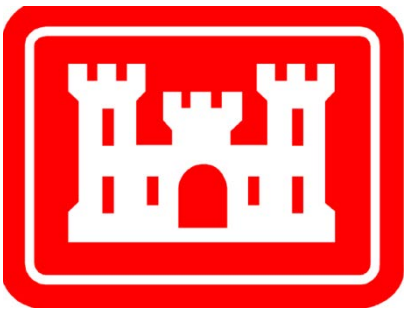
ANNUAL LONG-TERM MONITORING REPORT – 2012

Defense Depot Memphis, Tennessee



Department of the Army

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Defense Depot Memphis, Tennessee

Prepared for:

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LIST OF ACRONYMS AND ABBREVIATIONS

AS	Air Sparging
AS/SVE	Air Sparging with Soil Vapor Extraction
bgs	Below Ground Surface
btoc	Below Top of Casing
cDCE	cis-1,2-Dichloroethene
CF	Chloroform
COV	Coefficient of Variation
CT	Carbon Tetrachloride
CVOC	Chlorinated Volatile Organic Compound
DCE	1,1-Dichloroethene
DDMT	Defense Depot Memphis, Tennessee
DQE	Data Quality Evaluation
DQO	Data Quality Objective
EBT	Enhanced Bioremediation Treatment
Ft	foot/feet
FSVE	Fluvial Soil Vapor Extraction
IAQ	Intermediate Aquifer
IDW	Investigation-derived Waste
IRA	Interim Remedial Action
IRACR	Interim Remedial Action Completion Report
LCS	Laboratory Calibration Standard
LTM	Long-term Monitoring
LUC	Land Use Control
MACTEC	MACTEC Engineering and Consulting, Inc.
MAQ	Memphis Aquifer
MAROS	Monitoring and Remediation Optimization System
MCL	Maximum Contaminant Level
µg/L	Micrograms per Liter
MI	Main Installation
MIBK	methyl isobutyl ketone
msl	Mean Sea Level
MW	Monitoring Well
ND	Not Detected
NTU	Nephelometric Turbidity Units
OPS	Operating Properly and Successfully
PCE	Tetrachloroethene
PDB	Passive Diffusion Bags

LIST OF ACRONYMS AND ABBREVIATIONS

(Continued)

PMW	Performance Monitoring Well
PZ	Piezometer
QAPP	Quality Assurance Project Plan
RA	Remedial Action
RAO	Remedial Action Objective
RA SAP	Remedial Action Sampling and Analysis Plan
RD	Remedial Design
ROD	Record of Decision
RL	Reporting Limit
RW	Recovery Well
S	Mann-Kendall Statistic
SVE	Soil Vapor Extraction
TA	Treatment Area
TC	Target Concentrations
TCA	1,1,1-Trichloroethane
TCE	Trichloroethene
tDCE	trans-1,2-Dichloroethene
TDEC	Tennessee Department of Environment and Conservation
TeCA	1,1,2,2-Tetrachloroethane
TTA	Target Treatment Area
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
VC	Vinyl Chloride
VOC	Volatile Organic Compound
ZVI	Zero Valent Iron

1.0 INTRODUCTION

HDR has prepared this 2012 Annual Long-term Monitoring (LTM) Report for the Main Installation (MI) and Dunn Field at Defense Depot Memphis, Tennessee (DDMT) under Contract W9216G-09-D-0069, Task Order 0019 to the United States Army Corps of Engineers (USACE), Ft. Worth District. Long-term monitoring at the MI and Dunn Field is performed to document changes in plume concentrations, and to detect potential plume migration to off-site areas or into deeper aquifers and to track progress toward remediation goals. Long-term monitoring activities at DDMT are performed in accordance with the MI LTM Plan in Appendix B of the *Main Installation Final Remedial Design, Rev.1* (MI RD) (CH2M HILL 2004b) and the Dunn Field LTM Plan in Appendix C of *Off Depot Groundwater Final Remedial Design, Rev. 1* (Off Depot Groundwater RD) (CH2M HILL 2008).

1.1 SITE LOCATION AND DESCRIPTION

Defense Depot Memphis, Tennessee is located in southeastern Memphis, Shelby County, Tennessee approximately 5 miles east of the Mississippi River and two miles north of Memphis International Airport (Figure 1). Defense Depot Memphis, Tennessee originated as a military facility in the early 1940s; it received, warehoused, and distributed supplies common to all United States (US) military services and some civil agencies located primarily in the southeastern US, Puerto Rico, and Panama. Stocked items included food; clothing; petroleum products; construction materials; and industrial, medical, and general supplies. In 1995, DDMT was placed on the list of the Department of Defense facilities to be closed under Base Realignment and Closure. Storage and distribution of material continued until the facility closed in September 1997.

The property consists of approximately 632 acres and includes the MI and Dunn Field. The MI contains approximately 567 acres with open storage areas, warehouses, former military family housing, and outdoor recreational areas. Dunn Field, which is located across Dunn Avenue from the north-northwest portion of the MI, contains approximately 65 acres and includes former mineral storage and waste disposal areas.

In 1992, DDMT was added to the National Priorities List (57 Federal Register 47180 No. 199). Responsibility for environmental restoration at DDMT transferred from the Defense Logistics Agency to the Department of the Army in December 2010. The regulatory oversight agencies are US Environmental Protection Agency (USEPA) Region 4 and the Tennessee Department of Environment and Conservation (TDEC). DDMT's USEPA Identification Number is TN4210020570.

1.2 GEOLOGY AND HYDROGEOLOGY

The geologic units of interest at DDMT are (from youngest to oldest): loess, including surface soil; fluvial deposits; Jackson formation/Upper Claiborne group; and Memphis Sand.

The loess consists of wind-blown and deposited brown to reddish-brown, low-plasticity clayey silt to silty clay. The loess deposits are about 20 to 30 feet (ft) thick and are continuous throughout the DDMT area.

The fluvial (terrace) deposits consist of two general layers. The upper layer is a silty, sandy clay that transitions to a clayey sand and ranges from about 10 to 40 ft thick. The lower layer is composed of interlayered sand, sandy gravel, and gravelly sand, and has an average thickness of approximately 40 ft. The uppermost aquifer is the unconfined fluvial aquifer, which consists of saturated sands and gravelly sands in the lower portion of the fluvial deposits. Recharge to this unit is mainly from rainfall infiltration; discharge is to underlying units or laterally into adjacent stream channels. The saturated thickness ranges from 0 ft (dry) to approximately 60 ft, and is controlled by the uppermost clay configuration in the Jackson formation/Upper Claiborne group. The groundwater in the fluvial aquifer is not a drinking water source for area residents.

Groundwater elevations in the fluvial aquifer at the MI range from a high of approximately 240 ft mean sea level (msl) in the northeast to a low of approximately 195 ft msl in the central area. Groundwater elevations at Dunn Field range from a high of approximately 240 ft msl in the northeast to approximately 215 ft msl west of Dunn Field.

The intermediate aquifer (IAQ) is locally developed in Jackson Formation/Upper Claiborne group deposits, which contain laterally extensive, thick clay deposits. The uppermost clay unit appears to be continuous, except for a large gap in the MI's northwestern area and Dunn Field's southwestern area. There are other possible gaps in the clay off-site, west and northwest of Dunn Field. Where present, these gaps create connections to the underlying IAQ from the fluvial deposits. Water level elevations in the IAQ, away from areas of recharge from the fluvial aquifer, are approximately 160 ft msl.

The Memphis Sand primarily consists of thick-bedded, white to brown or gray, very fine-grained to gravelly, partly argillaceous and micaceous sand. The Memphis Sand ranges from 500 to 890 ft in thickness and begins at a depth below ground surface (bgs) of approximately 120 to 300 ft. The top of the Memphis Sand was identified at approximately 280 ft bgs (elevation of 15 ft above msl) in monitoring well (MW)-254 and MW-255 near the northwest corner of the MI. The Memphis aquifer (MAQ) is confined by overlying clays and silts in the Cook Mountain formation (part of the Jackson/Upper

Claiborne group) and contains groundwater under strong artesian (confined) conditions regionally. The City of Memphis obtains the majority of its drinking water from this unit. The Allen Well Field, which is operated by Memphis Light, Gas and Water, is located approximately 2 miles west of Dunn Field. The top of the MAQ potentiometric surface at MW-254 and MW-255 is approximately 160 ft msl.

1.3 REMEDIAL ACTION

1.3.1 Main Installation

Remedial action objectives (RAOs) for the MI were established in the *Main Installation Record of Decision* (MI ROD) (CH2M HILL2001). The groundwater RAOs are:

- to prevent human ingestion of water contaminated with volatile organic compounds (VOCs) in excess of maximum contaminant levels (MCLs) from potential future onsite wells;
- to restore groundwater to concentrations at or less than MCLs; and
- to prevent migration horizontally and vertically offsite of groundwater contaminants in excess of MCLs.

The groundwater remedy selected in the MI ROD was enhanced bioremediation treatment (EBT) with LTM and land use controls (LUCs). Enhanced bioremediation treatment was conducted from September 2006 to February 2009 in the most contaminated part of the plume within the MI and untreated parts of the plume were allowed to degrade under natural attenuation processes. Land use controls were implemented through deed and lease restrictions, zoning regulations, a Notice of Land Use Restrictions recorded in January 2005, and annual inspections since 2005. Long-term Monitoring has been conducted at the MI since 2004.

Enhanced bioremediation treatment reduced chlorinated VOC (CVOC) concentrations for parent compounds over 80 percent in wells with high baseline concentrations. Although the RAO of reducing concentrations below MCLs was not achieved, injections were halted based on the significant reduction in concentrations in the EBT areas, the lack of significant source areas in soil and the presence of similar low-level tetrachloroethene (PCE) concentrations in other groundwater plumes downgradient of treatment areas (TAs). The *Main Installation Interim Remedial Action Completion Report, Rev. 1* (MI IRACR) (HDR|e^{2}M 2010), including an Operating Properly and Successfully (OPS) determination, was approved by USEPA in March 2010.

Enhanced bioremediation treatment components were planned to be removed following a period of monitoring after the last injection in February 2009. However, system removal and well abandonment

were not performed because of rebound in CVOC concentrations observed in LTM samples. New baseline groundwater samples collected from the TAs in December 2011 confirmed rebound in CVOC concentrations.

The *Remedial Action Work Plan Addendum, Main Installation Revision 0* (MI RAWP Addendum) (HDR 2012c) describing procedures for additional EBT was submitted to USEPA and TDEC in November 2012. Additional EBT is being conducted in areas where individual CVOC concentrations of parent compounds (PCE, Trichloroethene [TCE] and carbon tetrachloride [CT]) exceed 100 micrograms per liter (µg/L): Target Treatment Area (TTA)-1, TTA-2, the west-central plume and the Bldg 835 plume. The number of injection wells was reduced because higher concentrations of sodium lactate can be used to provide an equivalent mass of carbon through fewer wells and less frequent injections. The number of performance MWs in the TAs was reduced based on past EBT results; overall progress toward RAOs will be evaluated through LTM outside the TAs. The initial round of quarterly injections was made in November 2012 and the initial performance monitoring will be conducted in February 2013.

1.3.2 Dunn Field

The *Record of Decision for Interim Remedial Action* was signed in April 1996 with the objective of hydraulic containment to prevent further contaminant plume migration and reduce contaminant mass in groundwater. The interim remedial action (IRA) groundwater recovery system included 11 recovery wells (RWs) screened in the fluvial aquifer along the western boundary of Dunn Field. Based on reduction of CVOC concentrations in groundwater following implementation of the Dunn Field Source Areas remedial action (RA), five RWs were shutdown in June 2008 and the remaining RWs were shutdown in January 2009. The IRA system was removed and the RWs abandoned in July 2010.

The groundwater RAOs established in the *Memphis Depot Dunn Field Record of Decision* (Dunn Field ROD) (CH2M HILL 2004a) are:

- to prevent human exposure to contaminated groundwater (i.e., exceeding protective target concentrations [TC])
- to prevent further off-site migration of VOCs in excess of protective target levels
- to remediate fluvial aquifer groundwater to drinking water quality to be protective of the deeper MAQ.

The selected remedies were modified through the *Dunn Field Record of Decision Amendment* (ROD Amendment) (e^2M, 2009) approved in January 2009. The remedies were implemented in three phases: Disposal Sites, Source Areas and Off Depot Groundwater.

The Disposal Sites RA included excavation and off-site disposal of soil and waste material from five sites and was completed in 2006. The *Disposal Site Remedial Action Completion Report* (MACTEC 2006) was approved in August 2006.

The Source Areas RA included soil vapor extraction (SVE) in the vadose zone and injection of zero valent iron (ZVI) in groundwater. The Fluvial SVE in fluvial soils (30 to 70 ft bgs) was operated from July 2007 to July 2012 and removed approximately 4,000 pounds of VOCs. Thermal SVE (in situ thermal desorption) was performed in the loess (0 to 30 ft bgs) from May to December 2008 and removed approximately 12,500 pounds of VOCs. ZVI injection was not required due to success of the SVE systems in reducing groundwater impacts. Excavation and off-site disposal of soil and waste material in two additional areas were also conducted in the Source Areas RA. The *Source Areas Interim Remedial Action Completion Report, Revision 1* (Source Areas IRACR) (HDR|e^2M 2009) was approved by USEPA and TDEC in November 2009.

The Off Depot Groundwater RA included installation of an air sparging with SVE (AS/SVE) system across the downgradient portion of the plume. The AS/SVE system has removed approximately 80 pounds of VOCs from startup in December 2009 through September 2012 and is meeting the treatment goals. Land use controls on Dunn Field and LTM in the Dunn Field area were also included in the Off Depot RA. Land use controls were implemented through deed restrictions, zoning regulations, a Notice of Land Use Restrictions recorded in June 2009, and annual inspections since 2009. Long-term Monitoring at Dunn Field was begun in 2010. The *Dunn Field Off Depot Groundwater Interim Remedial Action Completion Report, Revision 1* (Off Depot IRACR) (HDR 2011b) was approved by USEPA in August 2011 and by TDEC in November 2011.

All the remedies have been implemented. The *Preliminary Close Out Report* (USEPA 2010) was approved in May 2010 and the DDMT NPL site status was revised to Construction Complete. The Fluvial SVE (FSVE) system was shut down in July 2012 and LTM results at nearby wells are evaluated for potential rebound in CVOC concentrations. The AS/SVE system continues to operate and LTM results are used to evaluate system performance and the need for continued operation. The FSVE and the AS/SVE systems with nearby LTM wells are shown on Figures 2 and 3, respectively.

1.4 PREVIOUS GROUNDWATER MONITORING

1.4.1 Main Installation Long-term Monitoring

The MI LTM Plan established sampling frequency (biennial, annual, semiannual, or quarterly) and classifications for the 47 existing LTM wells. The well classifications are:

- Background – wells screened in the fluvial aquifer located along or outside the MI boundary; wells upgradient of or at a distance from groundwater plumes on the MI and Dunn Field; and wells with no, or low, previous detections of site constituents.
- Boundary – wells screened in the fluvial aquifer located along or outside the MI boundary to monitor constituent migration from off-site sources.
- Sentinel – wells screened within either the fluvial or IAQ adjacent to or within the window to the IAQ.
- Performance – wells screened in the fluvial aquifer and within the limits of known groundwater plumes.

Additional wells have been installed in phases since MI LTM was initiated in 2004. The wells exceeding MCLs are grouped into six plumes in the fluvial aquifer. Sentinel wells in the IAQ and the transition zone between the fluvial aquifer and the IAQ are listed separately.

Plume	Primary CVOCs
TTA-1 North	PCE
TTA-1 South	PCE, TCE
TTA-2	PCE, CT, CF
West Central	PCE
Building 835	TCE
North Central	TCE
Sentinel	PCE

Main Installation LTM during 2011 was described in *Main Installation Annual Long Term Monitoring Report-2011* (HDR 2012a). The report was approved by USEPA in April and by TDEC in May 2012.

There were 109 MI LTM wells in 2011. The well classifications were background (7), boundary (7), performance (71) and sentinel (24), and the sample frequency was biennial (12), annual (32) and semiannual (65). A semiannual sample event was conducted in April and an annual sample event was conducted in October 2011.

The extent and concentrations in the identified plumes were similar to LTM events in previous years. Rebound in concentrations of parent compounds in TTA-1 and TTA-2 was apparent in the 2011 LTM samples. Of the nine LTM wells within the former EBT areas, PCE concentrations were at 20 to 60 percent of the baseline concentrations (August 2006) in six wells, and near or above baseline concentrations in three wells.

PCE concentrations in sentinel well MW-202B, within the window, had increased to 27.1 in October 2011 and PCE concentrations in well MW-256, further downgradient, had increased to 20 µg/L since installation in 2010. Individual CVOC concentrations in the two MAQ wells, MW-254 and MW-255, remained at concentrations from non-detect to near 2 µg/L.

Three additional MWs were recommended in the 2011 MI LTM report to provide information on site hydrogeology and contaminant extent. The well locations and data quality objectives (DQOs) are:

- MW-257 to confirm the upgradient limit of the Building 835 TCE plume.
- MW-258 to evaluate potential for a plume upgradient of MW-107 and MW-214A/B which had increasing concentrations in 2011.
- MW-259 to clarify the direction and extent of contaminant migration from TTA-2.

Proposed well locations were confirmed in a conference call on 7 March 2012 with TDEC and the USEPA.

Changes to well classification and sample frequency were also recommended: well MW-143 was re-classified from boundary to performance (Building. 835 plume) with semiannual sample frequency; sentinel well MW-107 and performance wells MW-214 A/B were changed from annual to semiannual sampling because of increased concentrations and sentinel wells MW-34, MW-38 and MW-229 were changed from annual to biennial sampling due to consistent analytical results from non-detect to near 1 µg/L.

The groundwater sampling procedure was recommended to be changed from low-flow sampling to passive diffusion bags (PDBs). Passive diffusion bags have been used for most Dunn Field MWs since 2001. Field water quality measurements collected during low-flow sampling on the MI were used in evaluation of aerobic/anaerobic aquifer conditions, but the presence of daughter compounds (cis-1,2-Dichloroethene [cDCE] and vinyl chloride [VC]) in laboratory analyses provide a better indication. Low-flow sampling with measurement of field parameters will be performed in wells used for additional EBT.

Low-flow sampling or bailers will be used where well diameter or saturated screen thickness is not sufficient for PDBs.

One recommendation from the 2010 LTM report, abandonment of well Piezometer (PZ)-06, was not accomplished in 2011 or 2012; PZ-06 will be abandoned in 2013 during abandonment of Dunn Field wells.

1.4.2 Dunn Field Long-term Monitoring

Regular groundwater monitoring in the Dunn Field area at DDMT was performed as part of the IRA from 1999 through 2009. Beginning in 2010, groundwater monitoring was conducted in accordance with the Off Depot Groundwater RD and consisted of performance monitoring in the AS/SVE area and LTM in the remainder of the plume.

The Dunn Field LTM plan classified the MWs in three categories:

- Background – wells screened in the fluvial aquifer located along or outside of the Dunn Field boundary; located upgradient to or at a distance from contaminant plumes on Dunn Field; no (or only low-level) previous detections of site contaminants in well samples.
- Sentinel – wells screened within either the fluvial or IAQs adjacent to or within a window to the IAQ.
- Performance – wells screened in the fluvial aquifer; located within the limits of known contaminant plumes; or repeatedly have contaminants in samples; located in areas targeted for treatment during the RA.

The LTM plan established an initial sampling frequency for 58 existing wells: biennial, annual and semiannual. Another 20 MWs were used for water level measurements during LTM events. The 36 performance monitoring wells (PMWs) were sampled quarterly in 2010 and semiannually in 2011; the PMWs were incorporated into LTM in 2012.

Performance monitoring and LTM during 2011 was described in *Off Depot Annual Groundwater Monitoring Report-2011, Rev.1* (HDR 2012b). The report was approved by USEPA in April and by TDEC in May 2012.

Changes to sample frequencies recommended for several wells in the 2010 Off Depot LTM report were implemented in 2011. In addition, MW-175 was omitted from sampling in 2011 because it had been damaged during thermal SVE in 2008.

There were 57 Dunn Field LTM wells in 2011. The well classifications were background (9), performance (35) and sentinel (13), and the sample frequency was biennial (26) and annual (31). All LTM wells were sampled during a biennial event in March-April; no LTM wells were sampled for the semiannual event in September 2011. The 36 PMWs were sampled in March-April and September 2011.

The treatment goal for the AS/SVE system is to reduce individual CVOC concentrations to 50 µg/L or less, and the system will continue to operate until concentrations in upgradient wells do not exceed 50 µg/L for individual CVOCs. In addition, individual CVOC concentrations in wells on Dunn Field are not to exceed 50 µg/L after the Source Areas RA unless the groundwater will pass through the AS/SVE system. No LTM wells contained individual CVOC concentrations above 50 µg/L in March-April 2011; only three PMWs exceeded the treatment goal in September 2011.

The AS/SVE system in combination with natural attenuation processes is expected to reduce groundwater concentrations to MCLs within a reasonable period of time. In March-April 2011, five LTM wells had primary CVOC concentrations above an MCL or the TC for 1,1,2,2-Tetrachloroethane (TeCA). Four of the wells (MW-32, MW-144, MW-184 and MW-190) are located west of Dunn Field in the central portion of the Off Depot plume; CVOC concentrations in all four wells exceeded the MCL for TCE and the TC for TeCA. The fifth well (MW-51) is located north of Dunn Field, within the plume originating from an off-site source northeast of Dunn Field; CVOC concentrations exceeded the MCLs for TCE and 1,1-Dichloroethene (DCE). In September, an MCL or the TC for TeCA was exceeded for one or more CVOCs in 17 PMWs: TeCA (15 wells), 1,1,1-Trichloroethane (TCA) (1 well), DCE (1 well), CT (1 well), PCE (1 well), TCE (13 wells) and VC (1 well). In both sample events, TeCA and/or TCE was one of the exceedances in each well.

In order to incorporate the PMWs in Dunn Field LTM, historical results were reviewed for the 113 MWs in the Dunn Field/Off Depot area, including 57 LTM wells, 20 water level-only LTM wells, and 36 PMWs. Based on criteria from the Off Depot LTM plan, 87 wells were recommended for LTM and 26 wells were recommended for abandonment in addition to MW-175. The selected wells are to be abandoned in 2013.

2.0 LONG-TERM MONITORING ACTIVITIES

Long-term monitoring activities during 2012 consisted of installation, development and sampling of three MWs on the MI and monitoring designated LTM wells at the MI and Dunn Field during sampling events in April and October. Field activities and laboratory analyses were performed in accordance with the *Remedial Action Sampling and Analysis Plan, Rev. 1* (RA SAP) (MACTEC 2005) and the *Remedial Action Operations and Long Term Monitoring Quality Assurance Project Plan, Rev. 0* (QAPP) (HDR 2011c). The QAPP is consistent with the RA SAP but has not received final approval.

In 2012, MI LTM included 112 wells classified as Background (6), Boundary (7), Performance (72) and Sentinel (24); three new wells installed in March 2012 have not been classified. The sample frequency for the new wells will be determined after four semiannual sample events. The remaining 109 wells have the following sample frequency: biennial (15 wells), annual (26 wells) and semiannual (68 wells). The MI LTM wells are listed on Table 1 and the locations are shown on Figure 4. The well classification, sample frequency, and 2012 sampling events are shown on Table 2.

In 2012, Dunn Field LTM included 87 wells classified as Background (8), Background-NE (5), Performance (51), Performance-FSVE (14) or Sentinel (9). The Background-NE wells are located on or bordering the northeast section of Dunn Field and have CVOC concentrations from an off-site source(s) upgradient of Dunn Field. The Performance-FSVE wells are performance wells selected for rebound monitoring after shut down of the FSVE system in July 2012. The wells are assigned semiannual (42), annual (33) or biennial (12) sample frequencies. The Dunn Field LTM wells are listed on Table 3 and the locations are shown on Figure 5. The well classification, sample frequency, and 2012 sampling events are shown on Table 4.

2.1 WELL INSTALLATION

Three MWs were installed in March 2012 to provide information on site hydrogeology and contaminant extent; the new well locations are shown on Figure 4. Well installation data are provided on Table 5.

The well locations were marked by HDR on 16 March and the locations were cleared for utilities by Tennessee One Call on 23 March. Well construction permits were issued by the Memphis Shelby County Health Department on 19 March. The wells were installed by WDC from 26 to 30 March 2012. A Tennessee-licensed HDR field geologist was present during drilling to record field observations and to log the soil core.

Borings were advanced 5 to 10 ft into the uppermost clay of the Jackson Formation/Upper Claiborne Group using rotasonic drilling methods with a 6-inch outer core barrel and a 4-inch inner core barrel. Continuous soil cores were collected from ground surface to the termination depth of each boring. The borehole at MW-257 was backfilled with bentonite to approximately 1 foot below the top of the clay and 1 foot of sand was added prior to setting the well. Flowing sands filled the borehole at MW-258 before the bentonite could be placed. The borehole at MW-259 was drilled approximately 25 ft deeper than planned because of the depth to top of clay; the fluvial sands were allowed to fill the borehole as the drill casing was withdrawn to the planned well depth. Soil boring logs are provided in Appendix A.

Monitoring wells were constructed with new, unused, decontaminated 2-inch inside diameter (ID) schedule 40 PVC with internal-threaded flush joints using 10-foot sections of well casing, 5-foot and 10-foot sections of 0.010-inch factory-slotted well screen, and an end cap. Centralizers were used in all wells and placed at 30-foot intervals on the casing, starting above the well screen. A filter pack of clean, 8-16 grade, inert, hard, well-rounded sand (less than 2 percent flat particles) was placed from the bottom of the well to approximately 5 ft above the top of the well screen. A 5-foot thick bentonite seal was placed above the filter pack and allowed to hydrate for a minimum of 1 hour prior to installation of the grout seal. The annular space was filled with a cement-bentonite grout mixture to approximately 6 inches below the ground surface. All wells had flush-mount completions with an 11-inch ID manhole set within a 3-foot by 3-foot by 0.5-foot thick concrete pad. Steel bollards filled with concrete were placed around MW-257 for additional protection. Well installation diagrams are provided in Appendix B.

The wells were developed at least 24 hours after installation. The wells were initially developed using a Typhoon submersible pump, but it did not provide an adequate pumping rate; well development was completed with a new Grundfos pump. The wells were surged by manually raising and lowering the pump. Water quality measurements were made to evaluate well development in accordance with the following criteria: stabilized turbidity less than 10 nephelometric turbidity units (NTU), pH within 0.1 standard units, and temperature and specific conductance within 10 percent for three consecutive readings. All wells met the development criteria. A well development summary with volume purged and final stabilization parameters is provided on Table 6.

The completed wells were surveyed for location and elevation (ground surface and top of casing) by a Tennessee-licensed surveyor from Allen and Hoshall on 4 April 2012. Horizontal and vertical coordinates are based on the North American Datum, 1927 used for all survey data at DDMT. Horizontal coordinates are provided in the Tennessee State Plane coordinate system. The survey plats are provided in Appendix C.

2.2 GROUNDWATER MONITORING

Groundwater levels were measured in all LTM wells on the MI and Dunn Field prior to sampling during the two events. Measurements were made using Solinist Model 101 water level meters with electronic sensors and tapes graduated in 0.01-foot increments. The water level measurements are listed on Table 7 for the MI and on Table 8 for Dunn Field.

Groundwater samples were collected using either PDBs or low-flow purging methods. If saturated thickness of the well screen was greater than 5 ft, a PDB was used. If the saturated thickness was less than 5 ft or a PDB was not suitable for other reasons, the well was identified for low-flow sampling.

When samples were collected using a PDB, a sample of water from the PDB removed from the well was transferred to 40-milliliter vials preserved with hydrochloric acid. Following sample collection, a new PDB was filled with de-ionized water and placed in the middle of the saturated section of well screen. Water quality parameters were not measured prior to sampling wells with PDBs.

When samples were collected using bladder pumps and low-flow purging methods, dedicated Teflon® bladders and Teflon®-lined polyethylene tubing were used. The pumping rate at each well was monitored in order that the water levels not decline more than 4 inches (0.1 meter). Following sampling, the bladder and tubing for each well were placed in separate, sealed plastic bags and stored for future sampling events. Water quality parameters were measured at approximately 5 to 10 minute intervals during purging using a flow-through cell with a YSI 6550 meter. Wells sampled with a bailer had stabilization parameters collected using the same instrumentation; a sampling cup was filled from the bailer and a set of stabilization parameters were collected for every well volume. The YSI meter was calibrated each morning prior to sampling, and if abnormal readings were observed during the day, the instrument was recalibrated in the field. 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, 3 percent for specific conductance, 10 percent for dissolved oxygen and less than 20 NTU for turbidity. Temperatures were also measured and recorded, but not used as a stabilization parameter. All measurements were noted on the field sampling forms. Samples were collected in 40-milliliter vials preserved with hydrochloric acid when stabilization criteria were met or the field team leader approved a variance from the criteria.

Samples were sent to Microbac Laboratories in Marietta, Ohio for VOC analysis by Method SW8260B. The activities during the two sampling event are summarized in the following sections.

2.2.1 April 2012

Groundwater levels were measured in LTM wells at both the MI and Dunn Field on 16 to 17 April. Measurements were made using Solinist Model 101 water level meters with electronic sensors and tapes graduated in 0.01-foot increments. Water levels were measured at all LTM wells, except MW-32 and MW-33 at Dunn Field. The water level measurements are shown on Table 7 for the MI and Table 8 for Dunn Field.

During the September 2011 LTM event, MW-32 was found to have a break near 1 foot bgs and to be blocked with soil near 20 ft bgs. The drilling subcontractor for the new MI wells attempted to clear and repair the well in March 2012. A tremie pipe was used to jet water into the well casing to remove soil and an object, possibly the well cap, blocking the well; the blockage could not be removed or pushed below the well screen. MW-32 will be abandoned with other selected Dunn Field wells in 2013. Access to MW-33 is blocked by material placed by a nearby resident; requests to the City of Memphis to clear the debris from the city right of way have not been successful.

