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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: 26 June 2008

Re: **April 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 April 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 semiannual monitoring of groundwater and the system discharge. IRA groundwater recovery system 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); 1,1,1,2-tetrachlorothane (PCA); and vinyl chloride (VC). Three primary VOC plumes underlie 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 groundwater recovery system (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 system in the Loess began operation in May 2008. Zero valent iron injection in the fluvial aquifer is currently planned for 2009 following completion of the thermal-enhanced SVE.

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 BRAC Cleanup Team (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 using 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 126 monitoring wells, one piezometer, and 8 recovery wells on 10 April 2008. At monitoring 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. Water levels for recovery wells were taken from pressure transducer measurements. Measurements were not made in five of the planned monitoring wells: MW-144 and MW-233 were dry; MW-229 was inadvertently omitted; and MW-134 and MW-4-TDEC were not accessible. Water levels were not measured in three recovery wells (RW-1, RW-1A and RW-1B) because the water level was below the top of the pump motor. 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 82 of 84 designated monitoring wells and from all 11 recovery wells on 11 to 16 April 2008. Two monitoring wells (MW-10 and MW-233) were dry at the time of sampling. The groundwater samples were sent to Microbec Laboratories for VOC analysis by USEPA Method SW8260B.

Monitoring Wells - Passive Diffusion Bag Sampling

A total of 68 Passive Diffusion Bag (PDBs) were retrieved from 51 wells on 11 to 14 April 2008. Two PDB samples were collected from 17 wells as indicated on Table 1. The original purpose of the dual PDB samples was to evaluate variations in concentrations over the screened aquifer thickness. The use of dual PDBs was discontinued following the April 2008 event as agreed at the April 2008 BCT meeting. 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.

The drop in water levels in the fluvial aquifer resulted in ten wells having midpoints of PDBs at or above the water table. In four wells with dual PDBs (MW-148, MW-150, MW-155 and MW-158A), the upper PDB was 0.3 to 2.4 feet above the water level. In six wells with single PDBs (MW-144, MW-147, MW-160, MW-161, MW-163 and MW-169), the PDB was 0.1 to 1.1 feet above the water level. Wells MW-144, MW-161 and MW-163 were dry or had less than 1 foot of water based on the water level measurements To limit this problem during future semiannual sampling events, water levels will be measured in all wells with PDBs approximately one month prior to sample collection and PDBs will be lowered where necessary in order that the midpoint depth is 2 feet below the water level. If saturated thickness is less than 5 feet, samples will be collected by low-flow sampling.

Monitoring Wells - Low Flow Sampling

Groundwater samples were collected from 32 monitoring wells on 11 to 16 April 2008 using bladder pumps and low-flow purging methods. Dedicated Teflon® bladders and Teflon®-lined polyethylene tubing were used for 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:

- Samples collected from MW-172, MW-231, MW-234, MW-235, and MW-238 had turbidity readings of 22.9 to 172 NTUs following purging for two hours.

Recovery Wells

Groundwater samples were collected from all 11 recovery wells on 16 April 2008 and analyzed for VOCs by EPA Method 8260B. For the sampling event, the RW pumps were shut down prior to sample collection to prevent the pump from cycling. During sampling, each pump was restarted, allowed to run for a few minutes prior to sample collection and then shut down after sampling. Samples were collected from the sample port on the recovery well heads. 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, all RW pumps were re-started.

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 11 April 2008 from the GWRS at the discharge loop located adjacent to Person Avenue at the north property line of Dunn Field. The valve on the sample port was slowly opened and the system discharge allowed to slowly fill the required sample containers. The effluent sample were sent to Microbec 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 duplicate 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 stored in a 500 gallon plastic tank. When the tank is full, a sample will be collected and the water will be pumped to the sanitary sewer following approval from the City of Memphis.

SUMMARY OF MONITORING RESULTS

Water Level Measurements

Water level measurements collected on 10 April 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 1 foot lower in April 2008 compared to measurements in September 2007. Water levels in intermediate aquifer wells have been more variable; the water levels in April 2008 were 1 to 17 feet higher than in September 2007, but were within 3 feet of water levels in April 2007.

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 recovery wells is evident 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 April 2008 are shown on Figure 3.

Analytical Results for Monitoring Wells

A total of 99 groundwater samples were collected from 82 monitoring wells in April 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 19 VOCs were detected above RLs in the April 2008 samples. A summary of analytical results for the primary groundwater contaminants in monitoring wells is provided on Table 8.

Analytical results for the monitoring wells that had PDBs above the water level were compared to previous results and to the current results for the lower PDB, where present. The results for MW-150 (upper) and MW-144 are not considered valid based on differences with previous results. The results for the upper PDBs in other wells with dual PDBs (MW-148, MW-155 and MW-158) are consistent with trends from past results and the lower PDB, and are considered valid. The results in MW-169 are generally non-detect as in previous results. The results in the other wells with single PDBs (MW-147, MW-160, MW-161 and MW-163) were generally consistent with trends from past results but were sufficiently different to be considered questionable. As discussed above, water levels will be checked prior to future sample events to ensure samples are representative.

Analytical Results for Recovery Wells

Groundwater samples were collected from eleven recovery wells in April 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 April 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 appears to be having 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 and April 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 and continued in the latest sample. Total CVOC concentrations in the IRA system effluent in April 2008 have declined over 80% compared to samples collected in April 2007.

CVOC concentrations in all recovery wells decreased in the current samples. Generally, recovery wells on the south end have shown less reduction in CVOC concentrations since start-up of the SVE system. This may be due to thin saturated thickness in the southern area of Dunn Field. In addition, RW-9 on the north end of Dunn Field has shown little reduction in CVOC concentration; groundwater concentrations at this well are considered to result from migration from an off-site source northeast of Dunn Field.

On-Site Monitoring Wells

Time trend plots for onsite monitoring wells are included in Appendix C. The largest declines are seen in those wells located in the vicinity of SVE wells. Total CVOC concentrations have declined over one order of magnitude since the onset of Fluvial SVE operations at several wells including MW-132, MW-174, MW-220, MW-222, and MW-223. The highest onsite CVOC concentrations remain in the southern portion of Dunn Field.

The only monitoring wells on Dunn Field that did not show reductions in CVOC concentrations (MW-230, and MW-07) were in the northeast section of Dunn Field and reflect the offsite plume migrating onto Dunn Field.

The highest total CVOC concentration for the wells on Dunn Field was 243 µg/L in MW-15. The CVOC concentrations in Dunn Field monitoring wells are not indicative of a continuing source within the aquifer and are below the target concentrations for ZVI injections (1000 µg/L).

Offsite Wells

Time trend plots for selected off-site monitoring wells are included in Appendix D. Generally, CVOC concentrations have declined over October 2007 concentrations in wells immediately downgradient (west) of the Dunn Field western boundary.

Recommendations

CVOC concentrations in recovery wells and monitoring wells at the north end of Dunn Field do not exceed 50 µg/L for any single constituent. 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 will be discontinued based on achievement of the groundwater target concentration in this area. The wells will be maintained and kept in operating condition until the IRA GWRS is mothballed. This action was agreed upon at the June BCT meeting. The City of Memphis was notified of the operational change on 9 June and the wells were shut down on 9 June 2008.

Groundwater monitoring will continue at the 84 monitoring wells and 11 RWs. The next IRA sampling event is scheduled for October 2008.

TABLES

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

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

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

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

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

Well	Aquifer Screened	Water Level Measurement	Groundwater Samples April 2008
MW-187	Fluvial	X	LF
MW-193	Fluvial	X	
MW-194	Fluvial	X	
MW-220	Fluvial	X	LF
MW-221	Fluvial	X	LF
MW-222	Fluvial	X	LF
MW-223	Fluvial	X	LF
MW-224	Fluvial	X	LF
MW-225	Fluvial	X	LF
MW-226	Fluvial	X	LF
MW-227	Fluvial	X	LF
MW-228	Fluvial	X	LF
MW-229	Intermediate	N	
MW-230	Fluvial	X	LF
MW-231	Intermediate	X	LF
MW-232	Intermediate	X	M
MW-233	Fluvial	N	NS
MW-234	Intermediate	X	LF
MW-235	Fluvial	X	LF
MW-236	Fluvial	X	LF
MW-237	Intermediate	X	LF
MW-238	Intermediate	X	LF
MW-239	Intermediate	X	LF
MW-240	Intermediate	X	LF
PZ-02	Fluvial	X	
RW-01	Fluvial	N	G
RW-01A	Fluvial	N	G
RW-01B	Fluvial	N	G
RW-02	Fluvial	X	G
RW-03	Fluvial	X	G
RW-04	Fluvial	X	G
RW-05	Fluvial	X	G
RW-06	Fluvial	X	G
RW-07	Fluvial	X	G
RW-08	Fluvial	X	G
RW-09	Fluvial	X	G
MW-1 TDEC	Fluvial	X	
MW-2 TDEC	Fluvial	X	
MW-3 TDEC	Fluvial	X	
MW-4 TDEC	Fluvial	N	

Notes

**	Indicates a pressure transducer is installed in the monitoring well
X	Water level measured.
N	Water level measurement planned but not made
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 and bottom of saturated screened interval (two samples per well)
S	Single sample, one PDB sampler at mid-point of saturated screened intervals.
NS	Sample planned but not collected.

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

				Depth to Water	Groundwater Elevation
		Top of Casing Elevation	Top of Screen Elevation	10-Apr-2008	
Well ID	Aquifer	(ft, msl)	(ft, msl)	(ft, btoc)	(ft, msl)
MW-03	Fluvial	292 35	226 85	72 10	220 25
MW-04	Fluvial	301 61	241 61	78 00	223 61
MW-05	Fluvial	304 64	244 64	79 04	225 60
MW-06	Fluvial	289 11	238 11	65 70	223 41
MW-07	Fluvial	295 10	228 10	69 75	225 35
MW-08	Fluvial	292 59	236 09	65 09	227 50
MW-10	Fluvial	288 79	230 19	66 45	222 34
MW-12	Fluvial	301 30	231 90	78 85	222 45
MW-13	Fluvial	300 01	234 01	75 87	224 14
MW-14	Fluvial	302 22	237 22	75 55	226 67
MW-15	Fluvial	295 12	231 72	70 92	224 20
MW-19	Fluvial	290 57	207 47	87 00	203 57
MW-28	Fluvial	294 79	240 49	58 48	236 31
MW-29	Fluvial	273 22	239 02	41 33	231 89
MW-30	Fluvial	275 14	236 14	49 44	225 70
MW-31	Fluvial	290 37	226 27	73 31	217 06
MW-32	Fluvial	285 38	232 68	64 48	220 90
MW-33	Fluvial	280 71	236 11	57 29	223 42
MW-34	Intermediate	299 97	163 37	132 15	167 82
MW-35	Fluvial	300 46	230 86	79 43	221 03
MW-37	Intermediate	284 91	119 21	120 53	164 38
MW-38	Intermediate	307 45	167 55	130 00	177 45
MW-40	Fluvial/Intermediate	262 23	177 23	82 02	180 21
MW-42	Fluvial	274 83	225 83	57 19	217 64
MW-43	Intermediate	284 99	123 49	119 85	165 14
MW-44	Fluvial	269 07	205 07	57 25	211 82
MW-45	Fluvial	293 22	235 22	56 35	236 87
MW-51	Fluvial	275 23	220 23	43 25	231 98
MW-53	Fluvial	306 38	233 88	73 92	232 46
MW-54	Fluvial	295 35	210 85	83 15	212 20
MW-55	Fluvial	292 08	228 08	70 55	221 53
MW-56	Fluvial	293 60	234 60	68 30	225 30
MW-57	Fluvial	290 77	230 77	65 15	225 62
MW-58	Fluvial	290 51	233 51	64 50	226 01
MW-59	Fluvial	300 13	227 63	77 38	222 75
MW-60	Fluvial	296 86	224 36	74 00	222 86
MW-61	Fluvial	294 04	225 54	69 70	224 34
MW-62	Fluvial	293 65	207 65	93 93	199 72
MW-65	Fluvial	263 22	222 42	5 10	258 12
MW-67	Memphis	278 21	18 21	112 90	165 31
MW-68	Fluvial	291 69	219 19	70 95	220 74
MW-69	Fluvial	307 02	224 94	85 71	221 31
MW-70	Fluvial	304 99	224 18	83 04	221 95
MW-71	Fluvial	294 40	228 90	71 57	222 83
MW-74	Fluvial	303 68	233 68	81 36	222 32
MW-75	Fluvial	303 61	232 61	81 51	222 10
MW-76	Fluvial	302 71	229 71	87 00	215 71
MW-77	Fluvial	304 42	236 42	83 81	220 61
MW-78	Fluvial	275 00	230 50	50 55	224 45
MW-79	Fluvial	285 03	202 53	73 57	211 46
MW-80	Fluvial	273 81	220 81	62 18	211 63
MW-87	Fluvial	294 93	231 93	72 12	222 81

TABLE 2
WATER LEVEL MEASUREMENTS
APRIL 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)	Depth to Water 10-Apr-2008 (ft, btoc)	Groundwater Elevation 10-Apr-2008 (ft, msl)
MW-89	Intermediate	303 98	156 98	114 59	189 39
MW-90	Intermediate	304 19	189 19	115 00	189 19
MW-91	Fluvial	291 99	236 99	68 65	223 34
MW-95	Fluvial	259 23	219 43	29 15	230 08
MW-126	Fluvial	252 22	236 22	13 50	238 72
MW-127	Fluvial	268 71	208 71	60 20	208 51
MW-128	Fluvial	284 14	229 39	42 53	241 61
MW-129	Fluvial	293 01	228 01	58 50	234 51
MW-130	Fluvial	293 20	233 70	57 82	235 38
MW-132	Fluvial	300 73	227 23	78 25	222 48
MW-134[1]	Fluvial	300 81	225 81	--	--
MW-144	Fluvial	291 60	235 10	Dry	--
MW-145	Fluvial	284 72	204 72	72 74	211 98
MW-147	Fluvial	289 72	229 72	74 12	215 60
MW-148	Fluvial	294 71	224 71	81 31	213 40
MW-149	Fluvial	287 18	205 78	75 14	212 04
MW-150	Fluvial	296 81	225 61	84 32	212 49
MW-151	Fluvial	284 27	207 27	72 35	211 92
MW-152	Fluvial	289 59	198 59	77 83	211 76
MW-153	Fluvial	279 17	203 17	67 55	211 62
MW-154	Fluvial	273 81	220 81	58 41	215 40
MW-155	Fluvial	291 65	214 65	79 38	212 27
MW-156	Fluvial	269 15	213 71	58 60	210 55
MW-157	Fluvial	286 78	229 78	73 55	213 23
MW-158	Fluvial	294 07	203 06	82 24	211 83
MW-158A	Fluvial	293 95	216 03	82 14	211 81
MW-159	Fluvial	286 33	205 89	74 44	211 89
MW-160	Fluvial	294 00	228 13	81 45	212 55
MW-161	Fluvial	296 40	234 60	80 70	215 70
MW-162	Fluvial	299 70	233 39	84 34	215 36
MW-163	Fluvial	290 63	234 42	76 36	214 27
MW-164	Fluvial	287 48	231 86	72 07	215 41
MW-165	Fluvial	287 06	198 43	75 35	211 71
MW-165A	Fluvial	287 26	215 96	75 50	211 76
MW-166	Fluvial	283 44	199 59	71 53	211 91
MW-166A	Fluvial	283 45	215 15	71 54	211 91
MW-167	Fluvial	284 82	214 68	73 50	211 32
MW-168	Fluvial	283 95	177 75	72 23	211 72
MW-168A	Fluvial	283 20	204 42	71 50	211 70
MW-169	Fluvial/Intermediate	261 90	194 12	82 84	179 06
MW-170	Fluvial	273 75	214 14	60 70	213 05
MW-171	Fluvial	270 69	217 72	58 20	212 49
MW-172	Fluvial	300 28	232 28	74 43	225 85
MW-174	Fluvial	296 56	229 56	71 81	224 75
MW-175	Fluvial	291 63	224 13	74 31	217 32
MW-176	Fluvial	299 68	223 68	76 48	223 20
MW-178	Fluvial	300 26	224 26	76 94	223 32
MW-179	Fluvial	301 16	224 16	78 32	222 84
MW-180	Fluvial	296 14	224 14	74 79	221 35
MW-182	Fluvial	275 40	213 40	63 70	211 70
MW-183	Fluvial/Intermediate	275 59	114 59	111 25	164 34
MW-184	Fluvial	283 12	225 12	67 39	215 73

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

				Depth to Water	Groundwater Elevation
		Top of Casing Elevation	Top of Screen Elevation	10-Apr-2008	
Well ID	Aquifer	(ft, msl)	(ft, msl)	(ft, btoc)	(ft, msl)
MW-185	Fluvial	256 71	171 71	77 60	179 11
MW-186	Fluvial	256 31	108 31	81 05	175 26
MW-187	Fluvial	302 74	226 74	76 94	225 80
MW-193	Fluvial	293 28	222 28	78 63	214 65
MW-194	Fluvial	293 26	219 26	77 43	215 83
MW-220	Fluvial	293 29	228 35	71 59	221 70
MW-221	Fluvial	301 52	228 40	80 11	221 41
MW-222	Fluvial	303 82	229 64	79 83	223 99
MW-223	Fluvial	303 00	229 13	80 07	222 93
MW-224	Fluvial	304 13	230 42	80 95	223 18
MW-225	Fluvial	304 52	229 54	81 85	222 67
MW-226	Fluvial	303 19	228 97	79 96	223 23
MW-227	Fluvial	299 70	236 06	74 54	225 16
MW-228	Fluvial	301 65	237 56	76 17	225 48
MW-229[2]	Fluvial	311 77	123 34	--	--
MW-230	Fluvial	286 57	227 32	57 72	228 85
MW-231	Intermediate	289 18	121 43	124 70	164 48
MW-232	Intermediate	285 18	135 13	121 46	163 76
MW-233	Fluvial	289 53	231 88	Dry	-
MW-234	Intermediate	291 50	124 91	129 05	162 45
MW-235	Fluvial	264 00	213 41	56 88	207 12
MW-236	Fluvial	261 38	236 73	11 08	250 30
MW-237	Intermediate	289 18	122 73	124 80	164 38
MW-238	Intermediate	300 45	119 90	135 76	164 69
MW-239	Intermediate	288 44	122 97	124 58	163 86
MW-240	Intermediate	259 28	172 71	78 51	180 77
PZ-02	Fluvial	284 39	240 39	42 32	242 07
RW-01[3]	Fluvial	295 71	229 57	--	--
RW-01A[3]	Fluvial	295 42	228 43	--	--
RW-01B[3]	Fluvial	289 17	227 48	--	--
RW-02	Fluvial	289 92	225 93	70 35	219 57
RW-03	Fluvial	299 34	231 40	77 16	222 18
RW-04	Fluvial	305 11	230 48	84 37	220 74
RW-05	Fluvial	307 13	226 09	88 29	218 84
RW-06	Fluvial	304 56	227 94	84 71	219 85
RW-07	Fluvial	297 44	228 33	78 47	218 97
RW-08	Fluvial	292 99	222 84	75 41	217 58
RW-09	Fluvial	290 67	225 98	72 02	218 65
MW-1-TDEC	Fluvial	275 83	--	28 58	247 25
MW-2-TDEC	Fluvial	272 13	--	26 69	245 44
MW-3-TDEC	Fluvial	265 28	--	9 02	256 26
MW-4-TDEC[4]	Fluvial	263 81	--	--	--

Notes:

ft, msl feet mean sea level
ft, btoc feet below top of casing
-- Not Measured

** MW-4-TDEC was inaccessible
*** Water level at these RWs were below the top of the pump motor and not able to be measured
(1) Well pad under water, water level not measured
(2) Water level not collected due to oversight
(3) Water level below top of pump motor Water level not measured
(4) Debris on well, not accessible

TABLE 3
PDB SAMPLE INTERVALS
APRIL 2008 SEMIANNUAL MONITORING REPORT
DUNN FIELD GROUNDWATER IRA - YEAR NINE
Defense Depot Memphis, Tennessee

Monitoring Well	Date Collected	Measured Well Depth (ft bgs)	Depth to Water (feet btoc)	Sample Depth Interval - 1 (feet btoc)	Sample Depth Interval - 2 (feet btoc)
MW-07	4/14/2008	73.18	69.75	71 6	NI
MW-31	4/11/2008	83.28	73.31	74 3	79.7
MW-32	4/11/2008	68.08	64.48	66.6	NI
MW-33	4/14/2008	62.70	57.29	58.4	NI
MW-37	4/14/2008	184.68	120 53	175 9	NI
MW-40	4/11/2008	95.53	82.02	90 7	NI
MW-43	4/11/2008	171.71	119 85	168 0	NI
MW-44	4/11/2008	74 36	57.25	68.6	NI
MW-54	4/11/2008	97 18	83.15	89 5	NI
MW-57	4/14/2008	70 21	65 15	67 2	NI
MW-67	4/11/2008	>200	112 90	270 3	NI
MW-68	4/14/2008	81 56	70 95	77 5	NI
MW-69	4/14/2008	95 58	85 71	89.8	NI
MW-70	4/14/2008	93 73	83.04	87 6	92.1
MW-71	4/14/2008	78 10	71 57	73.5	NI
MW-76	4/14/2008	93 98	87 00	88 2	NI
MW-77	4/14/2008	89 18	83 81	84.9	NI
MW-79	4/11/2008	104.78	73 57	92.0	NI
MW-130	4/11/2008	81.02	57.82	69.5	NI
MW-144[1]	4/11/2008	76 28	Dry	75.3	NI
MW-145	4/14/2008	96.66	72.74	86.5	NI
MW-147	4/11/2008	77.91	74.12	73.7	NI
MW-148	4/11/2008	87.87	81.31	80.0	85.5
MW-149	4/11/2008	99.96	75.14	83.6	95.5
MW-150	4/11/2008	91.57	84.32	83.2	90.5
MW-151	4/14/2008	96.69	73.35	78.5	94.5
MW-152	4/11/2008	108 82	77.83	92.9	107.9
MW-153	4/14/2008	96.03	67.55	87.1	NI
MW-154	4/14/2008	66.84	58.14	60 7	NI
MW-155	4/11/2008	95.07	79.38	77 0	93 5
MW-156	4/11/2008	69.41	58.60	63 7	NI
MW-157	4/14/2008	77.11	73 55	74 8	NI
MW-158	4/11/2008	106.60	82 24	93 1	104.1
MW-158A	4/11/2008	93 28	82 14	81 5	91 4
MW-159	4/11/2008	99 31	74.44	81.1	91 1
MW-160	4/11/2008	85 77	81 45	80.8	NI
MW-161	4/11/2008	81.39	80 70	81 6	NI
MW-162	4/14/2008	86 69	84.34	85 3	NI
MW-163	4/14/2008	76 77	76.36	76 3	NI
MW-164	4/14/2008	75.28	72 07	72 6	NI
MW-165	4/11/2008	103.01	75 35	91 3	101.8
MW-165A	4/11/2008	86 40	75 50	76 5	84 7
MW-166	4/11/2008	100.05	71 53	87 3	97 8
MW-166A	4/11/2008	83 29	71 54	75 3	NI
MW-167	4/11/2008	82 68	73.50	75 8	NI
MW-168	4/11/2008	120.50	72 23	113.7	NI
MW-168A	4/11/2008	88.22	71 50	76 4	86.9
MW-169	4/11/2008	88 15	82 84	81 8	NI
MW-170	4/11/2008	79 78	60 70	61 9	78 1
MW-171	4/11/2008	68.32	58 20	60 8	NI
MW-232	4/11/2008	170.55	121.46	151 5	165 7

Notes
NM Not measured
NI Not installed
PDB passive diffision bag
bgs Below ground surface
btoc Below top of casing
> greater than
(1) Well dry, however sample collected from PDB.

TABLE 4
FINAL MONITORING WELL STABILIZATION MEASUREMENTS
APRIL 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	4/16/2008	low flow	900	73 2	71.94	220	5 3	6 4	16.7	0 529	3.2	226	2 9
MW-6	4/15/2008	low flow	1045	68 8	65.79	280	4 6	5 8	17.3	0 900	4.9	231	6 9
MW-10	4/15/2008	Dry	-	-	-	-	-	-	-	-	-	-	-
MW-15	4/15/2008	low flow	1200	77 0	71.01	240	8 1	6 0	17 5	0.727	6 9	231	12 1
MW-74	4/15/2008	low flow	1435	85.0	81 38	240	17 4	5 9	18 3	0 445	2 3	247	18 4
MW-132	4/15/2008	low flow	1615	84.0	78 32	265	14.6	6 1	18 2	0 414	3 1	81	4 8
MW-134	4/16/2008	low flow	1210	84.0	78 15	200	13 1	6 1	18.2	0 392	3 6	217	14 3
MW-172	4/14/2008	low flow	1450	76.1	74 55	120	12 8	6.0	16 8	0 181	7 3	168	34.1
MW-174	4/15/2008	low flow	855	75.0	71 94	110	6.0	6.0	18 1	0 216	5 3	141	17.5
MW-175	4/14/2008	low flow	1610	76 0	67 60	100	4 0	6 0	15 8	0 197	7 4	169	4.0
MW-178	4/15/2008	low flow	930	83 0	77 15	260	11 4	6 0	16 4	0.302	5 9	214	15 4
MW-179	4/15/2008	low flow	1158	82 0	78 45	280	14 1	5 4	17.5	0 252	20 7	118	20 0
MW-180	4/16/2008	low flow	1030	78.6	74 84	220	8 9	6 3	17 9	0 459	3 8	207	0 8
MW-187	4/16/2008	low flow	828	83 6	77 27	290	11 6	5 8	18 1	0 178	12.4	164	18 4
MW-220	4/15/2008	low flow	1540	77 6	71.80	80	3 5	6 4	19.2	0.422	1.6	70	6 5
MW-221	4/16/2008	low flow	945	85 0	80.20	140	4 7	5 9	17.3	0 249	8.4	164	4 7
MW-222	4/15/2008	low flow	1355	80 7	80 89	200	13 9	6 7	18 3	0.251	0.9	-74	0 0
MW-223	4/15/2008	low flow	1030	88 0	80 22	100	6 8	6 2	16 5	0 28	4.5	135	16 9
MW-224	4/16/2008	low flow	830	84 0	80 92	160	5 6	6 3	15 5	0.301	9 9	162	13 6
MW-225	4/16/2008	low flow	1155	85.0	81 63	120	12.3	6.1	19 1	0 241	1 9	96	16.5
MW-226	4/15/2008	low flow	1155	84.0	79 97	110	5.5	6.4	17 8	0.246	1 6	117	17 6
MW-227	4/16/2008	low flow	826	76 0	74 55	260	5 1	5 9	18.3	0 466	5 4	125	0 5
MW-228	4/16/2008	low flow	1014	77 0	76 17	200	3 9	5 9	19 4	0 199	6 6	150	16.5
MW-230	4/15/2008	low flow	1622	82 5	55 63	360	21.7	5 3	17 3	0 298	9 0	138	17.9
MW-231	4/14/2008	low flow	1509	185 3	124 27	200	24 0	8 7	16 6	0 140	4 9	-42	172.0
MW-233	4/14/2008	Dry	-	-	-	-	-	-	-	-	-	-	-
MW-234	4/14/2008	low flow	1207	172 0	125.58	180	22 0	6 3	15.8	0.291	4 0	-60	43 8
MW-235	4/15/2008	low flow	1434	59 0	56.50	160	18 9	5 5	16.9	0 389	9 4	36	81 2
MW-236	4/14/2008	low flow	857	30 0	9 71	192	9 6	6 6	17 7	0.457	8.6	110	20.0
MW-237	4/11/2008	low flow	1345	171 9	124 13	220	15 0	6 5	18 6	0.312	3 6	14	19 4
MW-238	4/15/2008	low flow	959	186 0	235.22	180	21 5	6 4	17 3	0.687	12 6	-54	22 9
MW-239	4/11/2008	low flow	1148	170.9	124 47	200	16.0	10.4	18 3	0 250	3 1	-116	12.4
MW-240	4/11/2008	low flow	1518	91.4	78 42	360	18 9	6 9	19 4	0 751	1 2	65	18 7

Notes

C	degrees Celsius
ft, btoc	feet below top of casing
ml/min	milliliters per minute
mS/cm	milliSiemens per centimeter
mV	millivolts
NTU	Nephelometric Turbidity Units

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

Analyte	Well ID Lab ID Date units	MCL	TC	MW-3 L08040517- 4/16/2008	MW-6 L08040486- 4/15/2008	MW-07 L08040444- 4/14/2008	MW-15 L08040486- 4/15/2008	MW-31 L08040409- 4/11/2008	MW-31 DUP L08040409-36 4/11/2008	MW-31 L08040409- 4/11/2008	MW-32 L08040409- 4/11/2008	MW-33 L08040444- 4/14/2008	MW-37 L08040444- 4/14/2008
1,1,1-Trichloroethane	ug/L	200	--	<1	<1	0 613 F	<1	**4.38**	**5.92**	0 856 F	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	--	2 2	<0 5	**8.89**	<0 5	**2.15**	<0 5	0 446 F	<0 5	<0 5	<0 5	<0 5
1,1,2-Trichloroethane	ug/L	5	1 9	<1	**1.02**	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	--	--	<1	<1	**1.2**	<1	**1.96**	**2.61**	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	7	7	**1.54**	<1	**24.8**	<1	**14.3**	**17.4**	**7.17**	<1	<1	<1
1,2-Dichloroethane	ug/L	5	--	<0 5	<0 5	0 357 F	**1.05**	<0 5	<0 5	<0 5	<0 5	<0 5	<0 5
Acetone	ug/L	--	--	<10	<10	3 41 F	<10	<10	<10	<10	<10	<10	2 97 F
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
Carbon tetrachloride	ug/L	5	3	<1	**3.78**	<1	**16**	0 368 F	0 539 F	<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
Chloroform	ug/L	80	12	0.147 F	**84.7**	0.273 F	**106**	**0.802**	**1.19**	0 169 F	**4.07**	<0 3	<0 3
cis-1,2-Dichloroethene	ug/L	70	35	<1	**36.2**	<1	**5.99**	**2.87**	**5.67**	0 332 F	0 263 F	<1	<1
Methylene chloride	ug/L	5	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5	2 5	**2.71**	**1.07**	**56.2**	**7.19**	0 891 F	**1.12**	0 916 F	<1	<1	<1
Toluene	ug/L			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100	50	<1	**1.45**	<1	**2.02**	**1.51**	**2.14**	<1	<1	<1	<1
Trichloroethene	ug/L	5	5	**2.04**	**32.5**	**29.4**	**104**	**10.5**	**16.1**	**3.21**	**2.47**	<1	<1
Vinyl chloride	ug/L	2	--	<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

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

Methods

8260B	Volatile Organic Compounds

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

Analyte	Well ID Lab ID Date units	MCL	TC	MW-40 L08040409- 4/11/2008	MW-43 L08040409- 4/11/2008	MW-44 L08040409- 4/11/2008	MW-44 DUP L08040409-35 4/11/2008	MW-54 L08040409- 4/11/2008	MW-57 L08040444- 4/14/2008	MW-67 L08040409- 4/11/2008	MW-68 L08040444- 4/14/2008	MW-69 L08040444- 4/14/2008	MW-70 L08040444- 4/14/2008
1,1,1-Trichloroethane	ug/L	200	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2
1,1,2,2-Tetrachloroethane	ug/L	--	2 2	<0.5	<0 5	<0 5	<0 5	**171**	<0 5	<0 5	0 24 F	<0 5	**270**
1,1,2-Trichloroethane	ug/L	5	1 9	<1	<1	<1	<1	0 885 F	<1	<1	<1	<1	<2
1,1-Dichloroethane	ug/L	--	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2
1,1-Dichloroethene	ug/L	7	7	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2
1,2-Dichloroethane	ug/L	5	--	<0 5	<0 5	<0 5	<0 5	<0 5	<0 5	<0 5	<0 5	<0 5	<1
Acetone	ug/L	--	--	4 94 F	9.66 F	<10	<10	5 16 Q	6 58 F	5.95 F	<10	<10	12.4 F
Bromomethane	ug/L	--	--	<1	0 611 F	<1	<1	<1	<1	<1	<1	<1	<2
Carbon disulfide	ug/L	--	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2
Carbon tetrachloride	ug/L	5	3	<1	<1	0 823 F	**1.28**	**6.76**	**11.1**	<1	<1	<1	<2
Chlorobenzene	ug/L	100	--	0.145 F	<0 5	<0.5	<0 5	<0 5	<0 5	<0.5	<0 5	<0 5	<1
Chloroform	ug/L	80	12	<0 3	<0 3	**0.567**	**0.586**	**3.85**	**3.32**	<0.3	<0 3	<0 3	<0 6
cis-1,2-Dichloroethene	ug/L	70	35	<1	<1	<1	<1	**17.4**	<1	<1	<1	<1	1 63 F
Methylene chloride	ug/L	5	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2
Tetrachloroethene	ug/L	5	2.5	<1	<1	<1	<1	**3.88**	**3.03**	<1	<1	0.658 F	1 53 F
Toluene	ug/L			<1	<1	<1	<1	<1	<1	<1	<1	<1	<2
trans-1,2-Dichloroethene	ug/L	100	50	<1	<1	<1	<1	**4.42**	<1	<1	<1	<1	<2
Trichloroethene	ug/L	5	5	<1	<1	0 599 F	**1.14**	**348**	**19.4**	<1	0 36 F	<1	**86**
Vinyl chloride	ug/L	2	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2

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.

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

Methods.

