for the site. The LTMP initially called for the collection of quarterly groundwater samples for 2 years with the potential for reduction in sampling frequency based on analytical results. Currently, as directed by the NYSDEC, groundwater samples are being collected at 15-month intervals in order to capture variations in groundwater conditions. This PRR is being written to assess whether the site has been managed as set forth in the ROD, the LTMP, and any modifications made to the LTMP.

Groundwater sampling was performed regularly from 1999 to 2005 to monitor the groundwater resources as part of the site's Operation and Maintenance program. The available data for the site included groundwater sampling events in August 1999, September 2001, November 2002, and May and October 2005. The most recent groundwater sampling was performed from 8 to 10 April 2008 and included the collection and analysis of two samples from site monitoring wells. Site sampling locations are detailed in Figure 2.

During 2008, a modification was made to the LTMP to include quarterly groundwater gauging events for a period of up to 1 year (as approved by NYSDEC). Water level and total depth measurements were obtained on 21 April 2008, 16 July 2008, and 9 October 2009. Depths to water measurements for these events are summarized in Tables 1A, 1B, and 1C, respectively.

Groundwater elevations for the bedrock and overburden aquifer were plotted and contoured on a potentiometric surface map and are included as Figures 3A and 3B (April 2008 event), Figures 4A and 4B (July 2008 event), and Figures 5A and 5B (October 2008 event).

Following each monitoring event, potential recommendations are discussed with the NYSDEC project manager regarding continued use or modification of the current LTMP, and the LTMP will be revised as necessary to reflect any changes in the monitoring program.

1. EA. 2004. Long-Term Monitoring Plan for Storonske Cooperage Site. December.

3.2.1 Groundwater Monitoring Program

In the fall of 1994, a full round of groundwater samples were collected from 29 monitoring wells present at that time in the study area, prior to activation of the soil vapor extraction system at the site. Analysis was performed for full target compound list (TCL) +30 constituents on shallow and deep monitoring well numbers 1-9 and 15, and TCL volatiles +10 for shallow and deep monitoring wells 10-14 and 16. It was then recommended that sampling be performed subsequently for constituents of concern (TCL volatiles +l0) on a semiannual basis for a 5-year period dependent upon results of the sampling.

Groundwater samples were collected in August 1999, September 2001, November 2002, and May 2005 and October 2005. Water samples were obtained with dedicated polyethylene bailers or a peristaltic pump. All groundwater samples were collected in bottles provided by the laboratory. Samples were packed on ice and submitted with a completed chain of custody to the laboratory.

The first comprehensive round of groundwater monitoring since October 2005 occurred in April 2008[2]. During the event, two monitoring wells (MW-11D and MW-8DD) were observed to be blocked and could not be sampled. Monitoring well MW-02 could not be located and was assumed to be destroyed. Twenty-five groundwater samples were collected from the monitoring wells using a submersible pump and dedicated section of polyethylene tubing or disposable polyethylene bailer. Each monitoring well was inspected prior to sampling and gauging, and their condition was noted on a monitoring well inspection checklist.

Three previously unknown monitoring wells (UK-1, UK-2, and UK-3) were located and sampled in April 2008. The total depth of each unknown monitoring well was measured to be 46.59 ft below ground surface (bgs) (UK-1), 51.74 ft bgs (UK-2), and 59.50 ft bgs (UK-3). Based on the total depths of overburden wells (which range from 18.76 to 64.33 ft bgs) and bedrock wells (which range from 39.35 to 99.89 ft bgs) at the site, it cannot be determined at this time whether the unknown monitoring wells are classified as overburden or bedrock.

During the April 2008 groundwater event, water level measurements were taken from each monitoring well prior to sampling in order to prepare a groundwater contour map and evaluate groundwater flow direction. All monitoring wells were purged a minimum of 3 well volumes, until the well went dry, or until water quality parameters (pH, conductivity, oxygen reduction potential [ORP], temperature, dissolved oxygen [DO], and turbidity) were stabilized. If the monitoring well was pumped dry, the well was allowed to recharge before a sample was collected. Once groundwater parameters were stabilized, samples were collected, placed in a cooler with ice, and delivered to the lab.

2. EA. Summary Report for Storonske Cooperage Site April 2008 Groundwater Sampling Event (4-42-021), Schodack, New York. October 2008

3.2.2 Site Survey

A survey was conducted on 3 June 2008 to provide a complete set of survey data which could be used to provide accurate groundwater contour maps. Monitoring well top of casing elevations were surveyed using a survey level and rod. All monitoring well elevations referenced the top of casing elevation of MW-10D (287.94 ft above mean sea level), which had been surveyed previously by others. Monitoring well survey data obtained in June 2008 are included in Table 2.

3.3 FIELD SAMPLING RESULTS

All groundwater samples for the April 2008 event were analyzed by Chemtech Consulting Group, Mountainside, New Jersey. Chemtech Consulting Group is a New York State Department of Health Environmental Lead Proficiency Analytical Testing- and Environmental Laboratory Analytical Program-certified laboratory for VOC analysis in accordance with the NYSDEC Analytical Services Protocol.

The April 2008 groundwater samples were analyzed for VOCs by USEPA Method 8260B. Historically, groundwater samples obtained at the site were analyzed using USEPA Methods 624 or 524.2. USEPA Method 8260B is an updated USEPA method for analyzing VOCs, which is capable of obtaining the same detection levels as USEPA Method 624. A Data Usability Summary Report was prepared for the April 2008 event.

3.3.1 Hydrogeology

Groundwater level measurements were taken prior to the initiation of each groundwater monitoring event. All groundwater measurements were taken from the top of the inner polyvinyl chloride casing using an oil/water interface probe. Gauging data for April 2008, July 2008, and October 2008 can be found in Tables 1A through 1C.

Monitoring wells at the site are installed in both the overburden and bedrock strata. Based on the 2008 groundwater level measurements, the direction of groundwater flow in both the overburden and bedrock aquifers is to the east-southeast. Current hydraulic groundwater gradients for the overburden and bedrock monitoring wells were calculated to be 0.028 and 0.044, respectively. Based on the interpretation of groundwater elevations from the monitoring well network (including both overburden and bedrock monitoring wells), as illustrated on the contour maps, the data suggests that the overburden and bedrock aquifers are connected. Interpreted groundwater elevation surface maps illustrating the direction of groundwater flow for the gauging events during this period are shown in Figures 3A through 5B. Groundwater flow is consistent with available historical data (i.e., presented in the LTMP) and generally follows the site topography.

3.3.2 Groundwater Sampling Results

Historical tetrachloroethene (PCE) groundwater data has indicated that natural attenuation was occurring in groundwater. Through anaerobic dechlorination, common breakdown compounds of

PCE (trichlorethene [TCE], *cis*-1,2-dichloroethene [*cis*-1,2-DCE], 1,2-dichloroethane, and vinyl chloride) have been consistently observed throughout the monitoring well network. PCE and its breakdown compounds were typically detected at levels below the NYSDEC Ambient Water Quality Standards (AWQS) during the historical and current groundwater monitoring events. PCE and corresponding breakdown compounds have not been detected above AWQS since May 2005. These compounds were commonly detected in monitoring wells immediately east and downgradient of the site. The one exception is *cis*-1,2-DCE which was detected at monitoring wells located further southeast and downgradient of the site at concentrations below AWQS.

1,1,1-trichloroethane (1,1,1-TCA) historically appears to be more prevalent in groundwater, with detections in a wider range of monitoring wells across the site. 1,1,1-TCA was also historically detected at higher concentrations than PCE and its breakdown compounds. When 1,1,1-TCA naturally attenuates under anaerobic conditions it's common breakdown compounds include 1,1-dichloroethane (1,1-DCA) followed by chloroethane. Historically, monitoring wells MW-2S, MW-7S, MW-9D, MW-12S, and MW-20D reported concentrations of both 1,1,1-TCA and 1,1-DCA above NYSDEC AWQS. These monitoring wells are located across the site both laterally and vertically, from shallow on-site wells (MW-2S and MW-7S), to bedrock monitoring well MW-9D just east and downgradient, and further southeast/downgradient at shallow monitoring well MW-12S and bedrock monitoring well MW-20D. 1,1,1-TCA and 1,1-DCA were detected above NYSDEC AWQS at the highest frequency during the October 2005 monitoring event.

The most recent groundwater monitoring event, conducted in April 2008, revealed continued detections of 1,1,1-TCA at monitoring wells MW-7S and MW-20D, and detections of 1,1-DCA at monitoring wells MW-20D and UK-02 above the applicable AWQS. Both are daughter products of PCE, which results from the reductive dehalogenation of chlorinated ethenes. Concentrations for PCE in groundwater samples were below the AWQS.

Isopleth maps (Figures 6A through 7B) from August 1999 and April 2008 show a decreasing trend in the size of the total chlorinated volatile organic compound (CVOC) plume in the overburden and bedrock monitoring wells. The size of the CVOC plume in the overburden and bedrock monitoring wells was approximately 600-ft long × 200-ft wide and 215-ft long × 125-ft wide, respectively, during the August 1999 sampling event (Figures 6A and 6B). During the April 2008 event (Figures 7A and 7B) there are two isolated areas in the overburden and one isolated area in the bedrock that reveal concentrations of total CVOCs. Figure 8 depicts analytical concentration trends for monitoring wells with detections of CVOCs over time.

3.3.3 Monitored Natural Attenuation Evaluation

The presence of PCE daughter products at levels which are higher than the AWQS, combined with the detection of PCE below the AWQS and decrease in the extent of the plume over time, suggest that natural attenuation is occurring at the site. These most recent data were compared with available historical data to determine if any wells can be removed from the sampling program in the future. Historical analytical data results are summarized in Table 3 and trend graphs for the wells are found in Figure 8.

3.3.3.1 Field Quality Parameters

Field water quality parameters were also recorded to obtain characteristics of site groundwater in April 2008. ORP readings are expressed in millivolts with positive readings indicating increased oxidizing potential and negative readings being increased by reduction potential. Greater negative ORP values indicate that an increase in reduction potential exists; thus, providing an environment where CVOCs have a greater potential for natural attenuation.

DO readings are expressed in milligrams per liter (mg/L) and are also used to evaluate aerobic or anaerobic conditions in groundwater. Typically, at DO levels above 0.5 mg/L, anaerobic bacteria do not function and reductive dechlorination does not occur.

Tables 4A and 4B show the ORP and DO readings collected at monitoring wells during the monitoring events.

3.3.3.2 Evaluation

Favorable conditions for MNA have been observed in various overburden and bedrock monitoring wells as described below. However, three monitoring wells (MW-7S, MW-20D and UK-2) exhibited unfavorable water quality parameters (DO greater than 0.5 mg/L and ORP greater than 50 millvolts) for natural attenuation and have reported concentrations of at least one CVOC analyte above the AWQS.

Overburden Monitoring Wells

ORP readings at site wells varied; however, ORP readings at MW-12S and MW-13S indicated positive reduction potential for all three events. Monitoring wells MW-12S and MW-13S are located southeast and downgradient of the former source area. MW-14S (April 2008) and MW-8S (October 2008) also indicated positive reduction potential.

DO readings at monitoring wells MW-6S, MW-8S, MW-9S, MW-12S, MW-13S, and MW-16S during the July 2008 monitoring event indicate favorable anaerobic conditions exist within the overburden groundwater monitoring wells. DO readings during the April and October 2008 events did not indicate favorable anaerobic conditions (Tables 4A and 4B).

Bedrock Monitoring Wells

Negative or low ORP readings at monitoring wells MW-08D, MW-10D, MW-13D, and MW-14D indicated that there is positive reduction potential in the bedrock groundwater monitoring wells. These wells are located southeast and downgradient of the former source area. With the exception of the October 2008 readings, the DO levels recorded at these wells reveal that oxygen levels within the bedrock groundwater are generally low, which is beneficial for anaerobic degradation to occur. Figures 9 and 10 chart the ORP readings versus the DO readings collected at monitoring well locations for both overburden groundwater and bedrock groundwater monitoring wells.

3.4 SITE MANAGEMENT PLAN COMPLIANCE REPORT

A Site Management Plan does not currently exist for this site; therefore, this report is certified based on the LTMP.

Sampling and gauging events are being performed in accordance with the modification made to the LTMP, and the site is inspected concurrently with groundwater sampling and monitoring events per Section 3.2 and as directed by NYSDEC.

4. COST EVAULATION

The annual costs incurred in 2008 were for the site management field activities, which included, but were not limited to, the following:

- One groundwater sampling event occurred on 9 April 2008 at 25 monitoring wells. Two duplicate samples were also collected at MW-9S and MW-16S. Groundwater samples were analyzed for VOCs by USEPA Method 8260B.

- Quarterly groundwater gauging and monitoring well inspections were completed on 8 April 2008, 16 July 2008, and 9 October 2008. All wells in the monitoring well network were gauged, and the integrity of the well was inspected and recorded on a monitoring well inspection list.

- One groundwater monitoring summary report describing laboratory analytical results was 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 groundwater monitoring report.

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

The total costs incurred at the site in 2008 are tabulated below.

Task	Totals
Operation and Maintenance	$1,997.01
Monitoring	$14,235.14
Reporting	$13,877.19
Totals	**$30,109.34**

Annual costs are anticipated to remain generally the same, with the exception of a mowing cost, estimated at $1,600, for the overall management of the site during 2009.

5. CONCLUSIONS / RECOMMENDATIONS

5.1 CONCLUSIONS

Based on a review of current and historical data, it appears that 1,1,1-TCA and 1,1-DCA concentrations are the most prevalent CVOCs being detected in groundwater at the site. The April 2008 monitoring event has shown a reduction in the frequency of detections; however, concentrations where these CVOCs were detected are either above or slightly below NYSDEC AWQS. Additionally, chloroethane, the compound commonly associated with the final breakdown stages of 1,1,1-TCA, has never been detected in groundwater. This would indicate either a stall of the dechlorination process has occurred or that chloroethane is not accumulating at concentrations above typical laboratory method detection limits.

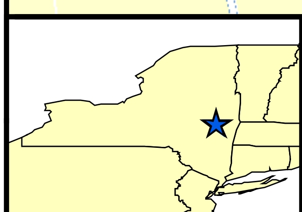
In review of historical site documents and reports, it was also noted that no MNA parameters have ever been collected for groundwater. This groundwater data would provide further assessment of the current biodegradation process and the potential for natural attenuation to meet the remedial objectives set forth in the ROD. Based on the historical trend data, CVOC concentrations appear to be decreasing at the site; however, a site-wide pattern has not been developed due to a lack of data. Where CVOCs were detected above AWQS (MW-7S, MW-20D, and UK-2), groundwater conditions suggest that anaerobic dechlorination is not occurring. Geochemical and groundwater characteristics can fluctuate across a site and tend to change seasonally. Additional groundwater monitoring data would be needed to determine if the unfavorable natural attenuation conditions continue to persist at these monitoring well locations.

5.2 RECOMMENDATIONS

Based on a comparison between April 2008 results and historical data, it is recommended that the following monitoring wells be removed from the sampling program: MW-1S, MW-1D, MW-1DD, MW-2S, MW-6DD, MW-7D, MW-8DD, MW-11D, MW-15D, and MW-21.

It is also recommended that groundwater monitoring be continued, which should consist of the collection of quarterly water quality parameters, quarterly monitoring well gauging, and groundwater sampling events (at 15-month intervals).

Collection of MNA parameters is recommended at monitoring wells located upgradient of the former source area (MW-4D and MW-5D), on-site (MW-7S and MW-6S), and downgradient of the site (UK-2, MW-12S, MW-10D, and MW-20D). MNA parameters should include analysis for the following: alkalinity, aromatic, and chlorinated hydrocarbons (benzene, toluene, ethylbenzene, and total xylenes; trimethylbezene; isomers; chlorinated compounds); arsenic; chloride; conductivity; iron (II); hydrogen; methane; ethane; ethene; nitrates; ORP; oxygen; pH; sulfates; manganese; and total organic carbon.



LEGEND

★ Site Location

Miles

0 0.125 0.25 0.5

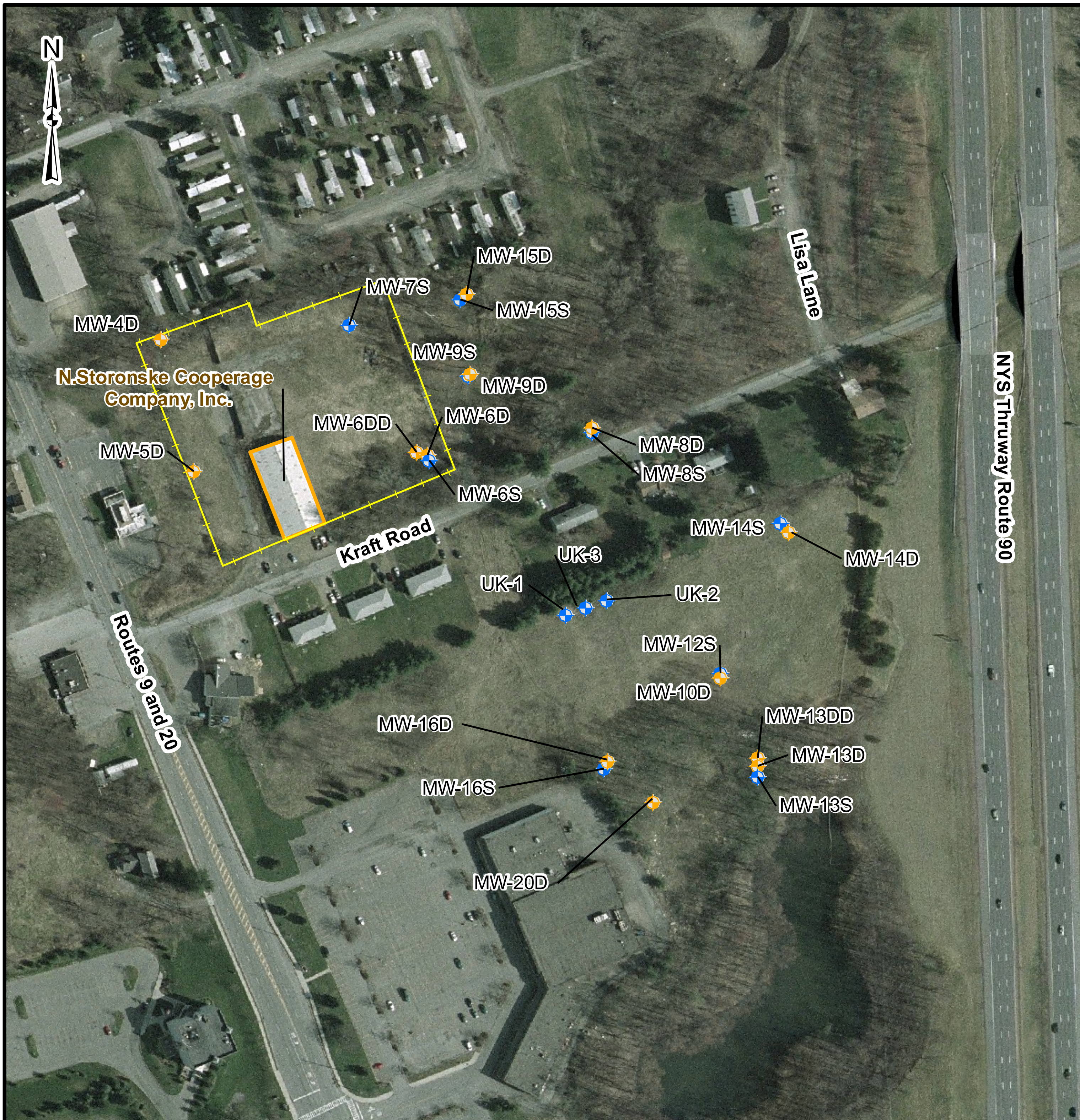
Source: StreetMap USA

EA Engineering, Science, and Technology, Inc.