2.2.1.1 Main Installation

Most of the 112 MI LTM wells were changed from low-flow sampling to PDBs in March 2012. Low-flow sampling will continue in wells used for EBT, in newly-installed wells and in wells where well diameter or saturated screen thickness is not sufficient for PDBs.

Dedicated bladder pumps were removed from the selected LTM wells and tethers constructed to locate the PDB near the middle of the saturated screen were installed 21-24 March 2012. The removed bladder pumps were cleaned and stored for later use or recycling. Passive diffusion bags were installed in 85 of 86 designated LTM wells; the dedicated bladder pump in MW-100B could not be pulled from the well and was pushed back to the sample depth. Water levels and total depths were measured prior to installation of the PDBs. The water levels were consistent with previous measurements and most total depths were within 2 ft of recorded depths from well installation data. The total depth of MW-63A was recorded as 150 ft below top of casing (btoc) but was measured at 140 ft, btoc. The recorded boring depth was 145 ft, bgs and the screen length as 10 ft; the screen interval was assumed to be 130-140 ft, btoc and the PDB was installed at 135 ft, btoc. The PDB in MW-104 was raised 2 ft because of sediment at the bottom of the well.

Semiannual groundwater sampling was conducted with samples collected from the 68 designated wells and the three new wells on 20-23 April 2012. There were 73 groundwater samples collected; samples were collected from two screened intervals at MW-101 and MW-107.

Groundwater samples were collected from 47 wells using PDBs. The sample intervals are shown on Table 9.

Groundwater samples were collected from 21 wells using a bladder pump and low-flow purging methods. Three wells (MW-62, MW-212 and MW-213) were sampled with a Teflon® bailer due to thin saturated layer and slow recharge. The final stabilization measurements are shown on Table 10. The following samples were collected without meeting the stabilization criteria:

- Samples were collected from MW-62, MW-212 and MW-213 with turbidity values out of range. The wells were purged and sampled with bailers after three well volumes had been drawn from the well.
- Samples were collected from MW-258 and MW-259 with turbidity values of 105 and 195 NTU. The wells were sampled after purging for two hours.
- A sample was collected from MW-100B without removing 3 liters. The air line was apparently pinched during the attempt to remove the pump and the purge rate was only 20 milliliters per minute. The well was sampled after purging for two hours.

Following sampling, PDBs were installed in the new wells, MW-257 to MW-259, with tethers constructed to locate the PDB near the middle of the saturated screen.

2.2.1.2 Dunn Field

Long-term monitoring wells previously used only for water level measurements were selected for sampling. Passive diffusion bags were installed in 14 wells on 24 March 2012 using tethers constructed to locate the PDB near the middle of the saturated screen. Water levels and total depths were measured prior to installation of the PDBs. The water levels and total depths were generally consistent with previous measurements and well installation data. The total depth at MW-07 was measured to be approximately 4 ft less than recorded, and the PDB was raised 3 ft.

Annual groundwater sampling was conducted with samples collected from 74 of 75 designated wells on 17 to 20 April 2012. MW-32 was omitted from sampling due to the blockage in the well

Groundwater samples were collected from 67 wells using PDBs. The sample intervals are shown on Table 11.

Groundwater samples were collected from 7 wells using a bladder pump and low-flow purging methods. Samples were collected when stabilization criteria were met. The final stabilization measurements are shown on Table 12.

2.2.2 October 2012

Groundwater levels were measured in LTM wells at Dunn Field on 16 October and at the MI on 17 to 18 October. Measurements were made using Solinist Model 101 water level meters with electronic sensors and tapes graduated in 0.01-foot increments. Water levels were measured at all LTM wells, except MW-32 and MW-33 at Dunn Field and PMW92-06 at the MI. The water level measurements are shown on Table 7 for the MI and Table 8 for Dunn Field.

MW-32 was not usable and MW-33 was blocked by debris, as described for the April 2012 LTM event. PMW92-06 was initially identified for use in EBT; following discussions with USEPA and TDEC, PMW85-05 was selected for EBT and PMW92-06 was abandoned in June 2012. A water level was not collected at PMW85-05.

2.2.2.1 Main Installation

Biennial groundwater sampling was conducted with samples collected from 111 of 112 designated wells on 19 to 22 October 2012. PMW-85-05 was sampled as a replacement for PMW92-06, which was abandoned. There were 114 groundwater samples collected; samples were collected from two screened intervals at MW-101 and MW-107.

Groundwater samples were collected from 89 wells using PDBs, with a total of 91 samples. The sample intervals are shown on Table 9.

Groundwater samples were collected from 19 wells using a bladder pump and low-flow purging methods. Four wells (MW-62, MW-212, MW-213 and PZ-03) were sampled with a Teflon® bailer due to well casing diameter, thin saturated layer and/or slow recharge. The final stabilization measurements are shown on Table 13. The following samples were collected without meeting the stabilization criteria:

- Samples were collected from MW-62, MW-212, MW-213 and PZ-03 with turbidity of 92.6 to 414 NTU. The wells were purged and sampled with bailers after three well volumes had been drawn from the well.

2.2.2.2 Dunn Field

Semiannual groundwater sampling was conducted with samples collected from 41 of 42 designated wells on 16 to 17 October 2012. The MW-32 was omitted from sampling due to the blockage in the well.

Groundwater samples were collected from all wells using PDBs. The sample intervals are shown on Table 11.

2.3 WASTE DISPOSAL

The waste generated during LTM activities in 2012 was classified as either non-investigative waste or investigation-derived waste (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. The IDW consisted of soil cuttings from the MW borings, waste water from equipment decontamination, and groundwater from well development, purging prior to sampling and excess water in PDBs.

The soil cuttings were spread in low areas on Dunn Field. Wastewater from decontamination of the drill rig and down hole equipment prior to drilling and for well construction materials prior to well installation was collected and transferred to the SVE condensate storage tank on Dunn Field. Groundwater from well development was also transferred to the storage tank. Groundwater from sampling in April and October 2012 was collected in five gallon buckets with lids and also added to the condensate storage tank.

Accumulated waste water from SVE condensate, well installation and development and sampling activities was discharged from the 20,000 gallon storage tank in June 2010. A grab sample was collected on 24 May 2012; the sample met TDEC discharge requirements and approximately 11,500 gallons of water was discharged to the storm sewer on 14 to 15 June.

Following shutdown of the FSVE system, the 20,000-gallon storage tank was picked up by the vendor in August 2012. Smaller tanks are being used for storage of AS/SVE condensate and waste water from sampling. When the storage tank nears capacity, the waste water will be analyzed and, if concentration limits are met, discharged to the storm sewer per agreement with TDEC.

3.0 SUMMARY OF MONITORING RESULTS

3.1 HYDROGEOLOGY

Water level measurements for the 2012 LTM events are shown on Table 7 for the MI and on Table 8 for Dunn Field.

3.1.1 Main Installation

Soil borings for the new MWs were drilled into the upper clay of the Jackson Formation/Upper Claiborne Group that forms the base of the fluvial aquifer. The groundwater and top of clay elevations and the resulting fluvial aquifer saturated thickness were estimated from nearby wells prior to field work. The actual saturated thickness was greater than estimated at each location, as shown below.

Well	Water Level Elevation (ft, msl)		Top of Clay Elevation (ft, msl)		Saturated Thickness (ft)	
	Estimated	Actual	Estimated	Actual	Estimated	Actual
MW-257	204	203.7	200	192.7	4	11.0
MW-258	212	227.1	195	199.8	17	27.3
MW-259	199	197.5	187	155.4	12	42.1

The water level was higher than estimated at MW-258 and the top of clay was deeper than estimated at MW-257 and MW-258. An updated top of clay map is provided on Figure 6. The main differences from the previous version included in the 2010 MI LTM report are a trough in the clay extending southeast from the window toward MW-259 and a steeper decline in the top of clay west of MW-258.

Groundwater elevations for MI LTM wells, with contours for the fluvial aquifer and the IAQ within the window, are shown on Figures 7 and 8. The groundwater elevation contour maps are similar to those from previous LTM events, except that the groundwater elevation MW-258 in the north-central MI results in a lower gradient to the northeast and a steeper gradient southwest toward the 'window'. Groundwater flow near TTA-1 is to the northeast with an approximate gradient of 0.003 in April and October (DR1-5A to MW-197B). The groundwater flow near TTA-2 is to the west-southwest with an approximate gradient of 0.018 in April and October (DR2-1 to MW-26). The gradient in the 'window' is to the northwest with an approximate gradient of 0.026 in April and 0.025 in October (MW-90 to MW-140).

Groundwater elevations for IAQ and MAQ wells are shown on Figures 9 and 10 with more extensive contours. The water levels for the IAQ indicate flow is generally to the northwest. The water levels in the three deepest wells show the gradient is to the west, from MW-140 to MW-254.

3.1.2 Dunn Field

Dunn Field groundwater contour maps for each event are shown on Figures 11 and 12. The groundwater elevation contour maps are similar to previous LTM events. Groundwater flow is generally to the west on Dunn Field. The maps show a trough in groundwater elevations near MW-246 approximately 1,000 ft west of Dunn Field, with flow diverging to the north and south. The AS/SVE system is located on the eastern side of the trough

Groundwater elevations in the fluvial aquifer are highest northeast of Dunn Field (MW-130: 238.8 ft msl in April and 237.9 msl in October) and decrease toward the trough west of Dunn Field (MW-165: 217.9 ft msl in April and 217.4 ft msl in October).

The groundwater elevations in IAQ wells away from the 'windows' providing connection with the fluvial aquifer were approximately 166-167 ft msl in April and 161-162 ft msl in October. The groundwater elevation in MW-67, which is screened in the Memphis Sand, was approximately 166.5 ft msl in April and 161.3 ft in October.

3.2 DATA QUALITY EVALUATION

Data collected during the 2012 LTM events were reviewed based on guidelines in the RA SAP and the QAPP. Data review was performed by an independent data validation contractor, Diane Short and Associates, Inc. The complete analytical results with data quality evaluation (DQE) flags are presented for each sample event in Appendix D.

Overall, the VOC data from the LTM events met project DQOs and were determined to be sufficient to support the evaluation of RA. The complete DQE for 2012 LTM is provided in Appendix E. The main findings from the DQE for the MI and Dunn Field are summarized separately below.

3.2.1 Main Installation

Based on the review and the project DQOs, the MI data are acceptable and usable. No data were rejected. The primary causes of the qualified data are described below.

- TCE was qualified as estimated J in one sample (MW-258-LS-15) and 1,2-dibromoethane (EDB) and methyl isobutyl ketone (MIBK) were qualified as non-detect estimated (UJ) in one sample (MW-88-LS-15) in the April 2012 event due to low Matrix Spike/Matrix Spike Duplicate recoveries. TCE was qualified as estimated J in one sample (MW-217-LB-16) and CT and PCE were qualified as estimated J in one sample (DR2-6-LB-16) in the October 2012 event due to low

MS/MSD recoveries. The sample results could be biased low approximately proportional to the recoveries.

- When a high Laboratory Calibration Standard (LCS) recovery is associated with a non-detect in samples, no qualifier is added since the indicated bias is high. When the analyte is detected, the result is qualified as J and data could be biased high proportional to the LCS %R. All results associated with low recoveries are qualified J. EDB in 24 samples was qualified UJ in the April 2012 event due to low LCS recoveries. Carbon disulfide in one sample (PMW-85-05-LB-16) was qualified J in the October 2012 event based on an elevated LCS recovery, and data could be biased high proportional to the LCS %R. EDB and carbon disulfide are not contaminants of concern and will not impact the use of the data.
- Bromomethane, chloromethane, dichlorofluoromethane and chloroethane were non-detect and qualified UJ in several samples in the April 2012 event due to high percent difference with low response in continuing calibration standards.
- Nine CT results were qualified J in the April 2012 event due to low results in the continuing calibration standard. Methyl tert-butyl ether (MTBE) was detected and qualified J in 11 samples in the October 2012 event due to elevated response in continuing calibration standards.
- Twelve chloroform (CF) results and one toluene result were qualified (B) for equipment blank contamination in the April 2012 event. The sample results could be biased high.
- VC was qualified J in two samples in the October 2012 event due to an elevated relative standard deviation (RSD) in the initial calibration.
- Any result reported below the reporting limit (RL) but above the method detection limit (MDL) was qualified J and considered an estimated result (unless overridden by other QC flags).

3.2.2 Dunn Field

Based on the review and the project DQOs, the Dunn Field data are acceptable and usable. No data were rejected. The primary causes of the qualified data are described below.

- Any result reported below the RL but above the method detection limit was flagged “J” and considered an estimated result (unless overridden by other QC flags).

3.3 ANALYTICAL RESULTS

The complete analytical results are shown in Appendix D. Summary tables for each sampling event list the analytical results for the primary CVOCs and for other VOCs detected above the RL in one or more samples.

3.3.1 Main Installation

The primary CVOCs for the MI are PCE, TCE, cDCE, CT, CF and VC. The MCLs are shown on the summary tables.

3.3.1.1 April 2012

Groundwater samples were collected from 71 LTM wells for the semiannual event in April 2012. A total of 73 groundwater samples were collected; samples were collected from two screened intervals in MW-101 and MW-107. Table 14 lists the analytical results for the primary CVOCs and for other VOCs detected above the RL in one or more samples. A summary of analytical results for the primary CVOCs is provided on Table 15.

3.3.1.2 October 2012

Groundwater samples were collected from 112 LTM wells for the biennial event in October 2012. A total of 114 groundwater samples were collected; samples were collected from two screened intervals in MW-101 and MW-107. Table 16 lists the analytical results for the primary CVOCs and for other VOCs detected above the RL in one or more samples. A summary of analytical results for the primary CVOCs is provided on Table 17.

3.3.2 Dunn Field

The primary CVOCs for Dunn Field are CT, CF, DCE, tDCE, cDCE, TeCA, PCE, TCA, and TCE; VC, a significant CVOC degradation product, is also included. The MCLs and groundwater TCs from the Dunn Field ROD are shown on the summary tables.

3.3.2.1 April 2012

Groundwater samples were collected from 74 LTM wells for the annual event in April 2012. Table 18 lists the analytical results for the primary CVOCs and for other VOCs detected above the RL in one or more samples. A summary of the primary CVOC results is provided on Table 19.

3.3.2.2 October 2012

Groundwater samples were collected from 41 LTM wells for the semiannual event in October 2012. Table 20 lists the analytical results for the primary CVOCs and for other VOCs detected above the RL in one or more samples. A summary of the primary CVOC results is provided on Table 21.

3.4 PLUME MAPS AND CROSS-SECTIONS

3.4.1 Main Installation

PCE, TCE and CT isoconcentration maps are shown on Figures 13, 14 and 15 for the April 2012 LTM semiannual samples and on Figures 16, 17 and 18 for the October 2012 LTM annual samples. The isopleths, indicating plume extent, were based on concentrations in adjacent wells with limited consideration of groundwater gradient. Concentrations in adjacent wells were generally assumed to have the same source even with distances of a few hundred feet between the wells.

Three new fluvial aquifer wells were sampled for the first time in April 2012.

- MW-257 was installed to confirm the upgradient limit of the Building 835 TCE plume. Chlorinated VOCs were not detected above RLs in the April or October samples, and the well appears to be upgradient of the TCE plume. MW-143 contained TCE near 13 µg/L in the 2012 samples, similar to previous results. Intermediate aquifer well MW-253 was non-detect for TCE in both samples, as compared to results of 8-10 µg/L in 2011; this decrease could be related to use of PDBs instead of low-flow sampling.
- MW-258 was installed to evaluate potential for an upgradient source impacting wells MW-107 and MW-214A/B near the window. PCE and TCE were detected at 19.4 µg/L and 57.7 µg/L in April and 22.1 µg/L and 93 µg/L in October 2012. The groundwater elevation contours indicate a steep gradient west of the well. The October 2012 samples at upgradient wells MW-103 and MW-104 contained TCE at 10.6 µg/L and 21.9 µg/L, respectively, but were non-detect for PCE. The results at MW-258 indicate an additional contaminant source impacting that area.
- MW-259 was installed to clarify the direction and extent of contaminant migration from TTA-2. The 2012 samples contained PCE near 15 µg/L, TCE near 16 µg/L and CT below 5 µg/L. The well appears to be in the downgradient area of the plume originating at TTA-2.

The isopleths are generally similar to those from previous LTM sampling events, with the additional information provided by the new wells.

The PCE plume in the IAQ, as indicated by the isopleths in Figures 13 and 16, extends to the northwest property boundary based on reported concentrations in IAQ well MW-256 (34.3 µg/L in April and 39.5 µg/L in October 2012); TCE is present at lower concentrations (7.82 µg/L in April and 13.7 µg/L in October 2012). Both PCE and TCE concentrations have increased since the initial sample in August 2010 (8.73 µg/L and 2.43 µg/L, respectively). PCE has not been detected above the RL in the nearby MAQ wells, MW-254 and MW-255; TCE has been detected from below the RL to 2.5 µg/L.

The 2012 analytical results for PCE and TCE in IAQ and MAQ wells are shown in cross-section on Figures 19 and 20. PCE concentrations are higher in the wells screened in the upper portion of the IAQ.

3.4.2 Dunn Field

Total CVOC concentrations for the April and October sample events are shown on Figures 21 and 22. The total CVOC concentrations demonstrate continued reduction in the Off Depot plume due to the Source Areas and Off Depot RAs. The 50 µg/L contour for total CVOCs indicates the progress toward the active treatment goal of reducing individual CVOC concentrations below 50 µg/L.

The highest total CVOC concentration in both sample events was at MW-159, which is immediately upgradient of the AS/SVE system; the concentrations were 389 µg/L in April and 335 µg/L in October 2012. This was an increase from 311 µg/L in September 2011.

Total CVOC concentrations decreased in wells on the southwest side of the AS/SVE system where plume diversion, due to reduced permeability caused by AS, has been suspected. Air sparging with SVE system operations were modified in June 2012 to reduce AS operation on the eastern end where CVOC concentrations were below the treatment goal; approximately 25% of the AS points were closed and 20% were reduced to half-time operation. Total CVOC concentration at MW-149, located south of MW-159, decreased to 18.6 µg/L in October from 29.1 µg/L in April 2012; the concentration was 143 µg/L in April 2011. The total CVOC concentration at MW-166, located at the southwest edge of the AS/SVE system, decreased to 24.1 µg/L in October from 66.0 µg/L in April 2012; the concentration was 183 µg/L in April 2011.

Total CVOC concentrations had previously increased at MW-249, southwest of the AS/SVE system, due to apparent contaminant migration. In 2012, the total CVOC concentration decreased from 43.2 µg/L in April to 27.1 µg/L in October; the concentration had increased from 6.2 µg/L in April 2011. Total CVOC concentrations decreased in almost all other LTM wells at Dunn Field and the Off Depot area; the overall extent of the plume originating on Dunn Field continued to decrease.

Several wells in the northern area of Dunn Field and off site were sampled in April 2012 for the first time in a few years. The results on Figure 21 clearly show contaminant migration on to Dunn Field.

The primary CVOCs detected most frequently above the MCL or the TC for TeCA in 2012 are shown on Tables 19 and 21. Concentrations and isopleths are shown for April 2012 TeCA, TCE, PCE and DCE results on Figures 23 to 26 and for October 2012 TeCA and TCE results on Figures 27 and 28. Each figure includes a 50 µg/L isopleth to show where the active treatment objective has not been met and an isopleth at both the TC and MCL, where applicable, to show where that RAO has not been met. TeCA (Figures 23 and 27) and TCE (Figures 24 and 28) are the only CVOCs with significant areas above the MCL or TC. MW-159 was the only LTM well in the Source Areas on Dunn Field or the Off Depot area to exceed the treatment goal; TCE concentrations were 275 µg/L in April and 247 µg/L in October 2012.

3.5 WELL CLASSIFICATION REVIEW

3.5.1 Main Installation

There are 112 wells included in MI LTM. The current well classifications are shown on Table 2: 6 background wells, 7 boundary wells, 72 performance wells and 24 sentinel wells. The three new wells (MW-257 to MW-259) have only been sampled twice and have not been classified. However, for the purpose of this review, the wells are tentatively classified as performance wells based on their locations in the fluvial aquifer within or adjacent to known groundwater plumes. Analytical results for the individual well classifications in 2012 LTM events are summarized in the following sections. Historical analytical results for the primary CVOCs in all MI LTM wells are provided in Appendix F. Time trend plots for primary CVOCs where one or more were detected above MCLs in MI LTM wells are provided in Appendix G.

3.5.1.1 Background Wells

There are six LTM background wells screened in the fluvial aquifer located along or outside the MI boundary; wells upgradient of or at a distance from groundwater plumes on the MI and Dunn Field; and wells with no, or low, previous detections of site constituents. The background wells are MW-16, MW-19, MW-53, MW-55, MW-66A and MW-99. No background wells were sampled in April, but all were sampled in October 2012.

Chlorinated VOCs were not detected above RLs in MW-16 and MW-55. MW-53 and MW-66A contained low levels of PCE (near 2 µg/L), and MW-19 and MW-99 contained low levels of CF (near 0.3 µg/L).

The results are similar to past results, except that CVOCs have not been detected above the RL at MW-19 previously.

3.5.1.2 Boundary Wells

There are seven LTM boundary wells screened in the fluvial aquifer located along or outside the MI boundary to monitor constituent migration from off-site sources. The boundary wells are MW-22, MW-23, MW-24, MW-50, MW-93, MW-102B, and MW-219. MW-219 was sampled in April and all boundary wells were sampled in October 2012.

No CVOCs were detected above RLs in MW-22, MW-23, MW-24, MW-93 and MW-102B. MW-50 contained low levels of CF and TCE (below 3µg/L). The results are similar to past results, except that concentrations of CF and TCE at MW-50 were higher in the latest sample.

MW-219, located immediately upgradient of TTA-1 North contained PCE at 11 µg/L in April and at 25.2 µg/L in October 2012; TCE and cDCE were also detected at low levels (below 3µg/L). PCE concentrations were higher than in 2011 (4.55 µg/L and 6.51 µg/L); the highest PCE concentration in MW-219 was 48 µg/L in January 2008. The results at MW-219 indicate potential plume migration on to the MI.

3.5.1.3 Sentinel Wells

There are 24 LTM sentinel wells screened within either the fluvial, intermediate or Memphis aquifers adjacent to or within the window. The sentinel wells are MW-34, MW-38, MW-63A/B, MW-89, MW-90, MW-107, MW-108, MW-140, MW-141, MW-199A, MW202A/B, MW-207A/B, MW-209A, MW-210A, MW-211, MW-229 and MW-252 to MW-256. Thirteen sentinel wells were sampled in April and all sentinel wells were sampled in October 2012.

Primary CVOCs were not detected above RLs in four sentinel wells (MW-211, MW-229, MW-253 and MW-255). At MW-253, TCE exceeded the MCL in 2011 but was not detected in 2012. The remaining sentinel wells had CVOCs detected above the RLs and nine wells (MW-90, MW-107, MW-108, MW-141, MW-202B, MW-207A/B, MW-210A and MW-256) had PCE and/or TCE at concentrations above the MCL. The highest concentrations were at MW-207B (PCE at 124 µg/L and TCE at 30.5 µg/L) in April and at MW-107B (PCE at 46.5 µg/L) and MW-108 (TCE at 31.5 µg/L) in October. Chlorinated VOC concentrations, which have been variable at MW-207B, decreased 10-fold in October (PCE at 11.8 µg/L and TCE at 3.24 µg/L). The sample frequency at MW-107 was changed from annual to semiannual

in 2012 due to increased PCE and TCE concentrations in both screened intervals. Concentrations were slightly higher in 2012 with PCE at 36.5 to 62.5 µg/L and TCE at 3.17 to 4.15 µg/L.

Five new sentinel wells (MW-252 to MW-256) were installed in 2010. Three of the wells are located downgradient of the window: MW-256 in the IAQ, and MW-254 and MW-255 in the MAQ. MW-255 is located adjacent to MW-256 with the screened interval approximately 160 ft deeper; MW-254 is located approximately 350 ft to the west of MW-255 and is downgradient. Analytical results for primary CVOCs are summarized below:

- MW-254 (MAQ) - TCE was detected above 2 µg/L and other CVOCs (CT, CF, cDCE and PCE) were detected from 1 µg/L to below the RL.
- MW-255 (MAQ) - No detections above the RL but TCE was detected below the RL.
- MW-256 (IAQ) – PCE and TCE were detected above the MCL and CF was detected above the RL. PCE and TCE concentrations increased from 20 µg/L and 4.68 µg/L in September 2011 to 39.5 µg/L and 13.7 µg/L in October 2012.

3.5.1.4 Performance Wells

There are 75 LTM performance wells screened in the fluvial aquifer and within the limits of designated groundwater plumes: TTA-1 North (MW-21 Area), TTA-1 South (MW-101 Area), TTA-2, West Central, Building 835 and North Central. The designated plumes, primary CVOCs and associated LTM wells are listed below.

Plume	CVOC	LTM Wells
TTA-1 North	PCE	DR1-2, DR1-7, DR1-8, MW-21, MW-100B, PMW21-03, PMW21-05
TTA-1 South	PCE, TCE	DR1-1, DR1-1A, DR1-3, DR1-4, DR1-5/5A, DR1-6/6A, MW-101, PMW101-04A/B
TTA-2	PCE, CT, CF	DR2-1, DR2-2, DR2-3, DR2-4, DR2-5, DR2-6, MW-26, MW-64, MW-85, MW-88, MW-92, MW-96, MW-113, MW-217, MW-218, MW-259, PMW85-05, PMW92-03 and PMW92-06
West-Central	PCE	MW-39/39A, MW-94A, MW-98, MW-197A/B, MW-200, MW-203A/B, MW-204A/B, MW-205A/B, MW-206A/B, MW-208A/B, MW-210B, MW-214A/B, MW-215A/B, PZ-03
Building 835	TCE	MW-62, MW-142, MW-143, MW-198, MW199B, MW-209B, MW-212, MW-213, MW-257
North-Central	TCE	MW-103, MW-104, MW-258

There are four LTM performance wells outside the designated plumes (MW-25A, MW-52, MW-97 and MW-216). One well, MW-97, was sampled in April, and all four wells were sampled in October 2012. MW-216, in the southwestern MI, did not have any primary CVOCs above the RL. The three other wells had CVOC concentrations above MCLs in 2012; the highest concentration was TCE at 62 µg/L in MW-97 in October. TCE concentrations in MW-97 have increased since 2004; MW-216 is located 150 ft upgradient of MW-97. PCE concentrations in MW-25A and MW-52 have remained relatively stable below 10 µg/L.

3.5.1.4.1 TTA-1 North

The TTA-1 North plume is a generally oval-shaped area with elevated PCE concentrations near the central section of Building 1089 and north of former Buildings 1084 and 1085. The depth of water is approximately 90 ft bgs and the average saturated thickness is 26 ft.

Seven LTM performance wells are associated with the TTA-1 North plume. Four wells were sampled in April, and all seven wells were sampled in October 2012. The maximum PCE concentration was 121 µg/L at MW-21 in October. VC concentrations increased in MW-100B since EBT was performed from 2006 to 2009; VC concentrations remain high (164 µg/L in October) and PCE concentrations have also rebounded (66.5 µg/L in October).

3.5.1.4.2 TTA-1 South

The TTA-1 South plume is located a few hundred feet southeast of TTA-1 North, on the west side of Building 1088 and the southern section of Building 972. Based on the distribution of PCE and TCE in the plume, there appear to be two source areas. Wells in the southern area have high TCE concentrations and moderate PCE concentrations while those in the northern area have high PCE concentrations and low TCE concentrations. The depth of water is approximately 90 ft bgs and the average saturated thickness is 36 ft.

Eleven LTM performance wells are associated with the TTA-1 South plume. Nine wells were sampled in April, and all eleven wells were sampled in October 2012. The maximum concentrations were PCE at 186 µg/L at DR1-6 in October and TCE at 165 µg/L at DR1-6A in October.

3.5.1.4.3 TTA-2

The TTA-2 plume is an irregularly shaped area with elevated concentrations of PCE, TCE, and CT. The distribution of PCE and CT in TTA-2 suggest two or more source areas. While PCE concentrations are elevated throughout most of the plume area, CT concentrations are primarily in the northwestern plume area (near Buildings 260, 261 and 263). The depth of water is approximately 93 ft bgs and the average saturated thickness is 9 ft.

Eighteen LTM performance wells are associated with the TTA-2 plume. MW-259 was installed downgradient of TTA-2 in March 2012. PMW-92-06 was abandoned in June 2012 and replaced by PMW85-05. Sixteen wells were sampled in April, and all wells were sampled in October 2012. The maximum concentrations were PCE at 180 µg/L at DR2-1 in October, TCE at 44.7 µg/L at MW-218 in April, and CT at 196 µg/L at DR2-5 in October.

3.5.1.4.4 West Central

The West-Central plume is a broad area of elevated PCE concentrations approximately 1,500 ft northeast of TTA-1. The eastern end of the plume is at the former location of Buildings 873 and 875 and the central area is near Building 770. The depth of water is approximately 100 ft bgs and the saturated thickness ranges from 7 to 94 ft with an average of 48 ft.

Twenty-three LTM performance wells are associated with the West Central plume. Twenty wells were sampled in April, and all wells were sampled in October 2012. The maximum PCE concentration was 127 g/L at MW-203A in April.

3.5.1.4.5 Building 835

The Building 835 plume located in the western portion of the MI contains elevated concentrations of TCE. The plume is orientated along the southern edge of the clay adjacent to the window in the northwest corner of the MI. The depth of water is approximately 94 ft bgs and the average saturated thickness is 6 ft.

Nine LTM performance wells are associated with the Building 835 plume. MW-143 was re-classified from background to performance well in 2012, and MW-257 was installed upgradient in March 2012. Seven wells were sampled in April, and all wells were sampled in October 2012. The maximum TCE concentration was 185 µg/L at MW-62 in April.

3.5.1.4.6 North Central

The North-central plume is located in the northeastern portion of the MI and contains slightly elevated concentrations of TCE. The depth of water is approximately 66 ft bgs and the average saturated thickness is 23 ft.