8260B	Volatile Organic Compounds

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

Analyte	Well ID Lab ID Date units	MCL	TC	MW-70 L08040444- 4/14/2008	MW-71 L08040444- 4/14/2008	MW-74 L08040486- 4/15/2008	MW-76 L08040444- 4/14/2008	MW-77 L08040444- 4/14/2008	MW-79 L08040409- 4/11/2008	MW-130 L08040409- 4/11/2008	MW-132 L08040486- 4/15/2008	MW-134 L08040517- 4/16/2008	MW-144 L08040409- 4/11/2008
1,1,1-Trichloroethane	ug/L	200	--	<2 5	<1	<1	<1	<20	<1	**1.86**	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	--	2 2	**177**	**1.72**	**16.1**	**77**	**566**	**30.4**	<0 5	**25.1**	**0 717**	**79.4**
1,1,2-Trichloroethane	ug/L	5	1 9	1 11 F	<1	<1	0 303 F	<20	<1	<1	0 469 F	<1	0.461 F
1,1-Dichloroethane	ug/L	--	--	<2 5	<1	<1	<1	<20	0 2 F	**4.01**	<1	<1	<1
1,1-Dichloroethene	ug/L	7	7	1 71 F	<1	<1	<1	<20	**10**	**73.4**	<1	<1	<1
1,2-Dichloroethane	ug/L	5	--	<1.25	<0 5	<0 5	<0 5	<10	<0 5	**1**	<0 5	<0 5	<0.5
Acetone	ug/L	--	--	9 93 F	8.48 F	<10	6.54 F	<200	<10	5 03 F	<10	<10	7 4 F
Bromomethane	ug/L	--	--	<2.5	<1	<1	<1	<20	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	--	--	<2 5	<1	<1	<1	<20	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5	3	<2 5	**7.66**	<1	<1	<20	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	100	--	<1 25	<0.5	<0 5	<0.5	<10	<0 5	0.144 F	<0 5	<0 5	<0 5
Chloroform	ug/L	80	12	<0 75	**17.3**	0 163 F	**0.915**	<6	<0 3	0.27 F	<0 3	<0 3	**1.77**
cis-1,2-Dichloroethene	ug/L	70	35	**14.2**	0 523 F	<1	**13.2**	7 13 F	<1	0 789 F	0.388 F	<1	**2.31**
Methylene chloride	ug/L	5	--	<2 5	<1	<1	<1	6.28 F	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5	2 5	0 984 F	0 715 F	0 473 F	**4.44**	<20	0 917 F	**196**	0.649 F	0.488 F	<1
Toluene	ug/L			<2 5	<1	<1	**<1**	<20	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100	50	**4.74**	<1	<1	**3.59**	<20	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	5	**60.4**	**9.37**	**7.19**	**336**	**309**	**7.5**	**71**	**16.7**	**1.08**	**37.6**
Vinyl chloride	ug/L	2	--	**13.5**	<1	<1	<1	<20	<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

F	Concentration below RL but above MDL
J	The analyte was positively identified, but the quantitation is an estimate
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M	Concentration estimated due to matrix effect
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Methods

8260B	Volatile Organic Compounds

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

Analyte	Well ID Lab ID Date units	MCL	TC	MW-145 L08040444- 4/14/2008	MW-147 L08040409- 4/11/2008	MW-148 L08040409- 4/11/2008	MW-148 L08040409- 4/11/2008	MW-149 L08040409- 4/11/2008	MW-149 L08040409- 4/11/2008	MW-150 L08040409- 4/11/2008	MW-150 L08040409- 4/11/2008	MW-150 DUP L08040409-10 4/11/2008	MW-151 L08040444- 4/14/2008
1,1,1-Trichloroethane	ug/L	200	--	<1	<1	<1	<1	<1	<1	<20	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	--	2 2	<0 5	**22**	**21.2**	**6.92**	**1.53**	**4.1**	**1960**	**2020**	**174**	<0.5
1,1,2-Trichloroethane	ug/L	5	1.9	<1	<1	0 252 F	<1	<1	<1	15 2 F	**23.1**	**9.85**	<1
1,1-Dichloroethane	ug/L	--	--	<1	<1	<1	<1	<1	<1	<20	<1	<1	<1
1,1-Dichloroethene	ug/L	7	7	<1	<1	<1	<1	<1	<1	<20	0 997 F	<1	<1
1,2-Dichloroethane	ug/L	5	--	<0 5	<0.5	<0.5	<0 5	<0.5	<0 5	<10	0 401 F	<0 5	<0.5
Acetone	ug/L	--	--	<10	3.08 Q	3 8 Q	2 71 Q	4 77 Q	3.65 F	<200	2 92 Q	4 51 F	<10
Bromomethane	ug/L	--	--	<1	<1	<1	<1	<1	<1	<20	<1	<1	<1
Carbon disulfide	ug/L	--	--	<1	<1	<1	<1	<1	<1	<20	<1	<1	<1
Carbon tetrachloride	ug/L	5	3	<1	<1	<1	<1	**5.26**	**6.7**	<20	<1	<1	0 602 F
Chlorobenzene	ug/L	100	--	<0 5	<0 5	<0 5	<0 5	<0 5	<0 5	<10	<0 5	<0 5	<0 5
Chloroform	ug/L	80	12	<0 3	**0.509**	**1.16**	**0.582**	**14.2**	**29.6**	<6	**1.9**	**1.43**	0 236 F
cis-1,2-Dichloroethene	ug/L	70	35	<1	**6.15**	**21.7**	**7.33**	**1.12**	**2.43**	**37.3**	**57**	**3.59**	<1
Methylene chloride	ug/L	5	--	<1	<1	<1	<1	<1	<1	<20	<1	<1	<1
Tetrachloroethene	ug/L	5	2 5	<1	**7.92**	**3.59**	**1.96**	0 623 F	**1**	8 1 F	**11.8**	0 361 F	<1
Toluene	ug/L			<1	<1	<1	<1	<1	<1	<20	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100	50	<1	**1**	**2.74**	**2.1**	0 266 F	0.675 F	<20	**4.38**	<1	<1
Trichloroethene	ug/L	5	5	<1	**53.9**	**266**	**62.9**	**12.2**	**19.1**	**1230**	**1220**	**80.6**	**1.32**
Vinyl chloride	ug/L	2	--	<1	<1	<1	<1	<1	<1	<20	0 708 F	<1	<1

Notes.

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

F	Concentration below RL but above MDL
J	The analyte was positively identified, but the quantitation is an estimate.
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Methods.

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

Analyte	Well ID Lab ID Date units	MCL	TC	MW-151 L08040444- 4/14/2008	MW-152 L08040409- 4/11/2008	MW-152 L08040409- 4/11/2008	MW-153 L08040444- 4/14/2008	MW-154 L08040444- 4/14/2008	MW-155 L08040409- 4/11/2008	MW-155 L08040409- 4/11/2008	MW-156 L08040409- 4/11/2008	MW-157 L08040444- 4/14/2008	MW-157 DUP L08040444-12 4/14/2008
1,1,1-Trichloroethane	ug/L	200	--	<1	<1	<1	**1.39**	<1	<20	<25	<1	<2	<1
1,1,2,2-Tetrachloroethane	ug/L	--	2 2	0.468 F	**1.4**	**3 05**	<0 5	<0 5	**3770**	**3540**	<0 5	**10.1**	**10.1**
1,1,2-Trichloroethane	ug/L	5	1 9	<1	<1	<1	<1	<1	**53.8**	**43.2**	<1	<2	0.29 F
1,1-Dichloroethane	ug/L	--	--	<1	<1	<1	0 596 F	<1	<20	<25	<1	<2	<1
1,1-Dichloroethene	ug/L	7	7	<1	<1	<1	**6.37**	<1	<20	<25	<1	<2	<1
1,2-Dichloroethane	ug/L	5	--	<0.5	<0 5	<0 5	<0 5	<0 5	<10	<12.5	<0 5	<1	<0 5
Acetone	ug/L	--	--	2 65 F	<10	<10	<10	<10	<200	<250	4 95 F	8 87 F	7 87 F
Bromomethane	ug/L	--	--	0 705 F	<1	<1	0 59 F	0.573 F	<20	<25	<1	1 05 F	<1
Carbon disulfide	ug/L	--	--	<1	<1	<1	<1	<1	<20	<25	<1	<2	<1
Carbon tetrachloride	ug/L	5	3	**4.77**	<1	<1	<1	<1	<20	<25	<1	<2	0 53 F
Chlorobenzene	ug/L	100	--	<0 5	<0.5	<0.5	<0.5	<0 5	<10	<12 5	<0 5	<1	<0.5
Chloroform	ug/L	80	12	**15.5**	**0.573**	**0.601**	<0 3	<0.3	<6	<7.5	<0 3	**9**	**10.8**
cis-1,2-Dichloroethene	ug/L	70	35	**1.42**	**5.49**	**5.65**	0 341 F	<1	**73.8**	**61.4**	<1	0 671 F	0.741 F
Methylene chloride	ug/L	5	--	<1	<1	<1	<1	<1	<20	<25	<1	<2	<1
Tetrachloroethene	ug/L	5	2 5	0.639 Q	**8.53**	**5.5**	0 445 F	<1	10 2 F	8 34 F	<1	<2	<1
Toluene	ug/L			<1	<1	0.321 F	<1	<1	<20	<25	<1	<2	<1
trans-1,2-Dichloroethene	ug/L	100	50	0.613 F	**1.76**	**2.42**	<1	<1	9.93 F	7 82 F	<1	<2	<1
Trichloroethene	ug/L	5	5	**20.1**	**61.7**	**72.7**	0 469 F	<1	**1600**	**1510**	<1	**5.48**	**6.86**
Vinyl chloride	ug/L	2	--	<1	<1	<1	<1	<1	<20	<25	<1	<2	<1

Notes.

µg/L	micrograms per liter
--	Not listed
MCL	Maximum Contaminant Level
MDL	Minimum Detection Limit
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TC	Target Concentration
	Results detected at or above reporting limits shown in bold

DQE Flags.

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J	The analyte was positively identified, but the quantitation is an estimate.
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Methods

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

Analyte	Well ID Lab ID Date units	MCL	TC	MW-158 L08040409- 4/11/2008	MW-158 L08040409- 4/11/2008	MW-158A L08040409- 4/11/2008	MW-158A L08040409- 4/11/2008	MW-159 L08040409- 4/11/2008	MW-159 DUP L08040409-01 4/11/2008	MW-159 L08040409- 4/11/2008	MW-160 L08040409- 4/11/2008	MW-161 L08040409- 4/11/2008	MW-162 L08040444- 4/14/2008
1,1,1-Trichloroethane	ug/L	200	--	<1	<1	<1	<1	<10	<1	<10	<5	<20	<50
1,1,2,2-Tetrachloroethane	ug/L	--	2 2	**3.03**	**2.79**	**217**	**26.9**	**312**	**361**	**290**	**3560**	**594**	**4160**
1,1,2-Trichloroethane	ug/L	5	1 9	<1	<1	**7.88 J**	<1	**99.8**	**115**	**111**	2 97 F	<20	<50
1,1-Dichloroethane	ug/L	--	--	<1	<1	<1	<1	<10	<1	<10	<5	<20	<50
1,1-Dichloroethene	ug/L	7	7	<1	<1	<1	<1	<10	**4.38**	<10	<5	<20	<50
1,2-Dichloroethane	ug/L	5	--	<0 5	<0 5	<0 5	<0.5	<5	**1 2**	<5	<2 5	<10	<25
Acetone	ug/L	--	--	<10	3 98 F	3 16 J	2 52 F	<100	8 62 Q	<100	<50	<200	<500
Bromomethane	ug/L	--	--	<1	<1	<1	<1	<10	<1	<10	<5	<20	<50
Carbon disulfide	ug/L	--	--	<1	<1	<1	<1	<10	<1	<10	<5	<20	<50
Carbon tetrachloride	ug/L	5	3	<1	<1	<1	<1	<10	<1	<10	<5	<20	<50
Chlorobenzene	ug/L	100	--	<0 5	<0 5	<0 5	<0 5	<5	<0.5	<5	0.926 F	<10	<25
Chloroform	ug/L	80	12	0 288 F	0.251 F	0.373 J	**1.01**	<3	**1.33**	<3	**2.14**	3 65 F	<15
cis-1,2-Dichloroethene	ug/L	70	35	**2.9**	**2.55**	**8.05 J**	**12.1**	**1220**	**1350**	**1180**	**49.8**	15 7 F	23.9 F
Methylene chloride	ug/L	5	--	<1	<1	<1	<1	<10	<1	<10	1 59 F	9.78 F	14 8 F
Tetrachloroethene	ug/L	5	2 5	**4.98**	**4.74**	0 578 J	**10.7**	5 26 F	**6.87**	6 28 F	**10.6**	<20	<50
Toluene	ug/L			<1	<1	<1	<1	<10	<1	<10	<5	<20	<50
trans-1,2-Dichloroethene	ug/L	100	50	**1.25**	**1.02**	0 938 J	**4.06**	**24.9**	**37**	**26.6**	**9.32**	5.59 F	<50
Trichloroethene	ug/L	5	5	**37.1**	**33.1**	**97.3 J**	**126**	**1170**	**1250**	**1410**	**1130**	**342**	**792**
Vinyl chloride	ug/L	2	--	<1	<1	<1	<1	7 79 F	**7.14**	7.11 F	<5	<20	<50

Notes

µg/L	micrograms per liter
--	Not listed
MCL	Maximum Contaminant Level
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DQE Flags

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Methods:

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

Analyte	Well ID Lab ID Date units	MCL	TC	MW-163 L08040444- 4/14/2008	MW-164 L08040444- 4/14/2008	MW-165 L08040409- 4/11/2008	MW-165 L08040409- 4/11/2008	MW-165A L08040409- 4/11/2008	MW-165A DUP L08040409-37 4/11/2008	MW-165A L08040409- 4/11/2008	MW-166 L08040409- 4/11/2008	MW-166 L08040409- 4/11/2008	MW-166A L08040409- 4/11/2008
1,1,1-Trichloroethane	ug/L	200	--	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	--	2 2	**488**	**13.4**	**1.8**	**3.04**	<0 5	<0 5	**2.77**	**8.3**	**8.39**	**3.76**
1,1,2-Trichloroethane	ug/L	5	1 9	3 37 F	0 517 F	0 343 F	0 299 F	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	--	--	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	7	7	<5	<1	**<1**	<1	<1	<1	<1	<1	<1	**<1**
1,2-Dichloroethane	ug/L	5	--	<2 5	<0 5	<0 5	<0 5	<0 5	<0 5	<0 5	<0 5	<0 5	<0 5
Acetone	ug/L	--	--	15.6 F	4 1 F	3 53 F	3 17 F	2 53 F	<10	3 53 F	3.3 F	4 31 F	6.84 F
Bromomethane	ug/L	--	--	<5	0.547 F	<1	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	--	--	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5	3	<5	3.42 M	0 769 F	**9.32**	**1.14**	**1.25**	**11.3**	**6.43**	**8.3**	**4.44**
Chlorobenzene	ug/L	100	--	<2 5	<0.5	<0.5	<0 5	<0 5	<0.5	<0 5	<0.5	<0 5	<0 5
Chloroform	ug/L	80	12	**11.9**	**37.1 M**	**4.85**	**61.4**	**3.88**	**3.97**	**49.8**	**39.1**	**52.2**	**34.4**
cis-1,2-Dichloroethene	ug/L	70	35	**9.07**	**2.71**	**9.59**	**5.97**	**1.2**	**1.06**	**7.3**	**2.49**	**2.4**	**2.57**
Methylene chloride	ug/L	5	--	1 56 F	<1	<1	**<1**	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5	2 5	<5	0 894 Q	**1.25**	**1.64**	0.392 F	0 267 F	**2.44**	**1.14**	**1.65**	**1.24**
Toluene	ug/L			<5	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100	50	1.84 F	0 57 F	**1.99**	**1.6**	0.322 F	<1	**1.4**	0 955 F	0 753 F	**1.16**
Trichloroethene	ug/L	5	5	**80.3**	**24.9 M**	**128**	**87.1**	**32.6**	**31.1**	**103**	**24.8**	**25.7**	**69.9**
Vinyl chloride	ug/L	2	--	<5	<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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DQE Flags:

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Methods

8260B	Volatile Organic Compounds

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

Analyte	Well ID Lab ID Date units	MCL	TC	MW-167 L08040409- 4/11/2008	MW-167 DUP L08040409-34 4/11/2008	MW-168 L08040409- 4/11/2008	MW-168A L08040409- 4/11/2008	MW-168A L08040409- 4/11/2008	MW-169 L08040409- 4/11/2008	MW-170 L08040409- 4/11/2008	MW-170 L08040409- 4/11/2008	MW-170 DUP L08040409-38 4/11/2008	MW-171 L08040409- 4/11/2008
1,1,1-Trichloroethane	ug/L	200	--	<1	<1	<1	**6.83**	**2.05**	<1	0 27 Q	<1	<1	<1
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-Dichloroethane	ug/L	--	--	<1	<1	<1	0 425 F	<1	<1	0.913 F	<1	0 15 F	<1
1,1-Dichloroethene	ug/L	7	7	<1	<1	0 818 F	**13.6**	**6.01**	<1	**1.43**	<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
Acetone	ug/L	--	--	5 76 F	5 24 F	<10	<10	<10	8 69 F	8 91 F	8 76 F	8.21 F	9.14 F
Bromomethane	ug/L	--	--	<1	<1	<1	<1	<1	<1	<1	<1	**1.35**	<1
Carbon disulfide	ug/L	--	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	100	--	<0 5	<0 5	<0 5	<0.5	<0.5	**0.859**	<0 5	<0 5	<0.5	<0 5
Chloroform	ug/L	80	12	<0.3	<0 3	<0 3	**0.537**	0 188 F	<0.3	<0 3	<0.3	<0 3	<0.3
cis-1,2-Dichloroethene	ug/L	70	35	<1	**<1**	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	5	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5	2 5	<1	<1	<1	0 949 F	0 815 F	<1	<1	<1	<1	<1
Toluene	ug/L			<1	<1	0.317 F	<1	0 312 F	<1	<1	<1	<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	0 34 F	<1	**1.22**	**1.15**	**1.09**	<1	<1	<1	<1	<1
Vinyl chloride	ug/L	2	--	<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.

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

Methods

8260B	Volatile Organic Compounds

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

Analyte	Well ID Lab ID Date units	MCL	TC	MW-172 L08040444- 4/14/2008	MW-174 L08040486- 4/15/2008	MW-175 L08040444- 4/14/2008	MW-178 L08040486- 4/15/2008	MW-179 L08040486- 4/15/2008	MW-180 L08040517- 4/16/2008	MW-187 L08040517- 4/16/2008	MW-220 L08040486- 4/15/2008	MW-221 L08040517- 4/16/2008	MW-222 L08040486- 4/15/2008
1,1,1-Trichloroethane	ug/L	200	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	--	2 2	<0 5	**0.7**	<0 5	<0 5	<0 5	**0.763**	<0.5	<0 5	<0 5	**12.7**
1,1,2-Trichloroethane	ug/L	5	1 9	<1	<1	<1	<1	<1	<1	<1	<1	<1	**7.57**
1,1-Dichloroethane	ug/L	--	--	<1	<1	<1	<1	<1	<1	<1	0 187 F	<1	<1
1,1-Dichloroethene	ug/L	7	7	<1	<1	<1	<1	<1	<1	<1	**4.54**	<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	0.341 F
Acetone	ug/L	--	--	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
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
Carbon tetrachloride	ug/L	5	3	<1	<1	0 383 F	<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
Chloroform	ug/L	80	12	0.143 F	**0.666**	**0.489**	<0 3	<0 3	<0 3	<0 3	<0.3	0 167 F	0 156 F
cis-1,2-Dichloroethene	ug/L	70	35	<1	<1	<1	<1	<1	<1	<1	<1	<1	**10.4**
Methylene chloride	ug/L	5	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5	2 5	<1	0 297 F	0 317 F	0 726 F	**1.77**	<1	<1	**8.14**	0 893 F	0 312 F
Toluene	ug/L			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100	50	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.301 F
Trichloroethene	ug/L	5	5	<1	<1	0.874 F	<1	0 264 F	<1	<1	**4.61**	<1	**5.34**
Vinyl chloride	ug/L	2	--	<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	Reporting Limit
TC	Target Concentration
	Results detected at or above reporting limits shown in bold

DQE Flags.

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

Methods

8260B	Volatile Organic Compounds

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

Analyte	Well ID Lab ID Date units	MCL	TC	MW-223 L08040486- 4/15/2008	MW-224 L08040517- 4/16/2008	MW-225 L08040517- 4/16/2008	MW-226 L08040486- 4/15/2008	MW-227 L08040517- 4/16/2008	MW-228 L08040517- 4/16/2008	MW-230 L08040486- 4/15/2008	MW-231 L08040444- 4/14/2008	MW-232B L08040408- 4/11/2008	MW-232 L08040409- 4/11/2008
1,1,1-Trichloroethane	ug/L	200	--	<1	<1	<1	<1	<1	<1	**1.33**	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	--	2 2	0 323 F	<0 5	**21.3**	<0 5	**28.1**	**0.509**	<0 5	<0 5	<0 5	<0 5
1,1,2-Trichloroethane	ug/L	5	1 9	<1	<1	0.544 F	<1	**1.02**	<1	<1	<1	0 736 F	0 763 F
1,1-Dichloroethane	ug/L	--	--	<1	<1	**<1**	<1	<1	<1	**1.43**	<1	0 187 F	0 176 F
1,1-Dichloroethene	ug/L	7	7	<1	<1	<1	<1	<1	<1	**18.2**	<1	0 704 F	**1.27**
1,2-Dichloroethane	ug/L	5	--	<0 5	<0 5	<0 5	<0 5	**2.71**	<0 5	0 455 F	<0 5	<0 5	<0 5
Acetone	ug/L	--	--	<10	<10	<10	<10	<10	<10	<10	<10	7 41 F	8 31 F
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
Carbon tetrachloride	ug/L	5	3	<1	<1	<1	<1	**4.02**	<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
Chloroform	ug/L	80	12	**0.439**	<0 3	0 275 F	0 155 F	**110**	**0.387**	0 192 F	<0.3	<0 3	<0 3
cis-1,2-Dichloroethene	ug/L	70	35	<1	<1	**1.71**	<1	**6.33**	<1	0 834 F	<1	**19**	**22.4**
Methylene chloride	ug/L	5	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5	2 5	0 343 F	**1.33**	0 616 F	<1	**2.25**	<1	**76.1**	<1	<1	<1
Toluene	ug/L			<1	<1	<1	<1	<1	<1	<1	<1	0 592 F	0 597 F
trans-1,2-Dichloroethene	ug/L	100	50	<1	<1	<1	**<1**	**1**	<1	<1	<1	0 311 F	0 426 F
Trichloroethene	ug/L	5	5	**4.55**	<1	**39.6**	0 855 F	**40.8**	<1	**74.6**	<1	0.384 F	0 39 F
Vinyl chloride	ug/L	2	--	<1	<1	<1	<1	<1	<1	<1	<1	0 611 F	0.593 F

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.

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

Methods

8260B	Volatile Organic Compounds

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

Analyte	Well ID Lab ID Date units	MCL	TC	MW-234 L08040444- 4/14/2008	MW-235 L08040486- 4/15/2008	MW-236 L08040444- 4/14/2008	MW-236 DUP L08040444-30 4/14/2008	MW-237 L08040409- 4/11/2008	MW-238 L08040486- 4/15/2008	MW-239 L08040409- 4/11/2008	MW-240 L08040409- 4/11/2008
1,1,1-Trichloroethane	ug/L	200	--	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	--	2 2	0.469 F	<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-Dichloroethane	ug/L	--	--	<1	<1	<1	<1	0 266 F	<1	<1	<1
1,1-Dichloroethene	ug/L	7	7	<1	<1	<1	<1	**2.2**	<1	0 76 F	<1
1,2-Dichloroethane	ug/L	5	--	<0.5	<0 5	<0.5	<0 5	<0 5	<0 5	<0.5	<0 5
Acetone	ug/L	--	--	<10	<10	<10	<10	<10	<10	**10.1**	<10
Bromomethane	ug/L	--	--	0 724 F	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	--	--	**2.99**	<1	<1	<1	<1	<1	**17.5**	<1
Carbon tetrachloride	ug/L	5	3	<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
Chloroform	ug/L	80	12	<0 3	<0 3	<0.3	<0 3	0.181 F	0.211 F	<0 3	<0.3
cis-1,2-Dichloroethene	ug/L	70	35	<1	<1	<1	<1	<1	<1	<1	**1.43**
Methylene chloride	ug/L	5	--	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5	2.5	<1	<1	<1	<1	0 256 F	<1	<1	<1
Toluene	ug/L			0 37 F	<1	<1	<1	<1	<1	**17.6**	<1
trans-1,2-Dichloroethene	ug/L	100	50	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	5	<1	<1	<1	<1	<1	<1	<1	**2.13**
Vinyl chloride	ug/L	2	--	<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

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

Methods.

8260B	Volatile Organic Compounds

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

Analyte	Well ID Sample ID Lab ID Date units	MCL	TC	RW-1A RW-1A-IS-4 L08040517-07 4/16/2008	RW-1B RW-1B-IS-4 L08040517-08 4/16/2008	RW-1 RW-1-IS-4 L08040517-06 4/16/2008	RW-2 RW-2-IS-4 L08040517-09 4/16/2008	RW-3 RW-3-IS-4 L08040517-10 4/16/2008	RW-4 RW-4-IS-4 L08040517-11 4/16/2008
1,1,2,2-Tetrachloroethane	ug/L	--	2 2	**43.7**	**1.09**	**0.518**	**40.5**	**20.9**	**19.4**
1,1,2-Trichloroethane	ug/L	5	1 9	0 5 F	<1	<1	**1.39**	0 717 F	0.287 F
1,1-Dichloroethene	ug/L	7	7	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5	--	**0.652**	<0 5	<0.5	0 273 F	<0.5	<0.5
Carbon tetrachloride	ug/L	5	3	**1.05**	**2.75**	**17.9**	**5.56**	0.961 F	0.799 F
Chloroform	ug/L	80	12	**27.8**	**78.3**	**81.9**	**107**	**1.82**	**0.796**
cis-1,2-Dichloroethene	ug/L	70	35	**1.01**	0 783 F	**2.02**	**18**	**5.49**	**1.13**
Tetrachloroethene	ug/L	5	2 5	0 561 F	0.982 F	**4.07**	**1.9**	0 429 F	0 809 F
trans-1,2-Dichloroethene	ug/L	100	50	<1	<1	**1.05**	0 976 F	0 298 F	0 299 F
Trichloroethene	ug/L	5	5	**10.6**	**18.1**	**53.9**	**43.5**	**10.7**	**55.4**

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

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

Analyte	Well ID / Sample ID / Lab ID / Date	units	MCL	TC	RW-5 RW-5-IS-4 L08040517-01 4/16/2008	RW-6 RW-6-IS-4 L08040517-12 4/16/2008	RW-7 RW-7-IS-4 L08040517-02 4/16/2008	RW-8 RW-8-IS-4 L08040517-13 4/16/2008	RW-9 RW-9-IS-4 L08040517-14 4/16/2008
1,1,2,2-Tetrachloroethane		ug/L	--	2 2	**14.4**	<0 5	**1.29**	**0.551**	**3.55**
1,1,2-Trichloroethane		ug/L	5	1 9	<1	<1	<1	<1	<1
1,1-Dichloroethene		ug/L	7	7	<1	<1	<1	**1.27**	**17.4**
1,2-Dichloroethane		ug/L	5	--	<0 5	<0 5	<0 5	<0 5	<0.5
Carbon tetrachloride		ug/L	5	3	<1	<1	<1	<1	<1
Chloroform		ug/L	80	12	0 133 F	0 239 F	0.143 F	<0.3	0 184 F
cis-1,2-Dichloroethene		ug/L	70	35	<1	<1	<1	<1	<1
Tetrachloroethene		ug/L	5	2 5	**2.36**	**4.4**	**1.33**	**1**	**19.1**
trans-1,2-Dichloroethene		ug/L	100	50	<1	<1	<1	<1	<1
Trichloroethene		ug/L	5	5	**5.75**	**1.24**	**1.55**	0 919 F	**14**

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

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

		City of Memphis Industrial Permit Discharge Limits	
Sample Site ID	EFFLUENT	Monthly Average	Instantaneous
Date Collected	4/11/2008	Maximum	Daily Maximum
pH - E150 1			
pH	6 11	5 5 to 10 0	5.5 to 10 0
Total Metals - SW6010B µg/L			
Aluminum	ND	1,000	2,000
Arsenic	ND	40	100
Barium	98 7	NA	NA
Cadmium	ND	10	20
Calcium	19600	NA	NA
Chromium	ND	200	400
Copper	ND	200	400
Iron	ND	10,000	20,000
Lead	ND	150	300
Magnesium	10900	NA	NA
Manganese	16 1	NA	NA
Mercury	ND	1	2
Nickel	ND	100	300
Potassium	773 F	NA	NA
Sodium	20500	NA	NA
Zinc	33	300	1000
Selenium, Total	1.51	NA	NA
Volatile Organic Compounds - SW8260B µg/L			
1,1,2,2-Tetrachloroethane	6 94	500	1000
1,1,1-Trichloroethane	ND	10	20
1,1,2-Trichloroethane	ND	50	100
1,1-Dichloroethane	0 217 F	NA	NA
1,1-Dichloroethene	6 94	50	100
Carbon tetrachloride	0 524 F	20	40
Chloroform	9 16	100	200
cis-1,2-Dichloroethene	1 27	80	100
Methylene chloride	ND	10	20
Tetrachloroethene	7 83	60	120
Toluene	ND	20	40
trans-1,2-Dichloroethene	ND	50	100
Trichloroethene	13 3	400	800
Semi-volatile Organic Compounds - SW8270B µg/L			
Bis (2-ethylhexyl) Phthalate	ND	10	20
Di-n-butyl Phthalate	ND	30	60
Naphthalene	ND	10	20
Phenol	ND	10	20

Notes

F	Estimated concentration below reporting limit but above detection limit
ND	Not detected above the reporting limit
NA	Discharge limit not established in agreement
NC	Not Collected
-	Not Analyzed

TABLE 8
SUMMARY OF ANALYTICAL RESULTS - MONITORING WELLS
APRIL 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
Carbon Tetrachloride	5	3	12	16	MW-15	8	12
Chloroform	80	12	30	110	MW-227	3	10
1,1-Dichloroethene (DCE)	7	7	12	73 4	MW-130	6	6
Cis-1,2-Dicloroethene (cDCE)	70	35	29	1,220	MW-159	2	5
Trans-1,2-dichloroethene (tDCE)	100	50	18	26 6	MW-159	0	0
1,1,2,2-Tetrachloroethane (PCA)	--	2 2	37	4,160	MW-162	--	31
Tetrachloroethene (PCE)	5	2 5	25	196	MW-130	10	16
1,1,2-Trichloroethane (TeCA)	5	1 9	6	111	MW-159	4	4
Trichloroethene (TCE)	5	5	51	1,600	MW-155	39	39
Vinyl Chloride (VC)	2	--	1	13 5	MW-70	1	--

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

TABLE 9
SUMMARY OF ANALYTICAL RESULTS - RECOVERY WELLS
APRIL 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
Carbon Tetrachloride	5	3	4	17 9	RW-1	1	1
Chloroform	80	12	6	107	RW-2	4	4
1,1-Dichloroethene (DCE)	7	7	2	17 4	RW-9	1	1
Cis-1,2-Dicloroethene (cDCE)	70	35	5	18	RW-2	0	0
Trans-1,2-dichloroethene (tDCE)	100	50	1	1 05	RW-1	0	0
1,1,2,2-Tetrachloroethane (TeCA)	--	2 2	10	44	RW-1A	--	6
Tetrachloroethene (PCE)	5	2 5	7	19 1	RW-9	1	3
1,1,2-Trichloroethane (TCA)	5	1 9	1	1 39	RW-2	0	0
Trichloroethene (TCE)	5	5	10	55	RW-4	7	7