STORONSKE COOPERAGE SITE (4-42-021)
PERIODIC REVIEW REPORT
SCHODACK, NEW YORK

FIGURE 1
SITE LOCATION MAP

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	MJS	MJS	JAV	AS SHOWN	SEPTEMBER 2009	14474.22	GIS/PROJECTS/ FIGURE1.MXD



Legend

Fence Line

Buildings

Monitoring Wells

Surficial

Bedrock

Feet

0 50 100 200 300 400 500

Source: NYS-GIS Clearinghouse

EA Engineering, Science, and Technology, Inc.

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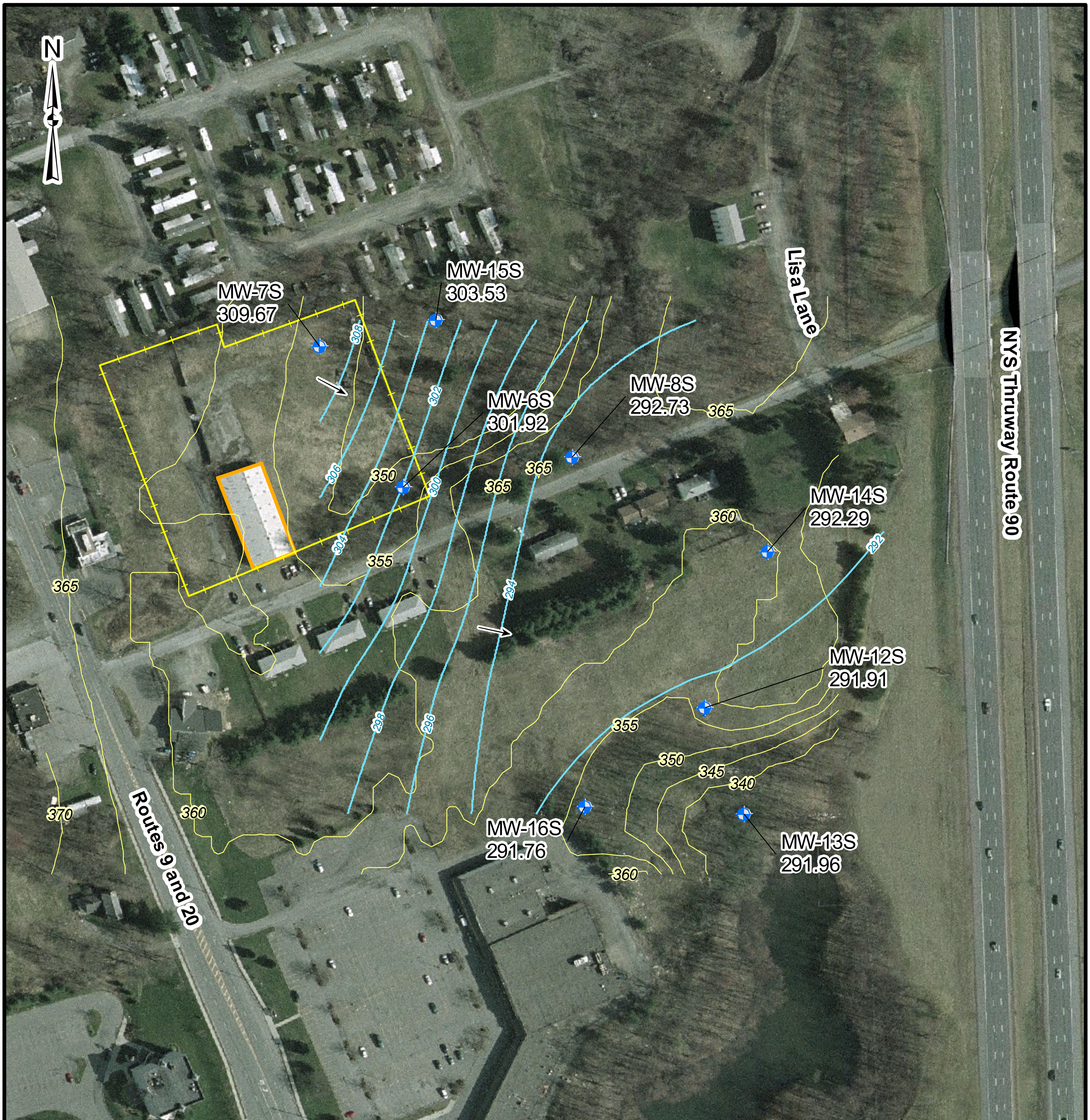
PERIODIC REVIEW REPORT
SCHODACK, NEW YORK

FIGURE 2
MONITORING WELL LOCATIONS

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	MJS	MJS	JAV	AS SHOWN	SEPTEMBER 2009	14474.22	GIS/PROJECTS/ FIGURE2.MXD



Legend

- Contour Interval (2ft)
- Surface Contour Interval (5ft)
- Fence Line
- Buildings

Monitoring Well

Overburden wells used in groundwater contour interpolation

Feet

0 50 100 200 300 400 500

Source: NYS-GIS Clearinghouse

EA Engineering, Science, and Technology, Inc.

STORONSKE COOPERAGE SITE (4-42-021)
PERIODIC REVIEW REPORT
SCHODACK, NEW YORK

FIGURE 3A
ESTIMATED OVERBURDEN GROUNDWATER CONTOURS
(APRIL 2008) (FT AMSL)

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	MJS	MJS	JAV	AS SHOWN	SEPTEMBER 2009	14474.22	GIS/PROJECTS/ FIGURE3A.MXD

Legend

- Contour Interval (2ft)
- Surface Contour Interval (5ft)
- Fence Line
- Buildings

Monitoring Well

Bedrock wells used in groundwater contour interpolation

Feet

0 50 100 200 300 400 500

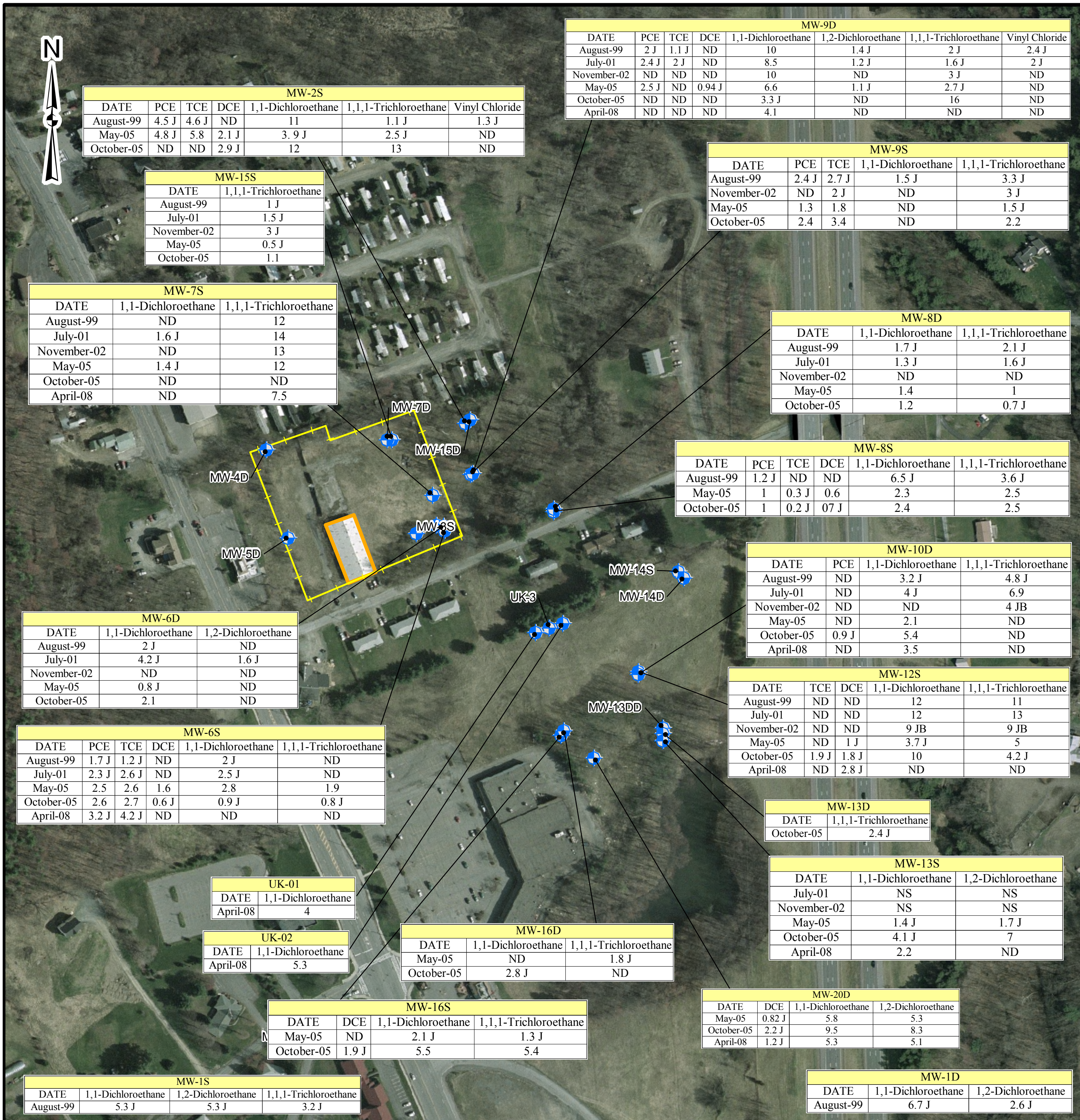
Source: NYS-GIS Clearinghouse

EA Engineering, Science, and Technology, Inc.

STORONSKE COOPERAGE SITE (4-42-021)
PERIODIC REVIEW REPORT
SCHODACK, NEW YORK

FIGURE 3B
ESTIMATED BEDROCK
GROUNDWATER CONTOURS
(APRIL 2008) (FT AMSL)

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	MJS	MJS	JAV	AS SHOWN	SEPTEMBER 2009	14474.22	GIS/PROJECTS/ FIGURE3B.MXD



MW-9D							
DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99	2 J	1.1 J	ND	10	1.4 J	2 J	2.4 J
July-01	2.4 J	2 J	ND	8.5	1.2 J	1.6 J	2 J
November-02	ND	ND	ND	10	ND	3 J	ND
May-05	2.5 J	ND	0.94 J	6.6	1.1 J	2.7 J	ND
October-05	ND	ND	ND	3.3 J	ND	16	ND
April-08	ND	ND	ND	4.1	ND	ND	ND

MW-2S						
DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99	4.5 J	4.6 J	ND	11	1.1 J	1.3 J
May-05	4.8 J	5.8	2.1 J	3. 9 J	2.5 J	ND
October-05	ND	ND	2.9 J	12	13	ND

MW-9S				
DATE	PCE	TCE	1,1-Dichloroethane	1,1,1-Trichloroethane
August-99	2.4 J	2.7 J	1.5 J	3.3 J
November-02	ND	2 J	ND	3 J
May-05	1.3	1.8	ND	1.5 J
October-05	2.4	3.4	ND	2.2

MW-15S	
DATE	1,1,1-Trichloroethane
August-99	1 J
July-01	1.5 J
November-02	3 J
May-05	0.5 J
October-05	1.1

MW-7S		
DATE	1,1-Dichloroethane	1,1,1-Trichloroethane
August-99	ND	12
July-01	1.6 J	14
November-02	ND	13
May-05	1.4 J	12
October-05	ND	ND
April-08	ND	7.5

MW-8D		
DATE	1,1-Dichloroethane	1,1,1-Trichloroethane
August-99	1.7 J	2.1 J
July-01	1.3 J	1.6 J
November-02	ND	ND
May-05	1.4	1
October-05	1.2	0.7 J

MW-8S					
DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,1,1-Trichloroethane
August-99	1.2 J	ND	ND	6.5 J	3.6 J
May-05	1	0.3 J	0.6	2.3	2.5
October-05	1	0.2 J	07 J	2.4	2.5

MW-10D			
DATE	PCE	1,1-Dichloroethane	1,1,1-Trichloroethane
August-99	ND	3.2 J	4.8 J
July-01	ND	4 J	6.9
November-02	ND	ND	4 JB
May-05	ND	2.1	ND
October-05	0.9 J	5.4	ND
April-08	ND	3.5	ND

MW-6D		
DATE	1,1-Dichloroethane	1,2-Dichloroethane
August-99	2 J	ND
July-01	4.2 J	1.6 J
November-02	ND	ND
May-05	0.8 J	ND
October-05	2.1	ND

MW-12S				
DATE	TCE	DCE	1,1-Dichloroethane	1,1,1-Trichloroethane
August-99	ND	ND	12	11
July-01	ND	ND	12	13
November-02	ND	ND	9 JB	9 JB
May-05	ND	1 J	3.7 J	5
October-05	1.9 J	1.8 J	10	4.2 J
April-08	ND	2.8 J	ND	ND

MW-6S					
DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,1,1-Trichloroethane
August-99	1.7 J	1.2 J	ND	2 J	ND
July-01	2.3 J	2.6 J	ND	2.5 J	ND
May-05	2.5	2.6	1.6	2.8	1.9
October-05	2.6	2.7	0.6 J	0.9 J	0.8 J
April-08	3.2 J	4.2 J	ND	ND	ND

MW-13D	
DATE	1,1,1-Trichloroethane
October-05	2.4 J

MW-13S		
DATE	1,1-Dichloroethane	1,2-Dichloroethane
July-01	NS	NS
November-02	NS	NS
May-05	1.4 J	1.7 J
October-05	4.1 J	7
April-08	2.2	ND

UK-01	
DATE	1,1-Dichloroethane
April-08	4

UK-02	
DATE	1,1-Dichloroethane
April-08	5.3

MW-16D		
DATE	1,1-Dichloroethane	1,1,1-Trichloroethane
May-05	ND	1.8 J
October-05	2.8 J	ND

MW-20D			
DATE	DCE	1,1-Dichloroethane	1,2-Dichloroethane
May-05	0.82 J	5.8	5.3
October-05	2.2 J	9.5	8.3
April-08	1.2 J	5.3	5.1

MW-16S			
DATE	DCE	1,1-Dichloroethane	1,1,1-Trichloroethane
May-05	ND	2.1 J	1.3 J
October-05	1.9 J	5.5	5.4

MW-1D		
DATE	1,1-Dichloroethane	1,2-Dichloroethane
August-99	6.7 J	2.6 J

MW-1S			
DATE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane
August-99	5.3 J	5.3 J	3.2 J

Legend

Fence Line

Monitoring Well

Buildings

Feet

0 50100 200 300 400 500

Source: NYS-GIS Clearinghouse

EA Engineering, Science, and Technology, Inc.

STORONSKE COOPERAGE SITE (4-42-021)
SUMMARY REPORT
SCHODACK, NEW YORK

FIGURE 4
DETECTED ANALYTES
BY DATE

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	MJS	MJS	JAV	AS SHOWN	SEPTEMBER 2009	14474.22	GIS/PROJECTS/ FIGURE4.MXD

Legend

Contour Interval (2ft)
- Contour Interval (2ft)
- Surface Contour Interval (5ft)
- Fence Line
- Buildings

Monitoring Well
- Overburden wells used in groundwater contour interpolation

Feet

0 50 100 200 300 400 500

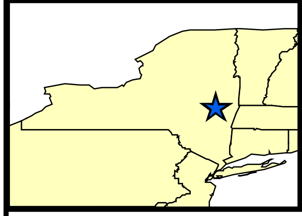
Source: NYS-GIS Clearinghouse

EA Engineering, Science, and Technology, Inc.

STORONSKE COOPERAGE SITE (4-42-021)
PERIODIC REVIEW REPORT
SCHODACK, NEW YORK

FIGURE 5a
ESTIMATED OVERBURDEN GROUNDWATER CONTOURS (FT AMSL) (JULY 2008)

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	MJS	MJS	JAV	AS SHOWN	SEPTEMBER 2009	14474.22	GIS/PROJECTS/ FIGURE5A.MXD



Legend

- Contour Interval (2ft)
- Surface Contour Interval (5ft)
- Fence Line
- Buildings

Monitoring Well

Bedrock wells used in groundwater contour interpolation

Feet

0 50 100 200 300 400 500

Source: NYS-GIS Clearinghouse

EA Engineering, Science, and Technology, Inc.

STORONSKE COOPERAGE SITE (4-42-021)
PERIODIC REVIEW REPORT
SCHODACK, NEW YORK

FIGURE 5b
ESTIMATED BEDROCK
GROUNDWATER CONTOURS
(FT AMSL JULY 2008)

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	MJS	MJS	JAV	AS SHOWN	SEPTEMBER 2009	14474.22	GIS/PROJECTS/ FIGURE5B.MXD

Legend

Contour Interval (2ft)
- Contour
- Interpolated Contour
- Surface Contour Interval (5ft)
- Fence Line
- Buildings

Monitoring Well
- Overburden wells used in groundwater contour interpolation

Feet

0 50 100 200 300 400 500

Source: NYS-GIS Clearinghouse

EA Engineering, Science, and Technology, Inc.

STORONSKE COOPERAGE SITE (4-42-021)
PERIODIC REVIEW REPORT
SCHODACK, NEW YORK

FIGURE 5c
ESTIMATED OVERBURDEN
GROUNDWATER CONTOURS
(FT AMSL) (OCTOBER 2008)

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	MJS	MJS	JAV	AS SHOWN	SEPTEMBER 2009	14474.22	GIS/PROJECTS/ FIGURE5C.MXD

Legend

- Contour Interval (2ft)
- Surface Contour Interval (5ft)
- Fence Line
- Buildings

Monitoring Well

Bedrock wells used in groundwater contour interpolation

Feet

0 50 100 200 300 400 500

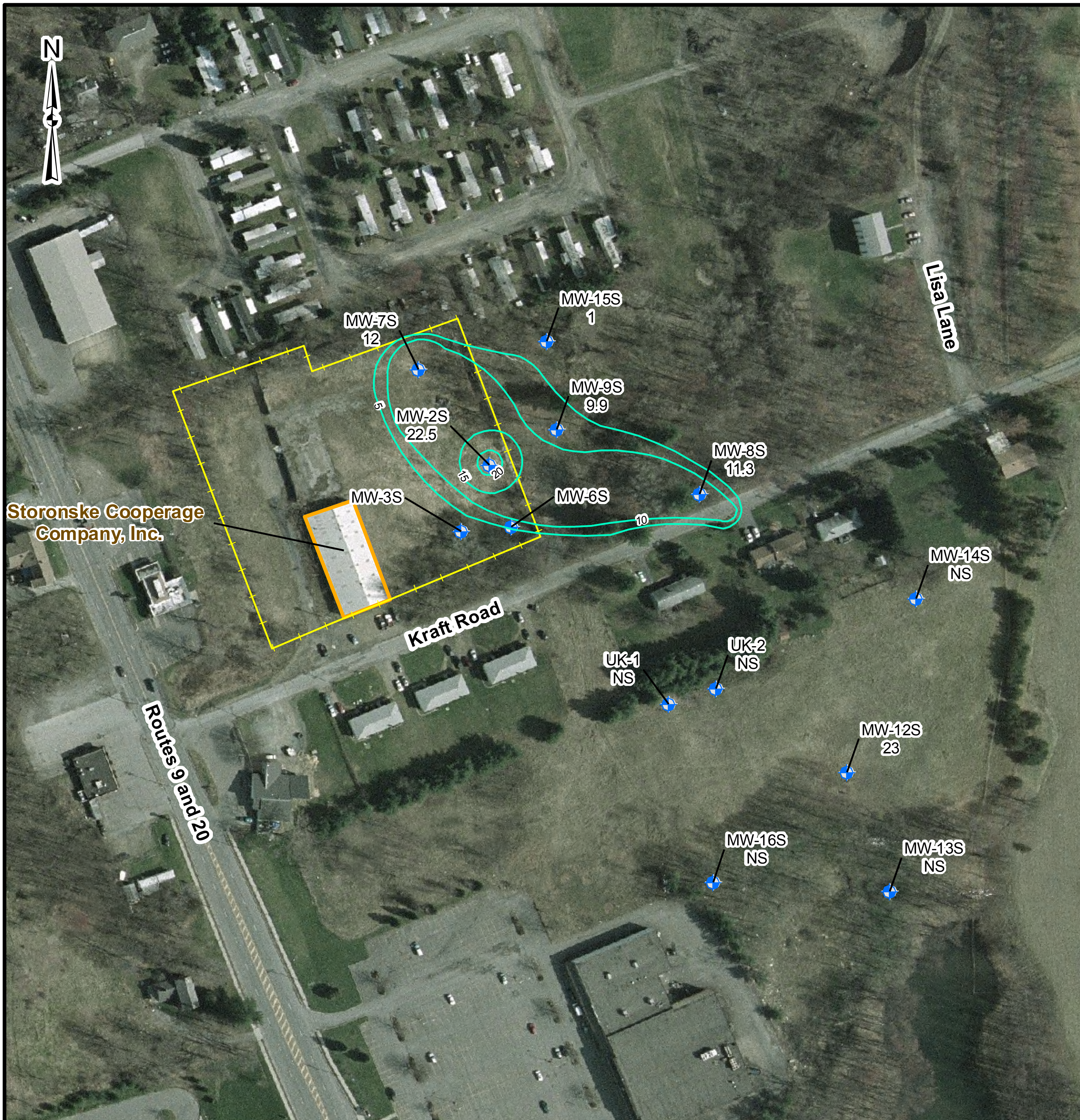
Source: NYS-GIS Clearinghouse

EA Engineering, Science, and Technology, Inc.