Two LTM performance wells (MW-103 and MW-104) have been associated with the North Central plume; a third well (MW-258) was installed downgradient in March 2012. MW-258 was sampled in April, and all wells were sampled in October 2012. In October, TCE was detected at 10.6 µg/L and 21.9 µg/L in MW-103 and MW-104, while MW-258 contained TCE at 93 µg/L and PCE at 22.1 µg/L.

3.5.2 Dunn Field

There are 87 wells included in Dunn Field LTM. The current well classifications are shown on Table 4: 13 background wells, 9 sentinel wells and 65 performance wells. Analytical results for the individual well classifications in the 2012 LTM events are summarized in the following sections. Historical analytical results for the primary CVOCs in all Dunn Field LTM wells are provided in Appendix H. Time trend plots for primary CVOCs detected above MCLs or the TC for TeCA in Dunn Field LTM wells are provided in Appendix I; where multiple sample results were available for a sampling event, the higher result was plotted.

3.5.2.1 Background Wells

There are 13 background wells screened in the fluvial aquifer located along or outside of the Dunn Field boundary; upgradient to or at a distance from contaminant plumes on Dunn Field; and with no or low previous detections of primary CVOCs. Five background wells are located on or bordering the northeast section of Dunn Field with CVOC concentrations from an off-site source(s) upgradient of Dunn Field; these wells are designated background-NE.

Nine background wells were sampled in April, including all five background-NE wells. MW-28 was the only background well sampled in October 2012; it had not been sampled since 1996 and is being sampled semiannually in 2012 and 2013 prior to establishing a new sample frequency. Concentrations exceeded the MCLs for DCE, PCE and TCE in all five background-NE wells; the highest concentrations were in MW-130 northeast of Dunn Field. CVOCs were not detected above RLs in the other background wells.

3.5.2.2 Sentinel Wells

There are 9 sentinel wells screened within either the fluvial or IAQs adjacent to or within a window. Five sentinel wells were sampled in April; no sentinel wells were sampled in October 2012. Primary CVOCs were detected above the RL in two wells; DCE in MW-237, and DCE and CF in MW-251. No concentrations were above the MCL.

3.5.2.3 Performance Wells

There are 65 performance wells screened in the fluvial aquifer and within the limits of groundwater plumes. Fourteen performance wells were selected for rebound monitoring after shut down of the FSVE system in July 2012; these wells are designated performance-FSVE. Sixty performance wells were sampled in April and 40 performance wells were sampled in October 2012; all performance-FSVE wells were sampled in each event. Primary CVOCs were detected above RLs in 40 performance wells in April and 30 wells in October; the CVOCs detected most commonly were TeCA, TCE and CF. Chlorinated VOC concentrations exceeded the MCL for TCE and/or the TC for TeCA in 19 wells in April and 17 wells in October. Other CVOCs were detected above the MCLs in a few wells, but all of those wells also exceeded the MCL for TCE and/or the TC for TeCA.

Considering only the 14 performance-FSVE wells, primary CVOCs were detected above RLs in 7 wells in April and 5 wells in October. Concentrations exceeded an MCL in one well; MW-220 contained TCE at 6.56 µg/L in April and 6.65 µg/L in October. MW-220 is within the area affected by the NE off-site plume.

3.6 TREND ANALYSIS

Concentration trends were assessed for the available groundwater analytical results for the LTM wells from January 2004 through October 2012 using the Mann-Kendall test. The Mann-Kendall test does not require any assumptions as to the statistical distribution of the data and can be used with data sets which include irregular sampling intervals and missing data. The analysis was performed using the Mann-Kendall module within Monitoring and Remediation Optimization System (MAROS) software version 2.2 developed by Air Force Center for Engineering and the Environment. The Mann-Kendall trend evaluation using MAROS relies on three statistical metrics: the Mann-Kendall statistic (S), the coefficient of variation (COV) and the confidence factor.

S measures the trend in the data. Positive values indicate an increase in constituent concentrations over time, whereas negative values indicate a decrease in constituent concentrations over time. The strength of the trend is proportional to the magnitude of S (i.e., large magnitudes indicate a strong trend). Coefficient of variation is a statistical measure of how the individual data points vary about the mean value; it is defined as the standard deviation divided by the average. Values less than or near 1.00 indicate that the data form a relatively close group about the mean value. Values larger than 1.00 indicate that the data show a greater degree of scatter about the mean. Confidence factor is the statistical probability that the constituent concentration is increasing (S>0) or decreasing (S<0).

The Concentration Trend for each well is determined according to the following rules:

Mann-Kendall Statistic	Confidence Factor	Concentration Trend
S > 0	> 95%	Increasing
S > 0	90 - 95%	Probably Increasing
S > 0	< 90%	No Trend
S ≤ 0	< 90% and COV ≥ 1	No Trend
S ≤ 0	< 90% and COV < 1	Stable
S < 0	90 - 95%	Probably Decreasing
S < 0	95%	Decreasing

If there are less than four sample results, the trend evaluation cannot be performed and the trend is listed as Insufficient Data (N/A). If the analyte is below the detection limit for all samples, the trend is listed as Not Detected (ND).

3.6.1 Main Installation

The Mann-Kendall analysis for the MI was run for PCE, TCE and cDCE on analytical results for 115 LTM sample locations, including replacement well PMW85-05 and both screened intervals in MW-101 and MW-107. In addition, Mann-Kendall analysis was run for CT and CF on analytical results for 19 LTM wells in TTA-2. The analysis was limited to samples collected since January 2004 to provide a more consistent comparison between wells; many of the LTM performance wells were installed from 2004 to 2007 and regular groundwater monitoring was not performed before 2004.

Results of the Mann-Kendall analysis for the MI are shown on Tables 22 through 26. The tables present the statistical metrics for each well, the concentration trend, the number of sample rounds and the number of samples with detects. In addition, the maximum and minimum analytical results for the review period are shown.

Most of the boundary (7) and background (6) wells had non-detects or very low concentrations of CVOCs and the majority of those wells had insufficient data or no trend. One boundary well, MW-219 located upgradient of TTA-1 North, has PCE concentrations up to 48 µg/L and may represent a groundwater plume migrating on to the MI; the PCE concentration at MW-219 was 25.2 µg/L in October 2011 and the well has a decreasing trend.

The results are summarized below for sentinel (25) and performance (77) sample locations. The Insufficient Data column includes wells with less than four sample analyses or with all analyses below detection limits.

	Total Locations	**Insufficient Data**	**Increasing/ Probably Increasing**	**Stable/ No Trend**	**Decreasing/ Probably Decreasing**
PCE	102	13	20	41	28
TCE	102	5	31	43	23
cDCE	102	29	27	32	14

The analysis indicates that many locations show no trend or are stable for these CVOCs. More of the remaining locations have decreasing trends for PCE, with increasing trends for TCE and cDCE.

The results are similar if the sample locations are limited to those with a maximum concentration above the MCL, as shown below.

	Total Locations	**Insufficient Data**	**Increasing/ Probably Increasing**	**Stable/ No Trend**	**Decreasing/ Probably Decreasing**
PCE	74	2	16	29	27
TCE	60	3	19	23	15
cDCE	10	0	3	2	5

Trends for the parent/primary CVOCs in each plume are summarized below.

Plume	Analyte	Total Locations	Insufficient Data	Increasing/ Probably Increasing	Stable/ No Trend	Decreasing/ Probably Decreasing
TTA-1 North	PCE	7	1	2	3	1
TTA-1 South	PCE	12	0	2	6	4
TTA-1 South	TCE	12	0	3	5	4
TTA-2	PCE	19	1	2	9	7
TTA-2	CT	19	1	1	10	7
TTA-2	CF	17	1	1	6	11
West-Central	PCE	23	0	5	3	15
Building 835	TCE	9	2	4	0	3
North-Central	TCE	3	1	2	0	0
Sentinel	PCE	25	3	8	13	1

The wells in several plumes within the fluvial aquifer generally have stable trends for the parent compounds with roughly equal increasing and decreasing trends. However, the West-Central (PCE) and the TTA-2 (PCE, CT and CF) plumes have more pronounced decreasing trends. Conversely, the sentinel wells (PCE), Building 835 (TCE) and North-Central (TCE) have more increasing trends than decreasing trends.

3.6.2 Dunn Field

The Mann-Kendall analysis for Dunn Field was run for TeCA, PCE, TCE, DCE, CT and CF on analytical results for 87 LTM wells. The analysis was limited to samples collected since January 2004. Results of the Mann-Kendall analysis are shown on Tables 27 through 32. The tables present the statistical metrics for each well, the concentration trend, the number of sample rounds and the number of samples with detects. In addition, the maximum and minimum analytical results for the review period are shown.

The results are summarized below for background wells, sentinel wells, and performance wells. The Insufficient Data column includes wells with less than four sample analyses or with all analyses below detection limits; non-detect results were the most common reason as shown on Tables 27 through 32.

Background Wells

	Total Locations	**Insufficient Data**	**Increasing/ Probably Increasing**	**Stable/ No Trend**	**Decreasing/ Probably Decreasing**
TeCA	8	4	0	4	0
PCE	8	4	0	2	2
TCE	8	4	0	3	1
DCE	8	8	0	0	0
CT	8	7	0	1	0
CF	8	3	0	4	1

Background NE Wells

	Total Locations	**Insufficient Data**	**Increasing/ Probably Increasing**	**Stable/ No Trend**	**Decreasing/ Probably Decreasing**
TeCA	5	3	0	2	0
PCE	5	0	1	4	0
TCE	5	0	2	3	0
DCE	5	0	0	5	0
CT	5	4	0	0	1
CF	5	1	1	2	1

Sentinel Wells

	Total Locations	**Insufficient Data**	**Increasing/ Probably Increasing**	**Stable/ No Trend**	**Decreasing/ Probably Decreasing**
TeCA	9	8	0	1	0
PCE	9	6	0	2	1
TCE	9	6	0	2	1
DCE	9	5	0	3	1
CT	9	9	0	0	0
CF	9	5	0	2	2

Performance Wells

	Total Locations	Insufficient Data	Increasing/ Probably Increasing	Stable/ No Trend	Decreasing/ Probably Decreasing
TeCA	51	5	5	13	28
PCE	51	5	3	16	27
TCE	51	2	3	11	35
DCE	51	32	2	12	5
CT	51	13	2	11	25
CF	51	3	3	20	25

Performance-FSVE Wells

	Total Locations	Insufficient Data	Increasing/ Probably Increasing	Stable/ No Trend	Decreasing/ Probably Decreasing
TeCA	14	0	0	5	9
PCE	14	0	1	5	8
TCE	14	0	0	1	13
DCE	14	12	0	2	0
CT	14	7	0	1	6
CF	14	0	1	7	6

Few LTM wells had increasing/probably increasing trends. The majority of sentinel wells had insufficient data due to few CVOC concentrations above the RL and the majority of background wells had either stable/no trend or insufficient data.

Performance wells showed the most decreasing/probably decreasing trends, due to the Source Areas and Off Depot RAs. Increasing trends were reported at three wells for TeCA (MW-151, MW-166A and MW-249) and for TCE (MW-151, MW-166 and MW-249). The four wells are located near the western end of the AS/SVE system and the trends likely reflect plume diversion around the system. The October 2012 concentrations at the wells are relatively low: 1.62-5.96 µg/L for TeCA and 8.7-11.4 µg/L for TCE.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 MAIN INSTALLATION

The additional MWs installed in 2012 (MW-257 to MW-259) provided useful information on site hydrogeology and contaminant extent. The findings from the new wells are summarized below:

- MW-257 – The top of clay was 7 ft deeper than estimated, and the saturated thickness was 11 ft. The groundwater samples did not contain CVOCs above the RL and confirmed the upgradient limit of the Building 835 TCE plume.
- MW-258 – The water level was higher than estimated resulting in a lower gradient to the northeast and a steeper gradient southwest toward the 'window' (Figures 7 and 8). PCE and TCE were detected at 22.1 µg/L and 93 µg/L in October; upgradient wells MW-103 and MW-104 have lower TCE concentration and PCE has not been detected. The analytical results at MW-258 indicate an additional contaminant source impacting that area with PCE concentrations near the level used to select areas for EBT.
- MW-259 – The top of clay was 30 ft deeper than estimated and the top of clay contour map was revised to show a trough extending southeast from the 'window' toward MW-259. The analytical results (PCE near 15 µg/L, TCE near 16 µg/L and CT below 5 µg/L) indicate the well is downgradient of TTA-2 and that contaminant migration from TTA-2 is to the southwest and not toward the 'window'. Boundary wells MW-24 and MW-93 on the southern property line did not have CVOCs detected in the October 2012 samples and have not since 2004.

The groundwater sampling procedure at most MI LTM wells was changed from low-flow sampling to PDBs. Low-flow sampling or bailers were used where well diameter or saturated screen thickness was not sufficient for PDBs and at wells to be used for EBT injections or performance monitoring. The analytical results from PDB samples were consistent with past results, except at MW-253. Intermediate aquifer well MW-253 was non-detect for TCE in both 2012 samples, after concentrations increased from 0.34 µg/L in June 2010 to 9.81 µg/L in September 2011. MW-253 is screened in a confined clayey sand and the previously observed increase may have been due to leakage from the overlying fluvial aquifer during purging prior to sampling. MW-253 is not properly located to monitor contaminant migration from the 'window' and is recommended for abandonment.

Contaminant rebound at LTM wells in TTA-1 and TTA-2 was similar to that observed in 2011. Quarterly EBT injections were re-started in November 2012.

Analytical results for 2012 LTM samples were generally similar to previous results as shown in the historical results tables in Appendix F and the CVOC time-trend plots in Appendix G. Continued increases in CVOC concentrations were observed at MW-97 and MW-256. TCE concentrations at MW-97, located east of TTA-1 South, have increased from 2.2 µg/L in March 2004 to 62 µg/L in October 2012; if the increase continues, further investigation may be warranted. PCE concentrations at IAQ well MW-256 located downgradient of the 'window' have increased from 8.7 µg/L in August 2010 to 39.5 µg/L in October 2012. Enhanced bioremediation treatment in the fluvial aquifer should reduce CVOC concentrations in the IAQ over time.

Twenty wells used for EBT injections or performance monitoring will be sampled during EBT and therefore omitted from MI LTM in 2013; the wells are: MW-21, MW-62, MW-85, MW-113, MW-197A/B, MW-203A/B, MW-212, MW-213, PMW85-05, PMW92-03, PMW101-04A/B, DR1-5/5A, DR1-6/6A, DR2-2 and DR2-5. Five former EBT performance MWs that were not selected for abandonment will be incorporated into LTM: PMW92-02, PMW101-03A/B and PMW101-6A/B. No other changes to MI LTM are recommended. The 2013 MI LTM sample schedule is shown on Table 33.

4.2 DUNN FIELD

Long-term monitoring results show continued reduction in CVOC concentrations from the RAs at Dunn Field and the Off Depot area. Total CVOC concentrations decreased in the majority of performance wells at Dunn Field and the Off Depot area, and the overall extent of the plume originating on Dunn Field continued to decrease.

The AS/SVE system is meeting the treatment goal, and operations were modified in June 2012 to focus on areas exceeding remediation goals (RGs); this was done to reduce plume diversion around the TA and operating costs. Total CVOC concentrations in the October 2012 samples decreased in wells MW-149, MW-166 and MW-249 on the southwest side of the AS/SVE system where plume diversion was indicated.

Few LTM wells had increasing/probably increasing trends and performance wells showed the most decreasing/probably decreasing trends, due to the Source Areas and Off Depot RAs. Increasing trends were reported at only four wells for TeCA and/or TCE, the most prevalent CVOCs. The wells are located near the western end of the AS/SVE system, and the trends likely reflect plume diversion around the system. The October 2012 concentrations at these wells were relatively low, below 6 µg/L for TeCA and 12 µg/L for TCE.

The treatment goal for the AS/SVE system is to reduce individual CVOC concentrations to 50 µg/L or less, and the system will continue to operate until concentrations in upgradient wells do not exceed 50 µg/L for individual CVOCs. In addition, individual CVOC concentrations in wells on Dunn Field are not to exceed 50 µg/L unless the groundwater will pass through the AS/SVE system. MW-159 was the only performance well to exceed the treatment goal in either April or October 2012; the only CVOC exceeding the goal in MW-159 was TCE at 275 µg/L in April and 247 µg/L in October.

Two background-NE wells, MW-130 and MW-230, exceeded 50 µg/L for TCE and/or PCE, but both are upgradient of the Source Areas on Dunn Field and within the off-site NE plume. Several wells in the northern area of Dunn Field and off site were sampled in April 2012 for the first time in a few years and Figures 24 to 26 clearly show contaminant migration on to Dunn Field.

The AS/SVE system in combination with natural attenuation processes is expected to reduce groundwater concentrations to the RGs within a reasonable period of time. Due to the presence of multiple CVOCs in groundwater, the Dunn Field ROD established RGs for groundwater based on a target cumulative risk level of 1 in 10,000 ($1X10^{-4}$) and a Hazard Index of 1.0. The final RGs may vary based on the individual concentration of each CVOC in a compliance well; however, they are not to exceed MCL or nonzero MCL goal levels. Risk-based concentrations were determined for the primary CVOCs using revised toxicity factors in the *Third Five-Year Review, Revision 1* (HDR 2012d). The review demonstrated that MCLs will be the primary determinant in meeting the RAO. TeCA is the only COC without an MCL and could meet the RAO at a concentration above the RG in the Dunn Field ROD.

Primary CVOC concentrations in LTM performance wells exceeded an MCL or the TC for TeCA in 19 wells in April and 17 wells in October. TeCA or TCE was one of the exceedances in each well. In April, three of the wells contained TeCA above the TC but had no CVOC concentrations above MCLs (MW-165A, MW-243 and MW-246); five of the wells met those criteria in October (MW-149, MW-166A, MW-243, MW-244 and MW-246). In each well with TeCA above the TC and no MCLs exceeded, the cumulative risk was less than $1X10^{-4}$.

The FSVE system on Dunn Field was shut down 24 July 2012 based on meeting soil remediation goals and reduced VOC emissions. Results at the 14 performance-FSVE wells are being used to evaluate potential rebound in groundwater concentrations near the FSVE wells. Vadose zone model results presented in the *Dunn Field Source Areas Fluvial Soil Vapor Extraction System Annual Operations Report, Year Four, Revision 0* (HDR 2011d) indicated short-term rebound due to residual CVOCs in the fluvial sand would occur 60 to 90 days after FSVE shutdown but that maximum concentrations from

residual CVOCs in the loess would not be seen for three to four years. Analytical results in the October 2012 samples from the performance-FSVE wells were generally less than in April, and only MW-220 exceeded an MCL (TCE at 6.65 µg/L). MW-220 is on the northern boundary of Dunn Field and within the area affected by the off-site NE plume.

The 2011 LTM report recommended 27 wells be removed from LTM in 2012 and be abandoned. These wells will be abandoned in 2013. MW-32, which could not be repaired, will also be abandoned.

The 2012 LTM results were reviewed against the criteria from the Dunn Field LTM plan, as described in the 2011 LTM report for incorporating the performance MWs and water-level only wells into LTM. No changes to well classification are recommended. The criteria for sample frequency are summarized below:

- Background Wells
  - Wells with results below MCLs in the last four events will be sampled in biennial events.
  - Wells with results above MCLs in one of the last four events will be sampled in annual events.
- Sentinel Wells
  - Wells at significant distance from performance wells exceeding MCLs will be sampled in biennial events.
  - Wells near performance wells exceeding MCLs will be sampled in annual events.
- Performance Wells
  - Wells with results above MCLs in one or more of the last four events and wells selected for FSVE system rebound monitoring will be sampled in semiannual events.
  - Wells with results below MCLs in the last four sample events will be sampled in annual events.
  - Wells on the edge of the monitoring network with consistent results below MCLs will be sampled in biennial events.

The following changes to sample criteria are recommended:

- Background wells MW-04, MW-80 and MW-126 to be sampled biennially
- Background-NE well MW-08 to be sampled annually

- Performance well MW-184 to be sampled semiannually

The well classification, sample frequency and 2013 sampling events are shown on Table 34.

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TABLES

TABLE 1
MAIN INSTALLATION LTM WELLS
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

Well	Aquifer	Well Classification	Northing (feet)	Easting (feet)	Ground Elevation (feet, msl)	Stick Up (feet)	Riser Length (feet)	Screen Length (feet)	Total Well Depth (feet, btoc)
DR1-1	Fluvial	Performance	276300.45	800855.38	293.26	-0.2	121.7	20	141.7
DR1-1A	Fluvial	Performance	276307.37	800863.15	293.29	-0.2	89.3	20	109.3
DR1-2	Fluvial	Performance	276536.56	801152.64	290.28	-0.2	97.8	20	117.8
DR1-3	Fluvial	Performance	276527.27	801415.91	291.11	-0.2	109.7	20	129.7
DR1-4	Fluvial	Performance	276231.20	801399.53	293.00	-0.2	106.3	20	126.3
DR1-5	Fluvial	Performance	276079.76	800828.18	294.88	-0.4	125.2	20	145.2
DR1-5A	Fluvial	Performance	276086.88	800835.32	294.88	-0.3	89.7	20	109.7
DR1-6	Fluvial	Performance	276044.05	801103.49	293.44	-0.5	115.8	20	135.8
DR1-6A	Fluvial	Performance	276035.13	801103.29	293.52	-0.4	90.8	20	110.8
DR1-7	Fluvial	Performance	276791.26	801441.36	289.46	-0.3	108.3	20	128.3
DR1-8	Fluvial	Performance	276752.46	800875.44	290.37	-0.4	92.7	20	112.7
DR2-1	Fluvial	Performance	276772.10	806497.62	305.08	-0.2	73.9	20	93.9
DR2-2	Fluvial	Performance	276771.06	806658.74	304.49	-0.1	79.0	20	99.0
DR2-3	Fluvial	Performance	276539.12	806203.16	303.66	-0.2	93.0	20	113.0
DR2-4	Fluvial	Performance	276455.68	806632.64	303.80	-0.3	88.0	20	108.0
DR2-5	Fluvial	Performance	276830.90	806180.36	305.55	-0.1	85.0	20	105.0
DR2-6	Fluvial	Performance	276643.99	805860.91	304.92	-0.2	94.6	20	114.6
MW-16	Fluvial	Background	278837.83	807099.66	300.19	-0.3	57.6	15	72.6
MW-19	Fluvial	Background	278945.87	800782.26	290.86	-0.3	83.1	10	93.1
MW-21	Fluvial	Performance	276473.39	800602.39	295.21	-0.2	92.1	15	107.1
MW-22	Fluvial	Boundary	275912.38	800702.16	298.49	-0.5	95.4	10	105.4
MW-23	Fluvial	Boundary	275791.02	801817.13	299.24	-0.3	101.2	10	111.2
MW-24	Fluvial	Boundary	275616.05	803538.81	299.81	-0.3	97.3	15	112.3
MW-25A	Fluvial	Performance	275975.11	805521.27	270.13	-0.3	73.0	10	83.0
MW-26	Fluvial	Performance	276508.16	805962.09	303.89	-0.2	97.6	10	107.6
MW-34	Intermediate	Sentinel	279411.21	801917.96	300.80	-0.8	136.6	20	156.6
MW-38	Intermediate	Sentinel	279141.38	802450.43	308.45	-1.0	139.9	15	154.9
MW-39	Fluvial	Performance	277280.67	802598.11	296.58	-0.3	95.5	20	115.5
MW-39A	Fluvial	Performance	277278.20	802607.72	298.49	0.0	147.9	20	167.9
MW-50	Fluvial	Boundary	276455.81	807065.28	299.32	-0.5	115.0	10	125.0
MW-52	Fluvial	Performance	275371.97	805897.36	279.71	-0.5	94.0	10	104.0
MW-53	Fluvial	Background	279176.66	805136.05	305.58	0.8	72.5	10	82.5
MW-55	Fluvial	Background	279301.05	801204.62	292.48	-0.4	64.0	10	74.0
MW-62	Fluvial	Performance	278289.89	801858.16	294.10	-0.5	86.0	10	96.0
MW-63A	Fluvial/Intermediate	Sentinel	278200.31	803572.83	306.33	-0.4	140.0	10	150.0
MW-63B	Fluvial/Intermediate	Sentinel	278201.32	803557.77	306.22	-0.4	115.0	10	125.0
MW-64	Fluvial	Performance	276951.52	805005.97	304.46	-0.2	102.0	10	112.0
MW-66A	Fluvial	Background	276626.02	799792.63	284.34	-0.1	74.6	20	94.6
MW-85	Fluvial	Performance	276704.14	806064.51	304.50	-0.4	95.9	15	110.9
MW-88	Fluvial	Performance	276879.05	806512.88	305.47	-0.3	82.0	15	97.0
MW-89	Intermediate	Sentinel	278286.97	802555.25	304.38	-0.4	147.0	30	177.0
MW-90	Intermediate	Sentinel	278283.60	802539.51	304.64	-0.5	115.0	30	145.0
MW-92	Fluvial	Performance	276614.20	806489.66	304.78	-0.4	93.0	15	108.0
MW-93	Fluvial	Boundary	275542.22	804440.10	294.31	-0.2	92.0	15	107.0
MW-94A	Fluvial	Performance	276805.80	803085.80	303.23	-0.2	109.6	10	119.6
MW-96	Fluvial	Performance	276310.14	806320.24	289.67	-0.7	75.5	20	95.5
MW-97	Fluvial	Performance	276074.23	802139.23	297.70	-0.3	97.5	20	117.5
MW-98	Fluvial	Performance	276891.37	802572.77	294.93	-0.5	137.0	10	147.0
MW-99	Fluvial	Background	277443.37	801114.53	285.69	-0.4	91.5	20	111.5
MW-100B	Fluvial	Performance	276600.65	800854.43	291.60	-0.5	107.5	20	127.5

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Well	Aquifer	Well Classification	Northing (feet)	Easting (feet)	Ground Elevation (feet, msl)	Stick Up (feet)	Riser Length (feet)	Screen Length (feet)	Total Well Depth (feet, btoc)
MW-101	Fluvial	Performance	276204.27	801110.38	291.99	-0.3	89.0	15	104.0
MW-102B	Fluvial	Boundary	275760.59	800707.72	312.07	-0.7	120.5	20	140.5
MW-103	Fluvial	Performance	278690.88	805159.83	301.89	-0.5	70.0	20	90.0
MW-104	Fluvial	Performance	278676.47	805417.03	292.18	-0.2	70.5	20	90.5
MW-107	Fluvial/Intermediate	Sentinel	278419.07	803009.93	305.18	-0.3	128.0	15	143.0
MW-108	Fluvial/Intermediate	Sentinel	277658.02	802985.53	303.25	-0.2	160.0	10	170.0
MW-113	Fluvial	Performance	276685.34	806279.10	304.92	-0.1	96.0	10	106.0
MW-140	Intermediate	Sentinel	279061.29	801715.68	298.16	0.0	224.6	20	244.6
MW-141	Intermediate	Sentinel	278019.19	802571.25	303.70	0.0	148.7	20	168.7
MW-142	Fluvial	Performance	278056.03	801629.12	291.49	-0.3	85.0	20	105.0
MW-143	Fluvial	Performance	278301.27	801201.33	290.74	-0.2	78.5	20	98.5
MW-197A	Fluvial	Performance	276975.42	802042.30	291.54	-0.3	162.0	15	177.0
MW-197B	Fluvial	Performance	276973.14	802036.92	291.43	-0.4	94.2	15	109.2
MW-198	Fluvial	Performance	277775.67	802141.93	291.80	-0.3	90.0	15	105.0
MW-199A	Intermediate	Sentinel	277756.40	802573.52	301.84	-0.3	146.1	15	161.1
MW-199B	Fluvial	Performance	277751.74	802575.66	302.07	-0.3	104.6	15	119.6
MW-200	Fluvial	Performance	277006.10	802859.39	300.51	-0.3	102.9	15	117.9
MW-202A	Intermediate	Sentinel	278685.74	802111.27	299.69	-0.5	176.2	15	191.2
MW-202B	Intermediate	Sentinel	278692.79	802112.04	299.74	-0.2	118.8	15	133.8
MW-203A	Fluvial	Performance	276841.61	801740.37	290.78	-0.2	142.9	15	158.0
MW-203B	Fluvial	Performance	276821.58	801741.76	290.75	-0.2	92.8	15	107.8
MW-204A	Fluvial	Performance	276724.66	802168.25	292.49	-0.3	133.3	15	148.3
MW-204B	Fluvial	Performance	276707.82	802167.00	292.67	-0.4	94.5	15	109.5
MW-205A	Fluvial	Performance	277157.28	802277.37	292.32	-0.4	141.0	15	156.0
MW-205B	Fluvial	Performance	277173.13	802277.76	292.04	-0.2	97.0	15	112.0
MW-206A	Fluvial	Performance	277219.28	802792.28	300.35	-0.4	127.3	15	142.4
MW-206B	Fluvial	Performance	277200.85	802794.78	300.12	-0.2	96.7	15	111.7
MW-207A	Fluvial	Sentinel	277652.65	803191.86	303.99	-0.2	149.7	15	164.7
MW-207B	Fluvial	Sentinel	277665.39	803193.06	304.03	-0.2	108.3	15	123.3
MW-208A	Fluvial	Performance	277382.04	802799.25	301.91	-0.4	183.4	15	198.5
MW-208B	Fluvial	Performance	277396.90	802814.96	302.08	-0.3	106.7	15	121.7
MW-209A	Intermediate	Sentinel	277574.28	802507.10	298.36	-0.3	189.0	15	204.0
MW-209B	Fluvial	Performance	277581.50	802520.13	298.72	-0.2	102.3	15	117.3
MW-210A	Intermediate	Sentinel	277238.49	801958.05	289.78	-0.1	177.1	15	192.0
MW-210B	Fluvial	Performance	277228.18	801951.94	289.53	-0.2	97.0	15	112.0
MW-211	Intermediate	Sentinel	278000.59	802973.69	304.09	-0.4	166.3	15	181.3
MW-212	Fluvial	Performance	278028.36	802225.44	295.68	-0.3	85.7	15	100.7
MW-213	Fluvial	Performance	278426.83	801668.99	294.12	-0.3	76.9	15	91.9
MW-214A	Fluvial	Performance	277877.62	803906.94	303.96	-0.4	119.1	15	134.1
MW-214B	Fluvial	Performance	277875.84	803922.20	303.96	-0.3	101.6	15	116.6
MW-215A	Fluvial	Performance	277298.37	804164.31	304.86	-0.4	128.8	15	143.8
MW-215B	Fluvial	Performance	277298.27	804177.33	304.98	-0.4	105.4	15	120.4
MW-216	Fluvial	Performance	276024.68	801995.93	297.63	-0.3	99.9	15	115.0
MW-217	Fluvial	Performance	276670.60	805213.69	304.51	-0.3	101.8	15	116.8
MW-218	Fluvial	Performance	276936.70	805628.44	306.00	-0.4	98.9	15	114.0
MW-219	Fluvial	Boundary	276429.60	800460.96	295.07	-0.2	97.7	15	112.8
MW-229	Intermediate	Sentinel	279293.98	802836.28	311.99	-0.2	188.4	20	208.4
MW-252	Intermediate	Sentinel	278789.21	801364.70	294.40	-0.2	126.1	20	146.1
MW-253	Intermediate	Sentinel	278287.43	801191.42	290.80	-0.3	118.3	20	138.3
MW-254	Memphis	Sentinel	279334.36	800857.53	293.28	-0.4	285.8	20	305.8