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

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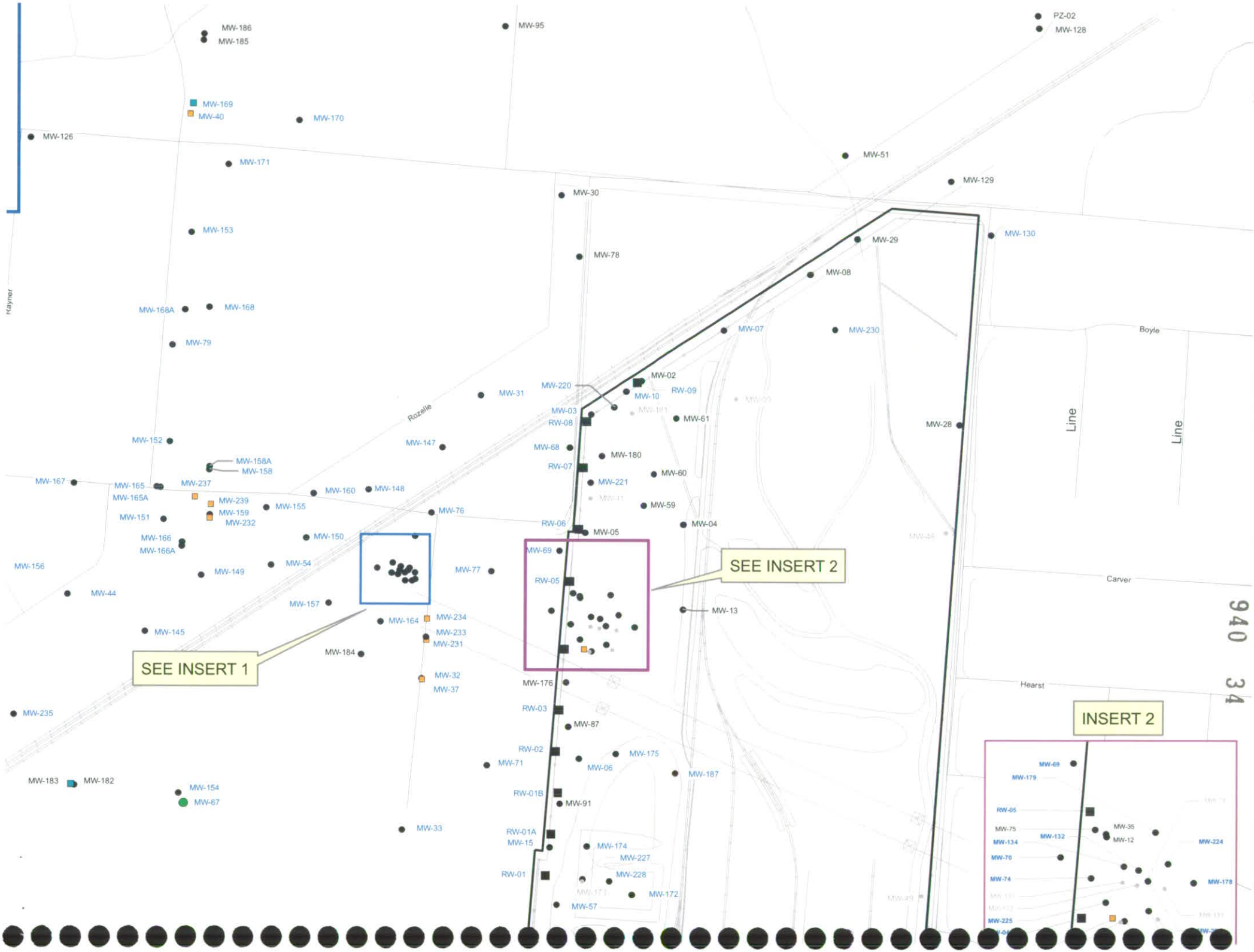
FIGURES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MW-08
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RW-02
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MW-71
MW-06
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RW-01B
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MW-33
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MW-15
MW-174
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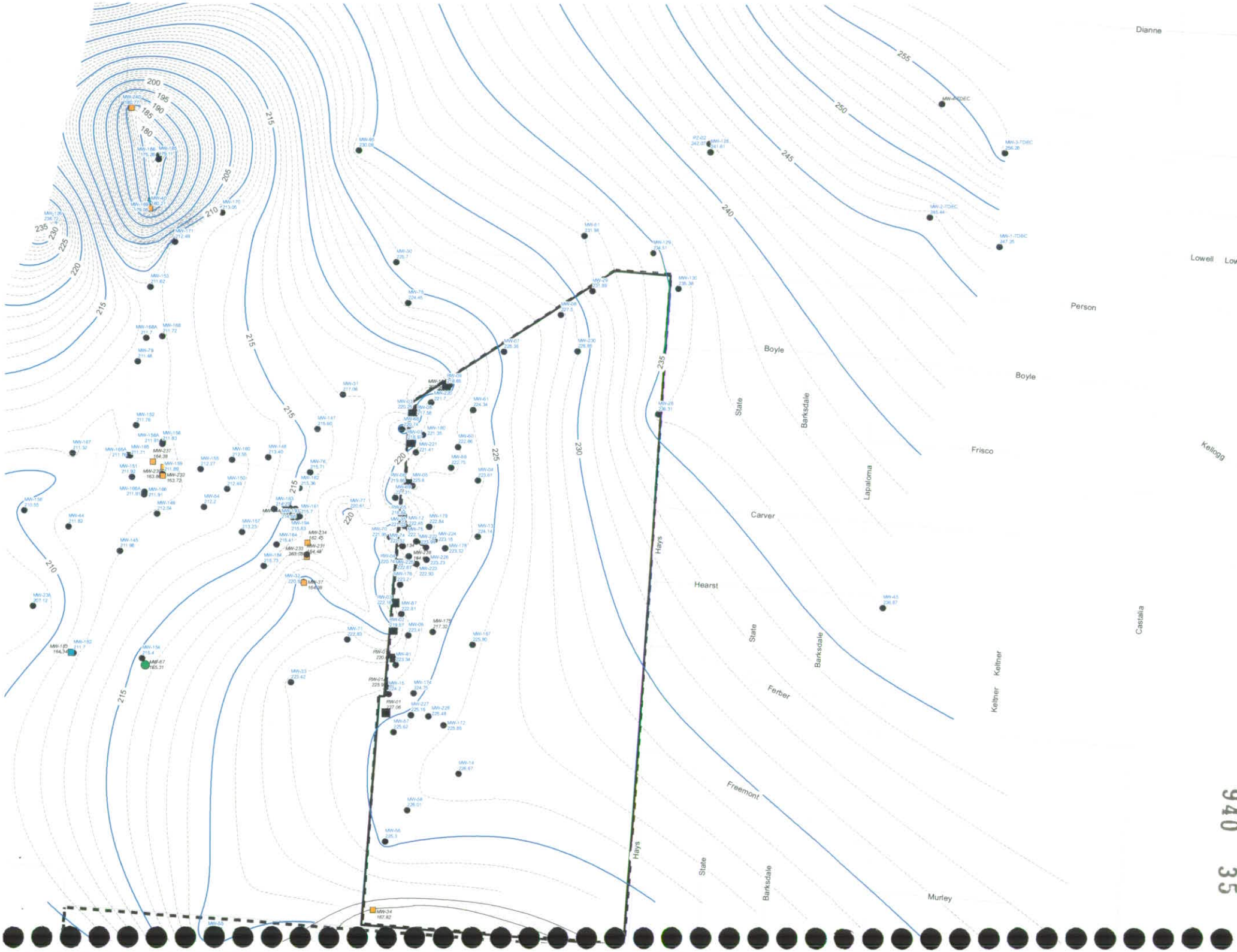
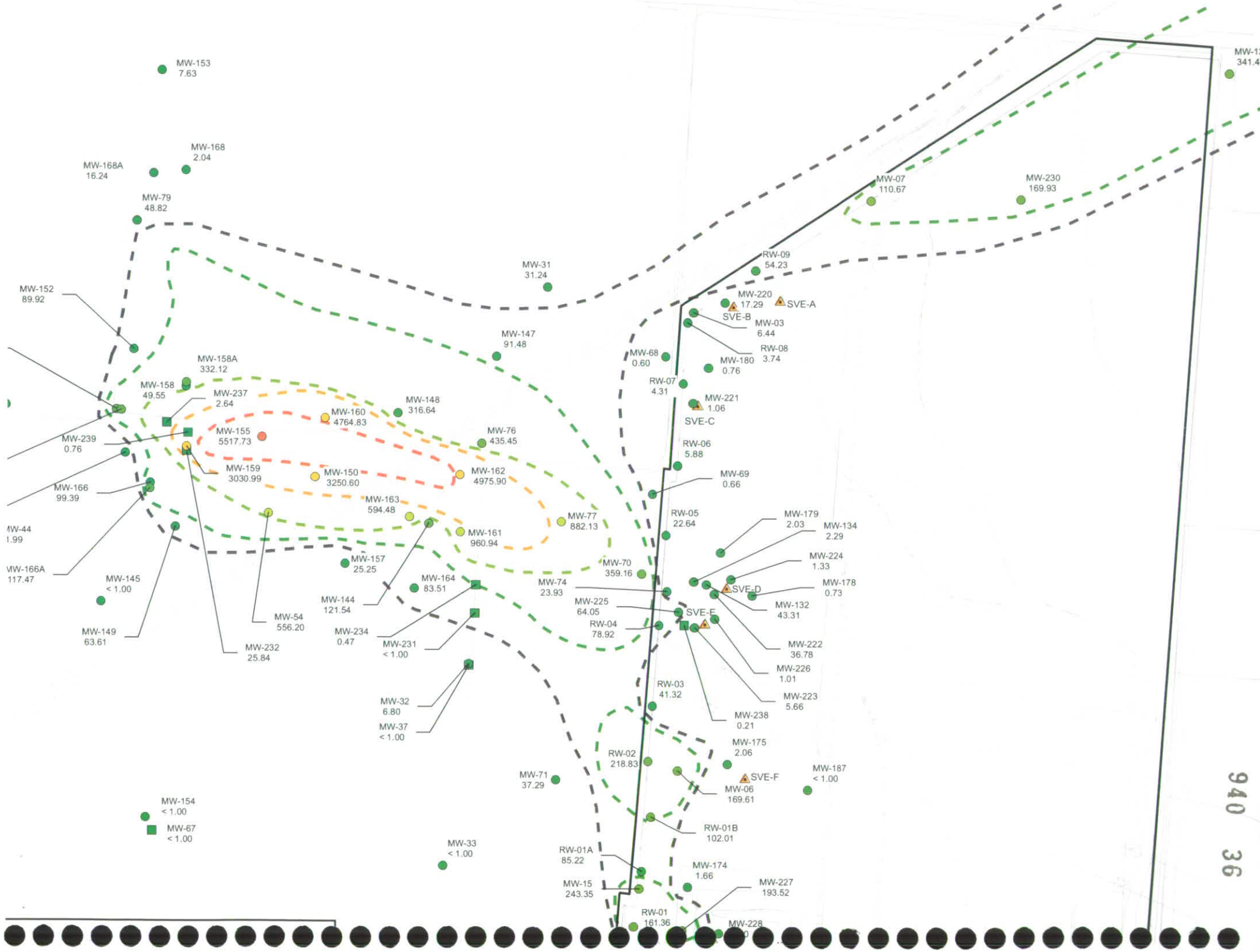

Dianne
Lowell
Lowell
Person
Boyle
Boyle
Frisco
Kellogg
Carver
Hearst
Castalia
Ferber
Freemont
Murley
Lapaloma
Barksdale
State
Hays
Kellner
200
195
190
185
180
215
205
210
235
230
225
220
255
250
245
240
MW-34
167.82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MW-168
2.04
MW-168A
16.24
MW-79
48.82
MW-31
31.24
MW-07
110.67
MW-230
169.93
RW-09
54.23
MW-152
89.92
MW-220
17.29
SVE-A
SVE-B
MW-03
6.44
MW-147
91.48
RW-08
3.74
MW-68
0.60
MW-180
0.76
MW-158A
332.12
RW-07
4.31
MW-158
49.55
MW-237
2.64
MW-148
316.64
MW-160
4764.83
MW-221
1.06
SVE-C
MW-155
5517.73
MW-76
435.45
MW-239
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RW-06
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3030.99
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3250.60
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4975.90
MW-69
0.66
MW-166
99.39
MW-163
594.48
RW-05
22.64
MW-77
882.13
MW-44
1.99
MW-161
960.94
MW-179
2.03
MW-134
2.29
MW-166A
117.47
MW-157
25.25
MW-70
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MW-224
1.33
MW-145
< 1.00
MW-164
83.51
MW-74
23.93
SVE-D
MW-178
0.73
MW-144
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MW-225
64.05
MW-132
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SVE-E
MW-54
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RW-04
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MW-234
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MW-231
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MW-226
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RW-03
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MW-223
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MW-32
6.80
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< 1.00
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RW-02
218.83
MW-71
37.29
SVE-F
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MW-06
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MW-154
< 1.00
MW-67
< 1.00
RW-01B
102.01
MW-33
< 1.00
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MW-15
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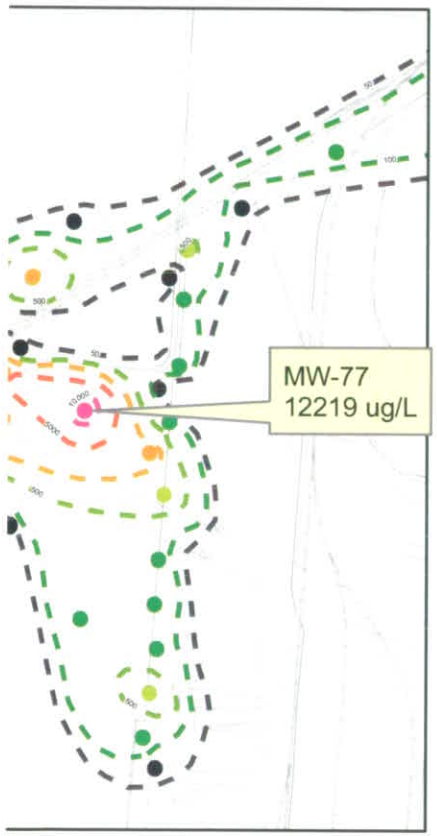
161.36
MW-228
940
36



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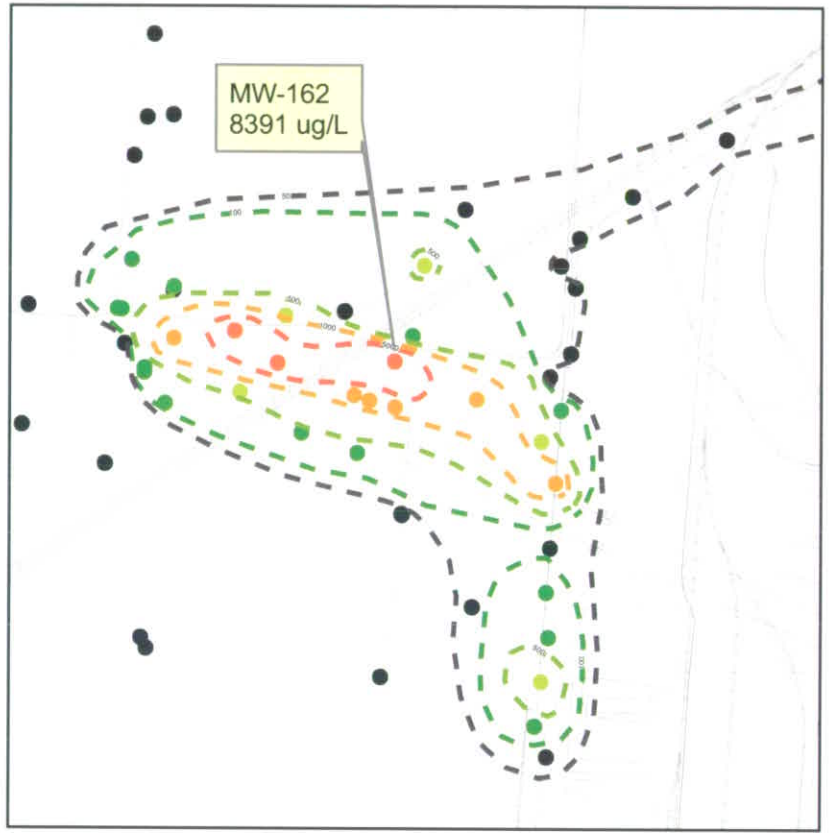
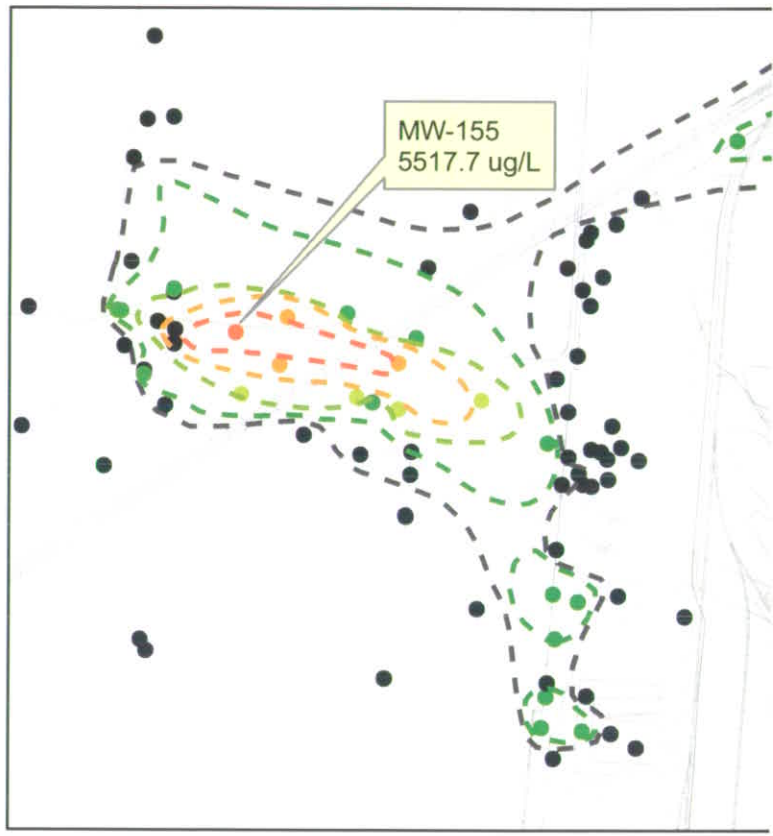


OCTOBER 2007



APRIL 2008

0 200 400 600 800 1,000

Feet

Legend

Total CVOC Isopleth (ug/L)

- 50
- 100
- 500
- 1000
- 5000
- 10000

Total CVOC Ranges (ug/L)

- 0 - 100
- 101 - 500
- 501 - 1000

Notes:
1. Highest concentration at well pairs used for contour.
2. Total CVOC include: CT, CF, DCE, cDCE, tDCE, TCA, TCE, PCE, ECA, and VC

940 37

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 Off Depot Central Plume Monitoring Wells

APPENDIX A

Results of Laboratory Analyses

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

Analyte	Well	MW-3	MW-6	MW-07	MW-15	MW-31	MW-31 DUP	MW-31
	sample_name	MW-3-IS-4	MW-6-IS-4	MW-07-68.9-IS-4	MW-15-IS-4	MW-31-71.6-IS-4	MW-31-71.6 DUP	MW-31-77.1-IS-4
	Lab ID	L08040517-22	L08040486-06	L08040444-01	L08040486-07	L08040409-29	L08040409-36	L08040409-30
	Date	4/16/2008	4/15/2008	4/14/2008	4/15/2008	4/11/2008	4/11/2008	4/11/2008
	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	0.613 F	<1	4.38	5.92	0.856 F
1,1,2,2-Tetrachloroethane	ug/L	<0.5	8.89	<0.5	2.15	<0.5	0.446 F	<0.5
1,1,2-Trichloroethane	ug/L	<1	1.02	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	1.2	<1	1.96	2.61	<1
1,1-Dichloroethene	ug/L	1.54	<1	24.8	<1	14.3	17.4	7.17
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	0.357 F	1.05	<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	0.193 F	0.177 F	<0.5	0.239 F	<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	3.41 F	<10	<10	<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	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	3.78	<1	16	0.368 F	0.539 F	<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	0.147 F	84.7	0.273 F	106	0.802	1.19	0.169 F
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	36.2	<1	5.99	2.87	5.67	0.332 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	2.71	1.07	56.2	7.19	0.891 F	1.12	0.916 F
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	1.45	<1	2.02	1.51	2.14	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	2.04	32.5	29.4	104	10.5	16.1	3.21
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 required
J The analyte was positively identified, but the quantitation is an estimate.
M Concentration estimated due to matrix effect

Method:
SW8260B - Volatile Organic Compounds

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

Analyte	Well	MW-32	MW-33	MW-37	MW-40	MW-43	MW-44	MW-44 DUP
	sample_name	MW-32-65.6-IS-4	MW-33-58-IS-4	MW-37-173.2-IS-4	MW-40-90-IS-4	MW-43-165.5-IS-4	MW-44-69-IS-4	MW-44-69 DUP
	Lab ID	L08040409-31	L08040444-11	L08040444-02	L08040409-39	L08040409-41	L08040409-42	L08040409-35
	Date	4/11/2008	4/14/2008	4/14/2008	4/11/2008	4/11/2008	4/11/2008	4/11/2008
	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	<0.5	<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	<10	2.97 F	4.94 F	9.66 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	<1	0.611 F	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	0.823 F	1.28
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	0.145 F	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	4.07	<0.3	<0.3	<0.3	<0.3	0.567	0.586
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	0.263 F	<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	<1	<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	2.47	<1	<1	<1	<1	0.599 F	1.14
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 required
J The analyte was positively identified, but the quantitation
M Concentration estimated due to matrix effect

Method:
SW8260B - Volatile Organic Compounds

TABLE A-1
MONITORING WELL SAMPLE ANALYTICAL RESULTS - VOCs
APRIL 2008 SEMI-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-70
	sample name	MW-54-89 5-IS-4	MW-57-66 6-IS-4	MW-67-267 5-IS-4	MW-68-77 5-IS-4	MW-69-88 2-IS 4	MW-70-83 3-IS 4	MW-70-88 8-IS-4
	Lab ID	L08040409-03	L08040444-03	L08040409-43	L08040444-04	L08040444-05	L08040444-06	L08040444-07
	Date	4/11/2008	4/14/2008	4/11/2008	4/14/2008	4/14/2008	4/14/2008	4/14/2008
	units							
1 1 1 2-Tetrachloroethane	ug/L	<0 5	<0 5	<0 5	<0 5	<0 5	<1	<1 25
1 1 1-Trichloroethane	ug/L	<1	<1	<1	<1	<1	<2	<2 5
1 1 2 2-Tetrachloroethane	ug/L	171	<0 5	<0 5	0 24 F	<0 5	270	177
1,1 2-Trichloroethane	ug/L	0 885 F	<1	<1	<1	<1	<2	1 11 F
1 1-Dichloroethane	ug/L	<1	<1	<1	<1	<1	<2	<2 5
1 1-Dichloroethene	ug/L	<1	<1	<1	<1	<1	<2	1 71 F
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<2	<2 5
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<2	<2 5
1 2 3-Trichloropropane	ug/L	<1	<1	<1	<1	<1	<2	<2 5
1 2 4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<2	<2 5
1 2 4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<2	<2 5
1 2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2	<4	<5
1 2-Dibromoethane	ug/L	<1	<1	<1	<1	<1	<2	<2 5
1 2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<2	<2 5
1 2-Dichloroethane	ug/L	<0 5	<0 5	<0 5	<0 5	<0 5	<1	<1 25
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	0 524 F	<2 5
1 3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<2	<2 5
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<2	<2 5
1,3-Dichloropropane	ug/L	<0 4	<0 4	<0 4	<0 4	<0 4	<0 8	<1
1,4-Dichlorobenzene	ug/L	<0 5	<0 5	<0 5	<0 5	<0 5	<1	<1 25
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1	<2	<2 5
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<2	<2 5
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<2	<2 5
2-Hexanone	ug/L	<10	<10	<10	<10	<10	<20	<25
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<2	<2 5
Acetone	ug/L	5 16 Q	6 58 F	5 95 F	<10	<10	12 4 F	9 93 F
Benzene	ug/L	<0 4	<0 4	<0 4	<0 4	<0 4	<0 8	<1
Bromobenzene	ug/L	<1	<1	<1	<1	<1	<2	<2 5
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<2	<2 5
Bromodichloromethane	ug/L	<0 5	<0 5	<0 5	<0 5	<0 5	<1	<1 25
Bromoform	ug/L	<1	<1	<1	<1	<1	<2	<2 5
Bromomethane	ug/L	<1	<1	<1	<1	<1	<2	<2 5
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<2	<2 5
Carbon tetrachloride	ug/L	6 76	11 1	<1	<1	<1	<2	<2 5
Chlorobenzene	ug/L	<0 5	<0 5	<0 5	<0 5	<0 5	<1	<1 25
Chloroethane	ug/L	<1	<1	<1	<1	<1	<2	<2 5
Chloroform	ug/L	3 85	3 32	<0 3	<0 3	<0 3	<0 6	<0 75
Chloromethane	ug/L	<1	<1	<1	<1	<1	<2	<2 5
cis-1 2-Dichloroethene	ug/L	17 4	<1	<1	<1	<1	1 63 F	14 2
cis-1 3-Dichloropropene	ug/L	<0 5	<0 5	<0 5	<0 5	<0 5	<1	<1 25
Dibromochloromethane	ug/L	<0 5	<0 5	<0 5	<0 5	<0 5	<1	<1 25
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<2	<2 5
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1	<2	<2 5
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<2	<2 5
Hexachlorobutadiene	ug/L	<0 6	<0 6	<0 6	<0 6	<0 6	<1 2	<1 5
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1	<2	<2 5
m- p-Xylene	ug/L	<2	<2	<2	<2	<2	<4	<5
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10	<20	<25
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5	<10	<12 5
Methylene chloride	ug/L	<1	<1	<1	<1	<1	<2	<2 5
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10	<20	<25
Naphthalene	ug/L	<1	<1	<1	<1	<1	<2	<2 5
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<2	<2 5
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1	<2	<2 5
o-Xylene	ug/L	<1	<1	<1	<1	<1	<2	<2 5
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1	<2	<2 5
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<2	<2 5
Styrene	ug/L	<1	<1	<1	<1	<1	<2	<2 5
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<2	<2 5
Tetrachloroethene	ug/L	3 88	3 03	<1	<1	0 658 F	1 53 F	0 984 F
Toluene	ug/L	<1	<1	<1	<1	<1	<2	<2 5
trans-1 2-Dichloroethene	ug/L	4 42	<1	<1	<1	<1	<2	4 74
trans-1 3-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<2	<2 5
Trichloroethene	ug/L	348	19 4	<1	0 36 F	<1	86	60 4
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<2	<2 5
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<10	<12 5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<2	13 5

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 required
J The analyte was positively identified but the quantitation
M Concentration estimated due to matrix effect

Method.
SW8260B - Volatile Organic Compounds

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

Analyte	Well	MW-71	MW-74	MW-76	MW-77	MW-79	MW-130	MW-132
	sample_name	MW-71-72 3-IS-4	MW-74-IS-4	MW-76-88 2-IS-4	MW-77-84 9-IS 4	MW-79-92-IS-4	MW-130-69 5-IS-4	MW-132-IS-4
	Lab ID	L08040444-13	L08040486-08	L08040444-14	L08040444-17	L08040409-04	L08040409-44	L08040486-09
	Date	4/14/2008	4/15/2008	4/14/2008	4/14/2008	4/11/2008	4/11/2008	4/15/2008
	units							
1 1 1 2-Tetrachloroethane	ug/L	<0 5	<0 5	<0 5	<10	<0 5	<0 5	<0 5
1 1 1 Trichloroethane	ug/L	<1	<1	<1	<20	<1	1 86	<1
1 1 2 2-Tetrachloroethane	ug/L	1 72	16 1	77	566	30 4	<0 5	25 1
1 1 2-Trichloroethane	ug/L	<1	<1	0 303 F	<20	<1	<1	0 469 F
1 1-Dichloroethane	ug/L	<1	<1	<1	<20	0 2 F	4 01	<1
1 1-Dichloroethene	ug/L	<1	<1	<1	<20	10	73 4	<1
1 1-Dichloropropene	ug/L	<1	<1	<1	<20	<1	<1	<1
1 2 3-Trichlorobenzene	ug/L	<1	<1	<1	<20	<1	<1	<1
1 2 3-Trichloropropane	ug/L	<1	<1	<1	<20	<1	<1	<1
1 2 4-Trichlorobenzene	ug/L	<1	<1	<1	<20	<1	<1	<1
1 2 4-Trimethylbenzene	ug/L	<1	<1	<1	<20	<1	<1	<1
1 2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<40	<2	<2	<2
1 2-Dibromoethane	ug/L	<1	<1	<1	<20	<1	<1	<1
1 2-Dichlorobenzene	ug/L	<1	<1	0 142 F	<20	<1	<1	<1
1 2-Dichloroethane	ug/L	<0 5	<0 5	<0 5	<10	<0 5	1	<0 5
1 2-Dichloropropane	ug/L	<1	<1	<1	<20	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<20	<1	<1	<1
1 3-Dichlorobenzene	ug/L	<1	<1	<1	<20	<1	<1	<1
1 3-Dichloropropane	ug/L	<0 4	<0 4	<0 4	<8	<0 4	<0 4	<0 4
1 4-Dichlorobenzene	ug/L	<0 5	<0 5	0 204 F	<10	<0 5	<0 5	0 179 F
1-Chlorohexane	ug/L	<1	<1	<1	<20	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<20	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<20	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<200	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<20	<1	<1	<1
Acetone	ug/L	8 48 F	<10	6 54 F	<200	<10	5 03 F	<10
Benzene	ug/L	<0 4	<0 4	<0 4	<8	<0 4	<0 4	<0 4
Bromobenzene	ug/L	<1	<1	<1	<20	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<20	<1	<1	<1
Bromodichloromethane	ug/L	<0 5	<0 5	<0 5	<10	<0 5	<0 5	<0 5
Bromoform	ug/L	<1	<1	<1	<20	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<20	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<20	<1	<1	<1
Carbon tetrachloride	ug/L	7 66	<1	<1	<20	<1	<1	<1
Chlorobenzene	ug/L	<0 5	<0 5	<0 5	<10	<0 5	0 144 F	<0 5
Chloroethane	ug/L	<1	<1	<1	<20	<1	<1	<1
Chloroform	ug/L	17 3	0 163 F	0 915	<6	<0 3	0 27 F	<0 3
Chloromethane	ug/L	<1	<1	<1	<20	<1	<1	<1
cis-1 2-Dichloroethene	ug/L	0 523 F	<1	13 2	7 13 F	<1	0 789 F	0 388 F
cis-1 3-Dichloropropene	ug/L	<0 5	<0 5	<0 5	<10	<0 5	<0 5	<0 5
Dibromochloromethane	ug/L	<0 5	<0 5	<0 5	<10	<0 5	<0 5	<0 5
Dibromomethane	ug/L	<1	<1	<1	<20	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<20	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<20	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0 6	<0 6	<12	<0 6	<0 6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<20	<1	<1	<1
m- p-Xylene	ug/L	<2	<2	<2	<40	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<200	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<100	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	6 28 F	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<200	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<20	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<20	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<20	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<20	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<20	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<20	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<20	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<20	<1	<1	<1
Tetrachloroethene	ug/L	0 715 F	0 473 F	4 44	<20	0 917 F	196	0 649 F
Toluene	ug/L	<1	<1	<1	<20	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	3 59	<20	<1	<1	<1
trans-1 3-Dichloropropene	ug/L	<1	<1	<1	<20	<1	<1	<1
Trichloroethene	ug/L	9 37	7 19	336	309	7 5	71	16 7
Trichlorofluoromethane	ug/L	<1	<1	<1	<20	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<100	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<20	<1	<1	<1

Notes

ug/L micrograms per liter
< Analyte not detected above RL
F Concentration below RL but above MDL
Q Quality control criteria failed further review required
J The analyte was positively identified but the quantitation
M Concentration estimated due to matrix effect

Method.
SW8260B - Volatile Organic Compounds

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

	Well	MW-134	MW-144	MW-145	MW-147	MW-148	MW-148	MW-149
	sample_name	MW-134-IS-4	MW-144-74 9-IS-4	MW-145-86 6-IS-4	MW-147-73 7-IS-4	MW-148-80 0-IS-4	MW-148-85 5-IS-4	MW-149-83 6-IS-4
	Lab ID	L08040517-24	L08040409-45	L08040444-08	L08040409-05	L08040409-06	L08040409-07	L08040409-08
	Date	4/16/2008	4/11/2008	4/14/2008	4/11/2008	4/11/2008	4/11/2008	4/11/2008
Analyte	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	0 717	79 4	<0 5	22	21 2	6 92	1 53
1 1 2-Trichloroethane	ug/L	<1	0 461 F	<1	<1	0 252 F	<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	0 135 F	<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 4 F	<10	3 08 Q	3 8 Q	2 71 Q	4 77 Q
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	5 26
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	1 77	<0 3	0 509	1 16	0 582	14 2
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	2 31	<1	6 15	21 7	7 33	1 12
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	0 488 F	<1	<1	7 92	3 59	1 96	0 623 F
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1
trans 1 2-Dichloroethene	ug/L	<1	<1	<1	1	2 74	2 1	0 266 F
trans-1 3-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	1 08	37 6	<1	53 9	266	62 9	12 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 required
J The analyte was positively identified but the quantitation
M Concentration estimated due to matrix effect

Method
SW8260B - Volatile Organic Compounds

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

Analyte	Well	MW-149	MW-150	MW-150	MW-150 DUP	MW-151	MW-151	MW-152
	sample_name	MW-149-98.5	MW-150-83.2-IS-4	MW-150-90.5-IS-4	MW-150 90.5 DUP	MW-151-78.5-IS-4	MW-151-94.5-IS-4	MW-152-107.9-IS-4
	Lab ID	L08040409-09	L08040409-10	L08040409-11	L08040409-02	L08040444-18	L08040444-19	L08040409-13
	Date	4/11/2008	4/11/2008	4/11/2008	4/11/2008	4/14/2008	4/14/2008	4/11/2008
	units							
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<20	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	4.1	174	1960	2020	<0.5	0.468 F	1.4
1,1,2-Trichloroethane	ug/L	<1	9.85	15.2 F	23.1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<20	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<20	0.997 F	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<20	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<20	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<20	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<20	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<20	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<40	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<20	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<20	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<10	0.401 F	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<20	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<20	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<20	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<8	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<20	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<20	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<20	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<200	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<20	<1	<1	<1	<1
Acetone	ug/L	3.65 F	4.51 F	<200	2.92 Q	<10	2.65 F	<10
Benzene	ug/L	<0.4	<0.4	<8	<0.4	<0.4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<20	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<20	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<20	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<20	<1	<1	0.705 F	<1
Carbon disulfide	ug/L	<1	<1	<20	<1	<1	<1	<1
Carbon tetrachloride	ug/L	6.7	<1	<20	<1	0.602 F	4.77	<1
Chlorobenzene	ug/L	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<20	<1	<1	<1	<1
Chloroform	ug/L	29.6	1.43	<6	1.9	0.236 F	15.5	0.573
Chloromethane	ug/L	<1	<1	<20	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	2.43	3.59	37.3	57	<1	1.42	5.49
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<20	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<20	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<20	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0.6	<12	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<20	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<40	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<200	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<100	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<20	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<200	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<20	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<20	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<20	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<20	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<20	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<20	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<20	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<20	<1	<1	<1	<1
Tetrachloroethene	ug/L	1	0.361 F	8.1 F	11.8	<1	0.639 Q	8.53
Toluene	ug/L	<1	<1	<20	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	0.675 F	<1	<20	4.38	<1	0.613 F	1.76
trans-1,3-Dichloropropene	ug/L	<1	<1	<20	<1	<1	<1	<1
Trichloroethene	ug/L	19.1	80.6	1230	1220	1.32	20.1	61.7
Trichlorofluoromethane	ug/L	<1	<1	<20	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<100	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<20	0.708 F	<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 required
J The analyte was positively identified, but the quantitation
M Concentration estimated due to matrix effect

Method:
SW8260B - Volatile Organic Compounds

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

	Well	MW-152	MW-153	MW-154	MW-155	MW-155	MW-156	MW-157
	sample_name	MW-152-92 9-IS-4	MW-153-87 1-IS-4	MW-154-61 6-IS-4	MW-155-77 0-IS-4	MW-155-93 5-IS-4	MW-156-62 0-IS-4	MW-157-74 8-IS-4
	Lab ID	L08040409-12	L08040444-20	L08040444-21	L08040409-14	L08040409-15	L08040409-46	L08040444-22
	Date	4/11/2008	4/14/2008	4/14/2008	4/11/2008	4/11/2008	4/11/2008	4/14/2008
Analyte	units							
1,1,1,2-Tetrachloroethane	ug/L	<0 5	<0 5	<0 5	<10	<12 5	<0 5	<1
1 1 1-Trichloroethane	ug/L	<1	1 39	<1	<20	<25	<1	<2
1 1,2,2-Tetrachloroethane	ug/L	3 05	<0 5	<0 5	3770	3540	<0 5	10 1
1,1,2-Trichloroethane	ug/L	<1	<1	<1	53 8	43 2	<1	<2
1,1-Dichloroethane	ug/L	<1	0 596 F	<1	<20	<25	<1	<2
1,1-Dichloroethene	ug/L	<1	6 37	<1	<20	<25	<1	<2
1,1-Dichloropropene	ug/L	<1	<1	<1	<20	<25	<1	<2
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<20	<25	<1	<2
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<20	<25	<1	<2
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<20	<25	<1	<2
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<20	<25	<1	<2
1 2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<40	<50	<2	<4
1,2-Dibromoethane	ug/L	<1	<1	<1	<20	<25	<1	<2
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<20	<25	<1	<2
1,2-Dichloroethane	ug/L	<0 5	<0 5	<0 5	<10	<12 5	<0 5	<1
1 2-Dichloropropane	ug/L	<1	<1	<1	<20	<25	<1	0 515 F
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<20	<25	<1	<2
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<20	<25	<1	<2
1,3-Dichloropropane	ug/L	<0 4	<0 4	<0 4	<8	<10	<0 4	<0 8
1,4-Dichlorobenzene	ug/L	<0 5	<0 5	<0 5	<10	<12 5	<0 5	<1
1-Chlorohexane	ug/L	<1	<1	<1	<20	<25	<1	<2
2,2-Dichloropropane	ug/L	<1	<1	<1	<20	<25	<1	<2
2-Chlorotoluene	ug/L	<1	<1	<1	<20	<25	<1	<2
2-Hexanone	ug/L	<10	<10	<10	<200	<250	<10	<20
4-Chlorotoluene	ug/L	<1	<1	<1	<20	<25	<1	<2
Acetone	ug/L	<10	<10	<10	<200	<250	4 95 F	8 87 F
Benzene	ug/L	<0 4	<0 4	<0 4	<8	<10	<0 4	<0 8
Bromobenzene	ug/L	<1	<1	<1	<20	<25	<1	<2
Bromochloromethane	ug/L	<1	<1	<1	<20	<25	<1	<2
Bromodichloromethane	ug/L	<0 5	<0 5	<0 5	<10	<12 5	<0 5	<1
Bromoform	ug/L	<1	<1	<1	<20	<25	<1	<2
Bromomethane	ug/L	<1	0 59 F	0 573 F	<20	<25	<1	1 05 F
Carbon disulfide	ug/L	<1	<1	<1	<20	<25	<1	<2
Carbon tetrachloride	ug/L	<1	<1	<1	<20	<25	<1	<2
Chlorobenzene	ug/L	<0 5	<0 5	<0 5	<10	<12 5	<0 5	<1
Chloroethane	ug/L	<1	<1	<1	<20	<25	<1	<2
Chloroform	ug/L	0 601	<0 3	<0 3	<6	<7 5	<0 3	9
Chloromethane	ug/L	<1	<1	<1	<20	<25	<1	<2
cis-1,2-Dichloroethene	ug/L	5 65	0 341 F	<1	73 8	61 4	<1	0 671 F
cis-1,3-Dichloropropene	ug/L	<0 5	<0 5	<0 5	<10	<12 5	<0 5	<1
Dibromochloromethane	ug/L	<0 5	<0 5	<0 5	<10	<12 5	<0 5	<1
Dibromomethane	ug/L	<1	<1	<1	<20	<25	<1	<2
Dichlorodifluoromethane	ug/L	<1	<1	<1	<20	<25	<1	<2
Ethylbenzene	ug/L	<1	<1	<1	<20	<25	<1	<2
Hexachlorobutadiene	ug/L	<0 6	<0 6	<0 6	<12	<15	<0 6	<1 2
Isopropylbenzene	ug/L	<1	<1	<1	<20	<25	<1	<2
m-,p-Xylene	ug/L	<2	<2	<2	<40	<50	<2	<4
MEK (2-Butanone)	ug/L	<10	<10	<10	<200	<250	<10	<20
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<100	<125	<5	<10
Methylene chloride	ug/L	<1	<1	<1	<20	<25	<1	<2
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<200	<250	<10	<20
Naphthalene	ug/L	<1	<1	<1	<20	<25	<1	<2
n-Butylbenzene	ug/L	<1	<1	<1	<20	<25	<1	<2
n-Propylbenzene	ug/L	<1	<1	<1	<20	<25	<1	<2
o-Xylene	ug/L	<1	<1	<1	<20	<25	<1	<2
p-Isopropyltoluene	ug/L	<1	<1	<1	<20	<25	<1	<2
sec-Butylbenzene	ug/L	<1	<1	<1	<20	<25	<1	<2
Styrene	ug/L	<1	<1	<1	<20	<25	<1	<2
tert-Butylbenzene	ug/L	<1	<1	<1	<20	<25	<1	<2
Tetrachloroethene	ug/L	5 5	0 445 F	<1	10 2 F	8 34 F	<1	<2
Toluene	ug/L	0 321 F	<1	<1	<20	<25	<1	<2
trans-1,2-Dichloroethene	ug/L	2 42	<1	<1	9 93 F	7 82 F	<1	<2
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<20	<25	<1	<2
Trichloroethene	ug/L	72 7	0 469 F	<1	1600	1510	<1	5 48
Trichlorofluoromethane	ug/L	<1	<1	<1	<20	<25	<1	<2
Vinyl acetate	ug/L	<5	<5	<5	<100	<125	<5	<10
Vinyl chloride	ug/L	<1	<1	<1	<20	<25	<1	<2