STORONSKE COOPERAGE SITE (4-42-021)
PERIODIC REVIEW REPORT
SCHODACK, NEW YORK

FIGURE 5d
ESTIMATED BEDROCK
GROUNDWATER CONTOURS
(FT AMSL) (OCTOBER 2008)

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	MJS	MJS	JAV	AS SHOWN	SEPTEMBER 2009	14474.22	GIS/PROJECTS/ FIGURE5D.MXD



Legend

Fence Line

Buildings

Monitoring Wells

CVOC Isopleth Contour ($\mu g/L$)

Feet

0 50 100 200 300 400 500

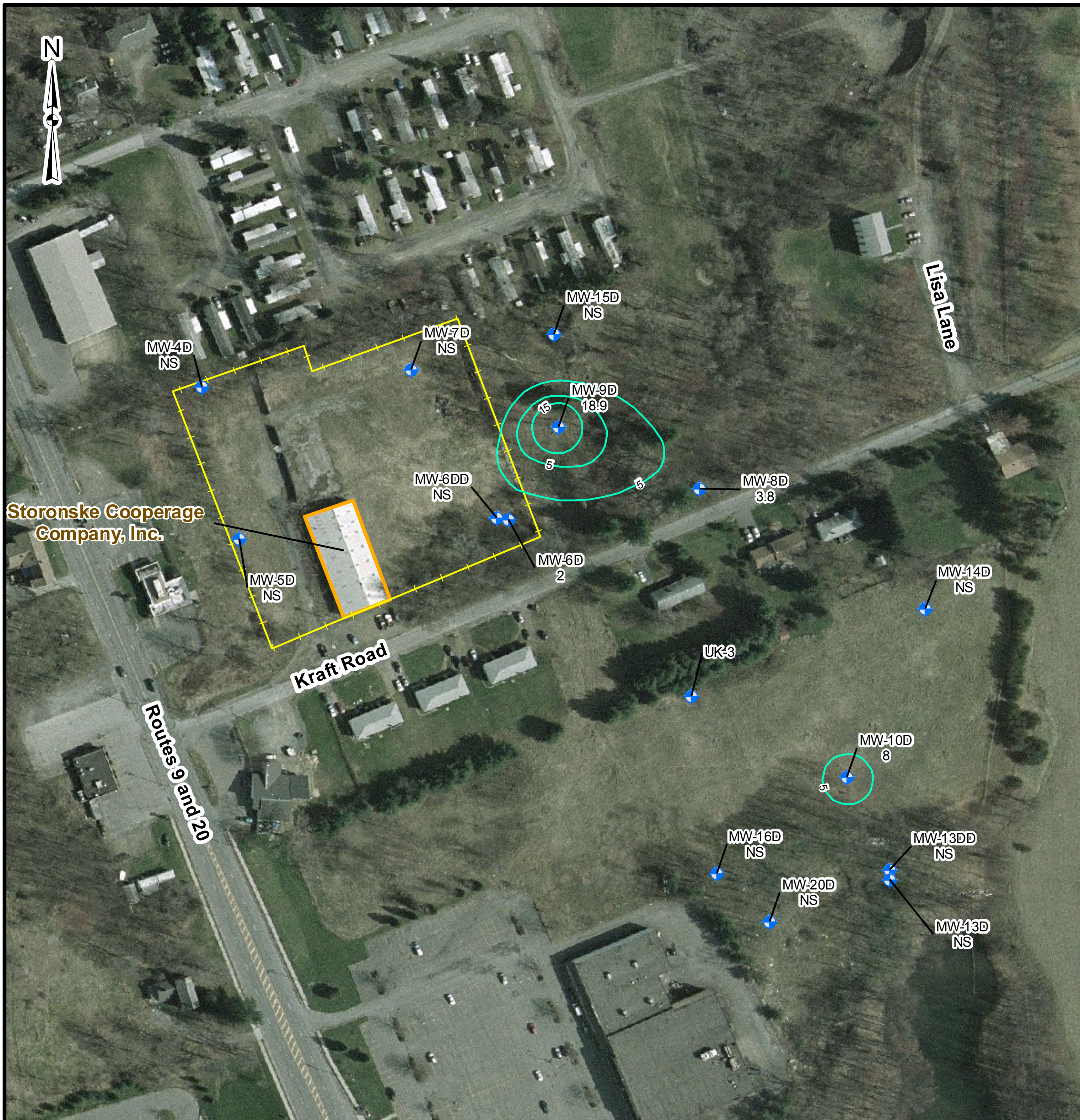
Source: NYS-GIS Clearinghouse

EA Engineering, Science, and Technology, Inc.

STORONSKE COOPERAGE SITE (4-42-021)
PERIODIC REVIEW REPORT
SCHODACK, NEW YORK

FIGURE 6a
OVERBURDEN TOTAL CVOCS
AUGUST 1999

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	MJS	MJS	JAV	AS SHOWN	SEPTEMBER 2009	14474.22	GIS/PROJECTS/ FIGURE6A.MXD



Legend

Fence Line

Buildings

Monitoring Wells

CVOC Isopleth Contour (μg/L)

Feet

0 50 100 200 300 400 500

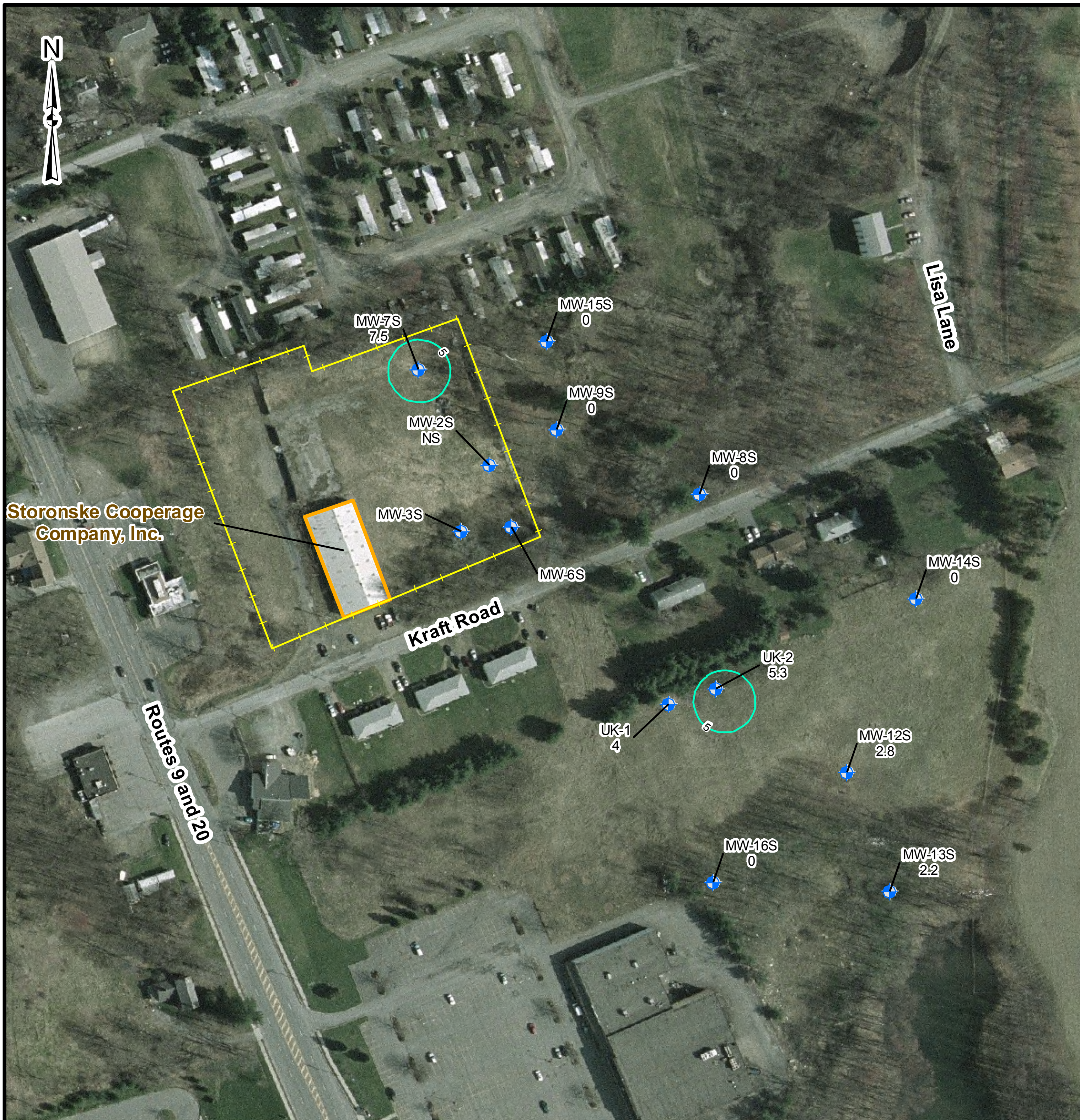
Source: NYS-GIS Clearinghouse

EA Engineering, Science, and Technology, Inc.

STORONSKE COOPERAGE SITE (4-42-021)
PERIODIC REVIEW REPORT
SCHODACK, NEW YORK

FIGURE 6b
BEDROCK TOTAL CVOCS
AUGUST 1999

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	MJS	MJS	JAV	AS SHOWN	SEPTEMBER 2009	14474.22	GIS/PROJECTS/ FIGURE6B.MXD



Legend

Fence Line
Buildings
Monitoring Wells
CVOC Isopleth Contour ($\mu g/L$)

*UNK Well Construction
(Bedrock/Overburden) Undetermined

Feet

0 50 100 200 300 400 500

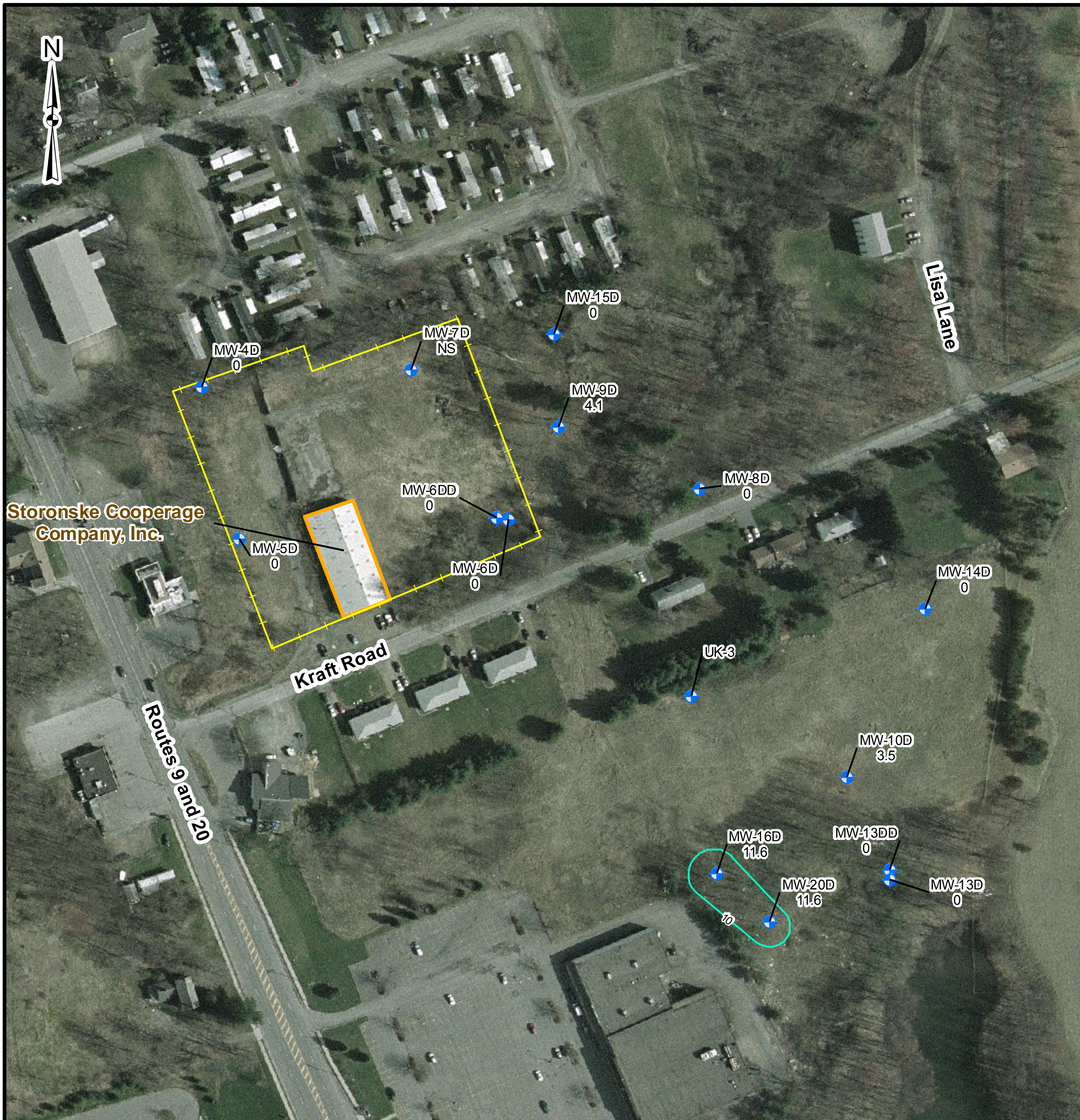
Source: NYS-GIS Clearinghouse

EA Engineering, Science, and Technology, Inc.

STORONSKE COOPERAGE SITE (4-42-021)
PERIODIC REVIEW REPORT
SCHODACK, NEW YORK

FIGURE 7a
OVERBURDEN TOTAL CVOCS
APRIL 2008

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	MJS	MJS	JAV	AS SHOWN	SEPTEMBER 2009	14474.22	GIS/PROJECTS/ FIGURE7A.MXD



Legend

Fence Line
Buildings
Monitoring Wells
CVOC Isopleth Contour ($\mu g/L$)

*UNK Well Construction
(Bedrock/Overburden) Undetermined

Feet
0 50 100 200 300 400 500

Source: NYS-GIS Clearinghouse

EA Engineering, Science, and Technology, Inc.

STORONSKE COOPERAGE SITE (4-42-021)
PERIODIC REVIEW REPORT
SCHODACK, NEW YORK

FIGURE 7b
BEDROCK TOTAL CVOCS
APRIL 2008

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	MJS	MJS	JAV	AS SHOWN	SEPTEMBER 2009	14474.22	GIS/PROJECTS/ FIGURE7B.MXD

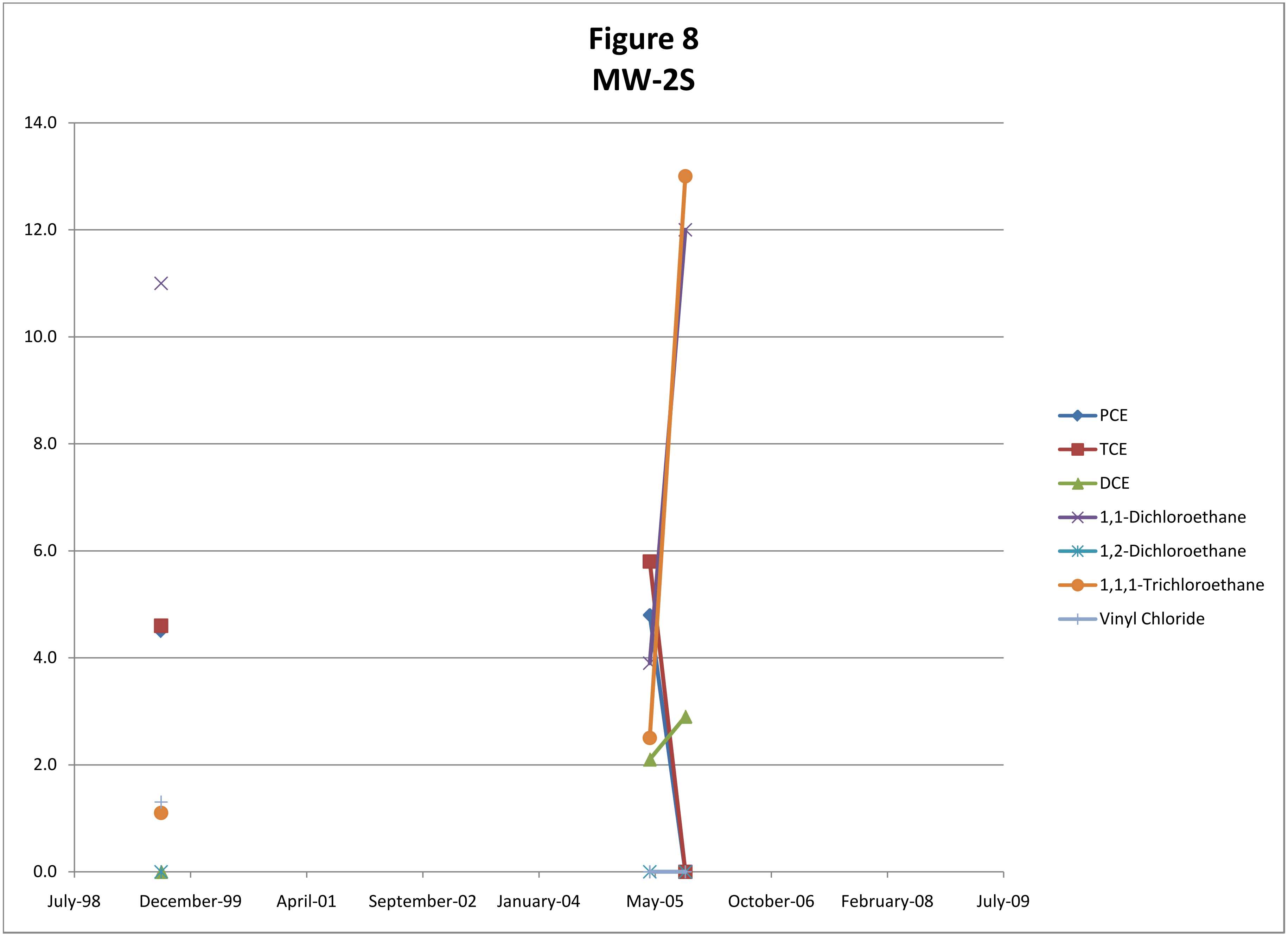


Figure 8
MW-2S
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
July-98
December-99
April-01
September-02
January-04
May-05
October-06
February-08
July-09
PCE
TCE
DCE
1,1-Dichloroethane
1,2-Dichloroethane
1,1,1-Trichloroethane
Vinyl Chloride