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Well	Aquifer	Well Classification	Northing (feet)	Easting (feet)	Ground Elevation (feet, msl)	Stick Up (feet)	Riser Length (feet)	Screen Length (feet)	Total Well Depth (feet, btoc)
MW-255	Memphis	Sentinel	279304.76	801226.84	292.38	-0.5	284.7	20	304.7
MW-256	Intermediate	Sentinel	279301.82	801243.80	293.40	-0.7	127.1	20	147.1
MW-257	Fluvial	TBD	278549.06	801340.58	292.67	-0.4	85.5	15	100.5
MW-258	Fluvial	TBD	278125.81	804426.82	304.83	-0.5	79.3	20	99.3
MW-259	Fluvial	TBD	276279.04	804450.97	291.44	-0.7	98.6	20	118.6
PMW101-04A	Fluvial	Performance	276299.41	801182.12	291.43	-0.4	117.9	20	137.9
PMW101-04B	Fluvial	Performance	276296.40	801186.86	291.75	-0.3	98.6	20	118.6
PMW21-03	Fluvial	Performance	276573.43	800742.52	292.72	-0.6	90.3	20	110.3
PMW21-05	Fluvial	Performance	276628.32	801129.72	288.92	-0.4	94.3	20	114.3
PMW92-03	Fluvial	Performance	276678.91	806438.66	304.17	-0.3	92.5	10	102.5
PMW92-06	Fluvial	Performance	276766.94	806270.66	304.97	-0.3	91.6	10	101.6
PZ-03	Fluvial	Performance	276379.33	802941.05	298.98	-0.5	108.9	10	118.9

Notes
btoc: below top of casing
msl: above mean sea level

TABLE 2
MAIN INSTALLATION LTM SCHEDULE
ANNUAL LONG-TERM MONITORING REPORT-2012
Defense Depot Memphis, Tennessee

Well ID	Well Classification	Sample Frequency	Semiannual Apr-2012	Biennial Oct-2012
DR1-1	Performance	Annual	-	S
DR1-1A	Performance	Annual	-	S
DR1-2	Performance	Annual	-	S
DR1-3	Performance	Semiannual	S	S
DR1-4	Performance	Annual	-	S
DR1-5	Performance	Semiannual	LF	LF
DR1-5A	Performance	Semiannual	LF	LF
DR1-6	Performance	Semiannual	LF	LF
DR1-6A	Performance	Semiannual	LF	LF
DR1-7	Performance	Annual	-	S
DR1-8	Performance	Annual	-	S
DR2-1	Performance	Semiannual	S	S
DR2-2	Performance	Semiannual	LF	LF
DR2-3	Performance	Semiannual	S	S
DR2-4	Performance	Annual	-	S
DR2-5	Performance	Semiannual	LF	LF
DR2-6	Performance	Semiannual	S	S
MW-16	Background	Biennial	-	S
MW-19	Background	Biennial	-	S
MW-21	Performance	Semiannual	LF	LF
MW-22	Boundary	Biennial	-	S
MW-23	Boundary	Biennial	-	S
MW-24	Boundary	Biennial	-	S
MW-25A	Performance	Annual	-	S
MW-26	Performance	Semiannual	S	S
MW-34	Sentinel	Biennial	-	S
MW-38	Sentinel	Biennial	-	S
MW-39	Performance	Semiannual	S	S
MW-39A	Performance	Semiannual	S	S
MW-50	Boundary	Biennial	-	S
MW-52	Performance	Annual	-	S
MW-53	Background	Biennial	-	S
MW-55	Background	Biennial	-	LF
MW-62	Performance	Semiannual	B	B
MW-63A	Sentinel	Annual	-	S
MW-63B	Sentinel	Annual	-	S
MW-64	Performance	Semiannual	S	S
MW-66A	Background	Biennial	-	S
MW-85	Performance	Semiannual	LF	LF
MW-88	Performance	Semiannual	S	S
MW-89	Sentinel	Annual	-	S
MW-90	Sentinel	Semiannual	S	S
MW-92	Performance	Semiannual	S	S
MW-93	Boundary	Biennial	-	S
MW-94A	Performance	Semiannual	S	S
MW-96	Performance	Annual	-	S
MW-97	Performance	Semiannual	S	S
MW-98	Performance	Semiannual	S	S
MW-99	Background	Biennial	-	S
MW-100B	Performance	Semiannual	LF	LF
MW-101[1]	Performance	Semiannual	S	S

TABLE 2
MAIN INSTALLATION LTM SCHEDULE
ANNUAL LONG-TERM MONITORING REPORT-2012
Defense Depot Memphis, Tennessee

Well ID	Well Classification	Sample Frequency	Semiannual Apr-2012	Biennial Oct-2012
MW-102B	Boundary	Biennial	-	S
MW-103	Performance	Annual	-	S
MW-104	Performance	Annual	-	S
MW-107[1]	Sentinel	Semiannual	S	S
MW-108	Sentinel	Semiannual	S	S
MW-113	Performance	Semiannual	LF	LF
MW-140	Sentinel	Annual	-	S
MW-141	Sentinel	Semiannual	S	S
MW-142	Performance	Annual	-	S
MW-143	Performance	Semiannual	S	S
MW-197A	Performance	Semiannual	LF	LF
MW-197B	Performance	Semiannual	LF	LF
MW-198	Performance	Annual	-	S
MW-199A	Sentinel	Annual	-	S
MW-199B	Performance	Semiannual	S	S
MW-200	Performance	Semiannual	S	S
MW-202A	Sentinel	Annual	-	S
MW-202B	Sentinel	Semiannual	S	S
MW-203A	Performance	Semiannual	LF	LF
MW-203B	Performance	Semiannual	LF	LF
MW-204A	Performance	Semiannual	S	S
MW-204B	Performance	Semiannual	S	S
MW-205A	Performance	Semiannual	S	S
MW-205B	Performance	Semiannual	S	S
MW-206A	Performance	Semiannual	S	S
MW-206B	Performance	Semiannual	S	S
MW-207A	Sentinel	Semiannual	S	S
MW-207B	Sentinel	Semiannual	S	S
MW-208A	Performance	Semiannual	S	S
MW-208B	Performance	Semiannual	S	S
MW-209A	Sentinel	Annual	-	S
MW-209B	Performance	Semiannual	S	S
MW-210A	Sentinel	Semiannual	S	S
MW-210B	Performance	Semiannual	S	S
MW-211	Sentinel	Annual	-	S
MW-212	Performance	Semiannual	B	B
MW-213	Performance	Semiannual	B	B
MW-214A	Performance	Semiannual	S	S
MW-214B	Performance	Semiannual	S	S
MW-215A	Performance	Annual	-	S
MW-215B	Performance	Annual	-	S
MW-216	Performance	Annual	-	S
MW-217	Performance	Semiannual	S	S
MW-218	Performance	Semiannual	S	S
MW-219	Boundary	Semiannual	S	S
MW-229	Sentinel	Biennial	-	S
MW-252	Sentinel	Semiannual	S	S
MW-253	Sentinel	Semiannual	S	S
MW-254	Sentinel	Semiannual	S	S
MW-255	Sentinel	Semiannual	S	S
MW-256	Sentinel	Semiannual	S	S

TABLE 2
MAIN INSTALLATION LTM SCHEDULE
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Defense Depot Memphis, Tennessee

Well ID	Well Classification	Sample Frequency	Semiannual Apr-2012	Biennial Oct-2012
MW-257	TBD	TBD	LF	S
MW-258	TBD	TBD	LF	S
MW-259	TBD	TBD	LF	S
PMW21-03	Performance	Semiannual	S	S
PMW21-05	Performance	Semiannual	S	S
PMW85-05	Performance	-	-	X
PMW92-03	Performance	Semiannual	LF	LF
PMW92-06	Performance	Semiannual	LF	NS
PMW101-04A	Performance	Semiannual	LF	LF
PMW101-04B	Performance	Semiannual	LF	LF
PZ-03	Performance	Annual	-	B

Notes:

1) Samples collected from two screened intervals in MW-101 and MW-107

PDB: Passive diffusion bag

B: Sample collected by bailer

LF: Sample collected by low-flow method

S: Sample collected with PDB

NS: Sample not collected

X: Sample not planned but collected

-: Sample not planned or collected

TABLE 3
DUNN FIELD LTM WELLS
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

Well	Aquifer	Well Classification	Northing (feet)	Easting (feet)	Ground Elevation (feet, msl)	Stick Up (feet)	Riser Length (feet)	Screen Length (feet)	Total Well Depth (feet, btoc)
MW-03	Fluvial	Performance-FSVE	281596.25	802100.69	290.40	2.0	65.5	10	75.5
MW-04	Fluvial	Background	281278.87	802369.19	300.00	1.6	60.0	20	80.0
MW-06	Fluvial	Performance-FSVE	280604.17	802069.13	288.10	1.0	51.0	20	71.0
MW-07	Fluvial	Background-NE	281839.88	802481.70	293.10	2.0	67.0	10	77.0
MW-08	Fluvial	Background-NE	282001.04	802727.91	292.74	-0.2	56.5	10	66.5
MW-13	Fluvial	Background	281033.56	802369.21	300.10	-0.1	66.0	15	81.0
MW-15	Fluvial	Performance	280348.88	801985.36	295.23	-0.1	63.4	15	78.4
MW-28	Fluvial	Background	281568.58	803154.48	294.89	-0.1	54.3	15	69.3
MW-31	Fluvial	Performance	281651.53	801783.90	287.50	2.9	64.1	15	79.1
MW-32	Fluvial	Performance	280834.37	801615.51	285.60	-0.2	52.7	15	67.7
MW-33	Fluvial	Performance	280398.10	801561.30	277.70	3.0	44.6	15	59.6
MW-44	Fluvial	Performance	281073.71	800601.09	269.40	-0.3	64.0	10	74.0
MW-54	Fluvial	Performance	281160.10	801183.32	295.60	-0.25	84.5	10	94.5
MW-57	Fluvial	Performance	280184.05	802006.19	291.10	-0.3	60.0	10	70.0
MW-58	Fluvial	Performance	279845.07	802066.44	290.70	-0.2	57.0	10	67.0
MW-67	Memphis	Sentinel	280473.05	800933.94	275.53	2.7	260.0	15	275.0
MW-68	Fluvial	Performance	281500.76	802040.04	291.60	0.1	72.5	10	82.5
MW-69	Fluvial	Performance	281202.55	802011.49	304.90	2.1	82.1	10	92.1
MW-70	Fluvial	Performance	281029.60	801988.49	302.80	2.19	80.8	10	90.8
MW-71	Fluvial	Performance	280584.68	801804.71	291.90	2.5	65.5	10	75.5
MW-76	Fluvial	Performance	281311.98	801642.76	303.30	-0.59	73.0	20	93.0
MW-77	Fluvial	Performance	281142.96	801815.29	304.70	-0.28	68.0	20	88.0
MW-78	Fluvial	Performance	282051.71	802065.28	275.40	-0.4	44.5	20	64.5
MW-79	Fluvial	Performance	281794.22	800899.03	285.40	-0.37	82.5	20	102.5
MW-80	Fluvial	Background	281417.56	800199.07	274.00	-0.2	53.0	20	73.0
MW-87	Fluvial	Performance-FSVE	280696.36	802038.55	292.80	2.1	63.0	15	78.0
MW-91	Fluvial	Performance	280474.97	802014.43	289.30	2.7	55.0	15	70.0
MW-126	Fluvial	Background	282390.01	800491.67	252.49	-0.3	16.0	10	26.0
MW-129	Fluvial	Background-NE	282271.08	803128.53	293.33	-0.3	65.0	15	80.0
MW-130	Fluvial	Background-NE	282116.23	803242.02	293.69	-0.5	59.5	20	79.5
MW-134	Fluvial	Performance-FSVE	281012.74	802102.58	301.05	-0.2	75.0	15	90.0
MW-144	Fluvial	Performance	281138.63	801528.84	291.89	-0.3	56.8	20	76.8
MW-145	Fluvial	Performance	280967.63	800823.18	284.86	-0.1	80.1	20	100.1
MW-147	Fluvial	Performance	281501.06	801674.04	289.97	-0.2	60.2	20	80.2
MW-148	Fluvial	Performance	281377.94	801461.63	294.87	-0.157	70.0	20	90.0
MW-149	Fluvial	Performance	281130.04	800982.76	287.44	-0.267	81.4	20	101.4
MW-150	Fluvial	Performance	281238.66	801283.61	297.15	-0.332	71.2	20	91.2
MW-151	Fluvial	Performance	281290.42	800874.85	284.42	-0.15	77.0	20	97.0
MW-152	Fluvial	Performance	281515.56	800892.84	289.82	-0.23	91.0	20	111.0
MW-153	Fluvial	Performance	282119.38	800952.34	279.26	-0.1	76.1	20	96.1
MW-154	Fluvial	Background	280501.53	800919.48	274.07	-0.3	53.3	10	63.3
MW-155	Fluvial	Performance	281325.31	801168.93	291.84	-0.19	77.0	20	97.0
MW-157	Fluvial	Performance	281050.91	801348.32	286.83	-0.05	57.0	20	77.0
MW-158	Fluvial	Performance	281434.42	801005.34	294.38	-0.31	91.0	15	106.0
MW-158A	Fluvial	Performance	281443.51	801005.67	294.22	-0.27	77.9	15	92.9
MW-159	Fluvial	Performance	281304.29	801006.52	286.58	-0.25	80.4	20	100.4
MW-160	Fluvial	Performance	281366.52	801304.26	294.11	-0.11	65.9	20	85.9
MW-163	Fluvial	Performance	281152.59	801487.27	290.81	-0.18	56.2	20	76.2
MW-164	Fluvial	Performance	280997.55	801497.47	287.71	-0.23	55.6	20	75.6
MW-165	Fluvial	Performance	281384.63	800855.49	287.35	-0.29	88.6	15	103.6

TABLE 3
DUNN FIELD LTM WELLS
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

Well	Aquifer	Well Classification	Northing (feet)	Easting (feet)	Ground Elevation (feet, msl)	Stick Up (feet)	Riser Length (feet)	Screen Length (feet)	Total Well Depth (feet, btoc)
MW-165A	Fluvial	Performance	281383.55	800865.69	287.53	-0.27	71.3	15	86.3
MW-166	Fluvial	Performance	281224.99	800928.09	280.96	2.48	83.9	15	98.9
MW-166A	Fluvial	Performance	281213.35	800927.36	280.92	2.53	68.3	15	83.3
MW-167	Fluvial	Background	281394.03	800618.54	285.21	-0.4	70.5	15	85.5
MW-169	Transition	Sentinel	282491.23	800956.58	262.17	-0.3	68.1	20	88.1
MW-170	Fluvial	Sentinel	282443.17	801260.46	273.98	-0.2	59.8	20	79.8
MW-171	Fluvial	Sentinel	282315.35	801057.83	271.02	-0.3	53.3	15	68.3
MW-174	Fluvial	Performance-FSVE	280352.00	802092.07	296.83	-0.3	67.0	10	77.0
MW-176	Fluvial	Performance	280823.77	802032.08	299.92	-0.2	76.0	10	86.0
MW-180	Fluvial	Performance	281476.43	802131.85	296.39	-0.3	72.0	10	82.0
MW-182	Fluvial	Sentinel	280524.22	800623.13	272.98	2.4	62.0	10	72.0
MW-184	Fluvial	Performance	280903.16	801442.29	283.34	-0.2	58.0	10	68.0
MW-187	Fluvial	Background	280563.18	802348.09	303.21	-0.5	76.0	10	86.0
MW-190	Fluvial	Performance	281138.88	801595.73	297.58	-0.3	78.0	10	88.0
MW-220	Fluvial	Performance-FSVE	281617.49	802166.87	290.31	3.0	64.9	15	79.9
MW-221	Fluvial	Performance-FSVE	281399.71	802100.05	298.37	3.2	73.1	15	88.1
MW-222	Fluvial	Performance-FSVE	280986.04	802145.54	301.06	2.8	74.2	15	89.2
MW-223	Fluvial	Performance-FSVE	280913.53	802104.29	300.41	2.6	73.9	15	88.9
MW-224	Fluvial	Performance-FSVE	281017.74	802181.62	301.18	3.0	73.7	15	88.7
MW-225	Fluvial	Performance-FSVE	280947.12	802070.50	301.30	3.2	75.0	15	90.0
MW-226	Fluvial	Performance-FSVE	280931.94	802147.21	300.56	2.6	74.2	15	89.2
MW-227	Fluvial	Performance-FSVE	280257.91	802081.00	296.64	3.1	63.6	15	78.6
MW-228	Fluvial	Performance-FSVE	280251.88	802157.40	298.59	3.1	64.1	15	79.1
MW-230	Fluvial	Background-NE	281842.54	802800.22	286.92	-0.4	59.3	15	74.3
MW-235	Fluvial	Sentinel	280727.57	800447.83	264.21	-0.2	50.6	10	60.8
MW-237	Intermediate	Sentinel	281356.02	800963.99	289.53	-0.4	166.5	10	176.7
MW-241	Fluvial	Performance	281389.92	801396.74	293.00	-0.18	73.3	15	88.3
MW-242	Fluvial	Performance	281297.31	801228.65	295.94	-0.54	73.2	16	88.7
MW-243	Fluvial	Performance	281370.62	801116.45	292.53	-0.27	80.7	20	100.7
MW-244	Fluvial	Performance	281333.49	801101.07	289.45	-0.73	76.3	20	96.3
MW-245	Fluvial	Performance	281379.56	801035.07	290.55	-0.42	84.7	20	104.7
MW-246	Fluvial	Performance	281387.26	800951.62	288.49	-0.32	85.2	20	105.2
MW-247	Fluvial	Performance	281319.67	800900.12	286.16	-0.46	80.0	20	100.0
MW-248	Fluvial	Performance	281253.66	800720.22	275.93	-0.48	67.5	20	87.5
MW-249	Fluvial	Performance	281029.63	800789.83	285.89	-0.36	78.0	20	98.0
MW-250	Intermediate	Sentinel	281045.53	800900.38	290.19	-0.53	168.7	15	183.7
MW-251	Intermediate	Sentinel	281211.70	801021.75	286.16	-0.33	160.2	15	175.2

Notes
btoc: below top of casing
msl: above mean sea level

TABLE 4
DUNN FIELD LTM SCHEDULE
ANNUAL LONG-TERM MONITORING REPORT-2012
Defense Depot Memphis, Tennessee

Well ID	Well Classification	Sample Frequency	Annual Apr 2012	Semiannual Sep 2012
MW-03	Performance-FSVE	Semiannual	S	S
MW-04	Background	Annual	LF	-
MW-06	Performance-FSVE	Semiannual	S	S
MW-07	Background-NE	Annual	S	-
MW-08	Background-NE	Annual	LF	-
MW-13	Background	Biennial	-	-
MW-15	Performance	Semiannual	S	S
MW-28	Background	Semiannual	S	S
MW-31	Performance	Semiannual	S	S
MW-32	Performance	Semiannual	NS	NS
MW-33	Performance	Biennial	-	-
MW-44	Performance	Annual	S	-
MW-54	Performance	Semiannual	S	S
MW-57	Performance	Semiannual	S	S
MW-58	Performance	Biennial	-	-
MW-67	Sentinel	Biennial	-	-
MW-68	Performance	Annual	S	-
MW-69	Performance	Annual	S	-
MW-70	Performance	Annual	S	-
MW-71	Performance	Annual	S	-
MW-76	Performance	Annual	S	-
MW-77	Performance	Semiannual	S	S
MW-78	Performance	Biennial	-	-
MW-79	Performance	Semiannual	S	S
MW-80	Background	Annual	S	-
MW-87	Performance-FSVE	Semiannual	S	S
MW-91	Performance	Annual	S	-
MW-126	Background	Annual	LF	-
MW-129	Background-NE	Annual	S	-
MW-130	Background-NE	Annual	S	-
MW-134	Performance-FSVE	Semiannual	S	S
MW-144	Performance	Semiannual	S	S
MW-145	Performance	Annual	S	-
MW-147	Performance	Annual	S	-
MW-148	Performance	Annual	S	-
MW-149	Performance	Semiannual	S	S
MW-150	Performance	Semiannual	S	S
MW-151	Performance	Semiannual	S	S
MW-152	Performance	Annual	S	-
MW-153	Performance	Biennial	-	-
MW-154	Background	Biennial	-	-
MW-155	Performance	Annual	S	-
MW-157	Performance	Semiannual	S	S
MW-158	Performance	Annual	S	-
MW-158A	Performance	Annual	S	-
MW-159	Performance	Semiannual	S	S
MW-160	Performance	Annual	LF	-
MW-163	Performance	Semiannual	S	S
MW-164	Performance	Semiannual	S	S
MW-165	Performance	Semiannual	S	S
MW-165A	Performance	Semiannual	S	S

TABLE 4
DUNN FIELD LTM SCHEDULE
ANNUAL LONG-TERM MONITORING REPORT-2012
Defense Depot Memphis, Tennessee

Well ID	Well Classification	Sample Frequency	Annual Apr 2012	Semiannual Sep 2012
MW-166	Performance	Semiannual	S	S
MW-166A	Performance	Semiannual	S	S
MW-167	Background	Biennial	-	-
MW-169	Sentinel	Biennial	-	-
MW-170	Sentinel	Biennial	-	-
MW-171	Sentinel	Biennial	-	-
MW-174	Performance-FSVE	Semiannual	S	S
MW-176	Performance	Annual	S	-
MW-180	Performance	Annual	S	-
MW-182	Sentinel	Annual	LF	-
MW-184	Performance	Annual	S	-
MW-187	Background	Biennial	-	-
MW-190	Performance	Semiannual	S	S
MW-220	Performance-FSVE	Semiannual	S	S
MW-221	Performance-FSVE	Semiannual	S	S
MW-222	Performance-FSVE	Semiannual	S	S
MW-223	Performance-FSVE	Semiannual	S	S
MW-224	Performance-FSVE	Semiannual	S	S
MW-225	Performance-FSVE	Semiannual	S	S
MW-226	Performance-FSVE	Semiannual	S	S
MW-227	Performance-FSVE	Semiannual	S	S
MW-228	Performance-FSVE	Semiannual	S	S
MW-230	Background-NE	Annual	S	-
MW-235	Sentinel	Annual	LF	-
MW-237	Sentinel	Annual	LF	-
MW-241	Performance	Annual	S	-
MW-242	Performance	Semiannual	S	S
MW-243	Performance	Semiannual	S	S
MW-244	Performance	Semiannual	S	S
MW-245	Performance	Semiannual	S	S
MW-246	Performance	Semiannual	S	S
MW-247	Performance	Semiannual	S	S
MW-248	Performance	Annual	S	-
MW-249	Performance	Semiannual	S	S
MW-250	Sentinel	Annual	S	-
MW-251	Sentinel	Annual	S	-

Notes:
PDB: Passive diffusion bag
LF: Sample collected using low-flow method
S: Sample collected with PDB
NS: Sample not collected
-: Sample not planned or collected

TABLE 5
WELL INSTALLATION SUMMARY
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

Well	Date Completed	Northing	Easting	Location	Aquifer Screened	Top of Casing Elevation (ft, msl)	Ground Elevation (ft, msl)	Surface Casing Depth (ft, bgs)	Total Boring Depth (ft, bgs)	Groundwater Elevation (ft, msl)	Top of Clay Elevation (ft, msl)	Fluvial Aquifer Thickness (ft)	Screen Length (ft)	Total Well depth (ft, btoc)
MW-257	3/27/2012	278549.06	801340.58	MI	Fluvial	292.22	292.67	NA	105	203.72	192.7	11.1	15	100.5
MW-258	3/29/2012	278125.81	804426.82	MI	Fluvial	304.37	304.83	NA	115	227.06	199.8	27.2	20	99.3
MW-259	3/28/2012	276279.04	804450.97	MI	Fluvial	290.77	291.44	NA	145	197.50	155.4	42.1	20	118.6

Notes:
bgs: below ground surface
btoc: below top of casing
ft: feet
MI: Main Installation
msl: mean sea level
NA: not applicable

TABLE 6
WELL DEVELOPMENT SUMMARY
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

			Final Stabilization Parameters			
Well ID	Date Developed	Volume Purged (gallons)	pH	Specific Conductivity (mS/cm)	Turbidity (NTU)	Temperature (˚C)
MW-257	4/4/2012	413	5.7	0.181	6.5	20.7
MW-258	4/4/2012	60	6.0	0.366	3.6	20.6
MW-259	4/3/2012	207	6.3	0.354	6.1	20.6

Notes:
ºC: degrees Celsius
mS/cm: milliSiemens per centimeter
NTU: nephelometric turbidity units

TABLE 7
MAIN INSTALLATION WATER LEVEL MEASUREMENTS
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

Well ID	Aquifer	Top of Casing Elevation (ft, msl)	Top of Screen Elevation (ft, msl)	Depth to Water 16-17 Apr 12 (ft, btoc)	Groundwater Elevation 16-17 Apr 12 (ft, msl)	Depth to Water 17-18 Oct 12 (ft, btoc)	Groundwater Elevation 17-18 Oct 12 (ft, msl)
MW-16	Fluvial	299.86	242.26	56.83	243.03	57.35	242.51
MW-19	Fluvial	290.57	207.47	83.64	206.93	83.59	206.98
MW-21	Fluvial	295.00	202.90	89.14	205.86	89.00	206.00
MW-22	Fluvial	298.04	202.64	91.94	206.10	91.83	206.21
MW-23	Fluvial	298.99	197.79	94.19	204.80	94.11	204.88
MW-24	Fluvial	299.51	202.21	99.55	199.96	100.66	198.85
MW-25A	Fluvial	269.88	196.88	67.03	202.85	67.69	202.19
MW-26	Fluvial	303.69	206.09	96.31	207.38	96.70	206.99
MW-34	Intermediate	299.97	163.37	125.98	173.99	131.73	168.24
MW-38	Intermediate	307.45	167.55	122.30	185.15	125.82	181.63
MW-39	Fluvial	296.28	200.78	97.77	198.51	98.27	198.01
MW-39A	Fluvial	298.45	150.53	98.16	200.29	98.62	199.83
MW-50	Fluvial	298.82	183.82	83.47	215.35	83.97	214.85
MW-52	Fluvial	279.26	185.26	75.19	204.07	75.65	203.61
MW-53	Fluvial	306.38	233.88	73.31	233.07	73.24	233.14
MW-55	Fluvial	292.08	228.08	69.80	222.28	70.21	221.87
MW-62	Fluvial	293.65	207.65	91.06	202.59	91.07	202.58
MW-63A	Fluvial/Intermediate	305.96	165.96	99.94	206.02	101.09	204.87
MW-63B	Fluvial/Intermediate	305.78	190.78	99.72	206.06	101.24	204.54
MW-64	Fluvial	304.21	202.21	102.67	201.54	103.63	200.58
MW-66A	Fluvial	284.22	209.60	75.65	208.57	75.47	208.75
MW-85	Fluvial	304.13	208.23	95.89	208.24	96.12	208.01
MW-88	Fluvial	305.15	223.15	77.93	227.22	78.26	226.89
MW-89	Intermediate	303.98	156.98	108.96	195.02	111.21	192.77
MW-90	Intermediate	304.19	189.19	109.45	194.74	111.78	192.41
MW-92	Fluvial	304.41	211.41	93.33	211.08	93.59	210.82
MW-93	Fluvial	294.08	202.08	95.03	199.05	96.24	197.84
MW-94A	Fluvial	303.00	193.38	102.98	200.02	103.87	199.13
MW-96	Fluvial	289.02	213.52	79.38	209.64	79.67	209.35
MW-97	Fluvial	297.44	199.94	94.10	203.34	94.16	203.28
MW-98	Fluvial	294.43	157.43	93.66	200.77	94.26	200.17
MW-99	Fluvial	285.33	193.83	82.47	202.86	82.74	202.59
MW-100B	Fluvial	291.06	183.56	86.12	204.94	86.42	204.64
MW-101T	Fluvial	291.70	202.70	86.78	204.92	86.96	204.74
MW-102B	Fluvial	311.40	190.90	104.76	206.64	104.65	206.75
MW-103	Fluvial	301.37	231.35	69.22	232.15	68.88	232.49
MW-104	Fluvial	291.98	225.26	58.94	233.04	58.86	233.12
MW-107T	Fluvial/Intermediate	304.92	176.92	103.53	201.39	105.29	199.63
MW-108	Fluvial/Intermediate	303.07	143.07	103.37	199.70	104.67	198.40
MW-113	Fluvial	304.81	208.81	94.48	210.33	94.90	209.91
MW-140	Intermediate	298.12	73.52	132.43	165.69	134.46	163.66
MW-141	Intermediate	303.71	155.01	107.17	196.54	108.98	194.73
MW-142	Fluvial	291.18	206.18	88.84	202.34	88.92	202.26
MW-143	Fluvial	290.56	212.06	86.33	204.23	86.28	204.28
MW-197A	Fluvial	291.26	129.30	90.14	201.12	90.41	200.85
MW-197B	Fluvial	291.03	196.88	90.05	200.98	90.32	200.71
MW-198	Fluvial	291.50	201.47	90.76	200.74	91.23	200.27
MW-199A	Intermediate	301.53	155.45	104.18	197.35	105.18	196.35
MW-199B	Fluvial	301.73	197.12	101.39	200.34	101.89	199.84

