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THE MEMPHIS DEPOT
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ADMINISTRATIVE RECORD
COVER SHEET

AR File Number 970

File:
M.D. 541.460.000.9

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e²M
Solutions Today for a Sustainable Tomorrow

Memorandum

To: Brian Renaghan, CIV AFCEE/EXA
Mike Dobbs, DES-DDC-EE

From: John Sperry
Steven Herrera
Tom Holmes

Date: 9 December 2008

Re: **October 2008 Semiannual Monitoring Report**
Dunn Field – Groundwater IRA, Year 10
Defense Depot Memphis, Tennessee
FA8903-04-D-8722-0043

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engineering-environmental Management, Inc. (e^2M) has prepared this report to present the results of the October 2008 Interim Remedial Action (IRA) semiannual monitoring event on Dunn Field at the Defense Depot Memphis, Tennessee (DDMT). This work was performed for the Defense Logistics Agency under Contract FA89031-04-D-8722, Task Order 0043 to the Air Force Center for Engineering and the Environment (AFCEE).

This report is limited to results from the semiannual monitoring of groundwater and the system discharge. IRA groundwater recovery system (GWRS) operations are described in the monthly discharge reports.

Nine volatile organic compounds (VOCs) have been persistently detected in the fluvial aquifer during past sampling events: carbon tetrachloride (CT); chloroform (CF); 1,1-dichloroethene (DCE); cis-1,2-dichloroethene (cDCE); trans-1,2-dichloroethene (tDCE); 1,1,2-trichlorothane (TCA); trichloroethene (TCE); tetrachloroethene (PCE); and 1,1,2,2-tetrachlorothane (TeCA). Historically, three primary VOC plumes have been observed at Dunn Field: a northern plume, a west-northwest plume (central) plume, and west-southwest (southern) plume. Mixing and intermingling of the plumes has occurred due to the active groundwater extraction system and natural groundwater gradient; the plumes merge west of Dunn Field.

The IRA Record of Decision (ROD) for groundwater at Dunn Field was signed in April 1996 with the objectives of hydraulic containment to: (1) prevent further contaminant plume migration; and (2) reduce contaminant mass in groundwater. The GWRS was installed in two phases between 1998 and 2001 and consists of 11 fluvial screened recovery wells (RWs) located along the western boundary of Dunn Field.

The initial *Five Year Review for Dunn Field* (CH2M HILL, 2003) concluded the IRA system did not adequately control groundwater flow and plume migration, as an increase in chlorinated CVOC concentrations was observed in monitoring wells west of Dunn

Field. It was concluded that capture zones of the RWs were not continuous between the wells. The review stated that monitoring data from the IRA and the remedial investigation suggested that aquifer restoration could be accomplished more effectively by other technologies. Fully protective remedies for all media were selected in the *Dunn Field Record of Decision* (CH2M HILL, 2004). The *Second Five-Year Review* (e^2M, 2008) completed in January 2008 did not alter the findings relative to the IRA.

Implementation of the selected remedies on Dunn Field has begun: excavation, transportation, and offsite disposal (ET&D) of disposal sites was completed in March 2006; the fluvial soil vapor extraction (SVE) system began operation in July 2007; and the thermal-enhanced SVE (TSVE) system in the Loess began operation in May 2008. TSVE operations were completed in December 2008 after soil sample results confirmed attainment of remediation goals (RGs). Fluvial SVE operations are expected to continue until 2012.

Groundwater sample results from the April 2008 IRA semiannual monitoring event (e^2M, 2008) demonstrated that fluvial SVE operations were having a significant impact in reducing CVOC concentrations in groundwater. CVOC concentrations in recovery wells and monitoring wells at the north end of Dunn Field did not exceed 50 µg/L for any single CVOC; this concentration limit is the goal for the Source Areas groundwater remedy, with further reduction to MCLs to be achieved by the Off Depot remedy. Operation of recovery wells RW-5 through RW-9 was discontinued on 9 June 2008 following approval of the BRAC Cleanup Team (BCT).

FIELD ACTIVITIES

The field activities consisted of water level measurements in the recovery wells and in groundwater monitoring wells in the Dunn Field area, sampling and analysis of groundwater from selected monitoring and recovery wells, and sampling and analysis of effluent from the main discharge for the GWRS. The number of monitoring wells to be included in the IRA semiannual sampling events for 2008 was increased from 50 to 84 as recommended in the *Annual Operations Report-2007, Dunn Field Groundwater Interim Remedial Action-Year Nine* (e^2M, 2008) and approved at the BCT meeting on 3 April 2008. Figure 1 shows the locations of the monitoring wells and recovery wells at Dunn Field.

Groundwater samples were collected from monitoring wells using passive diffusion bags for wells included in previous IRA sampling events and low-flow sampling with bladder pumps for the added wells. The activities were performed in accordance with the *Remedial Action Sampling and Analysis Plan* (RA SAP) (MACTEC, 2004) and the *User's Guide for Polyethylene-based Passive Diffusion Bag Samplers to Obtain Volatile Organic Compound Concentrations in Wells* (U.S. Geological Survey, 2001). The wells included in the monitoring program are listed in Table 1.

Water Level Measurements

Groundwater levels were measured at 133 monitoring wells, one piezometer, and 11 recovery wells on 14 October 2008. At monitoring wells, recovery wells, and the piezometer, measurements were made using Solinist Model 101 water level meters with electronic sensors and tapes graduated in 0.01-foot increments. Recovery wells RW-1 through RW-4 were in operation, while RW-5 through RW-9 remained offline during the water level measurement event. Measurements were not made in five of the planned monitoring wells: MW-5, MW-144, and MW-233 were dry; MW-51 was covered by

debris and was inaccessible; and MW-176 was omitted due to field oversight. The water level measurements are shown on Table 2.

Groundwater Sampling

Groundwater samples are collected from monitoring wells to evaluate system effectiveness in restricting plume migration. Groundwater samples are collected from recovery wells (RWs) for comparison to monitoring well sample results and for evaluation of GWRS effectiveness in reducing contaminant mass.

e^2M collected groundwater samples from 81 of 84 designated monitoring wells and from all 11 recovery wells on 17 to 22 October 2008. Two monitoring wells (MW-144 and MW-233) were dry at the time of sampling and one monitoring well (MW-175) appears to have been damaged (melted) due to heat from the TSVE system. The groundwater samples were sent to Microbac Laboratories for VOC analysis by USEPA Method SW8260B.

Monitoring Wells - Passive Diffusion Bag Sampling

Samples were collected using passive diffusion bag (PDBs) in 50 of 51 designated wells on 17 to 22 October 2008. A sample was not collected from the PDB in MW-144 because the well was dry.

The use of dual PDBs in select monitoring wells was discontinued following the April 2008 semiannual event, as agreed at the April 2008 BCT meeting. Dual PDB samples were used to evaluate variations in concentrations over the screened aquifer thickness, but the limited variation observed did not warrant continued monitoring. Following the April 2008 event, all dual PDBs were replaced by a single PDB. PDB depths were checked during an inspection on 1 September 2008 to ensure that each PDB was placed near the center of the saturated portion of the well screen. Two PDBs were moved during the inspection; the PDB in MW-169 was moved down 1 foot and the PDB in MW-77 was lowered 6.8 feet. PDB sample depths are shown on Table 3.

Upon removal from each monitoring well, a sample of water from the PDB was transferred to 40-milliliter vials preserved with hydrochloric acid. Following sample collection, a single, new PDB was filled with deionized water and were placed in each well in the middle of each well screen.

Monitoring Wells - Low Flow Sampling

Groundwater samples were collected from 31 of 33 monitoring wells on 17 to 22 October 2008 using bladder pumps and low-flow purging methods. MW-233 was dry at the time of sampling and MW-175 could not be sampled due to damage from TSVE heaters. Dedicated Teflon® bladders and Teflon®-lined polyethylene tubing were used at each of these wells.

Water quality parameters were measured at approximately 5 to 10 minute intervals during purging using a flow-through cell with either a Horiba U-22XD or an YSI 6500 Series. The units were calibrated daily prior to sampling. If necessary, the instruments were recalibrated in the field. All measurements were recorded on the field sampling forms.

Purging continued at each well for up to two hours in order to meet the stabilization criteria: three successive readings within 0.1 for pH, 10 millivolts for oxygen reduction potential (ORP), 3 percent for specific conductance, 10 percent for dissolved oxygen (DO) and less than 20 nephelometric turbidity units (NTU) for turbidity. Temperatures

was also measured and recorded, but was not used as a stabilization parameter. Samples were collected when stabilization criteria were met or the field team leader approved the variance from the criteria. Upon completion of purging at each monitoring well, water samples were transferred to 40-milliliter vials preserved with hydrochloric acid.

The final stabilization measurements are shown on Table 4. The following samples were collected without meeting the stabilization criteria:

- Sample collected from MW-235 had a turbidity reading of 21 NTUs following purging for two hours.

Recovery Wells

Groundwater samples were collected from all 11 recovery wells on 17 October. The off-line RWs (RW-5 through RW-9) were started the previous day and run overnight. All RWs were shut down one hour prior to sample collection to prevent the pump from cycling during sampling. Each pump was re-started and run for a few minutes prior to sample collection and then was shut down after sampling. Samples were collected from the sample port on the recovery wellheads. The valve was slowly opened and the extracted groundwater was allowed to slowly fill 40-milliliter vials preserved with hydrochloric acid. After sampling was completed, RW-1 though RW-4 were re-started; RW-5 though RW-9 remain offline.

Effluent Sampling

Effluent samples are collected to comply with the discharge permit requirements and to estimate contaminant mass removal. The effluent sample was collected on 17 October 2008 from the GWRS at the discharge loop located adjacent to Person Avenue at the north property line of Dunn Field. The effluent sample was collected after the RW samples, with only RW-1 through RW-4 on-line. The valve on the sample port was slowly opened and the system discharge allowed to slowly fill the required sample containers. The effluent sample was sent to Microbac Laboratories for VOC analysis by USEPA Method SW8260B, semivolatile organic compounds (SVOCs) by EPA Method 8270C; metals by EPA Method SW6010B; and pH by EPA Method 150.1.

Quality Assurance/Quality Control Samples

Field and laboratory quality assurance (QA)/quality control (QC) samples were collected during the sampling event. QC samples consisted of duplicates and matrix spike and matrix spike duplicates (MS/MSD). Trip blanks were included in coolers delivered from the laboratory. One duplicate was collected for approximately every 10 samples (10%) and one MS/MSD was collected for every 20 samples (5%). Laboratory QA/QC sampled included surrogate spikes, method blanks, and laboratory control samples, in addition to MS/MSD analysis. The sampling and analytical methods are described in the RA SAP.

Documentation was competed in the field to ensure that the samples collected, labels, chain-of custody, and request for analysis were in agreement. Custody seals were placed on each cooler before shipment by common carrier. Samples were typically shipped the day collected for overnight delivery to the laboratory.

IDW Management

The waste generated during groundwater sampling was classified as either non-investigative waste or IDW. Non-investigative waste, such as packaging materials, personal protective equipment, disposable sampling supplies, and other inert refuse, was collected, containerized, and transported to a designated collection bin for disposal at a municipal landfill.

Groundwater from purging activities was collected and placed in the TSVE condensate holding tank, pumped through bag filters and activated carbon, and discharged to the sanitary sewer for the City of Memphis.

SUMMARY OF MONITORING RESULTS

Water Level Measurements

Water level measurements collected on 14 October 2008 are shown with resulting groundwater elevations on Table 2. Groundwater elevations in the fluvial aquifer are highest northeast of Dunn Field and generally decrease to the southwest. Groundwater levels in fluvial aquifer wells were approximately one to three feet higher in October 2008 compared to measurements in April 2008. Water levels in intermediate aquifer wells have been more variable; the water levels in October 2008 were 2 to 11 feet lower than in April 2008, and are generally higher compared to levels in September 2007. Groundwater elevations at RW-5 through RW-9 were 5 to 7 feet higher than levels recorded in April 2008. These five RWs were shutdown in June 2008.

The groundwater elevation contour map (Figure 2) is similar to previous groundwater maps. Groundwater flow is generally to the west in the area of the IRA system. Drawdown in water levels at the online recovery wells (southern portion of Dunn Field) is evident as indicated on Figure 2.

Analytical Results

The complete analytical results are presented in Appendix A. The analytical results for monitoring wells, recovery wells and the groundwater discharge are summarized on Tables 5, 6 and 7, respectively. Total CVOC concentrations for the wells sampled in October 2008 are shown on Figure 3.

Analytical Results for Monitoring Wells

Groundwater samples were collected from 84 monitoring wells in October 2008 and analyzed for VOCs only. Table 5 lists the analytical results for all constituents detected above the RL in one or more samples. A total of 21 VOCs were detected above RLs in the October 2008 samples. A summary of analytical results for the primary groundwater contaminants in monitoring wells is provided on Table 8.

Analytical Results for Recovery Wells

Groundwater samples were collected from eleven recovery wells in October 2008 and analyzed for VOCs only. Table 6 lists the analytical results for all constituents detected above the RL in one or more samples. A summary of analytical results for the primary groundwater contaminants in recovery wells is provided on Table 9.

Analytical Results for the Main Discharge

An effluent sample was collected from the main discharge in October 2008. Table 7 lists the analytical results for all permitted constituents and all others results above reporting limits. All results were below permitted discharge limits.

CONCLUSIONS AND RECOMMENDATIONS

The fluvial SVE system continues to have a significant impact in reducing CVOC concentrations in groundwater based on groundwater sample results. This reduction is seen in the total CVOC plume maps for April 2007, October 2007, April 2008, and October 2008 shown on Figure 4. Time trend plots for individual recovery wells, monitoring wells on Dunn Field, and selected monitoring wells within the central plume west of Dunn Field are provided in Appendices B, C and D, respectively.

IRA System Recovery Wells

Time trend plots for the IRA system effluent and recovery wells are included in Appendix B. Reduction in the effluent CVOC concentrations coincided with the start up of the fluvial SVE system. CVOC concentrations remained low in the October 2008 sample. The higher CVOC concentrations in the July 2008 quarterly sample may have been due to higher contaminant flux from loess to groundwater during that stage of the TSVE operations. The total CVOC concentration in the October 2008 sample is 15% of that reported in July 2007, prior to start-up of the Fluvial SVE.

CVOC concentrations continued to decrease or remained at low levels in all recovery wells, except RW-9. RW-9 is upgradient of most identified source areas on Dunn Field and the ground water concentrations are representative of the plume migrating from off-site source(s) northeast of Dunn Field.

Decreases in CVOC concentrations were observed in most of the on-line recovery wells in the southern half of Dunn Field (RW-1, RW-1A, RW-1B, RW-2, and RW-3). At RW-4, TCE decreased from 55.4 µg/L in April to 28.8 µg/L, but TeCA increased from 19.4 µg/L in April to 52.5 µg/L. October 2008 CVOC concentrations for individual constituents are below 50 µg/L in all recovery wells except chloroform (70.8 µg/l) in RW-2 and TeCA (52.5 µg/L) in RW-4.

On-Site Monitoring Wells

Time trend plots for onsite monitoring wells are included in Appendix C. CVOC concentrations have remained at low levels in most on-site wells following large declines after start up of the Fluvial SVE system.

Four monitoring wells show the influence of the plume migrating on to Dunn Field from the northeast. No decrease in CVOC concentrations has been observed in MW-07 and MW-230; both wells are upgradient of the identified Source Areas on Dunn Field. Slight increases in CVOC concentrations have occurred in MW-03 and MW-220, located along the northern boundary of Dunn Field, following initial large decreases after start-up of the Fluvial SVE.

An increase in CVOC concentration was also observed in MW-227 located in loess treatment area 4. Chloroform and TCE concentrations increased slightly in the October sample, although concentrations remain approximately an order of magnitude below

concentrations in November 2007. The increase is probably due to higher contaminant flux from the loess during TSVE operations that was not captured by the Fluvial SVE.

October 2008 CVOC concentrations for individual constituents are below 50 µg/L in all monitoring wells on Dunn Field except PCE (63.9 µg/l) in MW-07; chloroform (134 µg/L) and TCE (61.8 ug/l) in MW-227; and PCE (100 µg/L) and TCE (98.4 µg/L) in MW-230. As noted above, CVOC concentrations in MW-07 and MW-230 are representative of the off-site northeast plume rather than source areas on Dunn Field.

The highest total CVOC concentrations for monitoring wells on Dunn Field are 233 µg/L at MW-230 and 228 µg/L at MW-227. As noted in review of the April 2008 semiannual sample results, CVOC concentrations in Dunn Field monitoring wells are not indicative of a continuing source within the aquifer and are well below the target concentrations for ZVI injections (1,000 µg/L).

Offsite Wells

Time trend plots for selected off-site monitoring wells are included in Appendix D. The concentrations vary considerably. However, total CVOC concentrations in MW-70 near the center of the central plume immediately west of Dunn Field decreased from 359 µg/L in April 2008 to 3.7 µg/L in the current sample.

Intermediate Aquifer Wells

IRA semiannual monitoring includes ten wells installed in the intermediate aquifer: one well on Dunn Field (MW-238) and nine wells west of Dunn Field (MW-37, MW-40, MW-43, MW-231, MW-232, MW-234, MW-237, MW-239, and MW-240). Primary CVOCs were detected above RLs in three wells (MW-232, MW-237, and MW-240). The highest concentration was vinyl chloride at 13.2 µg/L at MW-232.

Recommendations

The goal for the Source Areas groundwater remedy is 50 µg/L for any single constituent, with further reduction to MCLs to be achieved by the Off Depot remedy.

CVOC concentrations for individual constituents are below 50 µg/L in all recovery wells, except for slight exceedances in RW-2 (chloroform 70.8 µg/l) and RW-4 (TeCA at 52.5 µg/L); the maximum contaminant level (MCL) for chloroform (as total trihalomethanes is 80 µg/L).

With the exception of wells MW-07 and MW-230 in the northeast plume, only one monitoring well on Dunn Field exceeded 50 µg/L for any single constituent, MW-227 (chloroform at 134 µg/L and TCE at 61.8 ug/l); CVOC concentrations in this well should decrease now that TSVE operations have been completed.

Groundwater contours on Figure 2 indicate that groundwater from the south-central area of Dunn Field, including RW-2 and RW-4, will pass through the active component of the Off Depot groundwater remedy (air sparge with SVE). Therefore, it is recommended that operation of recovery wells RW-1 through RW-4 be discontinued. Mothballing or removal of the IRA GWRS will be considered following the next semiannual sampling event in April 2009. The GWRS will be maintained in operating condition until that time. If approved by the BRAC Cleanup Team, the City of Memphis will be notified of this operational change.

TABLES

TABLE 1
WELL ACTIVITY SUMMARY
OCTOBER 2008 SEMIANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Well	Aquifer Screened	April 2008		October 2008	
		Water Level Measurement	Groundwater Samples	Water Level Measurement	Groundwater Samples
MW-03	Fluvial	X	LF	X	LF
MW-04**	Fluvial	X		X	
MW-05	Fluvial	X		Dry	
MW-06	Fluvial	X	LF	X	LF
MW-07	Fluvial	X	S	X	S
MW-08	Fluvial	X		X	
MW-10	Fluvial	X	NS	X	LF
MW-12	Fluvial	X		X	
MW-13**	Fluvial	X		X	
MW-14	Fluvial	X		X	
MW-15	Fluvial	X	LF	X	LF
MW-19	Fluvial	X		X	
MW-28	Fluvial	X		X	
MW-29	Fluvial	X		X	
MW-30	Fluvial	X		X	
MW-31	Fluvial	X	M	X	S
MW-32	Fluvial	X	S	X	S
MW-33	Fluvial	X	S	X	S
MW-34	Intermediate	X		X	
MW-35	Fluvial	X		X	
MW-37	Intermediate	X	S	X	S
MW-38	Intermediate	X		X	
MW-40	Intermediate	X	S	X	S
MW-42	Fluvial	X		X	
MW-43	Intermediate	X	S	X	S
MW-44	Fluvial	X	S	X	S
MW-45**	Fluvial	X		X	
MW-51	Fluvial	X		NM	
MW-53	Fluvial	X		X	
MW-54	Fluvial	X	S	X	S
MW-55	Fluvial	X		X	
MW-56	Fluvial	X		X	
MW-57	Fluvial	X	S	X	S
MW-58	Fluvial	X		X	
MW-59	Fluvial	X		X	
MW-60	Fluvial	X		X	
MW-61	Fluvial	X		X	
MW-62	Fluvial	X		X	
MW-65	Fluvial	X		X	
MW-67	Memphis	X	S	X	S
MW-68	Fluvial	X	S	X	S
MW-69	Fluvial	X	S	X	S
MW-70	Fluvial	X	M	X	S
MW-71	Fluvial	X	S	X	S
MW-74	Fluvial	X	LF	X	LF
MW-75	Fluvial	X		X	
MW-76	Fluvial	X	S	X	S
MW-77	Fluvial	X	S	X	S
MW-78	Fluvial	X		X	
MW-79	Fluvial	X	S	X	S
MW-80	Fluvial	X		X	
MW-87	Fluvial	X		X	
MW-89	Intermediate	X		X	

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Well	Aquifer Screened	April 2008		October 2008	
		Water Level Measurement	Groundwater Samples	Water Level Measurement	Groundwater Samples
MW-90	Intermediate	X		X	
MW-91	Fluvial	X		X	
MW-95**	Fluvial	X		X	
MW-126	Fluvial	X		X	
MW-127	Fluvial	X		X	
MW-128	Fluvial	X		X	
MW-129	Fluvial	X		X	
MW-130	Fluvial	X	S	X	S
MW-132	Fluvial	X	LF	X	LF
MW-134	Fluvial	NM	LF	X	LF
MW-144	Fluvial	Dry	S	Dry	NS
MW-145	Fluvial	X	S	X	S
MW-147	Fluvial	X	S	X	S
MW-148	Fluvial	X	M	X	S
MW-149	Fluvial	X	M	X	S
MW-150	Fluvial	X	M	X	S
MW-151	Fluvial	X	M	X	S
MW-152	Fluvial	X	M	X	S
MW-153	Fluvial	X	S	X	S
MW-154	Fluvial	X	S	X	S
MW-155	Fluvial	X	M	X	S
MW-156	Fluvial	X	S	X	S
MW-157	Fluvial	X	S	X	S
MW-158	Fluvial	X	M	X	S
MW-158A	Fluvial	X	M	X	S
MW-159	Fluvial	X	M	X	S
MW-160	Fluvial	X	S	X	S
MW-161	Fluvial	X	S	X	S
MW-162	Fluvial	X	S	X	S
MW-163	Fluvial	X	S	X	S
MW-164	Fluvial	X	S	X	S
MW-165	Fluvial	X	M	X	S
MW-165A	Fluvial	X	M	X	S
MW-166	Fluvial	X	M	X	S
MW-166A	Fluvial	X	S	X	S
MW-167	Fluvial	X	S	X	S
MW-168	Fluvial	X	S	X	S
MW-168A	Fluvial	X	M	X	S
MW-169	Fluvial/Intermediate	X	S	X	S
MW-170	Fluvial	X	M	X	S
MW-171	Fluvial	X	S	X	S
MW-172	Fluvial	X	LF	X	LF
MW-174	Fluvial	X	LF	X	LF
MW-175	Fluvial	X	LF	X	NS
MW-176	Fluvial	X		NM	
MW-178	Fluvial	X	LF	X	LF
MW-179	Fluvial	X	LF	X	LF
MW-180	Fluvial	X	LF	X	LF
MW-182	Fluvial	X		X	
MW-183	Fluvial/Intermediate	X		X	
MW-184	Fluvial	X		X	
MW-185	Fluvial	X		X	
MW-186	Fluvial	X		X	

TABLE 1
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OCTOBER 2008 SEMIANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Well	Aquifer Screened	April 2008		October 2008	
		Water Level Measurement	Groundwater Samples	Water Level Measurement	Groundwater Samples
MW-187	Fluvial	X	LF	X	LF
MW-193	Fluvial	X		X	
MW-194	Fluvial	X		X	
MW-220	Fluvial	X	LF	X	LF
MW-221	Fluvial	X	LF	X	LF
MW-222	Fluvial	X	LF	X	LF
MW-223	Fluvial	X	LF	X	LF
MW-224	Fluvial	X	LF	X	LF
MW-225	Fluvial	X	LF	X	LF
MW-226	Fluvial	X	LF	X	LF
MW-227	Fluvial	X	LF	X	LF
MW-228	Fluvial	X	LF	X	LF
MW-230	Fluvial	X	LF	X	LF
MW-231	Intermediate	X	LF	X	LF
MW-232	Intermediate	X	M	X	S
MW-233	Fluvial	Dry	NS	Dry	NS
MW-234	Intermediate	X	LF	X	LF
MW-235	Fluvial	X	LF	X	LF
MW-236	Fluvial	X	LF	X	LF
MW-237	Intermediate	X	LF	X	LF
MW-238	Intermediate	X	LF	X	LF
MW-239	Intermediate	X	LF	X	LF
MW-240	Intermediate	X	LF	X	LF
PZ-02	Fluvial	X		X	
RW-01	Fluvial	NM	G	X	G
RW-01A	Fluvial	NM	G	X	G
RW-01B	Fluvial	NM	G	X	G
RW-02	Fluvial	X	G	X	G
RW-03	Fluvial	X	G	X	G
RW-04	Fluvial	X	G	X	G
RW-05	Fluvial	X	G	X	G
RW-06	Fluvial	X	G	X	G
RW-07	Fluvial	X	G	X	G
RW-08	Fluvial	X	G	X	G
RW-09	Fluvial	X	G	X	G
MW-1 TDEC	Fluvial	X		X	
MW-2 TDEC	Fluvial	X		X	
MW-3 TDEC	Fluvial	X		X	
MW-4 TDEC	Fluvial	NM		X	

Notes:

**	Indicates a pressure transducer is installed in the monitoring well.
X	Water level measured.
G	Grab sample collected from recovery well.
LF	Sample collected using low-flow purging methods.
M	Multiple samples; Permeable Diffusion Bag (PDB) samplers at top andbottom of saturated screened interval (two samples per well).
NM	Water level measurement planned but not made.
NS	Sample planned but not collected.
S	Single sample; one PDB sampler at mid-point of saturated screened intervals.

TABLE 2
WATER LEVEL MEASURMENTS
OCTOBER 2008 SEMIANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Well ID	Aquifer	Top of Casing Elevation (ft, msl)	Top of Screen Elevation (ft, msl)	10-Apr-2008 Depth to Water (ft, btoc)	10-Apr-2008 Groundwater Elevation (ft, msl)	14-Oct-2008 Depth to Water (ft, btoc)	14-Oct-2008 Groundwater Elevation (ft, msl)
MW-03	Fluvial	292.35	226.85	72.10	220.25	67.19	225.16
MW-04	Fluvial	301.61	241.61	78.00	223.61	75.10	226.51
MW-05	Fluvial	304.64	244.64	79.04	225.60	Dry	–
MW-06	Fluvial	289.11	238.11	65.70	223.41	65.00	224.11
MW-07	Fluvial	295.10	228.10	69.75	225.35	66.81	228.29
MW-08	Fluvial	292.59	236.09	65.09	227.50	62.70	229.89
MW-10	Fluvial	288.79	230.19	66.45	222.34	62.25	226.54
MW-12	Fluvial	301.30	231.90	78.85	222.45	76.32	224.98
MW-13	Fluvial	300.01	234.01	75.87	224.14	73.75	226.26
MW-14	Fluvial	302.22	237.22	75.55	226.67	75.12	227.10
MW-15	Fluvial	295.12	231.72	70.92	224.20	70.21	224.91
MW-19	Fluvial	290.57	207.47	87.00	203.57	87.28	203.29
MW-28	Fluvial	294.79	240.49	58.48	236.31	56.59	238.20
MW-29	Fluvial	273.22	239.02	41.33	231.89	39.59	233.63
MW-30	Fluvial	275.14	236.14	49.44	225.70	47.33	227.81
MW-31	Fluvial	290.37	226.27	73.31	217.06	70.46	219.91
MW-32	Fluvial	285.38	232.68	64.48	220.90	63.65	221.73
MW-33	Fluvial	280.71	236.11	57.29	223.42	56.73	223.98
MW-34	Intermediate	299.97	163.37	132.15	167.82	137.95	162.02
MW-35	Fluvial	300.46	230.86	79.43	221.03	76.98	223.48
MW-37	Intermediate	284.91	119.21	120.53	164.38	129.87	155.04
MW-38	Intermediate	307.45	167.55	130.00	177.45	132.40	175.05
MW-40	Intermediate	262.23	177.23	82.02	180.21	85.10	177.13
MW-42	Fluvial	274.83	225.83	57.19	217.64	56.62	218.21
MW-43	Intermediate	284.99	123.49	119.85	165.14	127.64	157.35
MW-44	Fluvial	269.07	205.07	57.25	211.82	56.74	212.33
MW-45	Fluvial	293.22	235.22	56.35	236.87	55.80	237.42
MW-51[1]	Fluvial	275.23	220.23	43.25	231.98	–	–
MW-53	Fluvial	306.38	233.88	73.92	232.46	73.54	232.84
MW-54	Fluvial	295.35	210.85	83.15	212.20	82.33	213.02
MW-55	Fluvial	292.08	228.08	70.55	221.53	70.69	221.39
MW-56	Fluvial	293.60	234.60	68.30	225.30	67.79	225.81
MW-57	Fluvial	290.77	230.77	65.15	225.62	64.55	226.22
MW-58	Fluvial	290.51	233.51	64.50	226.01	63.95	226.56
MW-59	Fluvial	300.13	227.63	77.38	222.75	74.16	225.97
MW-60	Fluvial	296.86	224.36	74.00	222.86	70.59	226.27
MW-61	Fluvial	294.04	225.54	69.70	224.34	67.13	226.91
MW-62	Fluvial	293.65	207.65	93.93	199.72	94.43	199.22
MW-65	Fluvial	263.22	222.42	5.10	258.12	12.55	250.67
MW-67	Memphis	278.21	18.21	112.90	165.31	123.24	154.97
MW-68	Fluvial	291.69	219.19	70.95	220.74	67.09	224.60
MW-69	Fluvial	307.02	224.94	85.71	221.31	82.55	224.47
MW-70	Fluvial	304.99	224.18	83.04	221.95	80.78	224.21
MW-71	Fluvial	294.40	228.90	71.57	222.83	70.97	223.43
MW-74	Fluvial	303.68	233.68	81.36	222.32	79.22	224.46
MW-75	Fluvial	303.61	232.61	81.51	222.10	78.93	224.68
MW-76	Fluvial	302.71	229.71	87.00	215.71	84.88	217.83
MW-77	Fluvial	304.42	236.42	83.81	220.61	81.66	222.76
MW-78	Fluvial	275.00	230.50	50.55	224.45	48.38	226.62
MW-79	Fluvial	285.03	202.53	73.57	211.46	72.84	212.19
MW-80	Fluvial	273.81	220.81	62.18	211.63	61.48	212.33
MW-87	Fluvial	294.93	231.93	72.12	222.81	71.37	223.56
MW-89	Intermediate	303.98	156.98	114.59	189.39	116.13	187.85
MW-90	Intermediate	304.19	189.19	115.00	189.19	116.38	187.81

TABLE 2
WATER LEVEL MEASURMENTS
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DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Well ID	Aquifer	Top of Casing Elevation (ft, msl)	Top of Screen Elevation (ft, msl)	10-Apr-2008 Depth to Water (ft, btoc)	10-Apr-2008 Groundwater Elevation (ft, msl)	14-Oct-2008 Depth to Water (ft, btoc)	14-Oct-2008 Groundwater Elevation (ft, msl)
MW-91	Fluvial	291.99	236.99	68.65	223.34	68.02	223.97
MW-95	Fluvial	259.23	219.43	29.15	230.08	28.40	230.83
MW-126	Fluvial	252.22	236.22	13.50	238.72	19.50	232.72
MW-127	Fluvial	268.71	208.71	60.20	208.51	59.90	208.81
MW-128	Fluvial	284.14	229.39	42.53	241.61	42.85	241.29
MW-129	Fluvial	293.01	228.01	58.50	234.51	57.11	235.90
MW-130	Fluvial	293.20	233.70	57.82	235.38	56.35	236.85
MW-132	Fluvial	300.73	227.23	78.25	222.48	76.17	224.56
MW-134[2]	Fluvial	300.81	225.81	–	–	75.90	224.91
MW-144	Fluvial	291.60	235.10	Dry	–	75.43	216.17
MW-145	Fluvial	284.72	204.72	72.74	211.98	71.10	213.62
MW-147	Fluvial	289.72	229.72	74.12	215.60	71.66	218.06
MW-148	Fluvial	294.71	224.71	81.31	213.40	79.99	214.72
MW-149	Fluvial	287.18	205.78	75.14	212.04	74.46	212.72
MW-150	Fluvial	296.81	225.61	84.32	212.49	83.44	213.37
MW-151	Fluvial	284.27	207.27	72.35	211.92	71.61	212.66
MW-152	Fluvial	289.59	198.59	77.83	211.76	77.13	212.46
MW-153	Fluvial	279.17	203.17	67.55	211.62	66.84	212.33
MW-154	Fluvial	273.81	220.81	58.41	215.40	58.68	215.13
MW-155	Fluvial	291.65	214.65	79.38	212.27	78.59	213.06
MW-156	Fluvial	269.15	213.71	58.60	210.55	58.08	211.07
MW-157	Fluvial	286.78	229.78	73.55	213.23	72.58	214.20
MW-158	Fluvial	294.07	203.06	82.24	211.83	81.54	212.53
MW-158A	Fluvial	293.95	216.03	82.14	211.81	81.43	212.52
MW-159	Fluvial	286.33	205.89	74.44	211.89	73.68	212.65
MW-160	Fluvial	294.00	228.13	81.45	212.55	80.55	213.45
MW-161	Fluvial	296.40	234.60	80.70	215.70	78.93	217.47
MW-162	Fluvial	299.70	233.39	84.34	215.36	82.57	217.13
MW-163	Fluvial	290.63	234.42	76.36	214.27	75.02	215.61
MW-164	Fluvial	287.48	231.86	72.07	215.41	70.89	216.59
MW-165	Fluvial	287.06	198.43	75.35	211.71	74.61	212.45
MW-165A	Fluvial	287.26	215.96	75.50	211.76	74.84	212.42
MW-166	Fluvial	283.44	199.59	71.53	211.91	70.85	212.59
MW-166A	Fluvial	283.45	215.15	71.54	211.91	70.86	212.59
MW-167	Fluvial	284.82	214.68	73.50	211.32	72.64	212.18
MW-168	Fluvial	283.95	177.75	72.23	211.72	71.51	212.44
MW-168A	Fluvial	283.20	204.42	71.50	211.70	70.78	212.42
MW-169	Fluvial/Intermediate	261.90	194.12	82.84	179.06	85.40	176.50
MW-170	Fluvial	273.75	214.14	60.70	213.05	59.91	213.84
MW-171	Fluvial	270.69	217.72	58.20	212.49	57.44	213.25
MW-172	Fluvial	300.28	232.28	74.43	225.85	73.85	226.43
MW-174	Fluvial	296.56	229.56	71.81	224.75	71.14	225.42
MW-175	Fluvial	291.63	224.13	74.31	217.32	66.46	225.17
MW-176[3]	Fluvial	299.68	223.68	76.48	223.20	–	–
MW-178	Fluvial	300.26	224.26	76.94	223.32	74.84	225.42
MW-179	Fluvial	301.16	224.16	78.32	222.84	75.95	225.21
MW-180	Fluvial	296.14	224.14	74.79	221.35	70.78	225.36
MW-182	Fluvial	275.40	213.40	63.70	211.70	64.18	211.22
MW-183	Fluvial/Intermediate	275.59	114.59	111.25	164.34	120.24	155.35
MW-184	Fluvial	283.12	225.12	67.39	215.73	66.71	216.41
MW-185	Fluvial	256.71	171.71	77.60	179.11	79.12	177.59
MW-186	Fluvial	256.31	108.31	81.05	175.26	86.67	169.64
MW-187	Fluvial	302.74	226.74	76.94	225.80	76.44	226.30
MW-193	Fluvial	293.28	222.28	78.63	214.65	77.12	216.16

TABLE 2
WATER LEVEL MEASURMENTS
OCTOBER 2008 SEMIANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Well ID	Aquifer	Top of Casing Elevation (ft, msl)	Top of Screen Elevation (ft, msl)	10-Apr-2008 Depth to Water (ft, btoc)	10-Apr-2008 Groundwater Elevation (ft, msl)	14-Oct-2008 Depth to Water (ft, btoc)	14-Oct-2008 Groundwater Elevation (ft, msl)
MW-194	Fluvial	293.26	219.26	77.43	215.83	75.79	217.47
MW-220	Fluvial	293.29	228.35	71.59	221.70	67.44	225.85
MW-221	Fluvial	301.52	228.40	80.11	221.41	76.38	225.14
MW-222	Fluvial	303.82	229.64	79.83	223.99	77.85	225.97
MW-223	Fluvial	303.00	229.13	80.07	222.93	77.97	225.03
MW-224	Fluvial	304.13	230.42	80.95	223.18	78.79	225.34
MW-225	Fluvial	304.52	229.54	81.85	222.67	80.14	224.38
MW-226	Fluvial	303.19	228.97	79.96	223.23	77.91	225.28
MW-227	Fluvial	299.70	236.06	74.54	225.16	73.82	225.88
MW-228	Fluvial	301.65	237.56	76.17	225.48	75.50	226.15
MW-230	Fluvial	286.57	227.32	57.72	228.85	55.64	230.93
MW-231	Intermediate	289.18	121.43	124.70	164.48	132.91	156.27
MW-232	Intermediate	285.18	135.13	121.46	163.76	127.68	157.50
MW-233	Fluvial	289.53	231.88	Dry	-	67.01	222.52
MW-234	Intermediate	291.50	124.91	129.05	162.45	135.87	155.63
MW-235	Fluvial	264.00	213.41	56.88	207.12	56.51	207.49
MW-236	Fluvial	261.38	236.73	11.08	250.30	19.45	241.93
MW-237	Intermediate	289.18	122.73	124.80	164.38	132.41	156.77
MW-238	Intermediate	300.45	119.90	135.76	164.69	145.60	154.85
MW-239	Intermediate	288.44	122.97	124.58	163.86	135.57	152.87
MW-240	Intermediate	259.28	172.71	78.51	180.77	80.04	179.24
PZ-02	Fluvial	284.39	240.39	42.32	242.07	42.74	241.65
RW-01[4]	Fluvial	295.71	229.57	–	–	72.70	223.01
RW-01[4]	Fluvial	295.42	228.43	–	–	71.42	224.00
RW-01B[4]	Fluvial	289.17	227.48	–	–	59.55	229.62
RW-02	Fluvial	289.92	225.93	70.35	219.57	70.25	219.67
RW-03	Fluvial	299.34	231.40	77.16	222.18	77.60	221.74
RW-04	Fluvial	305.11	230.48	84.37	220.74	82.50	222.61
RW-05	Fluvial	307.13	226.09	88.29	218.84	82.60	224.53
RW-06	Fluvial	304.56	227.94	84.71	219.85	79.80	224.76
RW-07	Fluvial	297.44	228.33	78.47	218.97	72.60	224.84
RW-08	Fluvial	292.99	222.84	75.41	217.58	68.05	224.94
RW-09	Fluvial	290.67	225.98	72.02	218.65	64.22	226.45
MW-1-TDEC	Fluvial	275.83		28.58	247.25	30.79	245.04
MW-2-TDEC	Fluvial	272.13		26.69	245.44	28.25	243.88
MW-3-TDEC	Fluvial	265.28		9.02	256.26	15.19	250.09
MW-4-TDEC[5]	Fluvial	263.81		–	–	15.96	247.85

Notes:

ft, msl	feet mean sea level
ft, btoc	feet below top of casing
–	Not Measured
(1)	MW-51 was covered by debris and not accessible during October 2008 event.
(2)	Well pad underwater during April 2008 event; water level not measured.
(3)	Water level not measured due to field oversight.
(4)	Water level below top of pump motor during April 2008 event. Water level not measured.
(5)	MW-4-TDEC was covered by debris and not accessible during April 2008 event.