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 required
J The analyte was positively identified, but the quantitation
M Concentration estimated due to matrix effect

Method
SW8260B - Volatile Organic Compounds

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

Analyte	Well	MW-157 DUP	MW-158	MW-158	MW-158A	MW-158A	MW-159	MW-159 DUP
	sample_name	MW-157-74.8 DUP	MW-158-104.1-IS-4	MW-158-93.1-IS-4	MW-158A-81.5-IS-4	MW-158A-91.4-IS-4	MW-159-81.1-IS-4	MW-159-81.1 DUP
	Lab ID	L08040444-12	L08040409-17	L08040409-16	L08040409-18	L08040409-19	L08040409-20	L08040409-01
	Date	4/14/2008	4/11/2008	4/11/2008	4/11/2008	4/11/2008	4/11/2008	4/11/2008
	units							
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1	<10	<1
1,1,2,2-Tetrachloroethane	ug/L	10.1	3.03	2.79	217	26.9	312	361
1,1,2-Trichloroethane	ug/L	0.29 F	<1	<1	7.88 J	<1	99.8	115
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1	<10	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1	<10	4.38
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<10	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<10	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1	<10	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1	<10	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<10	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2	<20	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1	<10	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<10	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<5	1.2
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<10	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1	<10	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<10	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1	<10	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<10	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<10	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10	<100	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1	<10	<1
Acetone	ug/L	7.87 F	<10	3.98 F	3.16 J	2.52 F	<100	8.62 Q
Benzene	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4	<4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1	<10	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<10	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1	<10	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<10	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<10	<1
Carbon tetrachloride	ug/L	0.53 F	<1	<1	<1	<1	<10	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1	<10	<1
Chloroform	ug/L	10.8	0.288 F	0.251 F	0.373 J	1.01	<3	1.33
Chloromethane	ug/L	<1	<1	<1	<1	<1	<10	<1
cis-1,2-Dichloroethene	ug/L	0.741 F	2.9	2.55	8.05 J	12.1	1220	1350
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<10	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1	<10	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<10	<1
Hexachlorobutadiene	ug/L	<0.6	<0.6	<0.6	<0.6	<0.6	<6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1	<10	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2	<20	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10	<100	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5	<50	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1	<10	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10	<100	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1	<10	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<10	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1	<10	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1	<10	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1	<10	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<10	<1
Styrene	ug/L	<1	<1	<1	<1	<1	<10	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<10	<1
Tetrachloroethene	ug/L	<1	4.98	4.74	0.578 J	10.7	5.26 F	6.87
Toluene	ug/L	<1	<1	<1	<1	<1	<10	<1
trans-1,2-Dichloroethene	ug/L	<1	1.25	1.02	0.938 J	4.06	24.9	37
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<10	<1
Trichloroethene	ug/L	6.86	37.1	33.1	97.3 J	126	1170	1250
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<10	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<50	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	7.79 F	7.14

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 required
J The analyte was positively identified, but the quantitation
M Concentration estimated due to matrix effect

Method:
SW8260B - Volatile Organic Compounds

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

	Well	MW-159	MW-160	MW-161	MW-162	MW-163	MW-164	MW-165
	sample_name	MW-159-97 1-IS-4	MW-160-80 8-IS-4	MW-161-80 0-IS-4	MW-162-83 7-IS-4	MW-163-74 9-IS-4	MW-164-72 6-IS-4	MW-165-100-IS-4
	Lab ID	L08040409-21	L08040409-22	L08040409-47	L08040444-23	L08040444-24	L08040444-25	L08040409-49
	Date	4/11/2008	4/11/2008	4/11/2008	4/14/2008	4/14/2008	4/14/2008	4/11/2008
Analyte	units							
1 1,1,2-Tetrachloroethane	ug/L	<5	<2 5	<10	<25	<2 5	<0 5	<0 5
1,1,1-Trichloroethane	ug/L	<10	<5	<20	<50	<5	<1	<1
1 1 2,2-Tetrachloroethane	ug/L	290	3560	594	4160	488	13 4	1 8
1,1,2-Trichloroethane	ug/L	111	2 97 F	<20	<50	3 37 F	0 517 F	0 343 F
1,1-Dichloroethane	ug/L	<10	<5	<20	<50	<5	<1	<1
1,1-Dichloroethene	ug/L	<10	<5	<20	<50	<5	<1	<1
1,1-Dichloropropene	ug/L	<10	<5	<20	<50	<5	<1	<1
1,2,3-Trichlorobenzene	ug/L	<10	<5	<20	<50	<5	<1	<1
1,2,3-Trichloropropane	ug/L	<10	<5	<20	<50	<5	<1	<1
1,2,4-Trichlorobenzene	ug/L	<10	<5	<20	<50	<5	<1	<1
1,2,4-Trimethylbenzene	ug/L	<10	<5	<20	<50	<5	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<20	<10	<40	<100	<10	<2	<2
1 2-Dibromoethane	ug/L	<10	<5	<20	<50	<5	<1	<1
1,2-Dichlorobenzene	ug/L	<10	<5	<20	<50	<5	<1	<1
1,2-Dichloroethane	ug/L	<5	<2 5	<10	<25	<2 5	<0 5	<0 5
1,2-Dichloropropane	ug/L	<10	<5	<20	<50	<5	<1	<1
1,3,5-Trimethylbenzene	ug/L	<10	<5	<20	<50	<5	<1	<1
1,3-Dichlorobenzene	ug/L	<10	<5	<20	<50	<5	<1	<1
1,3-Dichloropropane	ug/L	<4	<2	<8	<20	<2	<0 4	<0 4
1,4-Dichlorobenzene	ug/L	<5	<2 5	<10	<25	<2 5	<0 5	<0 5
1-Chlorohexane	ug/L	<10	<5	<20	<50	<5	<1	<1
2,2-Dichloropropane	ug/L	<10	<5	<20	<50	<5	<1	<1
2-Chlorotoluene	ug/L	<10	<5	<20	<50	<5	<1	<1
2-Hexanone	ug/L	<100	<50	<200	<500	<50	<10	<10
4-Chlorotoluene	ug/L	<10	<5	<20	<50	<5	<1	<1
Acetone	ug/L	<100	<50	<200	<500	15 6 F	4 1 F	3 53 F
Benzene	ug/L	<4	<2	<8	<20	<2	<0 4	<0 4
Bromobenzene	ug/L	<10	<5	<20	<50	<5	<1	<1
Bromochloromethane	ug/L	<10	<5	<20	<50	<5	<1	<1
Bromodichloromethane	ug/L	<5	<2 5	<10	<25	<2 5	<0 5	<0 5
Bromoform	ug/L	<10	<5	<20	<50	<5	<1	<1
Bromomethane	ug/L	<10	<5	<20	<50	<5	0 547 F	<1
Carbon disulfide	ug/L	<10	<5	<20	<50	<5	<1	<1
Carbon tetrachloride	ug/L	<10	<5	<20	<50	<5	3 42 M	0 769 F
Chlorobenzene	ug/L	<5	0 926 F	<10	<25	<2 5	<0 5	<0 5
Chloroethane	ug/L	<10	<5	<20	<50	<5	<1	<1
Chloroform	ug/L	<3	2 14	3 65 F	<15	11 9	37 1 M	4 85
Chloromethane	ug/L	<10	<5	<20	<50	<5	<1	<1
cis-1,2-Dichloroethene	ug/L	1180	49 8	15 7 F	23 9 F	9 07	2 71	9 59
cis-1,3-Dichloropropene	ug/L	<5	<2 5	<10	<25	<2 5	<0 5	<0 5
Dibromochloromethane	ug/L	<5	<2 5	<10	<25	<2 5	<0 5	<0 5
Dibromomethane	ug/L	<10	<5	<20	<50	<5	<1	<1
Dichlorodifluoromethane	ug/L	<10	<5	<20	<50	<5	<1	<1
Ethylbenzene	ug/L	<10	<5	<20	<50	<5	<1	<1
Hexachlorobutadiene	ug/L	<6	<3	<12	<30	<3	<0 6	<0 6
Isopropylbenzene	ug/L	<10	<5	<20	<50	<5	<1	<1
m-,p-Xylene	ug/L	<20	<10	<40	<100	<10	<2	<2
MEK (2-Butanone)	ug/L	<100	<50	<200	<500	<50	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<50	<25	<100	<250	<25	<5	<5
Methylene chloride	ug/L	<10	1 59 F	9 78 F	14 8 F	1 56 F	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<100	<50	<200	<500	<50	<10	<10
Naphthalene	ug/L	<10	<5	<20	<50	<5	<1	<1
n-Butylbenzene	ug/L	<10	<5	<20	<50	<5	<1	<1
n-Propylbenzene	ug/L	<10	<5	<20	<50	<5	<1	<1
o-Xylene	ug/L	<10	<5	<20	<50	<5	<1	0 659 F
p-Isopropyltoluene	ug/L	<10	<5	<20	<50	<5	<1	<1
sec-Butylbenzene	ug/L	<10	<5	<20	<50	<5	<1	<1
Styrene	ug/L	<10	<5	<20	<50	<5	<1	<1
tert-Butylbenzene	ug/L	<10	<5	<20	<50	<5	<1	<1
Tetrachloroethene	ug/L	6 28 F	10 6	<20	<50	<5	0 894 Q	1 25
Toluene	ug/L	<10	<5	<20	<50	<5	<1	<1
trans-1,2-Dichloroethene	ug/L	26 6	9 32	5 59 F	<50	1 84 F	0 57 F	1 99
trans-1,3-Dichloropropene	ug/L	<10	<5	<20	<50	<5	<1	<1
Trichloroethene	ug/L	1410	1130	342	792	80 3	24 9 M	128
Trichlorofluoromethane	ug/L	<10	<5	<20	<50	<5	<1	<1
Vinyl acetate	ug/L	<50	<25	<100	<250	<25	<5	<5
Vinyl chloride	ug/L	7 11 F	<5	<20	<50	<5	<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 required
J The analyte was positively identified but the quantitation
M Concentration estimated due to matrix effect

Method.
SW8260B - Volatile Organic Compounds

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

Analyte	Well	MW-165	MW-165A	MW-165A DUP	MW-165A	MW-166	MW-166	MW-166A
	sample_name	MW-165-89.9-IS-4	MW-165A-73.9-IS-4	MW-165A-73.9 DUP	MW-165A-84.5-IS-4	MW-166-87.3-IS-4	MW-166-97.8-IS-4	MW-166A-75.3-IS-4
	Lab ID	L08040409-48	L08040409-50	L08040409-37	L08040409-56	L08040409-23	L08040409-24	L08040409-25
	Date	4/11/2008	4/11/2008	4/11/2008	4/11/2008	4/11/2008	4/11/2008	4/11/2008
	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	3.04	<0.5	<0.5	2.77	8.3	8.39	3.76
1,1,2-Trichloroethane	ug/L	0.299 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	<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	3.17 F	2.53 F	<10	3.53 F	3.3 F	4.31 F	6.84 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	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	9.32	1.14	1.25	11.3	6.43	8.3	4.44
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	61.4	3.88	3.97	49.8	39.1	52.2	34.4
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	5.97	1.2	1.06	7.3	2.49	2.4	2.57
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	0.614 F	<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	1.64	0.392 F	0.267 F	2.44	1.14	1.65	1.24
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	1.6	0.322 F	<1	1.4	0.955 F	0.753 F	1.16
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	87.1	32.6	31.1	103	24.8	25.7	69.9
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 required
J The analyte was positively identified, but the quantitation
M Concentration estimated due to matrix effect

Method:
SW8260B - Volatile Organic Compounds

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

Analyte	Well	MW-167	MW-167 DUP	MW-168	MW-168A	MW-168A	MW-169	MW-170
	sample_name	MW-167-76.5-IS-4	MW-167-76.5 DUP	MW-168-113.9-IS-4	MW-168A-76.4-IS-4	MW-168A-86.9-IS-4	MW-169-81.8-IS-4	MW-170-61.7-IS-4
	Lab ID	L08040409-57	L08040409-34	L08040409-26	L08040409-27	L08040409-28	L08040409-58	L08040409-59
	Date	4/11/2008	4/11/2008	4/11/2008	4/11/2008	4/11/2008	4/11/2008	4/11/2008
	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	6.83	2.05	<1	0.27 Q
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	0.425 F	<1	<1	0.913 F
1,1-Dichloroethene	ug/L	<1	<1	0.818 F	13.6	6.01	<1	1.43
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	0.156 F	<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	5.76 F	5.24 F	<10	<10	<10	8.69 F	8.91 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	<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	0.859	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<0.3	<0.3	<0.3	0.537	0.188 F	<0.3	<0.3
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	<1	<1	0.949 F	0.815 F	<1	<1
Toluene	ug/L	<1	<1	0.317 F	<1	0.312 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	0.34 F	<1	1.22	1.15	1.09	<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 required
J The analyte was positively identified, but the quantitation
M Concentration estimated due to matrix effect

Method:
SW8260B - Volatile Organic Compounds

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

Analyte	Well	MW-170	MW-170 DUP	MW-171	MW-172	MW-174	MW-175	MW-178
	sample_name	MW-170-77.7-IS-4	MW-170-77.7 DUP	MW-171-62.4-IS-4	MW-172-IS-4	MW-174-IS-4	MW-175-IS-4	MW-178-IS-4
	Lab ID	L08040409-60	L08040409-38	L08040409-61	L08040444-09	L08040486-11	L08040444-10	L08040486-10
	Date	4/11/2008	4/11/2008	4/11/2008	4/14/2008	4/15/2008	4/14/2008	4/15/2008
	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	0.7	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	0.15 F	<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	0.359 F	<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	0.275 F	<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	0.144 F	<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	0.364 F	<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	0.196 F
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	8.76 F	8.21 F	9.14 F	<10	<10	<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	1.35	<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	0.383 F	<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	0.143 F	0.666	0.489	<0.3
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	0.587 F	<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	0.78 F	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	0.235 F	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	0.611 F	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	0.48 F	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	<1	0.686 F	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	<1	<1	<1	0.297 F	0.317 F	0.726 F
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	<1	<1	<1	<1	0.874 F	<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 required
J The analyte was positively identified, but the quantitation
M Concentration estimated due to matrix effect

Method:
SW8260B - Volatile Organic Compounds

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

	Well	MW-179	MW-180	MW-187	MW-220	MW-221	MW-222	MW-223
	sample_name	MW-179-IS-4	MW-180-IS-4	MW-187-IS-4	MW-220-IS-4	MW-221-IS-4	MW-222-IS-4	MW-223-IS-4
	Lab ID	L08040486-04	L08040517-25	L08040517-19	L08040486-12	L08040517-03	L08040486-13	L08040486-14
	Date	4/15/2008	4/16/2008	4/16/2008	4/15/2008	4/16/2008	4/15/2008	4/15/2008
Analyte	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	0 763	<0 5	<0 5	<0 5	12 7	0 323 F
1 1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1	7 57	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	0 187 F	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	4 54	<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	0 341 F	<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	0 163 F	<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	<10	<10	<10	<10	<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	<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 3	<0 3	0 167 F	0 156 F	0 439
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1	10 4	<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 77	<1	<1	8 14	0 893 F	0 312 F	0 343 F
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1
trans-1 2-Dichloroethene	ug/L	<1	<1	<1	<1	<1	0 301 F	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	0 264 F	<1	<1	4 61	<1	5 34	4 55
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 required
J The analyte was positively identified, but the quantitation
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Method.
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DUNN FIELD GROUNDWATER IRA - YEAR TEN
Defense Depot Memphis, Tennessee

Analyte	Well	MW-224	MW-225	MW-226	MW-227	MW-228	MW-230	MW-231
	sample_name	MW-224-IS-4	MW-225-IS-4	MW-226-IS-4	MW-227-IS-4	MW-228-IS-4	MW-230-IS-4	MW-231-IS-4
	Lab ID	L08040517-04	L08040517-05	L08040486-15	L08040517-20	L08040517-21	L08040486-05	L08040444-33
	Date	4/16/2008	4/16/2008	4/15/2008	4/16/2008	4/16/2008	4/15/2008	4/14/2008
	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 33	<1
1,1,2,2-Tetrachloroethane	ug/L	<0 5	21 3	<0 5	28 1	0 509	<0 5	<0 5
1,1,2-Trichloroethane	ug/L	<1	0 544 F	<1	1 02	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1	1 43	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1	18 2	<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	2 71	<0 5	0 455 F	<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	<10	<10	<10	<10	<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	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	4 02	<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	0 275 F	0 155 F	110	0 387	0 192 F	<0 3
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	1 71	<1	6 33	<1	0 834 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 33	0 616 F	<1	2 25	<1	76 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	<1	39 6	0 855 F	40 8	<1	74 6	<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 required
J The analyte was positively identified, but the quantitation
M Concentration estimated due to matrix effect

Method.
SW8260B - Volatile Organic Compounds

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

Analyte	Well	MW-232B	MW-232	MW-234	MW-235	MW-236	MW-236 DUP	MW-237
	sample_name	MW-232B-IS-4	MW-232-IS-4	MW-234-IS-4	MW-235-IS-4	MW-236-IS-4	MW-236 DUP	MW-237-IS-4
	Lab ID	L08040408-01	L08040409-55	L08040444-28	L08040486-01	L08040444-29	L08040444-30	L08040409-51
	Date	4/11/2008	4/11/2008	4/14/2008	4/15/2008	4/14/2008	4/14/2008	4/11/2008
	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	0.469 F	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	0.736 F	0.763 F	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	0.187 F	0.176 F	<1	<1	<1	<1	0.266 F
1,1-Dichloroethene	ug/L	0.704 F	1.27	<1	<1	<1	<1	2.2
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	0.223 F	0.289 F	<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	7.41 F	8.31 F	<10	<10	<10	<10	<10
Benzene	ug/L	<0.4	0.13 F	<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	0.724 F	<1	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	2.99	<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	<0.3	<0.3	<0.3	<0.3	0.181 F
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	19	22.4	<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	0.137 F	<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	0.256 F
Toluene	ug/L	0.592 F	0.597 F	0.37 F	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	0.311 F	0.426 F	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	0.384 F	0.39 F	<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	0.611 F	0.593 F	<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 required
J The analyte was positively identified, but the quantitation
M Concentration estimated due to matrix effect

Method:
SW8260B - Volatile Organic Compounds

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

	Well	MW-238	MW-239	MW-240
	sample_name	MW-238-IS-4	MW-239-IS-4	MW-240-IS-4
	Lab ID	L08040486-02	L08040409-52	L08040409-53
	Date	4/15/2008	4/11/2008	4/11/2008
Analyte	units			
1 1,1,2-Tetrachloroethane	ug/L	<0 5	<0 5	<0 5
1 1 1-Trichloroethane	ug/L	<1	<1	<1
1 1,2,2-Tetrachloroethane	ug/L	<0 5	<0 5	<0 5
1,1,2-Trichloroethane	ug/L	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	0 76 F	<1
1,1-Dichloropropene	ug/L	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1
1,2-Dichloroethane	ug/L	<0 5	<0 5	<0 5
1,2-Dichloropropane	ug/L	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1
1 3-Dichloropropane	ug/L	<0 4	<0 4	<0 4
1,4-Dichlorobenzene	ug/L	0 145 F	<0 5	<0 5
1-Chlorohexane	ug/L	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1
Acetone	ug/L	<10	10 1	<10
Benzene	ug/L	<0 4	0 156 F	<0 4
Bromobenzene	ug/L	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1
Bromodichloromethane	ug/L	<0 5	<0 5	<0 5
Bromoform	ug/L	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1
Carbon disulfide	ug/L	<1	17 5	<1
Carbon tetrachlonde	ug/L	<1	<1	<1
Chlorobenzene	ug/L	<0 5	<0 5	<0 5
Chloroethane	ug/L	<1	<1	<1
Chloroform	ug/L	0 211 F	<0 3	<0 3
Chloromethane	ug/L	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	<1	1 43
cis-1,3-Dichloropropene	ug/L	<0 5	<0 5	<0 5
Dibromochloromethane	ug/L	<0 5	<0 5	<0 5
Dibromomethane	ug/L	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0 6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1
Styrene	ug/L	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1
Tetrachloroethene	ug/L	<1	<1	<1
Toluene	ug/L	<1	17 6	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1
trans-1 3-Dichloropropene	ug/L	<1	<1	<1
Trichloroethene	ug/L	<1	<1	2 13
Trichlorofluoromethane	ug/L	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5
Vinyl chloride	ug/L	<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 required
J The analyte was positively identified, but the quantitation
M Concentration estimated due to matnx effect

Method.
SW8260B - Volatile Organic Compounds

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

	Well	RW-1A	RW-1B	RW-1	RW-2	RW-3	RW-4	RW-5
	Lab ID	L08040517-07	L08040517-08	L08040517-06	L08040517-09	L08040517-10	L08040517-11	L08040517-01
Analyte	Date / units	4/16/2008 RW-1A-IS-4	4/16/2008 RW-1B-IS-4	4/16/2008 RW-1-IS-4	4/16/2008 RW-2-IS-4	4/16/2008 RW-3-IS-4	4/16/2008 RW-4-IS-4	4/16/2008 RW-5-IS-4
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	43 7	1 09	0 518	40 5	20 9	19 4	14 4
1,1,2-Trichloroethane	ug/L	0 5 F	<1	<1	1 39	0 717 F	0 287 F	<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	0 274 F
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	0 652	<0 5	<0 5	0 273 F	<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	<10	<10	<10	<10	<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	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	1 05	2 75	17 9	5 56	0 961 F	0 799 F	<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	27 8	78 3	81 9	107	1 82	0 796	0 133 F
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	1 01	0 783 F	2 02	18	5 49	1 13	<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	3 32 F	<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	0 235 F
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	0 561 F	0 982 F	4 07	1 9	0 429 F	0 809 F	2 36
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	1 05	0 976 F	0 298 F	0 299 F	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	10 6	18 1	53 9	43 5	10 7	55 4	5 75
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

Method:
SW8260B - Volatile Organic Compounds

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

	Well	RW-6	RW-7	RW-8	RW-9
	Lab ID	L08040517-12	L08040517-02	L08040517-13	L08040517-14
	Date	4/16/2008	4/16/2008	4/16/2008	4/16/2008
Analyte	units	RW-6-IS-4	RW-7-IS-4	RW-8-IS-4	RW-9-IS-4
1,1,1,2-Tetrachloroethane	ug/L	<0 5	<0 5	<0 5	<0 5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	0 803 F
1,1,2,2-Tetrachloroethane	ug/L	<0 5	1 29	0 551	3 55
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	0 581 F
1,1-Dichloroethene	ug/L	<1	<1	1 27	17 4
1,1-Dichloropropene	ug/L	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0 5	<0 5	<0 5	<0 5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0 4	<0 4	<0 4	<0 4
1,4-Dichlorobenzene	ug/L	<0 5	<0 5	<0 5	<0 5
1-Chlorohexane	ug/L	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10
Benzene	ug/L	<0 4	<0 4	<0 4	<0 4
Bromobenzene	ug/L	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0 5	<0 5	<0 5	<0 5
Bromoform	ug/L	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1
Chlorobenzene	ug/L	<0 5	<0 5	<0 5	<0 5
Chloroethane	ug/L	<1	<1	<1	<1
Chloroform	ug/L	0 239 F	0 143 F	<0 3	0 184 F
Chloromethane	ug/L	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	<0 5	<0 5	<0 5	<0 5
Dibromochloromethane	ug/L	<0 5	<0 5	<0 5	<0 5
Dibromomethane	ug/L	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0 6	<0 6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2
MEK (2-Butanone	ug/L	<10	<10	<10	<10
Methyl t-butyl ether (MTBE	ug/L	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1
MIBK (methyl isobutyl ketone	ug/L	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1
Tetrachloroethene	ug/L	4 4	1 33	1	19 1
Toluene	ug/L	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1
Trichloroethene	ug/L	1 24	1 55	0 919 F	14
Trichlorofluoromethane	ug/L	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1

Notes.
µg/L micrograms per liter
< Analyte not detected above RL
F Concentration below RL but above MDL
Method:
SW8260B - Volatile Organic Compounds

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

Sample ID	EFFLUENT	EFFLUENT-DUP	EFFLUENT	EFFLUENT-DUP
Date	1/9/2008	1/9/2008	4/16/2008	4/16/2008
pH - E150.1				
pH	NC		**6.11**	
Total Metals - SW6010B µg/L				
Aluminum, Total	NC	NC	<100	<100
Arsenic, Total	NC	NC	<10	<10
Barium, Total	NC	NC	98.7	98.6
Beryllium, Total	NC	NC	<10	<10
Cadmium, Total	NC	NC	<10	<10
Calcium, Total	NC	NC	19600	19700
Chromium, Total	NC	NC	<20	<20
Cobalt, Total	NC	NC	<20	<20
Copper, Total	NC	NC	<20	<20
Iron, Total	NC	NC	<100	<100
Lead, Total	NC	NC	<5	<5
Magnesium, Total	NC	NC	10900	10800
Manganese, Total	NC	NC	16.1	16.2
Nickel, Total	NC	NC	<40	<40
Potassium, Total	NC	NC	773 F	775 F
Silver, Total	NC	NC	<10	<10
Sodium, Total	NC	NC	20500	20500
Vanadium, Total	NC	NC	<10	<10
Zinc, Total	NC	NC	33	33.1
Antimony, Total	NC	NC	<1	<1
Selenium, Total	NC	NC	1.51	1.51
Thallium, Total	NC	NC	<0.2	<0.2
Mercury	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
1,1,1-Trichloroethane	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	14.4	14	6.94	6 47
1,1,2-Trichloroethane	0 317 F	0.295 F	<1	<1
1,1-Dichloroethane	0.243 F	0.239 F	0.217 F	<1
1,1-Dichloroethene	7.58	8 24	6.94	6 88
1,1-Dichloropropene	<1	<1	<1	<1
1,2,3-Trichlorobenzene	<1	<1	<1	<1
1,2,3-Trichloropropane	<1	<1	<1	<1
1,2,4-Trichlorobenzene	<1	<1	<1	<1
1,2,4-Trimethylbenzene	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	<2	<2	<2	<2
1,2-Dibromoethane	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,2-Dichloroethane	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	<1	<1	<1	<1
1,3,5-Trimethylbenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichloropropane	<0 4	<0.4	<0 4	<0.4
1,4-Dichlorobenzene	<0.5	<0 5	<0.5	<0 5
1-Chlorohexane	<1	<1	<1	<1
2,2-Dichloropropane	<1	<1	<1	<1
2-Chlorotoluene	<1	<1	<1	<1
2-Hexanone	<10	<10	<10	<10
4-Chlorotoluene	<1	<1	<1	<1
Acetone	<10	<10	<10	<10
Benzene	<0.4	<0.4	<0 4	<0.4

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

Sample ID	EFFLUENT	EFFLUENT-DUP	EFFLUENT	EFFLUENT-DUP
Date	1/9/2008	1/9/2008	4/16/2008	4/16/2008
Bromobenzene	<1	<1	<1	<1
Bromochloromethane	<1	<1	<1	<1
Bromodichloromethane	<0.5	<0.5	<0.5	<0.5
Bromoform	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Carbon disulfide	<1	<1	<1	<1
Carbon tetrachloride	1.08	1 09	0.524 F	0 738 F
Chlorobenzene	<0.5	<0.5	<0 5	<0 5
Chloroethane	<1	<1	<1	<1
Chloroform	12 7	12 2	9 16	8.91
Chloromethane	<1	<1	<1	<1
cis-1,2-Dichloroethene	2 89	2 7	1.27	1.28
cis-1,3-Dichloropropene	<0 5	<0 5	<0.5	<0.5
Dibromochloromethane	<0 5	<0.5	<0.5	<0.5
Dibromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Hexachlorobutadiene	<0.6	<0.6	<0 6	<0 6
Isopropylbenzene	<1	<1	<1	<1
m-,p-Xylene	<2	<2	<2	<2
MEK (2-Butanone)	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	<5	<5	<5	<5
Methylene chloride	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	<10	<10	<10	<10
Naphthalene	<1	<1	<1	<1
n-Butylbenzene	<1	<1	<1	<1
n-Propylbenzene	<1	<1	<1	<1
o-Xylene	<1	<1	<1	<1
p-Isopropyltoluene	<1	<1	<1	<1
sec-Butylbenzene	<1	<1	<1	<1
Styrene	<1	<1	<1	<1
tert-Butylbenzene	<1	<1	<1	<1
Tetrachloroethene	9 09	9.29	7.83	7 54
Toluene	<1	<1	<1	<1
trans-1,2-Dichloroethene	0 301 F	0.294 F	<1	<1
trans-1,3-Dichloropropene	<1	<1	<1	<1
Trichloroethene	26 1	25.8	13 3	13.3
Trichlorofluoromethane	<1	<1	<1	<1
Vinyl acetate	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1
Semi-volatile Organic Compounds - SW8270B µg/L				
1,2,4-Trichlorobenzene	NC	NC	<11 1	<11.1
1,2-Dichlorobenzene	NC	NC	<11 1	<11.1
1,3-Dichlorobenzene	NC	NC	<11 1	<11.1
1,4-Dichlorobenzene	NC	NC	<11 1	<11.1
2,4,5-Trichlorophenol	NC	NC	<11.1	<11.1
2,4,6-Trichlorophenol	NC	NC	<11 1	<11.1
2,4-Dichlorophenol	NC	NC	<11.1	<11 1
2,4-Dimethylphenol	NC	NC	<11.1	<11.1
2,4-Dinitrophenol	NC	NC	<55.6	<55 6
2,4-Dinitrotoluene	NC	NC	<11.1	<11 1
2,6-Dinitrotoluene	NC	NC	<11.1	<11 1
2-Chloronaphthalene	NC	NC	<11 1	<11 1
2-Chlorophenol	NC	NC	<11 1	<11 1
2-Methylnaphthalene	NC	NC	<11 1	<11 1
2-Methylphenol	NC	NC	<11 1	<11 1
2-Nitroaniline	NC	NC	<55.6	<55.6

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

Sample ID	EFFLUENT	EFFLUENT-DUP	EFFLUENT	EFFLUENT-DUP
Date	1/9/2008	1/9/2008	4/16/2008	4/16/2008
2-Nitrophenol	NC	NC	<11 1	<11 1
3,3'-Dichlorobenzidine	NC	NC	<22 2	<22.2
3-,4-Methylphenol	NC	NC	<55.6	<55 6
3-Nitroaniline	NC	NC	<55.6	<55.6
4,6-Dinitro-2-methylphenol	NC	NC	<55.6	<55.6
4-Bromophenyl-phenylether	NC	NC	<11.1	<11 1
4-Chloro-3-methylphenol	NC	NC	<11.1	<11.1
4-Chloroaniline	NC	NC	<22 2	<22 2
4-Chlorophenyl-phenyl ether	NC	NC	<11.1	<11 1
4-Nitroaniline	NC	NC	<55 6	<55.6
4-Nitrophenol	NC	NC	<55 6	<55.6
Acenaphthene	NC	NC	<11.1	<11 1
Acenaphthylene	NC	NC	<11.1	<11 1
Anthracene	NC	NC	<11.1	<11.1
Benzo(a)anthracene	NC	NC	<11.1	<11.1
Benzo(a)pyrene	NC	NC	<11.1	<11 1
Benzo(b)fluoranthene	NC	NC	<11.1	<11 1
Benzo(g,h,i)Perylene	NC	NC	<11 1	<11 1
Benzo(k)fluoranthene	NC	NC	<11 1	<11.1
Benzoic acid	NC	NC	<55 6	<55.6
Benzyl alcohol	NC	NC	<11 1	<11.1
Bis(2-Chloroethoxy)Methane	NC	NC	<11.1	<11.1
Bis(2-Chloroethyl)ether	NC	NC	<11 1	<11.1
bis(2-Chloroisopropyl)ether	NC	NC	<11.1	<11 1
bis(2-Ethylhexyl)phthalate	NC	NC	<11.1	<11 1
Butylbenzylphthalate	NC	NC	<11 1	<11 1
Chrysene	NC	NC	<11 1	<11.1
Dibenzo(a,h)Anthracene	NC	NC	<11 1	<11.1
Dibenzofuran	NC	NC	<11 1	<11.1
Diethylphthalate	NC	NC	<11.1	<11.1
Dimethylphthalate	NC	NC	<11.1	<11 1
Di-N-Butylphthalate	NC	NC	<11.1	<11 1
Di-n-octylphthalate	NC	NC	<11.1	<11.1
Fluoranthene	NC	NC	<11.1	<11 1
Fluorene	NC	NC	<11.1	<11.1
Hexachlorobenzene	NC	NC	<11 1	<11 1
Hexachlorobutadiene	NC	NC	<11.1	<11 1
Hexachlorocyclopentadiene	NC	NC	<11.1	<11 1
Hexachloroethane	NC	NC	<11 1	<11 1
Indeno(1,2,3-cd)pyrene	NC	NC	<11 1	<11 1
Isophorone	NC	NC	<11 1	<11.1
Naphthalene	NC	NC	<11 1	<11 1
Nitrobenzene	NC	NC	<11.1	<11 1
N-Nitroso-di-n-propylamine	NC	NC	<11.1	<11 1
N-Nitrosodiphenylamine	NC	NC	<11.1	<11 1
Pentachlorophenol	NC	NC	<55.6	<55 6
Phenanthrene	NC	NC	<11.1	<11 1
Phenol	NC	NC	<11 1	<11 1
Pyrene	NC	NC	<11 1	<11 1

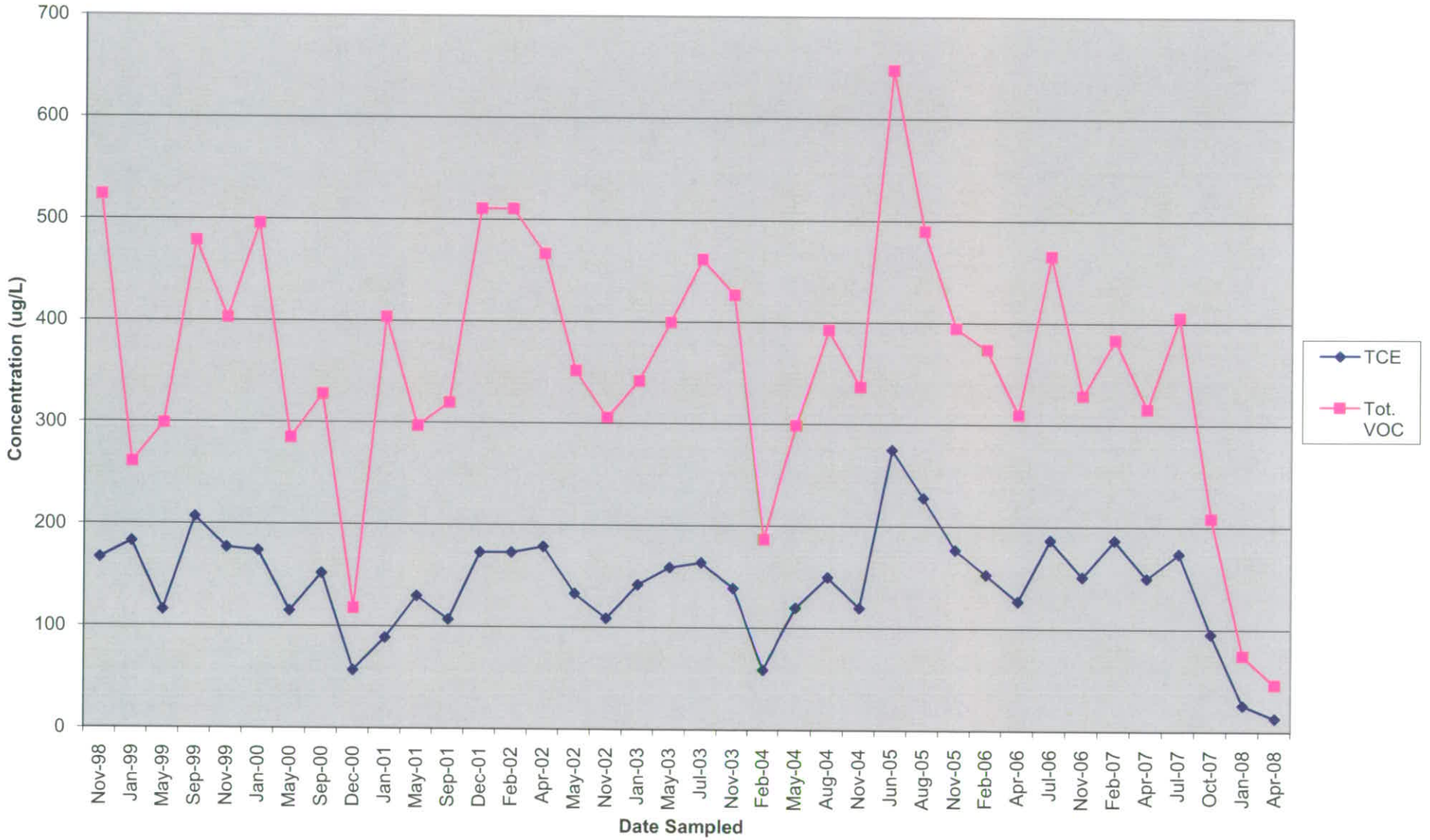
Notes.