TABLE 7
MAIN INSTALLATION WATER LEVEL MEASUREMENTS
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

Well ID	Aquifer	Top of Casing Elevation (ft, msl)	Top of Screen Elevation (ft, msl)	Depth to Water 16-17 Apr 12 (ft, btoc)	Groundwater Elevation 16-17 Apr 12 (ft, msl)	Depth to Water 17-18 Oct 12 (ft, btoc)	Groundwater Elevation 17-18 Oct 12 (ft, msl)
MW-200	Fluvial	300.18	196.98	100.20	199.98	100.71	199.47
MW-202A	Intermediate	299.23	122.73	116.12	183.11	119.94	179.29
MW-202B	Intermediate	299.51	180.42	115.55	183.96	119.57	179.94
MW-203A	Fluvial	290.59	147.65	88.84	201.75	89.03	201.56
MW-203B	Fluvial	290.51	197.68	88.75	201.76	88.95	201.56
MW-204A	Fluvial	292.21	158.95	91.21	201.00	91.51	200.70
MW-204B	Fluvial	292.32	197.83	91.24	201.08	91.55	200.77
MW-205A	Fluvial	291.93	150.96	91.43	200.50	91.82	200.11
MW-205B	Fluvial	291.82	194.82	91.25	200.57	91.57	200.25
MW-206A	Fluvial	299.92	172.58	100.08	199.84	100.52	199.40
MW-206B	Fluvial	299.90	203.18	100.03	199.87	100.54	199.36
MW-207A	Fluvial	303.78	154.13	104.12	199.66	105.28	198.50
MW-207B	Fluvial	303.83	195.58	103.99	199.84	104.97	198.86
MW-208A	Fluvial	301.50	118.05	101.93	199.57	102.79	198.71
MW-208B	Fluvial	301.79	195.13	101.98	199.81	102.78	199.01
MW-209A	Intermediate	298.05	109.07	100.05	198.00	100.92	197.13
MW-209B	Fluvial	298.49	196.17	99.31	199.18	98.67	199.82
MW-210A	Intermediate	289.66	112.60	94.94	194.72	96.16	193.50
MW-210B	Fluvial	289.29	192.33	88.49	200.80	87.75	201.54
MW-211	Intermediate	303.74	137.48	104.72	199.02	106.25	197.49
MW-212	Fluvial	295.34	209.69	94.45	200.89	95.02	200.32
MW-213	Fluvial	293.83	216.92	90.81	203.02	91.11	202.72
MW-214A	Fluvial	303.61	184.53	99.40	204.21	100.37	203.24
MW-214B	Fluvial	303.70	202.13	98.76	204.94	99.91	203.79
MW-215A	Fluvial	304.50	175.75	104.53	199.97	105.68	198.82
MW-215B	Fluvial	304.56	199.15	104.62	199.94	105.75	198.81
MW-216	Fluvial	297.34	197.41	93.87	203.47	94.85	202.49
MW-217	Fluvial	304.18	202.39	102.97	201.21	103.93	200.25
MW-218	Fluvial	305.60	206.69	100.02	205.58	100.50	205.10
MW-219	Fluvial	294.90	197.16	88.74	206.16	88.64	206.26
MW-229	Intermediate	311.77	123.34	144.77	167.00	150.69	161.08
MW-252	Intermediate	294.16	168.36	125.66	168.50	131.08	163.08
MW-253	Intermediate	290.47	172.47	103.12	187.35	105.69	184.78
MW-254	Memphis	292.84	7.24	128.66	164.18	133.87	158.97
MW-255	Memphis	291.84	7.34	126.87	164.97	132.13	159.71
MW-256	Intermediate	292.68	166.68	123.69	168.99	130.28	162.40
MW-257	Fluvial	292.22	207.12	88.03	204.19	88.16	204.06
MW-258	Fluvial	304.37	225.47	77.28	227.09	77.20	227.17
MW-259	Fluvial	290.77	192.27	93.32	197.45	94.84	195.93
PMW21-03	Fluvial	292.11	201.80	87.16	204.95	87.01	205.10
PMW21-05	Fluvial	288.53	194.28	84.96	203.57	85.25	203.28
PMW92-03	Fluvial	303.91	211.42	92.41	211.50	92.47	211.44
PMW92-06	Fluvial	304.65	213.02	93.24	211.41	NM	-
PMW101-04A	Fluvial	291.07	173.13	86.81	204.26	87.05	204.02
PMW101-04B	Fluvial	291.47	192.91	87.33	204.14	87.59	203.88
PZ-03	Fluvial	298.51	189.61	98.10	200.41	99.06	199.45
DR1-1	Fluvial	293.09	171.42	88.12	204.97	88.09	205.00
DR1-1A	Fluvial	293.13	203.79	88.08	205.05	87.99	205.14
DR1-2	Fluvial	290.08	192.28	86.08	204.00	86.35	203.73

TABLE 7
MAIN INSTALLATION WATER LEVEL MEASUREMENTS
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

Well ID	Aquifer	Top of Casing Elevation (ft, msl)	Top of Screen Elevation (ft, msl)	Depth to Water 16-17 Apr 12 (ft, btoc)	Groundwater Elevation 16-17 Apr 12 (ft, msl)	Depth to Water 17-18 Oct 12 (ft, btoc)	Groundwater Elevation 17-18 Oct 12 (ft, msl)
DR1-3	Fluvial	290.93	181.26	87.82	203.11	88.17	202.76
DR1-4	Fluvial	292.78	186.50	88.28	204.50	88.47	204.31
DR1-5	Fluvial	294.50	169.28	89.29	205.21	89.27	205.23
DR1-5A	Fluvial	294.61	204.88	89.40	205.21	89.32	205.29
DR1-6	Fluvial	292.98	177.14	88.02	204.96	88.22	204.76
DR1-6A	Fluvial	293.14	202.32	88.13	205.01	88.31	204.83
DR1-7	Fluvial	289.15	180.86	86.31	202.84	86.67	202.48
DR1-8	Fluvial	290.02	197.37	85.40	204.62	85.26	204.76
DR2-1	Fluvial	304.90	231.00	86.78	218.12	86.97	217.93
DR2-2	Fluvial	304.37	225.37	80.72	223.65	81.09	223.28
DR2-3	Fluvial	303.44	210.44	94.54	208.90	94.77	208.67
DR2-4	Fluvial	303.47	215.47	92.03	211.44	92.35	211.12
DR2-5	Fluvial	305.44	220.44	94.33	211.11	94.61	210.83
DR2-6	Fluvial	304.70	210.10	97.98	206.72	98.35	206.35

Notes:
ft, btoc: feet below top of casing
ft, msl: feet above mean sea level
NM: Not measured

TABLE 8
DUNN FIELD WATER LEVEL MEASUREMENTS
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

Well ID	Aquifer	Top of Casing Elevation (ft, msl)	Top of Screen Elevation (ft, msl)	Depth to Water 16 to 17-Apr-12 (ft, btoc)	Groundwater Elevation 16 to 17-Apr-12 (ft, msl)	Depth to Water 16-Oct-12 (ft, btoc)	Groundwater Elevation 16-Oct-12 (ft, msl)
MW-03	Fluvial	292.35	226.85	64.41	227.94	64.40	227.95
MW-04	Fluvial	301.61	241.61	71.79	229.82	71.91	229.70
MW-06	Fluvial	289.11	238.11	59.86	229.25	59.63	229.48
MW-07	Fluvial	295.10	228.10	64.22	230.88	64.52	230.58
MW-08	Fluvial	292.59	236.09	60.19	232.40	60.75	231.84
MW-13	Fluvial	300.01	234.01	70.25	229.76	70.22	229.79
MW-15	Fluvial	295.12	231.72	65.59	229.53	65.60	229.52
MW-28	Fluvial	294.79	240.49	54.91	239.88	55.47	239.32
MW-31	Fluvial	290.37	226.27	66.44	223.93	66.33	224.04
MW-32	Fluvial	285.40	232.70	NM	-	NM	-
MW-33	Fluvial	280.71	236.11	NM	-	NM	-
MW-44	Fluvial	269.07	205.07	51.43	217.64	51.29	217.78
MW-54	Fluvial	295.35	210.85	76.60	218.75	76.55	218.80
MW-57	Fluvial	290.77	230.77	61.19	229.58	61.44	229.33
MW-58	Fluvial	290.51	233.51	61.88	228.63	61.94	228.57
MW-67	Memphis	278.21	18.21	111.69	166.52	116.91	161.30
MW-68	Fluvial	291.69	219.19	64.25	227.44	64.17	227.52
MW-69	Fluvial	307.02	224.94	79.39	227.63	79.23	227.79
MW-70	Fluvial	304.99	224.18	77.08	227.91	76.83	228.16
MW-71	Fluvial	294.40	228.90	66.36	228.04	66.15	228.25
MW-76	Fluvial	302.71	229.71	79.87	222.84	79.87	222.84
MW-77	Fluvial	304.42	236.42	78.41	226.01	78.41	226.01
MW-78	Fluvial	275.00	230.50	45.87	229.13	46.34	228.66
MW-79	Fluvial	285.03	202.53	67.98	217.05	67.91	217.12
MW-80	Fluvial	273.81	220.81	56.91	216.90	56.96	216.85
MW-87	Fluvial	294.93	231.93	66.03	228.90	65.81	229.12
MW-91	Fluvial	291.99	236.99	62.77	229.22	62.70	229.29
MW-126	Fluvial	252.22	236.22	17.45	234.77	19.88	232.34
MW-129	Fluvial	293.01	228.01	54.94	238.07	56.14	236.87
MW-130	Fluvial	293.20	233.70	54.38	238.82	55.29	237.91
MW-134	Fluvial	300.81	225.81	72.14	228.67	71.98	228.83
MW-144	Fluvial	291.60	235.10	69.58	222.02	69.65	221.95
MW-145	Fluvial	284.72	204.72	66.73	217.99	66.55	218.17
MW-147	Fluvial	289.72	229.72	66.68	223.04	66.70	223.02
MW-148	Fluvial	294.71	224.71	74.25	220.46	74.16	220.55
MW-149	Fluvial	287.18	205.78	68.96	218.22	68.96	218.22
MW-150	Fluvial	296.81	225.61	77.55	219.26	77.63	219.18
MW-151	Fluvial	284.27	207.27	66.28	217.99	66.72	217.55
MW-152	Fluvial	289.59	198.59	72.16	217.43	71.82	217.77
MW-153	Fluvial	279.17	203.17	62.32	216.85	62.32	216.85
MW-154	Fluvial	273.81	220.81	55.11	218.70	55.24	218.57
MW-155	Fluvial	291.65	214.65	73.13	218.52	73.69	217.96
MW-157	Fluvial	286.78	229.78	66.16	220.62	66.20	220.58
MW-158	Fluvial	294.07	203.06	76.37	217.70	75.98	218.09
MW-158A	Fluvial	293.95	216.03	76.31	217.64	75.92	218.03
MW-159	Fluvial	286.33	205.89	68.30	218.03	68.79	217.54
MW-160	Fluvial	293.69	228.04	73.69	220.00	74.52	219.17
MW-163	Fluvial	290.63	234.42	68.91	221.72	69.10	221.53
MW-164	Fluvial	287.48	231.86	65.41	222.07	65.41	222.07

TABLE 8
DUNN FIELD WATER LEVEL MEASUREMENTS
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

Well ID	Aquifer	Top of Casing Elevation (ft, msl)	Top of Screen Elevation (ft, msl)	Depth to Water 16 to 17-Apr-12 (ft, btoc)	Groundwater Elevation 16 to 17-Apr-12 (ft, msl)	Depth to Water 16-Oct-12 (ft, btoc)	Groundwater Elevation 16-Oct-12 (ft, msl)
MW-165	Fluvial	287.06	198.43	69.19	217.87	69.64	217.42
MW-165A	Fluvial	287.26	215.96	69.77	217.49	69.44	217.82
MW-166	Fluvial	282.72	199.59	64.74	217.98	65.16	217.56
MW-166A	Fluvial	282.90	215.15	64.95	217.95	65.18	217.72
MW-167	Fluvial	284.82	214.68	67.43	217.39	67.53	217.29
MW-169	Transition	261.90	194.12	68.98	192.92	71.75	190.15
MW-170	Fluvial	273.75	214.14	55.05	218.70	54.96	218.79
MW-171	Fluvial	270.69	217.72	52.79	217.90	52.72	217.97
MW-174	Fluvial	296.56	229.56	67.02	229.54	66.85	229.71
MW-176	Fluvial	299.68	223.68	70.91	228.77	70.67	229.01
MW-180	Fluvial	296.14	224.14	67.89	228.25	67.86	228.28
MW-182	Fluvial	275.40	213.40	61.28	214.12	61.03	214.37
MW-184	Fluvial	283.12	225.12	61.49	221.63	61.30	221.82
MW-187	Fluvial	302.74	226.74	72.65	230.09	72.42	230.32
MW-190	Fluvial	297.32	219.32	75.04	222.28	74.88	222.44
MW-220	Fluvial	293.29	228.35	64.61	228.68	64.74	228.55
MW-221	Fluvial	301.52	228.40	73.50	228.02	73.45	228.07
MW-222	Fluvial	303.82	229.64	74.93	228.89	74.78	229.04
MW-223	Fluvial	303.00	229.13	74.13	228.87	73.96	229.04
MW-224	Fluvial	304.13	230.42	75.14	228.99	75.02	229.11
MW-225	Fluvial	304.52	229.54	75.86	228.66	75.67	228.85
MW-226	Fluvial	303.19	228.97	74.25	228.94	74.05	229.14
MW-227	Fluvial	299.70	236.06	69.91	229.79	69.95	229.75
MW-228	Fluvial	301.65	237.56	71.90	229.75	71.78	229.87
MW-230	Fluvial	286.57	227.32	53.31	233.26	53.71	232.86
MW-235	Fluvial	264.00	213.41	53.90	210.10	53.73	210.27
MW-237	Intermediate	289.18	122.73	121.90	167.28	127.07	162.11
MW-241	Fluvial	292.82	219.57	73.07	219.75	74.02	218.80
MW-242	Fluvial	295.40	222.20	74.71	220.69	75.45	219.95
MW-243	Fluvial	292.26	211.56	74.19	218.07	74.59	217.67
MW-244	Fluvial	288.72	212.39	70.68	218.04	71.66	217.06
MW-245	Fluvial	290.13	205.40	72.34	217.79	72.84	217.29
MW-246	Fluvial	288.17	202.97	70.51	217.66	70.96	217.21
MW-247	Fluvial	285.70	205.70	67.98	217.72	68.73	216.97
MW-248	Fluvial	275.45	207.94	57.91	217.54	57.65	217.80
MW-249	Fluvial	285.53	207.49	67.67	217.86	67.47	218.06
MW-250	Intermediate	289.66	120.96	122.25	167.41	128.55	161.11
MW-251	Intermediate	285.83	125.63	119.22	166.61	124.58	161.25

Notes:
ft, btoc: feet below top of casing
ft, msl: feet above mean sea level
NM: Not measured

TABLE 9
MAIN INSTALLATION PDB SAMPLE INTERVALS
ANNUAL LONG-TERM MONITORING REPORT-2012
Defense Depot Memphis, Tennessee

Well	Top of Screen Depth (ft, btoc)	Screen Length (ft)	Apr-12 Date Collected	Apr-12 Depth to Water (ft, btoc)	Apr-12 Sample Depth[1] (ft, btoc)	Oct-12 Date Collected	Oct-12 Depth to water (ft, btoc)	Oct-12 Sample Depth[1] (ft, btoc)
MW-16	57.6	15	-	-	-	10/21/2012	57.4	65.1
MW-19	83.1	10	-	-	-	10/19/2012	83.6	88.7
MW-22	95.4	10	-	-	-	10/19/2012	91.8	100.4
MW-23	101.2	10	-	-	-	10/20/2012	94.1	106.2
MW-24	97.3	15	-	-	-	10/21/2012	100.7	106.7
MW-25A	73.0	10	-	-	-	10/19/2012	67.7	78.0
MW-26	97.6	10	4/23/2012	96.3	102.6	10/21/2012	96.7	102.6
MW-34	136.6	20	-	-	-	10/19/2012	131.7	146.6
MW-38	139.9	15	-	-	-	10/21/2012	125.8	147.4
MW-39	95.5	20	4/23/2012	98.6	107.3	10/20/2012	98.3	107.3
MW-39A	147.9	20	4/23/2012	98.9	157.9	10/20/2012	98.6	157.9
MW-50	115.0	10	-	-	-	10/19/2012	84.0	120.0
MW-52	94.0	10	-	-	-	10/19/2012	75.7	99.0
MW-53	72.5	10	-	-	-	10/19/2012	73.2	78.0
MW-63A	140.0	10	-	-	-	10/21/2012	101.1	135.0
MW-63B	115.0	10	-	-	-	10/21/2012	101.2	120.0
MW-64	102.0	10	4/23/2012	102.5	108.0	10/21/2012	103.6	108.0
MW-66A	74.6	20	-	-	-	10/19/2012	75.5	85.4
MW-88	82.0	15	4/23/2012	79.5	89.5	10/21/2012	78.3	89.5
MW-89	147.0	30	-	-	-	10/20/2012	111.2	162.0
MW-90	115.0	30	4/23/2012	109.2	130.0	10/20/2012	111.8	130.0
MW-92	93.0	15	4/23/2012	93.5	101.0	10/21/2012	93.6	101.0
MW-93	92.0	15	-	-	-	10/21/2012	96.2	101.9
MW-94A	109.6	10	4/23/2012	102.8	114.6	10/21/2012	103.9	114.6
MW-96	75.5	20	-	-	-	10/19/2012	79.7	87.7
MW-97	97.5	20	4/23/2012	93.9	107.5	10/20/2012	94.2	107.5
MW-98	137.0	10	4/23/2012	93.6	142.0	10/20/2012	94.3	142.0
MW-99	91.5	20	-	-	-	10/19/2012	82.7	101.5
MW-101T	89.0	15	4/23/2012	86.8	96.5	10/19/2012	87.0	96.5
MW-101B	119.0	10	4/23/2012	86.8	124.0	10/19/2012	87.0	124.0
MW-102B	120.5	20	-	-	-	10/19/2012	104.7	130.5
MW-103	70.0	20	-	-	-	10/21/2012	68.9	80.0
MW-104	70.5	20	-	-	-	10/21/2012	58.9	78.5
MW-107T	128.0	15	4/23/2012	103.3	135.5	10/21/2012	105.3	135.5
MW-107B	148.0	10	4/23/2012	103.3	153.0	10/21/2012	105.3	153.0
MW-108	160.0	10	4/23/2012	103.1	165.0	10/21/2012	104.7	165.0
MW-140	224.6	20	-	-	-	10/20/2012	134.5	234.6
MW-141	148.7	20	4/23/2012	106.9	158.7	10/20/2012	109.0	158.7
MW-142	85.0	20	-	-	-	10/20/2012	88.9	97.4
MW-143	78.5	20	4/23/2012	86.3	92.8	10/19/2012	86.3	92.8
MW-198	90.0	15	-	-	-	10/20/2012	91.2	98.4
MW-199A	146.1	15	-	-	-	10/20/2012	105.2	153.6
MW-199B	104.6	15	4/23/2012	101.3	112.1	10/20/2012	101.9	112.1
MW-200	102.9	15	4/23/2012	100.0	110.4	10/20/2012	100.7	110.4
MW-202A	176.2	15	-	-	-	10/20/2012	119.9	183.7
MW-202B	118.8	15	4/23/2012	117.5	126.3	10/20/2012	119.6	126.3
MW-204A	133.3	15	4/23/2012	91.0	140.8	10/20/2012	91.5	140.8
MW-204B	94.5	15	4/23/2012	91.0	102.0	10/20/2012	91.6	102.0

TABLE 9
MAIN INSTALLATION PDB SAMPLE INTERVALS
ANNUAL LONG-TERM MONITORING REPORT-2012
Defense Depot Memphis, Tennessee

Well	Top of Screen Depth (ft, btoc)	Screen Length (ft)	Apr-12 Date Collected	Apr-12 Depth to Water (ft, btoc)	Apr-12 Sample Depth[1] (ft, btoc)	Oct-12 Date Collected	Oct-12 Depth to water (ft, btoc)	Oct-12 Sample Depth[1] (ft, btoc)
MW-205A	141.0	15	4/23/2012	91.2	148.5	10/20/2012	91.8	148.5
MW-205B	97.0	15	4/23/2012	91.0	104.5	10/20/2012	91.6	104.5
MW-206A	127.3	15	4/23/2012	99.9	134.8	10/20/2012	100.5	134.8
MW-206B	96.7	15	4/23/2012	99.8	106.5	10/20/2012	100.5	106.5
MW-207A	149.7	15	4/23/2012	103.9	157.2	10/21/2012	105.3	157.2
MW-207B	108.3	15	4/23/2012	103.8	115.8	10/21/2012	105.0	115.8
MW-208A	183.4	15	4/23/2012	101.7	191.0	10/20/2012	102.8	191.0
MW-208B	106.7	15	4/23/2012	101.8	114.2	10/20/2012	102.8	114.2
MW-209A	189.0	15	-	-	-	10/20/2012	100.9	196.5
MW-209B	102.3	15	4/23/2012	98.1	109.8	10/20/2012	98.7	109.8
MW-210A	177.1	15	4/23/2012	94.5	184.5	10/20/2012	96.2	184.5
MW-210B	97.0	15	4/23/2012	88.2	104.5	10/20/2012	87.8	104.5
MW-211	166.3	15	-	-	-	10/21/2012	106.3	173.8
MW-214A	119.1	15	4/23/2012	99.2	126.6	10/21/2012	100.4	126.6
MW-214B	101.6	15	4/23/2012	99.5	109.1	10/21/2012	99.9	109.1
MW-215A	128.8	15	-	-	-	10/21/2012	105.7	136.3
MW-215B	105.4	15	-	-	-	10/21/2012	105.8	113.2
MW-216	99.9	15	-	-	-	10/20/2012	94.9	107.4
MW-217	101.8	15	4/23/2012	102.8	110.5	10/21/2012	103.9	110.5
MW-218	98.9	15	4/23/2012	99.9	107.4	10/21/2012	100.5	107.4
MW-219	97.7	15	4/23/2012	88.6	105.3	10/19/2012	88.6	105.3
MW-229	188.4	20	-	-	-	10/19/2012	150.7	198.4
MW-252	126.1	20	4/23/2012	124.0	139.2	10/19/2012	131.1	139.2
MW-253	118.3	20	4/23/2012	103.3	128.8	10/19/2012	105.7	128.8
MW-254	285.8	20	4/23/2012	127.0	295.8	10/19/2012	133.9	295.8
MW-255	284.7	20	4/23/2012	124.3	294.7	10/19/2012	132.1	294.7
MW-256	127.1	20	4/23/2012	122.5	139.1	10/19/2012	130.3	139.1
MW-257	85.1	15	-	-	-	10/21/2012	88.2	94.3
MW-258	78.9	20	-	-	-	10/21/2012	77.2	88.9
MW-259	98.5	20	-	-	-	10/21/2012	94.8	108.5
DR1-1	121.7	20	-	-	-	10/19/2012	88.1	131.7
DR1-1A	89.3	20	-	-	-	10/19/2012	88.0	99.3
DR1-2	97.8	20	-	-	-	10/19/2012	86.4	107.8
DR1-3	109.7	20	4/23/2012	87.8	119.7	10/19/2012	88.2	119.7
DR1-4	106.3	20	-	-	-	10/19/2012	88.5	116.3
DR1-7	108.3	20	-	-	-	10/19/2012	86.7	118.3
DR1-8	92.7	20	-	-	-	10/19/2012	85.3	102.7
DR2-1	73.9	20	4/23/2012	87.3	90.5	10/21/2012	87.0	90.5
DR2-3	93.0	20	4/23/2012	94.5	104.1	10/21/2012	94.8	104.1
DR2-4	88.0	20	-	-	-	10/21/2012	92.4	100.3
DR2-6	94.6	20	4/23/2012	98.0	106.7	10/21/2012	98.4	106.7
PMW21-03	90.3	20	4/23/2012	87.1	100.3	10/19/2012	87.0	100.3
PMW21-05	94.3	20	4/23/2012	84.9	104.3	10/19/2012	85.3	104.3

Notes:
1) Sample Depth is to PDB mid-point
ft, btoc: feet below top of casing
PDB: passive diffusion bag

TABLE 10
MAIN INSTALLATION FINAL WELL STABILIZATION MEASUREMENTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT - 2012
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 (L)	pH	Temp (^{o}C)	Specific Conductivity (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTUs)
MW-21	4/21/2012	low flow	12:23	92.2	89.01	130	5.9	5.8	16.5	0.239	10.6	180	19.6
MW-62	4/21/2012	bailer	16:36	NA	90.77	NA	9.0	6.2	18.4	0.111	9.7	199	OR
MW-85	4/21/2012	low flow	15:18	105.1	95.90	100	7.6	6.0	20.8	0.196	4.2	136	13.3
MW-100B	4/21/2012	low flow	15:42	118.5	86.04	20	2.8	6.2	20.4	0.553	4.5	-71	4.9
MW-113	4/21/2012	low flow	11:27	103.2	94.65	120	3.7	5.9	19.2	0.202	2.2	192	0.5
MW-197A	4/20/2012	low flow	16:20	170.4	89.60	360	9.0	6.0	17.7	0.346	3.0	124	6.4
MW-197B	4/21/2012	low flow	8:44	102.6	89.80	140	3.4	6.3	15.9	0.348	3.9	147	2.4
MW-203A	4/20/2012	low flow	14:45	150.5	88.38	340	26.0	5.9	18.3	0.326	4.8	112	2.1
MW-203B	4/20/2012	low flow	15:37	100.3	88.23	120	3.7	6.1	19.9	0.362	2.9	88	1.8
MW-212	4/22/2012	bailer	10:04	NA	94.26	NA	12.0	5.9	18.4	0.149	11.7	138	OR
MW-213	4/21/2012	bailer	16:11	NA	90.75	NA	4.0	6.0	18.0	0.112	9.2	209	OR
MW-257	4/23/2012	low flow	9:06	93.0	88.12	170	7.8	5.9	18.5	0.193	7.6	147	19.5
MW-258	4/22/2012	low flow	15:21	89.1	76.98	180	19.8	6.1	19.6	0.493	4.7	88	105
MW-259	4/22/2012	low flow	17:33	108.6	93.11	190	17.0	6.0	20.0	0.290	11.7	184	195
DR1-5	4/22/2012	low flow	10:32	136.3	89.12	110	3.5	5.9	19.4	0.325	5.8	159	0.3
DR1-5A	4/22/2012	low flow	9:42	102.3	89.31	160	4.8	5.8	19.3	0.140	8.7	166	1.2
DR1-6	4/22/2012	low flow	11:16	126.6	87.80	210	3.8	6.0	19.6	0.425	6.0	154	1.7
DR1-6A	4/22/2012	low flow	11:43	102.8	87.91	200	3.6	5.9	20.0	0.127	6.9	162	1.8
DR2-2	4/20/2012	low flow	15:11	88.6	80.91	220	3.2	5.8	23.2	0.226	11.1	146	6.1
DR2-5	4/20/2012	low flow	16:08	98.6	94.27	120	3.5	5.6	23.1	0.173	6.7	156	4.5
PMW92-03	4/21/2012	low flow	9:42	98.6	92.29	120	3.6	6.6	18.5	0.355	2.1	-28	0.5
PMW92-06	4/21/2012	low flow	10:37	98.9	93.20	120	3.4	5.8	18.9	0.189	2.9	173	6.8
PMW101-04A	4/22/2012	low flow	11:24	128.8	86.83	120	5.8	6.4	19.5	0.499	4.7	-81	17.3
PMW101-04B	4/22/1012	low flow	12:27	109.5	87.11	150	3.3	5.8	19.9	0.288	6.5	112	11.4

Notes:
˚C : degrees Celsius
DO : Dissolved Oxygen
ft, btoc: feet below top of casing
L : liters
mg/L : milligrams per liter
mL/min: milliliters per minute
mS/cm : milliSiemens per centimeter
mV :millivolts
NA: not applicable
NTUs: nephelometric turbidity units
OR: out of range
ORP : Oxidation Reduction Potential

TABLE 11
DUNN FIELD PDB SAMPLE INTERVALS
ANNUAL LONG-TERM MONITORING REPORT-2012
Defense Depot Memphis, Tennessee