TABLE 3
PDB SAMPLE INTERVALS
OCTOBER 2008 SEMIANNUAL MONITROING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Monitoring Well	Date Collected	Measured Well Depth (ft bgs)	Depth to Water (feet btoc)	Sample Depth (feet btoc)
MW-07	10/17/2008	75.75	66.81	75.14
MW-31	10/17/2008	83.28	70.34	76.95
MW-32	10/17/2008	68.08	63.70	66.84
MW-33	10/17/2008	62.70	56.77	59.15
MW-37	10/17/2008	184.68	129.32	173.25
MW-40	10/20/2008	95.53	85.19	90.75
MW-43	10/20/2008	171.71	127.01	167.25
MW-44	10/20/2008	74.36	56.65	69.75
MW-54	10/20/2008	97.18	82.32	90.25
MW-57	10/17/2008	70.21	64.61	68.32
MW-67	10/20/2008	275.0	121.74	268.25
MW-68	10/17/2008	81.56	67.00	78.25
MW-69	10/17/2008	95.58	72.69	89.64
MW-70	10/17/2008	93.73	72.78	87.67
MW-71	10/17/2008	78.10	71.01	74.28
MW-76	10/17/2008	93.98	82.74	90.75
MW-77	10/17/2008	89.18	81.66	85.55
MW-79	10/20/2008	104.78	72.59	93.25
MW-130	10/20/2008	81.02	56.50	70.25
MW-144[(1)]	10/17/2008	76.28	dry	NS
MW-145	10/20/2008	96.66	72.10	90.75
MW-147	10/17/2008	80.49	71.51	79.35
MW-148	10/17/2008	87.87	79.82	86.35
MW-149	10/20/2008	99.96	74.46	92.15
MW-150	10/20/2008	91.57	83.35	88.51
MW-151	10/20/2008	96.69	71.60	87.75
MW-152	10/20/2008	108.82	77.09	101.75
MW-153	10/20/2008	96.03	66.76	86.75
MW-154	10/20/2008	66.84	58.60	61.45
MW-155	10/20/2008	95.07	78.60	88.94
MW-156	10/20/2008	69.41	58.01	67.75
MW-157	10/17/2008	77.11	72.52	75.95
MW-158	10/20/2008	106.60	81.48	99.25
MW-158A	10/20/2008	93.28	81.39	88.25
MW-159	10/20/2008	99.31	73.65	81.85
MW-160	10/20/2008	85.77	80.54	84.35
MW-161	10/17/2008	83.97	78.85	83.47
MW-162	10/17/2008	86.69	82.45	86.08
MW-163	10/17/2008	76.73	74.98	76.10
MW-164	10/17/2008	75.28	70.84	74.59
MW-165	10/20/2008	103.01	74.53	96.88
MW-165A	10/20/2008	86.40	74.80	81.65
MW-166	10/20/2008	100.05	70.84	92.10

TABLE 3
PDB SAMPLE INTERVALS
OCTOBER 2008 SEMIANNUAL MONITROING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Monitoring Well	Date Collected	Measured Well Depth (ft bgs)	Depth to Water (feet btoc)	Sample Depth (feet btoc)
MW-166A	10/20/2008	83.29	70.87	78.17
MW-167	10/20/2008	82.68	72.57	80.07
MW-168	10/20/2008	120.50	71.45	114.45
MW-168A	10/20/2008	88.22	70.70	82.03
MW-169	10/20/2008	88.15	85.34	87.06
MW-170	10/20/2008	79.78	59.82	70.91
MW-171	10/20/2008	68.32	57.35	63.75
MW-232	10/21/2008	170.55	128.70	161.25

Notes:

bgs	Below ground surface
btoc	Below top of casing
NS	Well not sampled
PDB	passive diffision bag
>	greater than
(1)	Well dry

TABLE 4
FINAL MONITORING WELL STABILIZATION MEASUREMENTS
OCTOBER 2008 SEMI-ANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Well ID	Sample Date	Method	Time	Sample Pump Depth (ft, btoc)	Water Depth (ft, btoc)	Purge Rate (ml/min)	Volume Purged (Liters)	pH	Temp (°C)	Specific Conductivity (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTUs)
MW-3	10/21/2008	low flow	10:55	73.2	67.50	300	7.0	6.1	19.0	0.361	3.1	186	6.7
MW-6	10/17/2008	low flow	9:15	68.8	65.04	210	11.2	5.5	16.5	2.620	7.4	263	0.0
MW-10	10/21/2008	low flow	15:15	73.4	62.55	100	6.1	6.7	27.9	0.330	2.4	72	4.0
MW-15	10/16/2008	low flow	13:16	77.0	70.29	150	4.6	6.1	16.3	0.392	11.3	253	1.3
MW-74	10/21/2008	low flow	8:53	85.0	79.50	220	7.3	5.9	21.1	0.247	6.0	206	0.0
MW-132	10/20/2008	low flow	11:20	84.0	76.35	160	5.0	5.9	31.2	0.294	4.2	172	12.7
MW-134	10/20/2008	low flow	12:30	84.0	74.70	160	4.8	5.9	20.6	0.290	2.8	180	0.0
MW-172	10/16/2008	low flow	9:42	76.1	73.93	110	11.0	5.9	21.4	0.209	11.8	257	14.0
MW-174	10/16/2008	low flow	14:32	75.0	71.21	200	10.9	5.9	19.3	0.204	9.0	266	19.7
MW-175[1]	10/17/2008	low flow	9:55	76.0	-	-	-	-	-	-	-	-	-
MW-176	10/20/2008	low flow	16:15	83.0	74.86	140	6.1	6.1	38.9	0.333	5.2	196	17.6
MW-179	10/20/2008	low flow	14:10	82.0	76.01	160	11.2	5.9	20.5	0.275	2.7	217	18.7
MW-180	10/21/2008	low flow	13:27	78.6	70.81	260	6.5	5.8	20.4	0.240	2.8	215	1.2
MW-187	10/16/2008	low flow	11:35	83.6	76.54	130	13.7	5.9	21.4	0.206	9.6	271	17.1
MW-220	10/21/2008	low flow	12:30	77.6	67.49	280	14.0	6.0	35.6	0.341	1.3	185	0.0
MW-221	10/21/2008	low flow	10:05	85.0	76.40	200	7.5	5.9	35.9	0.408	3.0	157	5.1
MW-222	10/20/2008	low flow	10:20	80.7	78.64	130	4.9	6.5	36.6	0.790	0.0	-61	1.3
MW-223	10/17/2008	low flow	13:30	88.0	77.83	160	6.0	6.0	30.2	0.259	5.5	227	9.4
MW-224	10/20/2008	low flow	15:15	84.0	78.79	140	7.2	6.0	40.2	0.304	0.7	198	17.9
MW-225	10/17/2008	low flow	15:43	85.0	79.59	200	15.2	6.0	38.4	0.274	1.5	119	19.0
MW-226	10/20/2008	low flow	9:15	84.0	78.30	160	10.3	6.0	34.9	0.266	4.1	196	9.9
MW-227	10/17/2008	low flow	10:48	76.0	73.86	180	4.6	5.8	35.4	0.441	8.4	226	0.0
MW-228	10/17/2008	low flow	11:45	77.0	75.53	110	4.9	5.8	35.3	0.191	8.4	224	0.0
MW-230	10/22/2008	low flow	8:50	82.5	55.62	200	10.6	5.9	17.8	0.305	9.7	228	15.9
MW-231	10/22/2008	low flow	10:37	185.3	132.90	360	11.0	8.3	17.6	0.501	5.0	-73	20.0
MW-233	10/21/2008	Dry	-	-	-	-	-	-	-	-	-	-	-
MW-234	10/22/2008	low flow	9:37	172.0	133.82	300	7.3	7.5	17.5	0.353	5.9	-22	1.5
MW-235	10/22/2008	low flow	12:40	59.0	56.19	100	15.2	5.8	17.6	0.267	2.3	260	21.0
MW-236	10/22/2008	low flow	10:10	30.0	22.91	120	4.8	6.8	20.5	0.397	3.0	204	11.2
MW-237	10/22/2008	low flow	8:37	171.9	132.60	260	9.1	6.9	17.4	0.338	6.2	197	4.6
MW-238	10/22/2008	low flow	14:47	186.0	147.69	176	21.1	7.8	27.8	0.423	3.0	30	9.5
MW-239	10/21/2008	low flow	15:45	170.9	129.80	160	13.2	13.2	19.2	0.299	10.2	26	2.4
MW-240	10/21/2008	low flow	16:35	91.4	80.02	175	7.6	6.7	20.1	0.662	0.5	174	14.9

Notes:

(1) Unable to insert pump in well. Well possibly damaged by thermal SVE operations.

°C	degrees Celsius	NTU	Nephelometric Turbidity Units
ft, btoc	feet below top of casing	-	Data not recorded
ml/min	milliliters per minute	ORP	Oxidation Reduction Potential
mS/cm	milliSiemens per centimeter	mg/L	milligrams per liter
mV	millivolts		

TABLE 5
POSITIVE RESULTS SUMMARY - MONITORING WELLS
OCTOBER 2008 SEMIANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Analyte	Well ID / Sample ID / Lab ID / Date	units	MCL	TC	MW-03 MW-3-IS-5 L08100653-01 10/21/2008	MW-6 MW-6-IS-5 L08100573-38 10/17/2008	MW-07 MW-07-74.15-IS-5 L08100573-01 10/17/2008	MW-10 MW-10-IS-5 L08100653-02 10/21/2008	MW-15 MW-15-IS-5 L08100573-45 10/16/2008	MW-31 MW-31-76.85-IS-5 L08100573-02 10/17/2008	MW-32 MW-32-66_84-IS-5 L08100573-03 10/17/2008	MW-33 MW-33-69.15-IS-5 L08100573-04 10/17/2008	MW-37 MW-37-173-25-15-5 L08100573-54 10/17/2008	MW-40 MW-40-90.75-IS-5 L08100600-01 10/20/2008
1,1,2,2-Tetrachloroethane		ug/L	--	2.2	**2.46**	**6.57**	<0.5	1.01	**4.61**	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		ug/L	5	1.9	<1	0.674 F	<1	<1	0.593 F	<1	<1	<1	<1	<1
1,1-Dichloroethene		ug/L	7	7	**17.3**	<1	**32.7**	<1	<1	**7.36**	<1	<1	<1	<1
1,2-Dichloroethane		ug/L	5	--	<0.5	<0.5	0.385 F	<0.5	**0.837 Q**	<0.5	0.276 F	<0.5	<0.5	<0.5
Carbon tetrachloride		ug/L	5	3	<1	0.793 F	<1	<1	**2.51**	<1	<1	<1	<1	<1
Chloroform		ug/L	80	12	0.212 F	**21.2**	0.299 F	0.288 F	**29.9**	0.219 F	0.2 F	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		ug/L	70	35	<1	**16**	0.367 F	0.992 F	**2.64**	<1	**2.09**	<1	<1	<1
Tetrachloroethene		ug/L	5	2.5	**9.5**	<1	**63.9**	<1	**1.16**	**3.17**	<1	<1	<1	<1
trans-1,2-Dichloroethene		ug/L	100	50	<1	0.458 F	<1	0.432 F	<1	<1	<1	<1	<1	<1
Trichloroethene		ug/L	5	5	**10.1**	**8.6**	**38.9**	**3.23**	**22.9**	**4.34**	**3.65**	<1	<1	<1
Vinyl chloride		ug/L	2	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total Primary CVOCs					39.6	52.3	137	5.95	65.1	15.1	6.22	0	0	0
1,1,1,2-Tetrachloroethane		ug/L	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane		ug/L	200	--	0.335 F	<1	0.787 F	<1	<1	0.352 F	<1	<1	<1	<1
1,1-Dichloroethane		ug/L	--	--	0.562 F	<1	**1.46**	<1	<1	0.253 F	<1	<1	<1	<1
1,4-Dichlorobenzene		ug/L	75	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.623**	<0.5	<0.5	<0.5
Acetone		ug/L	--	--	**2.63 Q**	<10	**15.3**	<10	<10	**11.9**	**15.3**	3 F	**16.4**	**16**
Benzene		ug/L	5	--	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromomethane		ug/L	--	--	<1	<1	<1	<1	**2.91 B**	<1	<1	<1	<1	<1
Carbon disulfide		ug/L	--	--	<1	<1	<1	0.847 F	<1	<1	<1	<1	<1	<1
Chlorobenzene		ug/L	100	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.662**
Styrene		ug/L	100	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Notes:
µg/L micrograms per liter
-- Not listed
MCL Maximum Contaminant Level
MDL Minimum Detection Limit
RL Reporing Limit
TC Target Concentration

Results detected at or above reporting limits shown in bold

DQE Flags:
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Methods:
8260B Volatile Organic Compounds

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OCTOBER 2008 SEMIANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Analyte	Well ID / Sample ID / Lab ID / Date	units	MCL	TC	MW-43 MW-43-167.25-IS-5 L08100600-04 10/20/2008	MW-44 MW-44-69.75-IS-5 L08100600-05 10/20/2008	MW-54 MW-54-60.25-IS-5 L08100600-06 10/20/2008	MW-57 MW-57-68.32-IS-5 L08100573-19 10/17/2008	MW-67 MW-67-255.25-IS-5 L08100600-07 10/20/2008	MW-68 MW-68-79.25-IS-5 L08100573-20 10/17/2008	MW-69 MW-69-69.54-IS-5 L08100573-21 10/17/2008	MW-70 MW-70-87.67-IS-5 L08100573-22 10/17/2008	MW-71 MW-71-74.28-IS-5 L08100573-23 10/17/2008	MW-74 MW-74-IS-5 L08100653-09 10/21/2008
1,1,2,2-Tetrachloroethane		ug/L	–	2.2	<0.5	<0.5	**53.9 J**	<0.5	0.251 F	<0.5	0.229 F	**0.883**	**5.32**	0.458 F
1,1,2-Trichloroethane		ug/L	5	1.9	<1	<1	0.621 F	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		ug/L	7	7	<1	<1	<1	<1	<1	0.727 F	<1	<1	<1	<1
1,2-Dichloroethane		ug/L	5	–	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride		ug/L	5	3	<1	0.708 F	**4.37 J**	**4.23**	<1	<1	<1	<1	**5.94**	<1
Chloroform		ug/L	80	12	<0.3	**0.366**	**9.76 J**	**15.9**	<0.3	<0.3	0.147 F	<0.3	**27.2**	<0.3
cis-1,2-Dichloroethene		ug/L	70	35	<1	<1	**18.7 J**	<1	<1	<1	<1	<1	0.717 F	<1
Tetrachloroethene		ug/L	5	2.5	<1	<1	**2.46 J**	**1.82**	<1	0.482 F	0.67 F	0.876 F	0.856 F	0.842 F
trans-1,2-Dichloroethene		ug/L	100	50	<1	<1	**3.13 J**	0.358 F	<1	<1	<1	<1	<1	<1
Trichloroethene		ug/L	5	5	<1	0.665 F	**350**	**30.4**	0.292 F	0.573 F	0.88 F	**1.96**	**12.7**	0.458 F
Vinyl chloride		ug/L	2	–	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total Primary CVOCs					0	1.74	440	52.7	0.54	1.78	1.93	3.72	52.7	1.76
1,1,1,2-Tetrachloroethane		ug/L	–	–	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane		ug/L	200	–	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		ug/L	–	–	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene		ug/L	75	–	0.149 F	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acetone		ug/L	–	–	**13.3**	**12.8**	5.34 F	4 F	**13.9**	**13.6**	**14.5**	**13.4**	<10	<10
Benzene		ug/L	5	–	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromomethane		ug/L	–	–	**2.83 B**	**2.83 B**	**2.82 J**	<1	**2.79 B**	<1	<1	<1	<1	<1
Carbon disulfide		ug/L	–	–	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene		ug/L	100	–	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Styrene		ug/L	100	–	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Notes:
µg/L micrograms per liter
– Not listed
MCL Maximum Contaminant Level
MDL Minimum Detection Limit
RL Reporing Limit
TC Target Concentration

Results detected at or above reporting limits shown in bold

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B The analyte was found in the associated blank, as well as in the sample.
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Methods:
8260B Volatile Organic Compounds

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OCTOBER 2008 SEMIANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Analyte	Well ID / Sample ID / Lab ID / Date	Units	MCL	TC	MW-76 MW-76-80.75-IS-5 L08100573-24 10/17/2008	MW-77 MW-77-78.75-IS-5 L08100573-25 10/17/2008	MW-79 MW-79-83.25-IS-5 L08100600-08 10/20/2008	MW-130 MW-130-70.25-IS-5 L08100600-09 10/20/2008	MW-132 MW-132-IS-5 L08100600-40 10/20/2008	MW-134 MW-134-IS-5 L08100600-41 10/20/2008	MW-145 MW-145-80.75-IS-5 L08100600-10 10/20/2008	MW-147 MW-147-77-IS-5 L08100573-26 10/17/2008	MW-148 MW-148-86.35-IS-5 L08100573-27 10/17/2008	MW-149 MW-149-92.15-IS-5 L08100600-11 10/20/2008
1,1,2,2-Tetrachloroethane	ug/L	--	2.2	**9.41**	**2010**	<0.5	<0.5	0.277 F	<0.5	<0.5	0.373 F	**9.66 J**	**1.71 J**
1,1,2-Trichloroethane	ug/L	5	1.9	<1	**2.3**	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	7	7	<1	<1	**4.17 J**	**80.2 J**	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5	--	<0.5	<0.5	<0.5	**1.06 Q**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	ug/L	5	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	**6.17 J**
Chloroform	ug/L	80	12	0.167 F	**0.573**	0.127 F	0.296 F	<0.3	<0.3	<0.3	0.147 F	**0.665 J**	**25.6 J**
cis-1,2-Dichloroethene	ug/L	70	35	0.406 F	**13.2**	<1	0.799 F	<1	<1	<1	0.401 F	**6.63 J**	**1.63 J**
Tetrachloroethene	ug/L	5	2.5	**1.35**	**4.62**	0.914 F	**140 J**	0.675 F	0.801 F	<1	**2.95**	**2.42 J**	0.717 F
trans-1,2-Dichloroethene	ug/L	100	50	<1	0.709 F	<1	<1	<1	<1	<1	<1	**1.73 J**	0.378 F
Trichloroethene	ug/L	5	5	**18**	**796**	0.948 F	**71.8 J**	<1	<1	<1	**3.1**	**107 J**	**19.8 J**
Vinyl chloride	ug/L	2	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total Primary CVOCs				**26.3**	**2827**	**6.16**	**294**	**0.95**	**0.80**	**0**	**6.97**	**128**	**58**
1,1,1,2-Tetrachloroethane	ug/L	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	200	--	<1	<1	<1	**3.47 Q**	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	--	--	<1	<1	<1	**3.69 J**	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	75	--	<0.5	<0.5	<0.5	0.156 F	<0.5	<0.5	<0.5	<0.5	0.149 F	<0.5
Acetone	ug/L	--	--	3.68 F	<10	<10	7.05 F	<10	<10	**14 J**	2.97 F	5.64 F	**11.9 J**
Benzene	ug/L	5	--	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromomethane	ug/L	--	--	<1	<1	**2.61 J**	<1	<1	<1	<1	<1	**2.85 J**	<1
Carbon disulfide	ug/L	--	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	100	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Styrene	ug/L	100	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Notes:

µg/L micrograms per liter
-- Not listed
MCL Maximum Contaminant Level
MDL Minimum Detection Limit
RL Reporing Limit
TC Target Concentration

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Methods:

8260B Volatile Organic Compounds

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TABLE 5
POSITIVE RESULTS SUMMARY - MONITORING WELLS
OCTOBER 2008 SEMIANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Analyte	Well ID / Sample ID / Lab ID / Date	Units	MCL	TC	MW-150 MW-150-88.51-IS-5 L08100600-12 10/20/2008	MW-151 MW-151-87.75-IS-5 L08100600-13 10/20/2008	MW-152 MW-152-101.75-IS-5 L08100600-14 10/20/2008	MW-153 MW-153-86.75-IS-5 L08100600-15 10/20/2008	MW-154 MW-154-81.45-IS-5 L08100600-16 10/20/2008	MW-155 MW-155-88.94-IS-5 L08100600-17 10/20/2008	MW-156 MW-156-87_75-IS-5 L08100600-18 10/20/2008	MW-157 MW-157-78.95-IS-5 L08100573-28 10/17/2008	MW-158 MW-158-89.25-IS-5 L08100600-21 10/20/2008	MW-158A MW-158A-86_25-IS-5 L08100600-22 10/20/2008
1,1,2,2-Tetrachloroethane		ug/L	--	2.2	**1760**	<0.5	**11.7**	<0.5	<0.5	**2040**	<0.5	**7.19**	**27.4**	**29.4 J**
1,1,2-Trichloroethane		ug/L	5	1.9	**12.4**	<1	<1	<1	<1	**7.66**	<1	0.39 F	<1	<1
1,1-Dichloroethene		ug/L	7	7	0.992 F	<1	0.758 F	**5.31**	<1	**1.04**	<1	<1	<1	**1.65 J**
1,2-Dichloroethane		ug/L	5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride		ug/L	5	3	<1	0.564 F	0.459 F	<1	<1	<1	<1	**12**	<1	0.825 F
Chloroform		ug/L	80	12	**5**	**1.34**	**2.59**	<0.3	<0.3	**1.17**	<0.3	**89.6**	**0.682**	**3.94 J**
cis-1,2-Dichloroethene		ug/L	70	35	**22.4**	<1	**40.2**	<1	<1	**46.8**	<1	**3.29**	**7.79**	**54.4 J**
Tetrachloroethene		ug/L	5	2.5	**5.22**	<1	**15.7**	0.272 F	<1	**10.4**	<1	**1.15**	**6.92**	**15 J**
trans-1,2-Dichloroethene		ug/L	100	50	**1.28**	<1	**13.4**	<1	<1	**3.56**	<1	0.589 F	**2.74**	**18 J**
Trichloroethene		ug/L	5	5	**636**	**2.62**	**260**	<1	<1	**1210**	<1	**38.3**	**162**	**408**
Vinyl chloride		ug/L	2	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total Primary CVOCs					2433	4.52	345	5.58	0	3321	0	153	208	531
1,1,1,2-Tetrachloroethane		ug/L	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane		ug/L	200	--	<1	<1	<1	**1.06**	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane		ug/L	--	--	<1	<1	<1	0.363 F	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene		ug/L	75	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acetone		ug/L	--	--	4.63 F	<10	7.62 F	6.42 F	<10	4.4 F	**15.6**	3.32 F	4.43 F	6.86 F
Benzene		ug/L	5	--	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromomethane		ug/L	--	--	**3.04 B**	<1	<1	<1	<1	<1	**2.67 B**	**2.61 B**	<1	**2.62 J**
Carbon disulfide		ug/L	--	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene		ug/L	100	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Styrene		ug/L	100	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Notes:
µg/L micrograms per liter
-- Not listed
MCL Maximum Contaminant Level
MDL Minimum Detection Limit
RL Reporing Limit
TC Target Concentration

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Methods:
8260B Volatile Organic Compounds

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Defense Depot Memphis, Tennessee

Analyte	Well ID Sample ID Lab ID Date units	MCL	TC	MW-159 MW-159-81.85-IS-5 L08100600-25 10/20/2008	MW-160 MW-160-84.35-IS-5 L08100600-26 10/20/2008	MW-161 MW-161-82-IS-5 L08100573-29 10/17/2008	MW-162 MW-162-85.06-IS-5 L08100573-30 10/17/2008	MW-163 MW-163-77.03-IS-5 L08100573-31 10/17/2008	MW-164 MW-164-74.59-IS-5 L08100573-32 10/17/2008	MW-165 MW-165-86.83-IS-5 L08100600-27 10/20/2008	MW-165A MW-165A-81.45-IS-5 L08100600-28 10/20/2008	MW-166 MW-166-82.1-IS-5 L08100600-29 10/20/2008	MW-166A MW-166A-78_17-IS-5 L08100600-30 10/20/2008
1,1,2,2-Tetrachloroethane	ug/L	--	2.2	**271**	**2340**	**2120 J**	**7140**	**1710**	**6.83**	**4.94**	**10.5**	**0.519**	0.149 F
1,1,2-Trichloroethane	ug/L	5	1.9	**92.6 J**	**3.84 J**	**6.61 J**	<50	**6.96**	0.403 F	0.491 F	0.498 F	<1	<1
1,1-Dichloroethene	ug/L	7	7	**7.33 J**	<1	<1	<50	<5	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5	--	**1.34 J**	<0.5	<0.5	<25	<2.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	ug/L	5	3	<1	0.388 F	0.39 F	<50	<5	**4.43**	**4.59**	**10.6**	**6.38**	**3.17**
Chloroform	ug/L	80	12	**1.66 J**	**1.75 J**	**3.65 J**	<15	**7.67**	**32.2**	**34.3**	**82.7**	**14.1**	**14.5**
cis-1,2-Dichloroethene	ug/L	70	35	**959**	**40.6 J**	**27 J**	38.7 F	**29.9**	**2.91**	**9.28**	**10.2**	**1.2**	**1.82**
Tetrachloroethene	ug/L	5	2.5	**5.46 J**	**9.87 J**	**6.79 J**	<50	<5	0.728 F	**1.3**	**2.32**	0.621 F	0.694 F
trans-1,2-Dichloroethene	ug/L	100	50	**46.2 J**	**5.81 J**	**2.91 J**	<50	3.81 F	0.41 F	**1.62**	**1.38**	0.354 F	0.75 F
Trichloroethene	ug/L	5	5	**1320**	**1050**	**952 J**	**1610**	**615**	**27**	**94.1**	**112**	**15**	**62.7 M**
Vinyl chloride	ug/L	2	--	**17.7 Q**	<1	<1	<50	<5	<1	<1	<1	<1	<1
Total Primary CVOCs				2723	3452	3119	8769	2373	74.9	151	230	37.2	83.8
1,1,1,2-Tetrachloroethane	ug/L	--	--	<0.5	**0.779 J**	**0.93 Q**	<25	<2.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	200	--	<1	<1	<1	<50	<5	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	--	--	<1	<1	<1	<50	<5	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	75	--	<0.5	<0.5	<0.5	<25	<2.5	0.297 F	**0.572**	<0.5	<0.5	<0.5
Acetone	ug/L	--	--	6.89 F	7.85 F	**17.3 J**	<500	21.1 F	5.65 F	**15.6**	5.54 F	4.76 F	6.62 F
Benzene	ug/L	5	--	<0.4	<0.4	<0.4	<20	<2	<0.4	<0.4	<0.4	<0.4	<0.4
Bromomethane	ug/L	--	--	**2.75 J**	<1	<1	<50	<5	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	--	--	**2.2 J**	<1	<1	<50	<5	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	100	--	<0.5	<0.5	<0.5	<25	<2.5	<0.5	<0.5	<0.5	<0.5	<0.5
Styrene	ug/L	100	--	<1	<1	<1	<50	<5	<1	<1	<1	<1	<1

Notes:
µg/L micrograms per liter
-- Not listed
MCL Maximum Contaminant Level
MDL Minimum Detection Limit
RL Reporing Limit
TC Target Concentration

Results detected at or above reporting limits shown in bold

DQE Flags:
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F Concentration below RL but above MDL
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< Analyte not detected above RL

Methods:
8260B Volatile Organic Compounds

TABLE 5
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OCTOBER 2008 SEMIANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Analyte	Well ID / Sample ID / Lab ID / Date	Units	MCL	TC	MW-167 MW-167-80.07-IS-5 L08100600-33 10/20/2008	MW-168 MW-168-114.45-IS-5 L08100600-34 10/20/2008	MW-168A MW-168A-82.03-IS-5 L08100600-35 10/20/2008	MW-169 MW-169-86.00-IS-5 L08100600-36 10/20/2008	MW-170 MW-170-70.91-IS-5 L08100600-37 10/20/2008	MW-171 MW-171-63.75-IS-5 L08100600-38 10/20/2008	MW-172 MW-172-IS-5 L08100573-49 10/16/2008	MW-174 MW-174-IS-5 L08100573-50 10/16/2008	MW-178 MW-178-IS-5 L08100600-42 10/20/2008	MW-179 MW-179-IS-5 L08100600-43 10/20/2008
1,1,2,2-Tetrachloroethane		ug/L	--	2.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.629**	<0.5	<0.5
1,1,2-Trichloroethane		ug/L	5	1.9	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		ug/L	7	7	<1	0.711 F	**5.27**	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane		ug/L	5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride		ug/L	5	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform		ug/L	80	12	<0.3	<0.3	0.222 F	<0.3	<0.3	<0.3	0.139 F	0.154 F	0.125 F	0.131 F
cis-1,2-Dichloroethene		ug/L	70	35	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		ug/L	5	2.5	<1	<1	0.503 F	<1	<1	<1	<1	<1	0.419 F	0.627 F
trans-1,2-Dichloroethene		ug/L	100	50	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		ug/L	5	5	<1	0.392 F	<1	<1	<1	<1	<1	<1	0.373 F	<1
Vinyl chloride		ug/L	2	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total Primary CVOCs					0	1.10	**6.00**	0	0	0	0.14	0.78	0.92	0.76
1,1,1,2-Tetrachloroethane		ug/L	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane		ug/L	200	--	<1	<1	**1.73**	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane		ug/L	--	--	<1	<1	0.419 F	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene		ug/L	75	--	0.429 F	<0.5	<0.5	0.494 F	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acetone		ug/L	--	--	**15.3**	<10	<10	**13.9**	**18.2**	**15**	<10	<10	2.95 F	<10
Benzene		ug/L	5	--	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	**3.22**	<0.4
Bromomethane		ug/L	--	--	<1	<1	<1	<1	<1	<1	**2.89 B**	**2.82 B**	<1	<1
Carbon disulfide		ug/L	--	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene		ug/L	100	--	<0.5	<0.5	<0.5	0.471 F	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Styrene		ug/L	100	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Notes:
µg/L micrograms per liter
-- Not listed
MCL Maximum Contaminant Level
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RL Reporing Limit
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Methods:
8260B Volatile Organic Compounds

TABLE 5
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OCTOBER 2008 SEMIANNUAL MONITORING REPORT
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Defense Depot Memphis, Tennessee

Analyte	Well ID / Sample ID / Lab ID / Date	units	MCL	TC	MW-160 MW-160-IS-5 L08100653-10 10/21/2008	MW-167 MW-167-IS-5 L08100573-51 10/16/2008	MW-220 MW-220-IS-5 L08100653-11 10/21/2008	MW-221 MW-221-IS-5 L08100653-12 10/21/2008	MW-222 MW-222-IS-5 L08100600-44 10/20/2008	MW-223 MW-223-IS-5 L08100573-41 10/17/2008	MW-224 MW-224-IS-5 L08100600-45 10/20/2008	MW-225 MW-225-IS-5 L08100573-42 10/17/2008	MW-226 MW-226-IS-5 L08100600-46 10/20/2008	MW-227 MW-227-IS-5 L08100573-43 10/17/2008
1,1,2,2-Tetrachloroethane		ug/L	--	2.2	<0.5	<0.5	0.267 F	0.329 F	**47.1**	**0.913**	<0.5	**22.8**	<0.5	**10.7**
1,1,2-Trichloroethane		ug/L	5	1.9	<1	<1	<1	<1	0.648 F	<1	<1	<1	<1	0.982 F
1,1-Dichloroethene		ug/L	7	7	**2.04**	<1	**44.3**	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane		ug/L	5	--	<0.5	<0.5	0.427 F	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**2.99**
Carbon tetrachloride		ug/L	5	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	**7.26**
Chloroform		ug/L	80	12	<0.3	0.183 F	0.217 F	<0.3	<0.3	0.249 F	<0.3	0.149 F	0.155 F	**134**
cis-1,2-Dichloroethene		ug/L	70	35	<1	<1	<1	<1	**4.61**	<1	<1	0.321 F	<1	**6.4**
Tetrachloroethene		ug/L	5	2.5	**1.86**	<1	**13.7**	<1	0.484 F	0.457 F	0.628 F	0.852 F	0.533 F	**2.7**
trans-1,2-Dichloroethene		ug/L	100	50	<1	<1	<1	<1	0.376 F	<1	<1	<1	<1	**1.04**
Trichloroethene		ug/L	5	5	**1.8**	<1	**15.2**	0.501 F	**5.81**	**3.56**	<1	**5.66**	<1	**61.8**
Vinyl chloride		ug/L	2	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total Primary CVOCs					5.72	0.18	74.1	0.83	58.9	5.18	0.63	32.6	0.69	228
1,1,1,2-Tetrachloroethane		ug/L	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane		ug/L	200	--	<1	<1	0.491 F	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane		ug/L	--	--	<1	<1	0.942 F	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene		ug/L	75	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.178 F
Acetone		ug/L	--	--	2.92 F	<10	<10	<10	**3.33 Q**	<10	**3.01 Q**	2.84 F	<10	<10
Benzene		ug/L	5	--	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromomethane		ug/L	--	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide		ug/L	--	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene		ug/L	100	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Styrene		ug/L	100	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Notes:
µg/L micrograms per liter
-- Not listed
MCL Maximum Contaminant Level
MDL Minimum Detection Limit
RL Reporing Limit
TC Target Concentration

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Methods:
8260B Volatile Organic Compounds

TABLE 5
POSITIVE RESULTS SUMMARY - MONITORING WELLS
OCTOBER 2008 SEMIANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Analyte	Well ID / Sample ID / Lab ID / Date	units	MCL	TC	MW-226 MW-226-IS-5 L08100573-44 10/17/2008	MW-230 MW-230-IS-5 L08100693-03 10/22/2008	MW-231 MW-231-IS-5 L08100693-08 10/22/2008	MW-232 MW-232-IS-5 L08100653-14 10/21/2008	MW-234 MW-234-IS-5 L08100693-09 10/22/2008	MW-235 MW-235-IS-5 L08100693-06 10/22/2008	MW-236 MW-236-IS-5 L08100693-07 10/22/2008	MW-237 MW-237-IS-5 L08100693-10 10/22/2008	MW-238 MW-238-IS-5 L08100693-11 10/22/2008	MW-239 MW-239-IS-5 L08100653-15 10/21/2008
1,1,2,2-Tetrachloroethane		ug/L	--	2.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		ug/L	5	1.9	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		ug/L	7	7	<1	**32.7 M**	<1	<1	<1	<1	<1	**2.02**	<1	<1
1,2-Dichloroethane		ug/L	5	--	<0.5	**0.71**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride		ug/L	5	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform		ug/L	80	12	0.155 F	0.276 F	<0.3	<0.3	<0.3	<0.3	<0.3	0.162 F	<0.3	<0.3
cis-1,2-Dichloroethene		ug/L	70	35	<1	**1.27**	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		ug/L	5	2.5	<1	**100 M**	<1	<1	<1	<1	<1	0.261 F	<1	<1
trans-1,2-Dichloroethene		ug/L	100	50	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		ug/L	5	5	<1	**98.4 M**	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride		ug/L	2	--	<1	<1	<1	**13.2**	<1	<1	<1	<1	<1	<1
Total Primary CVOCs					0.16	233	0	13.2	0	0	0	2.44	0	0
1,1,1,2-Tetrachloroethane		ug/L	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane		ug/L	200	--	<1	**1.65**	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane		ug/L	--	--	<1	**2.25**	<1	<1	<1	<1	<1	0.237 F	<1	<1
1,4-Dichlorobenzene		ug/L	75	--	<0.5	<0.5	<0.5	0.14 F	0.134 F	<0.5	<0.5	0.14 F	0.192 F	0.378 F
Acetone		ug/L	--	--	<10	<10	<10	3.77 F	<10	<10	<10	<10	<10	**21**
Benzene		ug/L	5	--	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromomethane		ug/L	--	--	<1	<1	0.768 Q	<1	0.609 Q	<1	<1	<1	**0.6 Q**	<1
Carbon disulfide		ug/L	--	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.533 F
Chlorobenzene		ug/L	100	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Styrene		ug/L	100	--	<1	<1	<1	1.04	<1	<1	<1	<1	<1	<1

Notes:
µg/L micrograms per liter
-- Not listed
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TC Target Concentration

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Methods:
8260B Volatile Organic Compounds

TABLE 5
POSITIVE RESULTS SUMMARY - MONITORING WELLS
OCTOBER 2008 SEMIANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Analyte	Well ID / Sample ID / Lab ID / Date	units	MCL	TC	MW-240 / MW-240-IS-5 / L08100653-13 / 10/21/2008
1,1,2,2-Tetrachloroethane		ug/L	--	2.2	<0.5
1,1,2-Trichloroethane		ug/L	5	1.9	<1
1,1-Dichloroethene		ug/L	7	7	<1
1,2-Dichloroethane		ug/L	5	--	<0.5
Carbon tetrachloride		ug/L	5	3	<1
Chloroform		ug/L	80	12	<0.3
cis-1,2-Dichloroethene		ug/L	70	35	**1.01**
Tetrachloroethene		ug/L	5	2.5	<1
trans-1,2-Dichloroethene		ug/L	100	50	<1
Trichloroethene		ug/L	5	5	**1.63**
Vinyl chloride		ug/L	2	--	<1
Total Primary CVOCs					**2.64**
1,1,1,2-Tetrachloroethane		ug/L	--	--	<0.5
1,1,1-Trichloroethane		ug/L	200	--	<1
1,1-Dichloroethane		ug/L	--	--	<1
1,4-Dichlorobenzene		ug/L	75	--	<0.5
Acetone		ug/L	--	--	<10
Benzene		ug/L	5	--	<0.4
Bromomethane		ug/L	--	--	<1
Carbon disulfide		ug/L	--	--	<1
Chlorobenzene		ug/L	100	--	<0.5
Styrene		ug/L	100	--	<1

Notes:
µg/L micrograms per liter
-- Not listed
MCL Maximum Contaminant Level
MDL Minimum Detection Limit
RL Reporing Limit
TC Target Concentration

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Methods:
8260B Volatile Organic Compounds

TABLE 6
POSITIVE RESULTS SUMMARY - RECOVERY WELLS
OCTOBER 2008 SEMIANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Analyte	Well ID / Sample ID / Lab ID / Date	units	MCL	TC	RW-1 RW-1-IS-5 L08100573-33 10/17/2008	RW-1A RW-1A-IS-5 L08100573-34 10/17/2008	RW-1B RW-1B-IS-5 L08100573-35 10/17/2008	RW-2 RW-2-IS-5 L08100573-36 10/17/2008	RW-3 RW-3-IS-5 L08100573-37 10/17/2008	RW-4 RW-4-IS-5 L08100573-05 10/17/2008	RW-5 RW-5-IS-5 L08100573-08 10/17/2008	RW-6 RW-6-IS-5 L08100573-09 10/17/2008	RW-7 RW-7-IS-5 L08100573-10 10/17/2008	RW-8 RW-8-IS-5 L08100573-11 10/17/2008	RW-9 RW-9-IS-5 L08100573-12 10/17/2008
1,1,2,2-Tetrachloroethane		ug/L	–	2.2	<0.5	**14.3**	**3.41**	**17.5**	**1.7**	**52.5**	**1.59**	<0.5	0.447 F	**2.06**	**1.2**
1,1,2-Trichloroethane		ug/L	5	1.9	<1	0.299 F	<1	0.738 F	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		ug/L	7	7	<1	<1	<1	<1	<1	<1	<1	<1	<1	**18**	**25**
1,2-Dichloroethane		ug/L	5	–	<0.5	**0.693**	<0.5	0.26 F	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.391 F
Carbon tetrachloride		ug/L	5	3	**11.8**	**1**	0.367 F	**3.08**	<1	<1	<1	<1	<1	<1	<1
Chloroform		ug/L	80	12	**49.8**	**19.2**	**13.3**	**70.8**	**0.762**	0.287 F	0.129 F	0.15 F	<0.3	0.193 F	0.223 F
cis-1,2-Dichloroethene		ug/L	70	35	**1.38**	**1.03**	<1	**7.69**	0.865 F	0.546 F	<1	<1	<1	0.308 F	0.317 F
Tetrachloroethene		ug/L	5	2.5	**2.36**	0.494 F	0.293 F	**1.28**	<1	0.616 F	0.836 F	0.887 F	<1	**7.85**	**43.1**
trans-1,2-Dichloroethene		ug/L	100	50	0.735 F	<1	<1	0.529 F	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		ug/L	5	5	**34**	**8.9**	**2.6**	**29.6**	**1.94**	**28.8**	0.753 F	0.274 F	0.634 F	**10.2**	**30.2**
Vinyl chloride		ug/L	2	–	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total Primary CVOCs					100	45.9	20.0	131	5.27	82.7	3.31	1.31	1.08	38.6	100
1,1-Dichloroethane		ug/L	–	–	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.433 F	**1.06**

Notes:

µg/L micrograms per liter

– Not listed

MCL Maximum Contaminant Level

TC Target Concentration

Results detected at or above reporting limits shown in bold

DQE Flags:

F Concentration below RL but above MDL

< Analyte not detected above RL

Methods:

8260B Volatile Organic Compounds

970 27

TABLE 7
EFFLUENT SAMPLE RESULTS
OCTOBER 2008 SEMIANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Sample Site ID Date and Time Collected	EFFLUENT- 7/7/2008	EFFLUENT- 10/17/2008	City of Memphis Industrial Permit Discharge Limits Monthly Average Maximum Level	 Instantaneous Daily Maximum
pH - E150.1				
pH	NS	6.26	5.5 to 10.0	5.5 to 10.0
Total Metals - SW6010B ug/L				
Aluminum	NS	ND	5000	10000
Antimony	NS	ND	6	12
Arsenic	NS	ND	40	100
Barium	NS	99.9	2000	4000
Cadmium	NS	ND	10	20
Calcium	NS	23000 M	40000	80000
Chromium	NS	ND	200	400
Copper	NS	ND	600	1200
Iron	NS	382	15000	30000
Lead	NS	1.44	150	300
Magnesium	NS	12100	20000	40000
Manganese	NS	78.2	50	100
Mercury	NS	ND	1	2
Nickel	NS	ND	100	300
Potassium	NS	839 F	2000	4000
Selenium	NS	0.984 F	50	100
Sodium	NS	24400	40000	80000
Thallium	NS	ND	2	4
Zinc	NS	42.7	300	1000
Volatile Organic Compounds - SW8260B ug/L				
1,1,2,2-Tetrachloroethane	135 M	7.76	500	1000
1,1,1-Trichloroethane	ND	ND	10	20
1,1,2-Trichloroethane	0.621 F	ND	50	100
1,1-Dichloroethane	ND	0.451 F	10	20
1,1-Dichloroethene	ND	12	50	100
Acetone	8.07	ND	2000	4000
Carbon tetrachloride	1.81	ND	20	40
Chloroform	54.5 M	4.71	100	200
Chloromethane	ND	ND	10	20
cis-1,2-Dichloroethene	6.11	0.822 F	80	100
Methylene chloride	ND	ND	10	20
Tetrachloroethene	1.04	16.5	60	120
Toluene	ND	ND	20	40
trans-1,2-Dichloroethene	1.02	ND	50	100
Trichloroethene	32.1	18	400	800
Semi-volatile Organic Compounds - SW8270B ug/L				
Bis (2-ethylhexyl) Phthalate	NS	ND	35	70
Di-n-butyl Phthalate	NS	ND	30	60
Fluoranthene	NS	ND	10	20
Naphthalene	NS	ND	10	20
Phenanthrene	NS	ND	10	20
Phenol	NS	ND	1	120
Pyrene	NS	ND	10	20

Notes:

F Estimated quantitation: result below the reporting limit or estimated based on the QC data
M Estimated due to Martix effect
ND Not detected above the reporting limit
NS Not Sampled

TABLE 8
SUMMARY OF ANALYTICAL RESULTS - MONITORING WELLS
OCTOBER 2008 SEMI-ANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

VOC Analyte	Maximum Contaminant Level (MCL) (µg/L)	Target Concentration (TC) (µg/L)	Number of Locations with VOC Analyte Above RL	Maximum Concentrations (µg/L)	Location of Maximum Concentration	Number of Locations with VOC Analyte Above MCL	Number of Locations with VOC Analyte Above TC
1,1,2,2-Tetrachloroethane	--	2.2	31	7140	MW-162	--	25
1,1,2-Trichloroethane	5	1.9	7	92.8 J	MW-159	5	7
1,1-Dichloroethene	7	7	14	80.2 J	MW-130	7	7
1,2-Dichloroethane	5	--	5	2.99	MW-227	0	--
Carbon Tetrachloride	5	3	12	12	MW-157	6	11
Chloroform	80	12	26	134	MW-227	3	12
cis-1,2-Dichloroethene	70	35	26	959	MW-159	1	6
Tetrachloroethene	5	2.5	26	140 J	MW-130	13	17
Trans-1,2-dichloroethene	100	50	13	46.2 J	MW-159	0	0
Trichloroethene	5	5	42	1610	MW-162	33	33
Vinyl chloride	2	--	2	17.7 Q	MW-159	2	--

Notes:
µg/L micrograms per liter
-- Not Listed
N/A Not applicable
RL Reporting Limit

DQE Flags:
J This analyte was positively identifeid, but the quantation is an estimate.
Q Quality control criteria failed, further reveiw required.