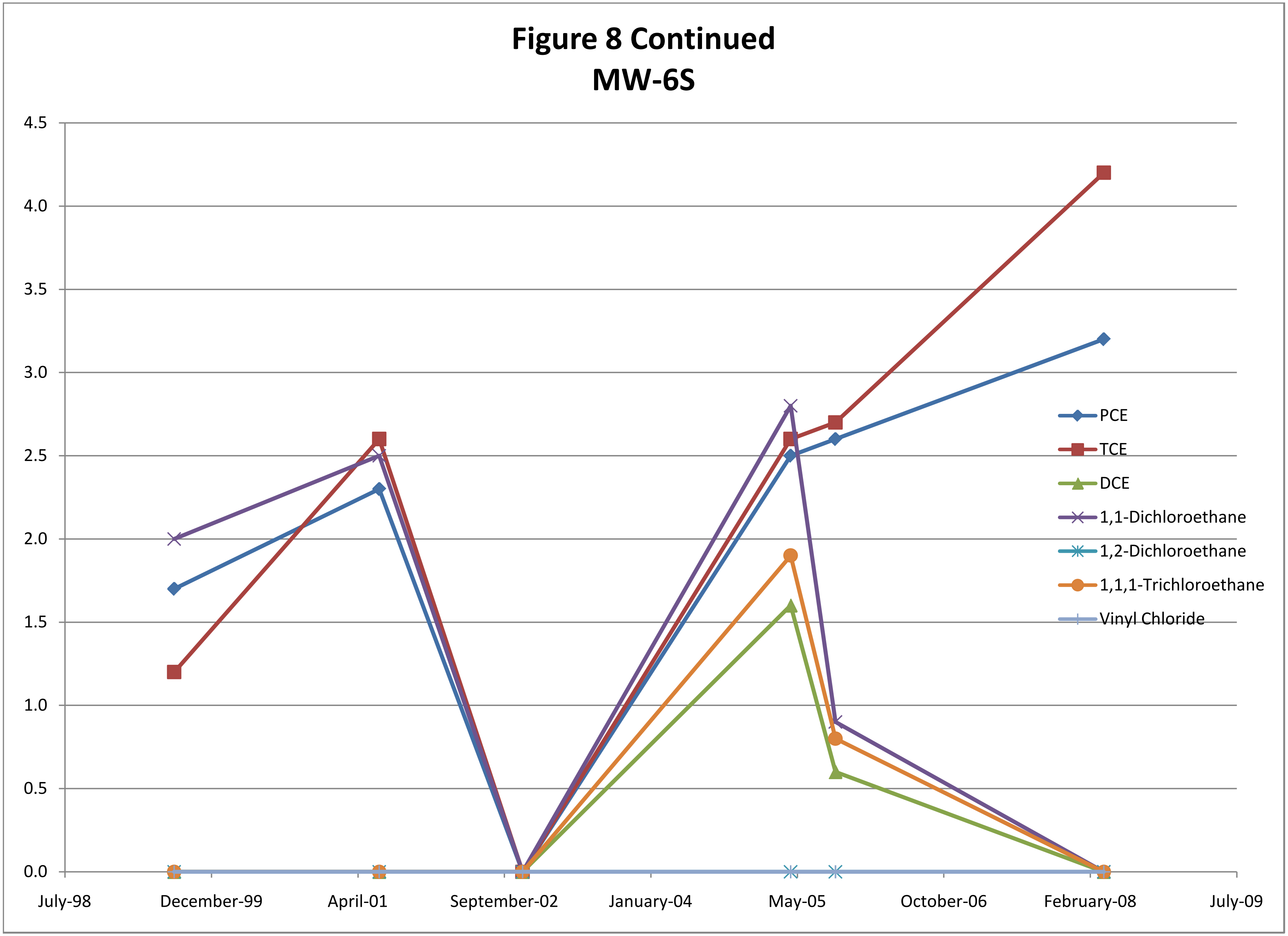


Figure 8 Continued
MW-6S
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
July-98
December-99
April-01
September-02
January-04
May-05
October-06
February-08
July-09
PCE
TCE
DCE
1,1-Dichloroethane
1,2-Dichloroethane
1,1,1-Trichloroethane
Vinyl Chloride

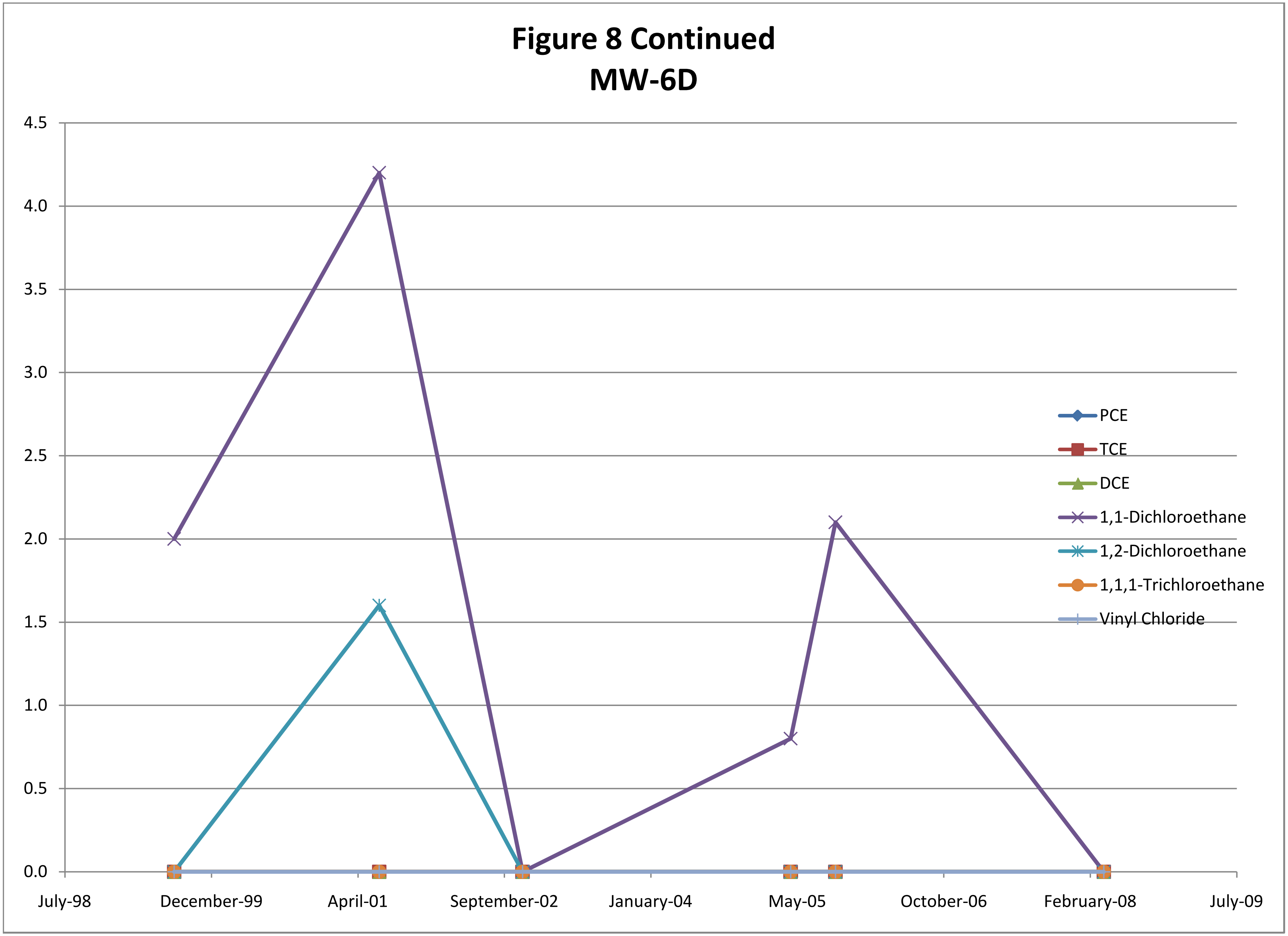


Figure 8 Continued
MW-6D
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
July-98
December-99
April-01
September-02
January-04
May-05
October-06
February-08
July-09
PCE
TCE
DCE
1,1-Dichloroethane
1,2-Dichloroethane
1,1,1-Trichloroethane
Vinyl Chloride

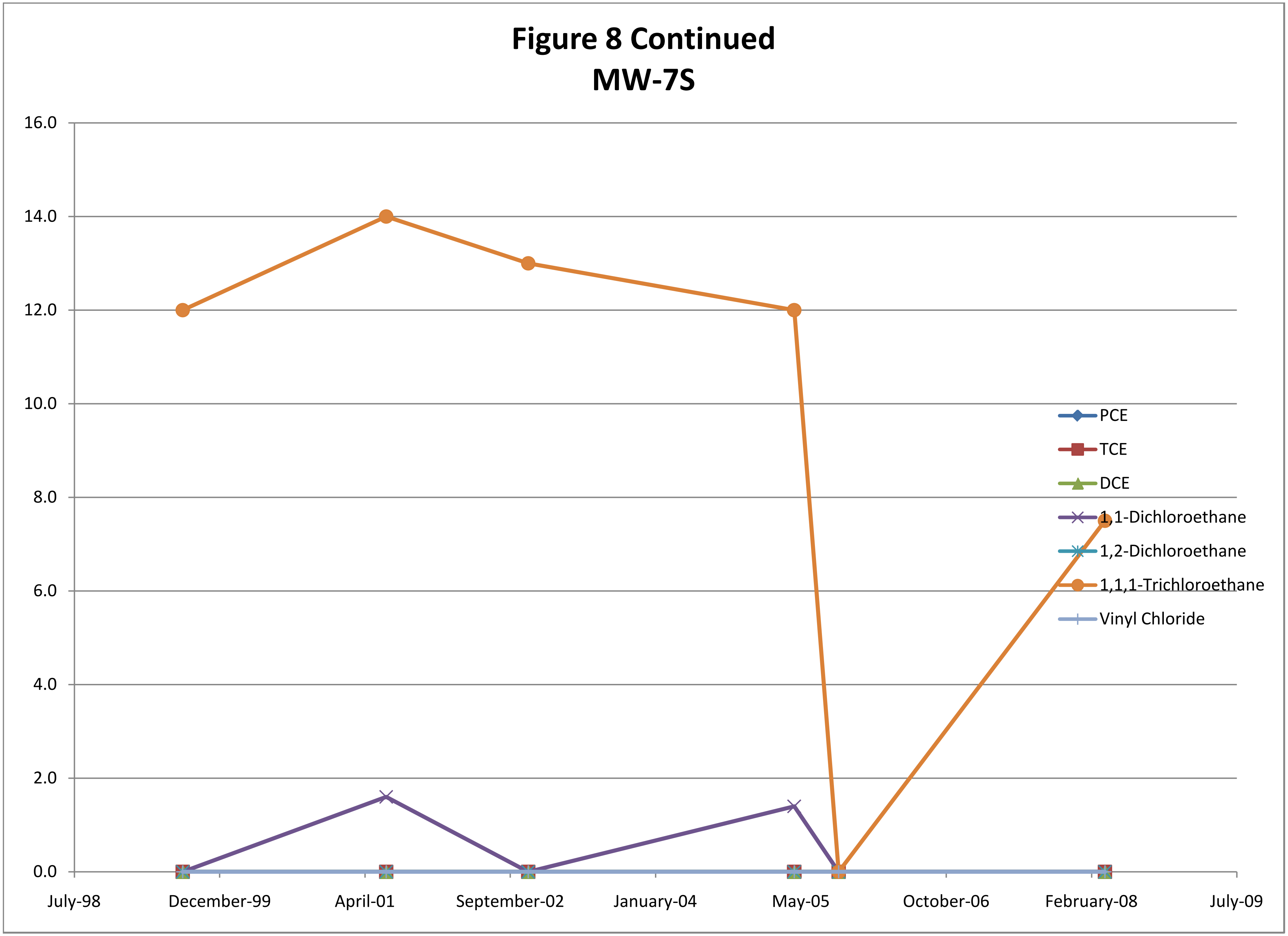


Figure 8 Continued
MW-7S
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
July-98
December-99
April-01
September-02
January-04
May-05
October-06
February-08
July-09
PCE
TCE
DCE
1,1-Dichloroethane
1,2-Dichloroethane
1,1,1-Trichloroethane
Vinyl Chloride

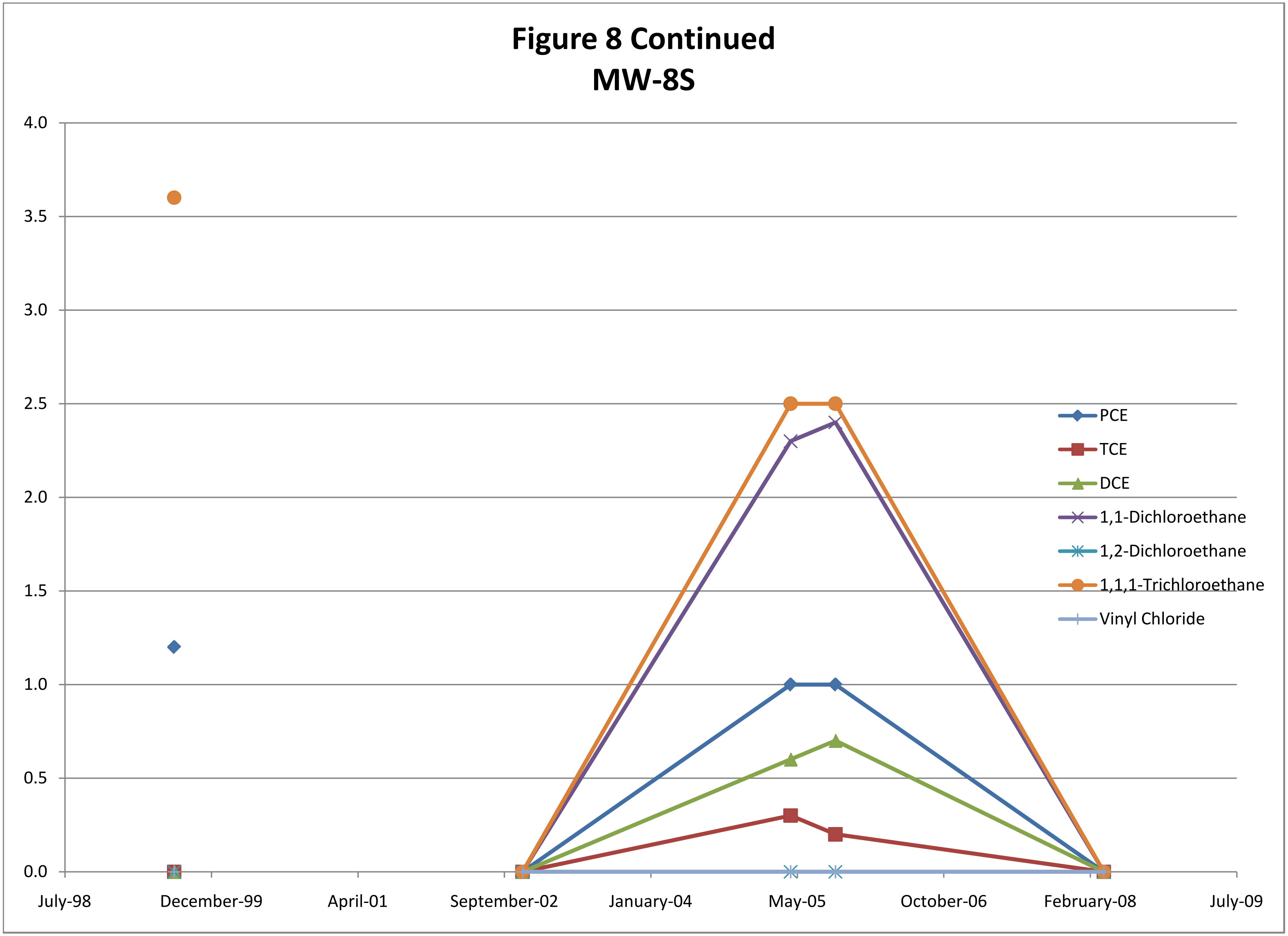


Figure 8 Continued
MW-8S
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
July-98
December-99
April-01
September-02
January-04
May-05
October-06
February-08
July-09
PCE
TCE
DCE
1,1-Dichloroethane
1,2-Dichloroethane
1,1,1-Trichloroethane
Vinyl Chloride

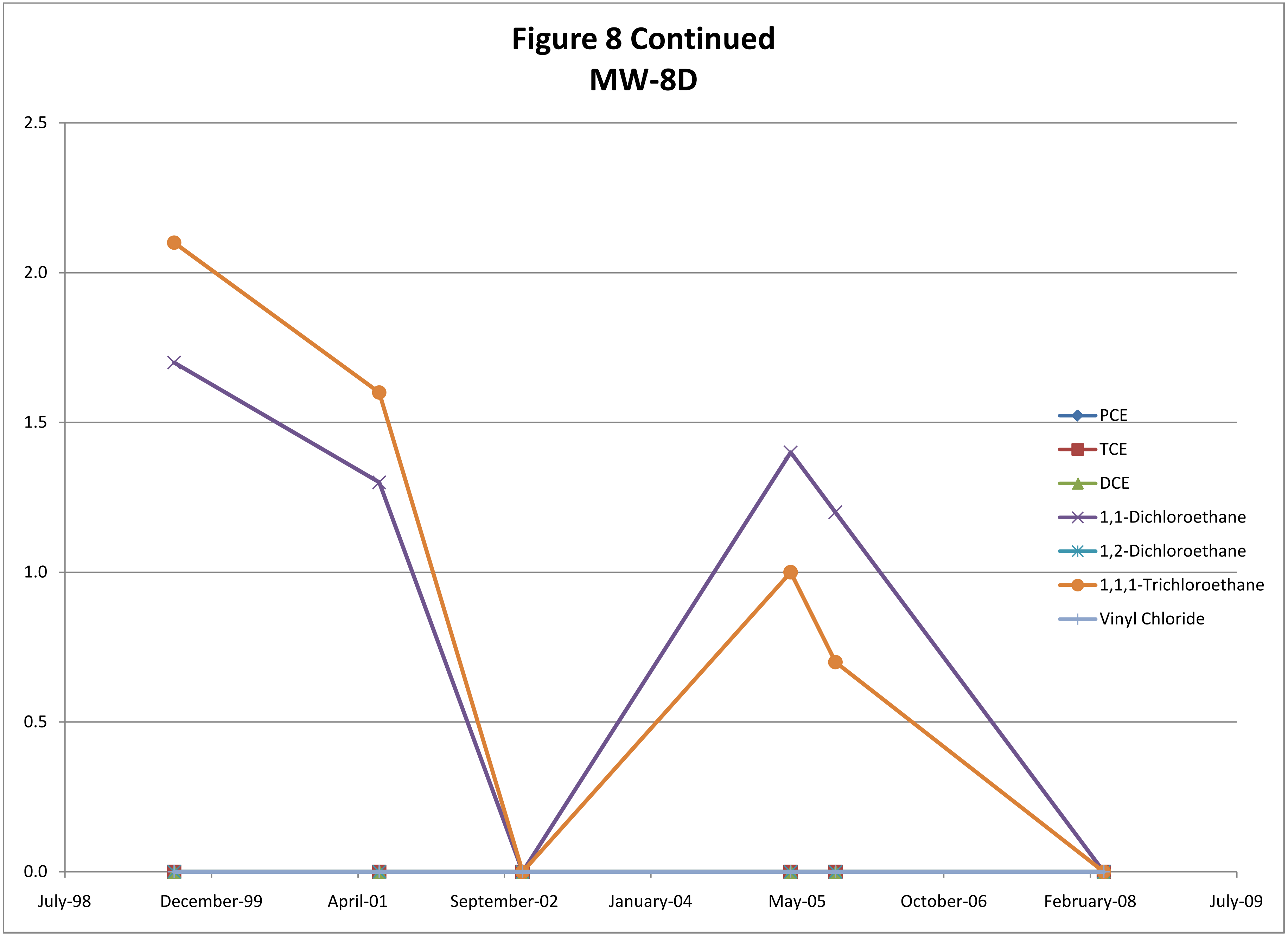


Figure 8 Continued
MW-8D
2.5
2.0
1.5
1.0
0.5
0.0
July-98
December-99
April-01
September-02
January-04
May-05
October-06
February-08
July-09
PCE
TCE
DCE
1,1-Dichloroethane
1,2-Dichloroethane
1,1,1-Trichloroethane
Vinyl Chloride