Well ID	Top of Screen Depth (ft, btoc)	Screen Length (ft)	Apr-12 Date Collected	Apr-12 Depth to Water (ft, btoc)	Apr-12 Sample Depth[1] (ft, btoc)	Oct-12 Date Collected	Oct-12 Depth to Water (ft, btoc)	Oct-12 Sample Depth[1] (ft, btoc)
MW-03	65.5	10	4/19/2012	64.4	70.5	10/17/2012	64.40	70.5
MW-06	51.0	20	4/19/2012	59.9	65.9	10/17/2012	59.63	65.9
MW-07	67.0	10	4/19/2012	64.2	68.5	-	-	-
MW-15	63.4	15	4/19/2012	65.6	72.5	10/17/2012	65.60	72.5
MW-28	54.3	15	4/19/2012	54.9	62.3	10/16/2012	55.47	62.3
MW-31	64.1	15	4/19/2012	66.4	73.2	10/16/2012	66.33	73.2
MW-44	64.0	10	4/20/2012	51.4	69.0	-	-	-
MW-54	84.5	10	4/18/2012	76.6	89.5	10/17/2012	76.55	89.5
MW-57	60.0	10	4/19/2012	61.2	66.1	10/17/2012	61.44	66.1
MW-68	72.5	10	4/19/2012	64.3	78.0	-	-	-
MW-69	82.1	10	4/20/2012	79.4	87.1	-	-	-
MW-70	80.8	10	4/19/2012	77.1	83.5	-	-	-
MW-71	65.5	10	4/19/2012	66.4	71.4	-	-	-
MW-76	73.0	20	4/19/2012	79.9	87.3	-	-	-
MW-77	68.0	20	4/19/2012	78.4	83.6	10/17/2012	78.41	83.6
MW-79	82.5	20	4/18/2012	68.0	92.5	10/17/2012	67.91	92.5
MW-80	53.0	20	4/20/2012	56.9	64.7	-	-	-
MW-87	63.0	15	4/19/2012	66.0	72.4	10/17/2012	65.81	72.4
MW-91	55.0	15	4/19/2012	62.8	66.6	-	-	-
MW-129	65.0	15	4/19/2012	54.9	73.0	-	-	-
MW-130	59.5	20	4/19/2012	54.4	70.0	-	-	-
MW-134	75.0	15	4/20/2012	72.1	83.0	10/17/2012	71.98	83.0
MW-144	56.8	20	4/19/2012	69.6	74.3	10/17/2012	69.65	74.3
MW-145	80.1	20	4/19/2012	66.7	90.1	-	-	-
MW-147	60.2	20	4/19/2012	66.7	74.3	-	-	-
MW-148	70.0	20	4/19/2012	74.3	81.7	-	-	-
MW-149	81.4	20	4/20/2012	69.0	91.7	10/17/2012	68.96	91.7
MW-150	71.2	20	4/19/2012	77.6	85.3	10/17/2012	77.63	85.3
MW-151	77.0	20	4/19/2012	66.3	87.2	10/17/2012	66.72	87.2
MW-152	91.0	20	4/18/2012	72.2	101.2	-	-	-
MW-155	77.0	20	4/19/2012	73.1	87.2	-	-	-
MW-157	57.0	20	4/19/2012	66.2	72.9	10/17/2012	66.20	72.9
MW-158	91.0	15	4/18/2012	76.4	98.8	-	-	-
MW-158A	77.9	15	4/18/2012	76.3	85.8	-	-	-
MW-159	80.4	20	4/20/2012	68.3	90.7	10/17/2012	68.79	90.7
MW-163	56.2	20	4/19/2012	68.9	73.0	10/17/2012	69.10	73.0
MW-164	55.6	20	4/19/2012	65.4	71.8	10/17/2012	65.41	71.8
MW-165	88.6	15	4/18/2012	69.2	96.4	10/16/2012	69.64	96.4
MW-165A	71.3	15	4/18/2012	69.8	79.2	10/16/2012	69.44	79.2
MW-166	83.9	15	4/18/2012	64.7	90.7	10/17/2012	65.16	90.7
MW-166A	68.3	15	4/18/2012	65.0	75.2	10/17/2012	65.18	75.2
MW-174	67.0	10	4/19/2012	67.0	73.0	10/17/2012	66.85	73.0
MW-176	76.0	10	4/18/2012	70.9	81.0	-	-	-
MW-180	72.0	10	4/19/2012	67.9	77.0	-	-	-
MW-184	58.0	10	4/19/2012	61.5	64.8	-	-	-
MW-190	78.0	10	4/19/2012	75.0	83.0	10/17/2012	74.88	83.0
MW-220	64.9	15	4/19/2012	64.6	72.4	10/17/2012	64.74	72.4
MW-221	73.1	15	4/20/2012	73.5	81.0	10/17/2012	73.45	81.0
MW-222	74.2	15	4/20/2012	74.9	82.4	10/16/2012	74.78	82.4

TABLE 11
DUNN FIELD PDB SAMPLE INTERVALS
ANNUAL LONG-TERM MONITORING REPORT-2012
Defense Depot Memphis, Tennessee

Well ID	Top of Screen Depth (ft, btoc)	Screen Length (ft)	Apr-12 Date Collected	Apr-12 Depth to Water (ft, btoc)	Apr-12 Sample Depth[1] (ft, btoc)	Oct-12 Date Collected	Oct-12 Depth to Water (ft, btoc)	Oct-12 Sample Depth[1] (ft, btoc)
MW-223	73.9	15	4/20/2012	74.1	81.4	10/16/2012	73.96	81.4
MW-224	73.7	15	4/20/2012	75.1	82.2	10/16/2012	75.02	82.2
MW-225	75.0	15	4/20/2012	75.9	83.2	10/16/2012	75.67	83.2
MW-226	74.2	15	4/19/2012	74.3	82.0	10/16/2012	74.05	82.0
MW-227	63.6	15	4/19/2012	69.9	74.7	10/17/2012	69.95	74.7
MW-228	64.1	15	4/19/2012	71.9	75.7	10/17/2012	71.78	75.7
MW-230	59.3	15	4/19/2012	53.3	67.3	-	-	-
MW-241	73.3	15	4/17/2012	73.1	81.6	-	-	-
MW-242	73.2	16	4/17/2012	74.7	83.8	10/17/2012	75.45	83.8
MW-243	80.7	20	4/17/2012	74.2	90.7	10/16/2012	74.59	90.7
MW-244	76.3	20	4/18/2012	70.7	86.3	10/17/2012	71.66	86.3
MW-245	84.7	20	4/17/2012	72.3	95.0	10/16/2012	72.84	95.0
MW-246	85.2	20	4/17/2012	70.5	95.2	10/16/2012	70.96	95.2
MW-247	80.0	20	4/18/2012	68.0	90.0	10/17/2012	68.73	90.0
MW-248	67.5	20	4/18/2012	57.9	77.5	-	-	-
MW-249	78.0	20	4/18/2012	67.7	88.3	10/17/2012	67.47	88.3
MW-250	168.7	15	4/18/2012	122.3	176.2	-	-	-
MW-251	160.2	15	4/18/2012	119.2	167.7	-	-	-

Notes:
1) Sample depth is to PDB mid-point
ft, btoc: feet below top of casing
PDB: passive diffusion bag

TABLE 12
DUNN FIELD FINAL WELL STABILIZATION MEASUREMENTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT - 2012
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 (L)	pH	Temp (^{o}C)	Specific Conductivity (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTUs)
MW-04	4/19/2012	low flow	9:01	75.5	71.7	150	3.1	6.0	17.2	0.219	8.3	127.5	0.5
MW-08	4/18/2012	low flow	10:29	64.5	60.1	250	17.4	6.0	16.3	0.254	9.8	47.4	17.8
MW-126	4/18/2012	low flow	12:00	22.5	17.4	200	11.6	6.0	19.6	0.154	6.2	85.7	17.5
MW-160	4/20/2012	low flow	9:29	80.0	73.9	140	3.5	7.4	19.7	0.354	10.1	146	0.0
MW-182	4/19/2012	low flow	9:38	70.0	60.6	100	3.7	5.9	16.3	0.234	7.6	130.1	19.3
MW-235	4/19/2012	low flow	12:11	58.9	53.3	140	4.9	5.7	18.1	0.211	5.1	136.5	20.0
MW-237	4/18/2012	low flow	16:29	172.0	121.9	360	43.9	6.2	17.9	0.285	3.2	12.9	20.0

Notes:

˚C : degrees Celsius
DO : Dissolved Oxygen
ft, btoc: feet below top of casing
L : liters
mg/L : milligrams per liter
mL/min: milliliters per minute
mS/cm : milliSiemens per centimeter
mV :millivolts
NTUs: nephelometric turbidity units
ORP : Oxidation Reduction Potential

TABLE 13
MAIN INSTALLATION FINAL WELL STABILIZATION MEASUREMENTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT - 2012
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 (L)	pH	Temp (°C)	Specific Conductivity (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTUs)
MW-21	10/20/2012	low flow	15:17	92.2	89.38	75	3.20	5.85	20.3	0.266	8.89	172.2	2.5
MW-55	10/21/2012	low flow	11:01	72	70.53	100	6.88	5.70	21.2	0.197	10.78	142.7	17.5
MW-62	10/22/2012	bailer	13:04	NA	91.59	NA	9.00	5.81	18.8	0.108	13.92	88.1	92.6
MW-85	10/19/2012	low flow	9:15	105.1	96.15	120	6.46	5.86	22.1	0.186	6.04	86.5	7.1
MW-100B	10/19/2012	low flow	14:15	118.5	86.45	40	3.10	6.21	21.2	0.423	4.14	-46.1	7.8
MW-113	10/22/2012	low flow	10:38	103.2	94.93	60	3.22	5.67	24.0	0.201	5.56	121.5	1.5
MW-197A	10/21/2012	low flow	15:16	170.4	90.92	250	5.50	6.11	19.5	0.359	5.92	129.5	8.3
MW-197B	10/21/2012	low flow	16:16	102.6	90.82	140	3.32	6.26	20.1	0.382	4.79	99.0	9.0
MW-203A	10/21/2012	low flow	14:20	150.5	89.52	110	3.94	5.97	20.3	0.344	5.09	137.7	5.1
MW-203B	10/21/2012	low flow	13:30	100.3	89.66	50	3.02	6.45	21.4	0.510	8.89	111.2	1.5
MW-212	10/22/2012	bailer	11:14	NA	95.25	NA	10.50	5.97	18.6	0.141	7.54	150.4	129.0
MW-213	10/22/2012	bailer	8:49	NA	91.30	NA	1.80	6.14	18.5	0.100	12.25	135.0	277.0
DR1-5	10/20/2012	low flow	12:00	136.3	89.75	140	3.38	5.85	21.8	0.326	9.38	154.4	0.5
DR1-5A	10/20/2012	low flow	13:44	102.3	89.82	200	5.64	5.66	20.5	0.136	11.47	165.2	1.5
DR1-6	10/20/2012	low flow	10:30	126.6	88.47	130	13.32	5.91	20.6	0.385	10.90	153.6	19.7
DR1-6A	10/20/2012	low flow	11:13	102.8	88.65	260	4.30	5.75	21.0	0.119	10.05	152.6	3.1
DR2-2	10/22/2012	low flow	14:09	88.6	81.01	80	3.08	5.91	23.8	0.235	9.29	125.3	2.7
DR2-5	10/19/2012	low flow	10:35	98.6	94.59	80	3.02	5.61	22.9	0.167	5.78	153.7	0.9
PMW92-03	10/22/2012	low flow	13:13	98.6	92.73	65	3.20	6.29	26.2	0.324	5.92	-37.1	0.8
PMW101-04A	10/22/2012	low flow	9:07	128.8	87.33	170	4.94	6.34	19.6	0.465	4.55	-85.0	4.2
PMW101-04B	10/19/2012	low flow	15:21	109.5	88.57	110	4.32	5.87	20.2	0.263	6.71	130.2	3.8
PMW85-05	10/22/2012	low flow	11:40	101.00	94.90	100	4.00	5.43	24.9	0.185	4.63	33.80	5.6
PZ-03	10/22/2012	bailer	10:17	N/A	98.60	NA	3.00	6.23	18.3	0.257	5.68	167.80	414.0

Notes:

˚C : degrees Celsius
DO : Dissolved Oxygen
ft, btoc: feet below top of casing
L : liters
mg/L : milligrams per liter
mL/min: milliliters per minute
mS/cm : milliSiemens per centimeter
mV :millivolts
NA: not applicable
NTUs: nephelometric turbidity units
OR: out of range
ORP : Oxidation Reduction Potential

TABLE 14
MAIN INSTALLATION ANALYTICAL RESULTS SUMMARY, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well		DR1-3	DR1-5	DR1-5A	DR1-6	DR1-6A	DR2-1	DR2-2
	Date		4/23/2012	4/22/2012	4/22/2012	4/22/2012	4/22/2012	4/23/2012	4/20/2012
	Lab ID		L12040829-18	L12040831-15	L12040831-16	L12040831-17	L12040831-18	L12040829-19	L12040762-01
Analyte	Units	MCL							
Carbon tetrachloride	µg/L	5	<1	<1	<1	<1	<1	**25.7 J**	4.96
Chloroform	µg/L	80	<0.3	<0.3	<0.3	<0.3	0.195 J	6.09	0.686
cis-1,2-Dichloroethene	µg/L	70	<1	<1	2.26	1.02	7.71	13.5	1.25
Tetrachloroethene	µg/L	5	**11.2**	**29.3**	**46.7**	**161**	**51.3**	**119**	**34.5**
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	1.48	<1	**74.4**	1.16	**154**	**6.95**	2.89
Vinyl chloride	µg/L	2	<1	<1	<1	<1	<1	<1	<1
Additional VOCs									
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	µg/L	7	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-Trichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Methyl t-butyl ether (MTBE)	µg/L	--	1.01 J	17.6	2.54 J	<5	<5	<5	<5
Trichlorofluoromethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1

Notes:
µg/L: micrograms per liter
-- : Not Listed
MCL: Maximum Contaminant Level
RL: Reporting Limit
<: Not detected above RL
Results above MCL shown in bold

DQE FLAGS:
J: Estimated concentration
UJ: Not-Detected, RL estimated
B: Blank Contamination
JB: Estimated - Blank contamination

TABLE 14
MAIN INSTALLATION ANALYTICAL RESULTS SUMMARY, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well		DR2-3	DR2-5	DR2-6	PMW21-03	PMW21-05	PMW92-03	PMW92-06
	Date		4/23/2012	4/20/2012	4/23/2012	4/23/2012	4/23/2012	4/21/2012	4/21/2012
	Lab ID		L12040829-20	L12040762-02	L12040829-23	L12040829-16	L12040829-17	L12040831-09	L12040831-10
Analyte	Units	MCL							
Carbon tetrachloride	µg/L	5	4.23 J	**168**	**27.4 J**	<1	<1	<1	**98.5**
Chloroform	µg/L	80	0.677	52	11	<0.3	<0.3	<0.3	34.7
cis-1,2-Dichloroethene	µg/L	70	0.55 J	65.1	22	1.83	0.378 J	54.2	57.7
Tetrachloroethene	µg/L	5	**21.7**	**103**	**25.2**	**83.5**	**20.3**	**112**	**137**
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	1.87	**38**	**8.5**	**19.9**	1.34	**18.9**	**30.3**
Vinyl chloride	µg/L	2	<1	<1	0.394 J	<1	<1	<1	<1
Additional VOCs									
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	µg/L	7	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	<0.5	0.305 J	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-Trichloropropane	µg/L	--	<1	14.3	15.1	<1	<1	<1	78.8
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	<5	4.57 J	<5	<5	<5
Trichlorofluoromethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1

Notes:
µg/L: micrograms per liter
-- : Not Listed
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Results above MCL shown in bold

DQE FLAGS:
J: Estimated concentration
UJ: Not-Detected, RL estimated
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TABLE 14
MAIN INSTALLATION ANALYTICAL RESULTS SUMMARY, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well		PMW101-04A	PMW101-04B	MW-21	MW-26	MW-39	MW-39A	MW-62
	Date		4/22/2012	4/22/2012	4/21/2012	4/23/2012	4/23/2012	4/23/2012	4/21/2012
	Lab ID		L12040831-22	L12040831-23	L12040831-01	L12040829-01	L12040859-01	L12040859-02	L12040831-04
Analyte	Units	MCL							
Carbon tetrachloride	µg/L	5	<1	<1	<1	**6.34 J**	<1	<1	0.736 J
Chloroform	µg/L	80	<0.3	<0.3	<0.3	0.74	<0.3	<0.3	0.403
cis-1,2-Dichloroethene	µg/L	70	2.09	<1	2.57	0.589 J	3.94	19.3	0.88 J
Tetrachloroethene	µg/L	5	**53.4**	**30.9**	**88**	**31.2**	**9.78**	**29**	0.692 J
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	1.44	3.82	**7**	1.68	**5.96**	**7.4**	**185**
Vinyl chloride	µg/L	2	<1	<1	<1	<1	<1	1.93	<1
Additional VOCs									
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	µg/L	7	<1	<1	<1	<1	<1	<1	1.21
1,2-Dichloroethane	µg/L	5	<0.5	<0.5	0.814	<0.5	<0.5	<0.5	<0.5
1,2,3-Trichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Methyl t-butyl ether (MTBE)	µg/L	--	1.27 J	3.16 J	<5	<5	<5	<5	<5
Trichlorofluoromethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1

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TABLE 14
MAIN INSTALLATION ANALYTICAL RESULTS SUMMARY, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well		MW-64	MW-85	MW-88	MW-90	MW-92	MW-94A	MW-97
	Date		4/23/2012	4/21/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012
	Lab ID		L12040859-03	L12040831-05	L12040829-02	L12040859-04	L12040829-05	L12040859-05	L12040859-06
Analyte	Units	MCL							
Carbon tetrachloride	µg/L	5	2.75	**110**	**9.96 J**	0.452 J	<1	<1	<1
Chloroform	µg/L	80	0.876 B	23.8	1.38	2.07	<0.3	<0.3	0.346 B
cis-1,2-Dichloroethene	µg/L	70	0.475 J	21.1	1.88	0.267 J	66.1	1.51	<1
Tetrachloroethene	µg/L	5	**20.8**	**44.3**	**38.4**	**25.6**	**51.6**	**15.3**	<1
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**35.7**	**14.4**	3.47	4.37	**26.7**	**8.04**	**54.7**
Vinyl chloride	µg/L	2	<1	<1	<1	<1	0.353 J	<1	<1
Additional VOCs									
1,1,2,2-Tetrachloroethane	µg/L	--	0.389 J	<0.5	<0.5	<0.5	<0.5	0.527	<0.5
1,1-Dichloroethene	µg/L	7	<1	<1	<1	0.634 J	<1	<1	<1
1,2-Dichloroethane	µg/L	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-Trichloropropane	µg/L	--	<1	6.31	<1	<1	<1	<1	<1
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	<5	<5	<5	<5	<5
Trichlorofluoromethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1

Notes:
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TABLE 14
MAIN INSTALLATION ANALYTICAL RESULTS SUMMARY, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well		MW-98	MW-100B	MW-101T	MW-101B	MW-107T	MW-107B	MW-108
	Date		4/23/2012	4/21/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012
	Lab ID		L12040859-07	L12040831-02	L12040829-06	L12040829-07	L12040859-08	L12040859-09	L12040859-10
Analyte	Units	MCL							
Carbon tetrachloride	µg/L	5	<1	<1	<1	<1	0.815 J	0.966 J	<1
Chloroform	µg/L	80	0.135 JB	<0.3	<0.3	<0.3	0.392 B	0.492 B	9.86
cis-1,2-Dichloroethene	µg/L	70	0.358 J	5.94	0.395 J	<1	<1	<1	0.646 J
Tetrachloroethene	µg/L	5	**21.7**	**44.1**	**66.6**	**64.1**	**47**	**62.5**	3.61
trans-1,2-Dichloroethene	µg/L	100	<1	1.11	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	3.03	0.811 J	<1	<1	3.44	4.15	**25.4**
Vinyl chloride	µg/L	2	<1	**132**	<1	<1	<1	<1	<1
Additional VOCs									
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	µg/L	7	<1	<1	<1	<1	<1	<1	1.29
1,2-Dichloroethane	µg/L	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-Trichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Methyl t-butyl ether (MTBE)	µg/L	--	<5	38.1	1.14 J	1.25 J	<5	<5	<5
Trichlorofluoromethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1

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TABLE 14
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ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well		MW-113	MW-141	MW-143	MW-197A	MW-197B	MW-199B	MW-200
	Date		4/21/2012	4/23/2012	4/23/2012	4/20/2012	4/21/2012	4/23/2012	4/23/2012
	Lab ID		L12040831-06	L12040859-11	L12040829-08	L12040762-03	L12040831-07	L12040859-12	L12040859-13
Analyte	Units	MCL							
Carbon tetrachloride	µg/L	5	**60.6**	<1	<1	<1	<1	0.379 J	<1
Chloroform	µg/L	80	13.4	2.58	<0.3	<0.3	<0.3	0.159 JB	0.159 JB
cis-1,2-Dichloroethene	µg/L	70	22.2	<1	<1	0.926 J	3.53	<1	2.98
Tetrachloroethene	µg/L	5	**150**	**24.9**	0.431 J	**31**	**28.5**	0.412 J	3
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**16.9**	3.46	**12.5**	1.52	**10.3**	**76.7**	3.94
Vinyl chloride	µg/L	2	<1	<1	<1	<1	0.732 J	<1	<1
Additional VOCs									
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	µg/L	7	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-Trichloropropane	µg/L	--	3.02	<1	<1	<1	<1	<1	<1
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	0.724 J	<5	0.832 J	<5	<5
Trichlorofluoromethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1

Notes:
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TABLE 14
MAIN INSTALLATION ANALYTICAL RESULTS SUMMARY, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well		MW-202B	MW-203A	MW-203B	MW-204A	MW-204B	MW-205A	MW-205B
	Date		4/23/2012	4/20/2012	4/20/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012
	Lab ID		L12040859-14	L12040762-04	L12040762-05	L12040859-15	L12040859-18	L12040859-19	L12040859-20
Analyte	Units	MCL							
Carbon tetrachloride	µg/L	5	0.297 J	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	80	0.655 B	0.284 J	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	70	0.485 J	5.78	4.39	1.11	0.937 J	9.21	5.01
Tetrachloroethene	µg/L	5	**10.9**	**127**	**24.8**	**42.7**	**14.2**	**28.9**	**26.9**
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	4.83	2.78	**9.92**	0.723 J	4.23	**7.04**	**8.17**
Vinyl chloride	µg/L	2	<1	<1	**2.13**	<1	<1	1.43	1.32
Additional VOCs									
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	<0.5	<0.5	<0.5	0.605	<0.5	<0.5
1,1-Dichloroethene	µg/L	7	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-Trichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	1.5 J	<5	<5	<5	<5
Trichlorofluoromethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1

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TABLE 14
MAIN INSTALLATION ANALYTICAL RESULTS SUMMARY, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well		MW-206A	MW-206B	MW-207A	MW-207B	MW-208A	MW-208B	MW-209B
	Date		4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012
	Lab ID		L12040859-21	L12040859-22	L12040859-23	L12040859-24	L12040859-25	L12040859-26	L12040859-27
Analyte	Units	MCL							
Carbon tetrachloride	µg/L	5	<1	<1	<1	1.15	<1	<1	0.814 J
Chloroform	µg/L	80	<0.3	<0.3	8.14	7.73	<0.3	0.373 B	0.227 JB
cis-1,2-Dichloroethene	µg/L	70	5.94	1.76	0.442 J	0.881 J	21.3	1.39	<1
Tetrachloroethene	µg/L	5	**16**	**15.2**	**10.5**	**124**	**19.3**	**24.2**	0.392 J
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**11.5**	**6.51**	**15.7**	**30.5**	**18.9**	**25**	**24.3**
Vinyl chloride	µg/L	2	<1	<1	<1	<1	<1	<1	<1
Additional VOCs									
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	µg/L	7	<1	<1	1.19	0.716 J	<1	<1	<1
1,2-Dichloroethane	µg/L	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-Trichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	<5	<5	<5	<5	<5
Trichlorofluoromethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1

Notes:
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TABLE 14
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ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well		MW-210A	MW-210B	MW-212	MW-213	MW-214A	MW-214B	MW-217
	Date		4/23/2012	4/23/2012	4/22/2012	4/21/2012	4/23/2012	4/23/2012	4/23/2012
	Lab ID		L12040859-28	L12040859-29	L12040831-20	L12040831-08	L12040859-30	L12040859-31	L12040859-32
Analyte	Units	MCL							
Carbon tetrachloride	µg/L	5	<1	<1	<1	0.661 J	1.03	0.942 J	**33.7**
Chloroform	µg/L	80	0.127 JB	<0.3	<0.3	0.217 J	2.93	2.7	3.54
cis-1,2-Dichloroethene	µg/L	70	1.92	0.902 J	<1	<1	<1	<1	0.555 J
Tetrachloroethene	µg/L	5	**10.4**	**7.42**	<1	<1	**7.59**	**5.78**	**17.9**
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	4.43	**6.76**	**12.2**	**44.6**	2.69	2.6	**41.7**
Vinyl chloride	µg/L	2	<1	<1	<1	<1	<1	<1	<1
Additional VOCs									
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	<0.5	<0.5	<0.5	0.298 J	<0.5	<0.5
1,1-Dichloroethene	µg/L	7	<1	<1	<1	1.81	<1	<1	<1
1,2-Dichloroethane	µg/L	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-Trichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	<5	<5	<5	<5	<5
Trichlorofluoromethane	µg/L	--	<1	<1	<1	<1	<1	<1	1.06

Notes:
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TABLE 14
MAIN INSTALLATION ANALYTICAL RESULTS SUMMARY, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well		MW-218	MW-219	MW-252	MW-253	MW-254	MW-255	MW-256
	Date		4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012
	Lab ID		L12040859-33	L12040829-09	L12040829-10	L12040829-11	L12040829-12	L12040829-13	L12040829-14
Analyte	Units	MCL							
Carbon tetrachloride	µg/L	5	**6.73**	<1	<1	<1	0.888 J	<1	0.524 J
Chloroform	µg/L	80	2.28	<0.3	<0.3	<0.3	0.201 J	<0.3	2.25
cis-1,2-Dichloroethene	µg/L	70	<1	0.677 J	<1	<1	0.321 J	<1	<1
Tetrachloroethene	µg/L	5	**17.9**	**11**	1.65	<1	0.573 J	<1	**34.3**
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**44.7**	1.36	0.891 J	<1	2.63	0.586 J	**7.82**
Vinyl chloride	µg/L	2	<1	<1	<1	<1	<1	<1	<1
Additional VOCs									
1,1,2,2-Tetrachloroethane	µg/L	--	2.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	µg/L	7	0.955 J	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	<0.5	0.834	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-Trichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	<5	<5	<5	<5	<5
Trichlorofluoromethane	µg/L	--	1.31	<1	<1	<1	<1	<1	<1

Notes:
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TABLE 14
MAIN INSTALLATION ANALYTICAL RESULTS SUMMARY, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well		MW-257	MW-258	MW-259
	Date		4/23/2012	4/22/2012	4/22/2012
	Lab ID		L12040829-15	L12040831-12	L12040831-21
Analyte	Units	MCL			
Carbon tetrachloride	µg/L	5	<1	<1	4.69
Chloroform	µg/L	80	<0.3	2.34	2.69
cis-1,2-Dichloroethene	µg/L	70	<1	1.75	<1
Tetrachloroethene	µg/L	5	<1	**19.4**	**15.1**
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1
Trichloroethene	µg/L	5	<1	**57.7 J**	**15.7**
Vinyl chloride	µg/L	2	<1	<1	<1
Additional VOCs					
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	<0.5	<0.5
1,1-Dichloroethene	µg/L	7	<1	1.34	<1
1,2-Dichloroethane	µg/L	5	<0.5	<0.5	0.263 J
1,2,3-Trichloropropane	µg/L	--	<1	<1	<1
Methyl t-butyl ether (MTBE)	µg/L	--	<5	4.26 J	<5
Trichlorofluoromethane	µg/L	--	<1	<1	<1

Notes:
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MCL: Maximum Contaminant Level
RL: Reporting Limit
<: Not detected above RL
Results above MCL shown in bold

DQE FLAGS:
J: Estimated concentration
UJ: Not-Detected, RL estimated
B: Blank Contamination
JB: Estimated - Blank contamination

TABLE 15
MAIN INSTALLATION PRIMARY CVOC RESULTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis Tennessee

VOC Analyte	MCL (µg/L)	Number of Locations with Analyte Above RL	Maximum Concentrations (µg/L)	Location of Maximum Concentration	Number of Locations with Analyte Above MCL
Carbon tetrachloride	5	16	168	DR2-5	10
Chloroform	80	29	52	DR2-5	0
cis-1,2-Dichloroethene	70	33	66.1	MW-92	0
Tetrachloroethene	5	62	161	DR1-6	59
trans-1,2-Dichloroethene	100	1	1.11	MW-100B	0
Trichloroethene	5	64	185	MW-62	40
Vinyl chloride	2	5	132	MW-100B	2

Notes:
µg/L micrograms per liter
--: Not Listed
MCL: Maximum Contaminant Level
RL: reporting limit

TABLE 16
MAIN INSTALLATION ANALYTICAL RESULTS SUMMARY, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well		DR1-1	DR1-1A	DR1-2	DR1-3	DR1-4	DR1-5	DR1-5A
	Lab ID		L12100776-08	L12100776-09	L12100776-10	L12100776-11	L12100776-12	L12100845-01	L12100845-02
	Date		10/19/2012	10/19/2012	10/19/2012	10/19/2012	10/19/2012	10/20/2012	10/20/2012
Analyte	Units	MCL							
Carbon tetrachloride	µg/L	5	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	80	<0.3	0.427	0.129 J	<0.3	<0.3	<0.3	0.167 J
cis-1,2-Dichloroethene	µg/L	70	1.52	<1	0.856 J	<1	<1	<1	2.41
Tetrachloroethene	µg/L	5	2.97	0.612 J	2.2	**16.2**	1.25	**38.6**	**49.7**
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	0.309 J	2.3	<1	1.93	<1	<1	**80.5**
Vinyl chloride	µg/L	2	<1	<1	<1	<1	<1	<1	<1
Additional VOCs									
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	--	<10	<10	<10	6.3 J	<10	<10	<10
Carbon disulfide	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	<5	4.1 J	<5	31.8 J	2.27 J
Trichlorofluoromethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1

Notes:
µg/L: micrograms per liter
-- : Not Listed
MCL: Maximum Contaminant Level
MDL: Method Detection Limit
RL: Reporting Limit
<: Not detected above RL
Results above MCL shown in bold