TABLE 9
SUMMARY OF ANALYTICAL RESULTS - RECOVERY WELLS
OCTOBER 2008 SEMI-ANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

VOC Analyte	Maximum Contaminant Level (MCL) (µg/L)	Target Concentration (TC) (µg/L)	Number of Locations with VOC Analyte Above RL	Maximum Concentrations (µg/L)	Location of Maximum Concentration	Number of Locations with VOC Analyte Above MCL	Number of Locations with VOC Analyte Above TC
1,1,2,2-Tetrachloroethane	--	2.2	8	52.5	RW-4	--	4
1,1,2-Trichloroethane	5	1.9	0	0.738 F	RW-2	0	0
1,1-Dichloroethene	7	7	2	25	RW-9	2	2
1,2-Dichloroethane	5	--	1	0.693	RW-1A	0	--
Carbon Tetrachloride	5	3	3	11.8	RW-1	1	2
Chloroform	80	12	5	70.8	RW-2	0	4
cis-1,2-Dichloroethene	70	35	3	7.69	RW-2	0	0
Tetrachloroethene	5	2.5	4	43.1	RW-9	2	2
Trans-1,2-dichloroethene	100	50	0	0.735 F	RW-1	0	0
Trichloroethene	5	5	8	34	RW-1	6	6
Vinyl chloride	2	--	0	0	N/A	N/A	N/A

Notes:
µg/L micrograms per liter
-- Not Listed
MDL Method Detection Limit
N/A Not applicable
RL Reporting Limit

DQE Flags:
F Concentration below RL but above MDL

970 30

FIGURES

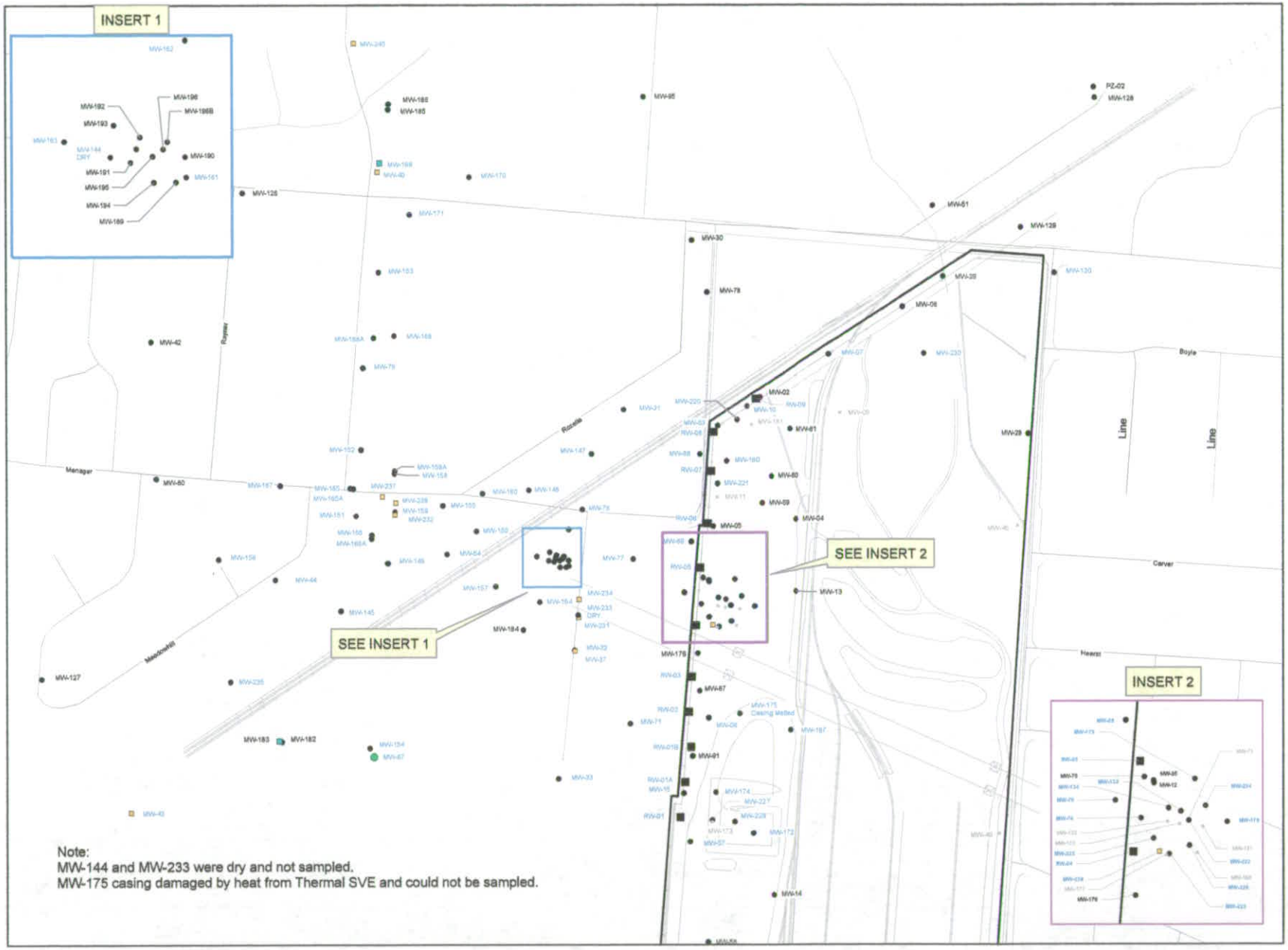

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Figure 1

WELL LOCATION MAP

OCTOBER 2008 SEMIANNUAL MONITORING REPORT

DUNN FIELD GROUNDWATER IRA YEAR TEN

DEFENSE DEPOT MEMPHIS, TENNESSEE

Legend

- Monitoring Well Screened in the Fluvial Aquifer
- Recovery Well Screened in the Fluvial Aquifer
- Monitoring Well Screened in the Intermediate Aquifer
- Monitoring Well Screened in the Transition Zone
- Monitoring Well Screened in the Memphis Aquifer
- Abandoned
- Annual Sample Location October 2008
- Dunn Field Boundary

0 150 300 450 600

Feet

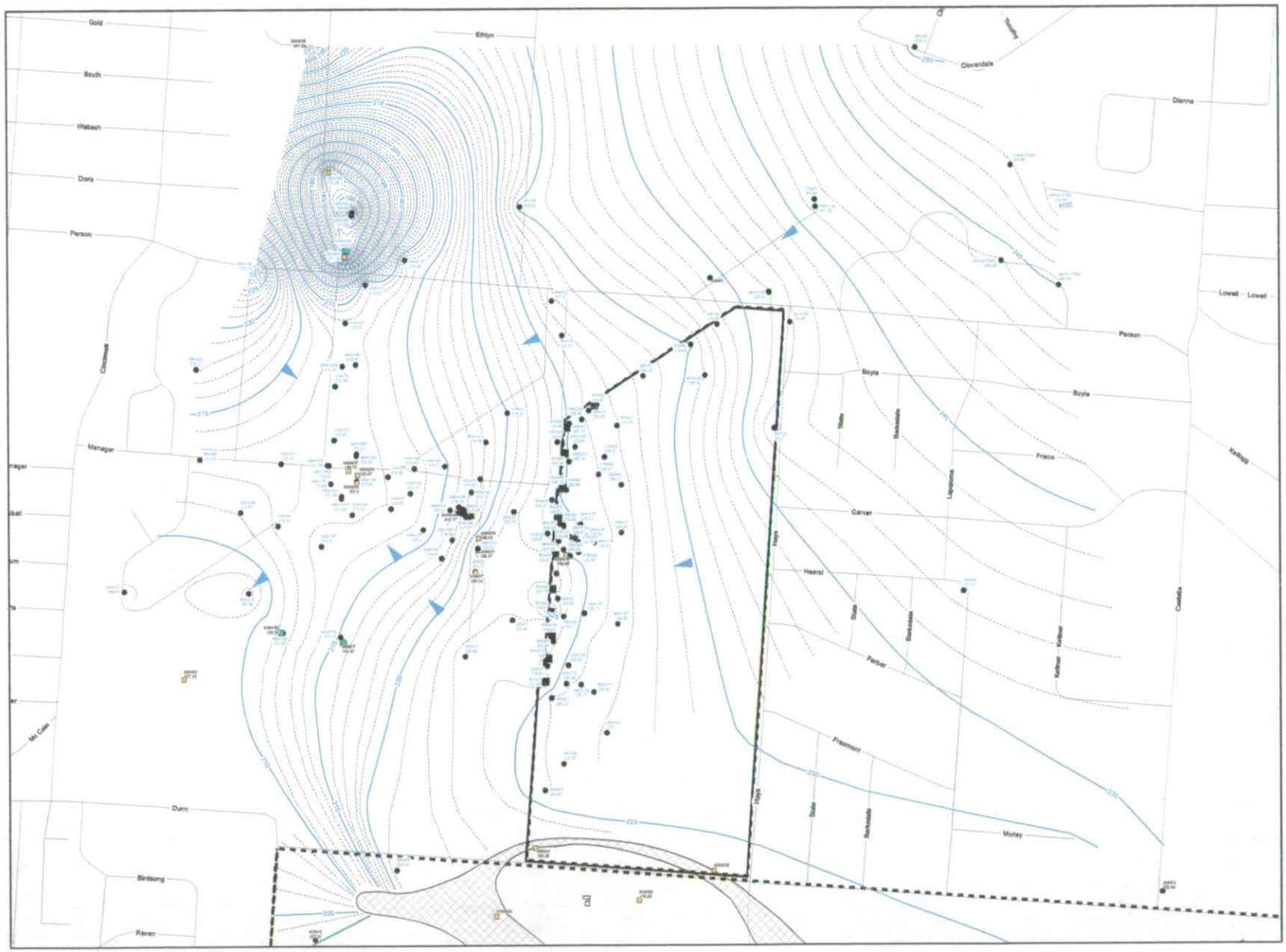

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Figure 2

GROUNDWATER ELEVATION CONTOUR MAP 14 OCTOBER 2008

OCTOBER 2008 SEMIANNUAL MONITORING REPORT

DUNN FIELD GROUNDWATER IRA YEAR TEN

DEFENSE DEPOT MEMPHIS, TENNESSEE

Legend

- Monitoring Well Screened in the Fluvial Aquifer
- Recovery Well Screened in the Fluvial Aquifer
- Monitoring Well Screened in the Intermediate Aquifer
- Monitoring Well Screened in the Transition Zone
- Monitoring Well Screened in the Memphis Aquifer
- Dunn Field Boundary
- Clay Area Clay Elevation Exceeds Groundwater Elevation

MW-03 Blue non-italics: value used for groundwater contours 100.12

MW-237 Black italics: value not used for groundwater contours 100.15 (non-fluvial well or anomalous reading)

Groundwater Contours

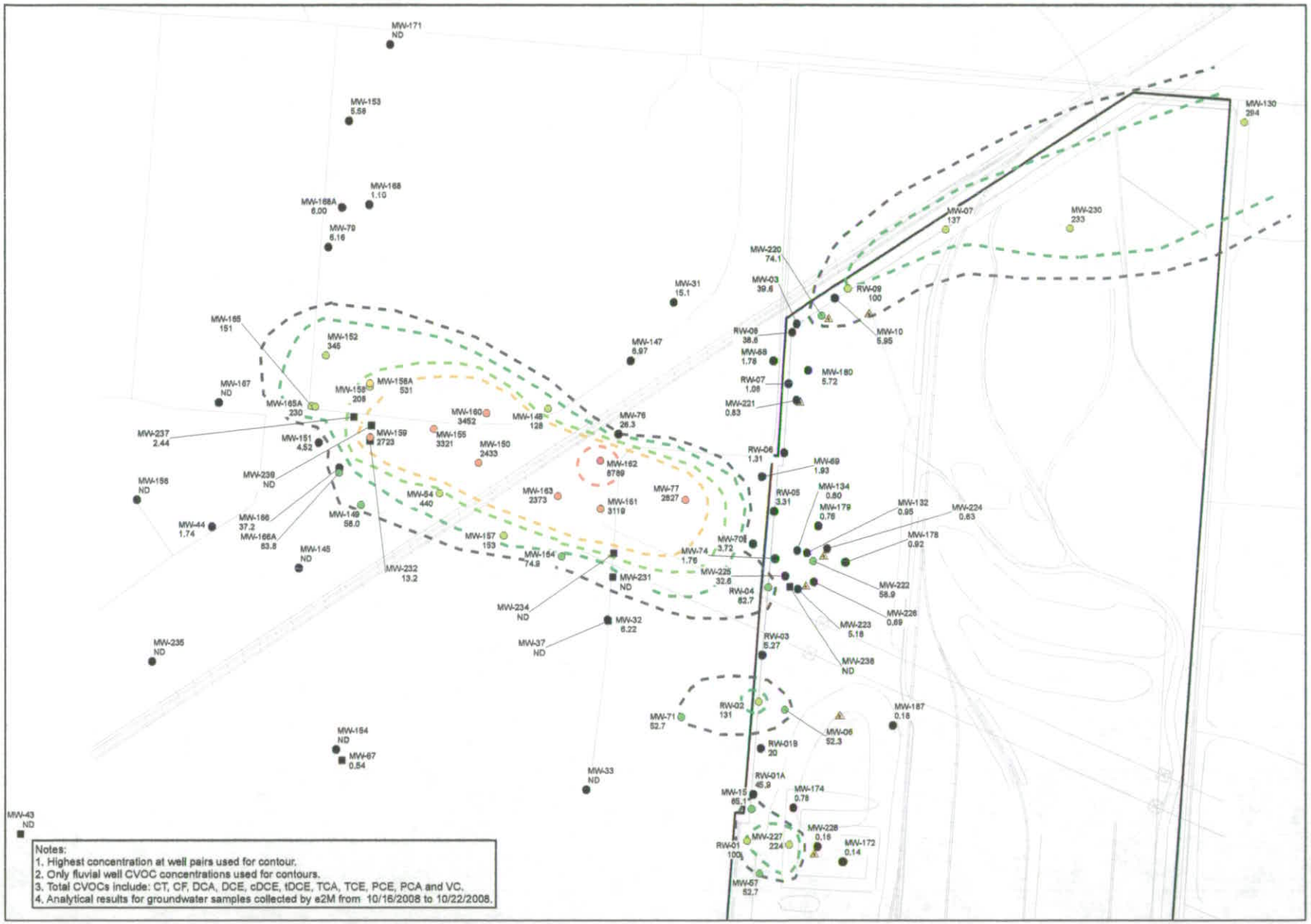
- 1-ft Contour
- 5-ft Contour
- Groundwater Flow Direction

0 200 400 600 800

Feet

Installation Location
Memphis, Tennessee

Date: November 2008
Edition: Rev 0



Notes:
1. Highest concentration at well pairs used for contour.
2. Only fluvial well CVOC concentrations used for contours.
3. Total CVOCs include: CT, CF, DCA, DCE, cDCE, tDCE, TCA, TCE, PCE, PCA and VC.
4. Analytical results for groundwater samples collected by e2M from 10/16/2008 to 10/22/2008.

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W E
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Figure 3

TOTAL CVOC CONCENTRATIONS, OCTOBER 2008

OCTOBER 2008 SEMIANNUAL MONITORING REPORT

DUNN FIELD GROUNDWATER IRA YEAR TEN

DEFENSE DEPOT MEMPHIS, TENNESSEE

Legend

CVOCs Fluvial Wells ug/L
- 0 - 50
- 51 - 100
- 101 - 500
- 501 - 1000
- 1001 - 5000
- 5001 - 10000

CVOCs Non-Fluvial Wells ug/L
- 0 - 50

Total CVOC Isopleth (ug/L)
- 50
- 100
- 500
- 1000
- 5000

SVE - Soil Vapor Extraction Point

0 50 100 200 300 400
Feet

Installation Location
Memphis, Tennessee

Date: November 2008
Edition: Rev 0

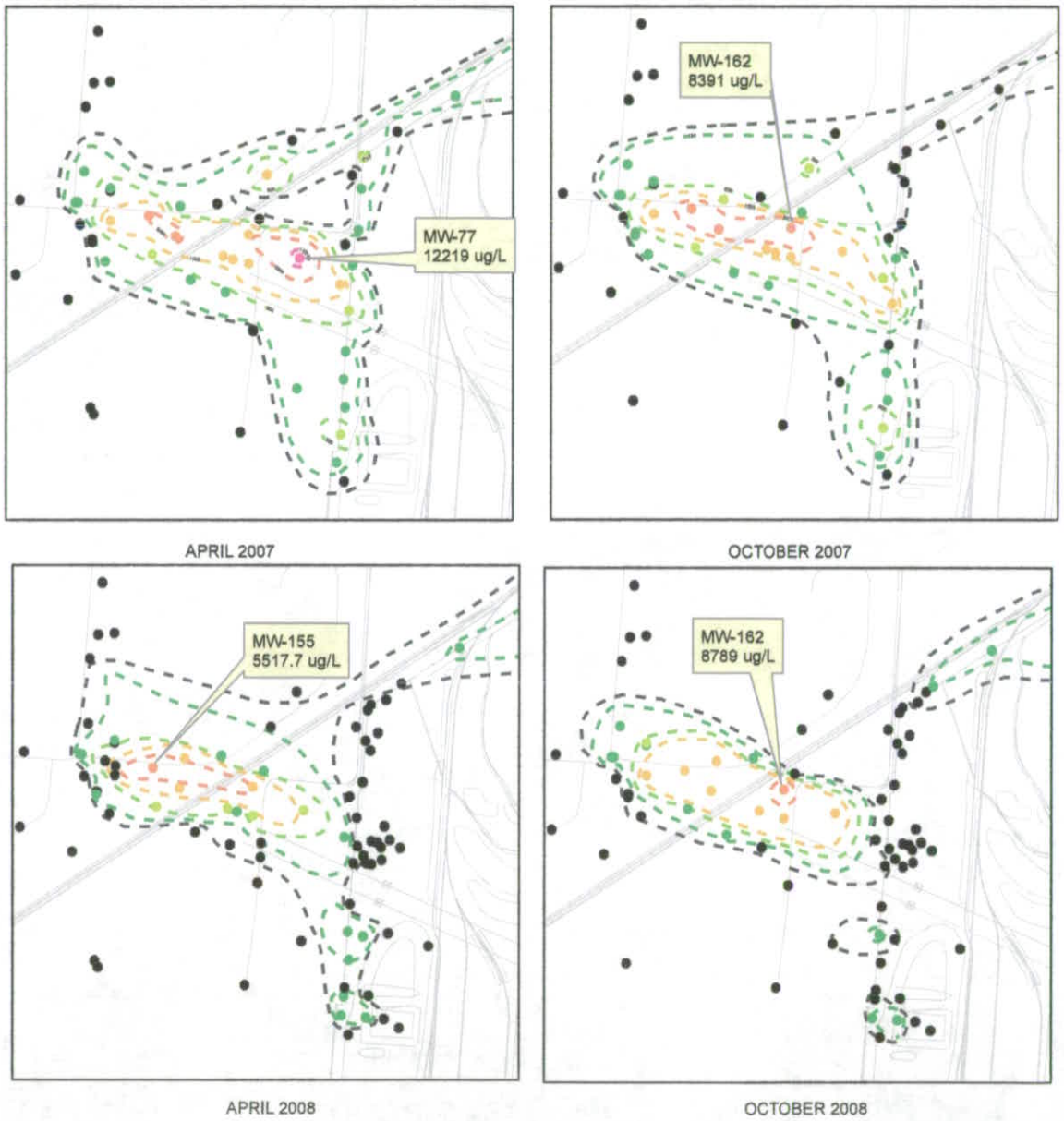

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Figure 4

TOTAL CVOC CONCENTRATIONS, TIME TREND

OCTOBER 2008 SEMIANNUAL MONITORING REPORT

DUNN FIELD
GROUNDWATER IRA
YEAR TEN

DEFENSE DEPOT
MEMPHIS, TENNESSEE

Legend

Total CVOC Isopleth (ug/L)
- 50
- 100
- 500
- 1000
- 5000
- 10000

Total CVOC Ranges (ug/L)
- 0 - 100
- 101 - 500
- 501 - 1000
- 1001 - 5000
- 5001 - 10000
- 10001 - 50000

Notes:
1. Highest concentration at well pairs used for contour.
2. Total CVOCs include: CT, CF, DCA, DCE, cDCE, tDCE, TCA, TCE, PCE, PCA and VC.
3. Highest Total CVOC labeled for each event.

0 200 400 600 800 1,000
Feet

Installation Location
Memphis, Tennessee

Date: November 2008
Edition: Rev 0

APPENDICES

A Results of Laboratory Analyses

B Time Trend Plots for IRA System Effluent and Recovery Wells

C Time Trend Plots for Dunn Field Monitoring Wells

D Time Trend Plots for Selected Off Depot Monitoring Wells

APPENDIX A

Results of Laboratory Analyses

TABLE A-1
MONITORING WELL SAMPLE ANALYTICAL RESULTS - VOCs
2008 ANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Analyte	Well	MW-3	MW-03 DUP7	MW-6	MW-07	MW-10	MW-15	MW-31
	Lab ID	L08100653-01	L08100653-06	L08100573-38	L08100573-01	L08100653-02	L08100573-45	L08100573-02
	Date	10/21/2008	10/21/2008	10/17/2008	10/17/2008	10/21/2008	10/16/2008	10/17/2008
	units							
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	0.335 F	0.324 F	<1	0.787 F	<1	<1	0.352 F
1,1,2,2-Tetrachloroethane	ug/L	2.46	2.19	5.57	<0.5	1.01	4.61	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	0.674 F	<1	<1	0.593 F	<1
1,1-Dichloroethane	ug/L	0.562 F	0.442 F	<1	1.46	<1	<1	0.253 F
1,1-Dichloroethene	ug/L	17.3	17.9	<1	32.7	<1	<1	7.36
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	0.228 F	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	0.385 F	<0.5	0.837 Q	<0.5
1,2-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropene	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
Acetone	ug/L	2.63 Q	3.01 F	<10	15.3	<10	<10	11.9
Benzene	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	2.91 B	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	0.847 F	<1	<1
Carbon tetrachloride	ug/L	<1	<1	0.793 F	<1	<1	2.51	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	0.212 F	0.187 F	21.2	0.299 F	0.288 F	29.9	0.219 F
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	<1	15	0.367 F	0.992 F	2.54	<1
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	9.5	9.13	<1	63.9	<1	1.16	3.17
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	0.458 F	<1	0.432 F	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	10.1	10.2	8.6	38.9	3.23	22.9	4.34
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1

Notes:
µg/L micrograms per liter

< Analyte not detected above RL
F Concentration below RL but above MDL
Q Quality control criteria failed, further review
J The analyte was positively identified, but the
M Concentration estimated due to matrix effect

Method:
SW8260B - Volatile Organic Compounds

TABLE A-1
MONITORING WELL SAMPLE ANALYTICAL RESULTS - VOCs
2008 ANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Analyte	Well	MW-32 DUP8	MW-32	MW-33	MW-37	MW-40	MW-43	MW-44
	Lab ID	L08100573-18	L08100573-03	L08100573-04	L08100573-54	L08100600-01	L08100600-04	L08100600-05
	Date	10/17/2008	10/17/2008	10/17/2008	10/17/2008	10/20/2008	10/20/2008	10/20/2008
	units							
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	0.276 F	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	0.603	0.623	<0.5	<0.5	<0.5	0.149 F	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
Acetone	ug/L	14.8	15.3	3 F	16.4	16	13.3	12.8
Benzene	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	2.83 B	2.83 B
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	0.708 F
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	0.662	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	0.206 F	0.2 F	<0.3	<0.3	<0.3	<0.3	0.366
Chloromethane	ug/L	<1	<1	0.368 F	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	2.12	2.09	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
Toluene	ug/L	0.341 F	0.321 F	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	3.47	3.65	<1	<1	<1	<1	0.665 F
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1

Notes:
µg/L micrograms per liter

< Analyte not detected above RL
F Concentration below RL but above MDL
Q Quality control criteria failed, further review
J The analyte was positively identified, but the
M Concentration estimated due to matrix effect

Method:
SW8260B - Volatile Organic Compounds

TABLE A-1
MONITORING WELL SAMPLE ANALYTICAL RESULTS - VOCs
2008 ANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Analyte	Well	MW-54	MW-57	MW-67	MW-68	MW-69	MW-70	MW-71
	Lab ID	L08100600-06	L08100573-19	L08100600-07	L08100573-20	L08100573-21	L08100573-22	L08100573-23
	Date	10/20/2008	10/17/2008	10/20/2008	10/17/2008	10/17/2008	10/17/2008	10/17/2008
	units							
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	53.9 J	<0.5	0.251 F	<0.5	0.229 F	0.883	5.32
1,1,2-Trichloroethane	ug/L	0.621 F	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	0.727 F	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
Acetone	ug/L	5.34 F	4 F	13.9	13.6	14.5	13.4	<10
Benzene	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	2.82 J	<1	2.79 B	<1	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	4.37 J	4.23	<1	<1	<1	<1	5.94
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	9.78 J	15.9	<0.3	<0.3	0.147 F	<0.3	27.2
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	15.7 J	<1	<1	<1	<1	<1	0.717 F
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	2.46 J	1.82	<1	0.482 F	0.67 F	0.676 F	0.856 F
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	3.13 J	0.358 F	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	350	30.4	0.292 F	0.573 F	0.88 F	1.96	12.7
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1

Notes:
µg/L micrograms per liter

< Analyte not detected above RL
F Concentration below RL but above MDL
Q Quality control criteria failed, further review
J The analyte was positively identified, but the
M Concentration estimated due to matrix effect

Method:
SW8260B - Volatile Organic Compounds

TABLE A-1
MONITORING WELL SAMPLE ANALYTICAL RESULTS - VOCs
2008 ANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Analyte	Well	MW-74 DUP10	MW-74	MW-76	MW-77	MW-79	MW-130	MW-132 DUP11
	Lab ID	L08100653-07	L08100653-09	L08100573-24	L08100573-25	L08100600-08	L08100600-09	L08100600-39
	Date	10/21/2008	10/21/2008	10/17/2008	10/17/2008	10/20/2008	10/20/2008	10/20/2008
	units							
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1	3.47 Q	<1
1,1,2,2-Tetrachloroethane	ug/L	0.49 F	0.458 F	9.41	2010	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	2.3	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1	3.69 J	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	4.17 J	80.2 J	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	1.06 Q	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	0.156 F	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	3.68 F	<10	<10	7.05 F	<10
Benzene	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	0.216 F	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	0.653 F	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	2.81 J	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<0.3	<0.3	0.167 F	0.573	0.127 F	0.296 F	<0.3
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	<1	0.406 F	13.2	<1	0.799 F	<1
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	0.867 F	0.842 F	1.35	4.62	0.914 F	140 J	0.619 F
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	0.709 F	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	0.471 F	0.458 F	15	796	0.948 F	71.8 J	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1

Notes:
µg/L micrograms per liter

< Analyte not detected above RL
F Concentration below RL but above MDL
Q Quality control criteria failed, further review
J The analyte was positively identified, but the
M Concentration estimated due to matrix effect

Method:
SW8260B - Volatile Organic Compounds

TABLE A-1
MONITORING WELL SAMPLE ANALYTICAL RESULTS - VOCs
2008 ANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Analyte	Well	MW-132	MW-134	MW-145	MW-147	MW-148	MW-149	MW-150
	Lab ID	L08100600-40	L08100600-41	L08100600-10	L08100573-26	L08100573-27	L08100600-11	L08100600-12
	Date	10/20/2008	10/20/2008	10/20/2008	10/17/2008	10/17/2008	10/20/2008	10/20/2008
	units							
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	0.277 F	<0.5	<0.5	0.373 F	9.66 J	1.71 J	1750
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	12.4
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	0.992 F
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	0.149 F	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	14 J	2.97 F	5.64 F	11.9 J	4.63 F
Benzene	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	2.85 J	<1	3.04 B
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	8.17 J	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<0.3	<0.3	<0.3	0.147 F	0.665 J	25.6 J	5
Chloromethane	ug/L	<1	<1	<1	0.292 F	0.572 F	0.515 F	0.288 F
cis-1,2-Dichloroethene	ug/L	<1	<1	<1	0.401 F	6.63 J	1.63 J	22.4
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	0.675 F	0.801 F	<1	2.95	2.42 J	0.717 F	5.22
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	1.73 J	0.378 F	1.28
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	<1	<1	<1	3.1	107 J	19.8 J	636
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1

Notes:
µg/L micrograms per liter

< Analyte not detected above RL
F Concentration below RL but above MDL
Q Quality control criteria failed, further review
J The analyte was positively identified, but the
M Concentration estimated due to matrix effect

Method:
SW8260B - Volatile Organic Compounds

TABLE A-1
MONITORING WELL SAMPLE ANALYTICAL RESULTS - VOCs
2008 ANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Analyte	Well	MW-151	MW-152	MW-153	MW-154 DUP9	MW-154	MW-155	MW-156
	Lab ID	L08100600-13	L08100600-14	L08100600-15	L08100600-02	L08100600-16	L08100600-17	L08100600-18
	Date	10/20/2008	10/20/2008	10/20/2008	10/20/2008	10/20/2008	10/20/2008	10/20/2008
	units							
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	1.06	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	11.7	<0.5	<0.5	<0.5	2040	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1	7.58	<1
1,1-Dichloroethane	ug/L	<1	<1	0.363 F	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	0.758 F	5.31	<1	<1	1.04	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
Acetone	ug/L	<10	7.62 F	6.42 F	<10	<10	4.4 F	11 8
Benzene	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1	0.648 F	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1	0.897 F	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	0.564 F	0.459 F	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	1.34	2.59	<0.3	<0.3	<0.3	1.17	<0.3
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	40.2	<1	<1	<1	46.8	<1
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1	<1	<1
p-isopropyltoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	15.7	0.272 F	<1	<1	10.4	<1
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	13.4	<1	<1	<1	3.58	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	2.62	260	<1	<1	<1	1210	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1

Notes:
µg/L micrograms per liter

< Analyte not detected above RL
F Concentration below RL but above MDL
Q Quality control criteria failed, further review
J The analyte was positively identified, but the
M Concentration estimated due to matrix effect

Method:
SW8260B - Volatile Organic Compounds

TABLE A-1
MONITORING WELL SAMPLE ANALYTICAL RESULTS - VOCs
2008 ANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Analyte	Well	MW-157	MW-158	MW-158A	MW-159	MW-160	MW-161	MW-162
	Lab ID	L08100573-28	L08100600-21	L08100600-22	L08100600-25	L08100600-26	L08100573-29	L08100573-30
	Date	10/17/2008	10/20/2008	10/20/2008	10/20/2008	10/20/2008	10/17/2008	10/17/2008
	units							
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	0.779 J	0.83 Q	<25
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<50
1,1,2,2-Tetrachloroethane	ug/L	7.19	27.4	29.4 J	271	2340	2120 J	7140
1,1,2-Trichloroethane	ug/L	0.39 F	<1	<1	92.8 J	3.84 J	6.61 J	<50
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<50
1,1-Dichloroethene	ug/L	<1	<1	1.65 J	7.33 J	<1	<1	<50
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<50
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<50
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<50
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<50
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<50
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2	<2	<100
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<50
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<50
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	1.34 J	<0.5	<0.5	<25
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<50
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<50
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<50
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<20
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1	<1	<50
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<50
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<1	<50
2-Hexanone	ug/L	<10	<10	<10	<10	<10	<10	<500
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<1	<50
Acetone	ug/L	3.32 F	4.43 F	6.86 F	6.89 F	7.85 F	17.3 J	<500
Benzene	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<20
Bromobenzene	ug/L	<1	<1	<1	<1	<1	<1	<50
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<50
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<50
Bromomethane	ug/L	2.81 B	<1	2.82 J	2.75 J	<1	<1	<50
Carbon disulfide	ug/L	<1	<1	<1	2.2 J	<1	<1	<50
Carbon tetrachloride	ug/L	12	<1	0.825 F	<1	0.388 F	0.39 F	<50
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<50
Chloroform	ug/L	89.6	0.682	3.94 J	1.66 J	1.75 J	3.65 J	<15
Chloromethane	ug/L	0.518 F	<1	<1	<1	<1	<1	<50
cis-1,2-Dichloroethene	ug/L	3.29	7.79	54.4 J	959	40.6 J	27 J	38.7 F
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<50
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<50
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<50
Hexachlorobutadiene	ug/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<30
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<50
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2	<2	<100
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10	<10	<500
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5	<5	<250
Methylene chloride	ug/L	<1	<1	<1	<1	<1	<1	<50
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10	<10	<500
Naphthalene	ug/L	<1	<1	<1	<1	<1	<1	<50
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<50
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<50
o-Xylene	ug/L	<1	<1	<1	<1	<1	<1	<50
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1	<1	<50
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<50
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<50
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<50
Tetrachloroethene	ug/L	1.15	6.92	15 J	5.48 J	9.87 J	6.79 J	<50
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<50
trans-1,2-Dichloroethene	ug/L	0.589 F	2.74	18 J	46.2 J	5.81 J	2.91 J	<50
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<50
Trichloroethene	ug/L	38.3	162	408	1320	1050	952 J	1810
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<50
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<250
Vinyl chloride	ug/L	<1	<1	<1	17.7 Q	<1	<1	<50

Notes:
µg/L micrograms per liter

< Analyte not detected above RL
F Concentration below RL but above MDL
Q Quality control criteria failed, further review
J The analyte was positively identified, but the
M Concentration estimated due to matrix effect

Method:
SW8260B - Volatile Organic Compounds

TABLE A-1
MONITORING WELL SAMPLE ANALYTICAL RESULTS - VOCs
2008 ANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Analyte	Well	MW-163	MW-164	MW-165	MW-165A	MW-166	MW-166A	MW-167
	Lab ID	L08100573-31	L08100573-32	L08100600-27	L08100600-28	L08100600-29	L08100600-30	L08100600-33
	Date	10/17/2008	10/17/2008	10/20/2008	10/20/2008	10/20/2008	10/20/2008	10/20/2008
	units							
1,1,1,2-Tetrachloroethane	ug/L	<2.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<5	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	1710	6.83	4.94	10.5	0.519	0.149 F	<0.5
1,1,2-Trichloroethane	ug/L	6.96	0.403 F	0.491 F	0.496 F	<1	<1	<1
1,1-Dichloroethane	ug/L	<5	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<5	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<5	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<5	<1	<1	<1	<1	<1	0.163 F
1,2,3-Trichloropropane	ug/L	<5	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<5	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<5	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<10	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<5	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<5	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<2.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<5	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<5	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<5	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<2	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<2.5	0.297 F	0.572	<0.5	<0.5	<0.5	0.429 F
1-Chlorohexane	ug/L	<5	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<5	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<5	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<50	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<5	<1	<1	<1	<1	<1	<1
Acetone	ug/L	21.1 F	5.65 F	15.6	5.54 F	4.76 F	6.62 F	15.3
Benzene	ug/L	<2	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	ug/L	<5	<1	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<5	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<2.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<5	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<5	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	<5	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<5	4.43	4.59	10.8	5.36	3.17	<1
Chlorobenzene	ug/L	<2.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<5	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	7.67	32.2	34.3	82.7	14.1	14.5	<0.3
Chloromethane	ug/L	<5	0.822 F	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	29.9	2.91	9.28	10.2	1.2	1.82	<1
cis-1,3-Dichloropropene	ug/L	<2.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<2.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<5	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<5	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<5	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<3	<0.6	<0.6	<0.6	<0.6	<0.6	0.269 F
Isopropylbenzene	ug/L	<5	<1	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<10	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<50	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<25	<5	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<5	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<50	<10	<10	<10	<10	<10	<10
Naphthalene	ug/L	<5	<1	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<5	<1	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<5	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	<5	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<5	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<5	<1	<1	<1	<1	<1	<1
Styrene	ug/L	<5	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<5	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<5	0.728 F	1.3	2.32	0.621 F	0.694 F	<1
Toluene	ug/L	<5	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	3.81 F	0.41 F	1.62	1.38	0.354 F	0.75 F	<1
trans-1,3-Dichloropropene	ug/L	<5	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	615	27	94.1	112	15	62.7 M	<1
Trichlorofluoromethane	ug/L	<5	<1	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<25	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<5	<1	<1	<1	<1	<1	<1

Notes:
µg/L micrograms per liter

< Analyte not detected above RL
F Concentration below RL but above MDL
Q Quality control criteria failed, further review
J The analyte was positively identified, but the
M Concentration estimated due to matrix effect

Method:
SW8260B - Volatile Organic Compounds

TABLE A-1
MONITORING WELL SAMPLE ANALYTICAL RESULTS - VOCs
2008 ANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Analyte	Well	MW-168	MW-168A	MW-169	MW-170	MW-171	MW-172 DUP1	MW-172
	Lab ID	L08100600-34	L08100600-35	L08100600-36	L08100600-37	L08100600-38	L08100573-48	L08100573-49
	Date	10/20/2008	10/20/2008	10/20/2008	10/20/2008	10/20/2008	10/16/2008	10/16/2008
	units							
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	1.73	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	0.419 F	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	0.711 F	5.27	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	0.494 F	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	13.9	18.2	15	<10	<10
Benzene	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	2.99 B	2.89 B
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<0.5	<0.5	0.471 F	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<0.3	0.222 F	<0.3	<0.3	<0.3	<0.3	0.139 F
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	0.503 F	<1	<1	<1	<1	<1
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	0.392 F	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1

Notes:
µg/L micrograms per liter

< Analyte not detected above RL
F Concentration below RL but above MDL
Q Quality control criteria failed, further review
J The analyte was positively identified, but the
M Concentration estimated due to matrix effect

Method:
SW8260B - Volatile Organic Compounds

TABLE A-1
MONITORING WELL SAMPLE ANALYTICAL RESULTS - VOCs
2008 ANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Analyte	Well	MW-174	MW-178	MW-179	MW-180	MW-187 DUP2	MW-187	MW-220
	Lab ID	L08100573-50	L08100600-42	L08100600-43	L08100653-10	L08100573-47	L08100573-51	L08100653-11
	Date	10/16/2008	10/20/2008	10/20/2008	10/21/2008	10/16/2008	10/16/2008	10/21/2008
	units							
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	0.491 F
1,1,2,2-Tetrachloroethane	ug/L	0.629	<0.5	<0.5	<0.5	<0.5	<0.5	0.267 F
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	0.942 F
1,1-Dichloroethene	ug/L	<1	<1	<1	2.04	<1	<1	44.3
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.427 F
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
Acetone	ug/L	<10	2.95 F	<10	2.92 F	<10	<10	<10
Benzene	ug/L	<0.4	3.22	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	2.82 B	<1	<1	<1	2.88 B	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	0.154 F	0.125 F	0.131 F	<0.3	0.214 F	0.183 F	0.217 F
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	0.419 F	0.627 F	1.88	0.292 F	<1	13.7
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	<1	0.373 F	<1	1.8	<1	<1	15.2
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1

Notes:
µg/L micrograms per liter

< Analyte not detected above RL
F Concentration below RL but above MDL
Q Quality control criteria failed, further review
J The analyte was positively identified, but the
M Concentration estimated due to matrix effect