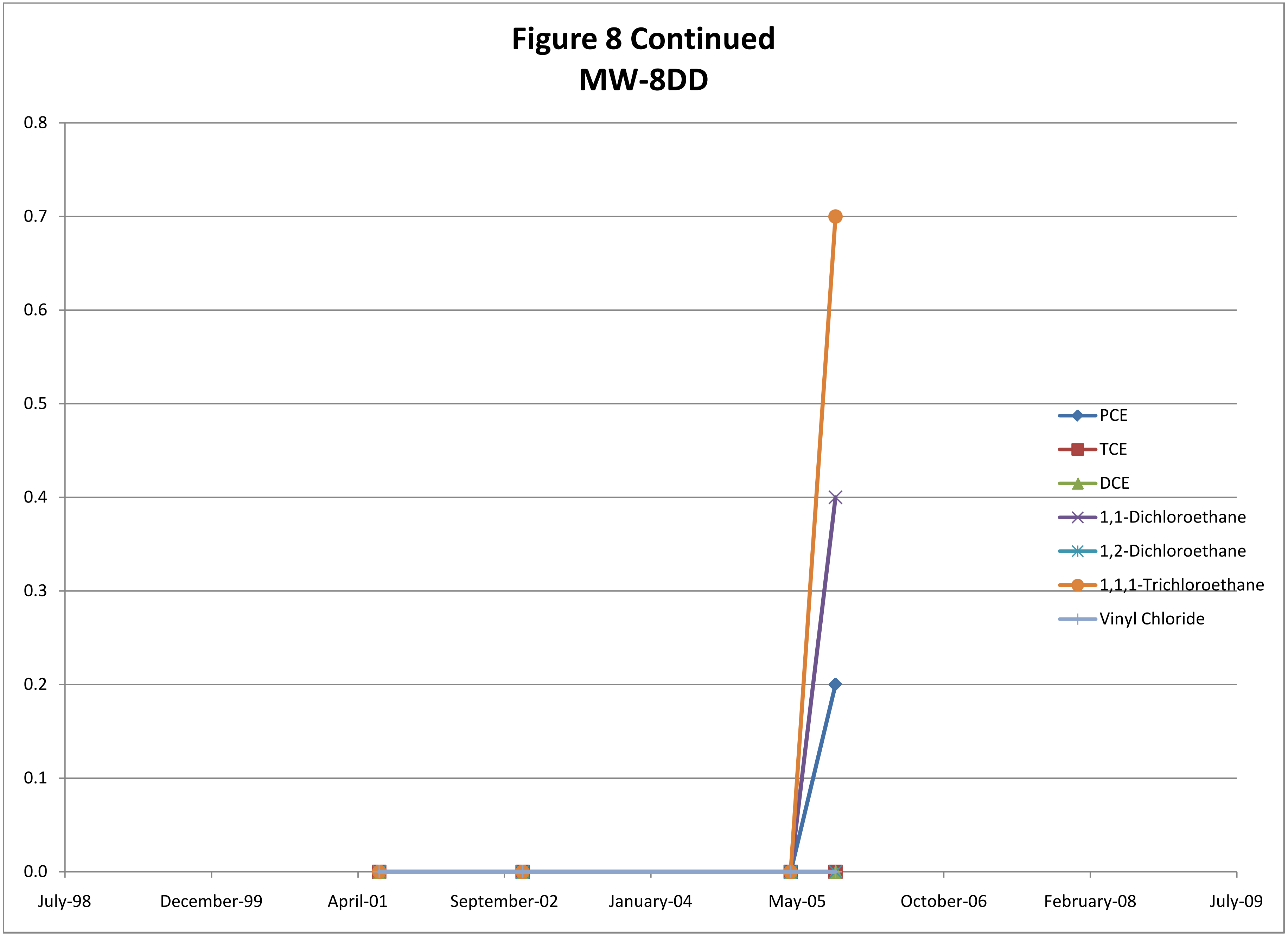


Figure 8 Continued
MW-8DD
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
July-98
December-99
April-01
September-02
January-04
May-05
October-06
February-08
July-09
PCE
TCE
DCE
1,1-Dichloroethane
1,2-Dichloroethane
1,1,1-Trichloroethane
Vinyl Chloride

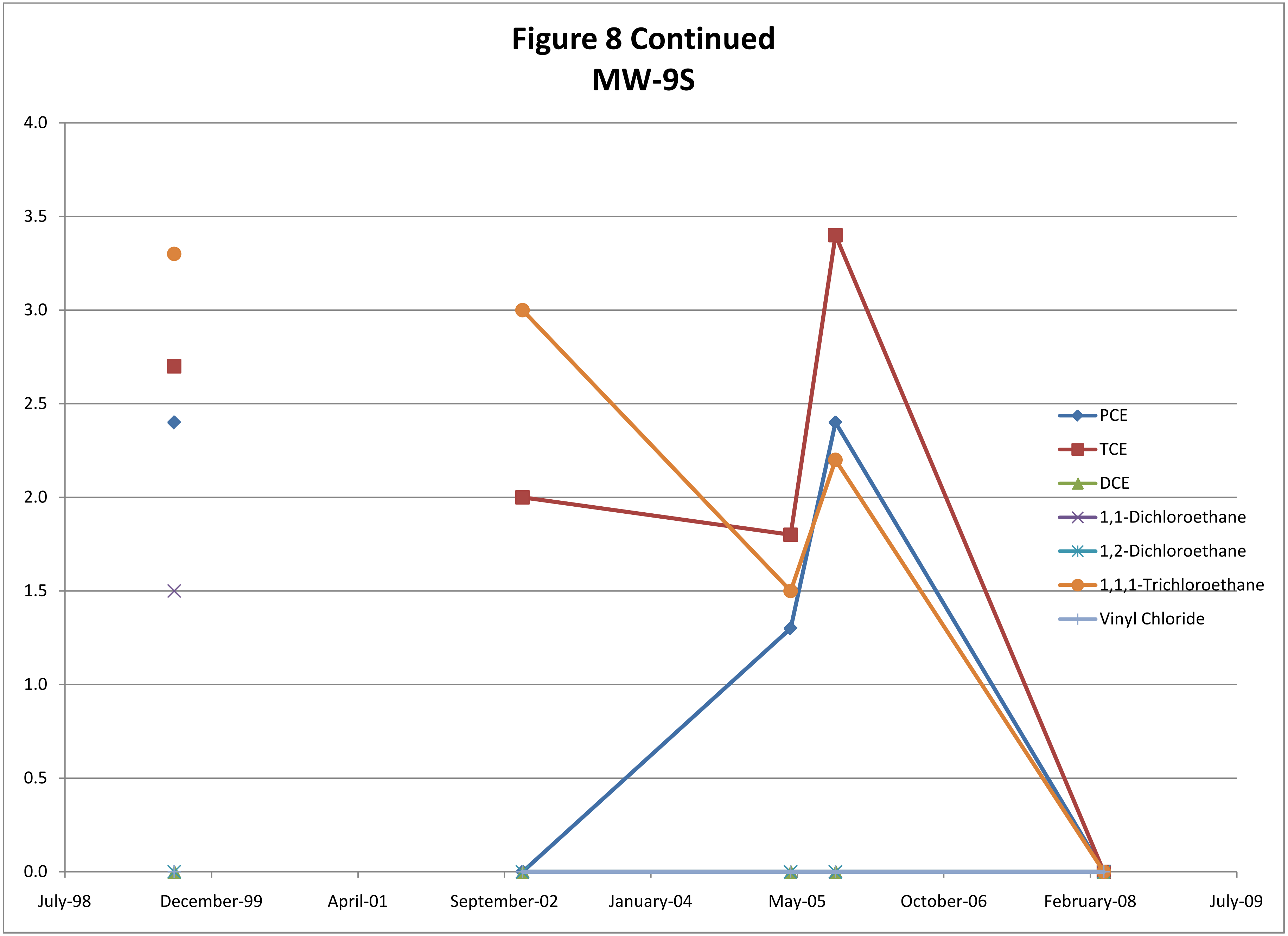


Figure 8 Continued
MW-9S
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
July-98
December-99
April-01
September-02
January-04
May-05
October-06
February-08
July-09
PCE
TCE
DCE
1,1-Dichloroethane
1,2-Dichloroethane
1,1,1-Trichloroethane
Vinyl Chloride

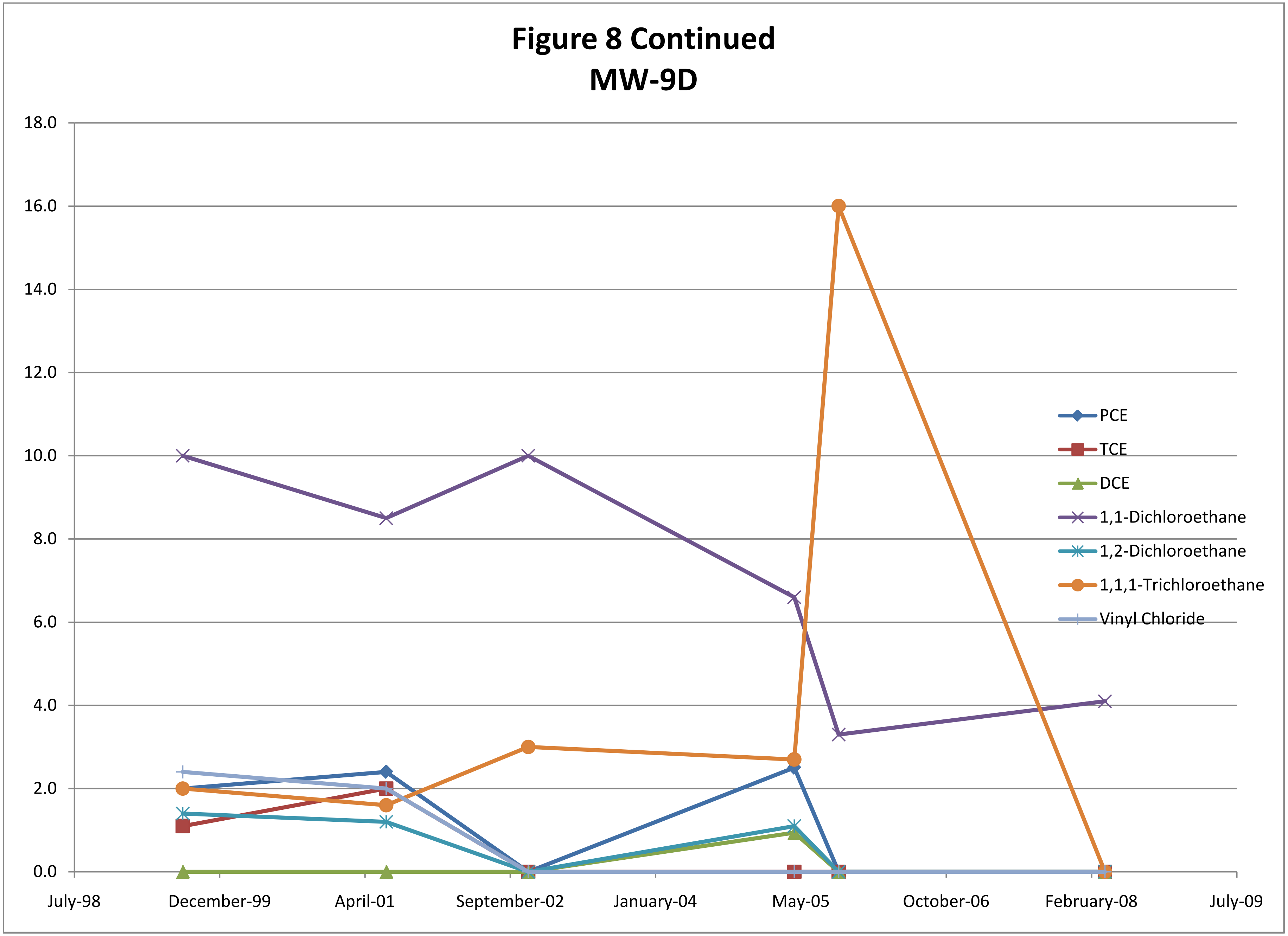


Figure 8 Continued
MW-9D
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
July-98
December-99
April-01
September-02
January-04
May-05
October-06
February-08
July-09
PCE
TCE
DCE
1,1-Dichloroethane
1,2-Dichloroethane
1,1,1-Trichloroethane
Vinyl Chloride

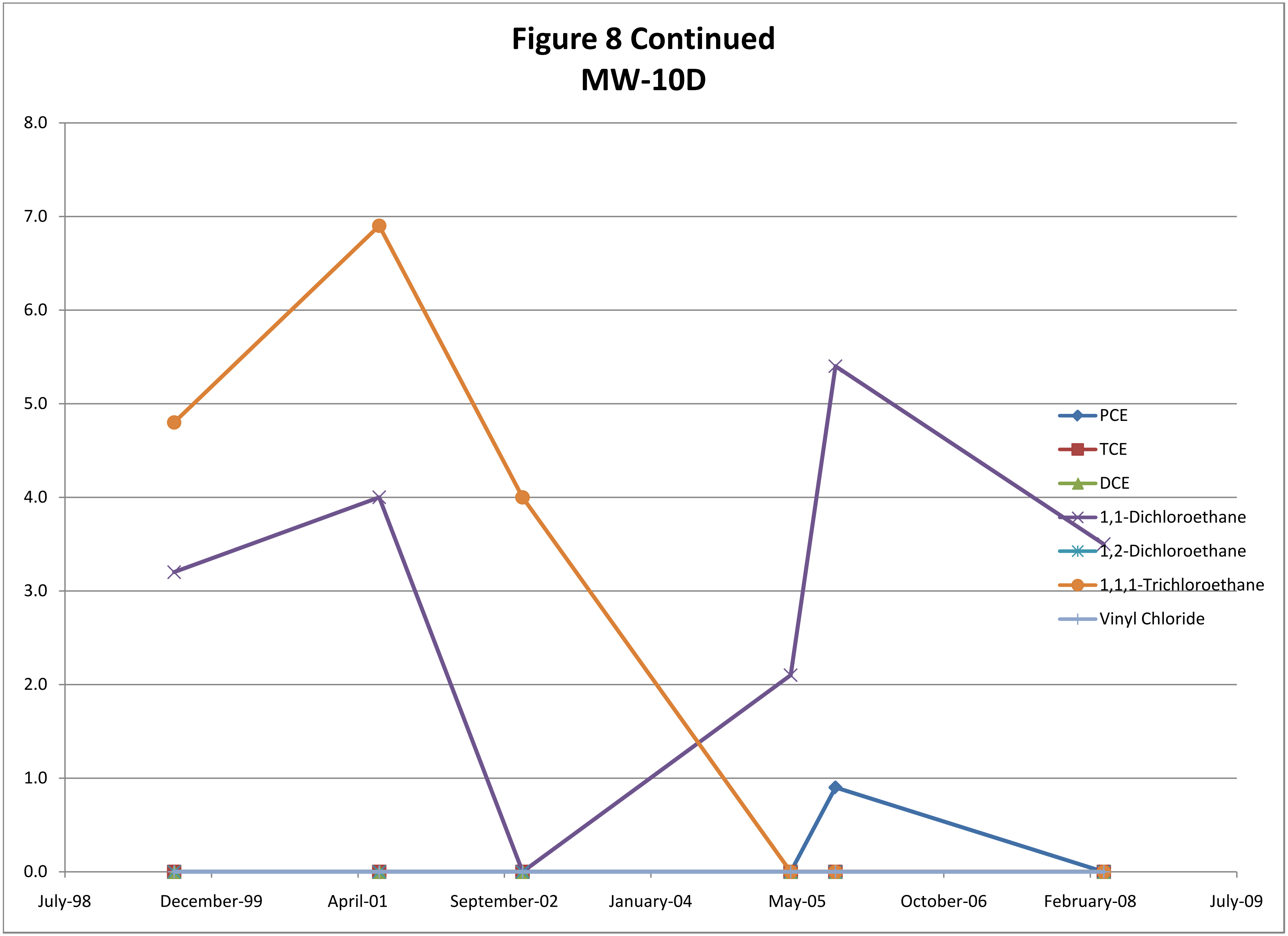


Figure 8 Continued
MW-10D
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
July-98
December-99
April-01
September-02
January-04
May-05
October-06
February-08
July-09
PCE
TCE
DCE
1,1-Dichloroethane
1,2-Dichloroethane
1,1,1-Trichloroethane
Vinyl Chloride