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

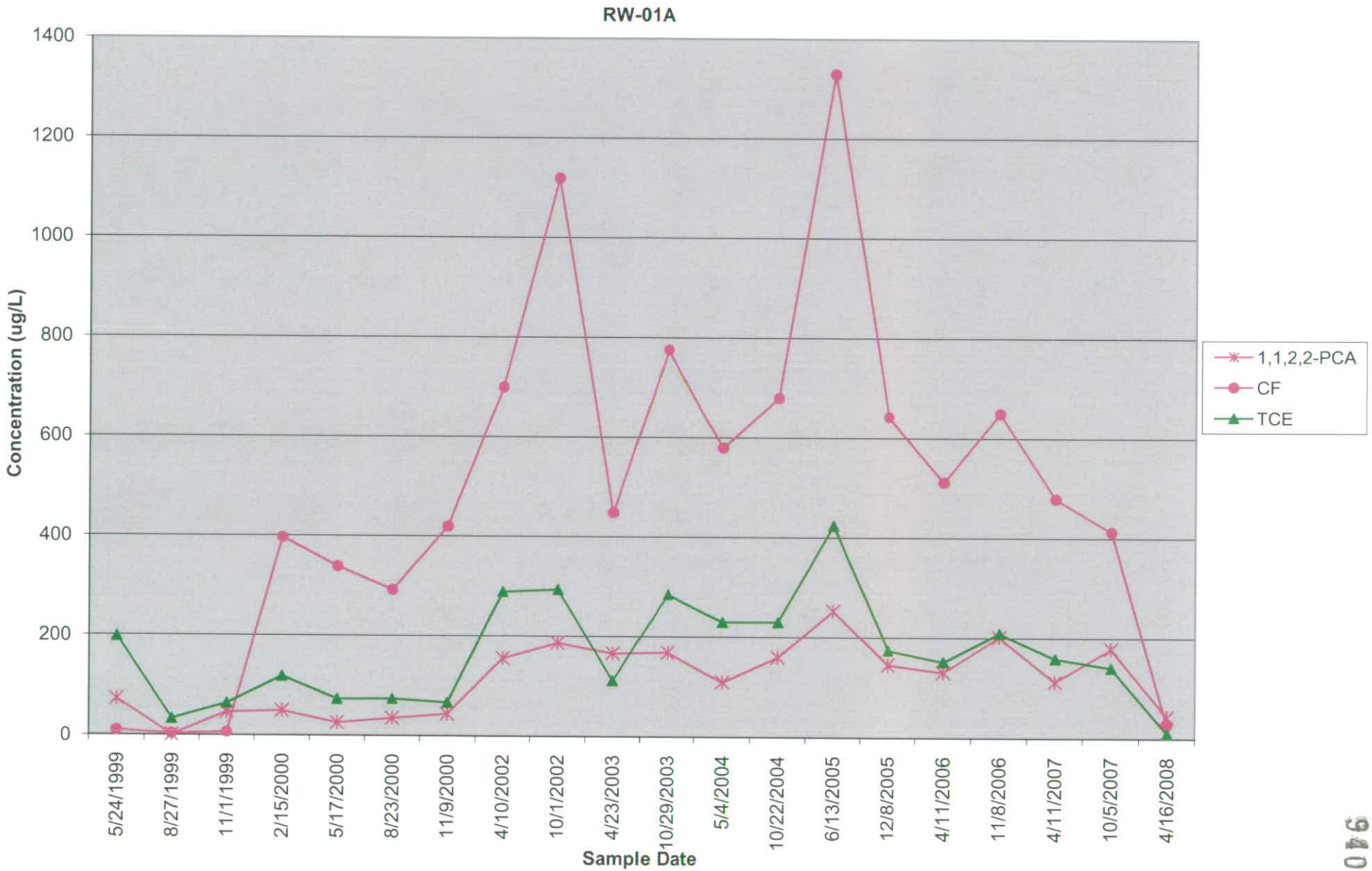
APPENDIX B

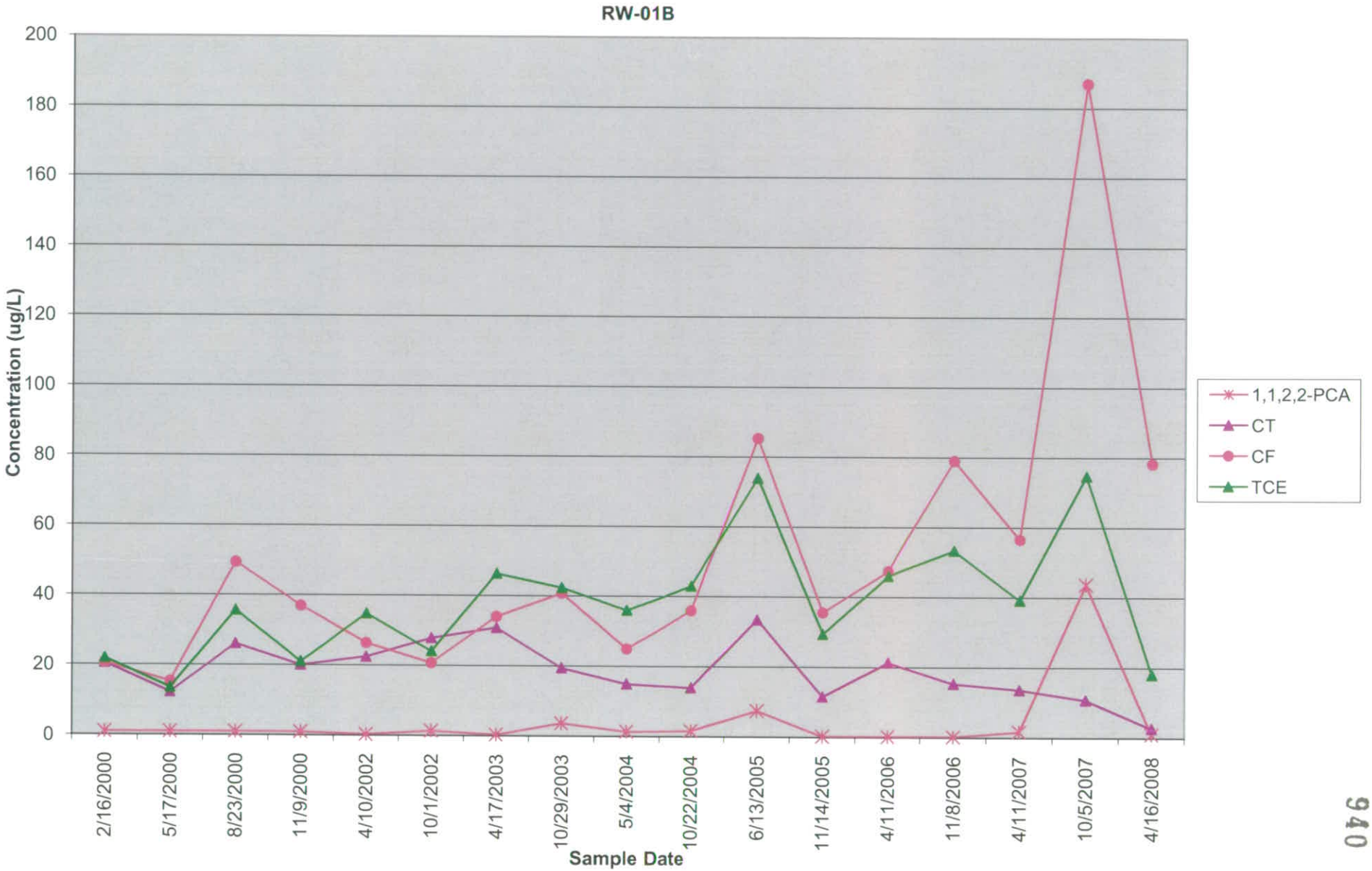
Time Trend Plots for IRA System Effluent and Recovery Wells

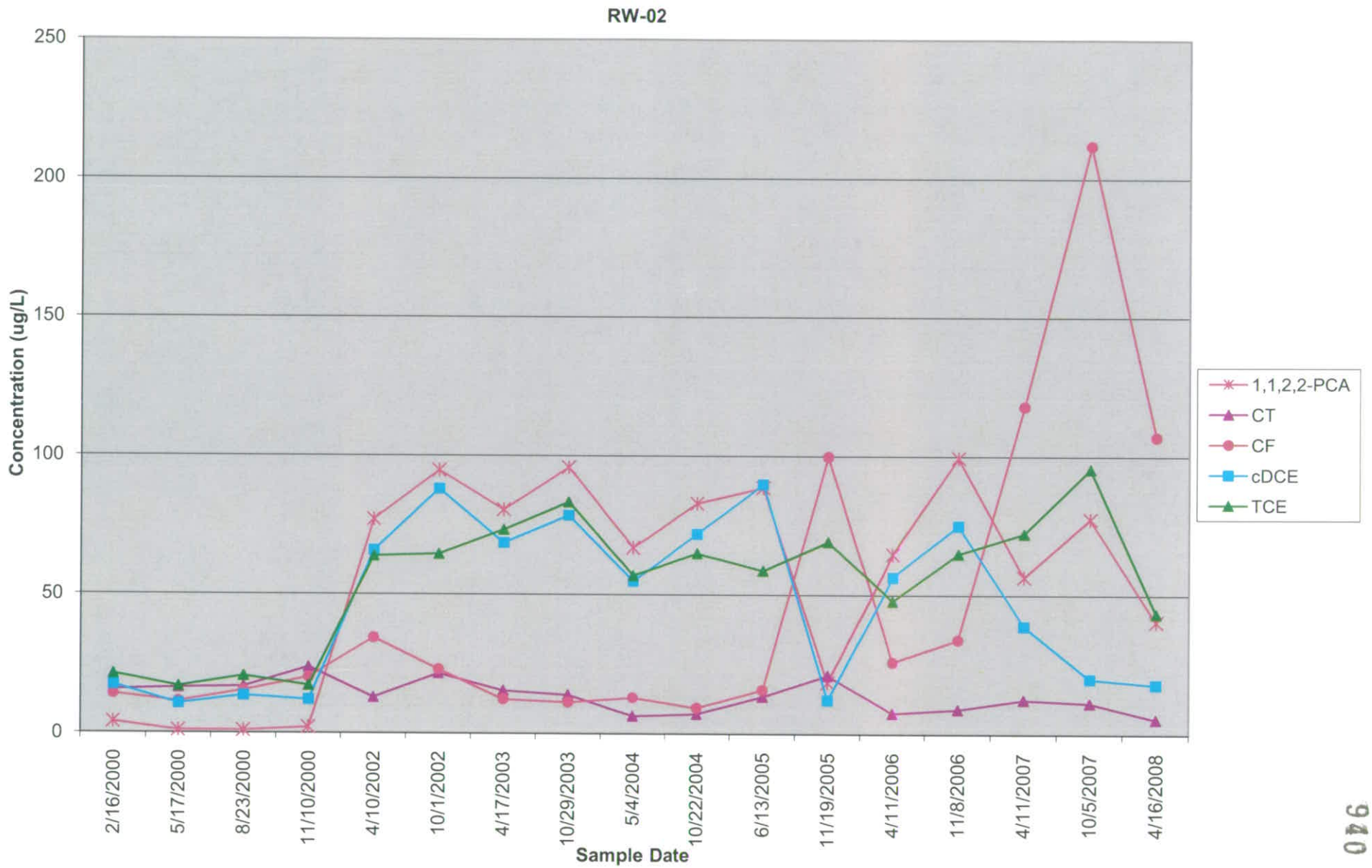
TCE AND TOTAL VOC CONCENTRATIONS IN EFFLUENT

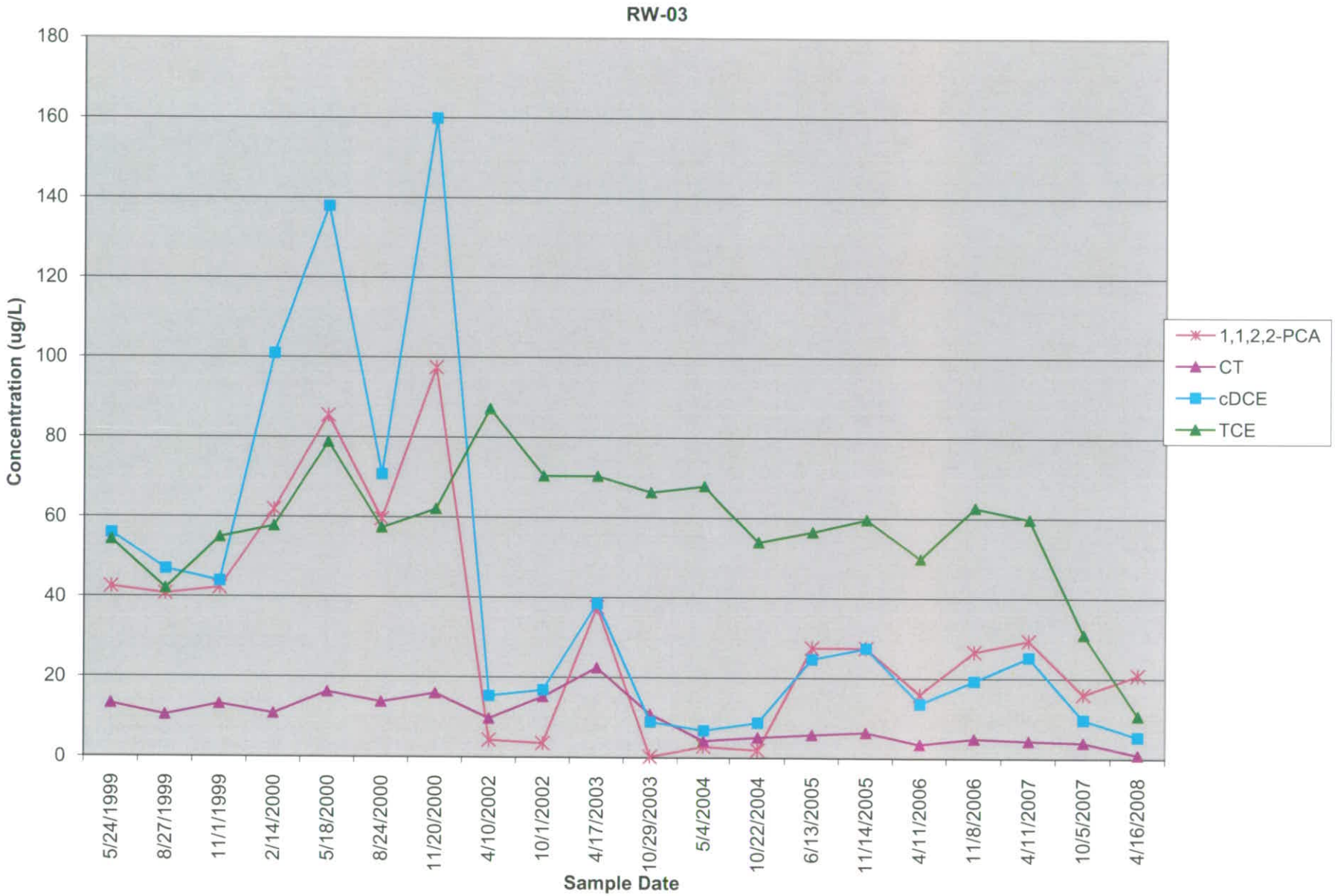


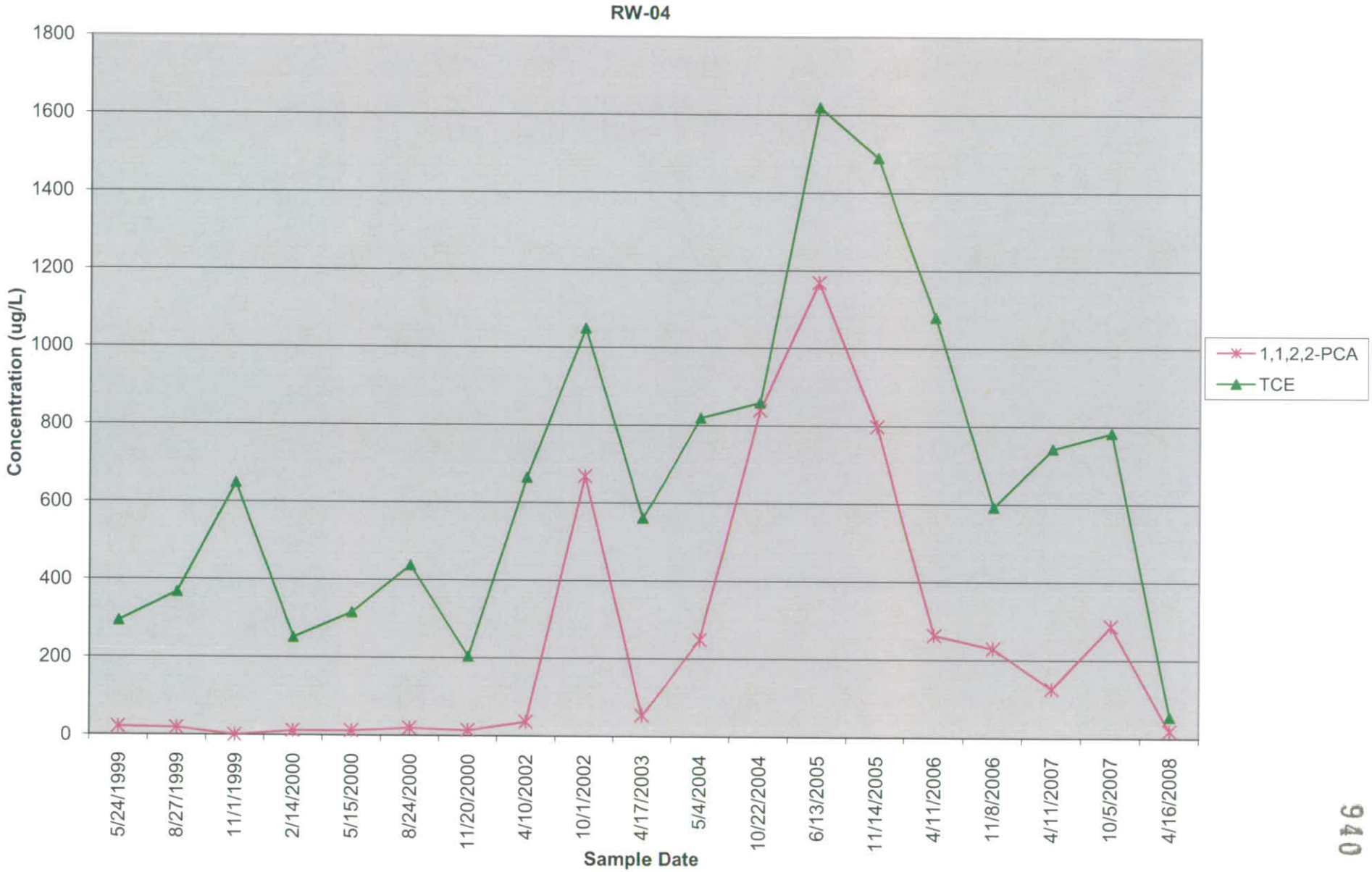

RW-01
Concentration (ug/L)
350
300
250
200
150
100
50
0
2/16/2000
5/17/2000
8/23/2000
11/9/2000
4/10/2002
10/29/2003
5/4/2004
10/22/2004
6/13/2005
11/14/2005
4/11/2006
11/8/2006
4/11/2007
10/5/2007
4/16/2008
Sample Date
1,1,2,2-PCA
CT
CF
PCE
TCE

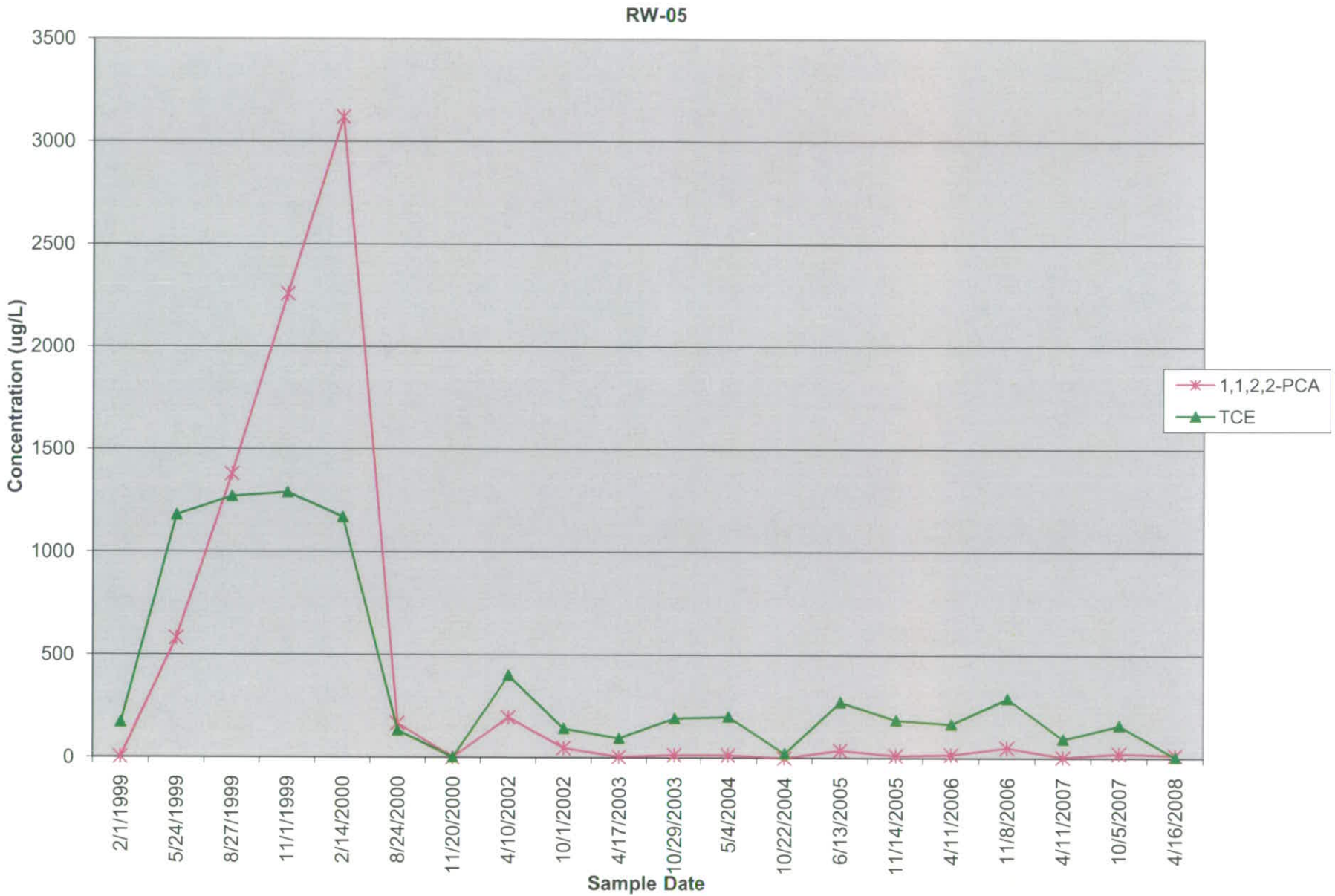

RW-01A
Concentration (ug/L)
1400
1200
1000
800
600
400
200
0
5/24/1999
8/27/1999
11/1/1999
2/15/2000
5/17/2000
8/23/2000
11/9/2000
4/10/2002
10/1/2002
4/23/2003
10/29/2003
5/4/2004
10/22/2004
6/13/2005
12/8/2005
4/11/2006
11/8/2006
4/11/2007
10/5/2007
4/16/2008
Sample Date
1,1,2,2-PCA
CF
TCE

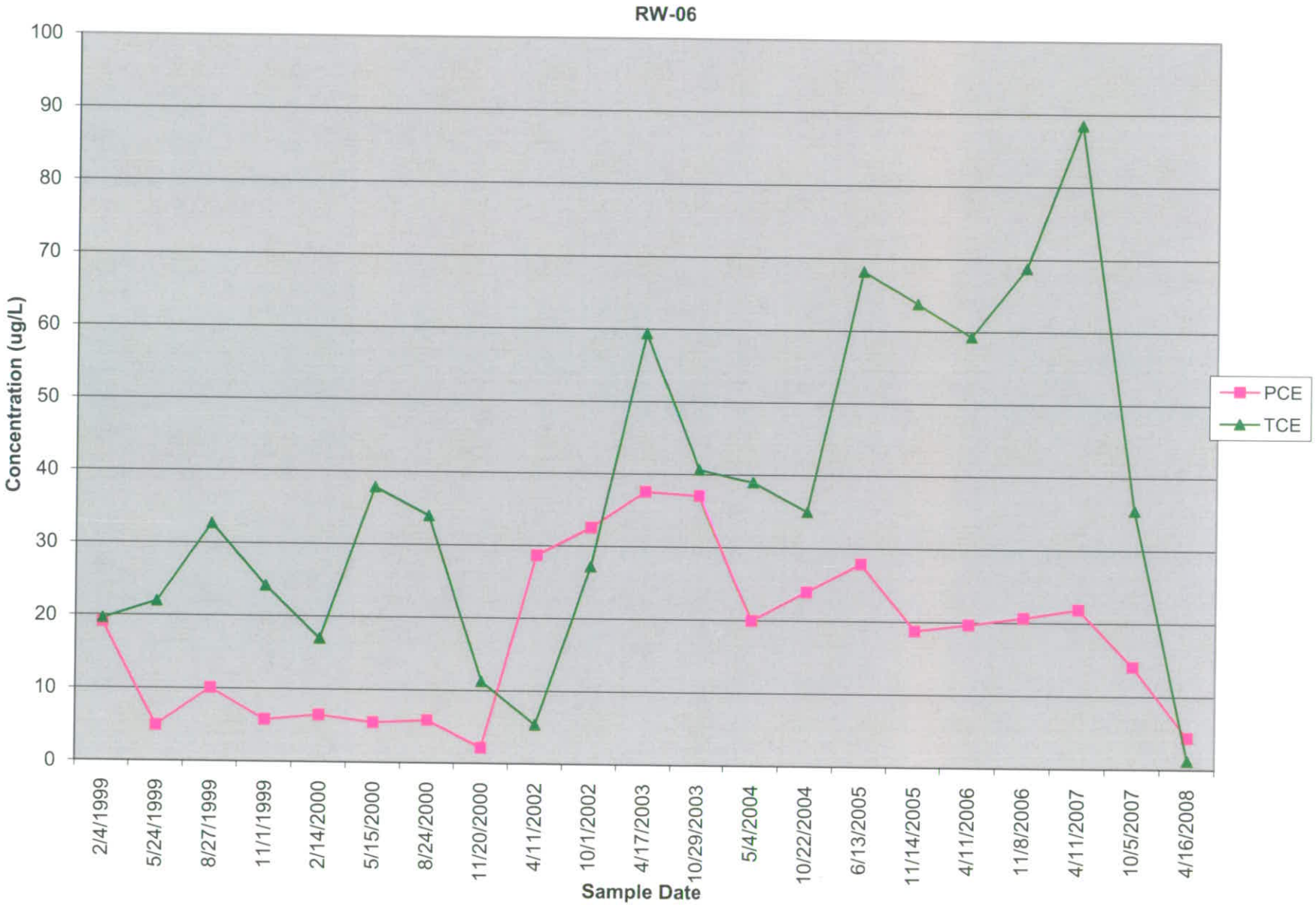

RW-01B
Concentration (ug/L)
200
180
160
140
120
100
80
60
40
20
0
2/16/2000
5/17/2000
8/23/2000
11/9/2000
4/10/2002
10/1/2002
4/17/2003
10/29/2003
5/4/2004
10/22/2004
6/13/2005
11/14/2005
4/11/2006
11/8/2006
4/11/2007
10/5/2007
4/16/2008
Sample Date
1,1,2,2-PCA
CT
CF
TCE

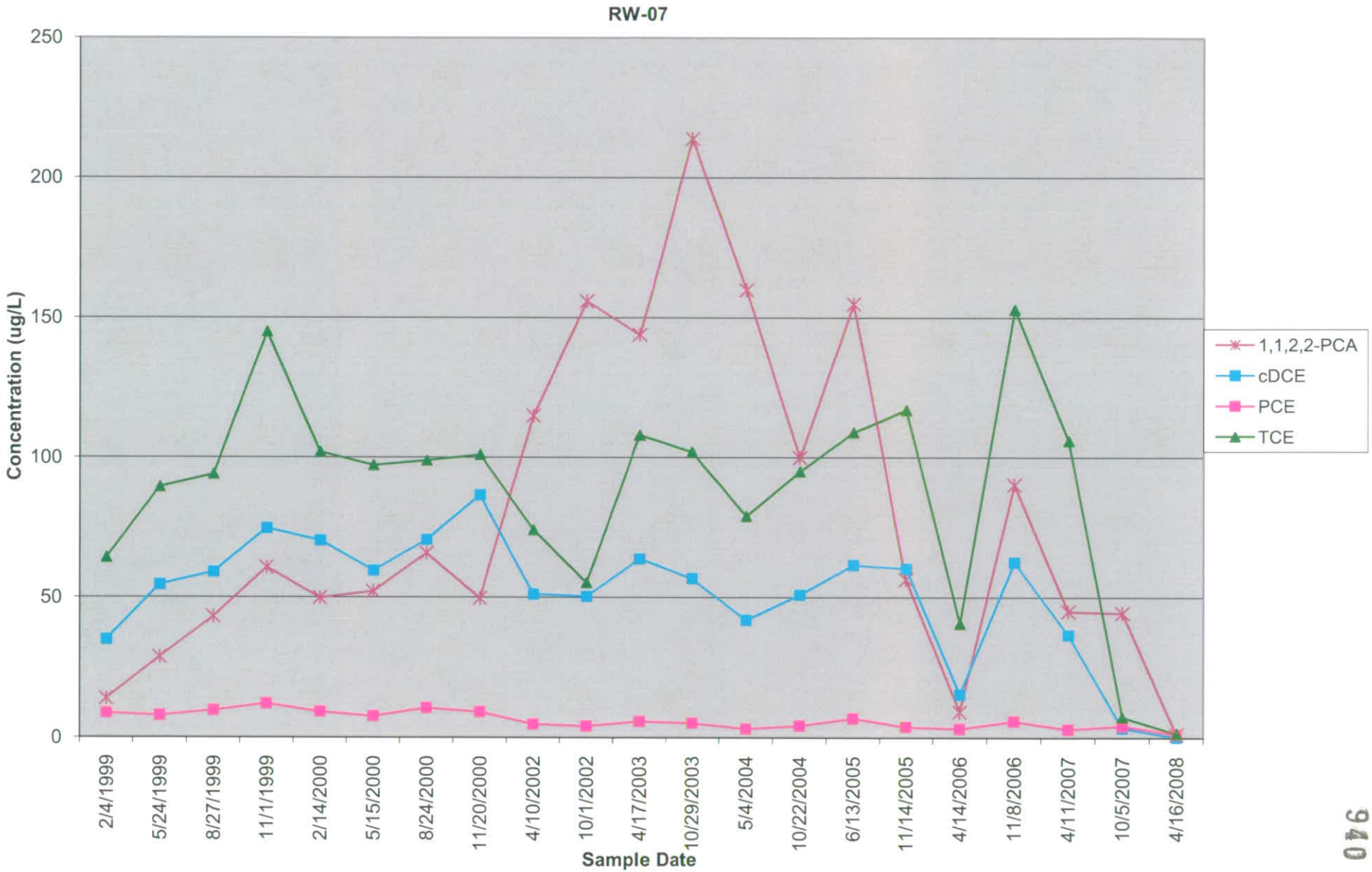

RW-02
250
200
150
100
50
0
Concentration (ug/L)
2/16/2000
5/17/2000
8/23/2000
11/10/2000
4/10/2002
10/1/2002
4/17/2003
10/29/2003
5/4/2004
10/22/2004
6/13/2005
11/19/2005
4/11/2006
11/8/2006
4/11/2007
10/5/2007
4/16/2008
Sample Date
1,1,2,2-PCA
CT
CF
cDCE
TCE