Method:
SW8260B - Volatile Organic Compounds

TABLE A-1
MONITORING WELL SAMPLE ANALYTICAL RESULTS - VOCs
2008 ANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Analyte	Well	MW-221	MW-222	MW-223	MW-224	MW-225 DUP3	MW-225	MW-226
	Lab ID	L08100853-12	L08100600-44	L08100573-41	L08100600-45	L08100573-39	L08100573-42	L08100600-46
	Date	10/21/2008	10/20/2008	10/17/2008	10/20/2008	10/17/2008	10/17/2008	10/20/2008
	units							
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	0.329 F	47.1	0.913	<0.5	22.4	22.8	<0.5
1,1,2-Trichloroethane	ug/L	<1	0.648 F	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
Acetone	ug/L	<10	3.33 Q	<10	3.01 Q	<10	2.84 F	<10
Benzene	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<0.3	<0.3	0.249 F	<0.3	0.157 F	0.149 F	0.155 F
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	4.51	<1	<1	0.296 F	0.321 F	<1
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	0.484 F	0.457 F	0.628 F	0.611 F	0.652 F	0.533 F
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	0.376 F	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	0.501 F	5.81	3.56	<1	8.46	8.66	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1

Notes:
µg/L micrograms per liter

< Analyte not detected above RL
F Concentration below RL but above MDL
Q Quality control criteria failed, further review
J The analyte was positively identified, but the
M Concentration estimated due to matrix effect

Method:
SW8260B - Volatile Organic Compounds

TABLE A-1
MONITORING WELL SAMPLE ANALYTICAL RESULTS - VOCs
2008 ANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Analyte	Well	MW-227	MW-228	MW-230	MW-231	MW-232	MW-234	MW-235
	Lab ID	L08100573-43	L08100573-44	L08100693-03	L08100693-08	L08100653-14	L08100693-09	L08100693-06
	Date	10/17/2008	10/17/2008	10/22/2008	10/22/2008	10/21/2008	10/22/2008	10/22/2008
	units							
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	1.65	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	10.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	0.982 F	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	2.25	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	32.7 M	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	2.99	<0.5	0.71	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	0.178 F	<0.5	<0.5	<0.5	0.14 F	0.134 F	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	3.77 F	<10	<10
Benzene	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	0.788 Q	<1	0.609 Q	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	7.26	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	134	0.155 F	0.276 F	<0.3	<0.3	<0.3	<0.3
Chloromethane	ug/L	<1	<1	<1	0.45 F	<1	0.555 Q	0.265 Q
cis-1,2-Dichloroethene	ug/L	6.4	<1	1.27	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	1.04	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	2.7	<1	100 M	<1	<1	<1	<1
Toluene	ug/L	<1	<1	<1	<1	0.623 F	<1	<1
trans-1,2-Dichloroethene	ug/L	1.04	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	61.8	<1	98.4 M	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	13.2	<1	<1

Notes:
µg/L micrograms per liter

< Analyte not detected above RL
F Concentration below RL but above MDL
Q Quality control criteria failed, further review
J The analyte was positively identified, but the
M Concentration estimated due to matrix effect

Method:
SW8260B - Volatile Organic Compounds

TABLE A-1
MONITORING WELL SAMPLE ANALYTICAL RESULTS - VOCs
2008 ANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Analyte	Well	MW-236 DUP4	MW-236	MW-237	MW-238	MW-239	MW-240 DUP5	MW-240
	Lab ID	L08100693-01	L08100693-07	L08100693-10	L08100693-11	L08100653-15	L08100653-05	L08100653-13
	Date	10/22/2008	10/22/2008	10/22/2008	10/22/2008	10/21/2008	10/21/2008	10/21/2008
	units							
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	0.237 F	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	2.02	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	0.14 F	0.192 F	0.378 F	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	21	<10	<10
Benzene	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	0.5 Q	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	0.533 F	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<0.3	<0.3	0.182 F	<0.3	<0.3	<0.3	<0.3
Chloromethane	ug/L	0.438 Q	0.259 Q	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1	1.35	1.01
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	<1	0.261 F	<1	<1	<1	<1
Toluene	ug/L	<1	<1	<1	<1	0.641 F	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	<1	<1	<1	<1	<1	1.85	1.63
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1

Notes:
µg/L micrograms per liter

< Analyte not detected above RL
F Concentration below RL but above MDL
Q Quality control criteria failed, further review
J The analyte was positively identified, but the
M Concentration estimated due to matrix effect

Method:
SW8260B - Volatile Organic Compounds

TABLE A-2
RECOVERY WELL SAMPLE ANALYTICAL RESULTS - VOCs
2008 ANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Analyte	Well Lab ID Date units	RW-1 L08100573-33 10/17/2008 ug/L	RW-1A L08100573-34 10/17/2008	RW-1B L08100573-35 10/17/2008	RW-01B L08100573-17 10/17/2008	RW-2 L08100573-36 10/17/2008	RW-3 L08100573-37 10/17/2008
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	14.3	3.41	2.66	17.5	1.7
1,1,2-Trichloroethane	ug/L	<1	0.299 F	<1	<1	0.738 F	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	0.693	<0.5	<0.5	0.26 F	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10	<10
Benzene	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	11.8	1	0.367 F	0.289 F	3.08	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	49.8	19.2	13.3	12.2	70.8	0.762
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	1.36	1.03	<1	<1	7.69	0.865 F
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	2.35	0.494 F	0.293 F	0.312 F	1.28	<1
Toluene	ug/L	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	0.735 F	<1	<1	<1	0.529 F	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	34	8.9	2.6	2.67	29.6	1.94
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1

Notes:
µg/L micrograms per liter
< Analyte not detected above RL
F Concentration below RL but above MDL
M Concentration estimated due to matrix effect
Method:
SW8260B - Volatile Organic Compounds

TABLE A-2
RECOVERY WELL SAMPLE ANALYTICAL RESULTS - VOCs
2008 ANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Analyte	Well Lab ID Date units	RW-4 L08100573-05 10/17/2008 ug/L	RW-5 L08100573-08 10/17/2008 ug/L	RW-6 L08100573-09 10/17/2008 ug/L	RW-7 L08100573-10 10/17/2008 ug/L	RW-8 L08100573-11 10/17/2008 ug/L	RW-9 L08100573-12 10/17/2008 ug/L
1,1,1,2-Tetrachloroethane		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane		<1	<1	<1	<1	0.336 F	0.584 F
1,1,2,2-Tetrachloroethane		52.5 M	1.59	<0.5	0.447 F	2.06	1.2
1,1,2-Trichloroethane		<1	<1	<1	<1	<1	<1
1,1-Dichloroethane		<1	<1	<1	<1	0.433 F	1.06
1,1-Dichloroethene		<1	<1	<1	<1	18	25
1,1-Dichloropropene		<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene		<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane		<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene		<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene		<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane		<2	<2	<2	<2	<2	<2
1,2-Dibromoethane		<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene		<1	<1	<1	<1	<1	<1
1,2-Dichloroethane		<0.5	<0.5	<0.5	<0.5	<0.5	0.391 F
1,2-Dichloropropane		<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene		<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene		<1	<1	<1	<1	<1	<1
1,3-Dichloropropane		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane		<1	<1	<1	<1	<1	<1
2,2-Dichloropropane		<1	<1	<1	<1	<1	<1
2-Chlorotoluene		<1	<1	<1	<1	<1	<1
2-Hexanone		<10	<10	<10	<10	<10	<10
4-Chlorotoluene		<1	<1	<1	<1	<1	<1
Acetone		<10	<10	<10	<10	<10	<10
Benzene		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene		<1	<1	<1	<1	<1	<1
Bromochloromethane		<1	<1	<1	<1	<1	<1
Bromodichloromethane		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform		<1	<1	<1	<1	<1	<1
Bromomethane		<1	<1	<1	<1	<1	<1
Carbon disulfide		<1	<1	<1	<1	<1	<1
Carbon tetrachloride		<1	<1	<1	<1	<1	<1
Chlorobenzene		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane		<1	<1	<1	<1	<1	<1
Chloroform		0.287 F	0.129 F	0.15 F	<0.3	0.193 F	0.223 F
Chloromethane		0.289 F	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene		0.546 F	<1	<1	<1	0.308 F	0.317 F
cis-1,3-Dichloropropene		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane		<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane		<1	<1	<1	<1	<1	<1
Ethylbenzene		<1	<1	<1	<1	<1	<1
Hexachlorobutadiene		<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene		<1	<1	<1	<1	<1	<1
m-,p-Xylene		<2	<2	<2	<2	<2	<2
MEK (2-Butanone)		<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)		<5	<5	<5	<5	<5	<5
Methylene chloride		<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)		<10	<10	<10	<10	<10	<10
Naphthalene		<1	<1	<1	<1	<1	<1
n-Butylbenzene		<1	<1	<1	<1	<1	<1
n-Propylbenzene		<1	<1	<1	<1	<1	<1
o-Xylene		<1	<1	<1	<1	<1	<1
p-Isopropyltoluene		<1	<1	<1	<1	<1	<1
sec-Butylbenzene		<1	<1	<1	<1	<1	<1
Styrene		<1	<1	<1	<1	<1	<1
tert-Butylbenzene		<1	<1	<1	<1	<1	<1
Tetrachloroethene		0.616 F	0.836 F	0.887 F	<1	7.85	43.1
Toluene		<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene		<1	<1	<1	<1	<1	<1
Trichloroethene		28.8	0.753 F	0.274 F	0.634 F	10.2	30.2
Trichlorofluoromethane		<1	<1	<1	<1	<1	<1
Vinyl acetate		<5	<5	<5	<5	<5	<5
Vinyl chloride		<1	<1	<1	<1	<1	<1

Notes:
µg/L micrograms per liter
< Analyte not detected above RL
F Concentration below RL but above MDL
M Concentration estimated due to matrix effect
Method:
SW8260B - Volatile Organic Compounds

TABLE A-3
EFFLUENT SAMPLE RESULTS
2008 ANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Sample ID	EFFLUENT	EFFLUENT-DUP	EFFLUENT	EFFLUENT-DUP	EFFLUENT	EFFLUENT-DUP	EFFLUENT	EFFLUENT-DUP
Date	1/9/2008	1/9/2008	4/16/2008	4/16/2008	7/7/2008	7/7/2008	10/17/2008	10/17/2008
pH - E150.1								
pH	NC		6.11	6.26	NC		6.26	6.21
Total Metals - SW6010B µg/L								
Aluminum, Total	NC	NC	<100	<100	NC	NC	<100	<100
Arsenic, Total	NC	NC	<10	<10	NC	NC	0.436 F	0.459 F
Barium, Total	NC	NC	98.7	98.6	NC	NC	99.9	103
Beryllium, Total	NC	NC	<10	<10	NC	NC	<10	<10
Cadmium, Total	NC	NC	<10	<10	NC	NC	<10	<10
Calcium, Total	NC	NC	19600	19700	NC	NC	23000 M	23000
Chromium, Total	NC	NC	<20	<20	NC	NC	<20	<20
Cobalt, Total	NC	NC	<20	<20	NC	NC	<20	<20
Copper, Total	NC	NC	<20	<20	NC	NC	<20	<20
Iron, Total	NC	NC	<100	<100	NC	NC	382	387
Lead, Total	NC	NC	<5	<5	NC	NC	1.44	1.31
Magnesium, Total	NC	NC	10900	10800	NC	NC	12100	11900
Manganese, Total	NC	NC	16.1	16.2	NC	NC	78.2	79.7
Nickel, Total	NC	NC	<40	<40	NC	NC	<40	<40
Potassium, Total	NC	NC	773 F	775 F	NC	NC	839 F	815 F
Silver, Total	NC	NC	<10	<10	NC	NC	<10	<10
Sodium, Total	NC	NC	20500	20500	NC	NC	24400	24500
Vanadium, Total	NC	NC	<10	<10	NC	NC	<10	<10
Zinc, Total	NC	NC	33	33.1	NC	NC	42.7	42
Antimony, Total	NC	NC	<1	<1	NC	NC	<1	<1
Selenium, Total	NC	NC	1.51	1.51	NC	NC	0.984 F	0.877 F
Thallium, Total	NC	NC	<0.2	<0.2	NC	NC	<0.2	<0.2
Mercury	NC	NC	<0.2	<0.2	NC	NC	<0.2	<0.2
Volatile Organic Compounds - SW8260B µg/L								
1,1,1,2-Tetrachloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	<1	<1	<1	<1	<1	<1	0.273 F	0.31 F
1,1,2,2-Tetrachloroethane	14.4	14	6.94	6.47	135 M	156	7.76	7.98
1,1,2-Trichloroethane	0.317 F	0.295 F	<1	<1	0.621 F	0.663 F	<1	<1
1,1-Dichloroethane	0.243 F	0.239 F	0.217 F	<1	<1	<1	0.451 F	0.468 F
1,1-Dichloroethene	7.58	8.24	6.94	6.88	<1	<1	12	12.7
1,1-Dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	<2	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	0.154 F	<0.5	<0.5
1-Chlorohexane	<1	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	<1	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	<10	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	<1	<1	<1	<1	<1	<1	<1	<1
Acetone	<10	<10	<10	<10	8.07 F	13.2	<10	3.04 F
Benzene	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	<1	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<0.5	<0.5	<0.5	<0.5	<0.5	0.464 F	<0.5	<0.5
Bromoform	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	1.08	1.09	0.524 F	0.738 F	1.81	1.8	<1	<1
Chlorobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	12.7	12.2	9.16	8.91	54.5 M	62.2	4.71	5.02
Chloromethane	<1	<1	<1	<1	<1	<1	<1	<1

TABLE A-3
EFFLUENT SAMPLE RESULTS
2008 ANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Sample ID	EFFLUENT	EFFLUENT-DUP	EFFLUENT	EFFLUENT-DUP	EFFLUENT	EFFLUENT-DUP	EFFLUENT	EFFLUENT-DUP
Date	1/9/2008	1/9/2008	4/16/2008	4/16/2008	7/7/2008	7/7/2008	10/17/2008	10/17/2008
cis-1,2-Dichloroethene	2.89	2.7	1.27	1.28	6.11	6.99	0.822 F	0.89 F
cis-1,3-Dichloropropene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	<1	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	<2	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	<10	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	<5	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	<1	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	<10	<10	<10	<10	<10	<10	<10	<10
Naphthalene	<1	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	<1	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene	<1	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	<1	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	<1	<1	<1	<1	<1	<1	<1	<1
Styrene	<1	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	9.09	9.29	7.83	7.54	1.04	1.14	16.5	16.4
Toluene	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	0.301 F	0.294 F	<1	<1	1.02	1.06	<1	<1
trans-1,3-Dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	26.1	25.8	13.3	13.3	32.1	33.3	18	18.7
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1	<1
Semi-volatile Organic Compounds - SW8270B µg/L								
1,2,4-Trichlorobenzene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
1,2-Dichlorobenzene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
1,3-Dichlorobenzene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
1,4-Dichlorobenzene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
2,4,5-Trichlorophenol	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
2,4,6-Trichlorophenol	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
2,4-Dichlorophenol	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
2,4-Dimethylphenol	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
2,4-Dinitrophenol	NC	NC	<55.6	<55.6	NC	NC	<52.6	<53.8
2,4-Dinitrotoluene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
2,6-Dinitrotoluene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
2-Chloronaphthalene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
2-Chlorophenol	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
2-Methylnaphthalene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
2-Methylphenol	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
2-Nitroaniline	NC	NC	<55.6	<55.6	NC	NC	<52.6	<53.8
2-Nitrophenol	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
3,3'-Dichlorobenzidine	NC	NC	<22.2	<22.2	NC	NC	<21.1	<21.5
3-,4-Methylphenol	NC	NC	<55.6	<55.6	NC	NC	<10.5	<10.8
3-Nitroaniline	NC	NC	<55.6	<55.6	NC	NC	<52.6	<53.8
4,6-Dinitro-2-methylphenol	NC	NC	<55 6	<55.6	NC	NC	<52.6	<53.8
4-Bromophenyl-phenylether	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
4-Chloro-3-methylphenol	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
4-Chloroaniline	NC	NC	<22.2	<22.2	NC	NC	<10.5	<10.8
4-Chlorophenyl-phenyl ether	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
4-Nitroaniline	NC	NC	<55.6	<55.6	NC	NC	<52.6	<53.8
4-Nitrophenol	NC	NC	<55.6	<55.6	NC	NC	<52.6	<53.8
Acenaphthene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Acenaphthylene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Anthracene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Benzo(a)anthracene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Benzo(a)pyrene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Benzo(b)fluoranthene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Benzo(g,h,i)Perylene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Benzo(k)fluoranthene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Benzoic acid	NC	NC	<55.6	<55.6	NC	NC	<52.6	<53.8

TABLE A-3
EFFLUENT SAMPLE RESULTS
2008 ANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Sample ID	EFFLUENT	EFFLUENT-DUP	EFFLUENT	EFFLUENT-DUP	EFFLUENT	EFFLUENT-DUP	EFFLUENT	EFFLUENT-DUP
Date	1/9/2008	1/9/2008	4/16/2008	4/16/2008	7/7/2008	7/7/2008	10/17/2008	10/17/2008
Benzyl alcohol	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Bis(2-Chloroethoxy)Methane	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Bis(2-Chloroethyl)ether	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
bis(2-Chloroisopropyl)ether	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
bis(2-Ethylhexyl)phthalate	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Butylbenzylphthalate	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Chrysene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Dibenzo(a,h)Anthracene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Dibenzofuran	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Diethylphthalate	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Dimethylphthalate	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Di-N-Butylphthalate	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Di-n-octylphthalate	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Fluoranthene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Fluorene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Hexachlorobenzene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Hexachlorobutadiene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Hexachlorocyclopentadiene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Hexachloroethane	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Indeno(1,2,3-cd)pyrene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Isophorone	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Naphthalene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Nitrobenzene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
N-Nitroso-di-n-propylamine	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
N-Nitrosodiphenylamine	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Pentachlorophenol	NC	NC	<55.6	<55.6	NC	NC	<52.6	<53.8
Phenanthrene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Phenol	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8
Pyrene	NC	NC	<11.1	<11.1	NC	NC	<10.5	<10.8

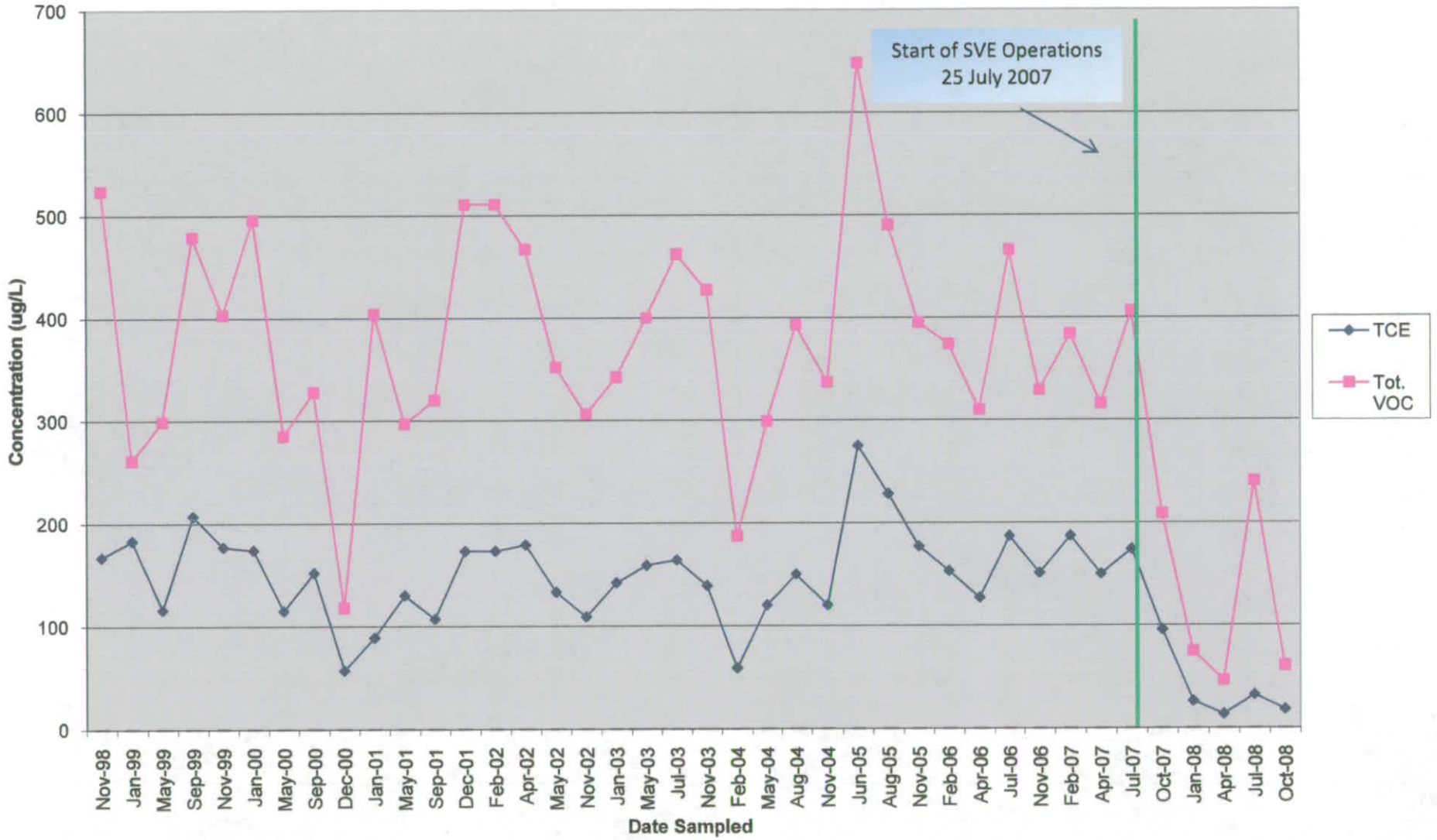
Notes:

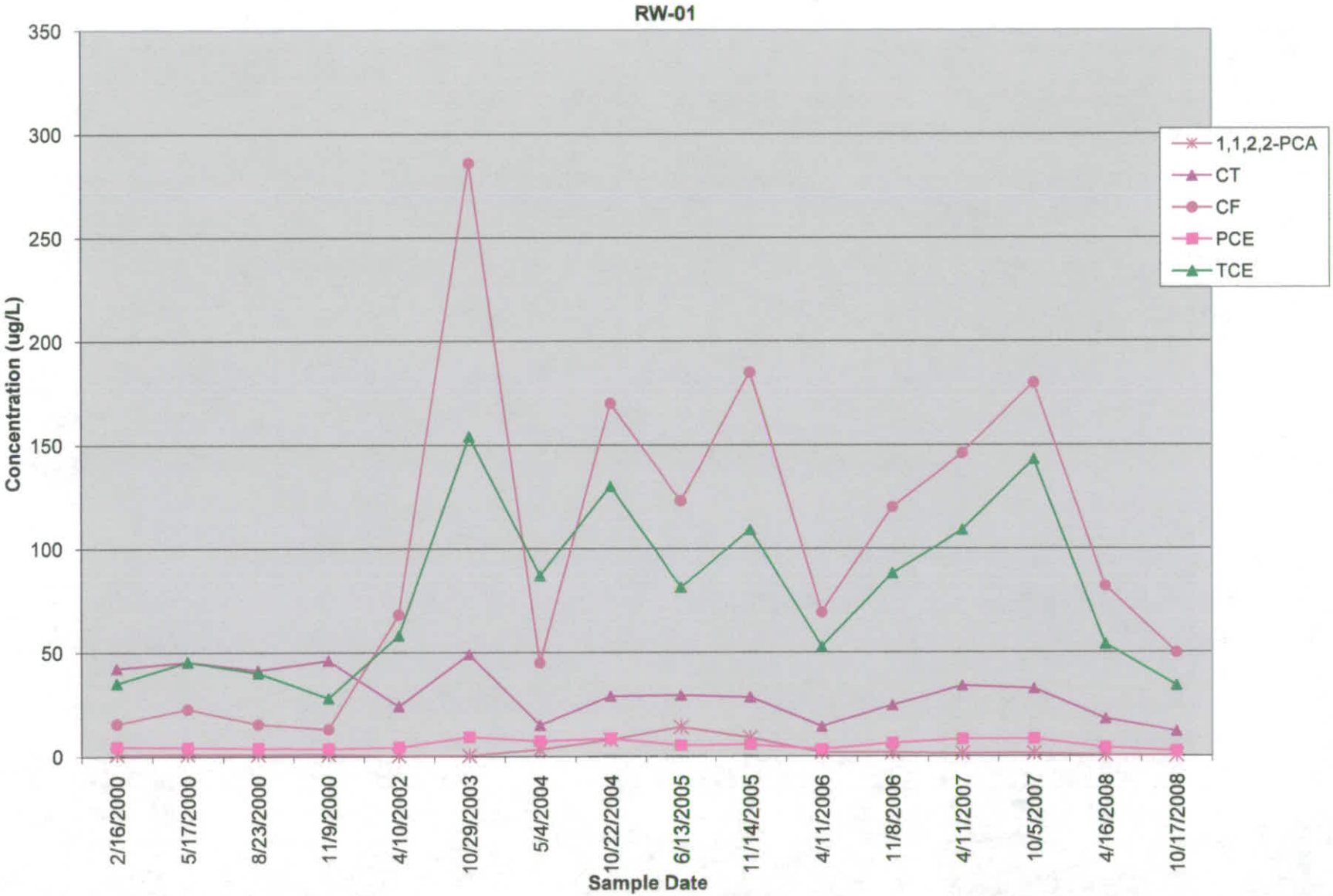
µg/L	micrograms per liter
<	Analyte not detected above RL
F	Concentration below RL but above MDL
NC	Not Collected

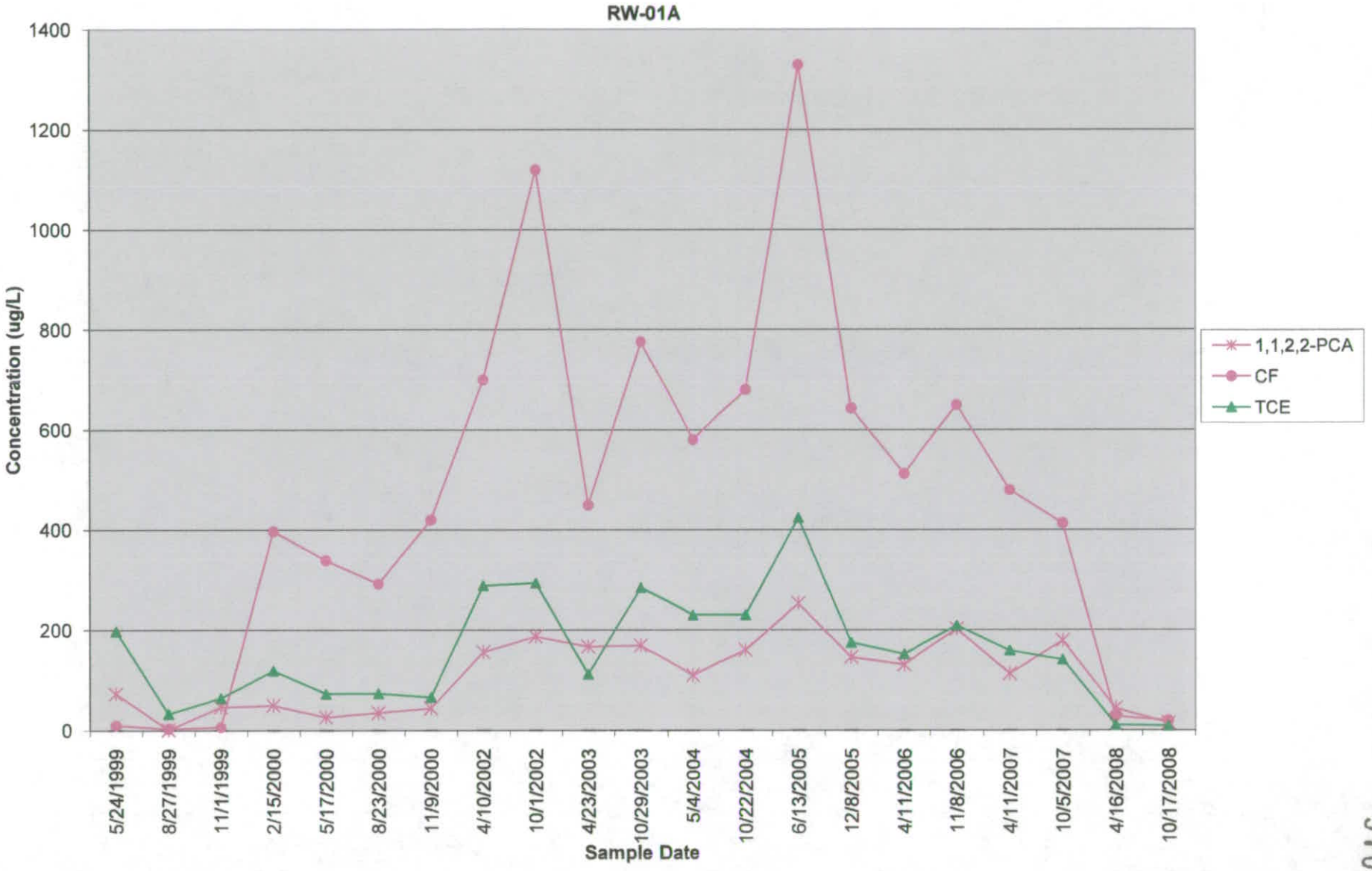
APPENDIX B

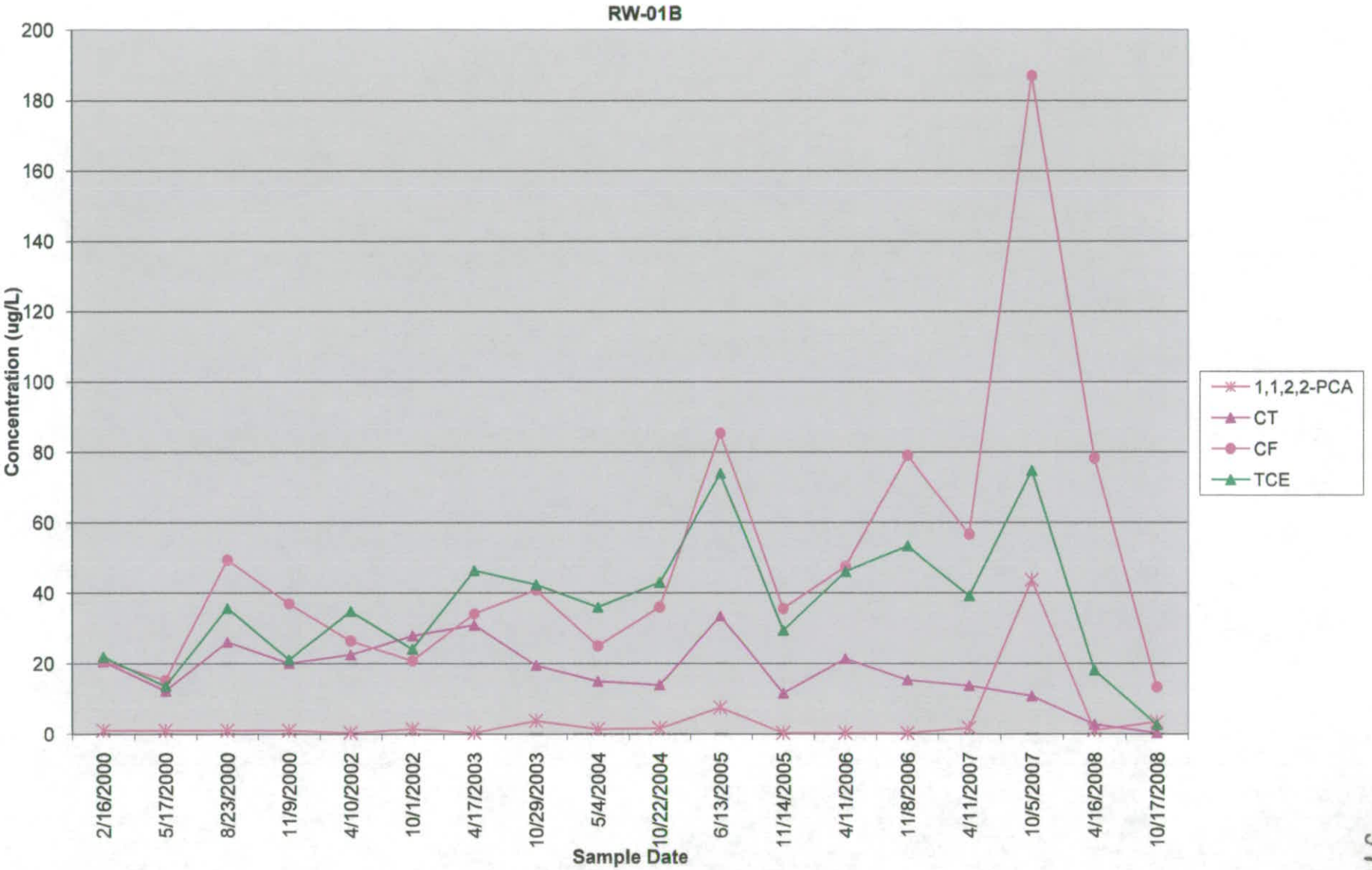
Time Trend Plots for IRA System Effluent and Recovery Wells

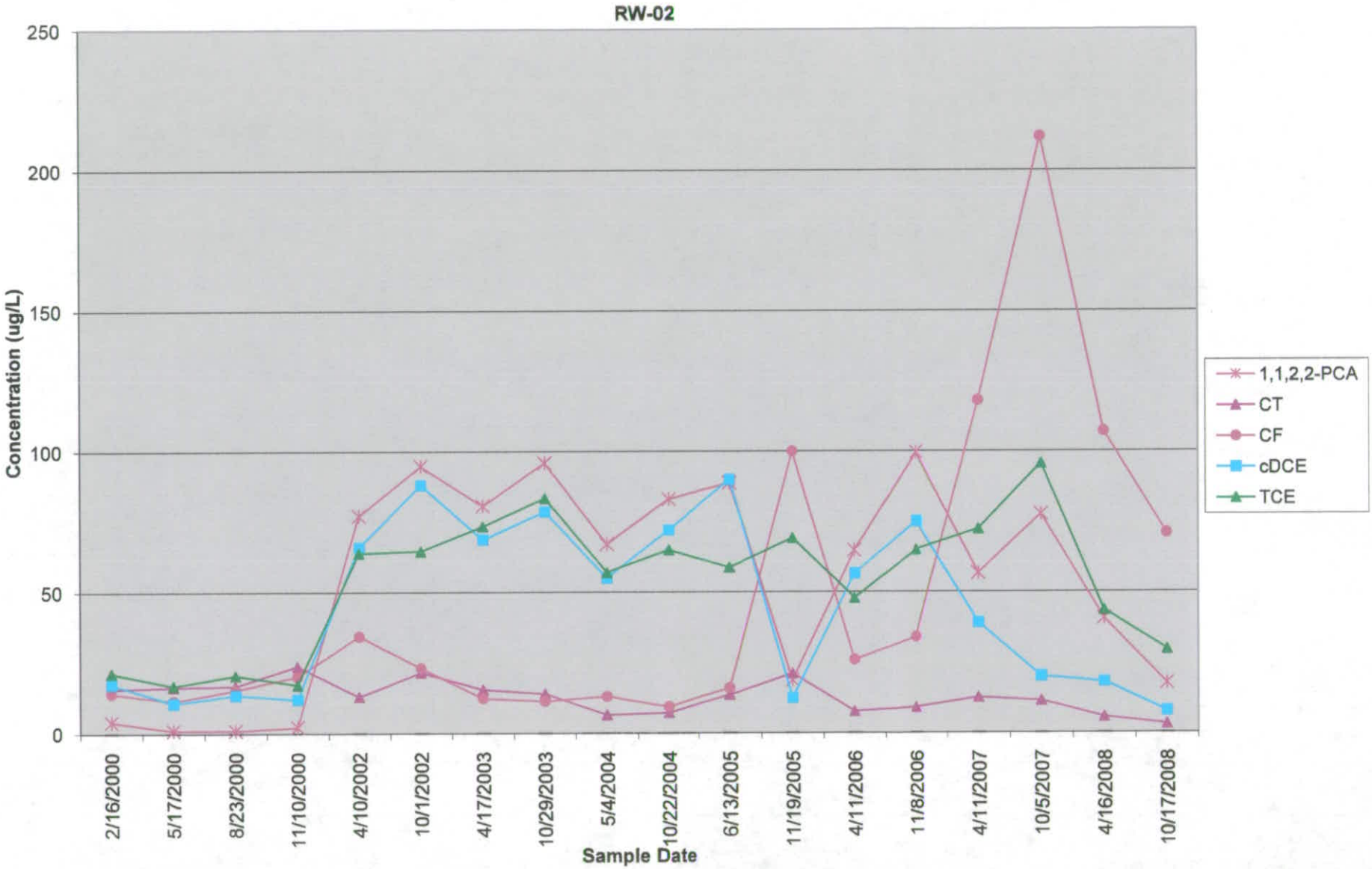
TCE AND TOTAL VOC CONCENTRATIONS IN EFFLUENT
ANNUAL STATUS REPORT - 2008
DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

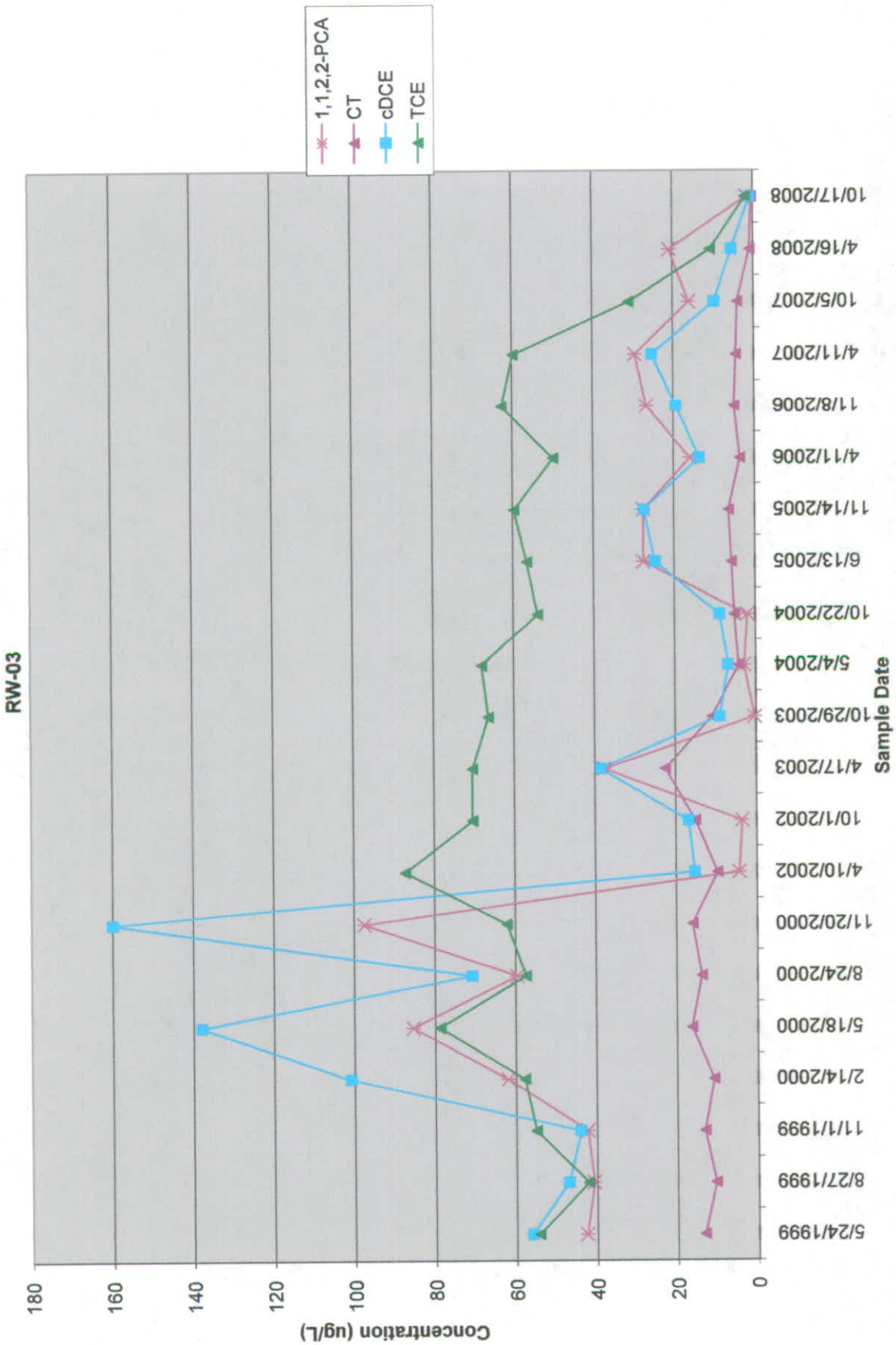


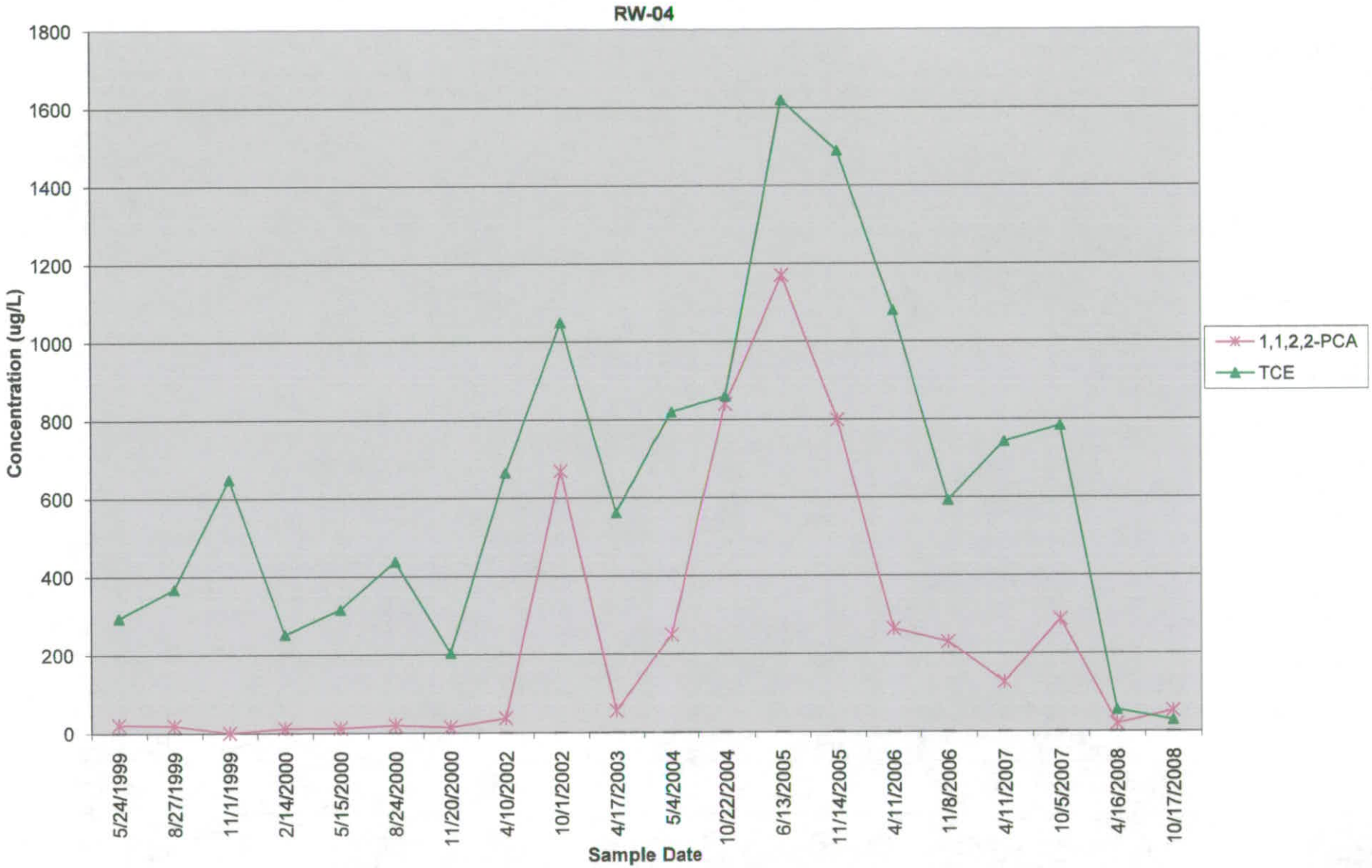

RW-01
350
300
250
200
150
100
50
0
Concentration (ug/L)
1,1,2,2-PCA
CT
CF
PCE
TCE
2/16/2000
5/17/2000
8/23/2000
11/9/2000
4/10/2002
10/29/2003
5/4/2004
10/22/2004
6/13/2005
11/14/2005
4/11/2006
11/8/2006
4/11/2007
10/5/2007
4/16/2008
10/17/2008
Sample Date