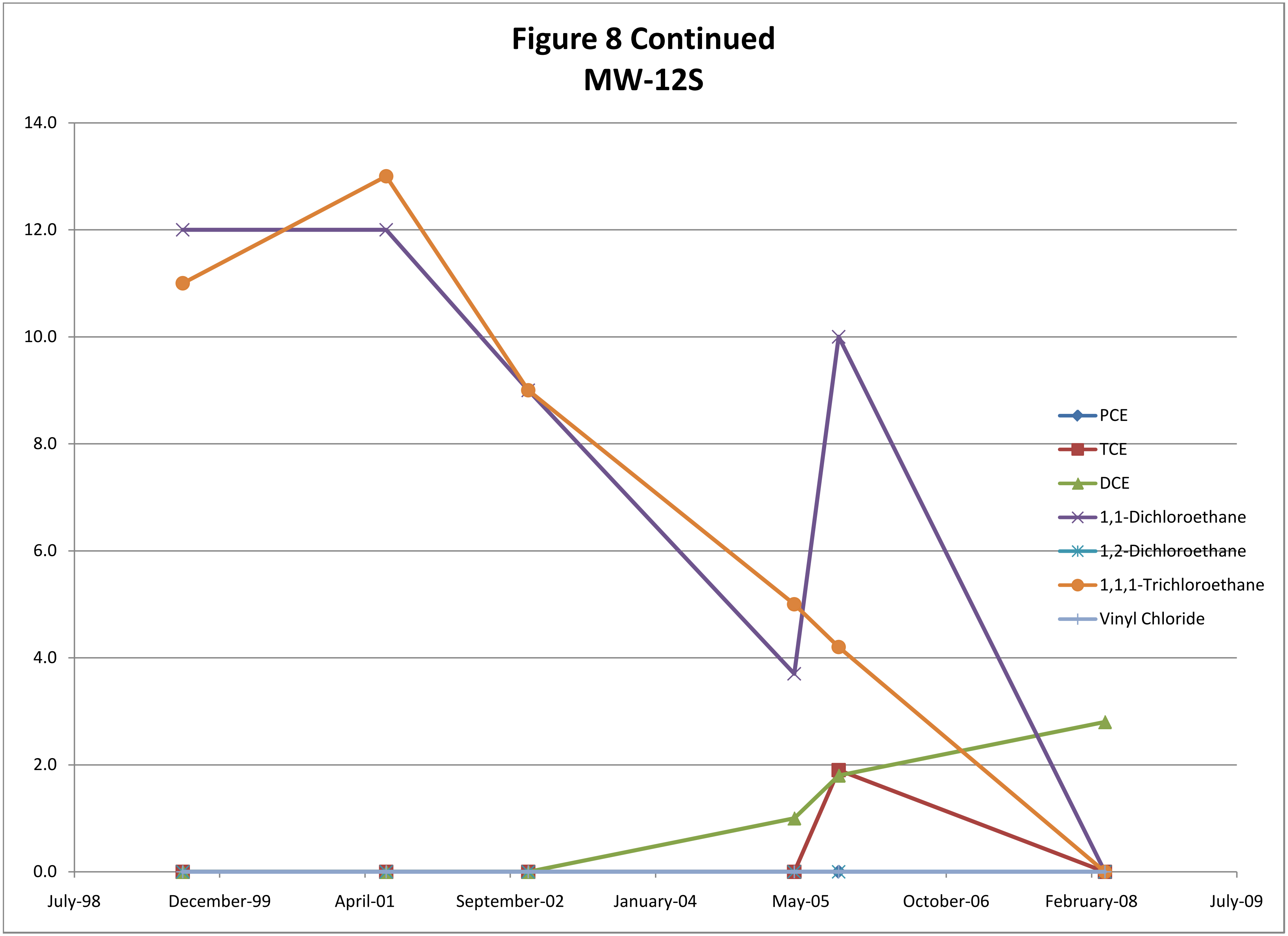


Figure 8 Continued
MW-12S
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
July-98
December-99
April-01
September-02
January-04
May-05
October-06
February-08
July-09
PCE
TCE
DCE
1,1-Dichloroethane
1,2-Dichloroethane
1,1,1-Trichloroethane
Vinyl Chloride

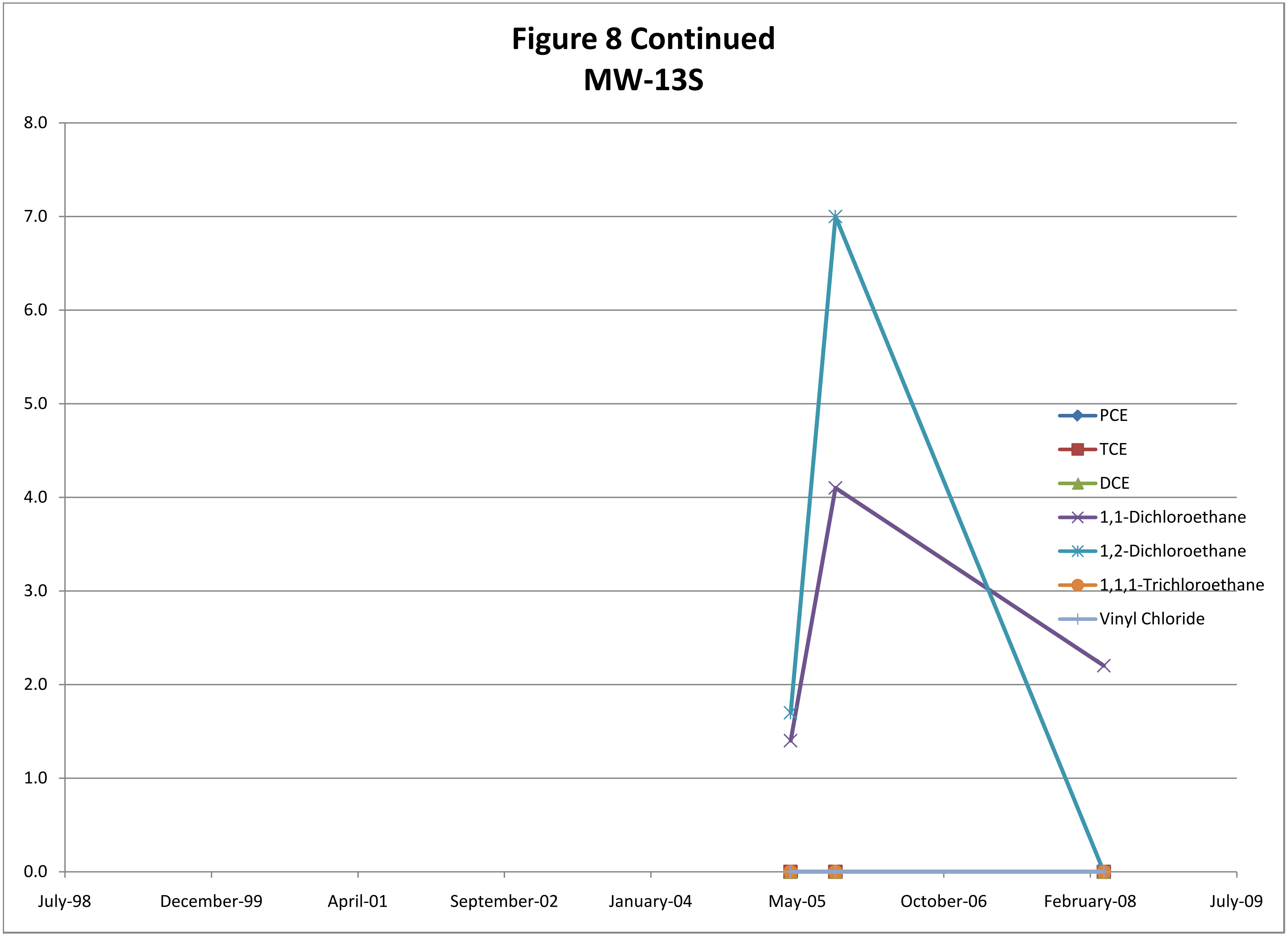


Figure 8 Continued
MW-13S
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
July-98
December-99
April-01
September-02
January-04
May-05
October-06
February-08
July-09
PCE
TCE
DCE
1,1-Dichloroethane
1,2-Dichloroethane
1,1,1-Trichloroethane
Vinyl Chloride

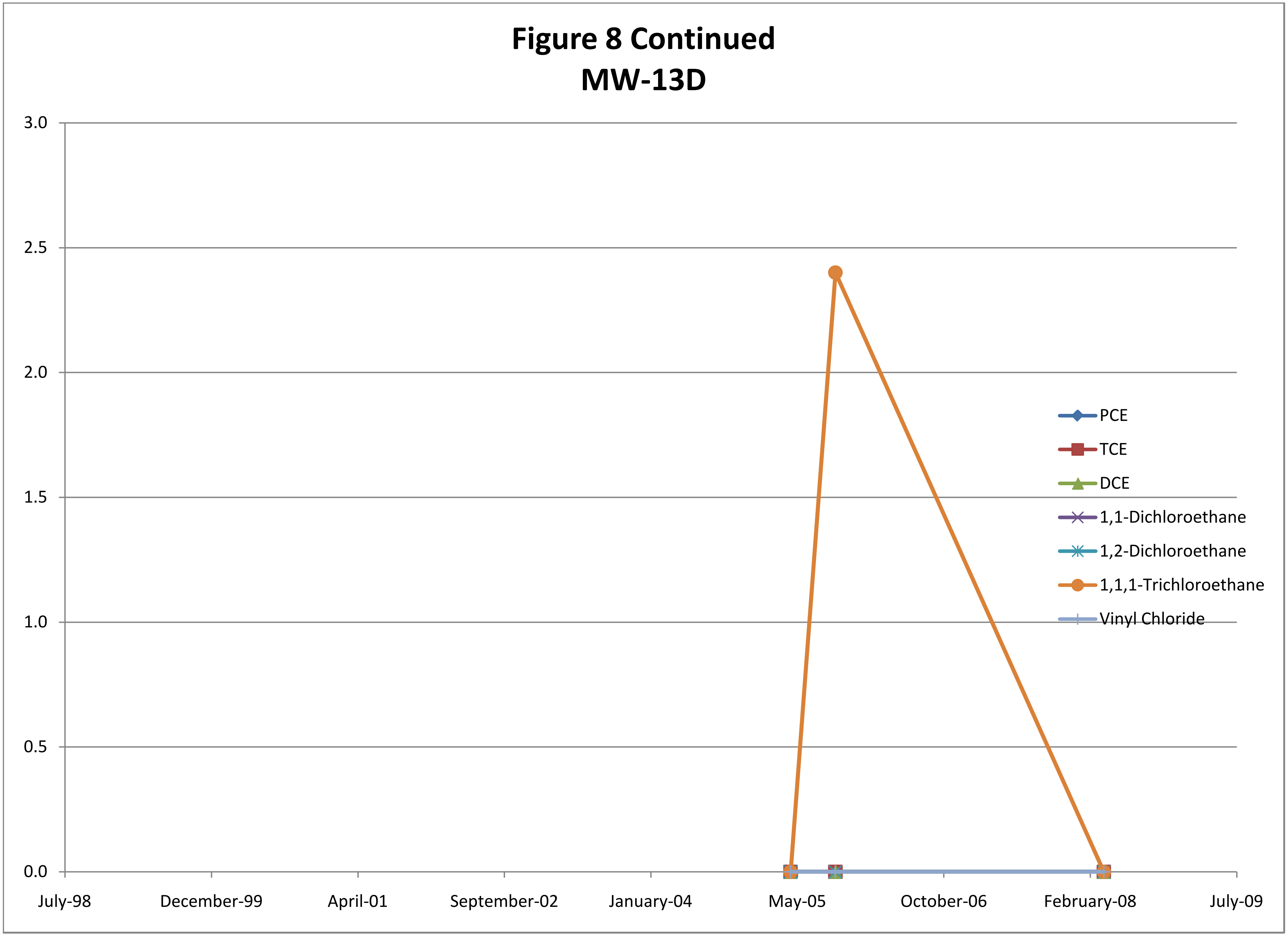


Figure 8 Continued
MW-13D
3.0
2.5
2.0
1.5
1.0
0.5
0.0
July-98
December-99
April-01
September-02
January-04
May-05
October-06
February-08
July-09
PCE
TCE
DCE
1,1-Dichloroethane
1,2-Dichloroethane
1,1,1-Trichloroethane
Vinyl Chloride

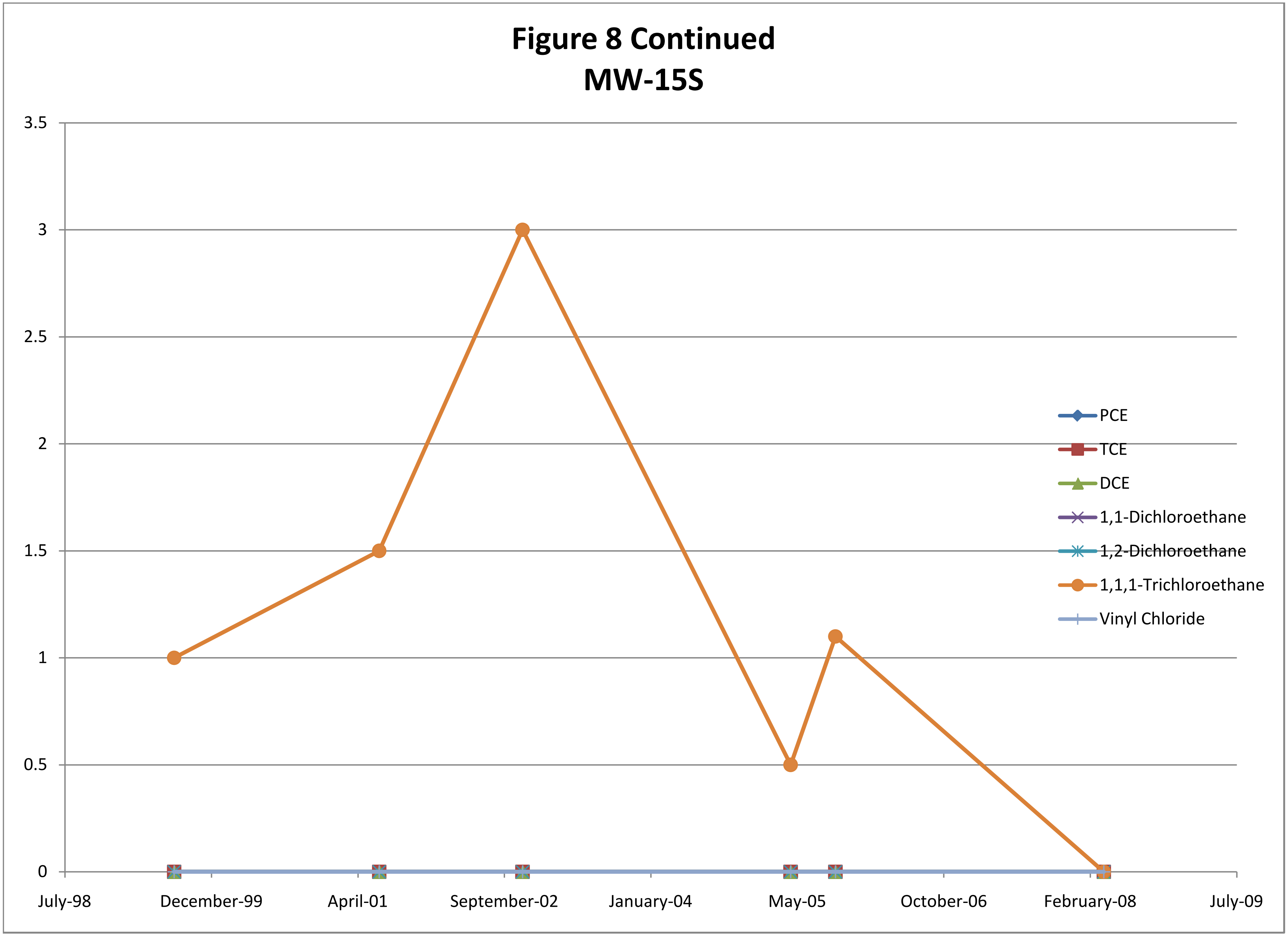


Figure 8 Continued
MW-15S
3.5
3
2.5
2
1.5
1
0.5
0
July-98
December-99
April-01
September-02
January-04
May-05
October-06
February-08
July-09
PCE
TCE
DCE
1,1-Dichloroethane
1,2-Dichloroethane
1,1,1-Trichloroethane
Vinyl Chloride

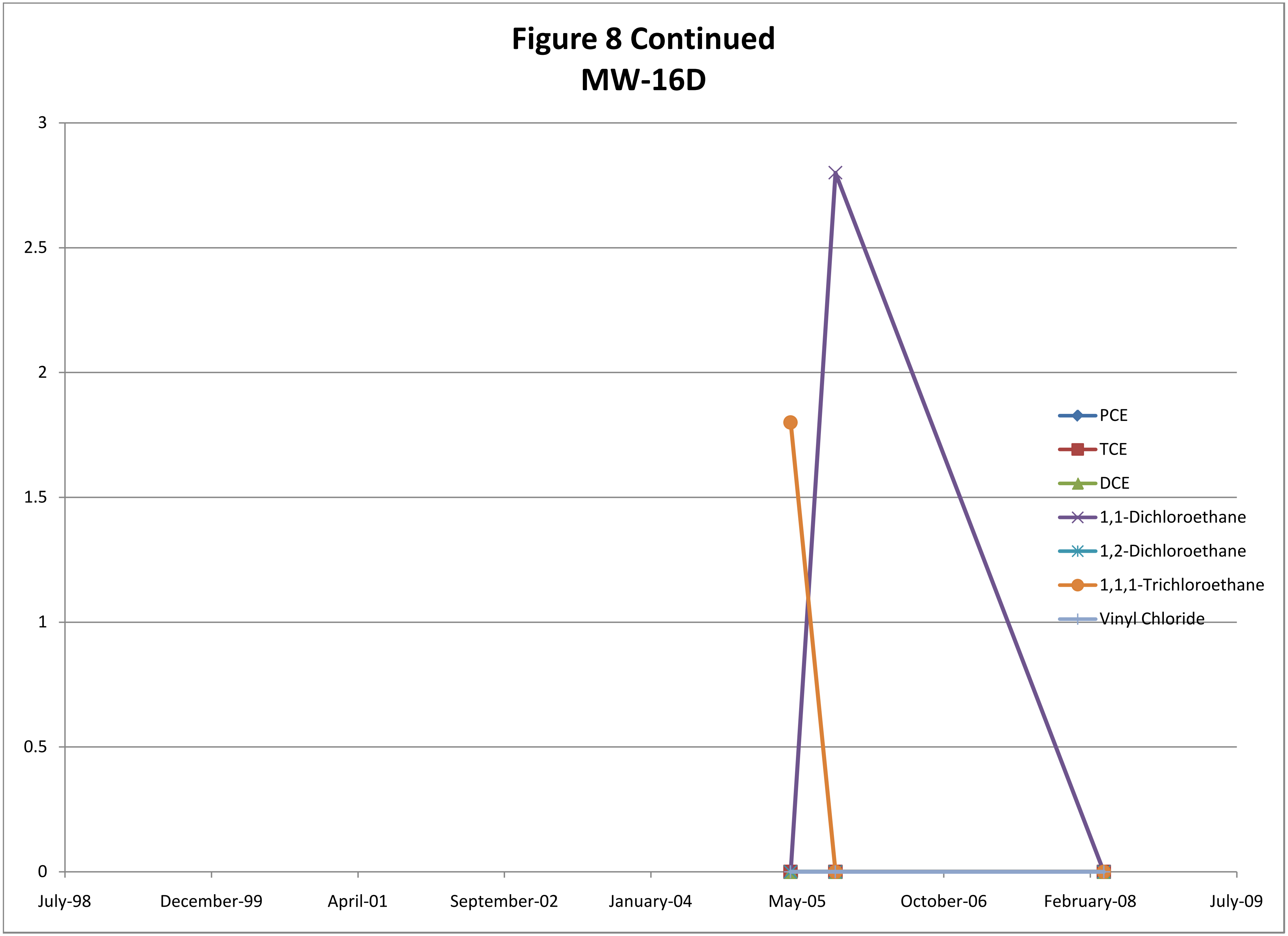


Figure 8 Continued
MW-16D
3
2.5
2
1.5
1
0.5
0
July-98
December-99
April-01
September-02
January-04
May-05
October-06
February-08
July-09
PCE
TCE
DCE
1,1-Dichloroethane
1,2-Dichloroethane
1,1,1-Trichloroethane
Vinyl Chloride