DQE Flags:
J: Estimated concentration

TABLE 16
MAIN INSTALLATION ANALYTICAL RESULTS SUMMARY, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well		DR1-6	DR1-6A	DR1-7	DR1-8	DR2-1	DR2-2	DR2-3
	Lab ID		L12100845-03	L12100845-06	L12100776-13	L12100776-14	L12100847-04	L12100842-01	L12100847-05
	Date		10/20/2012	10/20/2012	10/19/2012	10/19/2012	10/21/2012	10/22/2012	10/21/2012
Analyte	Units	MCL							
Carbon tetrachloride	µg/L	5	<1	<1	<1	<1	**26.6**	**5.28**	4.24
Chloroform	µg/L	80	<0.3	0.238 J	<0.3	<0.3	6.38	0.944	0.727
cis-1,2-Dichloroethene	µg/L	70	0.865 J	8.58	0.401 J	<1	13.9	1.66	0.617 J
Tetrachloroethene	µg/L	5	**186**	**53.8**	1.6	<1	**180**	**41.6**	**24.9**
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	1.49	**165**	<1	<1	**6.85**	2.92	1.85
Vinyl chloride	µg/L	2	<1	<1	<1	<1	<1	<1	<1
Additional VOCs									
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	µg/L	--	<1	0.244 J	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	--	<1	0.389 J	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	--	<10	<10	<10	<10	4.86 J	<10	<10
Carbon disulfide	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	<5	<5	<5	<5	<5
Trichlorofluoromethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1

Notes:
µg/L: micrograms per liter
-- : Not Listed
MCL: Maximum Contaminant Level
MDL: Method Detection Limit
RL: Reporting Limit
<: Not detected above RL
Results above MCL shown in bold

DQE Flags:
J: Estimated concentration

TABLE 16
MAIN INSTALLATION ANALYTICAL RESULTS SUMMARY, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well		DR2-4	DR2-5	DR2-6	MW-16	MW-19	MW-21	MW-22
	Lab ID		L12100847-06	L12100777-01	L12100847-07	L12100847-19	L12100776-22	L12100845-07	L12100776-23
	Date		10/21/2012	10/19/2012	10/21/2012	10/21/2012	10/19/2012	10/20/2012	10/19/2012
Analyte	Units	MCL							
Carbon tetrachloride	µg/L	5	3.47	**196**	**46.5 J**	<1	<1	<1	<1
Chloroform	µg/L	80	0.683	56.1	10.6	<0.3	0.334	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	70	0.375 J	**72.8**	29.6	<1	<1	3.64	<1
Tetrachloroethene	µg/L	5	**11**	**99.9**	**50.2 J**	<1	<1	**121**	<1
trans-1,2-Dichloroethene	µg/L	100	<1	0.271 J	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	1.12	**38.2**	**11.6**	<1	0.651 J	**9.17**	<1
Vinyl chloride	µg/L	2	<1	<1	0.76 J	<1	<1	<1	<1
Additional VOCs									
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	<0.5	0.436 J	0.25 J	<0.5	<0.5	0.988	<0.5
1,2-Dichloropropane	µg/L	--	<1	0.354 J	0.64 J	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	--	<1	19.4	19.7	<1	<1	<1	<1
Acetone	µg/L	--	<10	<10	6.81 J	4.12 J	<10	<10	<10
Carbon disulfide	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	<5	<5	<5	1.39 J	<5
Trichlorofluoromethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1

Notes:
µg/L: micrograms per liter
-- : Not Listed
MCL: Maximum Contaminant Level
MDL: Method Detection Limit
RL: Reporting Limit
<: Not detected above RL
Results above MCL shown in bold

DQE Flags:
J: Estimated concentration

TABLE 16
MAIN INSTALLATION ANALYTICAL RESULTS SUMMARY, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well		MW-23	MW-24	MW-25A	MW-26	MW-34	MW-38	MW-39
	Lab ID		L12100848-13	L12100847-20	L12100776-24	L12100847-21	L12100776-25	L12100847-22	L12100848-14
	Date		10/20/2012	10/21/2012	10/19/2012	10/21/2012	10/19/2012	10/21/2012	10/20/2012
Analyte	Units	MCL							
Carbon tetrachloride	µg/L	5	<1	<1	2.07	4.78	0.565 J	<1	<1
Chloroform	µg/L	80	<0.3	0.241 J	0.28 J	0.683	0.4	0.211 J	<0.3
cis-1,2-Dichloroethene	µg/L	70	<1	<1	<1	0.496 J	<1	<1	7.24
Tetrachloroethene	µg/L	5	<1	<1	**6.24**	**25.9**	0.459 J	0.591 J	**5.08**
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	<1	<1	0.301 J	1.45	0.718 J	4.86	**10.1**
Vinyl chloride	µg/L	2	<1	<1	<1	<1	<1	<1	<1
Additional VOCs									
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	--	4.18 J	3.01 J	<10	<10	<10	4.45 J	9.67 J
Carbon disulfide	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	<5	<5	<5	<5	<5
Trichlorofluoromethane	µg/L	--	<1	<1	0.298 J	<1	<1	<1	<1

Notes:
µg/L: micrograms per liter
-- : Not Listed
MCL: Maximum Contaminant Level
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Results above MCL shown in bold

DQE Flags:
J: Estimated concentration

TABLE 16
MAIN INSTALLATION ANALYTICAL RESULTS SUMMARY, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well		MW-39A	MW-50	MW-52	MW-53	MW-55	MW-62	MW-63A
	Lab ID		L12100848-15	L12100776-26	L12100776-27	L12100776-28	L12100846-04	L12100841-04	L12100847-23
	Date		10/20/2012	10/19/2012	10/19/2012	10/19/2012	10/21/2012	10/22/2012	10/21/2012
Analyte	Units	MCL							
Carbon tetrachloride	µg/L	5	<1	<1	<1	<1	<1	0.519 J	<1
Chloroform	µg/L	80	<0.3	1.57	0.729	<0.3	<0.3	0.457	<0.3
cis-1,2-Dichloroethene	µg/L	70	14.5	0.617 J	0.641 J	<1	<1	3.76	<1
Tetrachloroethene	µg/L	5	**30.9**	0.492 J	**7.55**	2.15	<1	0.482 J	2.31
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**8.18**	2.65	1.15	<1	<1	**163**	1.39
Vinyl chloride	µg/L	2	1.94	<1	<1	<1	<1	1.2	<1
Additional VOCs									
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	<1	<1	<1	<1	<1	1.04	<1
1,2-Dichloroethane	µg/L	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	--	10.6	<10	<10	3.52 J	<10	<10	3.58 J
Carbon disulfide	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Methyl t-butyl ether (MTBE)	µg/L	--	<5	0.927 J	<5	<5	<5	<5	<5
Trichlorofluoromethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1

Notes:
µg/L: micrograms per liter
-- : Not Listed
MCL: Maximum Contaminant Level
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RL: Reporting Limit
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Results above MCL shown in bold

DQE Flags:
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TABLE 16
MAIN INSTALLATION ANALYTICAL RESULTS SUMMARY, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well		MW-63B	MW-64	MW-66A	MW-85	MW-88	MW-89	MW-90
	Lab ID		L12100847-24	L12100847-25	L12100776-29	L12100777-04	L12100847-26	L12100848-16	L12100848-17
	Date		10/21/2012	10/21/2012	10/19/2012	10/19/2012	10/21/2012	10/20/2012	10/20/2012
Analyte	Units	MCL							
Carbon tetrachloride	µg/L	5	<1	2.62	<1	**112**	**11.8**	0.325 J	0.291 J
Chloroform	µg/L	80	0.578	1.16	<0.3	28.1	1.7	0.305	1.64
cis-1,2-Dichloroethene	µg/L	70	<1	0.488 J	<1	30.3	2.47	<1	0.34 J
Tetrachloroethene	µg/L	5	2.17	**20.8**	2.48	**51.5**	**46.3**	4.25	**25.6**
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	2.72	**34.8**	<1	**17.4**	3.69	1.9	4.08
Vinyl chloride	µg/L	2	<1	<1	<1	<1	<1	<1	<1
Additional VOCs									
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	0.557	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	µg/L	--	0.386 J	<1	<1	<1	<1	<1	0.75 J
1,1-Dichloroethene	µg/L	7	<1	<1	<1	<1	<1	<1	0.522 J
1,2-Dichloroethane	µg/L	5	<0.5	5.12	0.545	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	--	<1	<1	<1	0.335 J	<1	<1	<1
1,2,3-Trichloropropane	µg/L	--	<1	<1	<1	10.6	<1	<1	<1
Acetone	µg/L	--	4.04 J	7.02 J	<10	<10	<10	4.27 J	4.17 J
Carbon disulfide	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	<5	<5	<5	<5	<5
Trichlorofluoromethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1

Notes:
µg/L: micrograms per liter
-- : Not Listed
MCL: Maximum Contaminant Level
MDL: Method Detection Limit
RL: Reporting Limit
<: Not detected above RL
Results above MCL shown in bold

DQE Flags:
J: Estimated concentration

TABLE 16
MAIN INSTALLATION ANALYTICAL RESULTS SUMMARY, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well		MW-92	MW-93	MW-94A	MW-96	MW-97	MW-98	MW-99
	Lab ID		L12100847-27	L12100847-28	L12100847-29	L12100776-30	L12100848-18	L12100848-19	L12100776-33
	Date		10/21/2012	10/21/2012	10/21/2012	10/19/2012	10/20/2012	10/20/2012	10/19/2012
Analyte	Units	MCL							
Carbon tetrachloride	µg/L	5	<1	<1	<1	1.15	<1	<1	<1
Chloroform	µg/L	80	<0.3	<0.3	0.149 J	0.288 J	0.311	0.134 J	0.3
cis-1,2-Dichloroethene	µg/L	70	50.9	<1	1.63	<1	<1	0.5 J	<1
Tetrachloroethene	µg/L	5	**78.3**	<1	**32.1**	0.306 J	<1	**41.7**	<1
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**21**	<1	**10.2**	<1	**62**	3.1	<1
Vinyl chloride	µg/L	2	0.61 J	<1	<1	<1	<1	<1	<1
Additional VOCs									
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	<0.5	0.899	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	--	<1	<1	0.374 J	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	--	4.89 J	3.16 J	5.43 J	<10	7.73 J	5.84 J	<10
Carbon disulfide	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	<5	<5	<5	<5	<5
Trichlorofluoromethane	µg/L	--	<1	<1	<1	0.672 J	<1	<1	<1

Notes:
µg/L: micrograms per liter
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MCL: Maximum Contaminant Level
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Results above MCL shown in bold

DQE Flags:
J: Estimated concentration

TABLE 16
MAIN INSTALLATION ANALYTICAL RESULTS SUMMARY, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well		MW-100B	MW-101T	MW-101B	MW-102B	MW-103	MW-104	MW-107T
	Lab ID		L12100777-05	L12100776-34	L12100776-35	L12100776-36	L12100847-30	L12100847-31	L12100847-32
	Date		10/19/2012	10/19/2012	10/19/2012	10/19/2012	10/21/2012	10/21/2012	10/21/2012
Analyte	Units	MCL							
Carbon tetrachloride	µg/L	5	<1	<1	<1	<1	<1	<1	0.579 J
Chloroform	µg/L	80	<0.3	<0.3	<0.3	<0.3	10.4	9.89	0.391
cis-1,2-Dichloroethene	µg/L	70	16.3	<1	<1	<1	0.419 J	0.637 J	<1
Tetrachloroethene	µg/L	5	**66.5**	**66.2**	**63.2**	<1	<1	<1	**36.5**
trans-1,2-Dichloroethene	µg/L	100	1.27	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	3.02	<1	<1	<1	**10.6**	**21.9**	3.17
Vinyl chloride	µg/L	2	**164 J**	<1	<1	<1	<1	<1	<1
Additional VOCs									
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	µg/L	--	<1	<1	<1	<1	2	1.08	<1
1,1-Dichloroethene	µg/L	7	0.872 J	<1	<1	<1	2.11	2.33	<1
1,2-Dichloroethane	µg/L	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	--	<10	<10	2.61 J	<10	<10	<10	4.52 J
Carbon disulfide	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Methyl t-butyl ether (MTBE)	µg/L	--	37.7 J	4.39 J	4.61 J	<5	<5	<5	<5
Trichlorofluoromethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1

Notes:
µg/L: micrograms per liter
-- : Not Listed
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TABLE 16
MAIN INSTALLATION ANALYTICAL RESULTS SUMMARY, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well		MW-107B	MW-108	MW-113	MW-140	MW-141	MW-142	MW-143
	Lab ID		L12100847-35	L12100847-36	L12100842-05	L12100848-20	L12100848-21	L12100848-22	L12100776-37
	Date		10/21/2012	10/21/2012	10/22/2012	10/20/2012	10/20/2012	10/20/2012	10/19/2012
Analyte	Units	MCL							
Carbon tetrachloride	µg/L	5	0.719 J	<1	**65.6**	0.313 J	<1	<1	<1
Chloroform	µg/L	80	0.422	10.1	16.4	0.146 J	3.04	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	70	<1	0.927 J	28.6	0.294 J	<1	<1	<1
Tetrachloroethene	µg/L	5	**46.5**	2.67	**166**	2.51	**27.4**	<1	0.368 J
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	3.47	**31.5**	**18.6**	1.6	3.68	4.16	**13.5**
Vinyl chloride	µg/L	2	<1	<1	<1	<1	<1	<1	<1
Additional VOCs									
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	µg/L	--	<1	0.83 J	<1	<1	0.324 J	<1	<1
1,1-Dichloroethene	µg/L	7	<1	1.37	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	--	<1	<1	0.232 J	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	--	<1	<1	4.27	<1	<1	<1	<1
Acetone	µg/L	--	5.38 J	6.48 J	<10	3.93 J	4.57 J	3.38 J	4.77 J
Carbon disulfide	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	<5	<5	<5	3.91 J	2.05 J
Trichlorofluoromethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1

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TABLE 16
MAIN INSTALLATION ANALYTICAL RESULTS SUMMARY, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well		MW-197A	MW-197B	MW-198	MW-199A	MW-199B	MW-200	MW-202A
	Lab ID		L12100846-05	L12100846-06	L12100848-23	L12100848-24	L12100848-05	L12100848-06	L12100848-07
	Date		10/21/2012	10/21/2012	10/20/2012	10/20/2012	10/20/2012	10/20/2012	10/20/2012
Analyte	Units	MCL							
Carbon tetrachloride	µg/L	5	<1	<1	<1	<1	0.386 J	<1	<1
Chloroform	µg/L	80	0.139 J	<0.3	<0.3	<0.3	<0.3	<0.3	0.23 J
cis-1,2-Dichloroethene	µg/L	70	0.798 J	4.6	<1	<1	<1	3.08	<1
Tetrachloroethene	µg/L	5	**27.7**	**27.1**	<1	<1	0.676 J	**11.8**	2.28
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	1.34	**11**	2.63	1	**84.9**	**7.14**	1.57
Vinyl chloride	µg/L	2	<1	1.41	<1	<1	<1	<1	<1
Additional VOCs									
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	--	<10	<10	5.21 J	<10	5.49 J	6.17 J	2.5 J
Carbon disulfide	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Methyl t-butyl ether (MTBE)	µg/L	--	<5	1.67 J	<5	2.09 J	<5	<5	<5
Trichlorofluoromethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1

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TABLE 16
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ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well		MW-202B	MW-203A	MW-203B	MW-204A	MW-204B	MW-205A	MW-205B
	Lab ID		L12100848-08	L12100846-02	L12100846-03	L12100848-09	L12100848-10	L12100848-11	L12100848-25
	Date		10/20/2012	10/21/2012	10/21/2012	10/20/2012	10/20/2012	10/20/2012	10/20/2012
Analyte	Units	MCL							
Carbon tetrachloride	µg/L	5	0.353 J	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	80	0.606	<0.3	<0.3	<0.3	0.134 J	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	70	0.401 J	8.54	1.59	0.937 J	1.08	8.84	5.29
Tetrachloroethene	µg/L	5	**21.3**	**118**	**11.1**	**47.9**	**13.8**	**33.1**	**27.1**
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**5.11**	2.89	4.74	0.756 J	**5.33**	**8.38**	**10.4**
Vinyl chloride	µg/L	2	<1	<1	0.697 J	<1	<1	0.393 J	0.87 J
Additional VOCs									
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	<0.5	<0.5	<0.5	0.684	<0.5	<0.5
1,1-Dichloroethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	--	3.5 J	<10	<10	5.66 J	5.09 J	5.53 J	4.44 J
Carbon disulfide	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	0.993 J	<5	<5	0.525 J	1.25 J
Trichlorofluoromethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1

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TABLE 16
MAIN INSTALLATION ANALYTICAL RESULTS SUMMARY, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well		MW-206A	MW-206B	MW-207A	MW-207B	MW-208A	MW-208B	MW-209A
	Lab ID		L12100848-26	L12100848-27	L12100847-37	L12100847-38	L12100848-28	L12100848-29	L12100848-30
	Date		10/20/2012	10/20/2012	10/21/2012	10/21/2012	10/20/2012	10/20/2012	10/20/2012
Analyte	Units	MCL							
Carbon tetrachloride	µg/L	5	<1	<1	<1	2.78	<1	<1	<1
Chloroform	µg/L	80	<0.3	<0.3	11	0.519	<0.3	0.688	<0.3
cis-1,2-Dichloroethene	µg/L	70	4.21	2.14	0.599 J	<1	18.2	1.13	<1
Tetrachloroethene	µg/L	5	**18.5**	**19.1**	**16.4**	**11.8**	**21.4**	**26.5**	<1
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**10.5**	**7.83**	**23.6**	3.24	**20.2**	**17.9**	3.06
Vinyl chloride	µg/L	2	<1	<1	<1	<1	1.97 J	<1	<1
Additional VOCs									
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	µg/L	--	<1	<1	0.933 J	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	<1	<1	0.937 J	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	<0.5	<0.5	<0.5	2.9	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	--	7.11 J	5.49 J	6.48 J	2.82 J	7.28 J	6.01 J	2.74 J
Carbon disulfide	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	<5	<5	<5	<5	3.86 J
Trichlorofluoromethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1

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TABLE 16
MAIN INSTALLATION ANALYTICAL RESULTS SUMMARY, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well Lab ID Date		MW-209B L12100848-31 10/20/2012	MW-210A L12100848-32 10/20/2012	MW-210B L12100848-35 10/20/2012	MW-211 L12100847-39 10/21/2012	MW-212 L12100841-05 10/22/2012	MW-213 L12100841-06 10/22/2012	MW-214A L12100847-40 10/21/2012
Analyte	Units	MCL							
Carbon tetrachloride	µg/L	5	0.526 J	<1	<1	<1	<1	0.553 J	1.01
Chloroform	µg/L	80	0.208 J	<0.3	<0.3	0.166 J	<0.3	0.215 J	2.7
cis-1,2-Dichloroethene	µg/L	70	<1	2.08	0.723 J	<1	<1	<1	<1
Tetrachloroethene	µg/L	5	0.557 J	**8.21**	4.8	<1	<1	<1	**6.54**
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**32**	4.62	**10.2**	0.39 J	**13**	**34.2**	2.46
Vinyl chloride	µg/L	2	<1	<1	<1	<1	<1	<1	<1
Additional VOCs									
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.538
1,1-Dichloroethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	<1	<1	<1	<1	<1	1.65	<1
1,2-Dichloroethane	µg/L	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	--	5.72 J	4.8 J	5.24 J	3.2 J	<10	<10	<10
Carbon disulfide	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Methyl t-butyl ether (MTBE)	µg/L	--	<5	0.766 J	<5	<5	<5	<5	1.03 J
Trichlorofluoromethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1

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ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well		MW-214B	MW-215A	MW-215B	MW-216	MW-217	MW-218	MW-219
	Lab ID		L12100847-12	L12100847-13	L12100847-14	L12100848-12	L12100847-15	L12100847-18	L12100776-01
	Date		10/21/2012	10/21/2012	10/21/2012	10/20/2012	10/21/2012	10/21/2012	10/19/2012
Analyte	Units	MCL							
Carbon tetrachloride	µg/L	5	1.19	1.09	1.3	<1	**23.9**	**8.22**	<1
Chloroform	µg/L	80	2.53	2.4	0.845	<0.3	4.12	2.82	<0.3
cis-1,2-Dichloroethene	µg/L	70	<1	<1	<1	<1	0.519 J	0.379 J	1.64
Tetrachloroethene	µg/L	5	**6.79**	**6.06**	**5.91**	<1	**23.7**	**20.3**	**25.2**
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	2.28	3	1.71	0.363 J	**45 J**	**43.9**	2.9
Vinyl chloride	µg/L	2	<1	<1	<1	<1	<1	<1	<1
Additional VOCs									
1,1,2,2-Tetrachloroethane	µg/L	--	0.326 J	0.301 J	<0.5	<0.5	0.658	2.19	<0.5
1,1-Dichloroethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	<1	<1	<1	<1	<1	1.18	<1
1,2-Dichloroethane	µg/L	5	<0.5	<0.5	<0.5	<0.5	0.362 J	0.67	1.77
1,2-Dichloropropane	µg/L	--	<1	<1	<1	<1	0.475 J	0.489 J	<1
1,2,3-Trichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	--	6.27 J	5.11 J	4.87 J	5.48 J	7.09 J	7.33 J	5.02 J
Carbon disulfide	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Methyl t-butyl ether (MTBE)	µg/L	--	1.01 J	1.13 J	0.76 J	<5	<5	<5	<5
Trichlorofluoromethane	µg/L	--	<1	<1	<1	<1	1.52	1.61	<1

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Defense Depot Memphis, Tennessee

	Well		MW-229	MW-252	MW-253	MW-254	MW-255	MW-256	MW-257
	Lab ID		L12100776-02	L12100776-03	L12100776-04	L12100776-05	L12100776-06	L12100776-07	L12100847-01
	Date		10/19/2012	10/19/2012	10/19/2012	10/19/2012	10/19/2012	10/19/2012	10/21/2012
Analyte	Units	MCL							
Carbon tetrachloride	µg/L	5	<1	<1	<1	1.15	<1	0.404 J	<1
Chloroform	µg/L	80	<0.3	<0.3	<0.3	0.295 J	<0.3	2.47	<0.3
cis-1,2-Dichloroethene	µg/L	70	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	5	<1	<1	<1	0.649 J	<1	**39.5**	<1
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	<1	<1	<1	2.37	0.532 J	**13.7**	<1
Vinyl chloride	µg/L	2	<1	<1	<1	<1	<1	<1	<1
Additional VOCs									
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	µg/L	--	<1	<1	<1	<1	<1	0.386 J	<1
1,1-Dichloroethene	µg/L	7	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	--	<10	4.59 J	5.63 J	5.23 J	3.97 J	6.27 J	2.57 J
Carbon disulfide	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	<5	<5	<5	<5	<5
Trichlorofluoromethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1

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ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well Lab ID Date		MW-258 L12100847-02 10/21/2012	MW-259 L12100847-03 10/21/2012	PMW21-03 L12100776-16 10/19/2012	PMW21-05 L12100776-15 10/19/2012	PMW92-03 L12100842-02 10/22/2012	PMW85-05 L12100832-01 10/22/2012	PMW101-04A L12100842-03 10/22/2012
Analyte	Units	MCL							
Carbon tetrachloride	µg/L	5	<1	**5.12**	<1	<1	<1	**62.8**	<1
Chloroform	µg/L	80	4.1	3.07	<0.3	<0.3	<0.3	30.1	<0.3
cis-1,2-Dichloroethene	µg/L	70	2.54	<1	2.11	<1	42.6	**101**	1.35
Tetrachloroethene	µg/L	5	**22.1**	**15.1**	**88.8**	**12.3**	**145**	**70.1**	**46.9**
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**93**	**15.9**	**21.2**	0.867 J	**15.2**	**24**	0.977 J
Vinyl chloride	µg/L	2	<1	<1	<1	<1	<1	<1	<1
Additional VOCs									
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	µg/L	--	0.351 J	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	2.1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	<0.5	0.388 J	<0.5	<0.5	<0.5	0.593	<0.5
1,2-Dichloropropane	µg/L	--	<1	0.398 J	<1	<1	0.21 J	1.02	<1
1,2,3-Trichloropropane	µg/L	--	<1	<1	<1	<1	<1	62.7	<1
Acetone	µg/L	--	<10	7.02 J	4.48 J	3.81 J	<10	<10	<10
Carbon disulfide	µg/L	--	<1	<1	<1	<1	<1	1.87 J	<1
Methyl t-butyl ether (MTBE)	µg/L	--	4.49 J	<5	12.1	<5	<5	<5	2.04 J
Trichlorofluoromethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1

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Defense Depot Memphis, Tennessee

	Well		PMW101-04B	PZ-03
	Lab ID		L12100777-02	L12100841-01
	Date		10/19/2012	10/22/2012
Analyte	Units	MCL		
Carbon tetrachloride	µg/L	5	<1	<1
Chloroform	µg/L	80	<0.3	0.261 J
cis-1,2-Dichloroethene	µg/L	70	0.281 J	<1
Tetrachloroethene	µg/L	5	**28.5**	3.34
trans-1,2-Dichloroethene	µg/L	100	<1	<1
Trichloroethene	µg/L	5	**5.6**	3.76
Vinyl chloride	µg/L	2	<1	<1
Additional VOCs				
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	<0.5
1,1-Dichloroethane	µg/L	--	<1	<1
1,1-Dichloroethene	µg/L	7	<1	<1
1,2-Dichloroethane	µg/L	5	<0.5	<0.5
1,2-Dichloropropane	µg/L	--	<1	<1
1,2,3-Trichloropropane	µg/L	--	<1	<1
Acetone	µg/L	--	<10	<10
Carbon disulfide	µg/L	--	<1	<1
Methyl t-butyl ether (MTBE)	µg/L	--	5.89 J	<5
Trichlorofluoromethane	µg/L	--	<1	0.304 J

Notes:
µg/L: micrograms per liter
-- : Not Listed
MCL: Maximum Contaminant Level
MDL: Method Detection Limit
RL: Reporting Limit
<: Not detected above RL
Results above MCL shown in bold

DQE Flags:
J: Estimated concentration

TABLE 17
MAIN INSTALLATION PRIMARY CVOC RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis Tennessee

VOC Analyte	MCL (µg/L)	Number of Locations with Analyte Above RL	Maximum Concentrations (µg/L)	Location of Maximum Concentration	Number of Locations with Analyte Above MCL
Carbon tetrachloride	5	23	196	DR2-5	11
Chloroform	80	42	56.1	DR2-5	0
cis-1,2-Dichloroethene	70	35	101	PMW85-05	2
Tetrachloroethene	5	78	186	DR1-6	64
trans-1,2-Dichloroethene	100	1	1.27	MW-100B	0
Trichloroethene	5	82	165	DR1-6A	44
Vinyl chloride	2	5	164	MW-100B	1

Notes:
µg/L micrograms per liter
--: Not Listed
RL: reporting limit
MCL: Maximum Contaminant Level

TABLE 18
DUNN FIELD ANALYTICAL RESULTS SUMMARY, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID			MW-03	MW-04	MW-06	MW-07	MW-08	MW-15	MW-28
	Lab ID			L12040763-01	L12040763-02	L12040763-03	L12040763-06	L12040692-27	L12040764-01	L12040764-02
	Date			4/19/2012	4/19/2012	4/19/2012	4/19/2012	4/18/2012	4/19/2012	4/19/2012
Analyte	Units	MCL	TC							
1,1,2,2-Tetrachloroethane	µg/L	--	2.2	<0.5	<0.5	0.497 J	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	5	1.9	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	7	<1	<1	<1	**16.2**	2.99	<1	<1
1,2-Dichloroethane	µg/L	5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	µg/L	5	3	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	80	12	<0.3	0.162 J	2.9	0.192 J	<0.3	1.34	<0.3
cis-1,2-Dichloroethene	µg/L	70	35	<1	<1	0.311 J	0.29 J	<1	<1	<1
Tetrachloroethene	µg/L	5	2.5	0.871 J	<1	<1	**35.1**	**5.25**	0.62 J	<1
trans-1,2-Dichloroethene	µg/L	100	50	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	5	1	<1	1.06	**30.3**	**7**	0.724 J	<1
Vinyl chloride	µg/L	2	--	<1	<1	<1	<1	<1	<1	<1
Total Primary CVOCs				1.87	0.162	4.77	82.1	15.2	2.68	0
Additional VOCs										
1,1,1-Trichloroethane	µg/L	20	--	<1	<1	<1	0.277 J	<1	<1	<1
1,1-Dichloroethane	µg/L	--	--	<1	<1	<1	0.874 J	<1	<1	<1
Acetone	µg/L	--	--	<10	<10	<10	<10	<10	<10	<10

Notes:
µg/L: micrograms per liter
-- : Not Listed
MCL: Maximum Contaminant Level
RL: Reporting Limit
TC: Target Concentration
<: Not detected above RL
Results above MCL or TC shown in bold

DQE Flags:
J: Estimated

Method:
8260B: Volatile Organic Compounds

TABLE 18
DUNN FIELD ANALYTICAL RESULTS SUMMARY, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID			MW-31	MW-44	MW-54	MW-57	MW-68	MW-69	MW-70
	Lab ID			L12040764-03	L12040782-05	L12040692-08	L12040763-07	L12040764-04	L12040782-06	L12040764-05
	Date			4/19/2012	4/20/2012	4/18/2012	4/19/2012	4/19/2012	4/20/2012	4/19/2012
Analyte	Units	MCL	TC							
1,1,2,2-Tetrachloroethane	µg/L	--	2.2	<0.5	<0.5	**2.87**	<0.5	<0.5	<0.5	0.505
1,1,2-Trichloroethane	µg/L	5	1.9	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	7	2.55	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	µg/L	5	3	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	80	12	<0.3	2.84	0.521	8.11	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	70	35	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	5	2.5	**4.75**	<1	0.48 J	<1	<1	<1	0.768 J
trans-1,2-Dichloroethene	µg/L	100	50	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	5	4.87	2.03	**8.74**	0.961 J	<1	<1	1.34
Vinyl chloride	µg/L	2	--	<1	<1	<1	<1	<1	<1	<1
Total Primary CVOCs				12.2	4.87	12.6	9.07	0	0	2.61
Additional VOCs										
1,1,1-Trichloroethane	µg/L	20	--	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	--	--	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	--	--	2.76 J	<10	<10	<10	<10	<10	<10

Notes:
µg/L: micrograms per liter
-- : Not Listed
MCL: Maximum Contaminant Level
RL: Reporting Limit
TC: Target Concentration
<: Not detected above RL
Results above MCL or TC shown in bold