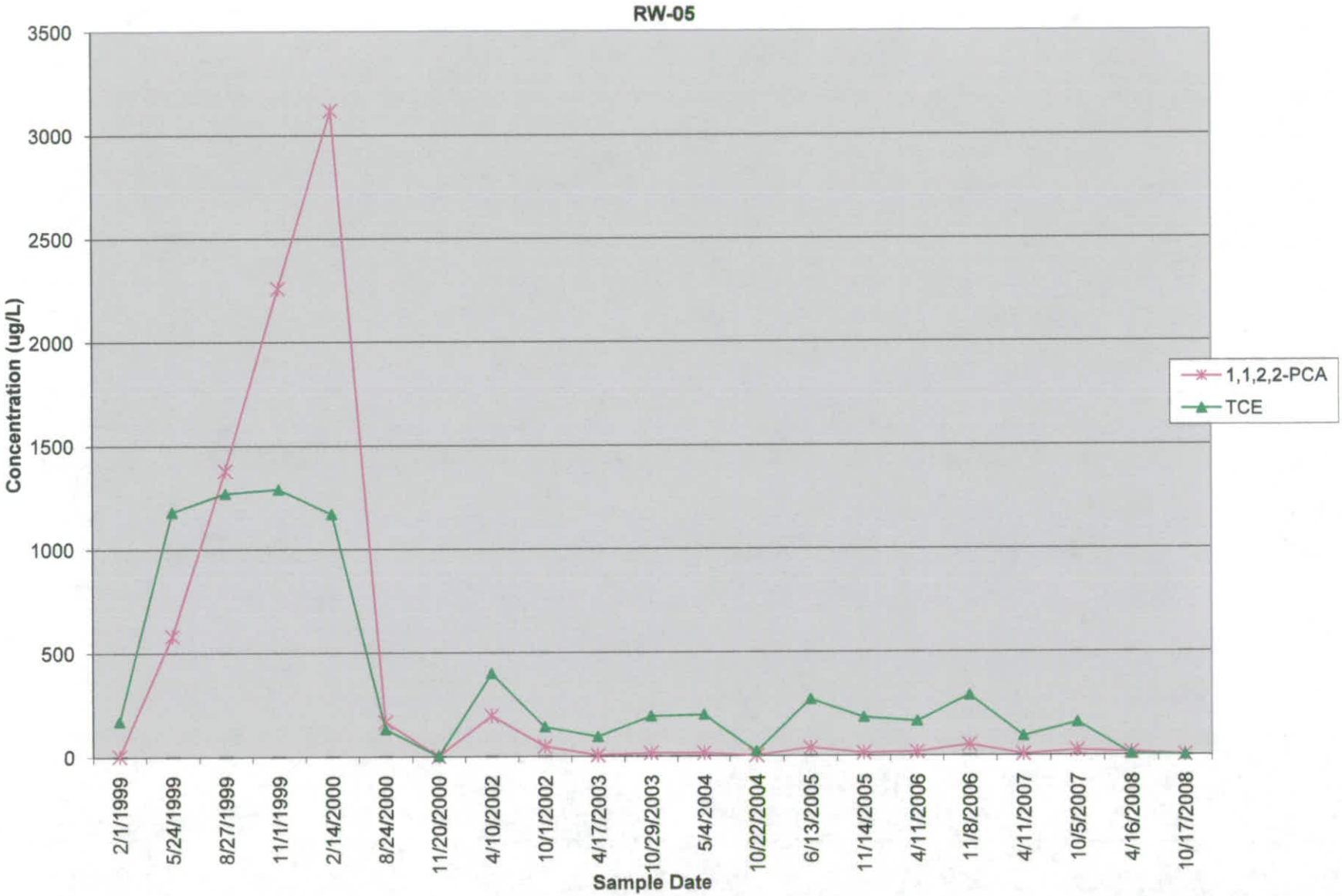

RW-01A
Concentration (ug/L)
1400
1200
1000
800
600
400
200
0
5/24/1999
8/27/1999
11/1/1999
2/15/2000
5/17/2000
8/23/2000
11/9/2000
4/10/2002
10/1/2002
4/23/2003
10/29/2003
5/4/2004
10/22/2004
6/13/2005
12/8/2005
4/11/2006
11/8/2006
4/11/2007
10/5/2007
4/16/2008
10/17/2008
Sample Date
1,1,2,2-PCA
CF
TCE

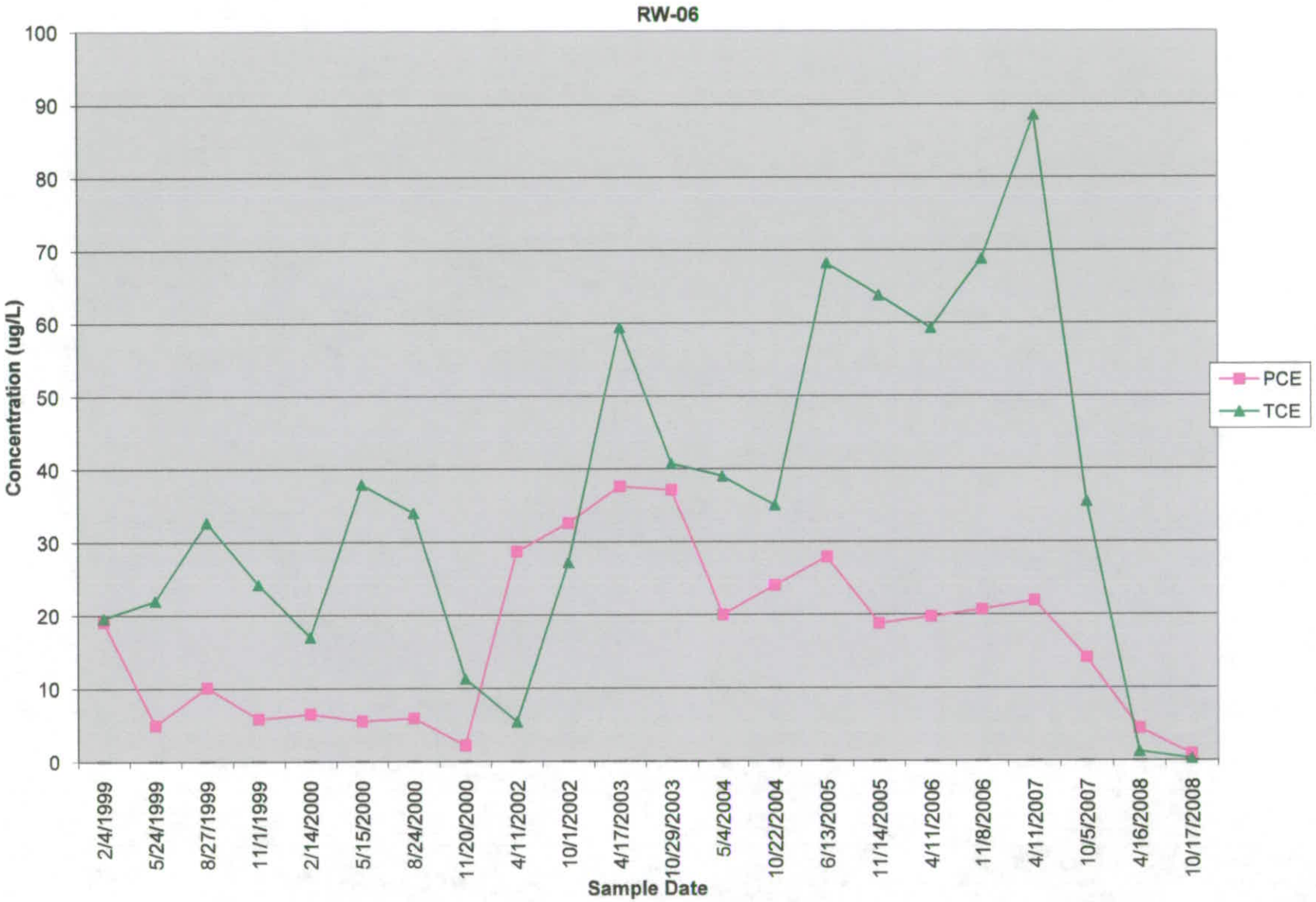

RW-01B
Concentration (ug/L)
200
180
160
140
120
100
80
60
40
20
0
2/16/2000
5/17/2000
8/23/2000
11/9/2000
4/10/2002
10/1/2002
4/17/2003
10/29/2003
5/4/2004
10/22/2004
6/13/2005
11/14/2005
4/11/2006
11/8/2006
4/11/2007
10/5/2007
4/16/2008
10/17/2008
Sample Date
1,1,2,2-PCA
CT
CF
TCE

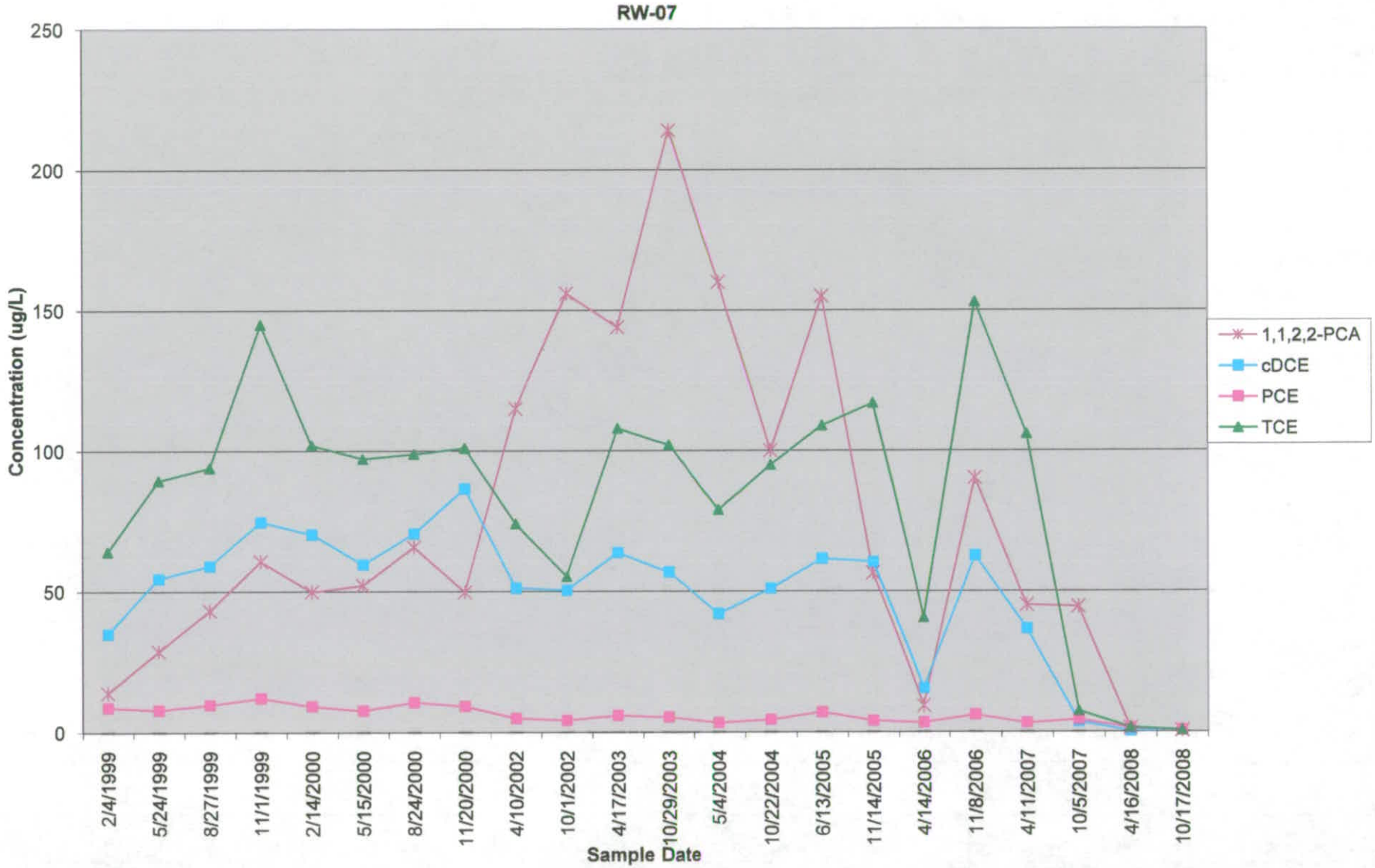

RW-02
Concentration (ug/L)
250
200
150
100
50
0
2/16/2000
5/17/2000
8/23/2000
11/10/2000
4/10/2002
10/1/2002
4/17/2003
10/29/2003
5/4/2004
10/22/2004
6/13/2005
11/19/2005
4/11/2006
11/8/2006
4/11/2007
10/5/2007
4/16/2008
10/17/2008
Sample Date
1,1,2,2-PCA
CT
CF
cDCE
TCE

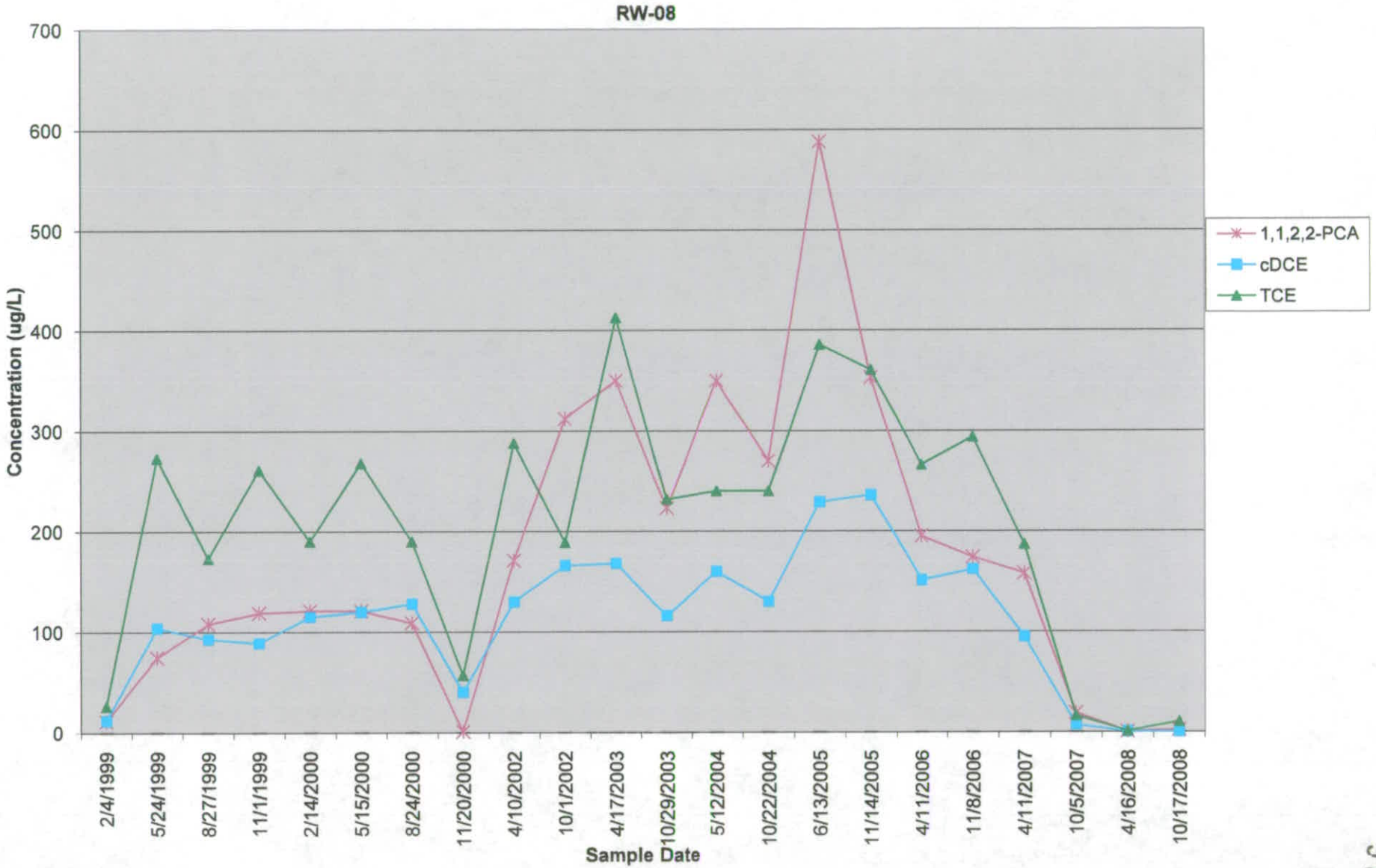

RW-03
1,1,2,2-PCA
CT
cDCE
TCE
Concentration (ug/L)
0
20
40
60
80
100
120
140
160
180
Sample Date
5/24/1999
8/27/1999
11/1/1999
2/14/2000
5/18/2000
8/24/2000
11/20/2000
4/10/2002
10/1/2002
4/17/2003
10/29/2003
5/4/2004
10/22/2004
6/13/2005
11/14/2005
4/11/2006
11/8/2006
4/11/2007
10/5/2007
4/16/2008
10/17/2008

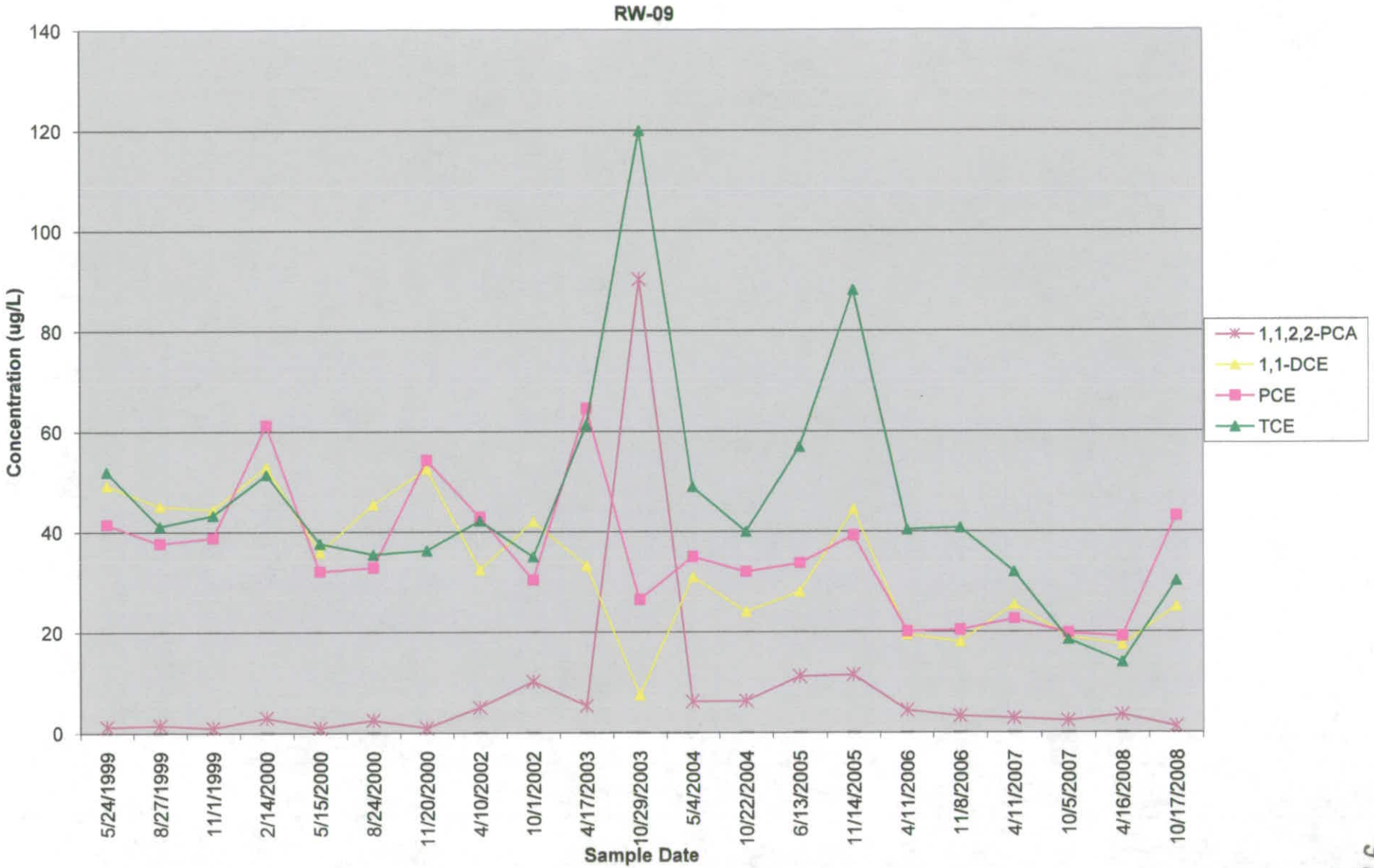

RW-04
Concentration (ug/L)
1800
1600
1400
1200
1000
800
600
400
200
0
5/24/1999
8/27/1999
11/1/1999
2/14/2000
5/15/2000
8/24/2000
11/20/2000
4/10/2002
10/1/2002
4/17/2003
5/4/2004
10/22/2004
6/13/2005
11/14/2005
4/11/2006
11/8/2006
4/11/2007
10/5/2007
4/16/2008
10/17/2008
Sample Date
1,1,2,2-PCA
TCE


RW-05
Concentration (ug/L)
3500
3000
2500
2000
1500
1000
500
0
2/1/1999
5/24/1999
8/27/1999
11/1/1999
2/14/2000
8/24/2000
11/20/2000
4/10/2002
10/1/2002
4/17/2003
10/29/2003
5/4/2004
10/22/2004
6/13/2005
11/14/2005
4/11/2006
11/8/2006
4/11/2007
10/5/2007
4/16/2008
10/17/2008
Sample Date
1,1,2,2-PCA
TCE


RW-06
Concentration (ug/L)
100
90
80
70
60
50
40
30
20
10
0
2/4/1999
5/24/1999
8/27/1999
11/1/1999
2/14/2000
5/15/2000
8/24/2000
11/20/2000
4/11/2002
10/1/2002
4/17/2003
10/29/2003
5/4/2004
10/22/2004
6/13/2005
11/14/2005
4/11/2006
11/8/2006
4/11/2007
10/5/2007
4/16/2008
10/17/2008
Sample Date
PCE
TCE

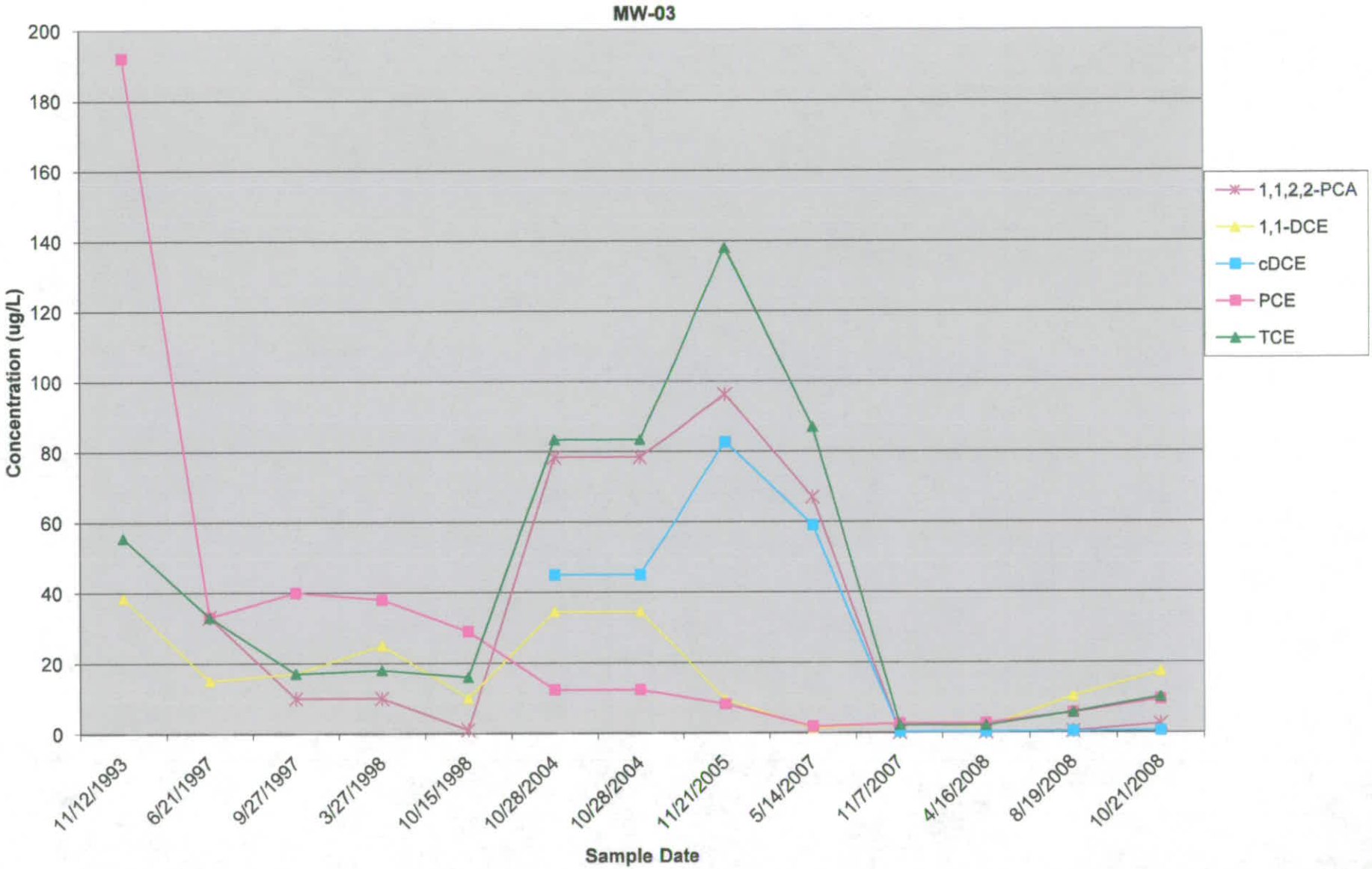

RW-07
Concentration (ug/L)
250
200
150
100
50
0
2/4/1999
5/24/1999
8/27/1999
11/1/1999
2/14/2000
5/15/2000
8/24/2000
11/20/2000
4/10/2002
10/1/2002
4/17/2003
10/29/2003
5/4/2004
10/22/2004
6/13/2005
11/14/2005
4/14/2006
11/8/2006
4/11/2007
10/5/2007
4/16/2008
10/17/2008
Sample Date
1,1,2,2-PCA
cDCE
PCE
TCE

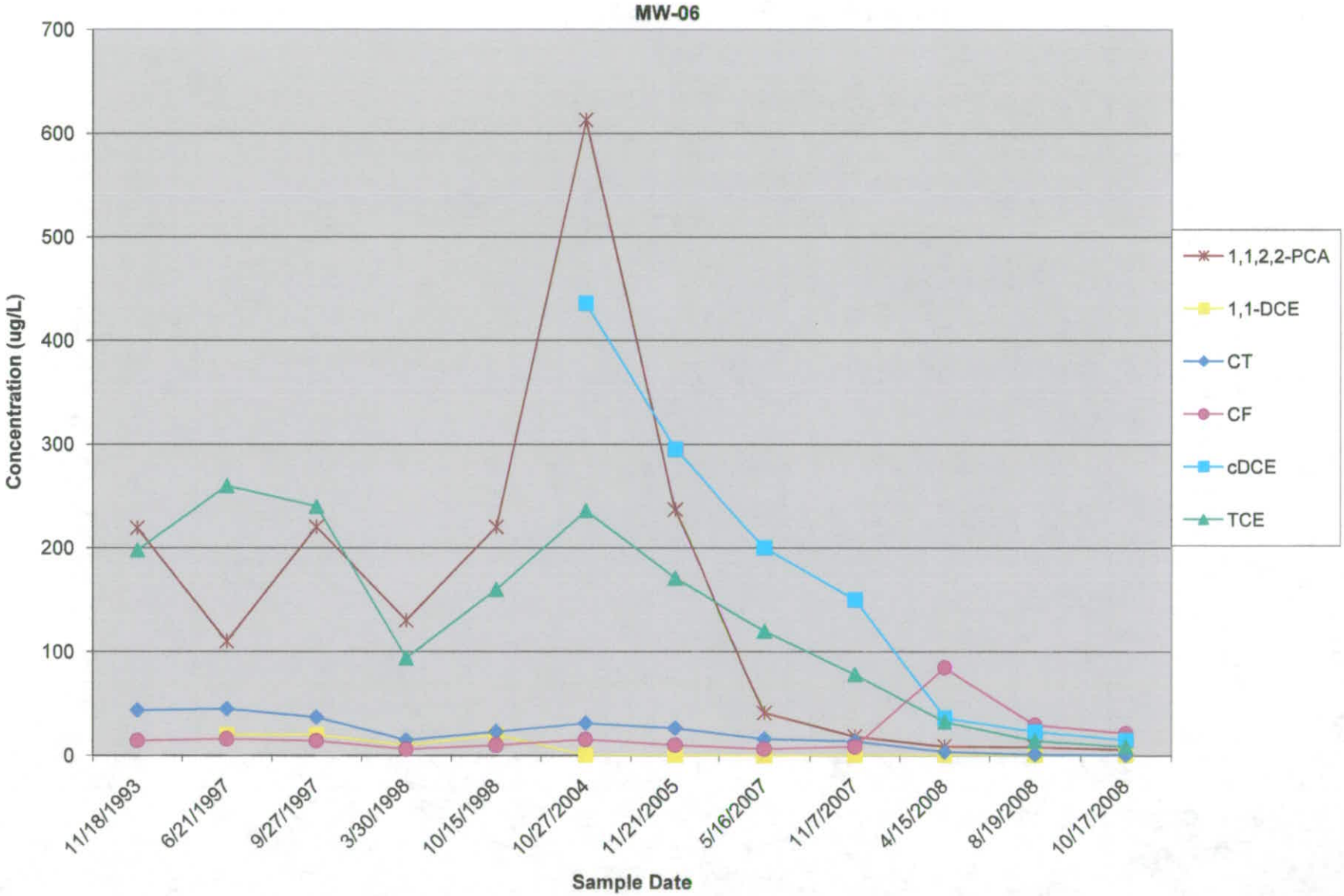

RW-08
Concentration (ug/L)
700
600
500
400
300
200
100
0
2/4/1999
5/24/1999
8/27/1999
11/1/1999
2/14/2000
5/15/2000
8/24/2000
11/20/2000
4/10/2002
10/1/2002
4/17/2003
10/29/2003
5/12/2004
10/22/2004
6/13/2005
11/14/2005
4/11/2006
11/8/2006
4/11/2007
10/5/2007
4/16/2008
10/17/2008
Sample Date
1,1,2,2-PCA
cDCE
TCE


RW-09
Concentration (ug/L)
140
120
100
80
60
40
20
0
5/24/1999
8/27/1999
11/1/1999
2/14/2000
5/15/2000
8/24/2000
11/20/2000
4/10/2002
10/1/2002
4/17/2003
10/29/2003
5/4/2004
10/22/2004
6/13/2005
11/14/2005
4/11/2006
11/8/2006
4/11/2007
10/5/2007
4/16/2008
10/17/2008
Sample Date
1,1,2,2-PCA
1,1-DCE
PCE
TCE

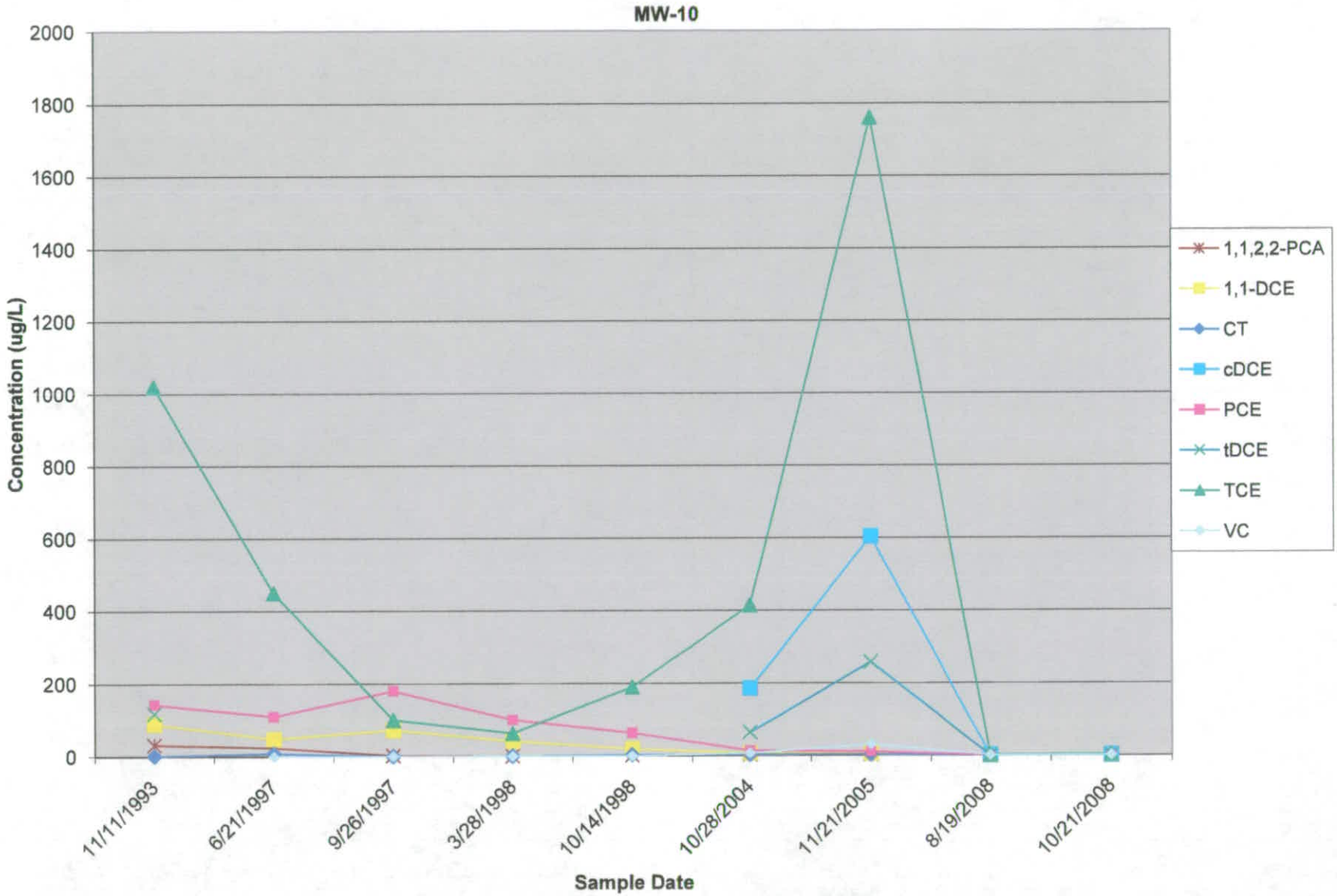
APPENDIX C

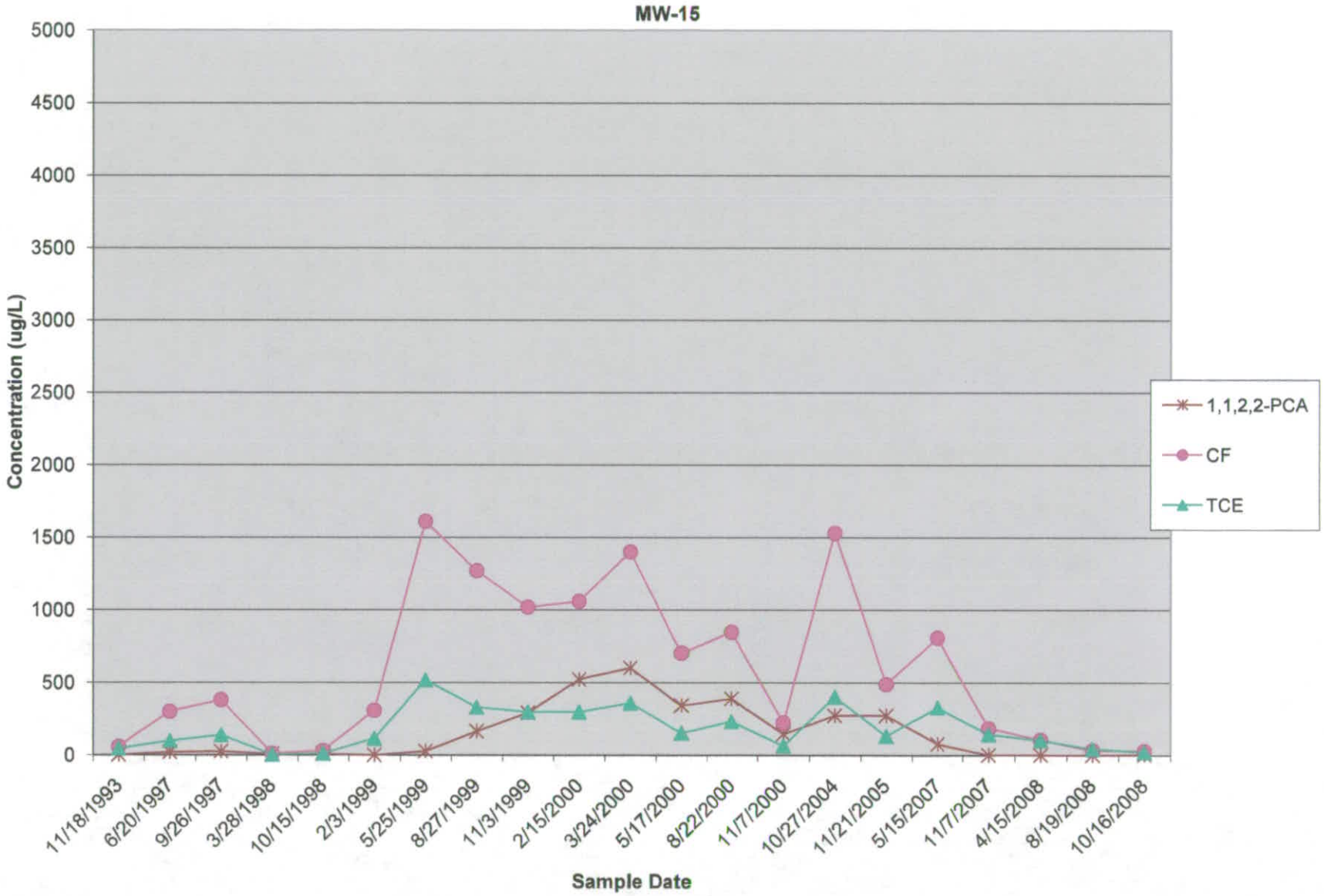
Time Trend Plots for Dunn Field Monitoring Wells