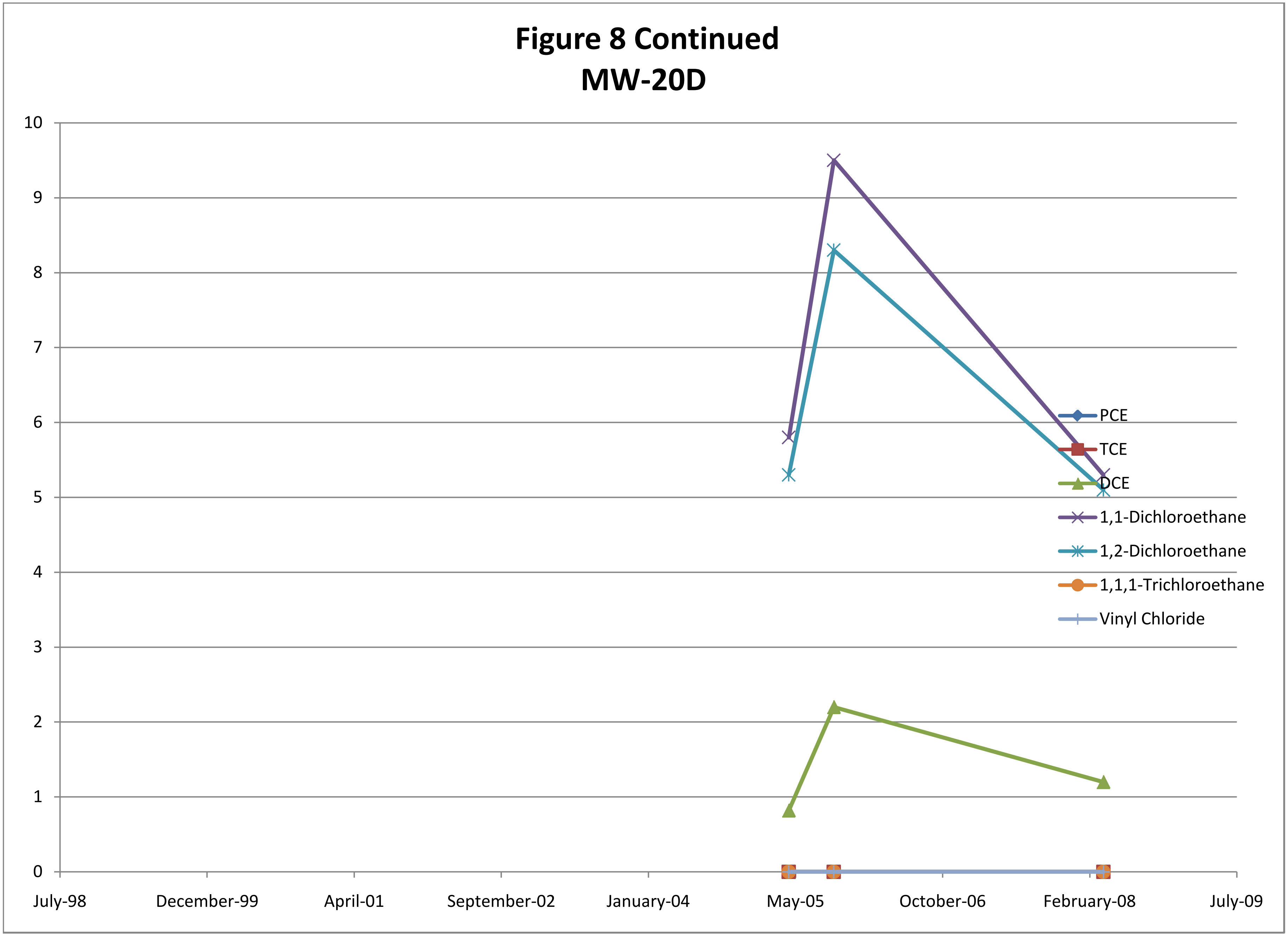
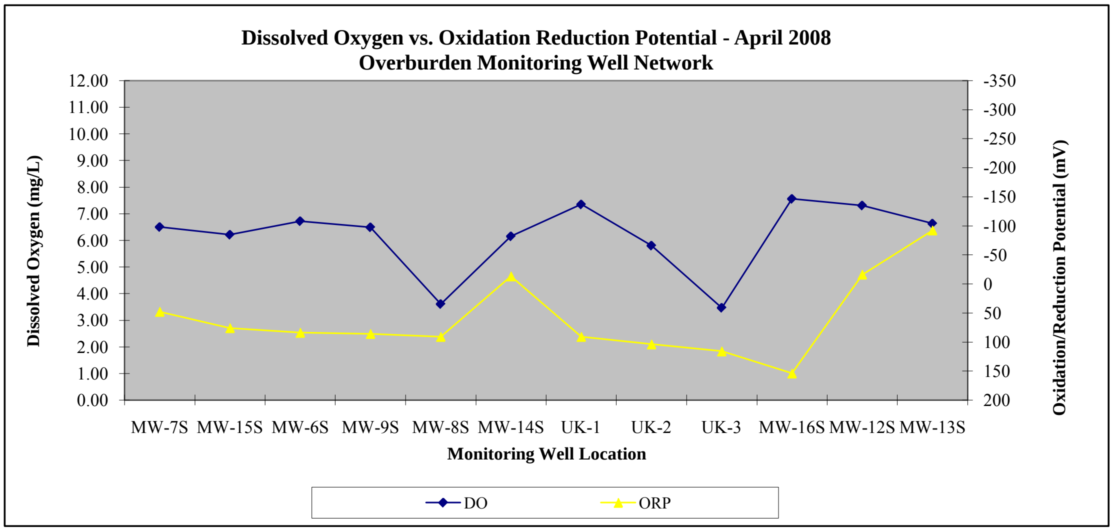
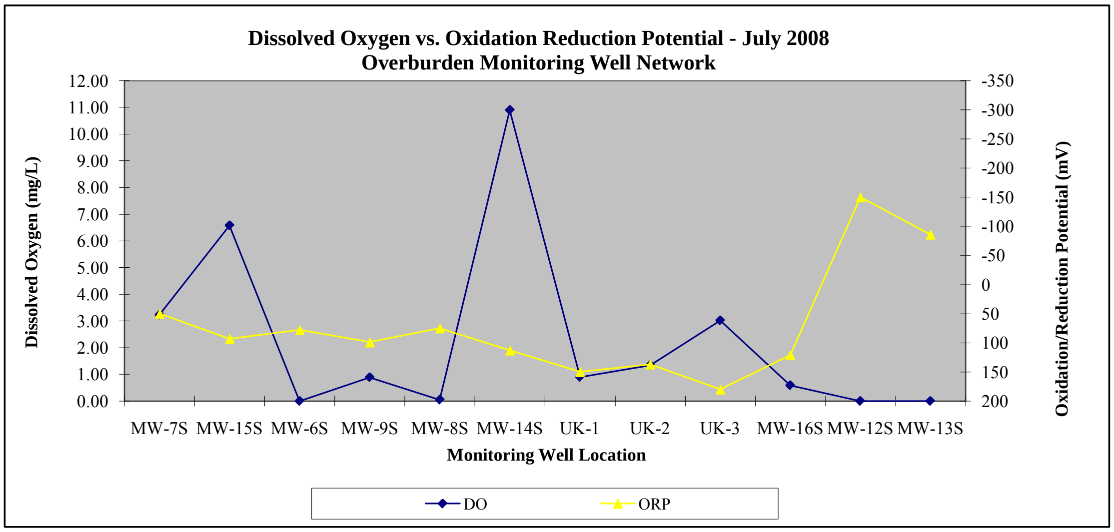
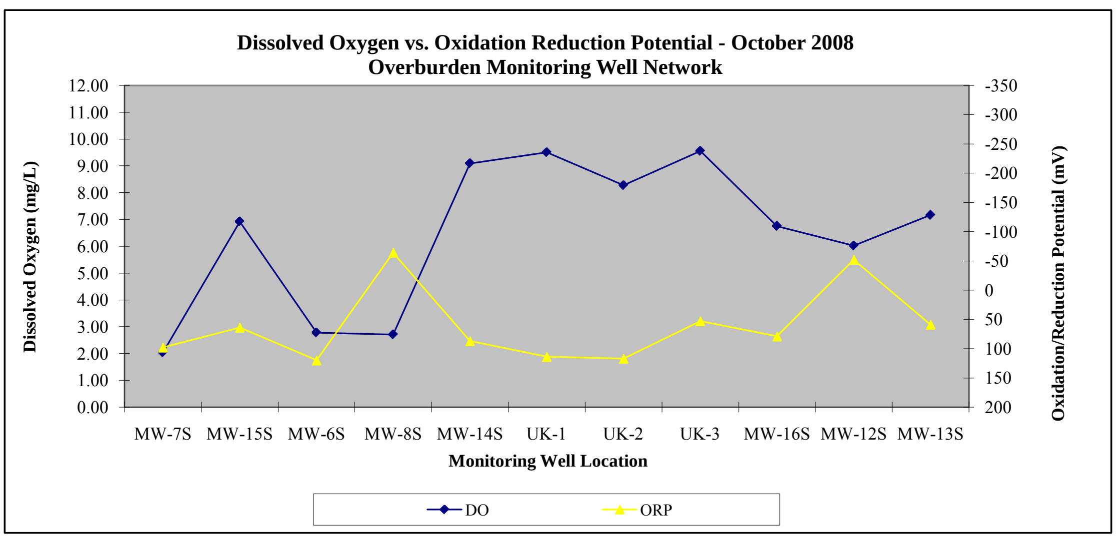
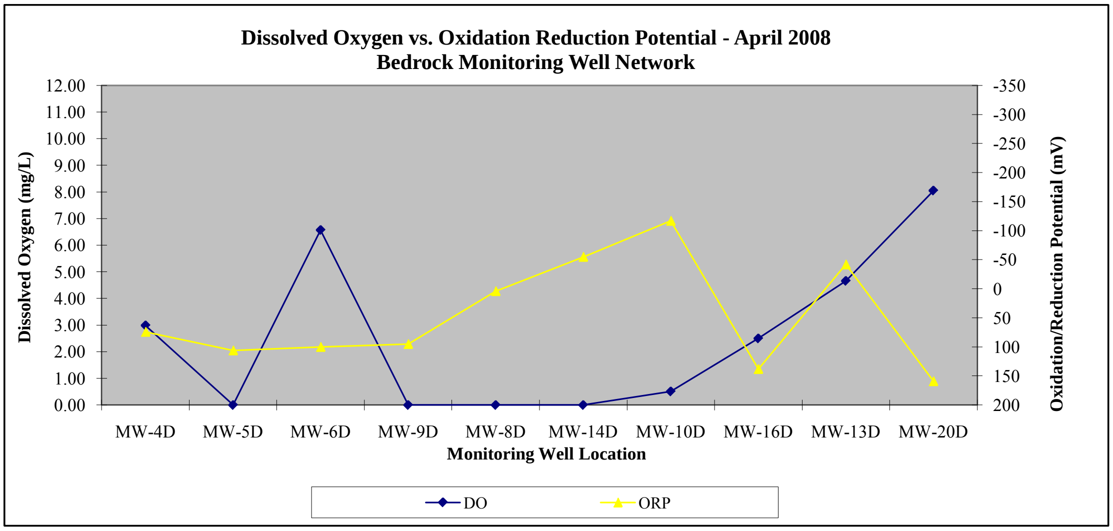


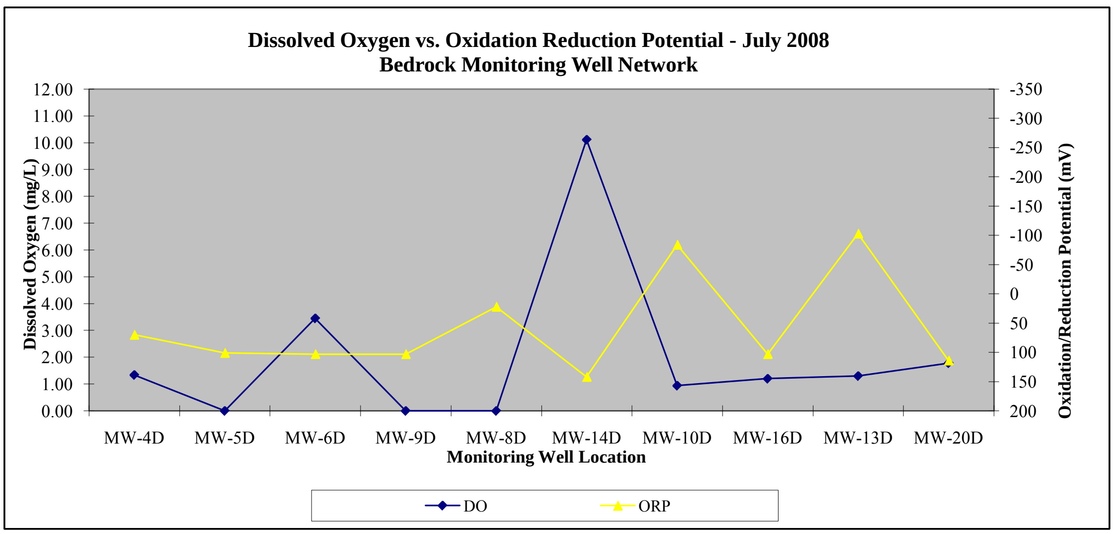
Figure 8 Continued
MW-20D
10
9
8
7
6
5
4
3
2
1
0
July-98
December-99
April-01
September-02
January-04
May-05
October-06
February-08
July-09
PCE
TCE
DCE
1,1-Dichloroethane
1,2-Dichloroethane
1,1,1-Trichloroethane
Vinyl Chloride


Dissolved Oxygen vs. Oxidation Reduction Potential - April 2008
Overburden Monitoring Well Network
Dissolved Oxygen (mg/L)
Oxidation/Reduction Potential (mV)
MW-7S MW-15S MW-6S MW-9S MW-8S MW-14S UK-1 UK-2 UK-3 MW-16S MW-12S MW-13S
Monitoring Well Location
DO
ORP


Dissolved Oxygen vs. Oxidation Reduction Potential - July 2008
Overburden Monitoring Well Network
Dissolved Oxygen (mg/L)
Oxidation/Reduction Potential (mV)
MW-7S MW-15S MW-6S MW-9S MW-8S MW-14S UK-1 UK-2 UK-3 MW-16S MW-12S MW-13S
Monitoring Well Location
DO
ORP


Dissolved Oxygen vs. Oxidation Reduction Potential - October 2008
Overburden Monitoring Well Network
Dissolved Oxygen (mg/L)
Oxidation/Reduction Potential (mV)
MW-7S MW-15S MW-6S MW-8S MW-14S UK-1 UK-2 UK-3 MW-16S MW-12S MW-13S
Monitoring Well Location
DO
ORP


Dissolved Oxygen vs. Oxidation Reduction Potential - April 2008
Bedrock Monitoring Well Network
Dissolved Oxygen (mg/L)
Oxidation/Reduction Potential (mV)
12.00
11.00
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
-350
-300
-250
-200
-150
-100
-50
0
50
100
150
200
MW-4D
MW-5D
MW-6D
MW-9D
MW-8D
MW-14D
MW-10D
MW-16D
MW-13D
MW-20D
Monitoring Well Location
DO
ORP


Dissolved Oxygen vs. Oxidation Reduction Potential - July 2008
Bedrock Monitoring Well Network
Dissolved Oxygen (mg/L)
Oxidation/Reduction Potential (mV)
12.00
11.00
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
-350
-300
-250
-200
-150
-100
-50
0
50
100
150
200
MW-4D
MW-5D
MW-6D
MW-9D
MW-8D
MW-14D
MW-10D
MW-16D
MW-13D
MW-20D
Monitoring Well Location
DO
ORP

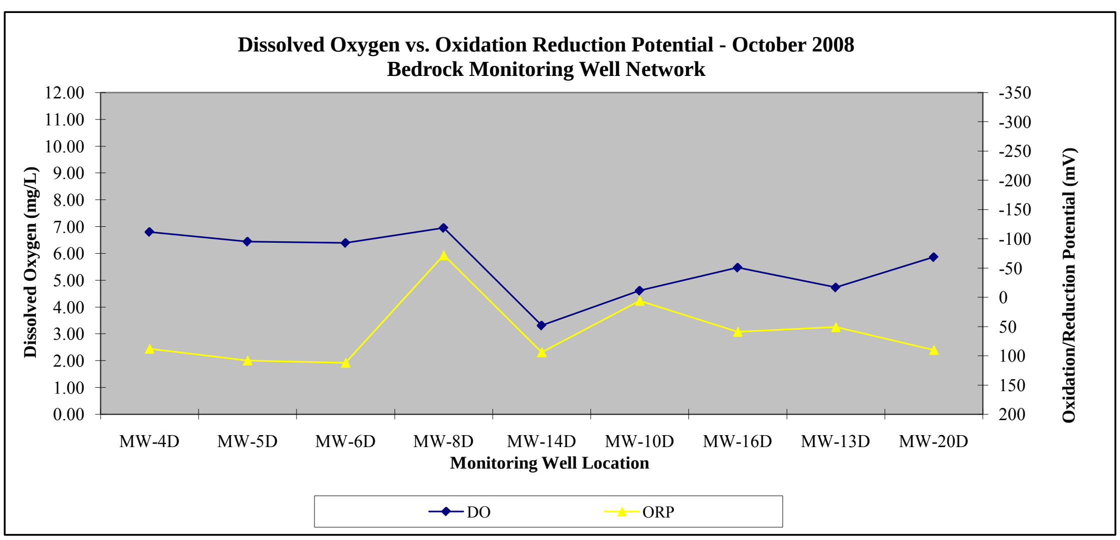

Dissolved Oxygen vs. Oxidation Reduction Potential - October 2008
Bedrock Monitoring Well Network
Dissolved Oxygen (mg/L)
Oxidation/Reduction Potential (mV)
12.00
11.00
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
-350
-300
-250
-200
-150
-100
-50
0
50
100
150
200
MW-4D
MW-5D
MW-6D
MW-8D
MW-14D
MW-10D
MW-16D
MW-13D
MW-20D
Monitoring Well Location
DO
ORP

TABLE 1A GROUNDWATER TABLE GAUGING INFORMATION (APRIL 2008)

Well Number	TOIC Elevation (ft/amsl)	Depth to Water Level (BTOIC , ft)	Groundwater Table Elevation (ft AMSL) 8 April 2008
MW-6S	314.86	12.94	301.92
MW-7S	323.36	13.69	309.67
MW-8S	326.10	33.37	292.73
MW-9S	No TOIC	8.56	- -
MW-12S	322.27	30.36	291.91
MW-13S	311.17	19.21	291.96
MW-14S	324.63	32.34	292.29
MW-15S	309.22	5.69	303.53
MW-16S	320.87	29.11	291.76
MW-4D	326.73	3.20	323.53
MW-5D	325.06	3.50	321.56
MW-6D	314.48	12.62	301.86
MW-8D	326.01	33.24	292.77
MW-9D	310.84	9.07	301.77
MW-10D	321.84	29.91	291.93
MW-11D	327.40	- -	- -
MW-13D	311.46	20.02	291.44
MW-14D	324.74	32.84	291.90
MW-15D	309.87	8.05	301.82
MW-16D	321.2	29.2	292.00
MW-20D	317.05	24.39	292.66
MW-6DD	315.21	12.4	302.81
MW-8DD	325.46	30.8	294.66
MW-13DD	311.85	20.28	291.57
UK-1	327.02	34.67	292.35
UK-2	327.18	34.86	292.32
UK-3	327.51	35.16	292.35

NOTE: TOIC = Top of Inner Casing
BTOIC = Below top of Inner Casing
Monitoring wells were surveyed by EA on 3 June 2008

TABLE 1B GROUNDWATER TABLE GAUGING INFORMATION (JULY 2008)

Well Number	TOIC Elevation (ft/amsl)	Depth to Water Level (BTOIC, ft)	Groundwater Table Elevation (ft AMSL) 16 July 2008
MW-6S	314.86	15.14	299.72
MW-7S	323.36	16.14	307.22
MW-8S	326.10	35.48	290.62
MW-9S	No TOIC	9.14	- -
MW-12S	322.27	33.78	288.49
MW-13S	311.17	20.14	291.03
MW-14S	324.63	35.62	289.01
MW-15S	309.22	6.11	303.11
MW-16S	320.87	32.12	288.75
MW-4D	326.73	3.34	323.39
MW-5D	325.06	3.89	321.17
MW-6D	314.48	14.61	299.87
MW-8D	326.01	34.17	291.84
MW-9D	310.84	9.11	301.73
MW-10D	321.84	30.11	291.73
MW-11D	327.40	- -	- -
MW-13D	311.46	20.71	290.75
MW-14D	324.74	35.47	289.27
MW-15D	309.87	7.41	302.46
MW-16D	321.2	32.59	288.61
MW-20D	317.05	25.92	291.13
MW-6DD	315.21	14.53	300.68
MW-8DD	325.46	33.94	291.52
MW-13DD	311.85	20.98	290.87
UK-1	327.02	37.97	289.05
UK-2	327.18	38.18	289.00
UK-3	327.51	38.5	289.01