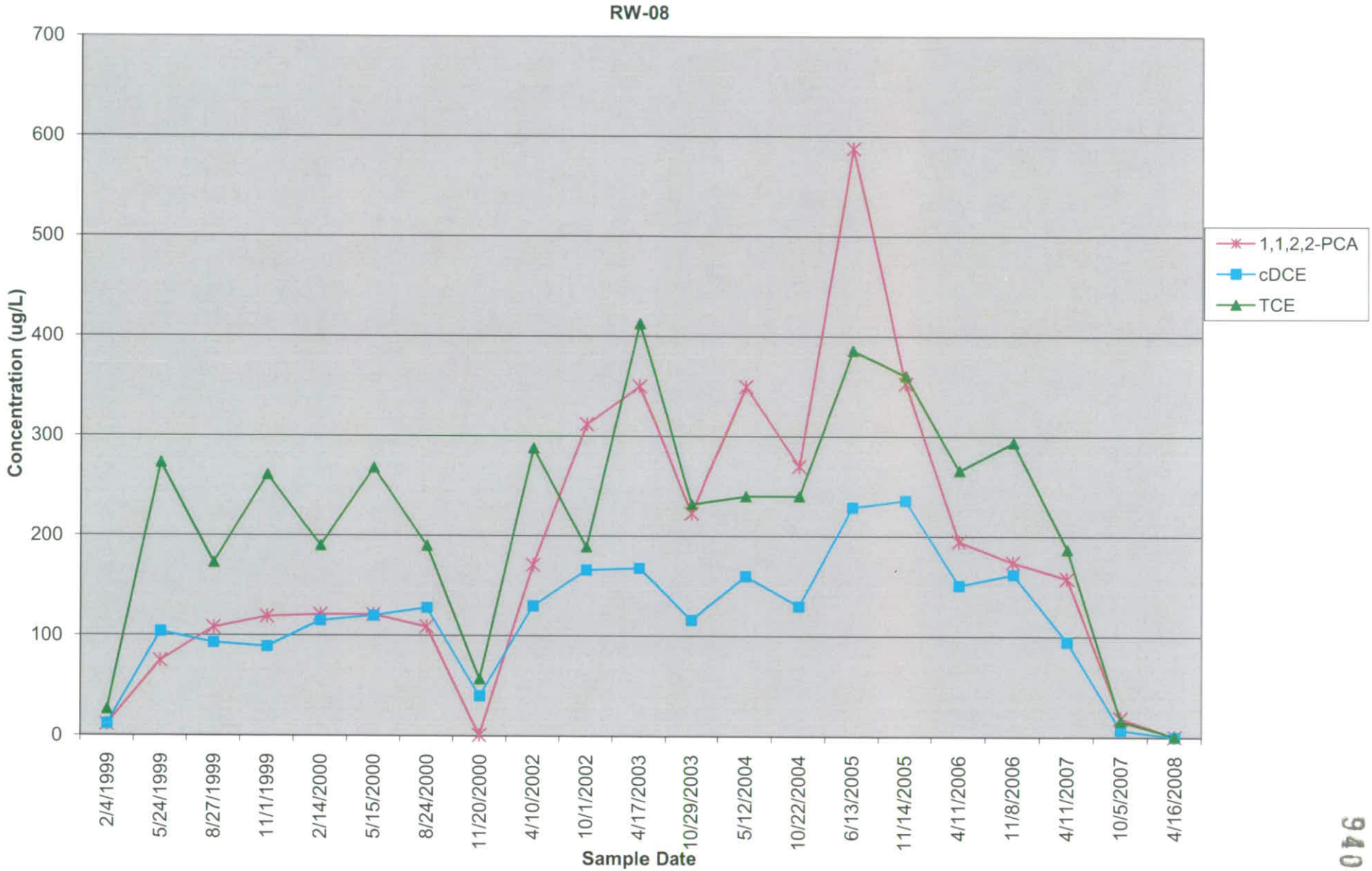

RW-03
Concentration (ug/L)
180
160
140
120
100
80
60
40
20
0
5/24/1999
8/27/1999
11/1/1999
2/14/2000
5/18/2000
8/24/2000
11/20/2000
4/10/2002
10/1/2002
4/17/2003
10/29/2003
5/4/2004
10/22/2004
6/13/2005
11/14/2005
4/11/2006
11/8/2006
4/11/2007
10/5/2007
4/16/2008
Sample Date
1,1,2,2-PCA
CT
cDCE
TCE


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
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
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
Sample Date
PCE
TCE

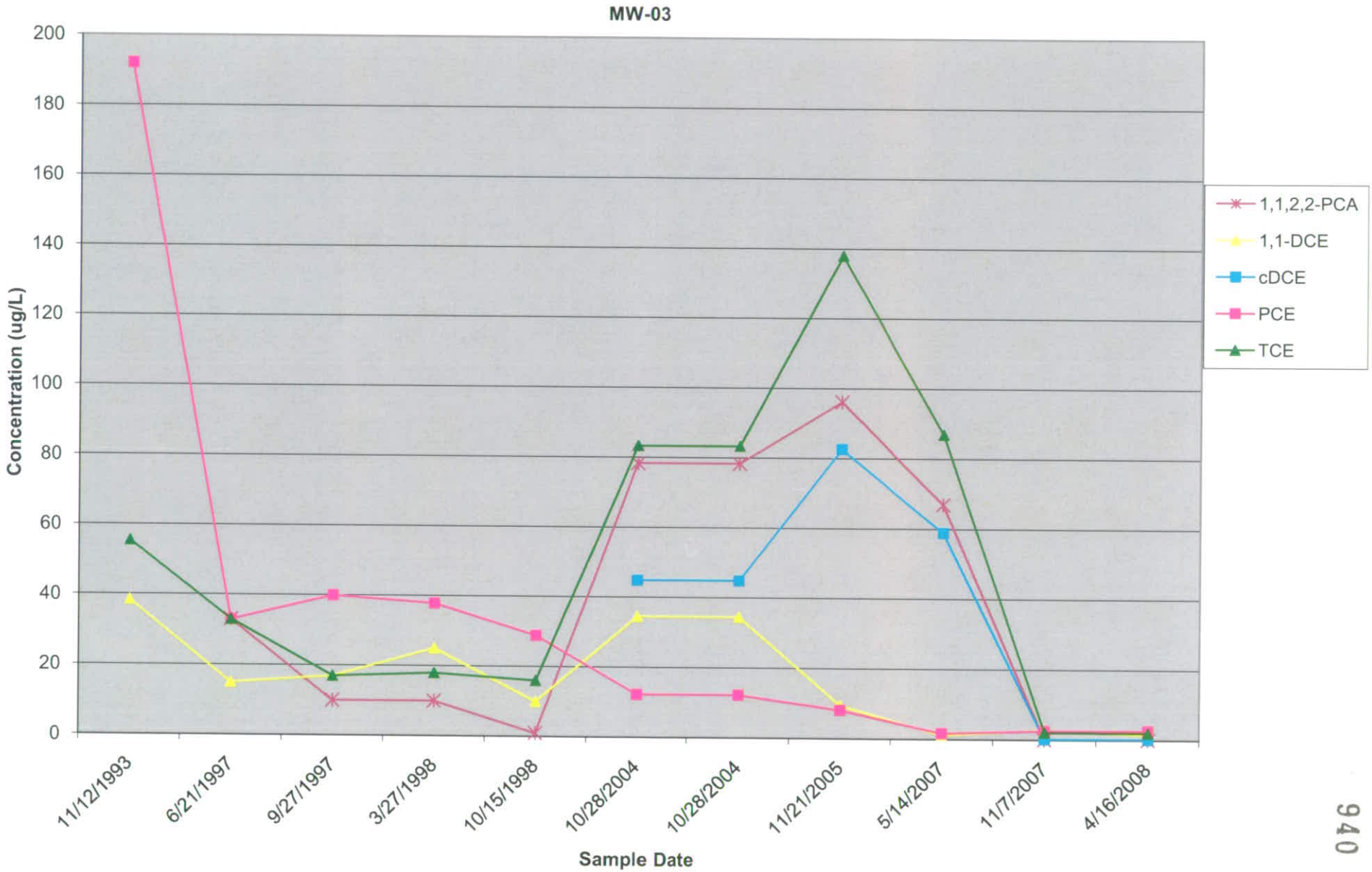

RW-07
250
200
150
100
50
0
Concentration (ug/L)
2/4/1999
5/24/1999
8/27/1999
11/1/1999
2/14/2000
5/15/2000
8/24/2000
11/20/2000
4/10/2002
10/1/2002
4/17/2003
10/29/2003
5/4/2004
10/22/2004
6/13/2005
11/14/2005
4/14/2006
11/8/2006
4/11/2007
10/5/2007
4/16/2008
Sample Date
1,1,2,2-PCA
cDCE
PCE
TCE

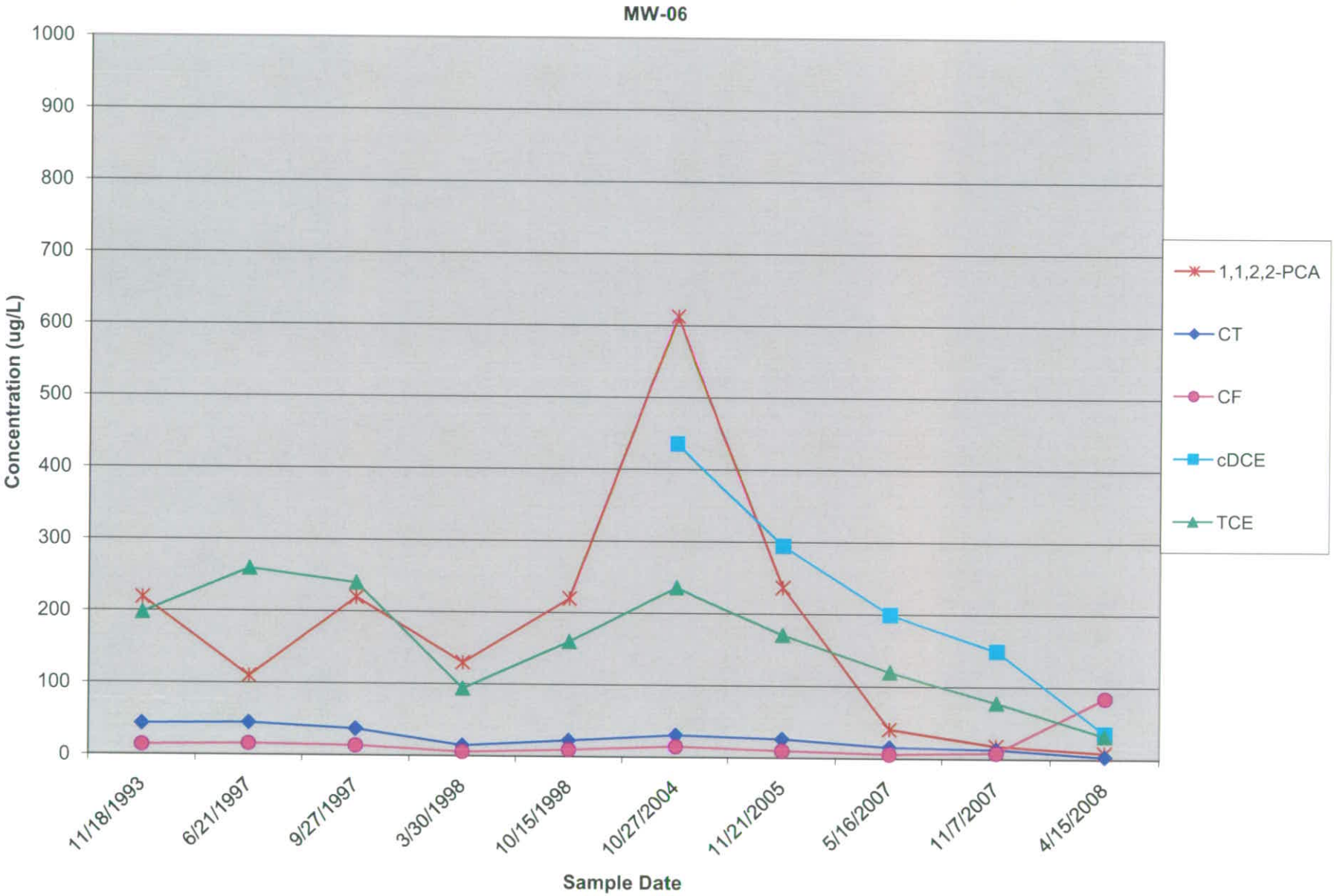

RW-08
700
600
500
400
300
200
100
0
Concentration (ug/L)
1,1,2,2-PCA
cDCE
TCE
2/4/1999
5/24/1999
8/27/1999
11/1/1999
2/14/2000
5/15/2000
8/24/2000
11/20/2000
4/10/2002
10/1/2002
4/17/2003
10/29/2003
5/12/2004
10/22/2004
6/13/2005
11/14/2005
4/11/2006
11/8/2006
4/11/2007
10/5/2007
4/16/2008
Sample Date

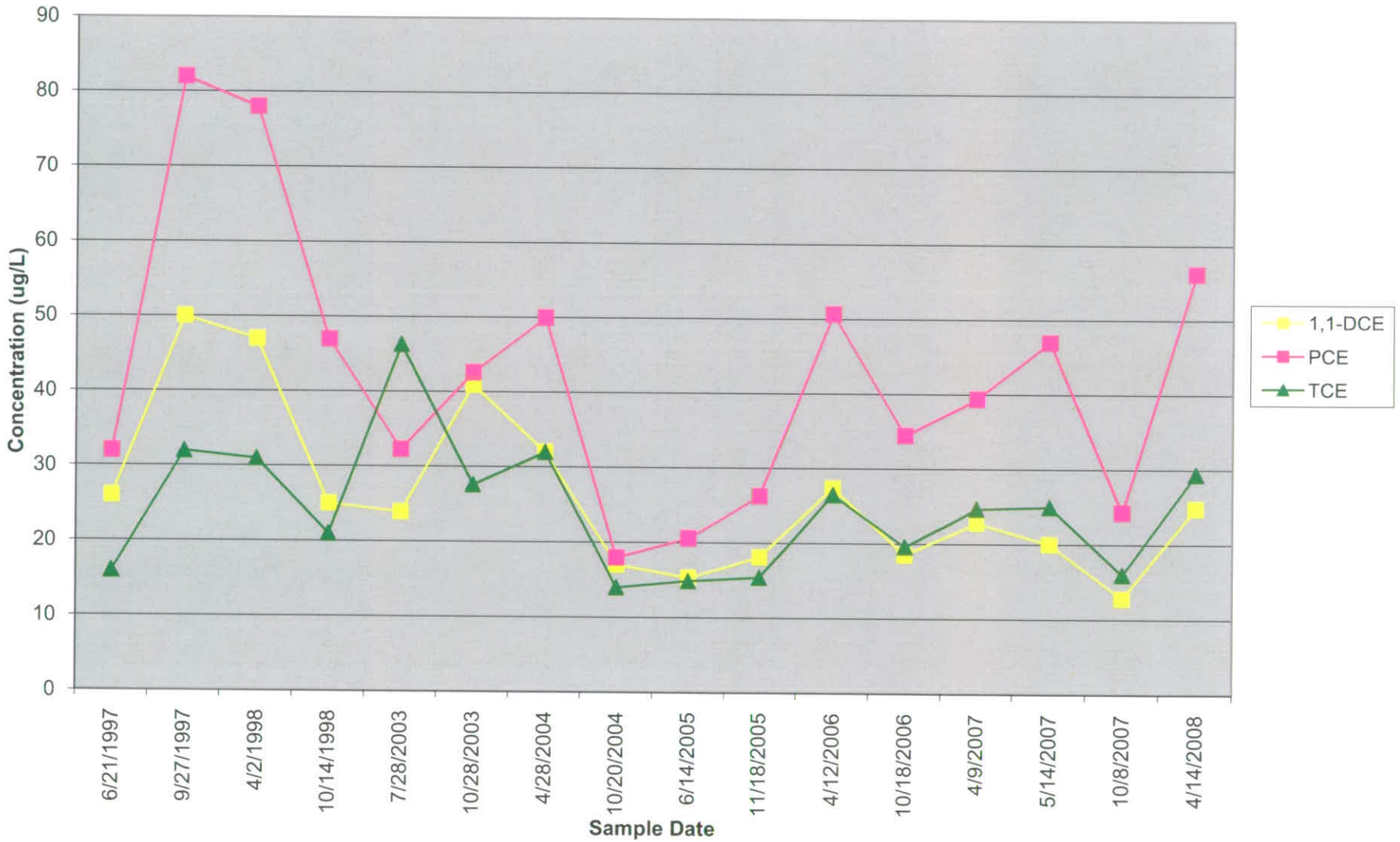

RW-09
140
120
100
80
60
40
20
0
Concentration (ug/L)
5/24/1999
8/27/1999
11/1/1999
2/14/2000
5/15/2000
8/24/2000
11/20/2000
4/10/2002
10/1/2002
4/17/2003
10/29/2003
5/4/2004
10/22/2004
6/13/2005
11/14/2005
4/11/2006
11/8/2006
4/11/2007
10/5/2007
4/16/2008
Sample Date
1,1,2,2-PCA
1,1-DCE
PCE
TCE

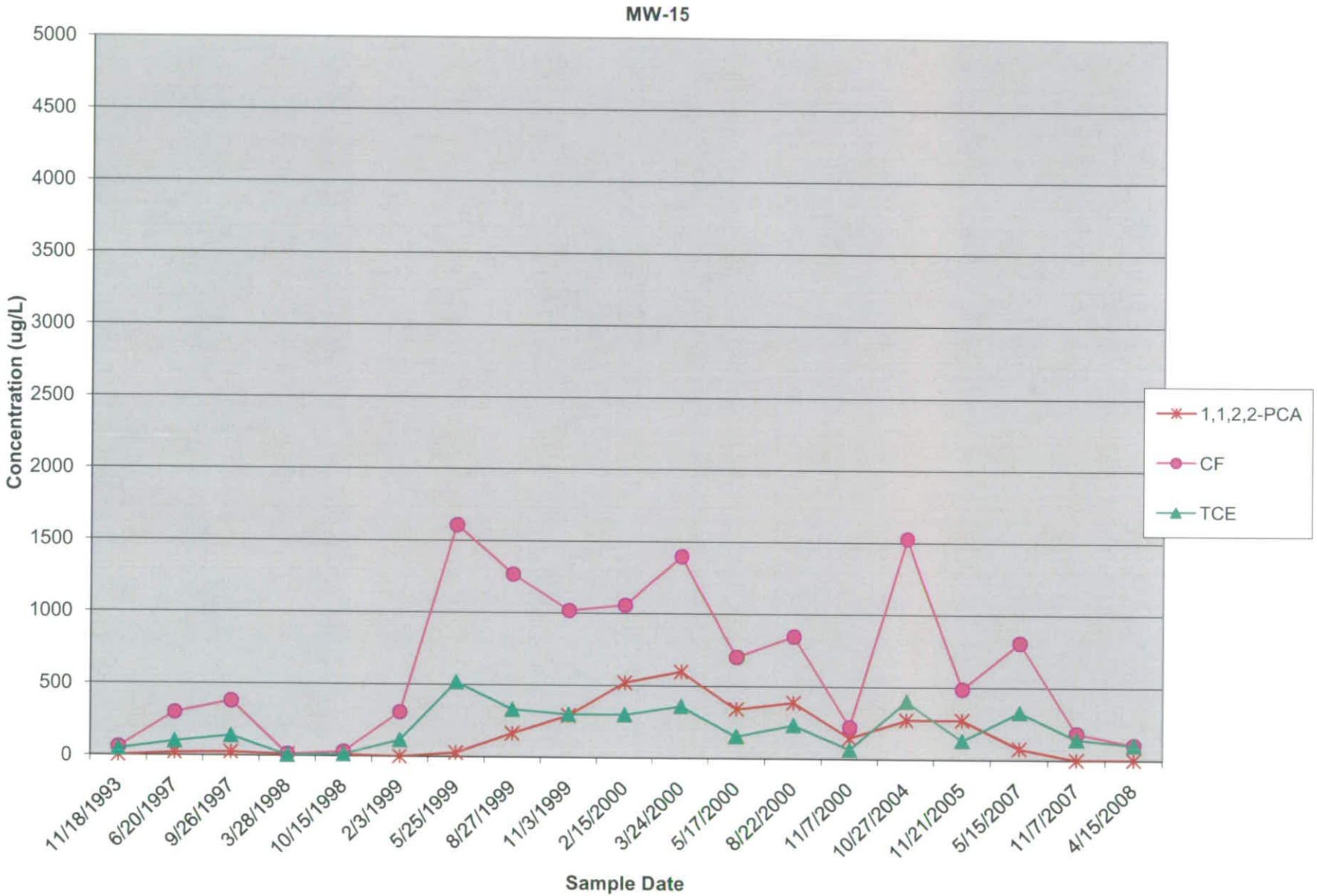
APPENDIX C

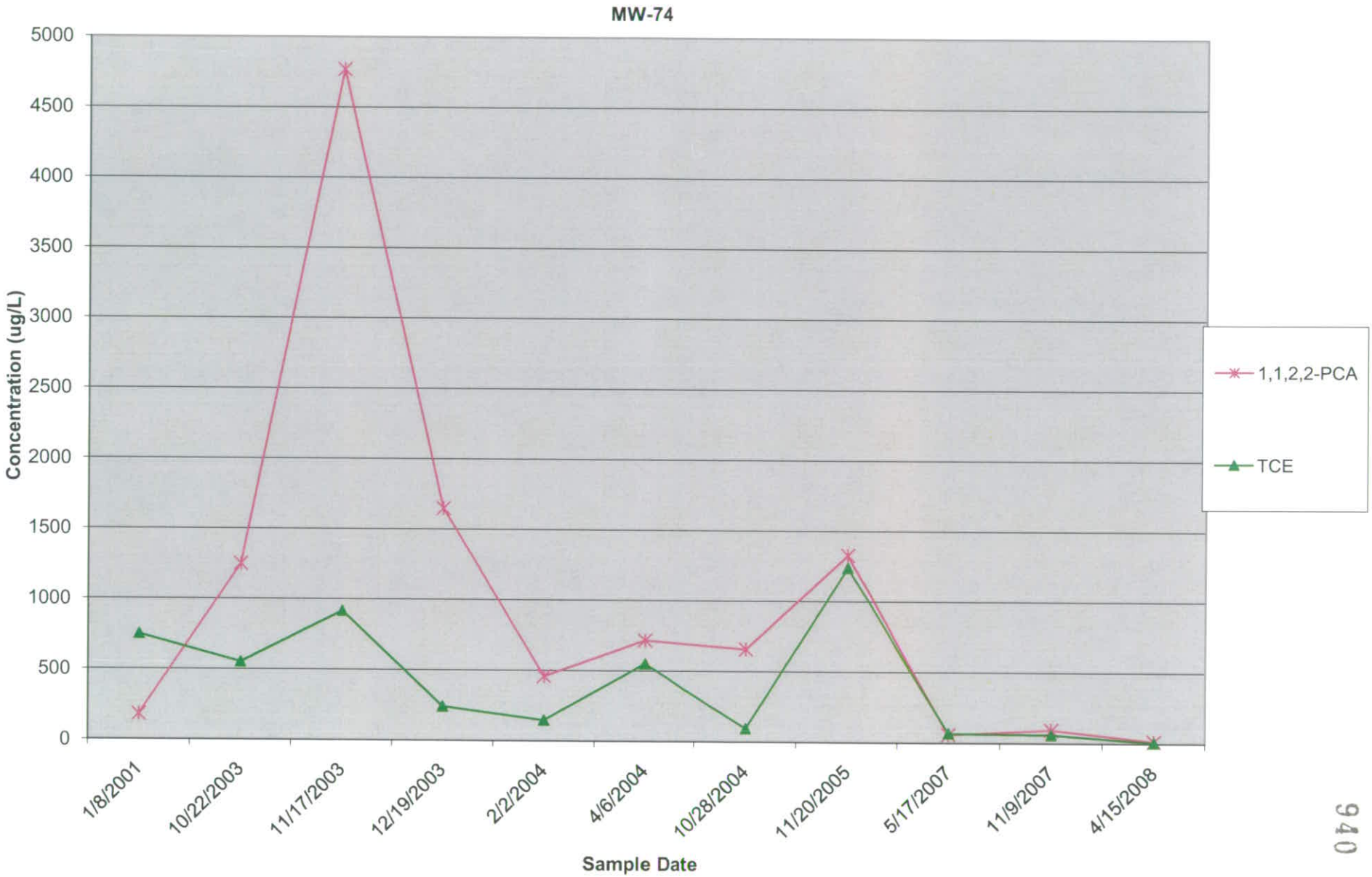
Time Trend Plots for Dunn Field Monitoring Wells

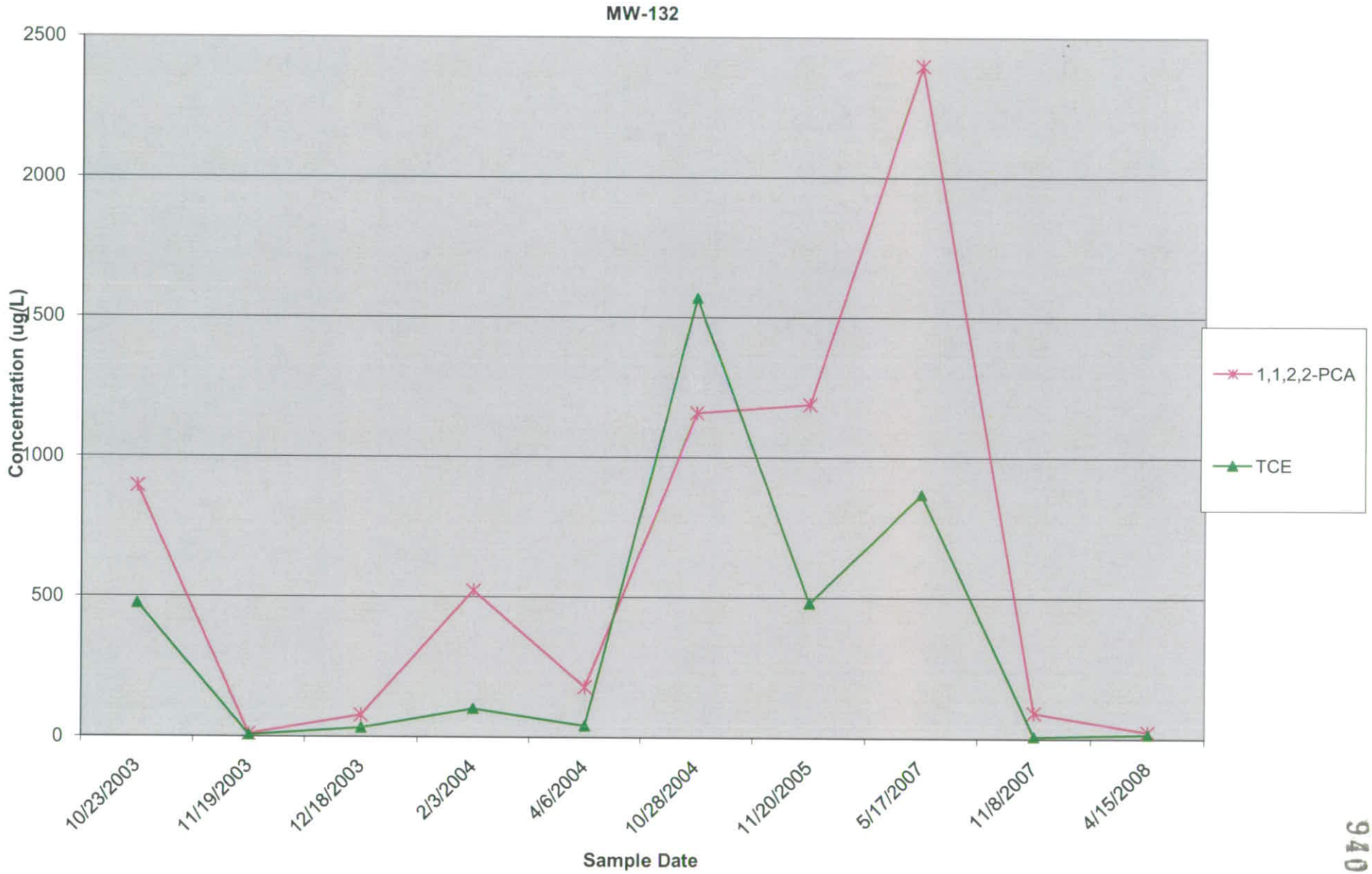

MW-03
Concentration (ug/L)
200
180
160
140
120
100
80
60
40
20
0
11/12/1993
6/21/1997
9/27/1997
3/27/1998
10/15/1998
10/28/2004
10/28/2004
11/21/2005
5/14/2007
11/7/2007
4/16/2008
Sample Date
1,1,2,2-PCA
1,1-DCE
cDCE
PCE
TCE

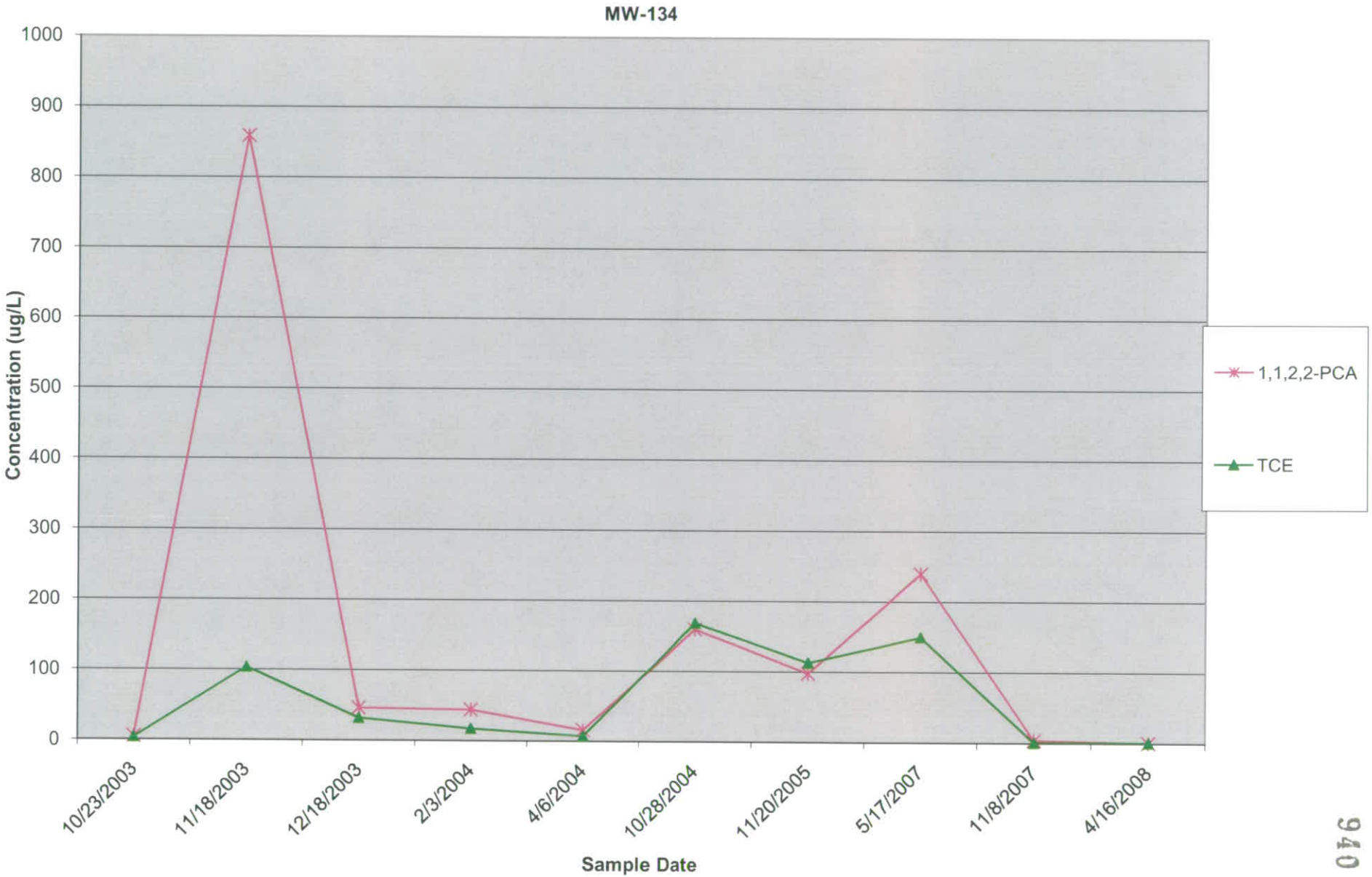

MW-06
Concentration (ug/L)
1000
900
800
700
600
500
400
300
200
100
0
11/18/1993
6/21/1997
9/27/1997
3/30/1998
10/15/1998
10/27/2004
11/21/2005
5/16/2007
11/7/2007
4/15/2008
Sample Date
1,1,2,2-PCA
CT
CF
cDCE
TCE