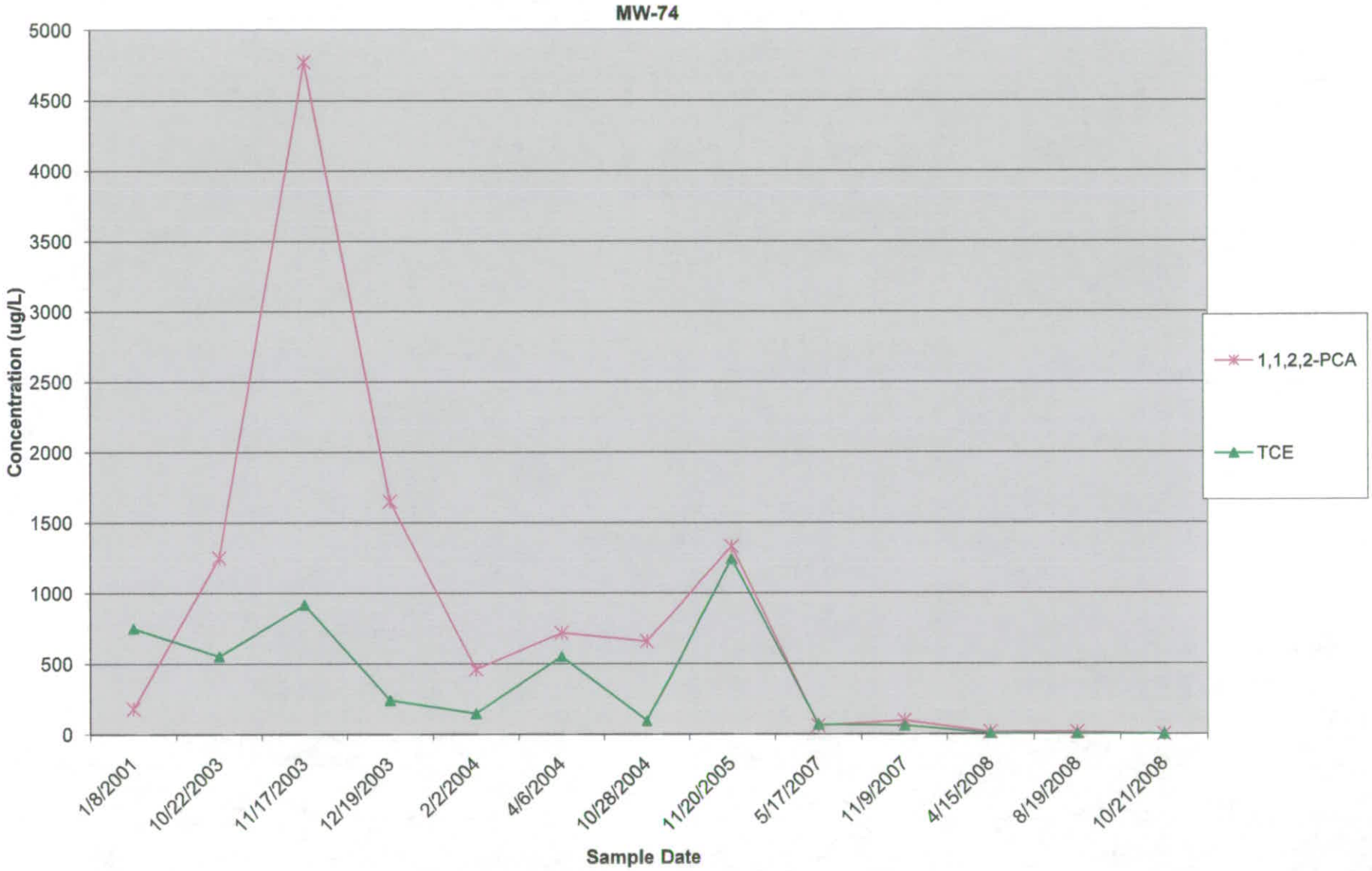

MW-03
Concentration (ug/L)
200
180
160
140
120
100
80
60
40
20
0
11/12/1993
6/21/1997
9/27/1997
3/27/1998
10/15/1998
10/28/2004
10/28/2004
11/21/2005
5/14/2007
11/7/2007
4/16/2008
8/19/2008
10/21/2008
Sample Date
1,1,2,2-PCA
1,1-DCE
cDCE
PCE
TCE

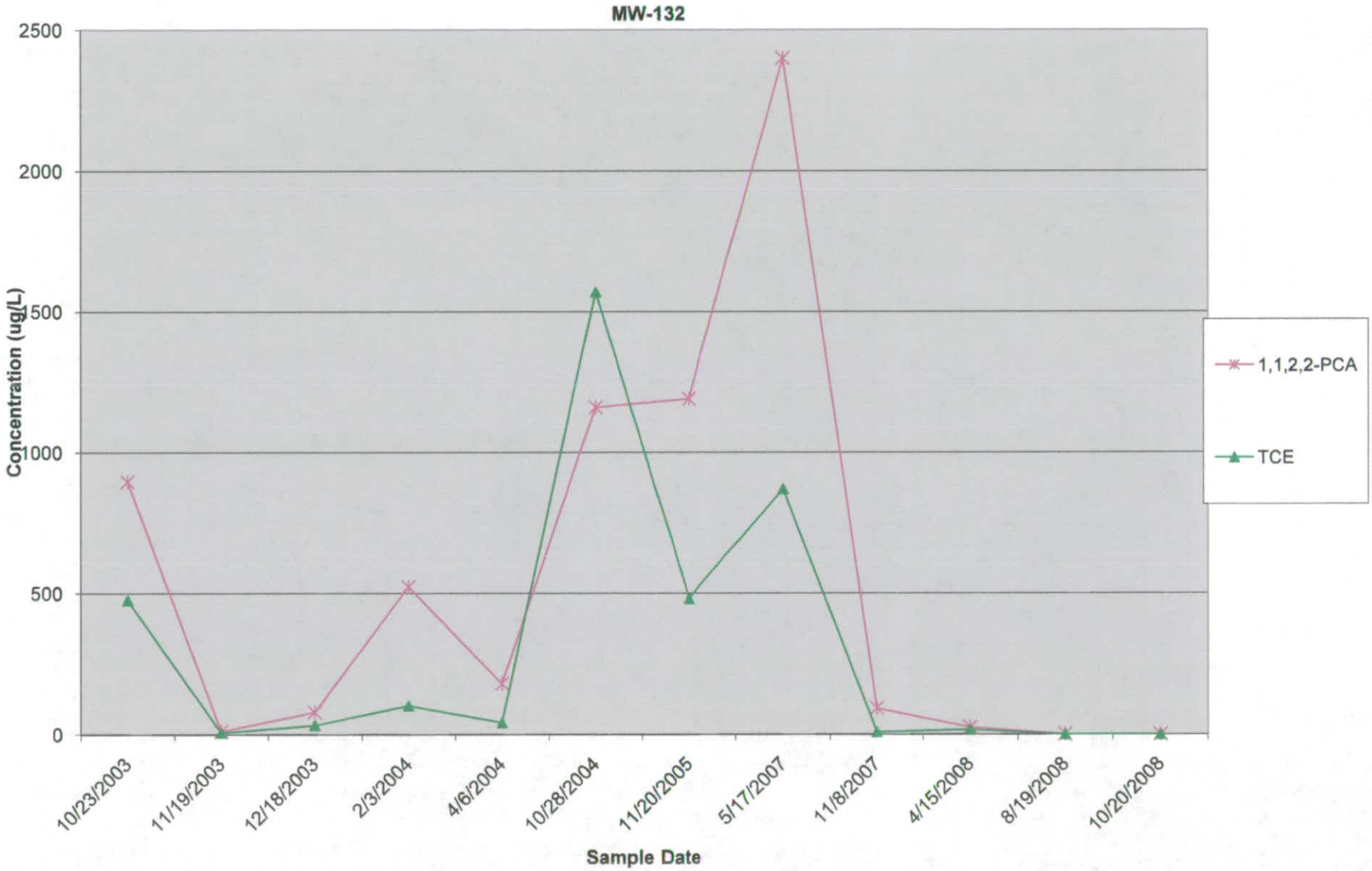

MW-06
Concentration (ug/L)
700
600
500
400
300
200
100
0
11/18/1993
6/21/1997
9/27/1997
3/30/1998
10/15/1998
10/27/2004
11/21/2005
5/16/2007
11/7/2007
4/15/2008
8/19/2008
10/17/2008
Sample Date
1,1,2,2-PCA
1,1-DCE
CT
CF
cDCE
TCE

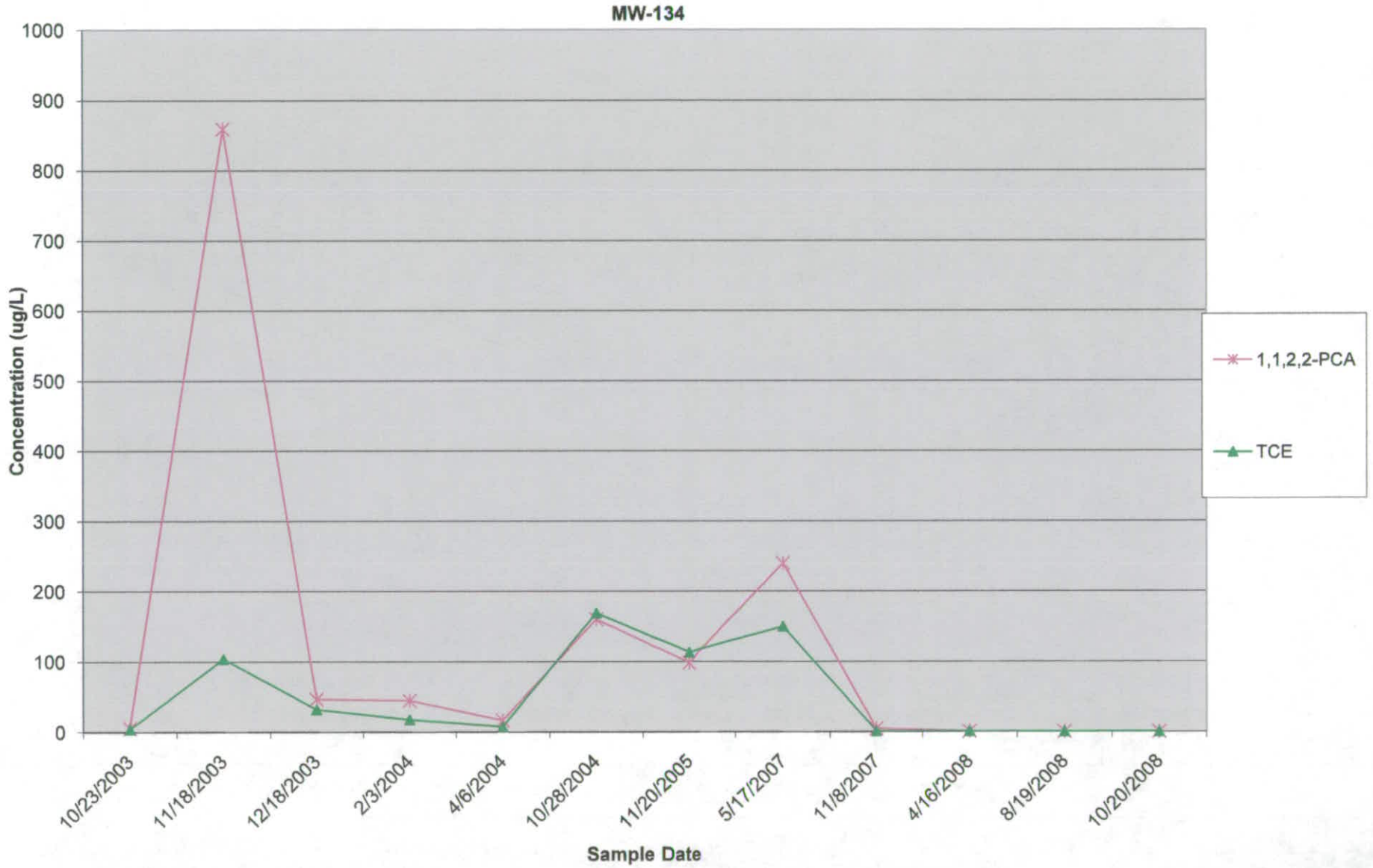

MW-07
Concentration (ug/L)
90
80
70
60
50
40
30
20
10
0
6/21/1997
9/27/1997
4/2/1998
10/14/1998
7/28/2003
10/28/2003
4/28/2004
10/20/2004
6/14/2005
11/18/2005
4/12/2006
10/18/2006
4/9/2007
5/14/2007
10/8/2007
4/14/2008
8/19/2008
10/17/2008
Sample Date
1,1-DCE
PCE
TCE

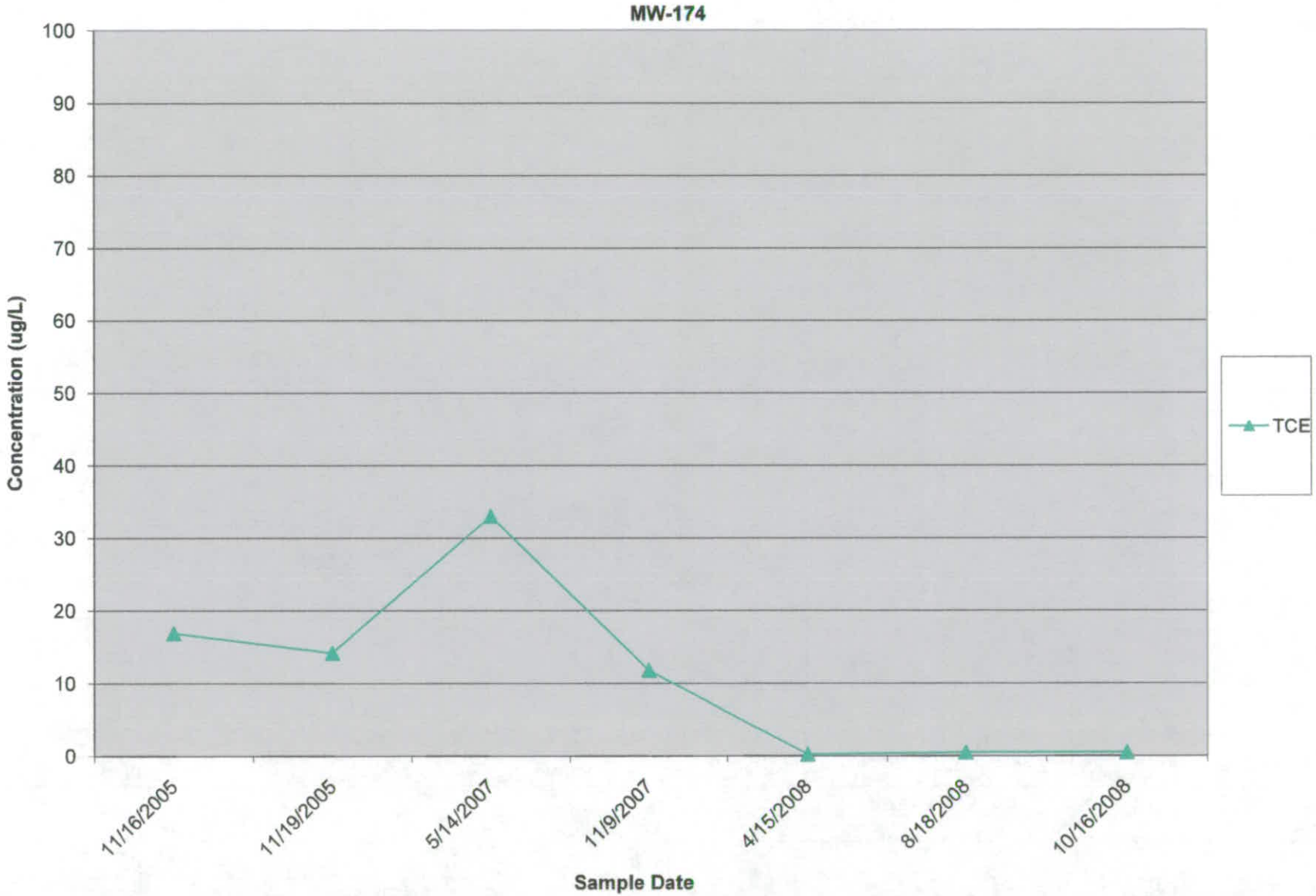

MW-10
Concentration (ug/L)
2000
1800
1600
1400
1200
1000
800
600
400
200
0
11/11/1993
6/21/1997
9/26/1997
3/28/1998
10/14/1998
10/28/2004
11/21/2005
8/19/2008
10/21/2008
Sample Date
1,1,2,2-PCA
1,1-DCE
CT
cDCE
PCE
tDCE
TCE
VC

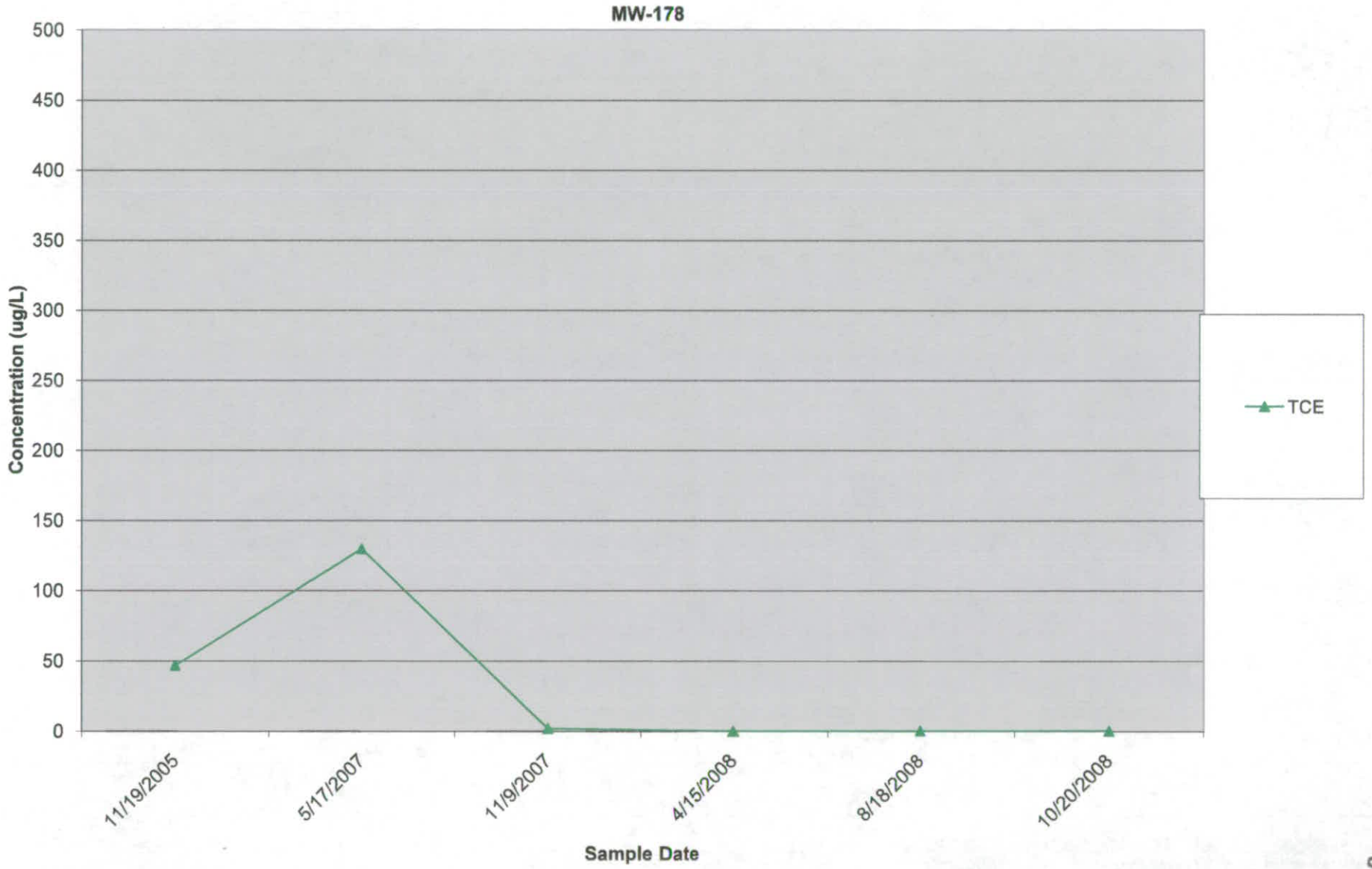

MW-15
Concentration (ug/L)
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
11/18/1993
6/20/1997
9/26/1997
3/28/1998
10/15/1998
2/3/1999
5/25/1999
8/27/1999
11/3/1999
2/15/2000
3/24/2000
5/17/2000
8/22/2000
11/7/2000
10/27/2004
11/21/2005
5/15/2007
11/7/2007
4/15/2008
8/19/2008
10/16/2008
Sample Date
1,1,2,2-PCA
CF
TCE

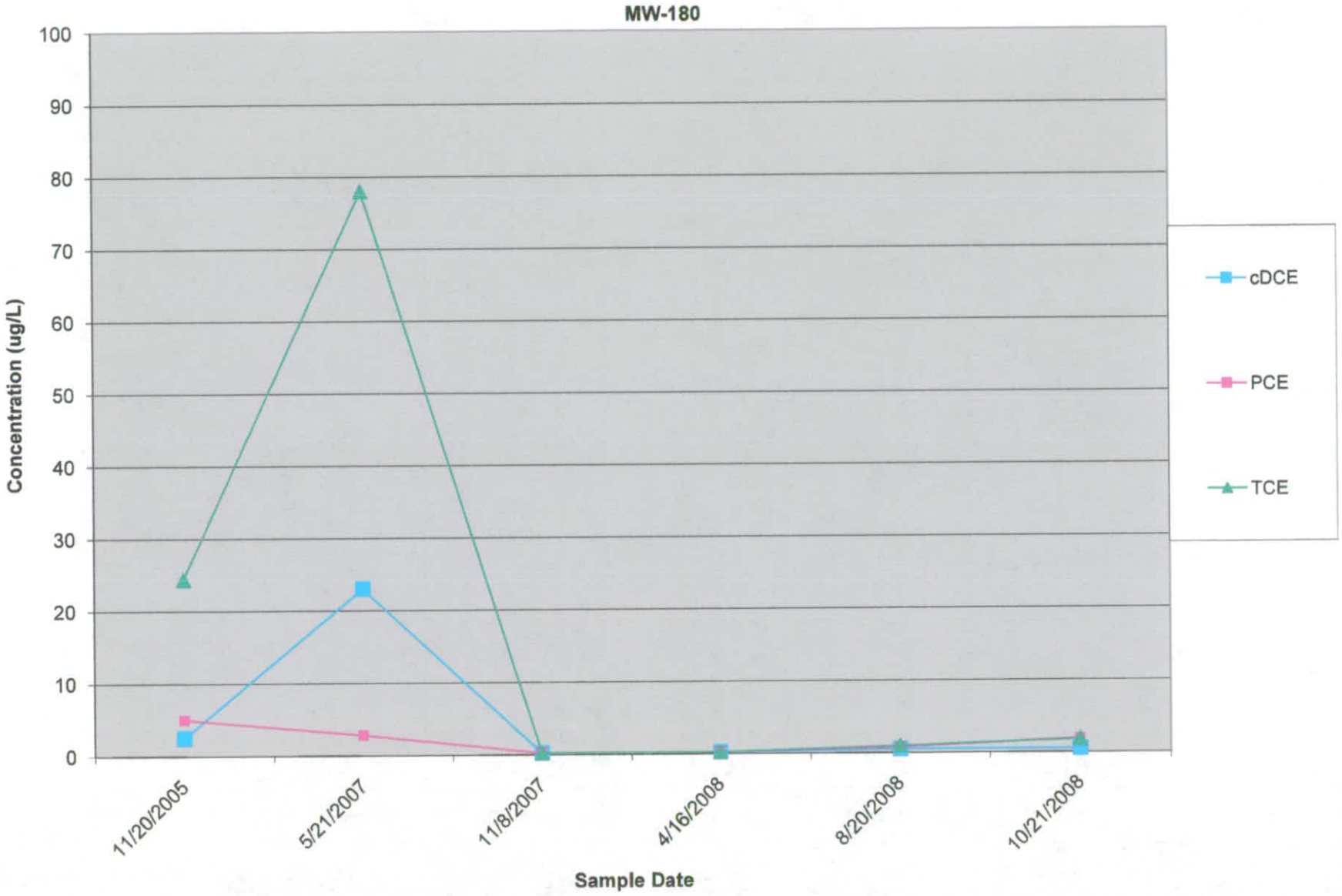

MW-74
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Concentration (ug/L)
1,1,2,2-PCA
TCE
1/8/2001
10/22/2003
11/17/2003
12/19/2003
2/2/2004
4/6/2004
10/28/2004
11/20/2005
5/17/2007
11/9/2007
4/15/2008
8/19/2008
10/21/2008
Sample Date

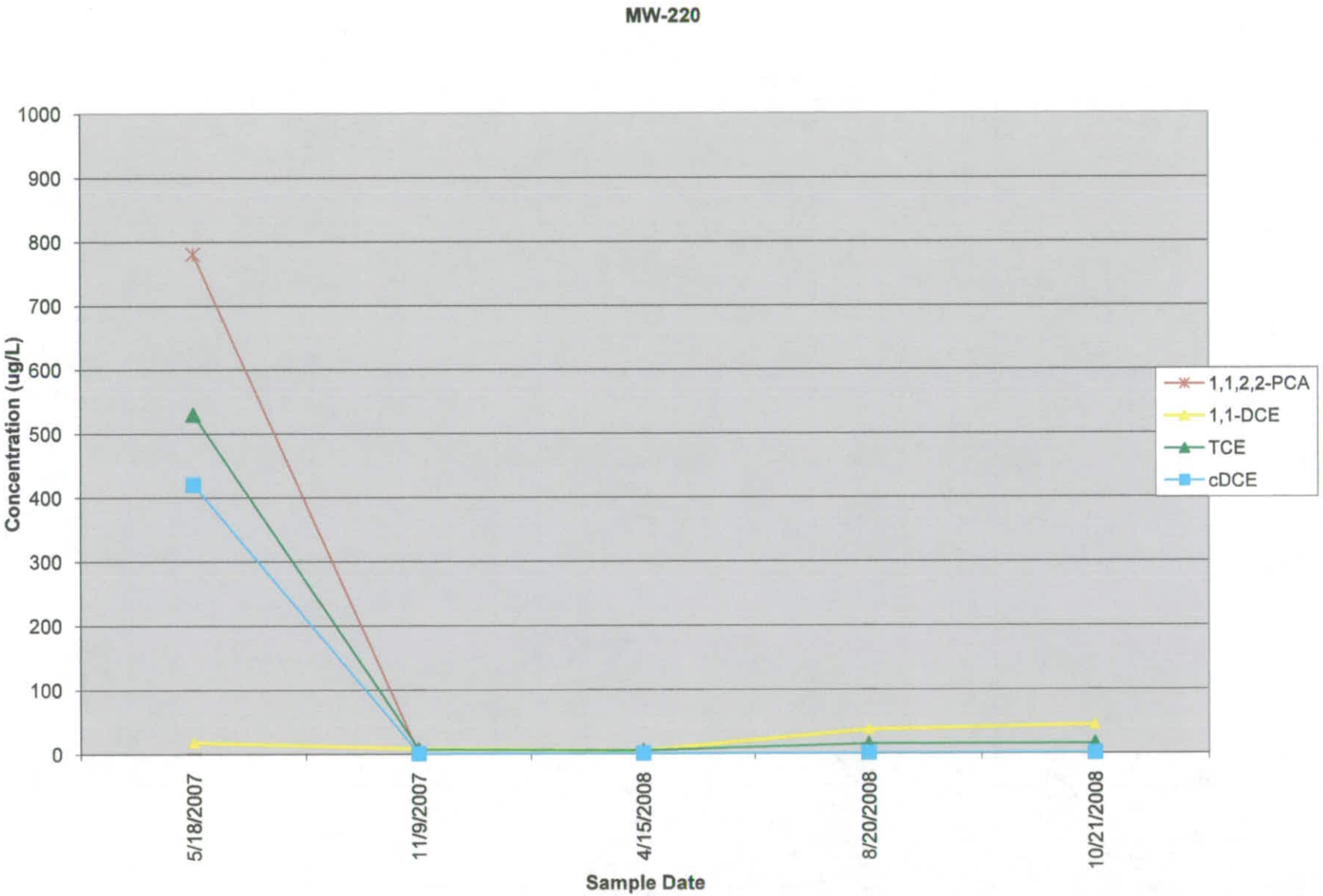

MW-132
2500
2000
1500
1000
500
0
Concentration (ug/L)
1,1,2,2-PCA
TCE
10/23/2003
11/19/2003
12/18/2003
2/3/2004
4/6/2004
10/28/2004
11/20/2005
5/17/2007
11/8/2007
4/15/2008
8/19/2008
10/20/2008
Sample Date

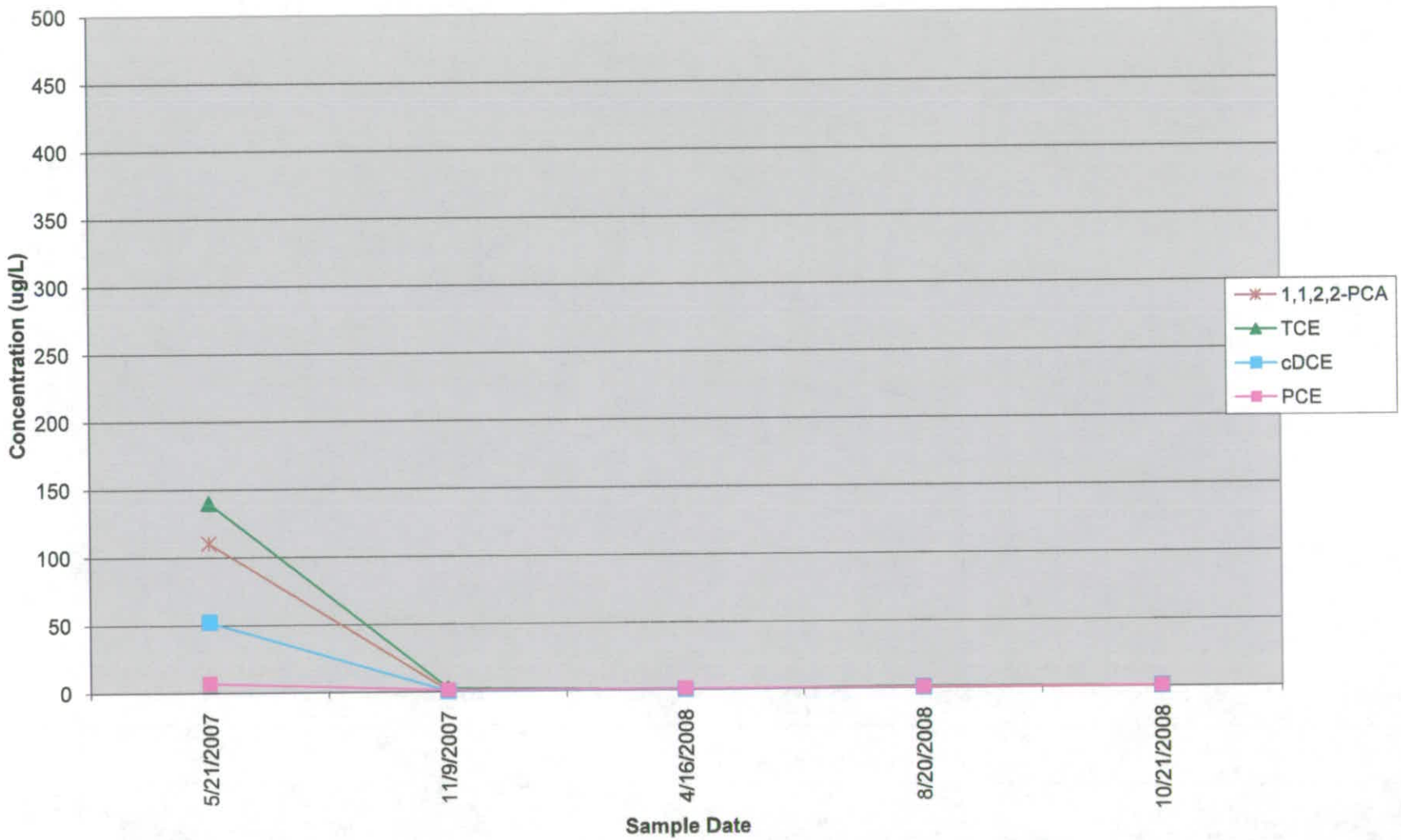

MW-134
1000
900
800
700
600
500
400
300
200
100
0
Concentration (ug/L)
10/23/2003
11/18/2003
12/18/2003
2/3/2004
4/6/2004
10/28/2004
11/20/2005
5/17/2007
11/8/2007
4/16/2008
8/19/2008
10/20/2008
Sample Date
1,1,2,2-PCA
TCE

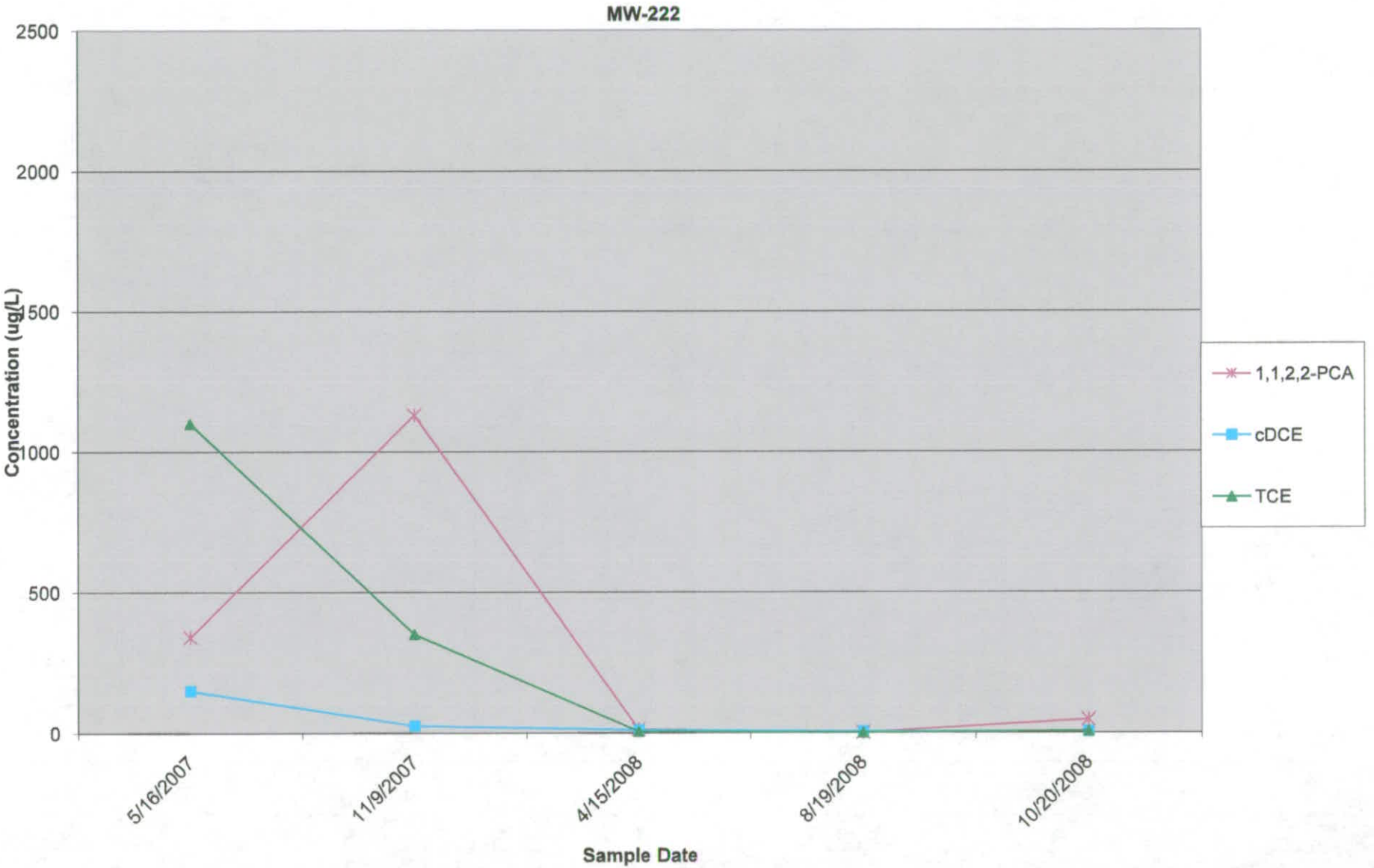

MW-174
100
90
80
70
60
50
40
30
20
10
0
Concentration (ug/L)
11/16/2005
11/19/2005
5/14/2007
11/9/2007
4/15/2008
8/18/2008
10/16/2008
Sample Date
TCE

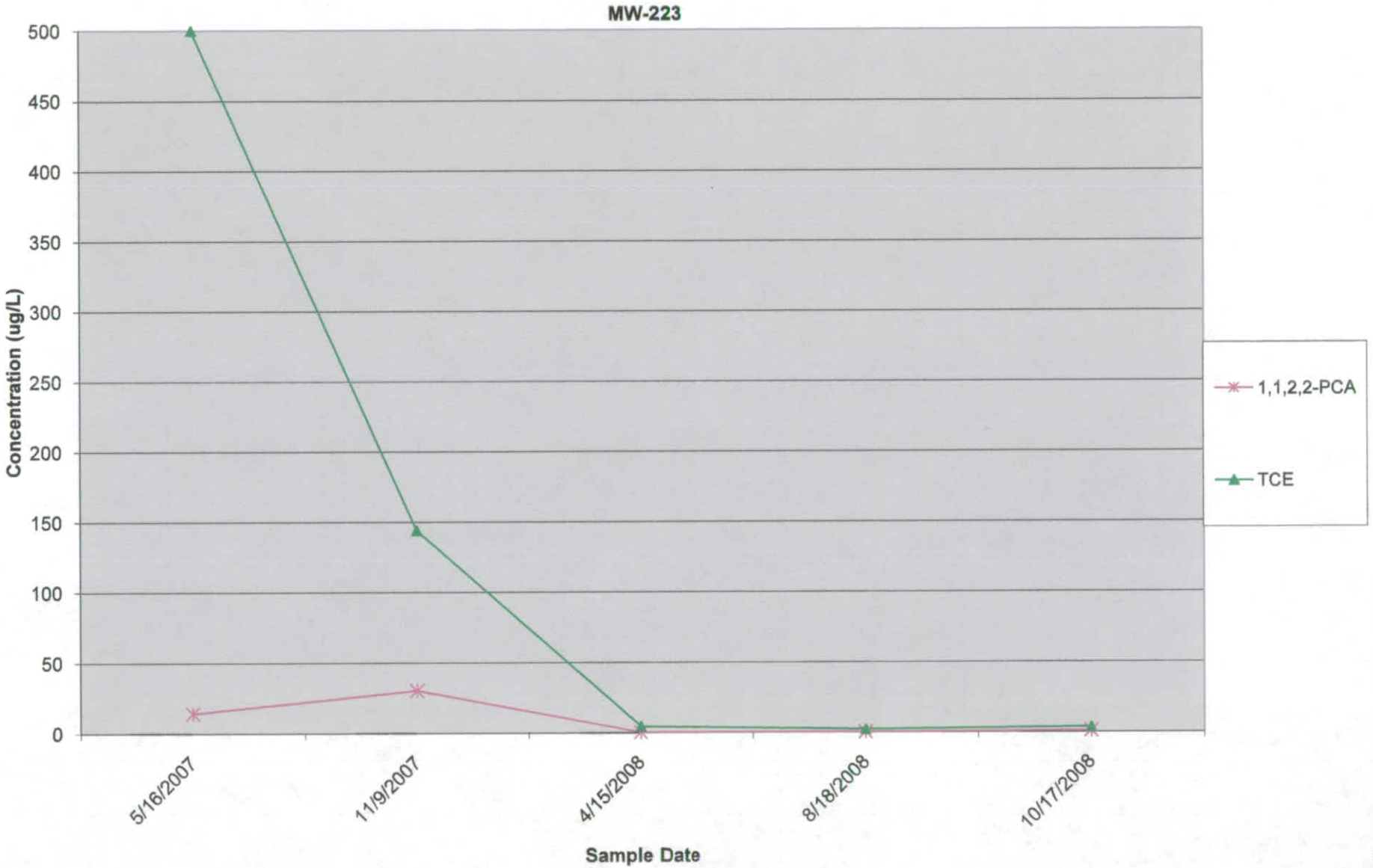

MW-178
500
450
400
350
300
250
200
150
100
50
0
Concentration (ug/L)
11/19/2005
5/17/2007
11/9/2007
4/15/2008
8/18/2008
10/20/2008
Sample Date
TCE