TABLE 1C GROUNDWATER TABLE GAUGING INFORMATION (OCTOBER 2008)

Well Number	TOIC Elevation (ft/amsl)	Depth to Water Level (BTOIC, ft)	Groundwater Table Elevation (ft AMSL) 9 October 2008
MW-6S	314.86	17.04	297.82
MW-7S	323.36	23.93	299.43
MW-8S	326.10	36.71	289.39
MW-9S	No TOIC	- -	- -
MW-12S	322.27	33.31	288.96
MW-13S	311.17	22.44	288.73
MW-14S	324.63	35.5	289.13
MW-15S	309.22	11.3	297.92
MW-16S	320.87	32.02	288.85
MW-4D	326.73	7.10	319.63
MW-5D	325.06	5.24	319.82
MW-6D	314.48	16.55	297.93
MW-8D	326.01	34.92	291.09
MW-9D	310.84	- -	- -
MW-10D	321.84	32.97	288.87
MW-11D	327.40	- -	- -
MW-13D	311.46	22.71	288.75
MW-14D	324.74	36.11	288.63
MW-15D	309.87	13.36	296.51
MW-16D	321.2	32.45	288.75
MW-20D	317.05	27.31	289.74
MW-6DD	315.21	14.97	300.24
MW-8DD	325.46	- -	- -
MW-13DD	311.85	22.89	288.96
UK-1	327.02	37.85	289.17
UK-2	327.18	38	289.18
UK-3	327.51	38.32	289.19
NOTE: Could not find 9S and 9D due to overgrowth			

TABLE 2 WELL SURVEY (3 JUNE 2008)

Well ID	Elevation	Rod Height	Reference Elevation	Elevation
MW-10	321.84	8.03	329.87	321.84
UK-1		2.85		327.02
UK-2		2.69		327.18
UK-3		2.36		327.51
MW-11D		2.47		327.40
MW-14S		5.24		324.63
MW-14D		5.13		324.74
MW-12S		7.60		322.27
MW-16S		9.00		320.87
MW-20D		12.82		317.05
MW-13DD		18.02		311.85
MW-16D		8.67		321.20
MW-13DD	311.85	4.49	316.34	311.85
MW-13D		4.88		311.46
MW-13S		5.17		311.17
MW-11D	327.40	0.51	327.91	327.40
PK-1		6.80		321.11
PK-1	321.11	10.91	332.02	321.11
MW-8S		5.92		326.10
MW-8D		6.01		326.01
MW-8DD		6.56		325.46
PK-1	321.11	2.46	323.57	321.11
MW-9D		12.73		310.84
MW-6S		8.71		314.86
MW-6D		9.09		314.48
MW-6DD		8.36		315.21
MW-9D	310.84	4.15	314.99	310.84
MW-15S		5.77		309.22
MW-15D		5.12		309.87
MW-6DD	315.21	9.61	324.82	315.21
MW-7S		1.46		323.36
MW-7S	323.36	6.59	329.95	323.36
MW-4D		3.22		326.73
MW-5D		4.89		325.06
MW-5D	325.06	4.05	329.11	325.06
PK-1		8.02		321.09

TABLE 3 HISTORICAL GROUNDWATER ANALYTICAL RESULTS

MW-1S

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99	ND	ND	5.3 J	**5.3 J**	5.3 J	3.2 J	ND
July-01	NS	NS	NS	NS	NS	NS	NS
November-02	NS	NS	NS	NS	NS	NS	NS
May-05	NS	NS	NS	NS	NS	NS	NS
October-05	NS	NS	NS	NS	NS	NS	NS
April-08	NS	NS	NS	NS	NS	NS	NS

MW-1D

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99	ND	ND	ND	**6.7 J**	**2.6 J**	ND	ND
July-01	NS	NS	NS	NS	NS	NS	NS
November-02	NS	NS	NS	NS	NS	NS	NS
May-05	NS	NS	NS	NS	NS	NS	NS
October-05	NS	NS	NS	NS	NS	NS	NS
April-08	NS	NS	NS	NS	NS	NS	NS

MW-1DD

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99							
July-01	NS	NS	NS	NS	NS	NS	NS
November-02	NS	NS	NS	NS	NS	NS	NS
May-05	NS	NS	NS	NS	NS	NS	NS
October-05	NS	NS	NS	NS	NS	NS	NS
April-08	NS	NS	NS	NS	NS	NS	NS

MW-2S

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99	4.5 J	4.6 J	ND	**11**	ND	1.1 J	1.3 J
July-01	NS	NS	NS	NS	NS	NS	NS
November-02	NS	NS	NS	NS	NS	NS	NS
May-05	4.8 J	**5.8**	2.1 J	3. 9 J	ND	2.5 J	ND
October-05	ND	ND	2.9 J	**12**	ND	**13**	ND
April-08	NS	NS	NS	NS	NS	NS	NS

MW-4D

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99							
July-01	ND	ND	ND	ND	ND	ND	ND
November-02	NS						
May-05	ND	ND	ND	ND	ND	ND	ND
October-05	ND	ND	ND	ND	ND	ND	ND
April-08	ND	ND	ND	ND	ND	ND	ND

MW-5D

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99							
July-01	NS	NS	NS	NS	NS	NS	NS
November-02	NS	NS	NS	NS	NS	NS	NS
May-05	ND	ND	ND	ND	ND	ND	ND
October-05	ND	ND	ND	ND	ND	ND	ND
April-08	ND	ND	ND	ND	ND	ND	ND

MW-6S

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99	1.7 J	1.2 J	ND	2 J	ND	ND	ND
July-01	2.3 J	2.6 J	ND	2.5 J	ND	ND	ND
November-02	ND	ND	ND	ND	ND	ND	ND
May-05	2.5	2.6	1.6	2.8	ND	1.9	ND
October-05	2.6	2.7	0.6 J	0.9 J	ND	0.8 J	ND
April-08	3.2 J	4.2 J	ND	ND	ND	ND	ND

MW-6D

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99	ND	ND	ND	2 J	ND	ND	ND
July-01	ND	ND	ND	**4.2 J**	**1.6 J**	ND	ND
November-02	ND	ND	ND	ND	ND	ND	ND
May-05	ND	ND	ND	0.8 J	ND	ND	ND
October-05	ND	ND	ND	2.1	ND	ND	ND
April-08	ND	ND	ND	ND	ND	ND	ND

MW-6DD

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99							
July-01	NS	NS	NS	NS	NS	NS	NS
November-02	ND	ND	ND	ND	ND	ND	ND
May-05	ND	ND	ND	ND	ND	ND	ND
October-05	ND	ND	ND	ND	ND	ND	ND
April-08	ND	ND	ND	ND	ND	ND	ND

MW-7S

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99	ND	ND	ND	ND	ND	**12**	ND
July-01	ND	ND	ND	**1.6 J**	ND	**14**	ND
November-02	ND	ND	ND	ND	ND	**13**	ND
May-05	ND	ND	ND	**1.4 J**	ND	**12**	ND
October-05	ND	ND	ND	ND	ND	ND	ND
April-08	ND	ND	ND	ND	ND	**7.5**	ND

MW-7D

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99							
July-01	ND	ND	ND	ND	ND	ND	ND
November-02	ND	ND	ND	ND	ND	ND	ND
May-05	ND	ND	ND	ND	ND	ND	ND
October-05	ND	ND	ND	ND	ND	ND	ND
April-08	NS	NS	NS	NS	NS	NS	NS

MW-8S

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99	1.2 J	ND	ND	**6.5 J**	ND	3.6 J	ND
July-01	NS	NS	NS	NS	NS	NS	NS
November-02	ND	ND	ND	ND	ND	ND	ND
May-05	1	0.3 J	0.6	2.3	ND	2.5	ND
October-05	1	0.2 J	0.7 J	2.4	ND	2.5	ND
April-08	ND	ND	ND	ND	ND	ND	ND

MW-8D

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99	ND	ND	ND	1.7 J	ND	2.1 J	ND
July-01	ND	ND	ND	1.3 J	ND	1.6 J	ND
November-02	ND	ND	ND	ND	ND	ND	ND
May-05	ND	ND	ND	1.4	ND	1	ND
October-05	ND	ND	ND	1.2	ND	0.7 J	ND
April-08	ND	ND	ND	ND	ND	ND	ND

MW-8DD

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99							
July-01	ND	ND	ND	ND	ND	ND	ND
November-02	ND	ND	ND	ND	ND	ND	ND
May-05	ND	ND	ND	ND	ND	ND	ND
October-05	0.2 J	ND	ND	0.4 J	ND	0.7 J	ND
April-08	NS	NS	NS	NS	NS	NS	NS

MW-9S

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99	2.4 J	2.7 J	ND	1.5 J	ND	3.3 J	ND
July-01	NS	NS	NS	NS	NS	NS	NS
November-02	ND	2 J	ND	ND	ND	3 J	ND
May-05	1.3	1.8	ND	ND	ND	1.5 J	ND
October-05	2.4	3.4	ND	ND	ND	2.2	ND
April-08	ND	ND	ND	ND	ND	ND	ND

MW-9D

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99	2 J	1.1 J	ND	**10**	**1.4 J**	2 J	**2.4 J**
July-01	2.4 J	2 J	ND	**8.5**	**1.2 J**	1.6 J	**2 J**
November-02	ND	ND	ND	**10**	ND	3 J	ND
May-05	2.5 J	ND	0.94 J	**6.6**	**1.1 J**	2.7 J	ND
October-05	ND	ND	ND	3.3 J	ND	**16**	ND
April-08	ND	ND	ND	4.1	ND	ND	ND

MW-10D

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99	ND	ND	ND	3.2 J	ND	4.8 J	ND
July-01	ND	ND	ND	4 J	ND	**6.9**	ND
November-02	ND	ND	ND	ND	ND	4 JB	ND
May-05	ND	ND	ND	2.1	ND	ND	ND
October-05	0.9 J	ND	ND	**5.4**	ND	ND	ND
April-08	ND	ND	ND	3.5	ND	ND	ND

MW-11D

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99							
July-01	NS	NS	NS	NS	NS	NS	NS
November-02	NS	NS	NS	NS	NS	NS	NS
May-05	ND	ND	ND	ND	ND	ND	ND
October-05	ND	ND	ND	ND	ND	ND	ND
April-08	NS	NS	NS	NS	NS	NS	NS

MW-12S

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99	ND	ND	ND	**12**	ND	**11**	ND
July-01	ND	ND	ND	**12**	ND	**13**	ND
November-02	ND	ND	ND	**9 JB**	ND	**9 JB**	ND
May-05	ND	ND	1 J	3.7 J	ND	**5**	ND
October-05	ND	1.9 J	1.8 J	**10**	ND	4.2 J	ND
April-08	ND	ND	2.8 J	ND	ND	ND	ND

MW-13S

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99							
July-01	NS	NS	NS	NS	NS	NS	NS
November-02	NS	NS	NS	NS	NS	NS	NS
May-05	ND	ND	ND	1.4 J	1.7 J	ND	ND
October-05	ND	ND	ND	4.1 J	7	ND	ND
April-08	ND	ND	ND	2.2	ND	ND	ND

MW-13D

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99							
July-01	NS	NS	NS	NS	NS	NS	NS
November-02	NS	NS	NS	NS	NS	NS	NS
May-05	ND	ND	ND	ND	ND	ND	ND
October-05	ND	ND	ND	ND	ND	2.4 J	ND
April-08	ND	ND	ND	ND	ND	ND	ND

MW-13DD

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99							
July-01	NS	NS	NS	NS	NS	NS	NS
November-02	NS	NS	NS	NS	NS	NS	NS
May-05	ND	ND	ND	ND	ND	ND	ND
October-05	ND	ND	ND	ND	ND	ND	ND
April-08	ND	ND	ND	ND	ND	ND	ND

MW-14S

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99							
July-01	ND	ND	ND	ND	ND	ND	ND
November-02	ND	ND	ND	ND	ND	ND	ND
May-05	ND	ND	ND	ND	ND	ND	ND
October-05	ND	ND	ND	ND	ND	ND	ND
April-08	ND	ND	ND	ND	ND	ND	ND

MW-14D

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99							
July-01	ND	ND	ND	ND	ND	ND	ND
November-02	ND	ND	ND	ND	ND	ND	ND
May-05	ND	ND	ND	ND	ND	ND	ND
October-05	ND	ND	ND	ND	ND	ND	ND
April-08	ND	ND	ND	ND	ND	ND	ND

MW-15S

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99	ND	ND	ND	ND	ND	1 J	ND
July-01	ND	ND	ND	ND	ND	1.5 J	ND
November-02	ND	ND	ND	ND	ND	3 J	ND
May-05	ND	ND	ND	ND	ND	0.5 J	ND
October-05	ND	ND	ND	ND	ND	1.1	ND
April-08	ND	ND	ND	ND	ND	ND	ND

MW-15D

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99							
July-01	ND	ND	ND	ND	ND	ND	ND
November-02	ND	ND	ND	ND	ND	ND	ND
May-05	ND	ND	ND	ND	ND	ND	ND
October-05	ND	ND	ND	ND	ND	ND	ND
April-08	ND	ND	ND	ND	ND	ND	ND

MW-16S

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99							
July-01	NS	NS	NS	NS	NS	NS	NS
November-02	NS	NS	NS	NS	NS	NS	NS
May-05	ND	ND	ND	2.1 J	ND	1.3 J	ND
October-05	ND	ND	1.9 J	**5.5**	ND	**5.4**	ND
April-08	ND	ND	ND	ND	ND	ND	ND

MW-16D

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99							
July-01	NS	NS	NS	NS	NS	NS	NS
November-02	NS	NS	NS	NS	NS	NS	NS
May-05	ND	ND	ND	ND	ND	1.8 J	ND
October-05	ND	ND	ND	2.8 J	ND	ND	ND
April-08	ND	ND	ND	ND	ND	ND	ND

MW-20D

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99							
July-01	NS	NS	NS	NS	NS	NS	NS
November-02	NS	NS	NS	NS	NS	NS	NS
May-05	ND	ND	0.82 J	**5.8**	**5.3**	ND	ND
October-05	ND	ND	2.2 J	**9.5**	**8.3**	ND	ND
April-08	ND	ND	1.2 J	**5.3**	5.1	ND	ND

MW-21

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99							
July-01	NS	NS	NS	NS	NS	NS	NS
November-02	NS	NS	NS	NS	NS	NS	NS
May-05	ND	ND	ND	ND	ND	ND	ND
October-05	ND	ND	ND	ND	ND	ND	ND
April-08	NS	NS	NS	NS	NS	NS	NS

UK-01

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99	NS	NS	NS	NS	NS	NS	NS
July-01	NS	NS	NS	NS	NS	NS	NS
November-02	NS	NS	NS	NS	NS	NS	NS
May-05	NS	NS	NS	NS	NS	NS	NS
October-05	NS	NS	NS	NS	NS	NS	NS
April-08	ND	ND	ND	4	ND	ND	ND

UK-02

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99	NS	NS	NS	NS	NS	NS	NS
July-01	NS	NS	NS	NS	NS	NS	NS
November-02	NS	NS	NS	NS	NS	NS	NS
May-05	NS	NS	NS	NS	NS	NS	NS
October-05	NS	NS	NS	NS	NS	NS	NS
April-08	ND	ND	ND	**5.3**	ND	ND	ND

UK-03

DATE	PCE	TCE	DCE	1,1-Dichloroethane	1,2-Dichloroethane	1,1,1-Trichloroethane	Vinyl Chloride
August-99	NS	NS	NS	NS	NS	NS	NS
July-01	NS	NS	NS	NS	NS	NS	NS
November-02	NS	NS	NS	NS	NS	NS	NS
May-05	NS	NS	NS	NS	NS	NS	NS
October-05	NS	NS	NS	NS	NS	NS	NS
April-08	ND	ND	ND	**4.5**	ND	ND	ND

NOTE:
- TCE = Tetrachloroethene
- PCE = Trichloroethene
- DCE = cis 1,2-dichloroethene
- J = Analyte detected below the sample reporting limit.
- B = Analyte detected in the associated method blank.
- ND = The analyte was analyzed for, but was not detected above the sample reporting limit.
- NS = 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 .

TABLE 4A SUMMARY OF DISSOLVED OXYGEN AND OXIDATION/REDUCTION POTENTIAL READINGS SHALLOW GROUNDWATER

April 2008		
Monitoring Well ID	Dissolved Oxygen (mg/L)	Oxidation/Reduction Potential (mV)
MW-7S	6.50	48
MW-15S	6.21	76
MW-6S	6.72	84
MW-9S	6.49	86
MW-8S	3.60	91
MW-14S	6.15	-13
UK-1	7.35	91
UK-2	5.80	104
UK-3	3.46	116
MW-16S	7.56	154
MW-12S	7.31	-16
MW-13S	6.63	-92
July 2008		
Monitoring Well ID	Dissolved Oxygen (mg/L)	Oxidation/Reduction Potential (mV)
MW-7S	3.23	50
MW-15S	6.58	93
MW-6S	0.00	78
MW-9S	0.89	99
MW-8S	0.05	75
MW-14S	10.90	113
UK-1	0.90	150
UK-2	1.34	137
UK-3	3.02	180
MW-16S	0.59	121
MW-12S	0.00	-150
MW-13S	0.00	-86
October 2008		
Monitoring Well ID	Dissolved Oxygen (mg/L)	Oxidation/Reduction Potential (mV)
MW-7S	2.04	98
MW-15S	6.92	64
MW-6S	2.78	120
MW-8S	2.71	-64
MW-14S	9.09	87
UK-1	9.50	114
UK-2	8.27	117
UK-3	9.55	53
MW-16S	6.75	79
MW-12S	6.02	-52
MW-13S	7.16	59

NOTE: mg/L = Milligrams per liter.
mV = Millivolts.

TABLE 4B SUMMARY OF DISSOLVED OXYGEN AND OXIDATION/REDUCTION POTENTIAL READINGS SHALLOW GROUNDWATER

April 2008		
Monitoring Well ID	Dissolved Oxygen (mg/L)	Oxidation/Reduction Potential (mV)
MW-4D	2.99	74
MW-5D	0.00	106
MW-6D	6.57	100
MW-9D	0.00	95
MW-8D	0.00	4
MW-14D	0.00	-55
MW-10D	0.51	-117
MW-16D	2.50	138
MW-13D	4.66	-42
MW-20D	8.05	159
July 2008		
Monitoring Well ID	Dissolved Oxygen (mg/L)	Oxidation/Reduction Potential (mV)
MW-4D	1.34	70
MW-5D	0.00	101
MW-6D	3.45	103
MW-9D	0.00	103
MW-8D	0.00	22
MW-14D	10.11	142
MW-10D	0.94	-84
MW-16D	1.20	103
MW-13D	1.30	-103
MW-20D	1.78	114
October 2008		
Monitoring Well ID	Dissolved Oxygen (mg/L)	Oxidation/Reduction Potential (mV)
MW-4D	6.80	88
MW-5D	6.44	108
MW-6D	6.39	112
MW-8D	6.95	-72
MW-14D	3.31	94
MW-10D	4.61	6
MW-16D	5.47	59
MW-13D	4.73	51
MW-20D	5.86	90

NOTE: mg/L = Milligrams per liter.
mV = Millivolts.