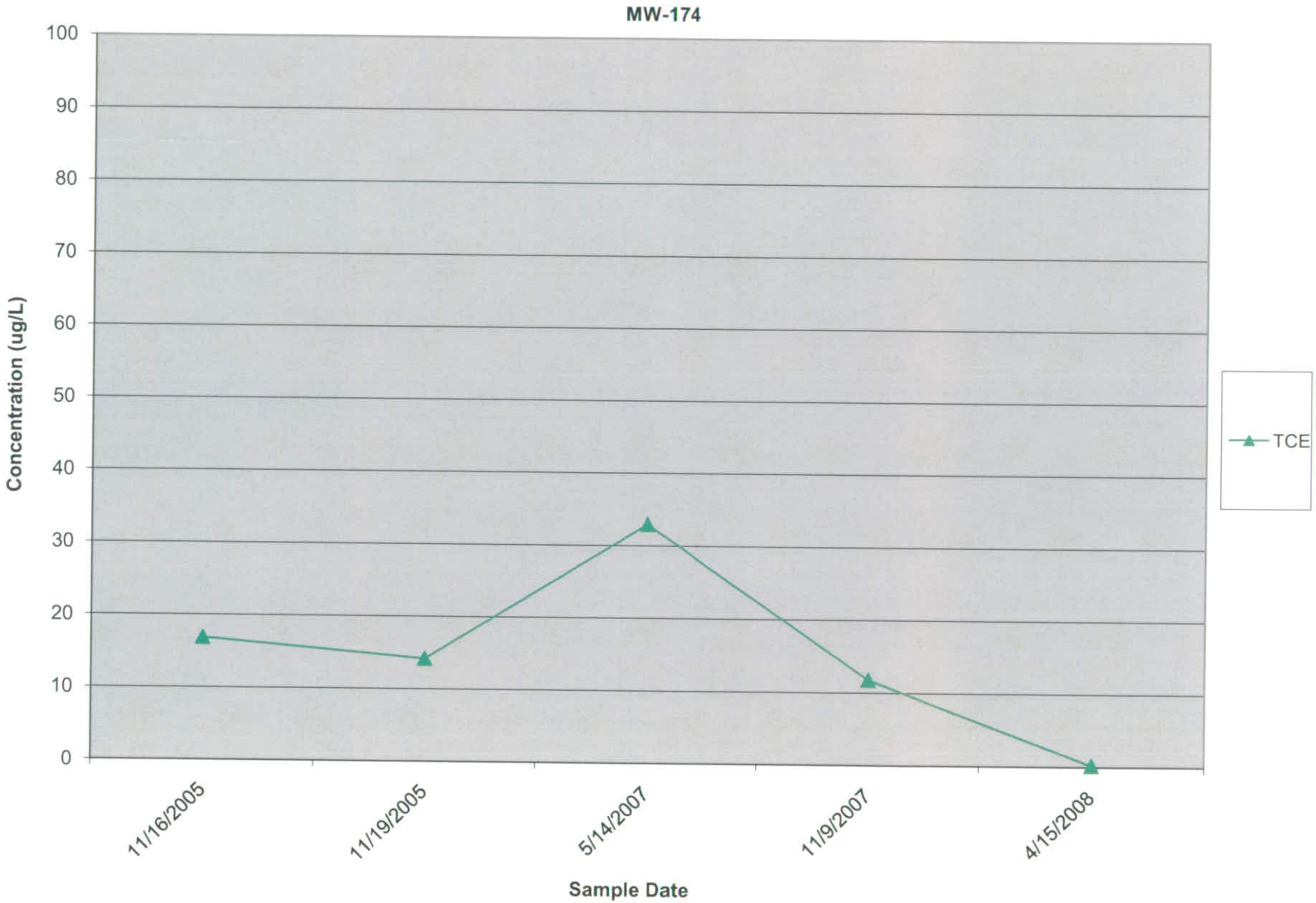

MW-07
Concentration (ug/L)
90
80
70
60
50
40
30
20
10
0
6/21/1997
9/27/1997
4/2/1998
10/14/1998
7/28/2003
10/28/2003
4/28/2004
10/20/2004
6/14/2005
11/18/2005
4/12/2006
10/18/2006
4/9/2007
5/14/2007
10/8/2007
4/14/2008
Sample Date
1,1-DCE
PCE
TCE

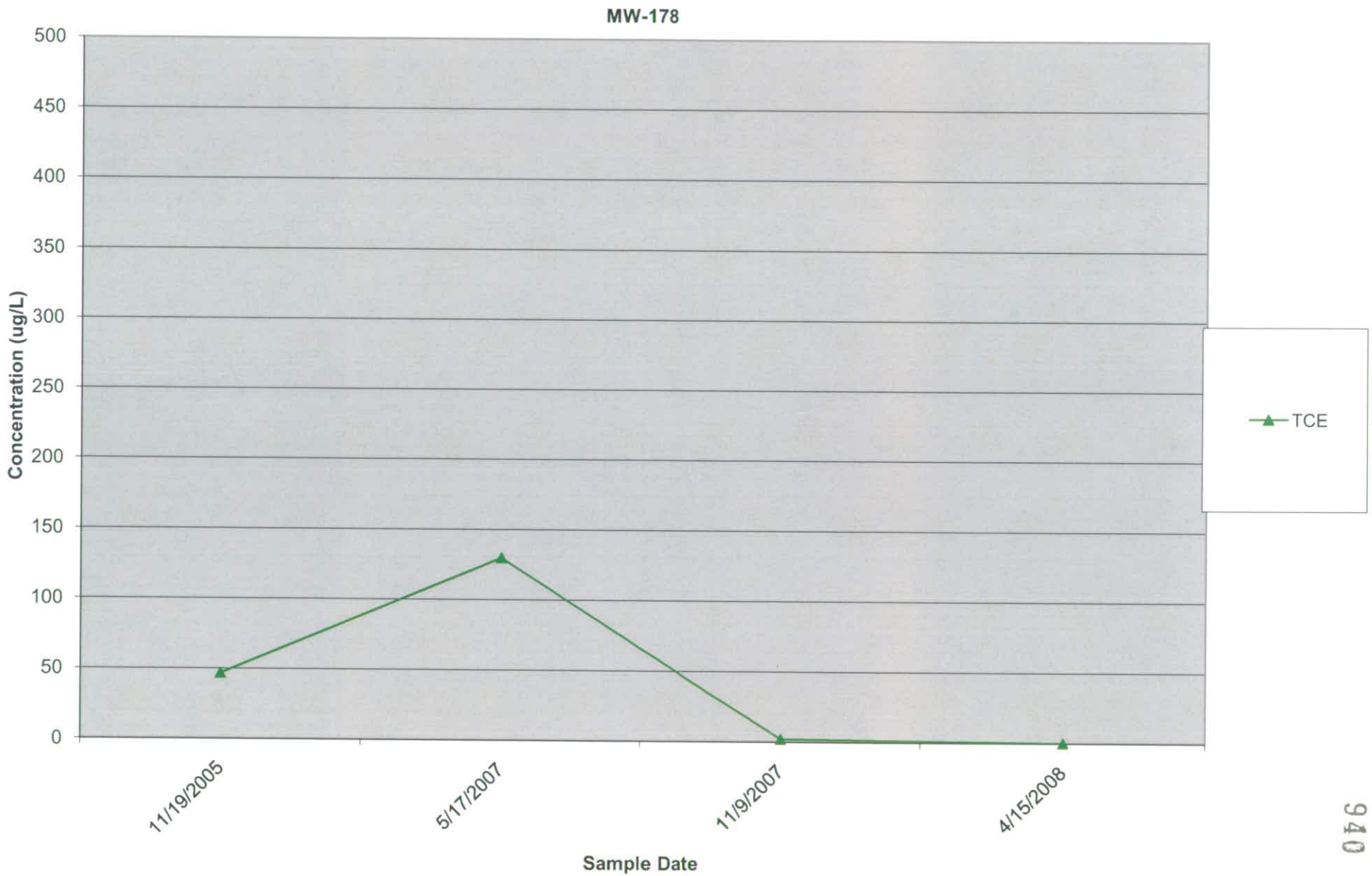

MW-15
Concentration (ug/L)
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
11/18/1993
6/20/1997
9/26/1997
3/28/1998
10/15/1998
2/3/1999
5/25/1999
8/27/1999
11/3/1999
2/15/2000
3/24/2000
5/17/2000
8/22/2000
11/7/2000
10/27/2004
11/21/2005
5/15/2007
11/7/2007
4/15/2008
Sample Date
1,1,2,2-PCA
CF
TCE

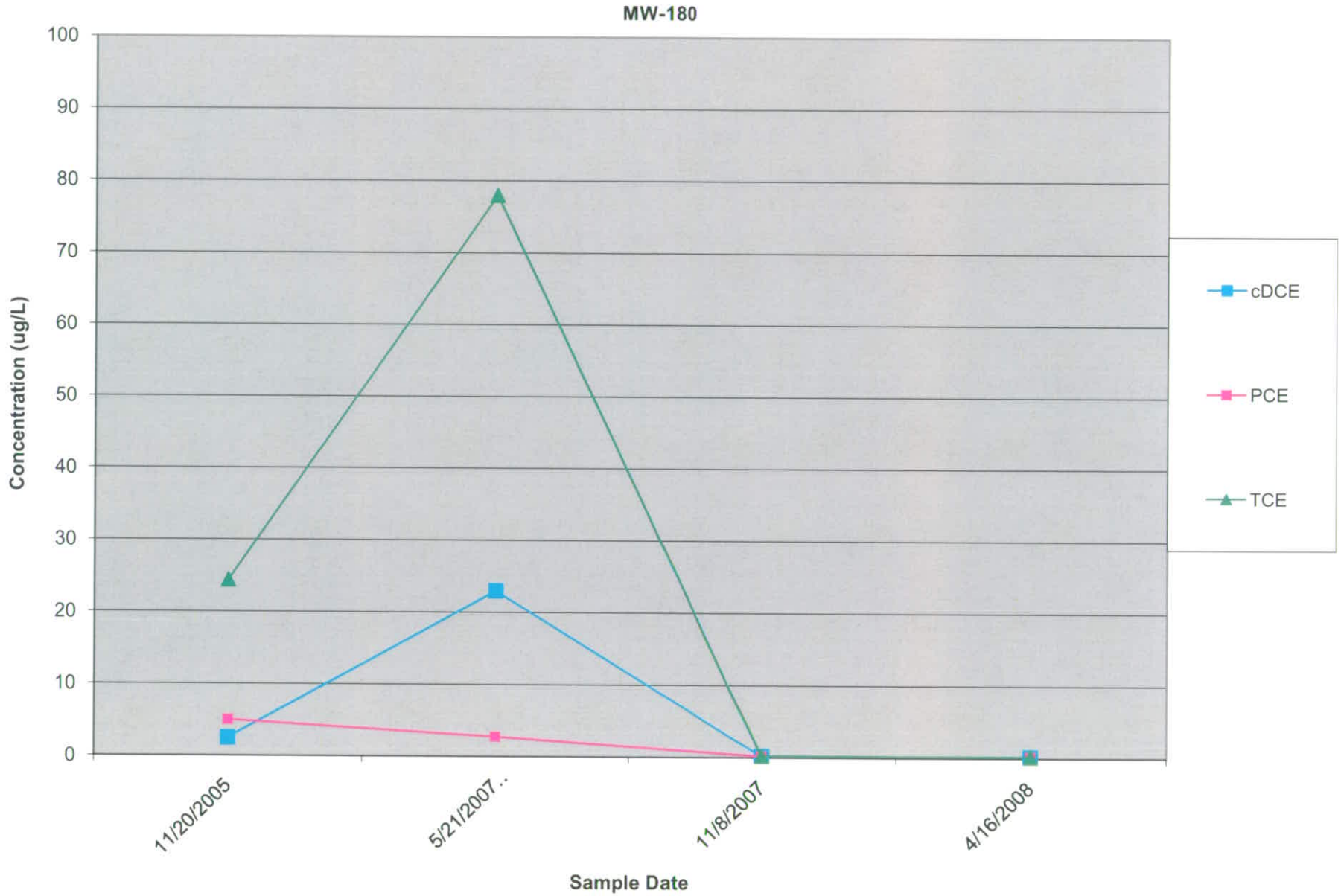

MW-74
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Concentration (ug/L)
1,1,2,2-PCA
TCE
1/8/2001
10/22/2003
11/17/2003
12/19/2003
2/2/2004
4/6/2004
10/28/2004
11/20/2005
5/17/2007
11/9/2007
4/15/2008
Sample Date

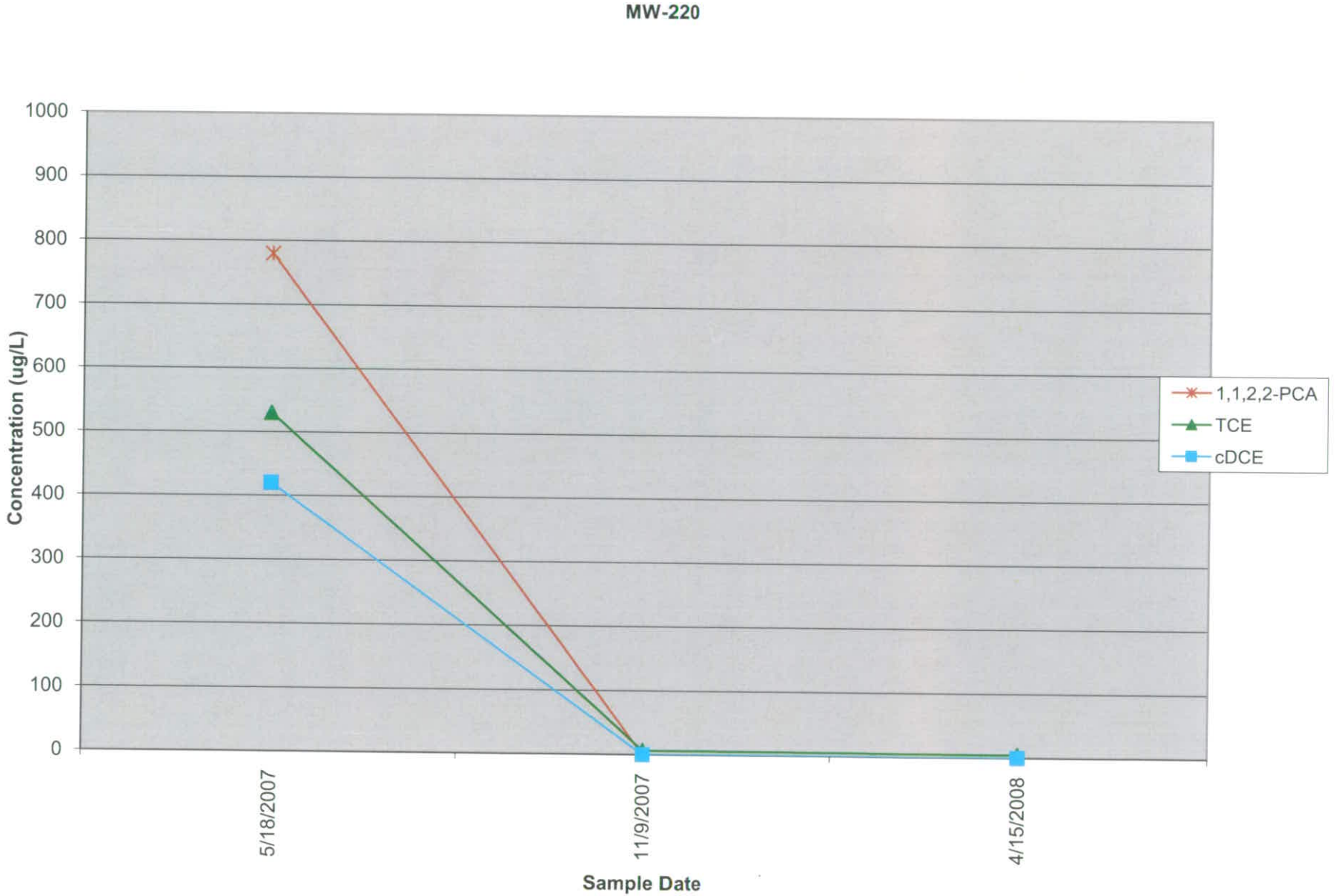

MW-132
2500
2000
1500
1000
500
0
Concentration (ug/L)
1,1,2,2-PCA
TCE
10/23/2003
11/19/2003
12/18/2003
2/3/2004
4/6/2004
10/28/2004
11/20/2005
5/17/2007
11/8/2007
4/15/2008
Sample Date

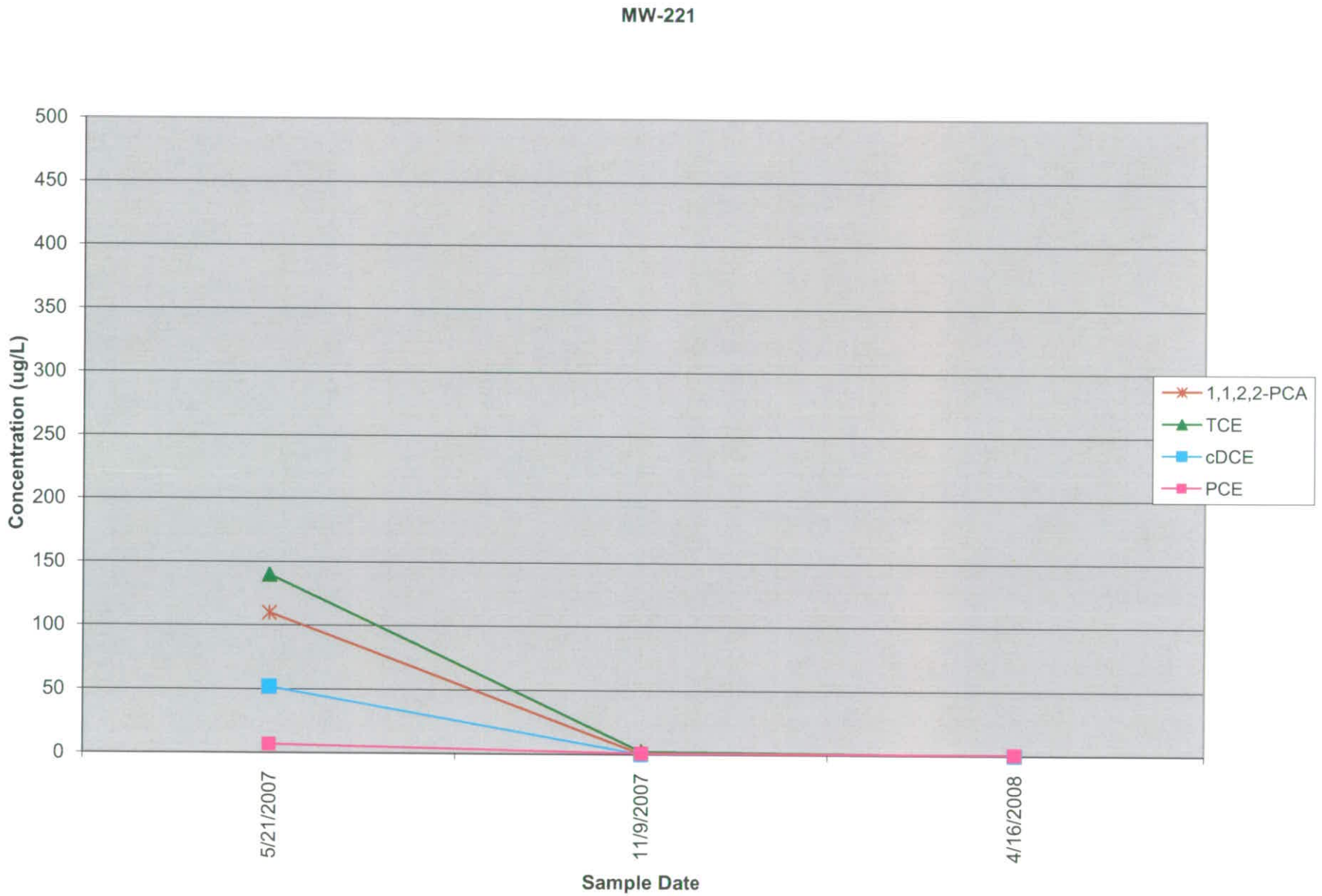

MW-134
1000
900
800
700
600
500
400
300
200
100
0
Concentration (ug/L)
10/23/2003
11/18/2003
12/18/2003
2/3/2004
4/6/2004
10/28/2004
11/20/2005
5/17/2007
11/8/2007
4/16/2008
Sample Date
1,1,2,2-PCA
TCE

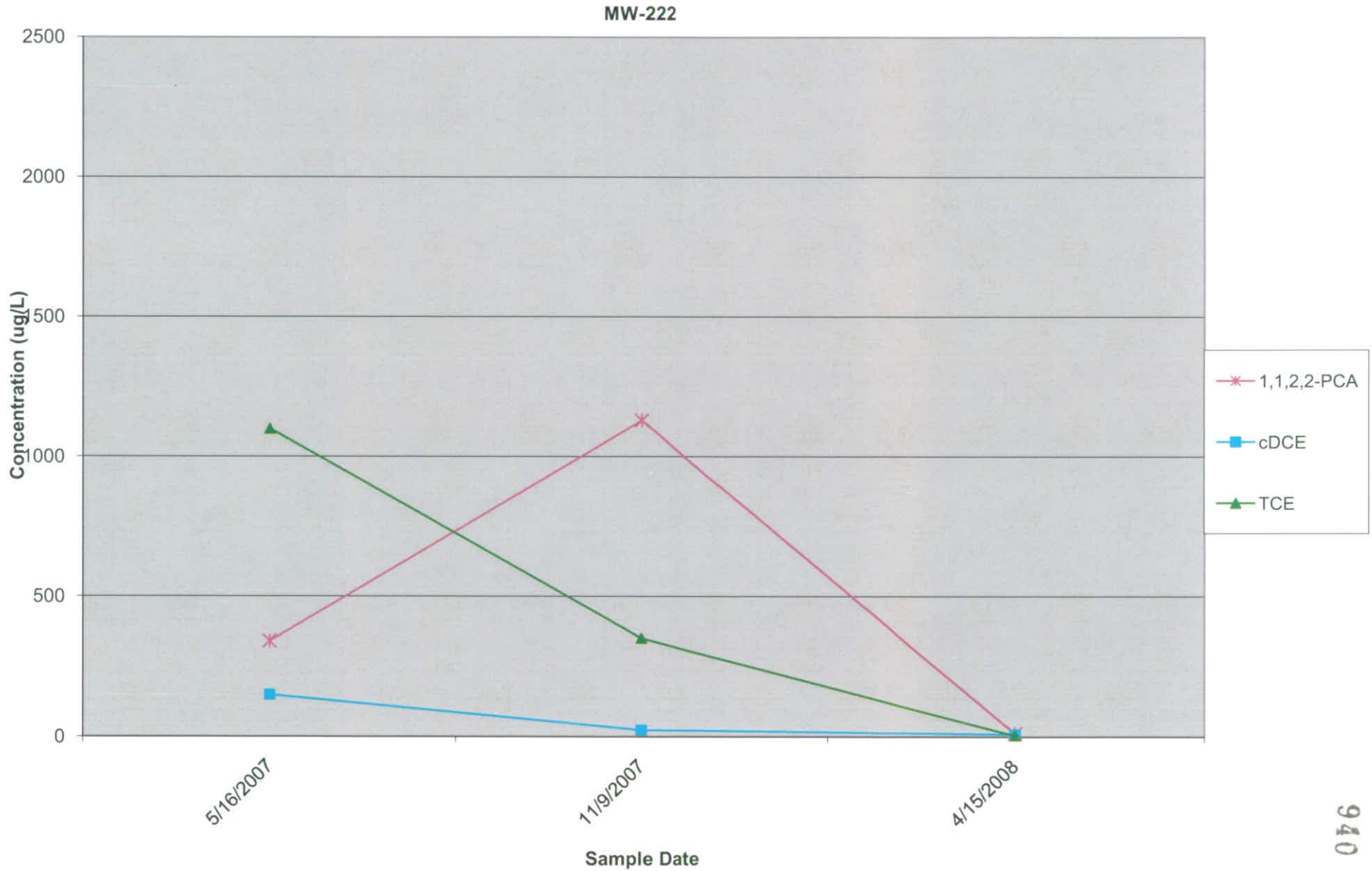

MW-174
100
90
80
70
60
50
40
30
20
10
0
Concentration (ug/L)
11/16/2005
11/19/2005
5/14/2007
11/9/2007
4/15/2008
Sample Date
TCE

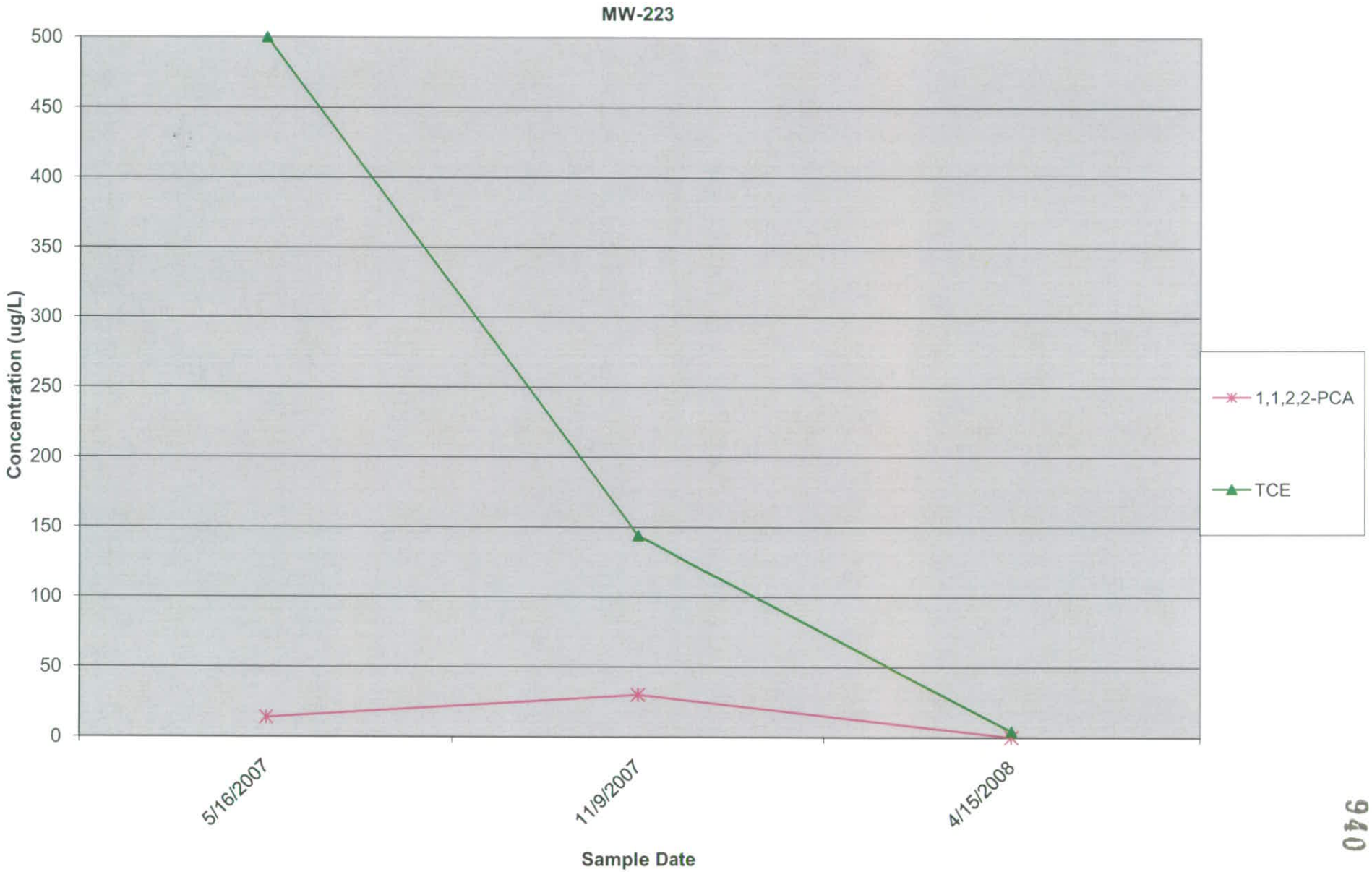

MW-178
500
450
400
350
300
250
200
150
100
50
0
Concentration (ug/L)
11/19/2005
5/17/2007
11/9/2007
4/15/2008
Sample Date
TCE

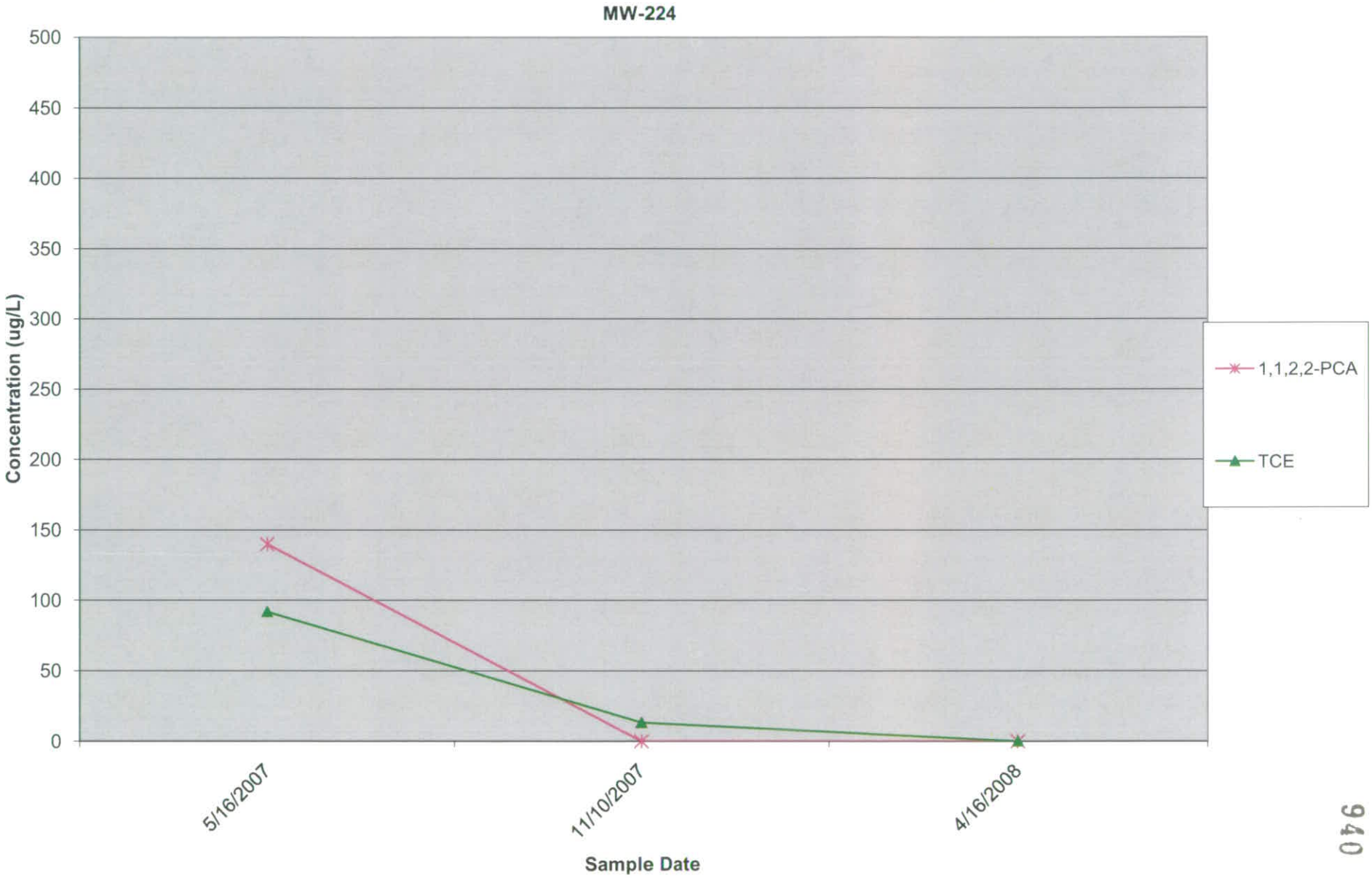

MW-180
100
90
80
70
60
50
40
30
20
10
0
Concentration (ug/L)
11/20/2005
5/21/2007 ..
11/8/2007
4/16/2008
Sample Date
cDCE
PCE
TCE

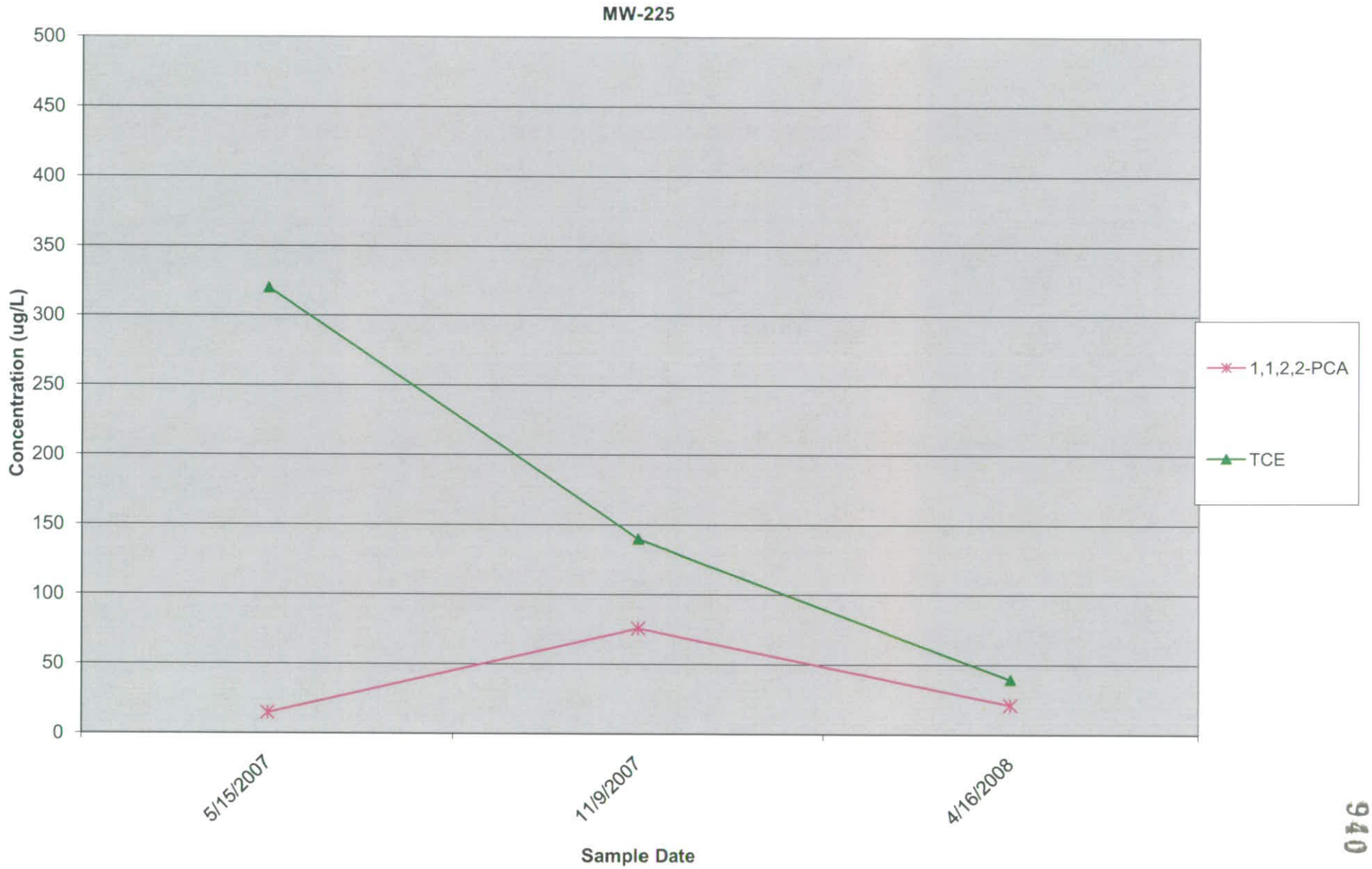

MW-220
1000
900
800
700
600
500
400
300
200
100
0
Concentration (ug/L)
5/18/2007
11/9/2007
4/15/2008
Sample Date
1,1,2,2-PCA
TCE
cDCE