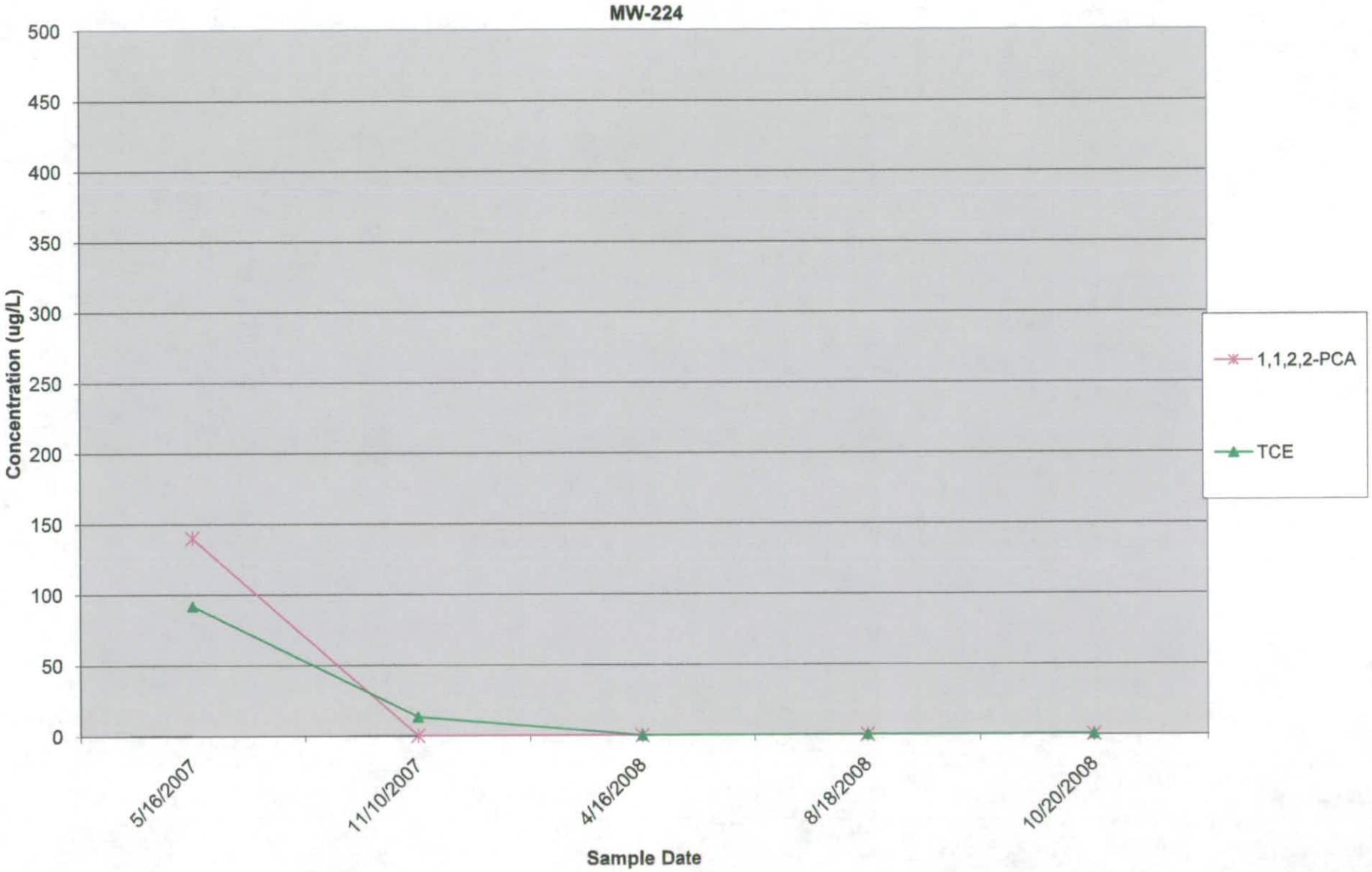

MW-180
100
90
80
70
60
50
40
30
20
10
0
Concentration (ug/L)
11/20/2005
5/21/2007
11/8/2007
4/16/2008
8/20/2008
10/21/2008
Sample Date
cDCE
PCE
TCE

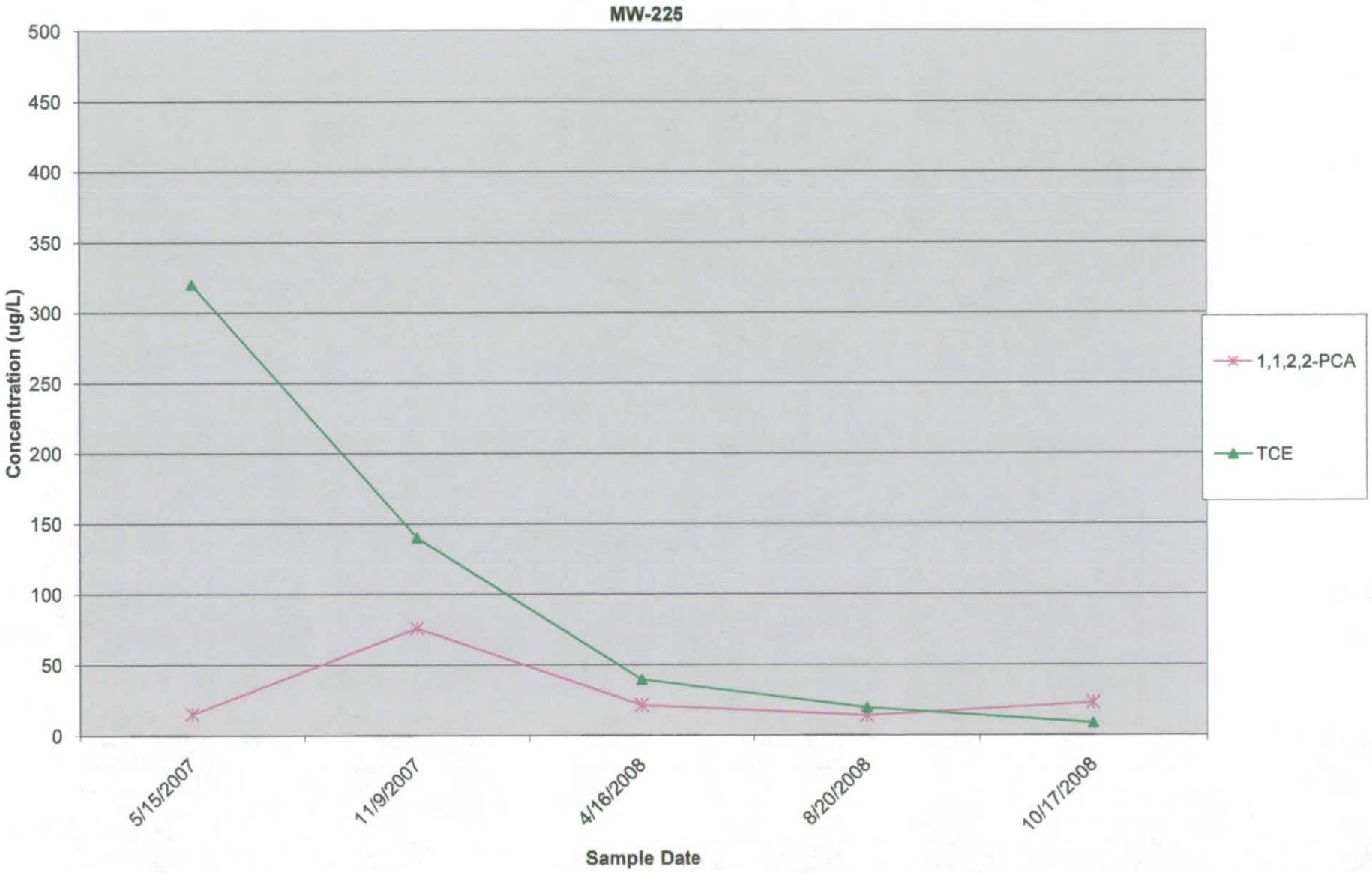

MW-220
Concentration (ug/L)
1000
900
800
700
600
500
400
300
200
100
0
5/18/2007
11/9/2007
4/15/2008
8/20/2008
10/21/2008
Sample Date
1,1,2,2-PCA
1,1-DCE
TCE
cDCE

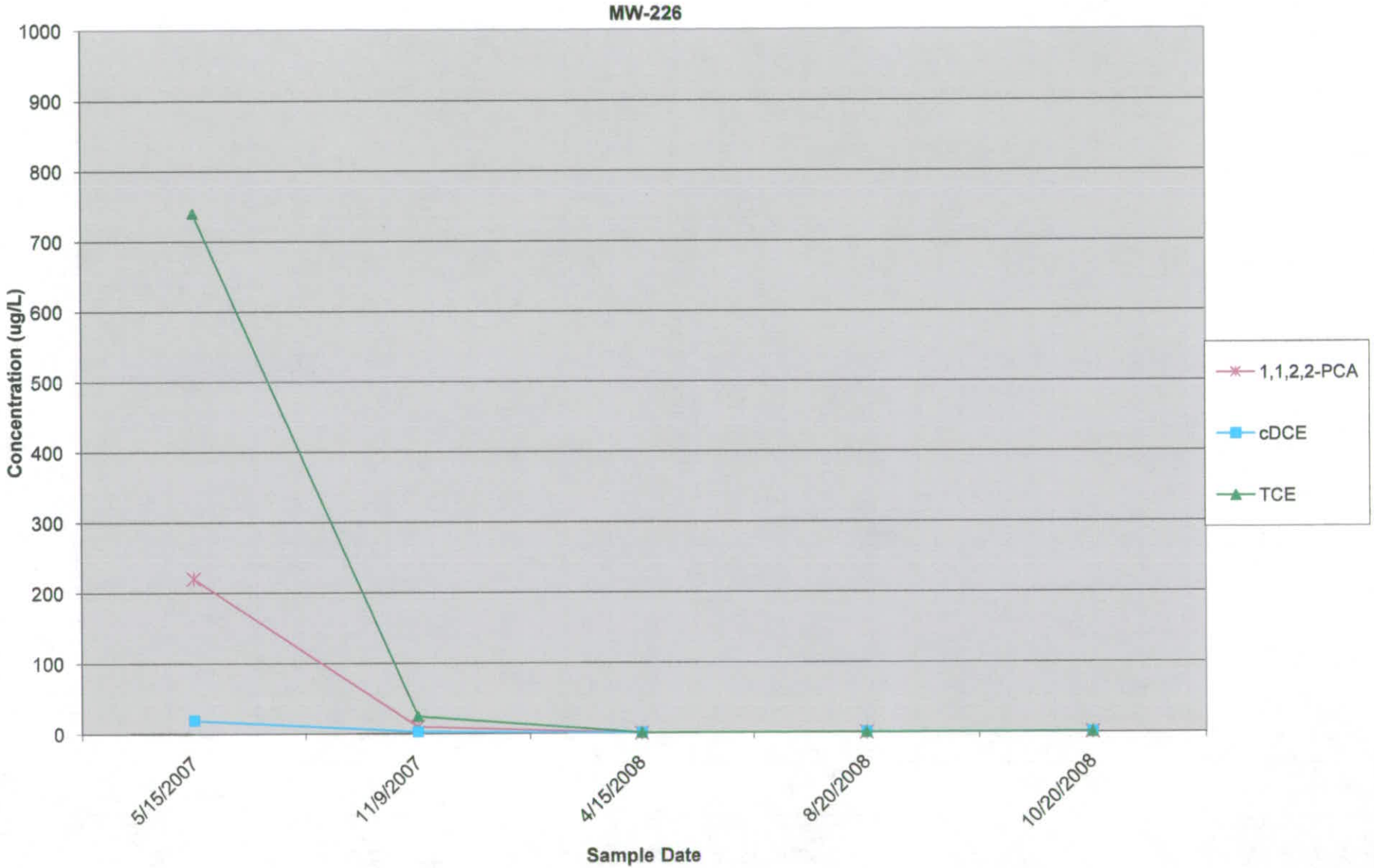

MW-221
500
450
400
350
300
250
200
150
100
50
0
Concentration (ug/L)
1,1,2,2-PCA
TCE
cDCE
PCE
5/21/2007
11/9/2007
4/16/2008
8/20/2008
10/21/2008
Sample Date

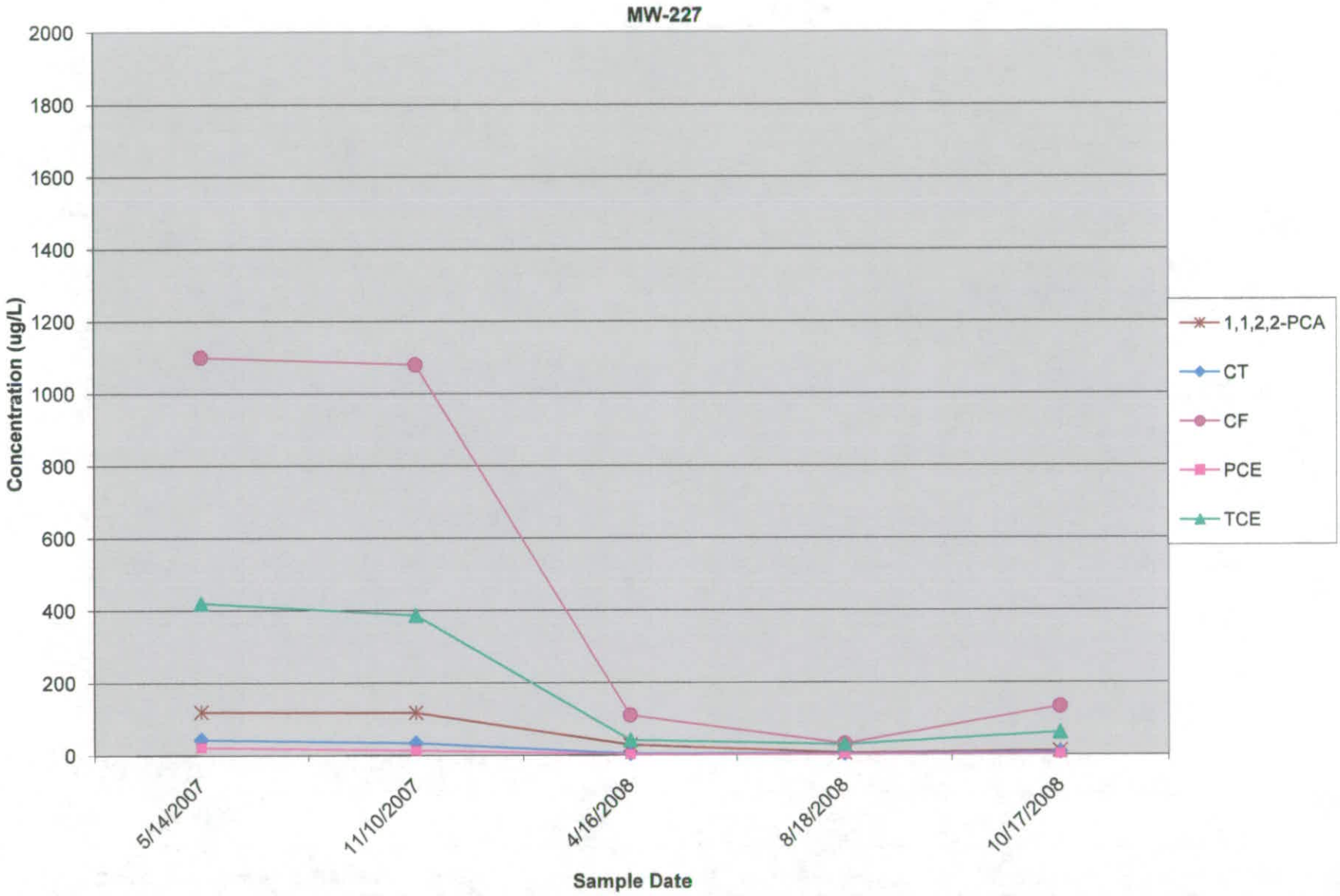

MW-222
2500
2000
1500
1000
500
0
Concentration (ug/L)
5/16/2007
11/9/2007
4/15/2008
8/19/2008
10/20/2008
Sample Date
1,1,2,2-PCA
cDCE
TCE

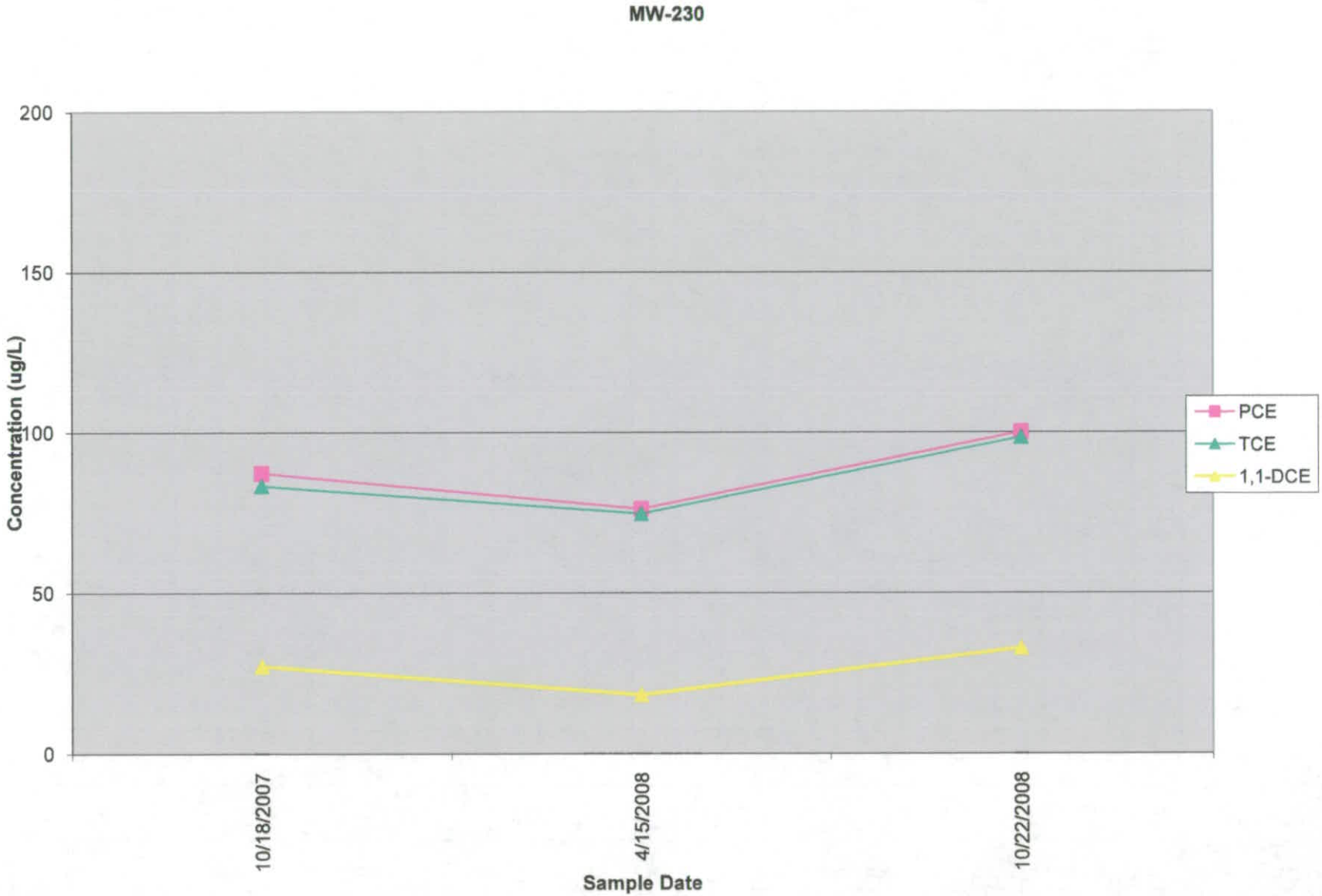

MW-223
500
450
400
350
300
250
200
150
100
50
0
Concentration (ug/L)
5/16/2007
11/9/2007
4/15/2008
8/18/2008
10/17/2008
Sample Date
1,1,2,2-PCA
TCE


MW-224
500
450
400
350
300
250
200
150
100
50
0
Concentration (ug/L)
5/16/2007
11/10/2007
4/16/2008
8/18/2008
10/20/2008
Sample Date
1,1,2,2-PCA
TCE


MW-225
500
450
400
350
300
250
200
150
100
50
0
Concentration (ug/L)
5/15/2007
11/9/2007
4/16/2008
8/20/2008
10/17/2008
Sample Date
1,1,2,2-PCA
TCE

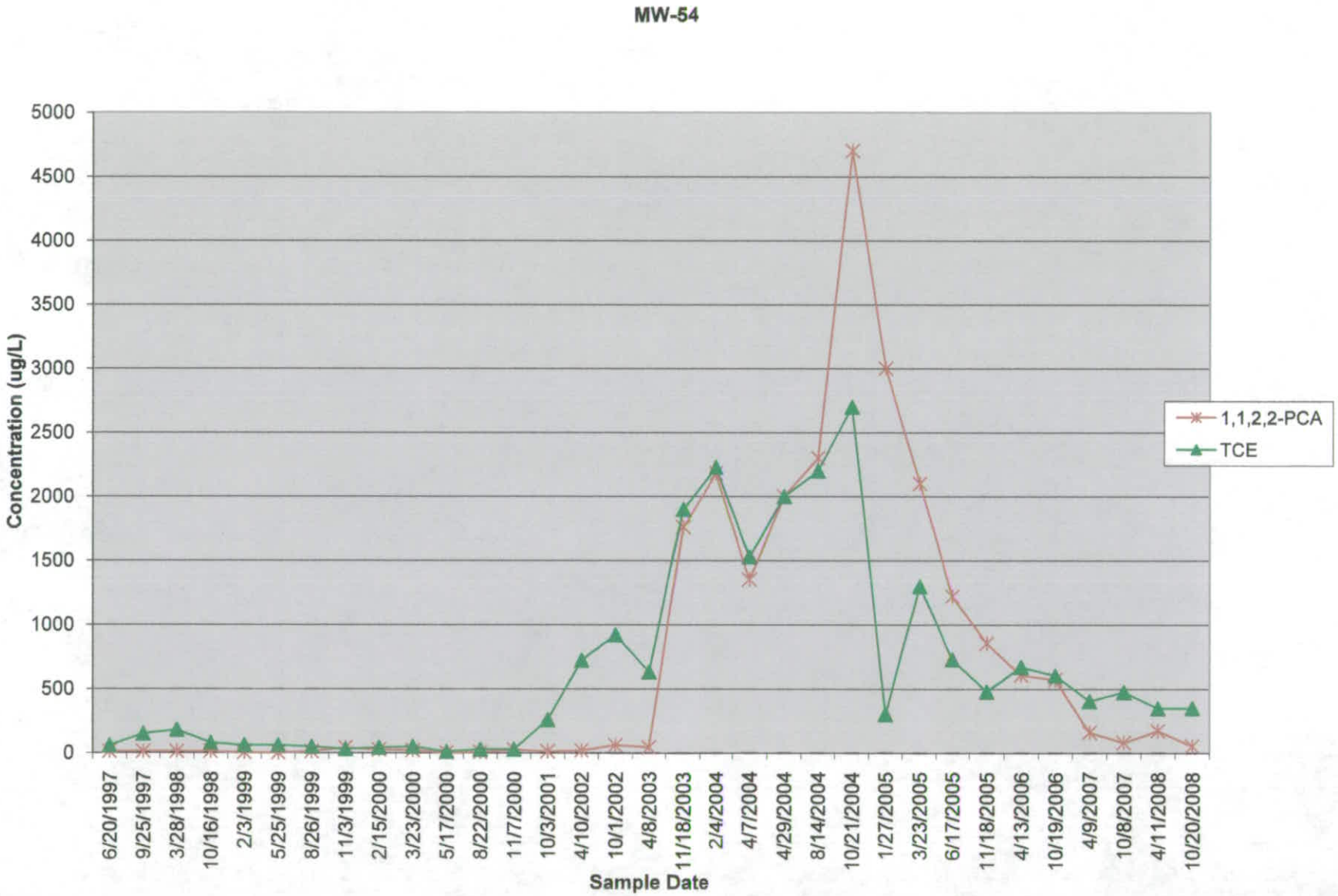

MW-226
1000
900
800
700
600
500
400
300
200
100
0
Concentration (ug/L)
5/15/2007
11/9/2007
4/15/2008
8/20/2008
10/20/2008
Sample Date
1,1,2,2-PCA
cDCE
TCE

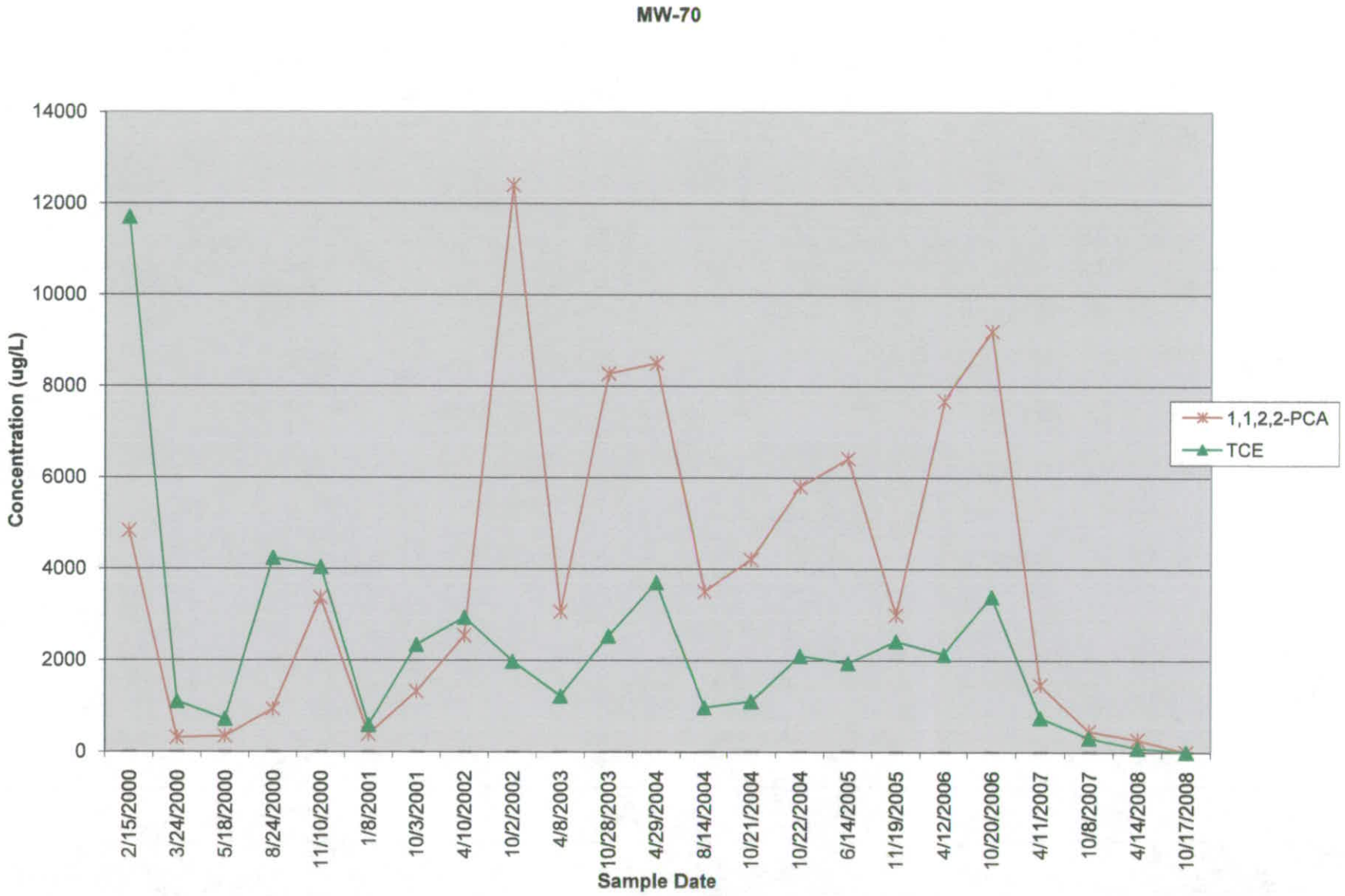

MW-227
2000
1800
1600
1400
1200
1000
800
600
400
200
0
Concentration (ug/L)
5/14/2007
11/10/2007
4/16/2008
8/18/2008
10/17/2008
Sample Date
1,1,2,2-PCA
CT
CF
PCE
TCE

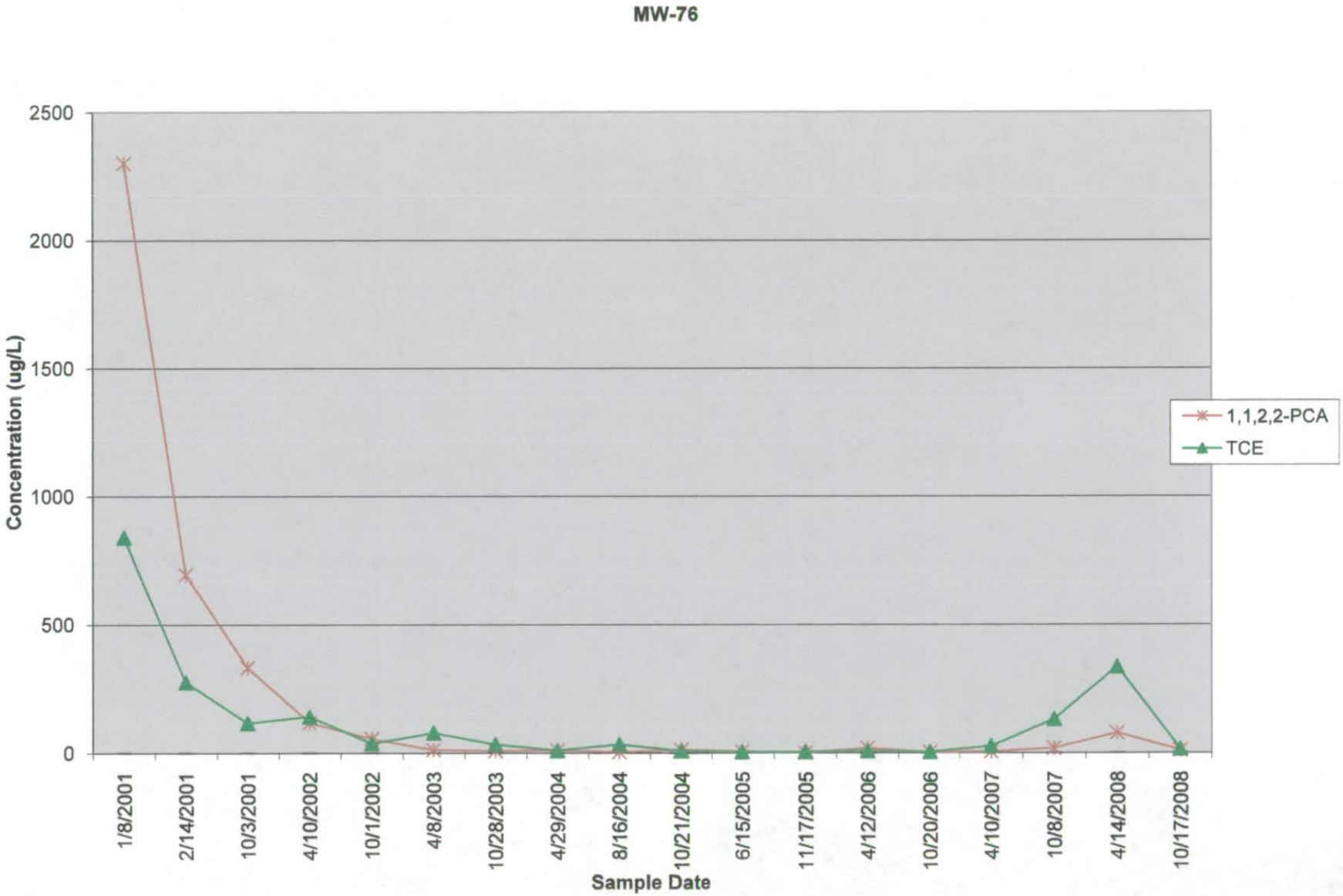

MW-230
200
150
100
50
0
Concentration (ug/L)
10/18/2007
4/15/2008
10/22/2008
Sample Date
PCE
TCE
1,1-DCE

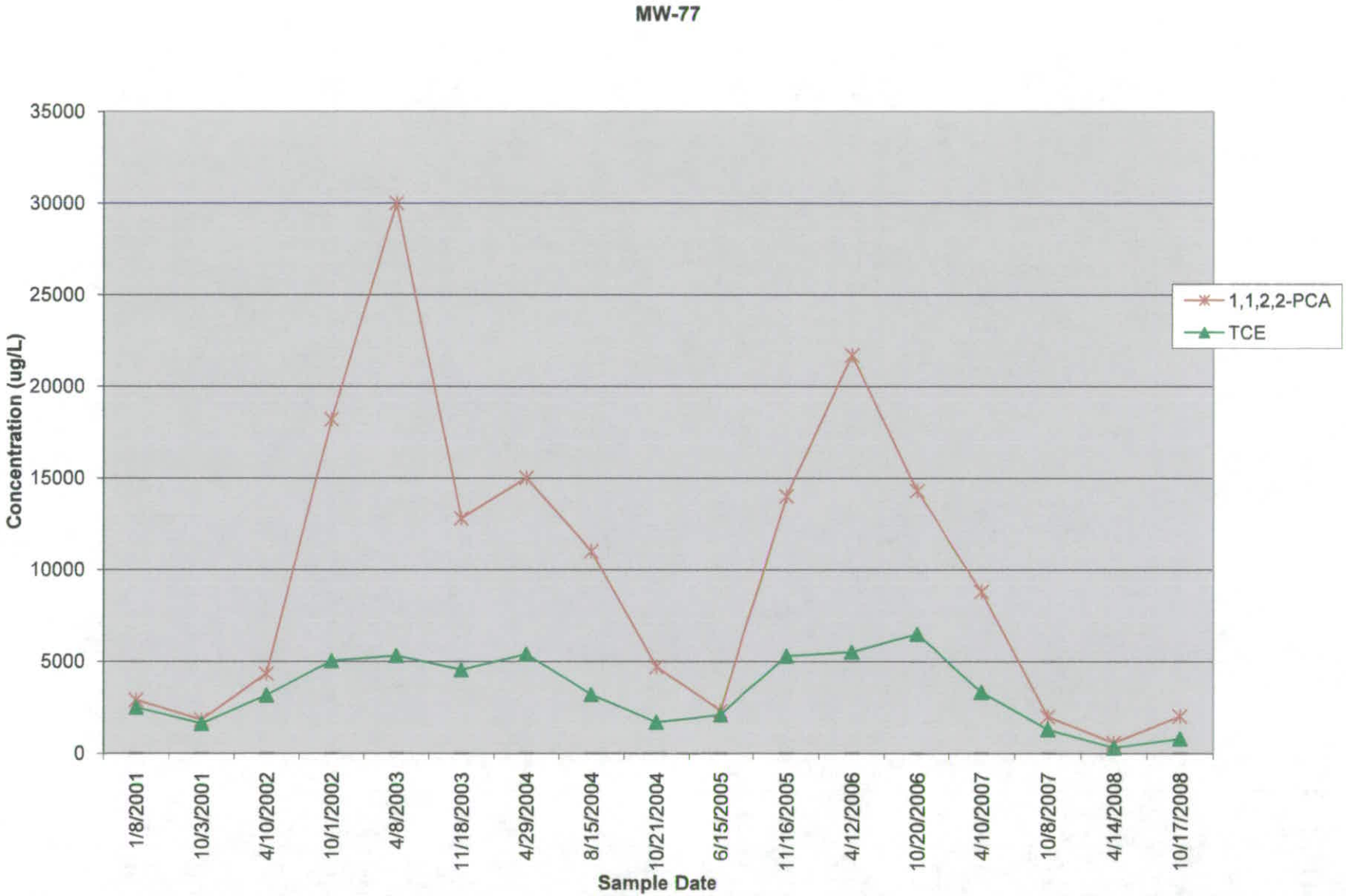
APPENDIX D

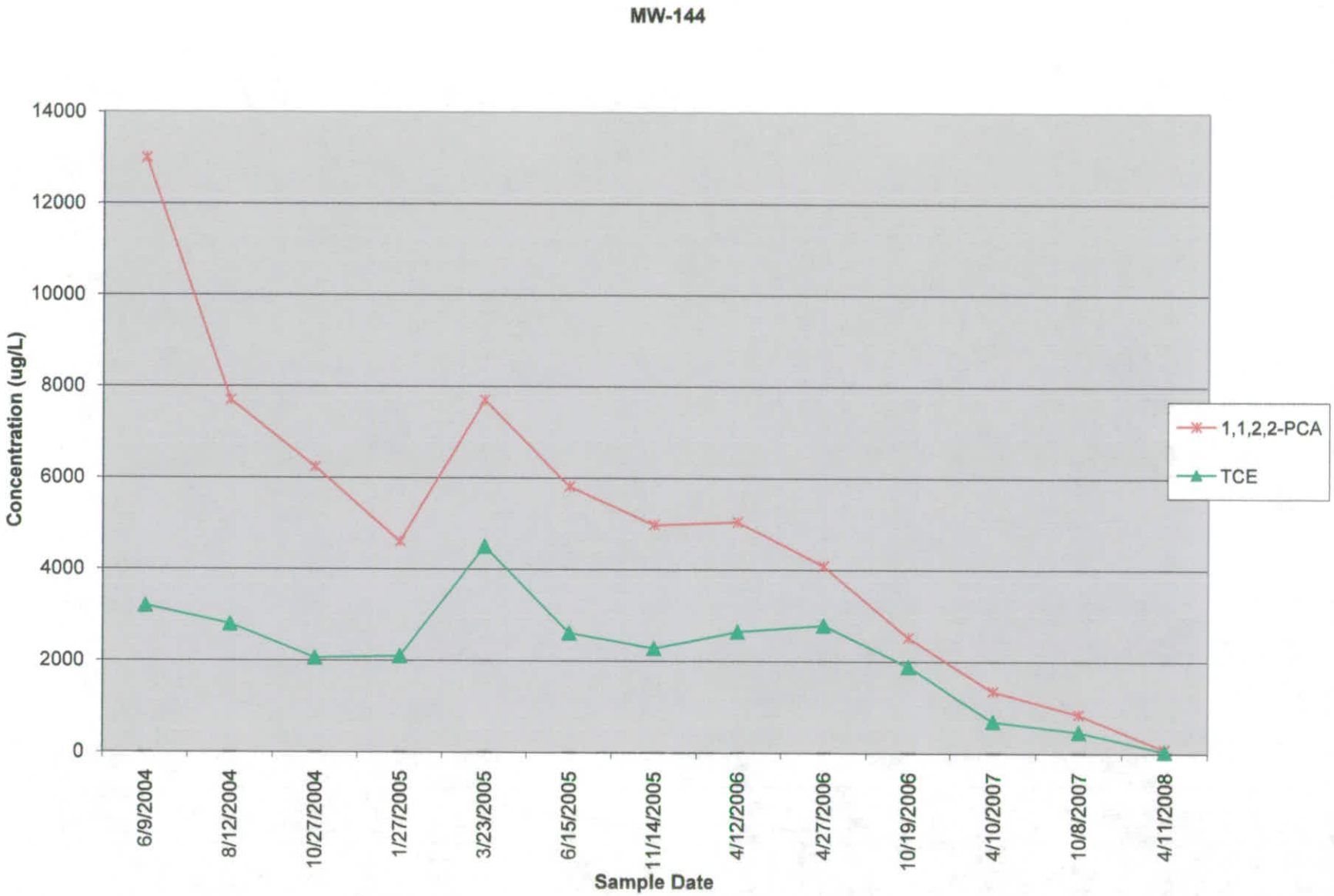
Time Trend Plots for Selected Off-Depot Monitoring Wells