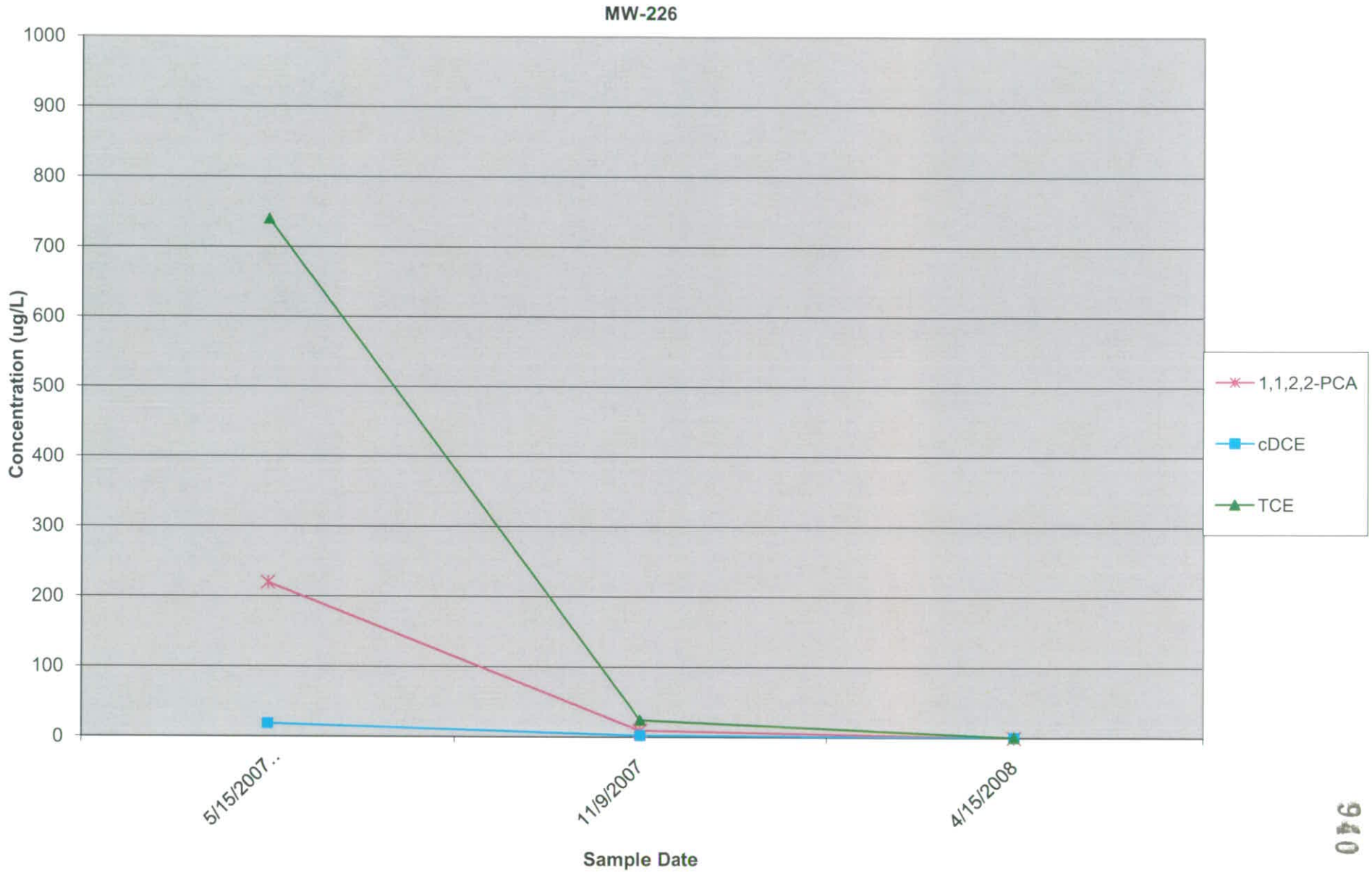

MW-221
500
450
400
350
300
250
200
150
100
50
0
Concentration (ug/L)
5/21/2007
11/9/2007
4/16/2008
Sample Date
1,1,2,2-PCA
TCE
cDCE
PCE

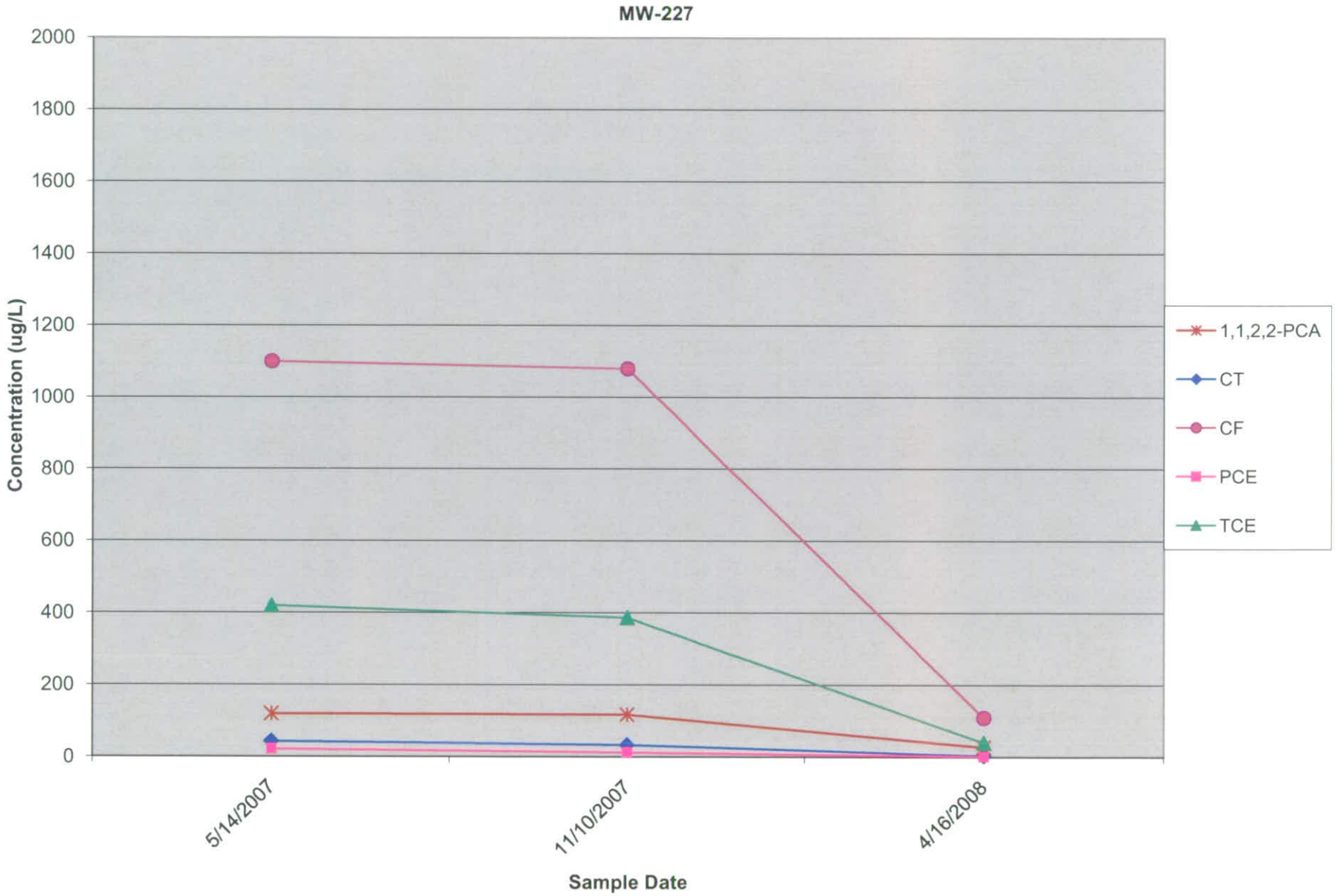

MW-222
2500
2000
1500
1000
500
0
Concentration (ug/L)
5/16/2007
11/9/2007
4/15/2008
Sample Date
1,1,2,2-PCA
cDCE
TCE

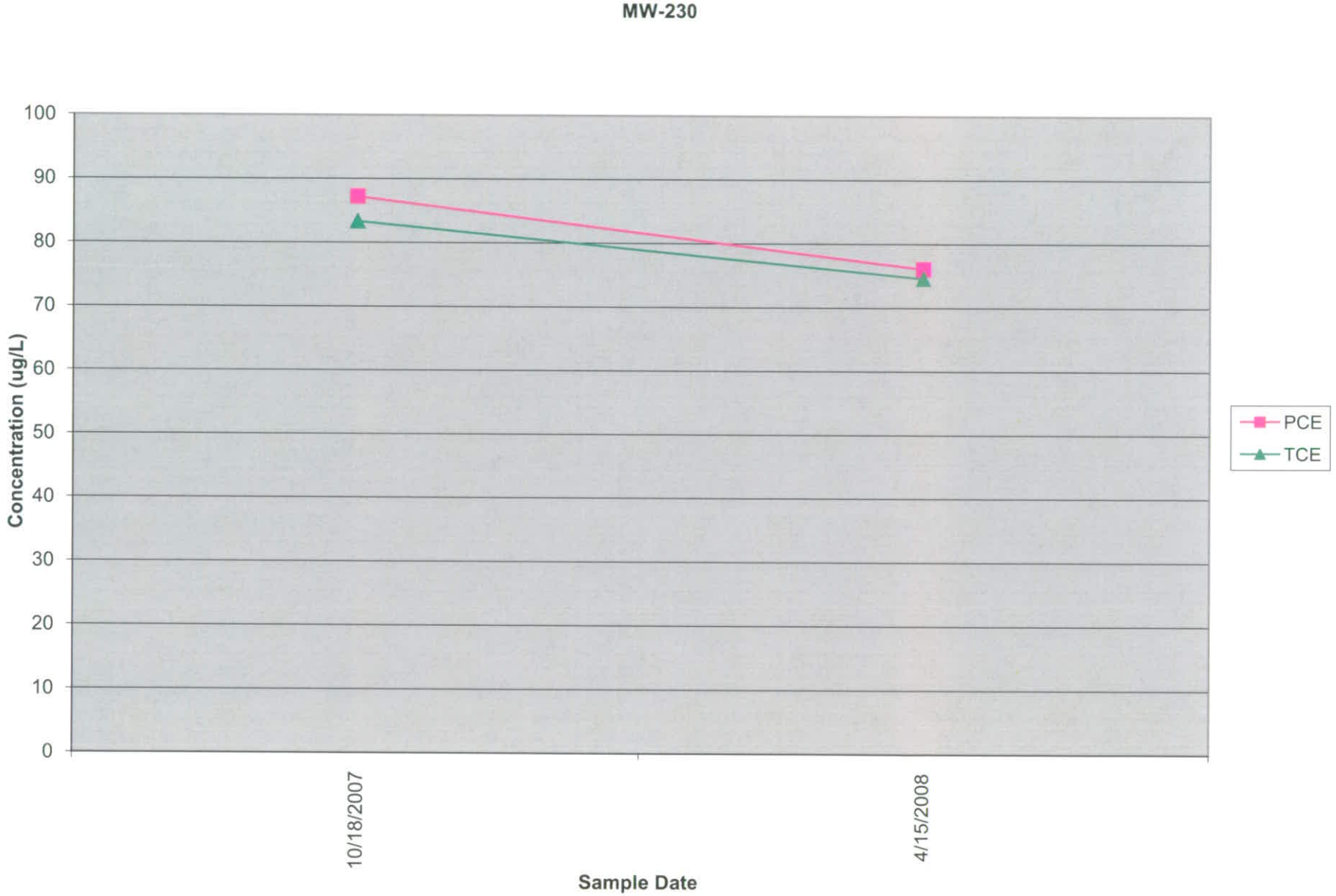

MW-223
500
450
400
350
300
250
200
150
100
50
0
Concentration (ug/L)
5/16/2007
11/9/2007
4/15/2008
Sample Date
1,1,2,2-PCA
TCE


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
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
Sample Date
1,1,2,2-PCA
TCE

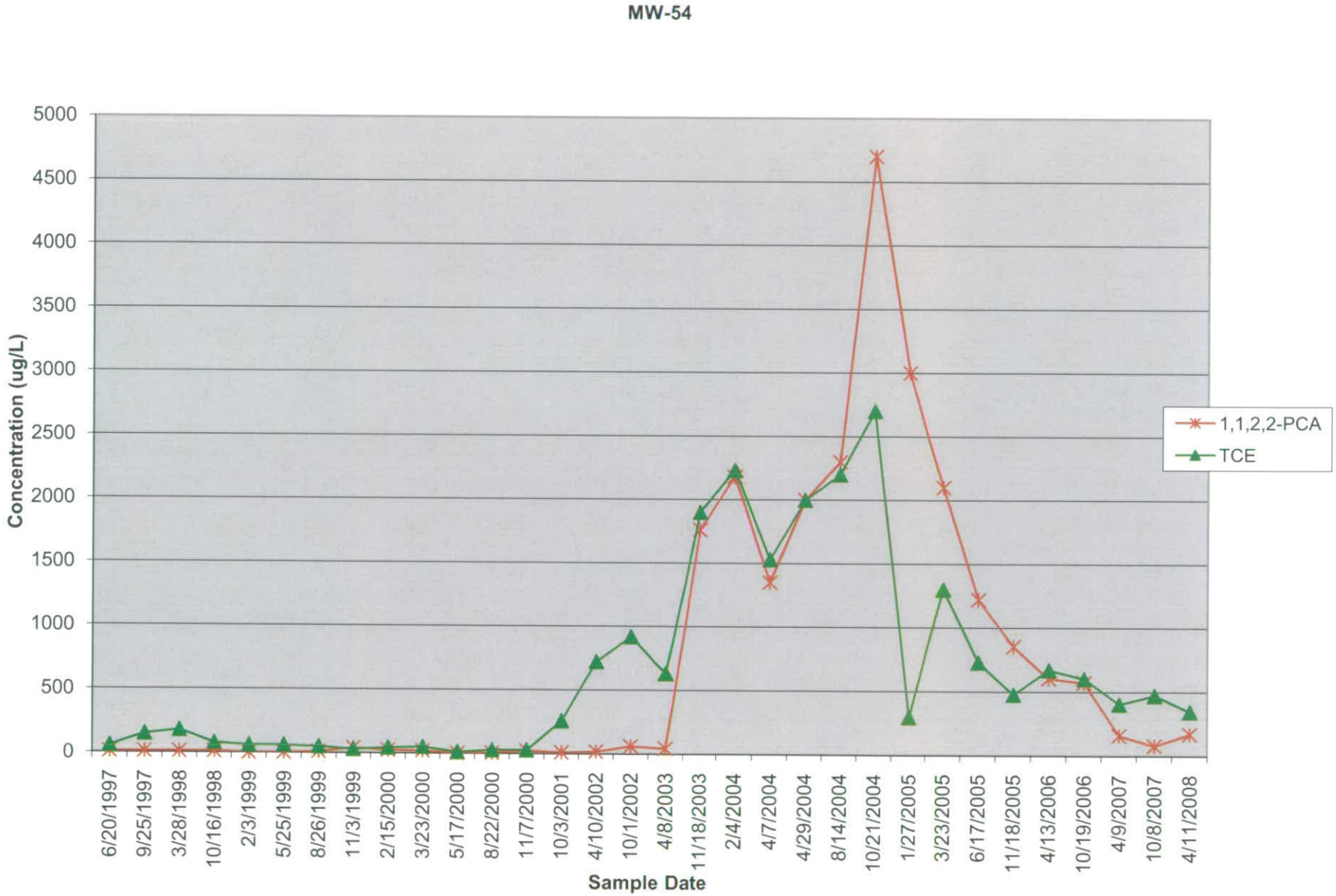

MW-226
1000
900
800
700
600
500
400
300
200
100
0
Concentration (ug/L)
5/15/2007 ..
11/9/2007
4/15/2008
Sample Date
1,1,2,2-PCA
cDCE
TCE

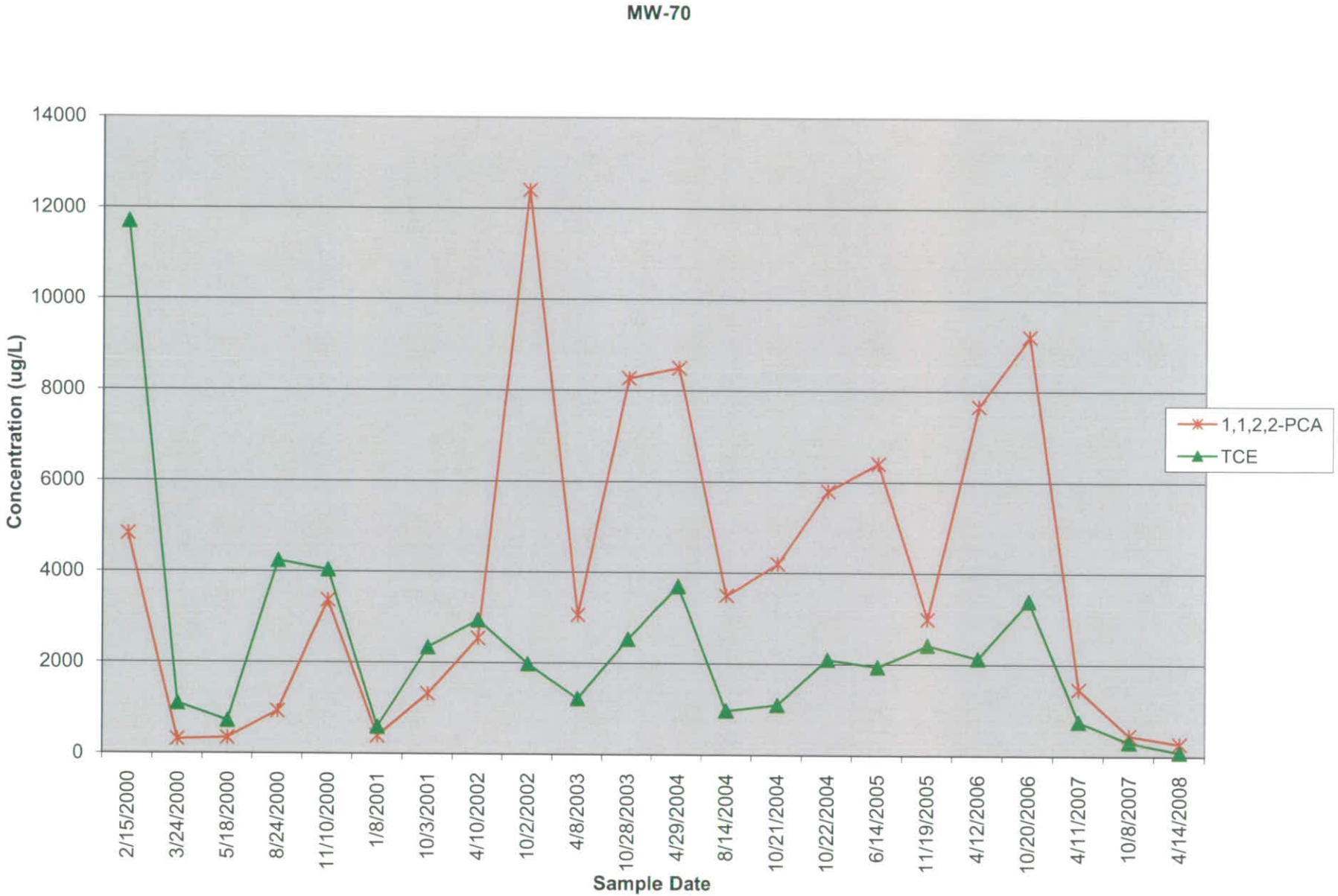

MW-227
2000
1800
1600
1400
1200
1000
800
600
400
200
0
Concentration (ug/L)
5/14/2007
11/10/2007
4/16/2008
Sample Date
1,1,2,2-PCA
CT
CF
PCE
TCE

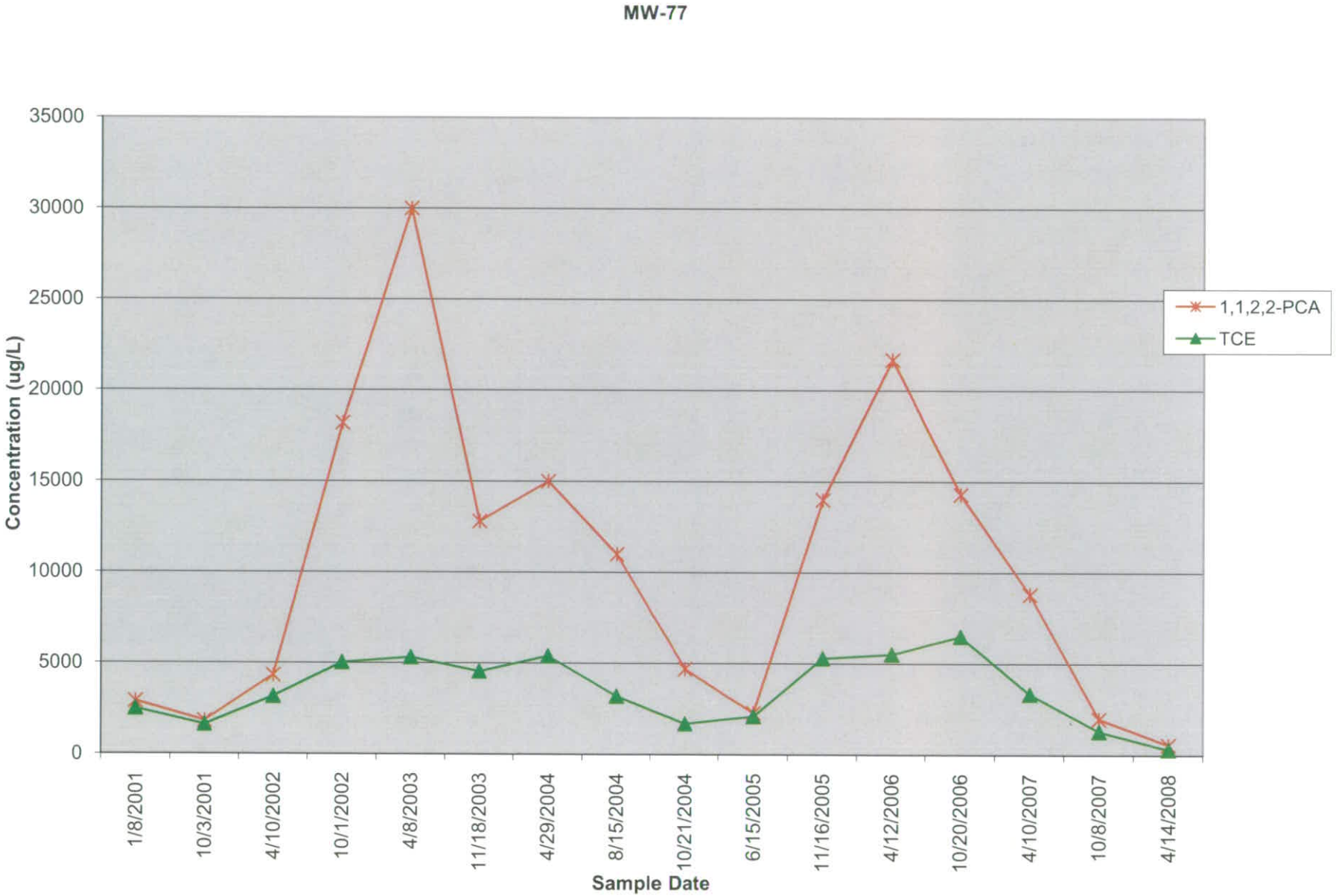

MW-230
100
90
80
70
60
50
40
30
20
10
0
Concentration (ug/L)
10/18/2007
4/15/2008
Sample Date
PCE
TCE

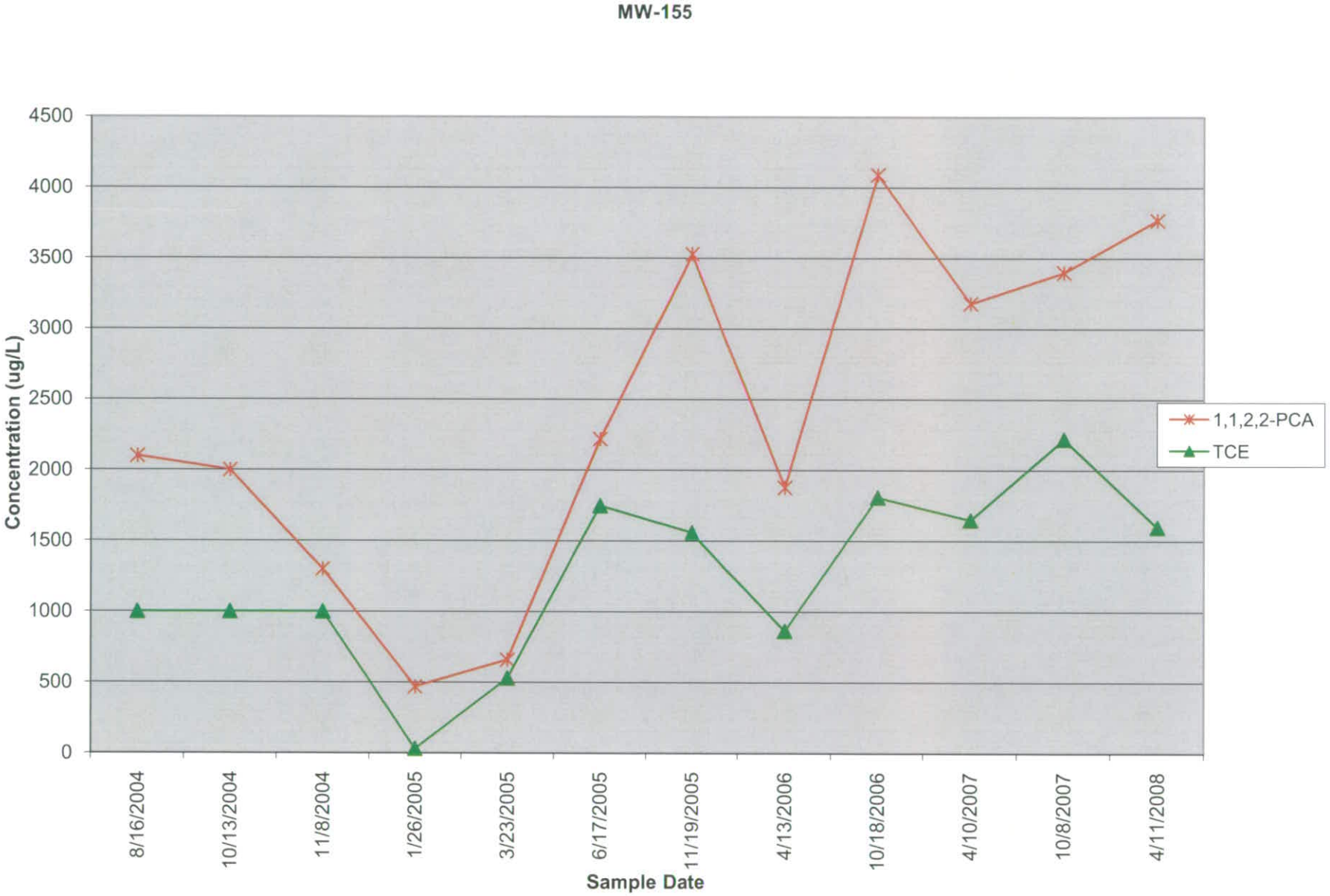
APPENDIX D

Time Trend Plots for Off-Depot Central Plume Monitoring Wells

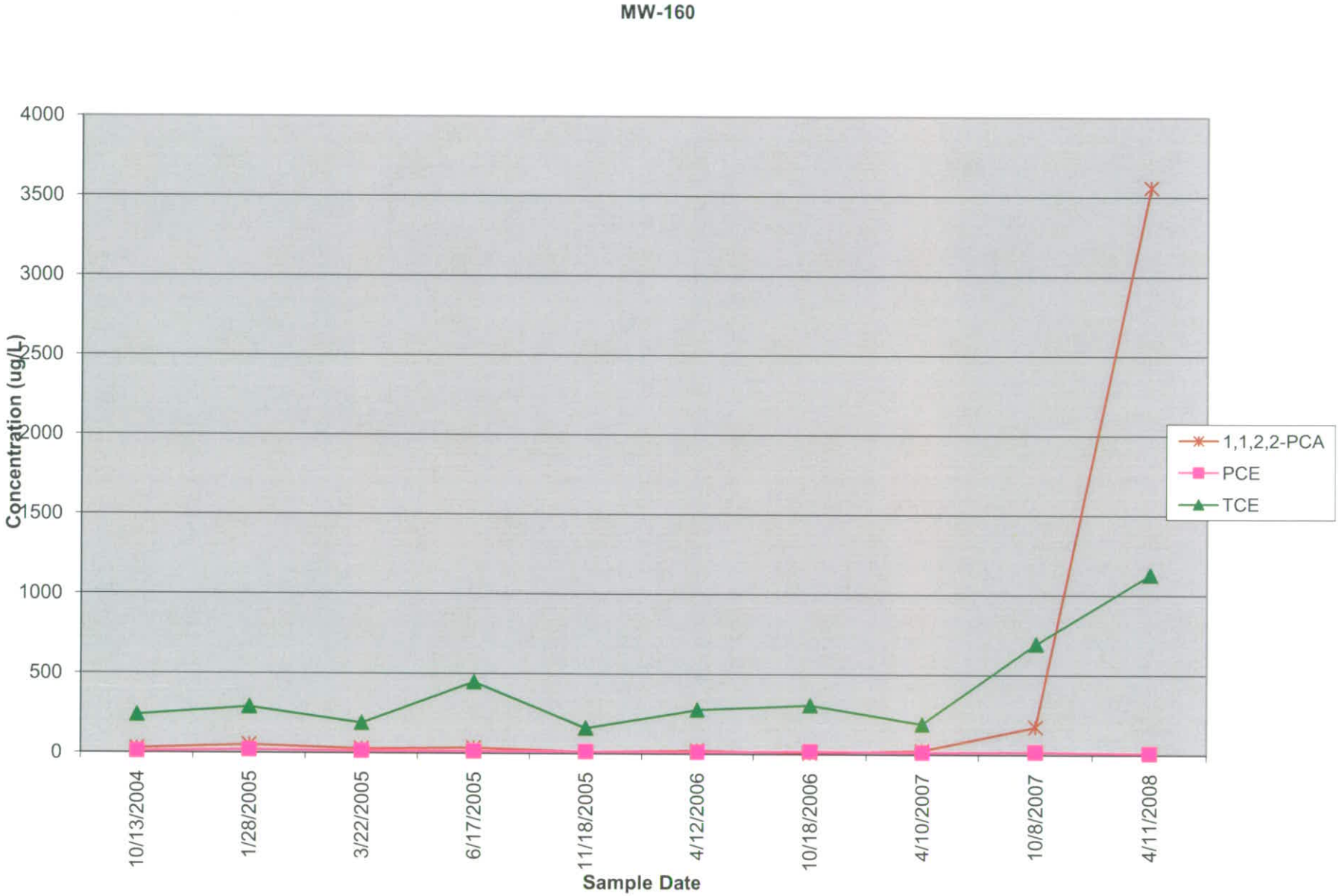

MW-54
Concentration (ug/L)
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
6/20/1997
9/25/1997
3/28/1998
10/16/1998
2/3/1999
5/25/1999
8/26/1999
11/3/1999
2/15/2000
3/23/2000
5/17/2000
8/22/2000
11/7/2000
10/3/2001
4/10/2002
10/1/2002
4/8/2003
11/18/2003
2/4/2004
4/7/2004
4/29/2004
8/14/2004
10/21/2004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

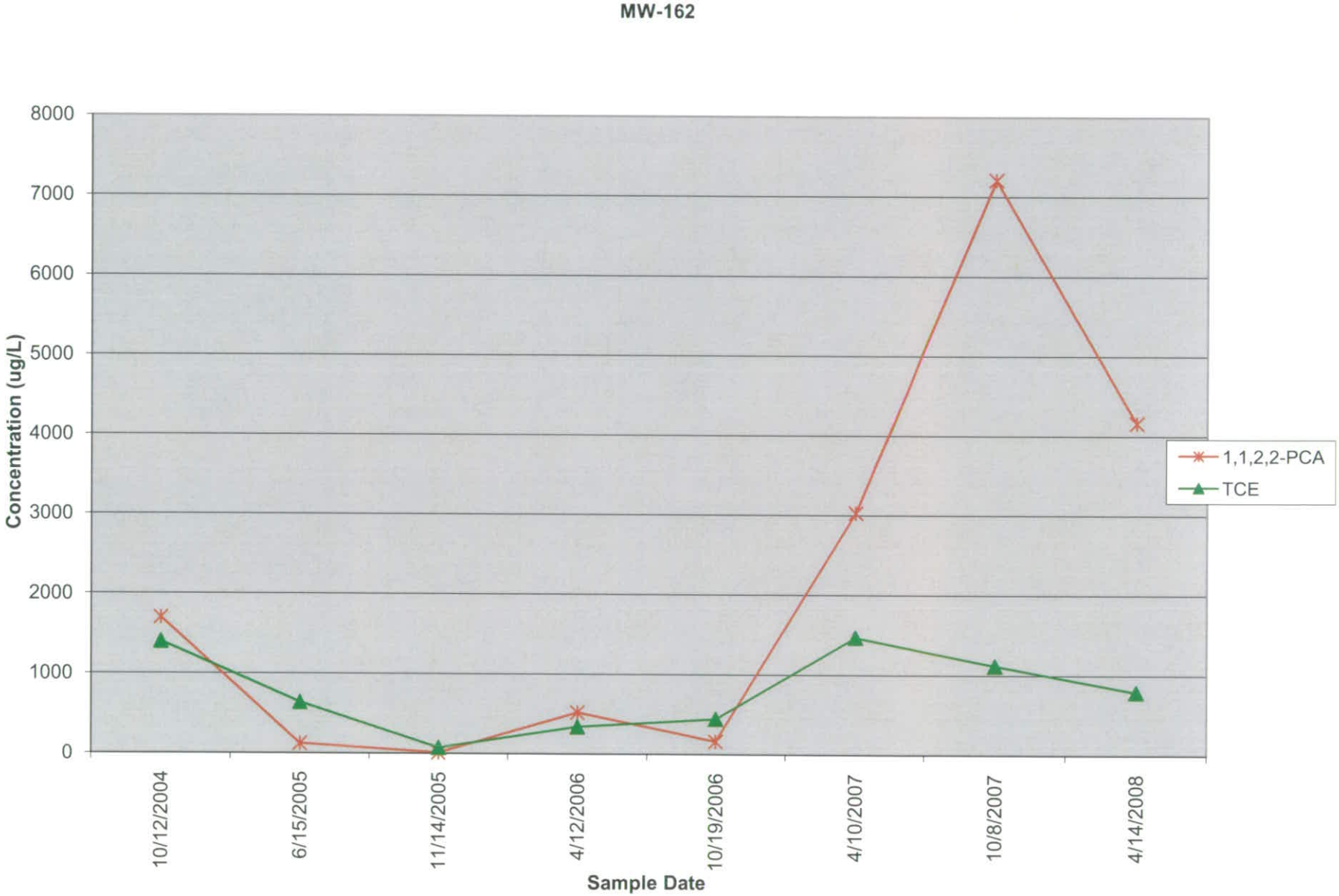

MW-70
14000
12000
10000
8000
6000
4000
2000
0
Concentration (ug/L)
2/15/2000
3/24/2000
5/18/2000
8/24/2000
11/10/2000
1/8/2001
10/3/2001
4/10/2002
10/2/2002
4/8/2003
10/28/2003
4/29/2004
8/14/2004
10/21/2004
10/22/2004
6/14/2005
11/19/2005
4/12/2006
10/20/2006
4/11/2007
10/8/2007
4/14/2008
Sample Date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


MW-77
35000
30000
25000
20000
15000
10000
5000
0
Concentration (ug/L)
1,1,2,2-PCA
TCE
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
Sample Date


MW-155
Concentration (ug/L)
4500
4000
3500
3000
2500
2000
1500
1000
500
0
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
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
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
Sample Date
1,1,2,2-PCA
PCE
TCE


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

FINAL PAGE

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