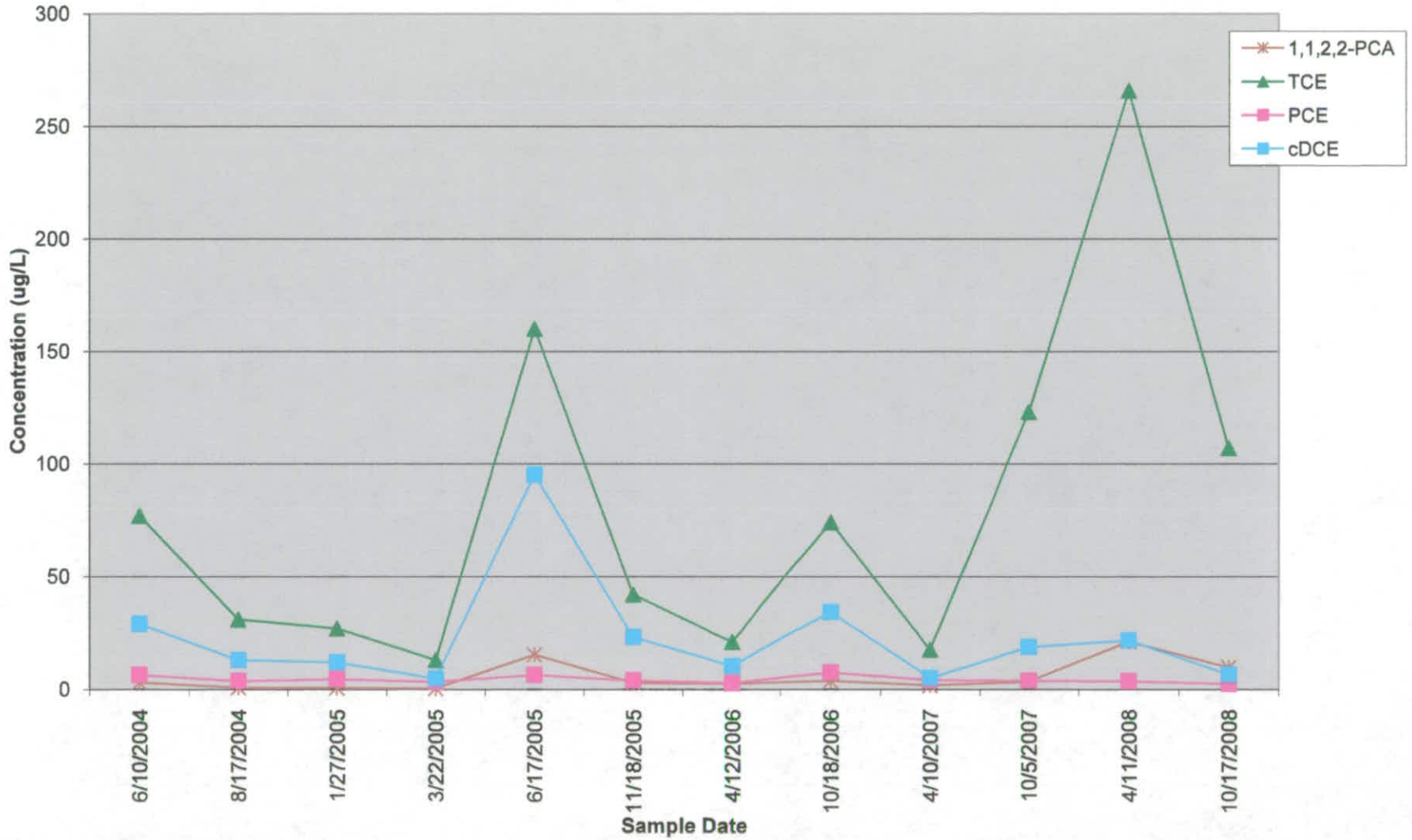

MW-54
Concentration (ug/L)
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
1,1,2,2-PCA
TCE
6/20/1997
9/25/1997
3/28/1998
10/16/1998
2/3/1999
5/25/1999
8/26/1999
11/3/1999
2/15/2000
3/23/2000
5/17/2000
8/22/2000
11/7/2000
10/3/2001
4/10/2002
10/1/2002
4/8/2003
11/18/2003
2/4/2004
4/7/2004
4/29/2004
8/14/2004
10/21/2004
1/27/2005
3/23/2005
6/17/2005
11/18/2005
4/13/2006
10/19/2006
4/9/2007
10/8/2007
4/11/2008
10/20/2008
Sample Date

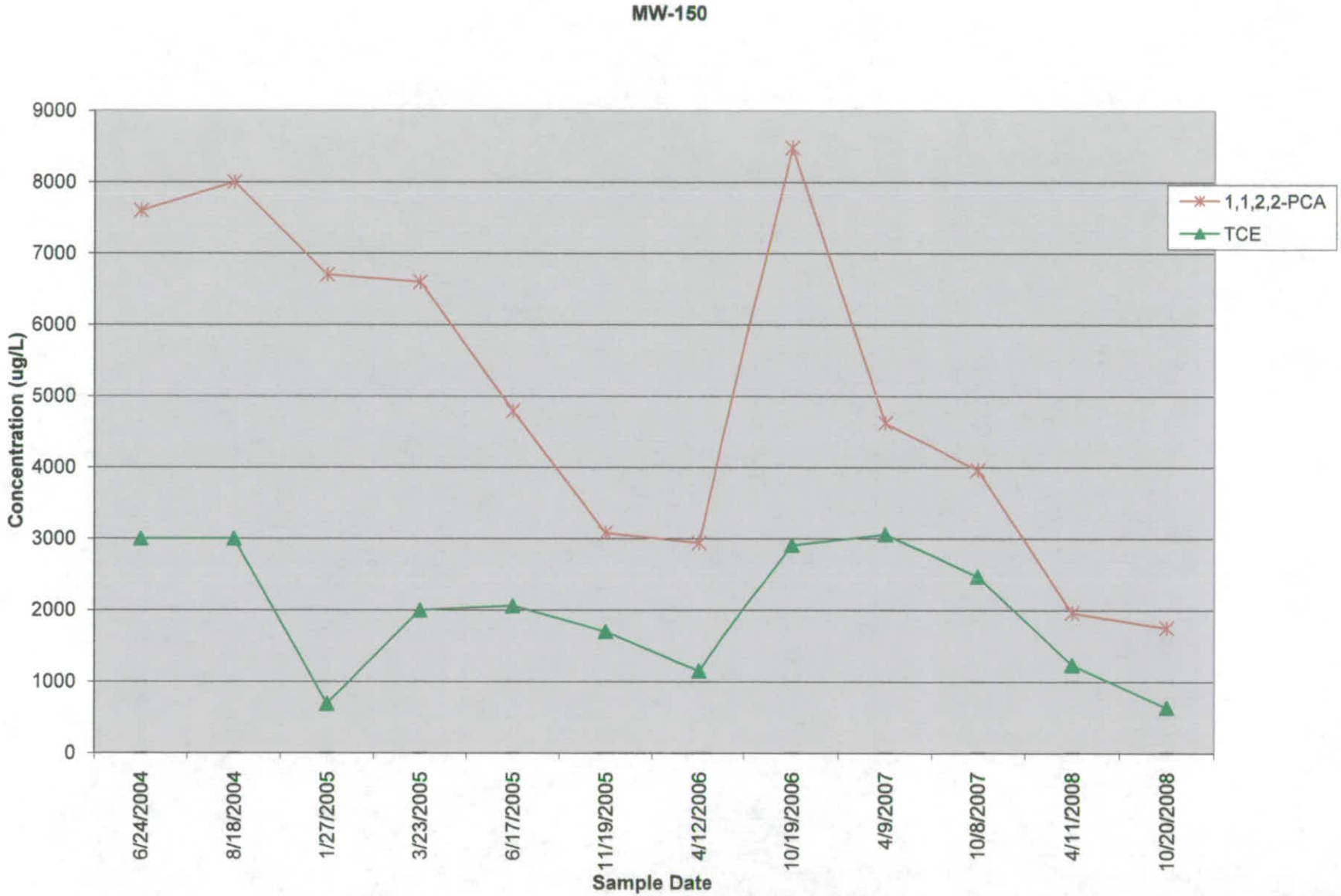

MW-70
14000
12000
10000
8000
6000
4000
2000
0
Concentration (ug/L)
2/15/2000
3/24/2000
5/18/2000
8/24/2000
11/10/2000
1/8/2001
10/3/2001
4/10/2002
10/2/2002
4/8/2003
10/28/2003
4/29/2004
8/14/2004
10/21/2004
10/22/2004
6/14/2005
11/19/2005
4/12/2006
10/20/2006
4/11/2007
10/8/2007
4/14/2008
10/17/2008
Sample Date
1,1,2,2-PCA
TCE

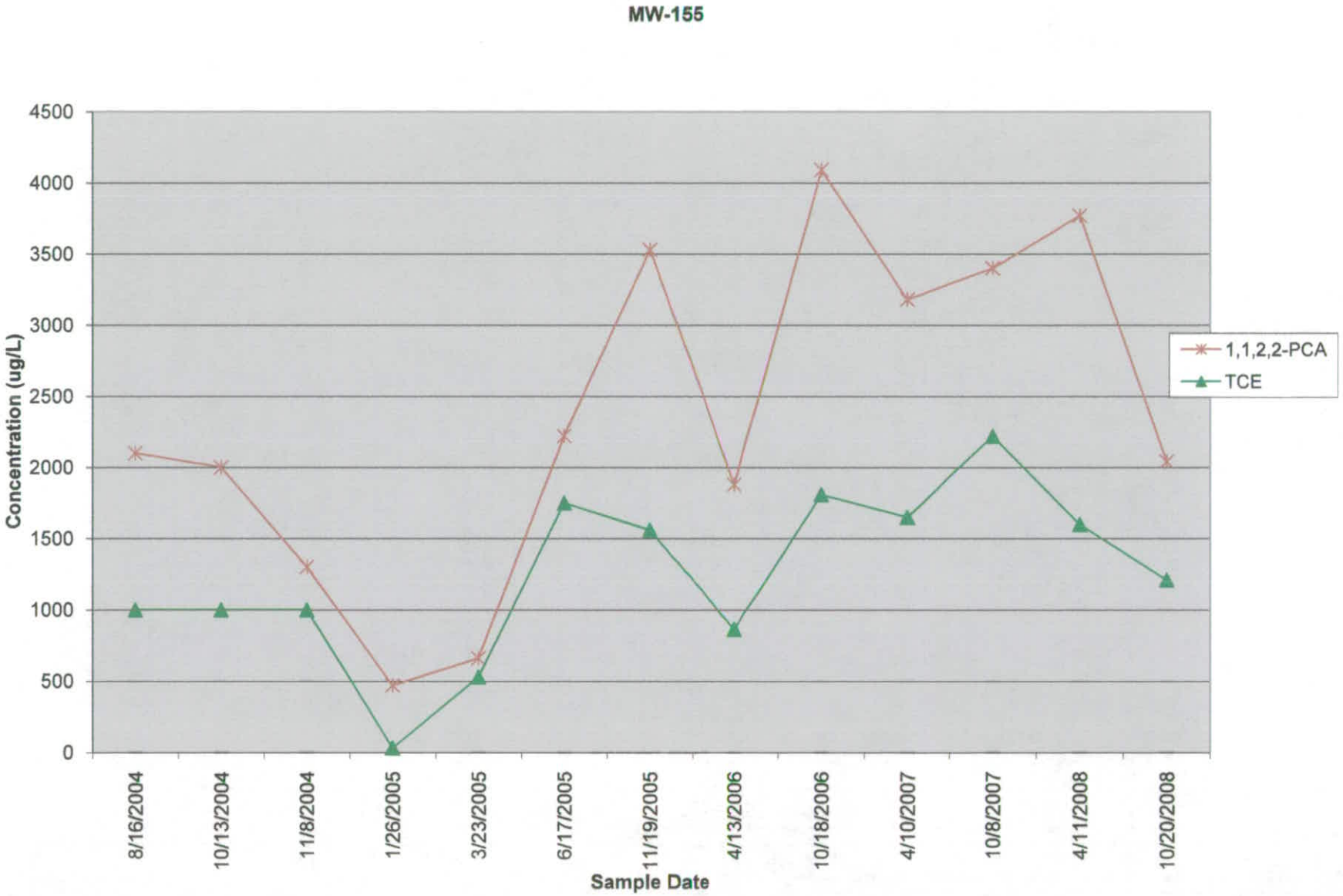

MW-76
2500
2000
1500
1000
500
0
Concentration (ug/L)
1,1,2,2-PCA
TCE
1/8/2001
2/14/2001
10/3/2001
4/10/2002
10/1/2002
4/8/2003
10/28/2003
4/29/2004
8/16/2004
10/21/2004
6/15/2005
11/17/2005
4/12/2006
10/20/2006
4/10/2007
10/8/2007
4/14/2008
10/17/2008
Sample Date

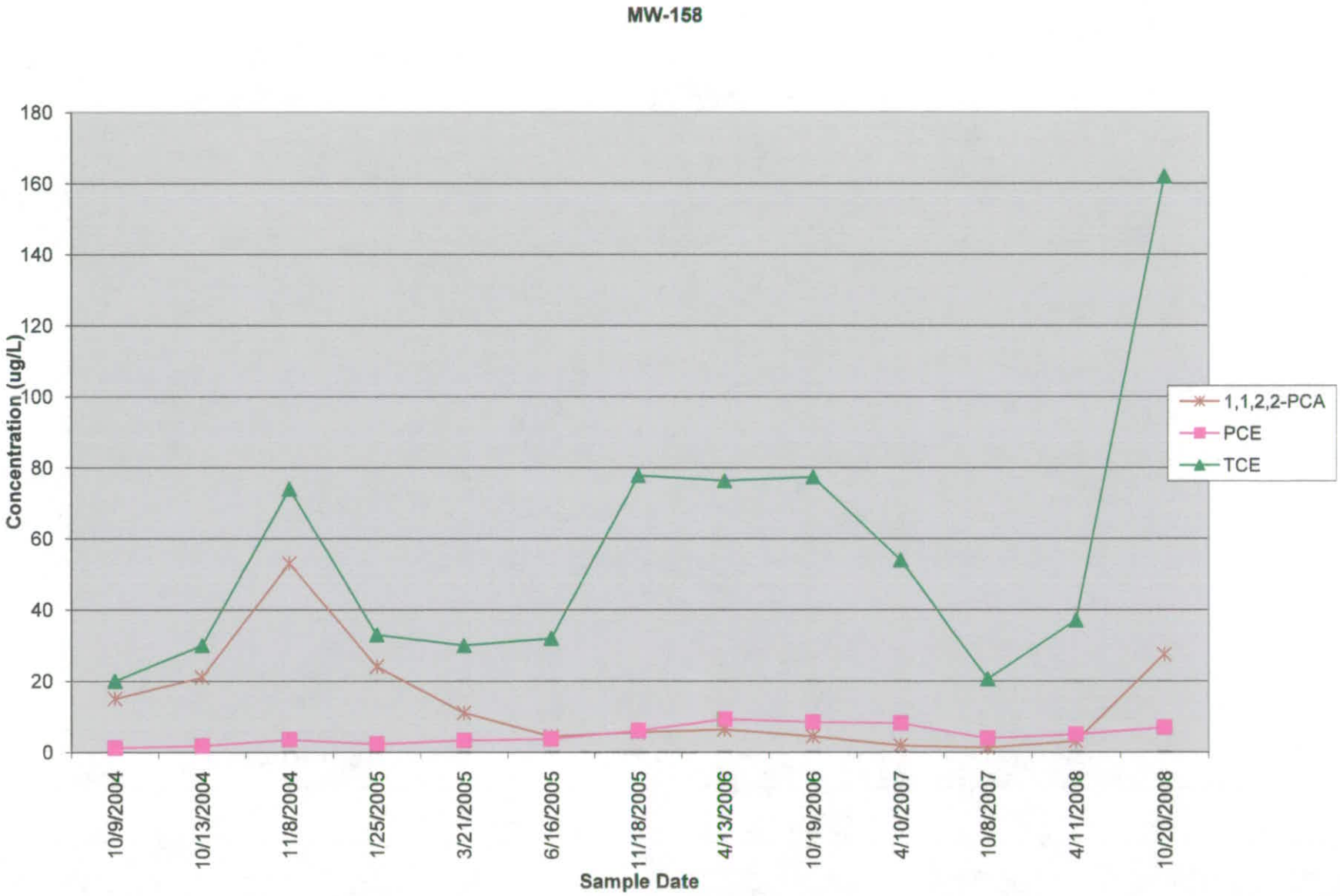

MW-77
35000
30000
25000
20000
15000
10000
5000
0
Concentration (ug/L)
1/8/2001
10/3/2001
4/10/2002
10/1/2002
4/8/2003
11/18/2003
4/29/2004
8/15/2004
10/21/2004
6/15/2005
11/16/2005
4/12/2006
10/20/2006
4/10/2007
10/8/2007
4/14/2008
10/17/2008
Sample Date
1,1,2,2-PCA
TCE

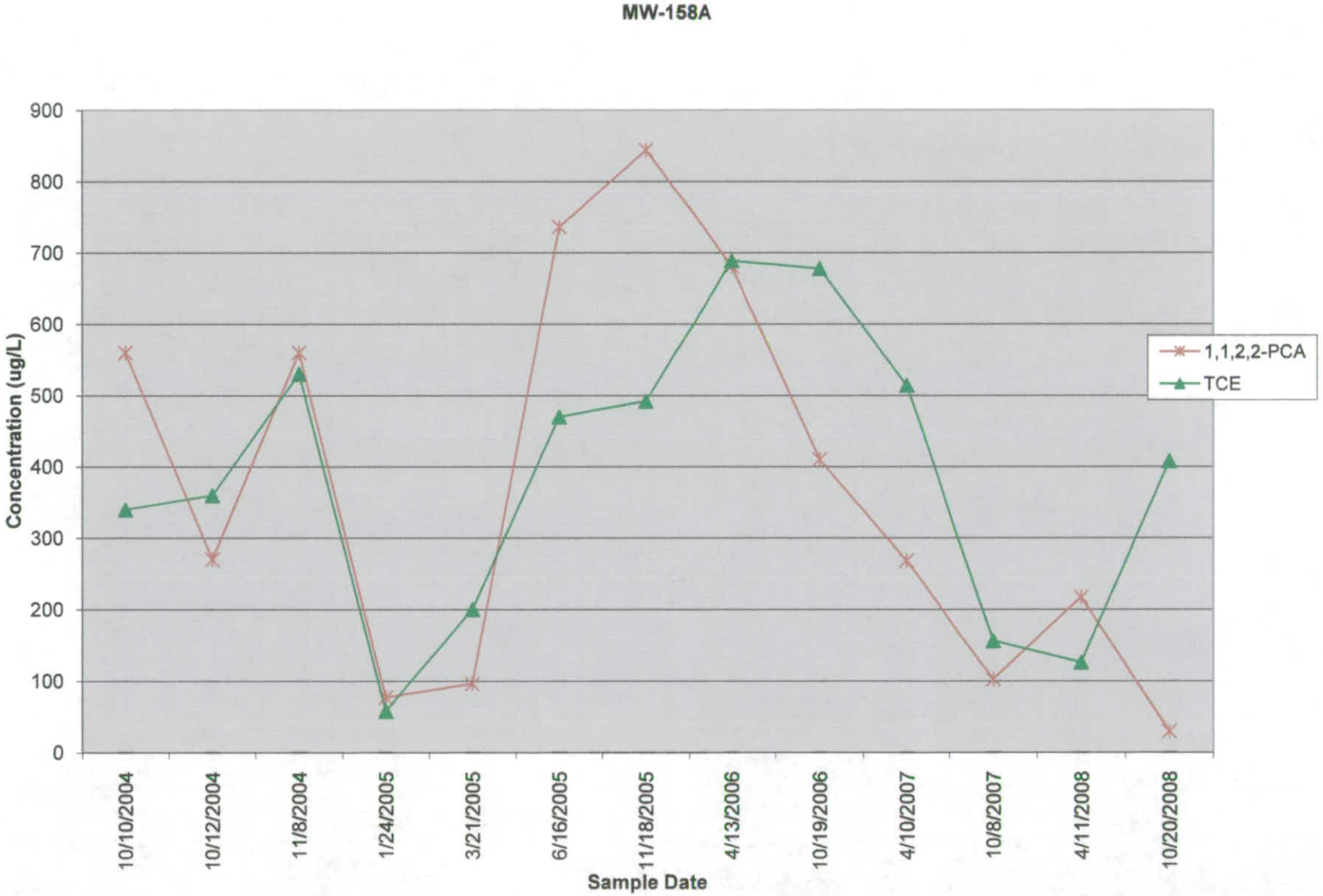

MW-144
14000
12000
10000
8000
6000
4000
2000
0
Concentration (ug/L)
6/9/2004
8/12/2004
10/27/2004
1/27/2005
3/23/2005
6/15/2005
11/14/2005
4/12/2006
4/27/2006
10/19/2006
4/10/2007
10/8/2007
4/11/2008
Sample Date
1,1,2,2-PCA
TCE

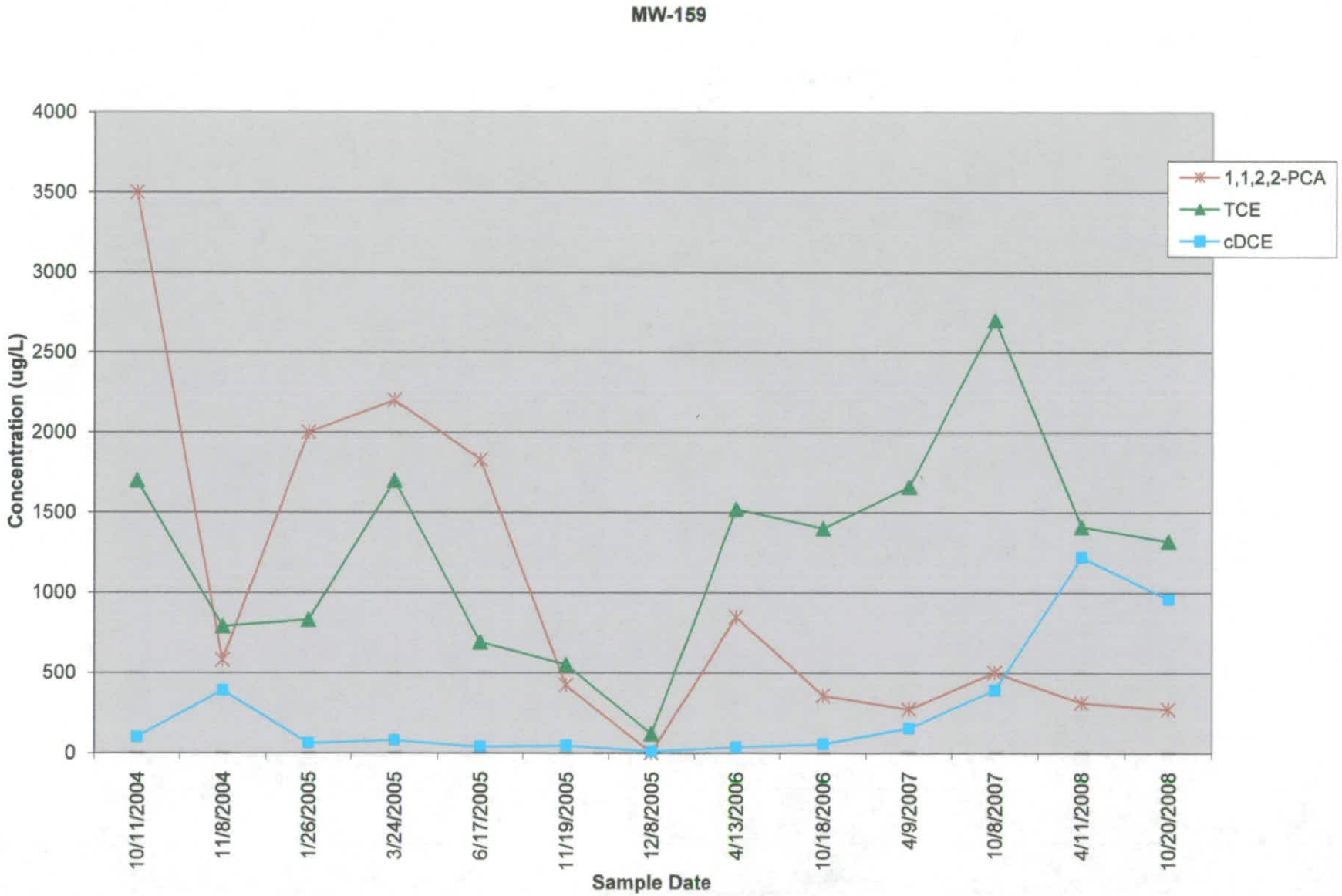

MW-148
300
250
200
150
100
50
0
Concentration (ug/L)
1,1,2,2-PCA
TCE
PCE
cDCE
6/10/2004
8/17/2004
1/27/2005
3/22/2005
6/17/2005
11/18/2005
4/12/2006
10/18/2006
4/10/2007
10/5/2007
4/11/2008
10/17/2008
Sample Date

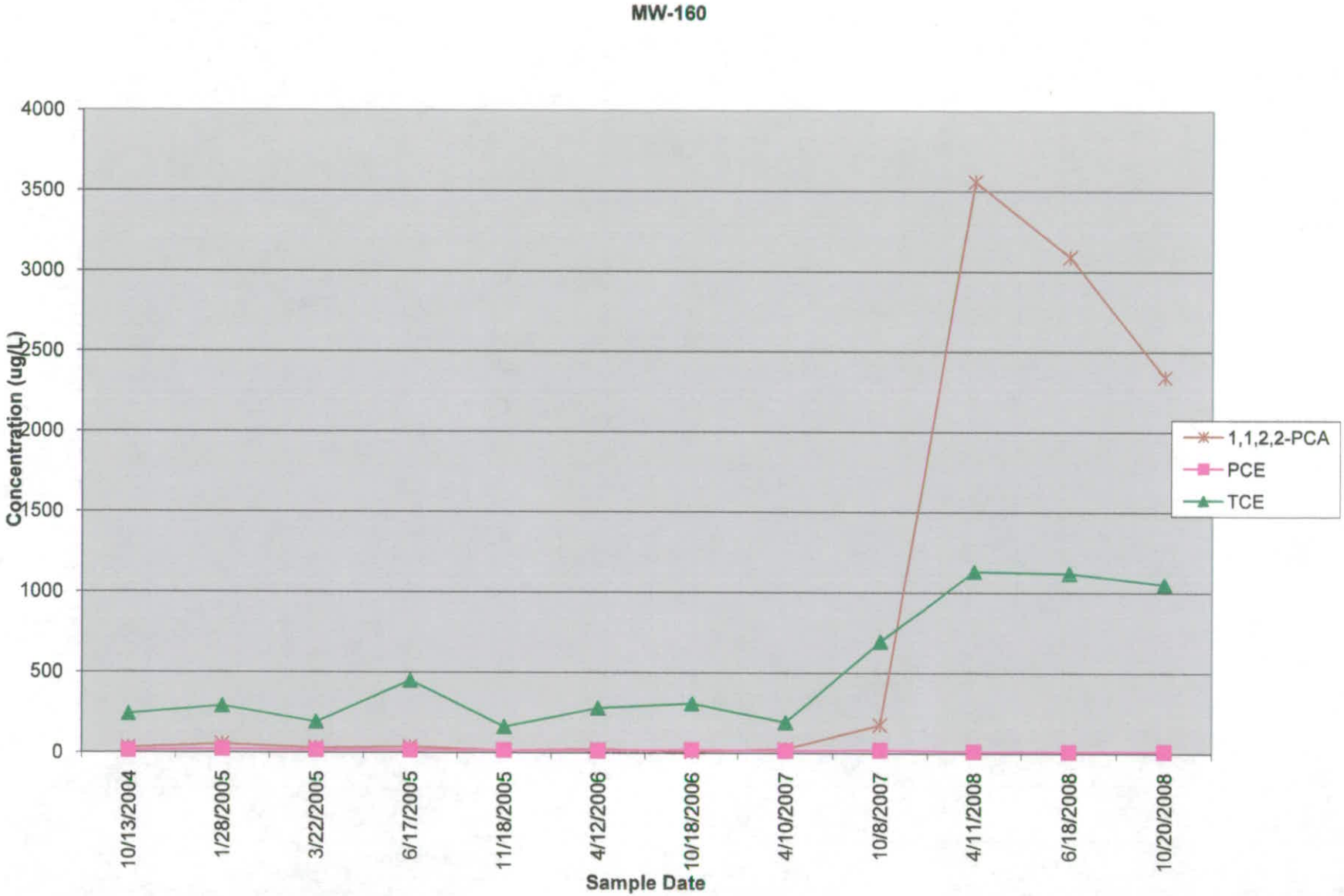

MW-150
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Concentration (ug/L)
1,1,2,2-PCA
TCE
6/24/2004
8/18/2004
1/27/2005
3/23/2005
6/17/2005
11/19/2005
4/12/2006
10/19/2006
4/9/2007
10/8/2007
4/11/2008
10/20/2008
Sample Date

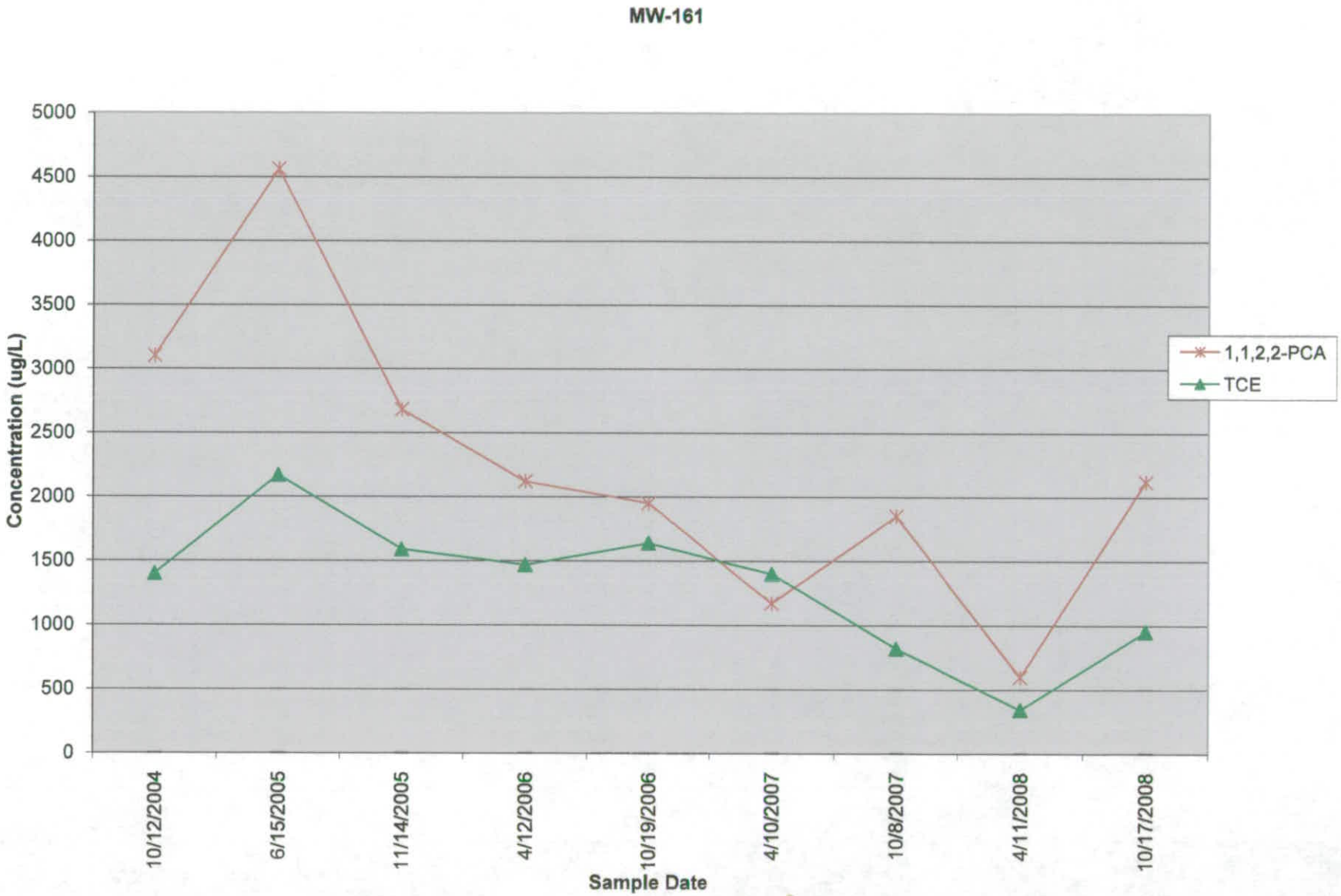

MW-155
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Concentration (ug/L)
1,1,2,2-PCA
TCE
8/16/2004
10/13/2004
11/8/2004
1/26/2005
3/23/2005
6/17/2005
11/19/2005
4/13/2006
10/18/2006
4/10/2007
10/8/2007
4/11/2008
10/20/2008
Sample Date


MW-158
Concentration (ug/L)
180
160
140
120
100
80
60
40
20
0
10/9/2004
10/13/2004
11/8/2004
1/25/2005
3/21/2005
6/16/2005
11/18/2005
4/13/2006
10/19/2006
4/10/2007
10/8/2007
4/11/2008
10/20/2008
Sample Date
1,1,2,2-PCA
PCE
TCE

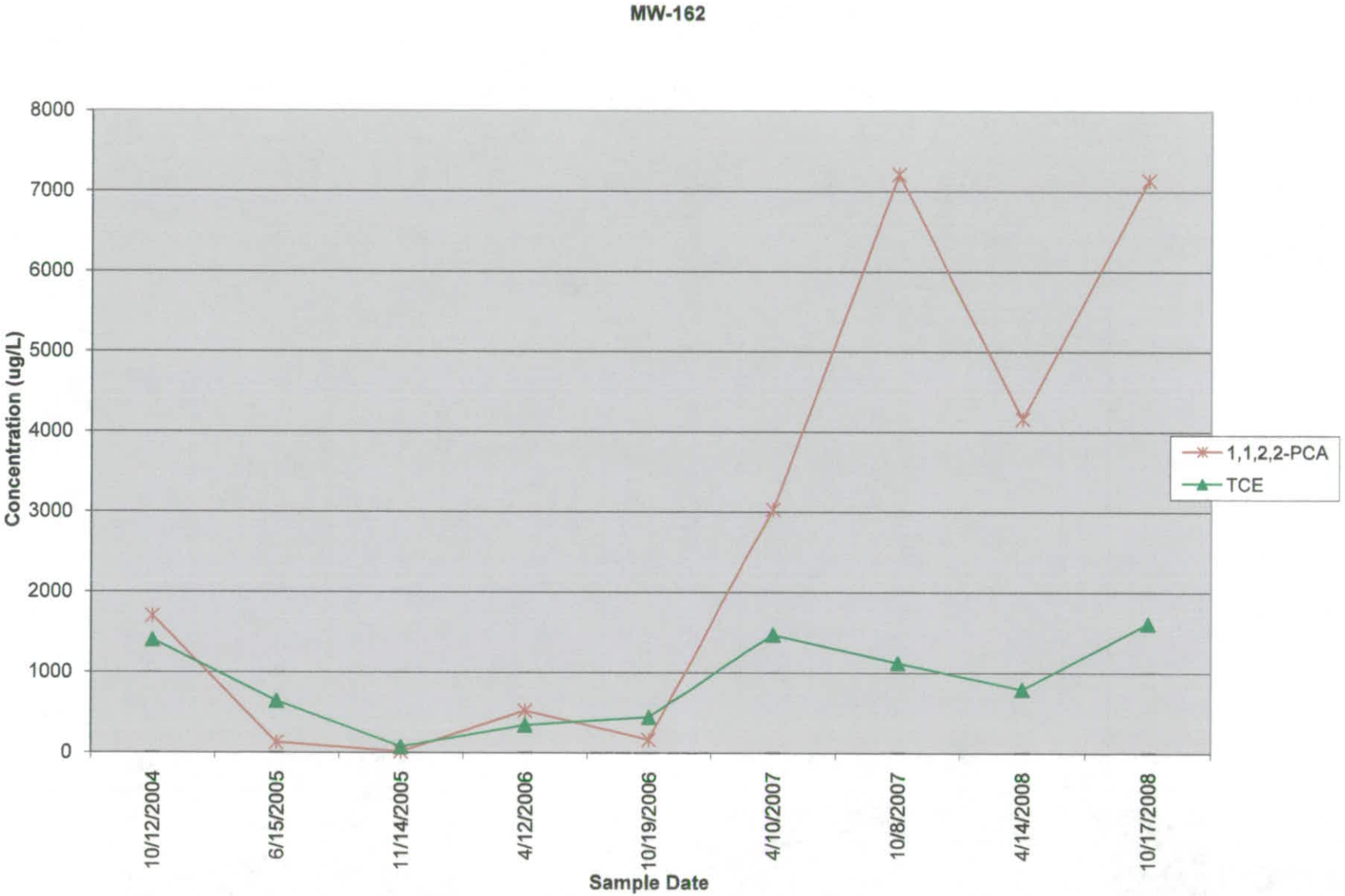

MW-158A
Concentration (ug/L)
900
800
700
600
500
400
300
200
100
0
10/10/2004
10/12/2004
11/8/2004
1/24/2005
3/21/2005
6/16/2005
11/18/2005
4/13/2006
10/19/2006
4/10/2007
10/8/2007
4/11/2008
10/20/2008
Sample Date
1,1,2,2-PCA
TCE

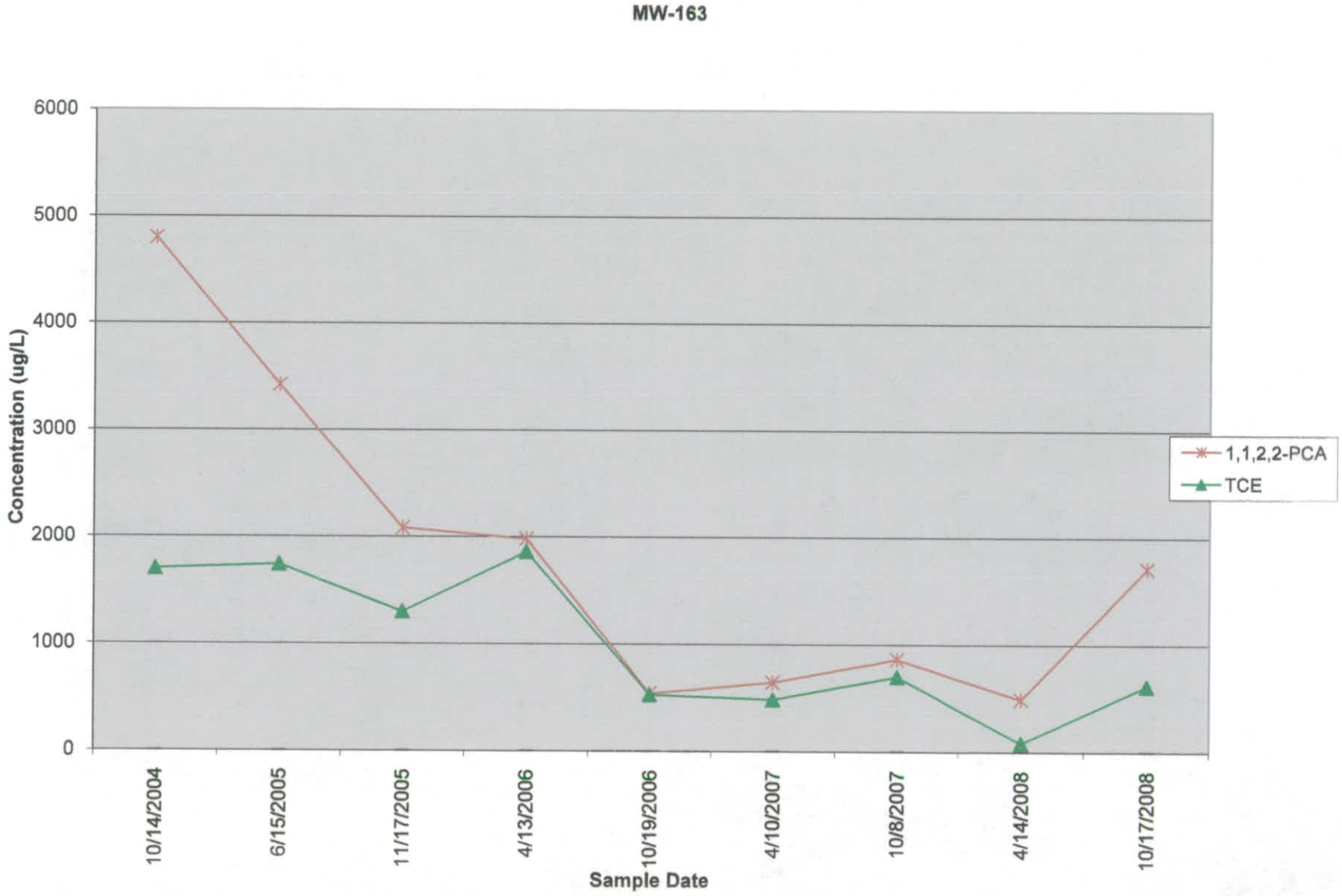

MW-159
4000
3500
3000
2500
2000
1500
1000
500
0
Concentration (ug/L)
1,1,2,2-PCA
TCE
cDCE
10/11/2004
11/8/2004
1/26/2005
3/24/2005
6/17/2005
11/19/2005
12/8/2005
4/13/2006
10/18/2006
4/9/2007
10/8/2007
4/11/2008
10/20/2008
Sample Date


MW-160
4000
3500
3000
2500
2000
1500
1000
500
0
Concentration (ug/L)
10/13/2004
1/28/2005
3/22/2005
6/17/2005
11/18/2005
4/12/2006
10/18/2006
4/10/2007
10/8/2007
4/11/2008
6/18/2008
10/20/2008
Sample Date
1,1,2,2-PCA
PCE
TCE


MW-161
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Concentration (ug/L)
1,1,2,2-PCA
TCE
10/12/2004
6/15/2005
11/14/2005
4/12/2006
10/19/2006
4/10/2007
10/8/2007
4/11/2008
10/17/2008
Sample Date

970 103


MW-162
8000
7000
6000
5000
4000
3000
2000
1000
0
Concentration (ug/L)
1,1,2,2-PCA
TCE
10/12/2004
6/15/2005
11/14/2005
4/12/2006
10/19/2006
4/10/2007
10/8/2007
4/14/2008
10/17/2008
Sample Date


MW-163
6000
5000
4000
3000
2000
1000
0
Concentration (ug/L)
1,1,2,2-PCA
TCE
10/14/2004
6/15/2005
11/17/2005
4/13/2006
10/19/2006
4/10/2007
10/8/2007
4/14/2008
10/17/2008
Sample Date

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