DQE Flags:
J: Estimated

Method:
8260B: Volatile Organic Compounds

TABLE 18
DUNN FIELD ANALYTICAL RESULTS SUMMARY, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID			MW-71	MW-76	MW-77	MW-79	MW-80	MW-87	MW-91
	Lab ID			L12040764-06	L12040764-07	L12040764-08	L12040692-09	L12040782-07	L12040764-09	L12040763-08
	Date			4/19/2012	4/19/2012	4/19/2012	4/18/2012	4/20/2012	4/19/2012	4/19/2012
Analyte	Units	MCL	TC							
1,1,2,2-Tetrachloroethane	µg/L	--	2.2	0.953	0.398 J	**6.01**	<0.5	<0.5	0.207 J	<0.5
1,1,2-Trichloroethane	µg/L	5	1.9	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	7	<1	<1	<1	**10.1**	<1	<1	<1
1,2-Dichloroethane	µg/L	5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	µg/L	5	3	0.53 J	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	80	12	10.6	<0.3	0.509	0.233 J	<0.3	0.53	0.633
cis-1,2-Dichloroethene	µg/L	70	35	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	5	2.5	0.264 J	<1	0.478 J	**12.1**	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	100	50	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	5	3.02	0.923 J	**8.48**	**10.3**	<1	<1	<1
Vinyl chloride	µg/L	2	--	<1	<1	<1	<1	<1	<1	<1
Total Primary CVOCs				15.4	1.32	15.5	32.7	0	0.737	0.633
Additional VOCs										
1,1,1-Trichloroethane	µg/L	20	--	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	--	--	<1	<1	<1	0.368 J	<1	<1	<1
Acetone	µg/L	--	--	<10	<10	<10	<10	<10	<10	<10

Notes:
µg/L: micrograms per liter
-- : Not Listed
MCL: Maximum Contaminant Level
RL: Reporting Limit
TC: Target Concentration
<: Not detected above RL
Results above MCL or TC shown in bold

DQE Flags:
J: Estimated

Method:
8260B: Volatile Organic Compounds

TABLE 18
DUNN FIELD ANALYTICAL RESULTS SUMMARY, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID			MW-126	MW-129	MW-130	MW-134	MW-144	MW-145	MW-147
	Lab ID			L12040692-28	L12040764-10	L12040764-11	L12040782-08	L12040764-12	L12040764-13	L12040764-14
	Date			4/18/2012	4/19/2012	4/19/2012	4/20/2012	4/19/2012	4/19/2012	4/19/2012
Analyte	Units	MCL	TC							
1,1,2,2-Tetrachloroethane	µg/L	--	2.2	<0.5	<0.5	<0.5	<0.5	**16.6**	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	5	1.9	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	7	<1	**13.7**	**25.7**	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	--	<0.5	<0.5	0.305 J	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	µg/L	5	3	<1	<1	<1	<1	<1	0.886 J	<1
Chloroform	µg/L	80	12	<0.3	<0.3	0.227 J	0.17 J	0.519	0.927	<0.3
cis-1,2-Dichloroethene	µg/L	70	35	<1	<1	0.766 J	<1	1.05	<1	<1
Tetrachloroethene	µg/L	5	2.5	<1	**15**	**72.5**	0.531 J	0.829 J	<1	<1
trans-1,2-Dichloroethene	µg/L	100	50	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	5	<1	**13.4**	**62.6**	<1	**49.6**	0.639 J	<1
Vinyl chloride	µg/L	2	--	<1	<1	<1	<1	<1	<1	<1
Total Primary CVOCs				0	42.1	162	0.701	68.6	2.45	0
Additional VOCs										
1,1,1-Trichloroethane	µg/L	20	--	<1	0.558 J	1.27	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	--	--	<1	1.3	1.45	<1	<1	<1	<1
Acetone	µg/L	--	--	<10	3.08 J	2.76 J	<10	3.59 J	2.66 J	<10

Notes:
µg/L: micrograms per liter
-- : Not Listed
MCL: Maximum Contaminant Level
RL: Reporting Limit
TC: Target Concentration
<: Not detected above RL
Results above MCL or TC shown in bold

DQE Flags:
J: Estimated

Method:
8260B: Volatile Organic Compounds

TABLE 18
DUNN FIELD ANALYTICAL RESULTS SUMMARY, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID			MW-148	MW-149	MW-150	MW-151	MW-152	MW-155	MW-157
	Lab ID			L12040764-15	L12040782-01	L12040764-16	L12040764-17	L12040692-10	L12040764-18	L12040764-19
	Date			4/19/2012	4/20/2012	4/19/2012	4/19/2012	4/18/2012	4/19/2012	4/19/2012
Analyte	Units	MCL	TC							
1,1,2,2-Tetrachloroethane	µg/L	--	2.2	<0.5	**4.89**	**3.4**	**4.26**	<0.5	0.983	0.533
1,1,2-Trichloroethane	µg/L	5	1.9	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	7	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	µg/L	5	3	<1	1.07	<1	2.67	<1	<1	0.346 J
Chloroform	µg/L	80	12	<0.3	**13.4**	1.55	**37.4**	<0.3	<0.3	3.24
cis-1,2-Dichloroethene	µg/L	70	35	<1	1.74	0.263 J	1.93	<1	<1	0.476 J
Tetrachloroethene	µg/L	5	2.5	<1	0.522 J	<1	0.793 J	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	100	50	<1	<1	<1	0.262 J	<1	<1	<1
Trichloroethene	µg/L	5	5	<1	**7.47**	**13.9**	**19.1**	0.277 J	1.15	3.26
Vinyl chloride	µg/L	2	--	<1	<1	<1	<1	<1	<1	<1
Total Primary CVOCs				0	29.1	19.1	66.4	0.277	2.13	7.86
Additional VOCs										
1,1,1-Trichloroethane	µg/L	20	--	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	--	--	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	--	--	<10	<10	<10	<10	<10	<10	<10

Notes:
µg/L: micrograms per liter
-- : Not Listed
MCL: Maximum Contaminant Level
RL: Reporting Limit
TC: Target Concentration
<: Not detected above RL
Results above MCL or TC shown in bold

DQE Flags:
J: Estimated

Method:
8260B: Volatile Organic Compounds

TABLE 18
DUNN FIELD ANALYTICAL RESULTS SUMMARY, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID			MW-158	MW-158A	MW-159	MW-160	MW-163	MW-164	MW-165
	Lab ID			L12040692-11	L12040692-12	L12040782-02	L12040782-03	L12040764-20	L12040764-21	L12040692-13
	Date			4/18/2012	4/18/2012	4/20/2012	4/20/2012	4/19/2012	4/19/2012	4/18/2012
Analyte	Units	MCL	TC							
1,1,2,2-Tetrachloroethane	µg/L	--	2.2	0.528	<0.5	**37.9**	<0.5	**3.83**	1.47	**5.28**
1,1,2-Trichloroethane	µg/L	5	1.9	<1	<1	**6.14**	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	7	<1	<1	3.49	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	µg/L	5	3	<1	<1	<1	<1	<1	0.957 J	<1
Chloroform	µg/L	80	12	<0.3	<0.3	0.34	<0.3	0.187 J	5.3	0.394
cis-1,2-Dichloroethene	µg/L	70	35	<1	<1	**42.8**	<1	<1	1.36	<1
Tetrachloroethene	µg/L	5	2.5	<1	<1	1.17	<1	0.914 J	0.284 J	<1
trans-1,2-Dichloroethene	µg/L	100	50	<1	<1	4.36	<1	<1	<1	<1
Trichloroethene	µg/L	5	5	1.37	<1	**275**	<1	**9.02**	**6.97**	**7.48**
Vinyl chloride	µg/L	2	--	<1	<1	**17.3**	<1	<1	<1	<1
Total Primary CVOCs				1.90	0	389	0	14.0	16.3	13.2
Additional VOCs										
1,1,1-Trichloroethane	µg/L	20	--	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	--	--	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	--	--	<10	<10	<10	<10	<10	<10	<10

Notes:
µg/L: micrograms per liter
-- : Not Listed
MCL: Maximum Contaminant Level
RL: Reporting Limit
TC: Target Concentration
<: Not detected above RL
Results above MCL or TC shown in bold

DQE Flags:
J: Estimated

Method:
8260B: Volatile Organic Compounds

TABLE 18
DUNN FIELD ANALYTICAL RESULTS SUMMARY, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID			MW-165A	MW-166	MW-166A	MW-174	MW-176	MW-180	MW-182
	Lab ID			L12040692-16	L12040692-17	L12040692-18	L12040763-09	L12040692-19	L12040763-10	L12040763-11
	Date			4/18/2012	4/18/2012	4/18/2012	4/19/2012	4/18/2012	4/19/2012	4/19/2012
Analyte	Units	MCL	TC							
1,1,2,2-Tetrachloroethane	µg/L	--	2.2	**6**	**6.08**	**9.62**	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	5	1.9	<1	<1	0.4 J	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	7	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	µg/L	5	3	<1	2.99	1.88	0.442 J	<1	<1	<1
Chloroform	µg/L	80	12	0.337	**32.5**	**25.9**	0.22 J	0.187 J	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	70	35	<1	2.63	2.47	<1	<1	<1	<1
Tetrachloroethene	µg/L	5	2.5	<1	1.02	0.617 J	0.311 J	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	100	50	<1	0.293 J	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	5	2.54	**19.5**	**12.1**	0.324 J	<1	<1	<1
Vinyl chloride	µg/L	2	--	<1	<1	<1	<1	<1	<1	<1
Total Primary CVOCs				8.88	65.0	53.0	1.30	0.187	0	0
Additional VOCs										
1,1,1-Trichloroethane	µg/L	20	--	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	--	--	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	--	--	<10	4.16 J	2.54 J	<10	<10	<10	<10

Notes:
µg/L: micrograms per liter
-- : Not Listed
MCL: Maximum Contaminant Level
RL: Reporting Limit
TC: Target Concentration
<: Not detected above RL
Results above MCL or TC shown in bold

DQE Flags:
J: Estimated

Method:
8260B: Volatile Organic Compounds

TABLE 18
DUNN FIELD ANALYTICAL RESULTS SUMMARY, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Analyte	Well ID Lab ID Date Units	MCL	TC	MW-184 L12040764-22 4/19/2012	MW-190 L12040764-23 4/19/2012	MW-220 L12040763-12 4/19/2012	MW-221 L12040782-09 4/20/2012	MW-222 L12040782-10 4/20/2012	MW-223 L12040782-11 4/20/2012	MW-224 L12040782-12 4/20/2012
1,1,2,2-Tetrachloroethane	µg/L	--	2.2	**0.716**	**12.1**	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	5	1.9	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	7	<1	<1	3.08	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	µg/L	5	3	1.31	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	80	12	4.67	0.291 J	<0.3	<0.3	<0.3	0.391	0.563
cis-1,2-Dichloroethene	µg/L	70	35	0.642 J	0.459 J	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	5	2.5	0.397 J	0.893 J	**4.61**	<1	<1	0.503 J	<1
trans-1,2-Dichloroethene	µg/L	100	50	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	5	2.83	**20.4**	**6.56**	<1	<1	0.275 J	<1
Vinyl chloride	µg/L	2	--	<1	<1	<1	<1	<1	<1	<1
Total Primary CVOCs				10.6	34.1	14.3	0	0	1.17	0.563
Additional VOCs										
1,1,1-Trichloroethane	µg/L	20	--	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	--	--	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	--	--	<10	6.99 J	<10	<10	23.4	19.4	<10

Notes:
µg/L: micrograms per liter
-- : Not Listed
MCL: Maximum Contaminant Level
RL: Reporting Limit
TC: Target Concentration
<: Not detected above RL
Results above MCL or TC shown in bold

DQE Flags:
J: Estimated

Method:
8260B: Volatile Organic Compounds

TABLE 18
DUNN FIELD ANALYTICAL RESULTS SUMMARY, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID			MW-225	MW-226	MW-227	MW-228	MW-230	MW-235	MW-237
	Lab ID			L12040782-13	L12040763-13	L12040763-14	L12040763-15	L12040763-16	L12040763-17	L12040692-31
	Date			4/20/2012	4/19/2012	4/19/2012	4/19/2012	4/19/2012	4/19/2012	4/18/2012
Analyte	Units	MCL	TC							
1,1,2,2-Tetrachloroethane	µg/L	--	2.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	5	1.9	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	7	<1	<1	<1	<1	**13.2**	<1	3.03
1,2-Dichloroethane	µg/L	5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	µg/L	5	3	<1	<1	0.348 J	<1	<1	<1	<1
Chloroform	µg/L	80	12	0.221 J	0.195 J	0.865	0.186 J	0.225 J	<0.3	0.172 J
cis-1,2-Dichloroethene	µg/L	70	35	<1	<1	<1	<1	0.499 J	<1	<1
Tetrachloroethene	µg/L	5	2.5	0.538 J	0.376 J	0.463 J	0.264 J	**35.9**	<1	0.259 J
trans-1,2-Dichloroethene	µg/L	100	50	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	5	0.653 J	<1	0.893 J	<1	**54.3**	<1	<1
Vinyl chloride	µg/L	2	--	<1	<1	<1	<1	<1	<1	<1
Total Primary CVOCs				1.41	0.571	2.57	0.450	104	0	3.46
Additional VOCs										
1,1,1-Trichloroethane	µg/L	20	--	<1	<1	<1	<1	0.429 J	<1	<1
1,1-Dichloroethane	µg/L	--	--	<1	<1	<1	<1	0.981 J	<1	0.395 J
Acetone	µg/L	--	--	<10	<10	<10	<10	<10	<10	<10

Notes:
µg/L: micrograms per liter
-- : Not Listed
MCL: Maximum Contaminant Level
RL: Reporting Limit
TC: Target Concentration
<: Not detected above RL
Results above MCL or TC shown in bold

DQE Flags:
J: Estimated

Method:
8260B: Volatile Organic Compounds

TABLE 18
DUNN FIELD ANALYTICAL RESULTS SUMMARY, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID			MW-241	MW-242	MW-243	MW-244	MW-245	MW-246	MW-247
	Lab ID			L12040692-01	L12040692-02	L12040692-03	L12040692-20	L12040692-04	L12040692-05	L12040692-21
	Date			4/17/2012	4/17/2012	4/17/2012	4/18/2012	4/17/2012	4/17/2012	4/18/2012
Analyte	Units	MCL	TC							
1,1,2,2-Tetrachloroethane	µg/L	--	2.2	<0.5	0.325 J	**2.6**	1.28	0.715	**9.94**	1.09
1,1,2-Trichloroethane	µg/L	5	1.9	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	7	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	µg/L	5	3	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	80	12	0.136 J	0.197 J	<0.3	0.161 J	<0.3	<0.3	0.661
cis-1,2-Dichloroethene	µg/L	70	35	<1	<1	<1	<1	<1	0.44 J	<1
Tetrachloroethene	µg/L	5	2.5	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	100	50	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	5	0.667 J	0.779 J	1.95	1.84	0.554 J	1.75	0.864 J
Vinyl chloride	µg/L	2	--	<1	<1	<1	<1	<1	<1	<1
Total Primary CVOCs				0.803	1.30	4.55	3.28	1.27	12.1	2.62
Additional VOCs										
1,1,1-Trichloroethane	µg/L	20	--	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	--	--	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	--	--	<10	<10	<10	<10	<10	<10	<10

Notes:
µg/L: micrograms per liter
-- : Not Listed
MCL: Maximum Contaminant Level
RL: Reporting Limit
TC: Target Concentration
<: Not detected above RL
Results above MCL or TC shown in bold

DQE Flags:
J: Estimated

Method:
8260B: Volatile Organic Compounds

TABLE 18
DUNN FIELD ANALYTICAL RESULTS SUMMARY, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID			MW-248	MW-249	MW-250	MW-251
	Lab ID			L12040692-22	L12040692-23	L12040692-24	L12040692-25
	Date			4/18/2012	4/18/2012	4/18/2012	4/18/2012
Analyte	Units	MCL	TC				
1,1,2,2-Tetrachloroethane	µg/L	--	2.2	<0.5	**2.27**	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	5	1.9	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	7	<1	<1	<1	4.05
1,2-Dichloroethane	µg/L	5	--	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	µg/L	5	3	<1	**3.55**	<1	<1
Chloroform	µg/L	80	12	<0.3	**20.3**	<0.3	0.328
cis-1,2-Dichloroethene	µg/L	70	35	<1	1.15	<1	<1
Tetrachloroethene	µg/L	5	2.5	<1	1.02	<1	0.613 J
trans-1,2-Dichloroethene	µg/L	100	50	<1	<1	<1	<1
Trichloroethene	µg/L	5	5	<1	**14.9**	<1	0.253 J
Vinyl chloride	µg/L	2	--	<1	<1	<1	<1
Total Primary CVOCs				0	43.2	0	5.24
Additional VOCs							
1,1,1-Trichloroethane	µg/L	20	--	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	--	--	<1	<1	<1	0.561 J
Acetone	µg/L	--	--	<10	<10	2.54 J	<10

Notes:
µg/L: micrograms per liter
-- : Not Listed
MCL: Maximum Contaminant Level
RL: Reporting Limit
TC: Target Concentration
<: Not detected above RL
Results above MCL or TC shown in bold

DQE Flags:
J: Estimated

Method:
8260B: Volatile Organic Compounds

TABLE 19
DUNN FIELD PRIMARY CVOC RESULTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis Tennessee

VOC Analyte	MCL (µg/L)	TC (µg/L)	Number of Locations with Analyte Above RL	Maximum Concentrations (µg/L)	Location of Maximum Concentration	Number of Locations with Analyte Above MCL	Number of Locations with Analyte Above TC
1,1,2,2-Tetrachloroethane	--	2.2	26	37.9	MW-159	NA	16
1,1,2-Trichloroethane	5	1.9	1	6.14	MW-159	1	1
1,1-Dichloroethene	7	7	10	25.7	MW-130	5	5
1,2-Dichloroethane	5	--	0	0.305	MW-130	0	NA
Carbon tetrachloride	5	3	6	3.55	MW-249	0	1
Chloroform	80	12	27	37.4	MW-151	0	5
cis-1,2-Dichloroethene	70	35	8	42.8	MW-159	0	1
Tetrachloroethene	5	2.5	10	72.5	MW-130	6	8
trans-1,2-Dichloroethene	100	50	1	4.36	MW-159	0	0
Trichloroethene	5	5	35	275	MW-159	21	21
Vinyl chloride	2	--	1	17.3	MW-159	1	NA

Notes:
µg/L micrograms per liter
--: Not Listed
RL: reporting limit
MCL: Maximum Contaminant Level
TC: Target Concentration

TABLE 20
DUNN FIELD ANALYTICAL RESULTS SUMMARY, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Analyte	Well Lab ID Date Units	MCL	TC	MW-03 L12100695-40 10/17/2012	MW-06 L12100695-41 10/17/2012	MW-15 L12100695-42 10/17/2012	MW-28 L12100695-09 10/16/2012	MW-31 L12100695-01 10/16/2012	MW-54 L12100695-19 10/17/2012	MW-57 L12100695-43 10/17/2012
1,1,2,2-Tetrachloroethane	µg/L	--	2.2	<0.5	0.486 J	<0.5	<0.5	0.526	**2.54**	<0.5
1,1,2-Trichloroethane	µg/L	5	1.9	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	7	0.524 J	<1	<1	<1	0.902 J	<1	<1
1,2-Dichloroethane	µg/L	5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	µg/L	5	3	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	80	12	<0.3	2.72	2.29	0.154 J	<0.3	0.354	9.57
cis-1,2-Dichloroethene	µg/L	70	35	<1	0.569 J	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	5	2.5	1.06	<1	0.539 J	<1	**2.71**	0.377 J	<1
trans-1,2-Dichloroethene	µg/L	100	50	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	5	1.28	0.938 J	1.07	<1	3.66	**7.74**	1.1
Vinyl chloride	µg/L	2	--	<1	<1	<1	<1	<1	<1	<1
Total Primary CVOCs				2.86	4.71	3.90	0.154	7.80	11.0	10.7
Acetone	µg/L			<10	<10	3.15 J	5.84 J	4.34 J	<10	<10

Notes:
µg/L: micrograms per liter
-- : Not Listed
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Results above MCL or TC shown in bold

DQE Flags:
J: Estimated

Method:
8260B: Volatile Organic Compounds

TABLE 20
DUNN FIELD ANALYTICAL RESULTS SUMMARY, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Analyte	Well Lab ID Date Units	MCL	TC	MW-77 L12100695-20 10/17/2012	MW-79 L12100695-23 10/17/2012	MW-87 L12100695-44 10/17/2012	MW-134 L12100695-45 10/17/2012	MW-144 L12100695-46 10/17/2012	MW-149 L12100695-24 10/17/2012	MW-150 L12100695-25 10/17/2012
1,1,2,2-Tetrachloroethane	µg/L	--	2.2	**6.48**	<0.5	<0.5	<0.5	**14.7**	**4.56**	**2.64**
1,1,2-Trichloroethane	µg/L	5	1.9	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	7	<1	2.71	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	µg/L	5	3	<1	<1	<1	<1	<1	0.517 J	<1
Chloroform	µg/L	80	12	0.62	<0.3	0.377	<0.3	0.377	7.37	0.746
cis-1,2-Dichloroethene	µg/L	70	35	0.264 J	<1	<1	<1	0.942 J	1.6	<1
Tetrachloroethene	µg/L	5	2.5	0.411 J	**4.06**	<1	0.889 J	0.798 J	0.296 J	<1
trans-1,2-Dichloroethene	µg/L	100	50	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	5	**13**	3.12	<1	<1	**38.5**	4.3	**6.94**
Vinyl chloride	µg/L	2	--	<1	<1	<1	<1	<1	<1	<1
Total Primary CVOCs				20.8	9.89	0.377	0.889	55.3	18.6	10.3
Acetone	µg/L			4.5 J	<10	<10	<10	<10	4.9 J	<10

Notes:
µg/L: micrograms per liter
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DQE Flags:
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TABLE 20
DUNN FIELD ANALYTICAL RESULTS SUMMARY, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Analyte	Well Lab ID Date Units	MCL	TC	MW-151 L12100695-26 10/17/2012	MW-157 L12100695-27 10/17/2012	MW-159 L12100695-28 10/17/2012	MW-163 L12100695-47 10/17/2012	MW-164 L12100695-48 10/17/2012	MW-165 L12100695-02 10/16/2012	MW-165A L12100695-03 10/16/2012
1,1,2,2-Tetrachloroethane	µg/L	--	2.2	**3.61**	0.616	**24.2**	**3.18**	0.826	1.79	1.16
1,1,2-Trichloroethane	µg/L	5	1.9	<1	<1	**4.82**	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	7	<1	<1	3.2	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	µg/L	5	3	**1.42**	<1	<1	<1	1.03	<1	<1
Chloroform	µg/L	80	12	**23.9**	2.46	0.242 J	0.215 J	5.15	0.281 J	0.433
cis-1,2-Dichloroethene	µg/L	70	35	1.17	<1	**35.3**	<1	0.925 J	<1	<1
Tetrachloroethene	µg/L	5	2.5	0.507 J	<1	1.06	0.832 J	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	100	50	<1	<1	**4.93**	<1	<1	<1	<1
Trichloroethene	µg/L	5	5	**11.4**	2.03	**247**	**9.26**	**5.86**	3.9	0.493 J
Vinyl chloride	µg/L	2	--	<1	<1	**14.6**	<1	<1	<1	<1
Total Primary CVOCs				42.0	5.11	335	13.5	13.8	5.97	2.09
Acetone	µg/L			4.46 J	<10	<10	<10	4.36 J	6.09 J	6.08 J

Notes:
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TABLE 20
DUNN FIELD ANALYTICAL RESULTS SUMMARY, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Analyte	Well Lab ID Date Units	MCL	TC	MW-166 L12100695-29 10/17/2012	MW-166A L12100695-32 10/17/2012	MW-174 L12100695-49 10/17/2012	MW-190 L12100695-50 10/17/2012	MW-220 L12100695-51 10/17/2012	MW-221 L12100695-52 10/17/2012	MW-222 L12100695-10 10/16/2012
1,1,2,2-Tetrachloroethane	µg/L	--	2.2	**2.56**	**5.96**	<0.5	**10.6**	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	5	1.9	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	7	<1	<1	<1	<1	2.47	<1	<1
1,2-Dichloroethane	µg/L	5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	µg/L	5	3	0.692 J	0.464 J	<1	<1	<1	<1	<1
Chloroform	µg/L	80	12	10	8.6	0.212 J	0.186 J	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	70	35	1.29	1.37	<1	0.373 J	<1	<1	<1
Tetrachloroethene	µg/L	5	2.5	0.521 J	<1	0.263 J	1.05	**3.78**	<1	0.291 J
trans-1,2-Dichloroethene	µg/L	100	50	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	5	**9.01**	4.93	<1	**23.1**	**6.65**	<1	<1
Vinyl chloride	µg/L	2	--	<1	<1	<1	<1	<1	<1	<1
Total Primary CVOCs				24.07	21.3	0.475	35.3	12.9	0	0.291
Acetone	µg/L			6.35 J	<10	<10	<10	5.19 J	<10	5.13 J

Notes:
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TABLE 20
DUNN FIELD ANALYTICAL RESULTS SUMMARY, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Analyte	Well Lab ID Date Units	MCL	TC	MW-223 L12100695-11 10/16/2012	MW-224 L12100695-12 10/16/2012	MW-225 L12100695-13 10/16/2012	MW-226 L12100695-14 10/16/2012	MW-227 L12100695-53 10/17/2012	MW-228 L12100695-54 10/17/2012	MW-242 L12100695-33 10/17/2012
1,1,2,2-Tetrachloroethane	µg/L	--	2.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	5	1.9	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	7	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	µg/L	5	3	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	80	12	0.207 J	0.286 J	0.214 J	0.242 J	0.42	0.199 J	<0.3
cis-1,2-Dichloroethene	µg/L	70	35	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	5	2.5	0.476 J	0.305 J	0.464 J	0.393 J	0.392 J	0.46 J	<1
trans-1,2-Dichloroethene	µg/L	100	50	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	5	0.352 J	<1	<1	<1	0.37 J	<1	0.498 J
Vinyl chloride	µg/L	2	--	<1	<1	<1	<1	<1	<1	<1
Total Primary CVOCs				1.04	0.591	0.678	0.635	1.18	0.659	0.498
Acetone	µg/L			7.12 J	<10	5.51 J	<10	<10	<10	<10

Notes:
µg/L: micrograms per liter
-- : Not Listed
MCL: Maximum Contaminant Level
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<: Not detected above RL
Results above MCL or TC shown in bold

DQE Flags:
J: Estimated

Method:
8260B: Volatile Organic Compounds

TABLE 20
DUNN FIELD ANALYTICAL RESULTS SUMMARY, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Analyte	Well Lab ID Date Units	MCL	TC	MW-243 L12100695-04 10/16/2012	MW-244 L12100695-34 10/17/2012	MW-245 L12100695-05 10/16/2012	MW-246 L12100695-06 10/16/2012	MW-247 L12100695-35 10/17/2012	MW-249 L12100695-36 10/17/2012
1,1,2,2-Tetrachloroethane	µg/L	--	2.2	**2.31**	**2.25**	0.615	**13.1**	0.738	1.62
1,1,2-Trichloroethane	µg/L	5	1.9	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	7	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	µg/L	5	3	<1	<1	<1	<1	<1	2.52
Chloroform	µg/L	80	12	<0.3	0.246 J	<0.3	<0.3	2.17	**13**
cis-1,2-Dichloroethene	µg/L	70	35	<1	<1	<1	<1	0.42 J	0.515 J
Tetrachloroethene	µg/L	5	2.5	<1	0.389 J	<1	<1	<1	0.744 J
trans-1,2-Dichloroethene	µg/L	100	50	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	5	1.55	4.05	0.643 J	1.59	1.7	**8.7**
Vinyl chloride	µg/L	2	--	<1	<1	<1	<1	<1	<1
Total Primary CVOCs				3.86	6.94	1.26	14.7	5.03	27.1
Acetone	µg/L			6.08 J	6.55 J	6.29 J	5.77 J	5.14 J	5.34 J

Notes:
µg/L: micrograms per liter
-- : Not Listed
MCL: Maximum Contaminant Level
RL: Reporting Limit
TC: Target Concentration
<: Not detected above RL
Results above MCL or TC shown in bold

DQE Flags:
J: Estimated

Method:
8260B: Volatile Organic Compounds

TABLE 21
DUNN FIELD PRIMARY CVOC RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

VOC Analyte	MCL (µg/L)	TC (µg/L)	Number of Locations with Analyte Above RL	Maximum Concentrations (µg/L)	Location of Maximum Concentration	Number of Locations with Analyte Above MCL	Number of Locations with Analyte Above TC
1,1,2,2-Tetrachloroethane	--	2.2	22	24.2	MW-159	NA	14
1,1,2-Trichloroethane	5	1.9	1	4.82	MW-159	0	1
1,1-Dichloroethene	7	7	3	3.2	MW-159	0	0
1,2-Dichloroethane	5	--	0	ND	--	0	NA
Carbon tetrachloride	5	3	3	2.52	MW-249	0	0
Chloroform	80	12	18	23.9	MW-151	0	2
cis-1,2-Dichloroethene	70	35	5	35.3	MW-159	0	1
Tetrachloroethene	5	2.5	6	4.06	MW-79	0	3
trans-1,2-Dichloroethene	100	50	1	4.93	MW-159	0	0
Trichloroethene	5	5	25	247	MW-159	12	12
Vinyl chloride	2	--	1	14.6	MW-159	1	NA

Notes:
µg/L: micrograms per liter
--: Not Listed
RL: reporting limit
MCL: Maximum Contaminant Level
TC: Target Concentration

TABLE 22
MAIN INSTALLATION MANN-KENDALL TREND ANALYSIS - PCE
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

Well	Plume	COC	Coefficient of Variation	MK (S)	Confidence Factor	Concentration Trend	Sample Rounds	Detects	Max	Min
DR1-1	TTA-1 South	PCE	0.13	-11	77.70%	S	11	11	3.3	2.12
DR1-1A	TTA-1 South	PCE	0.36	-50	99.75%	D	14	14	1.8	0.612
DR1-2	TTA-1 North	PCE	0.18	-10	75.30%	S	11	11	2.5	1.47
DR1-3	TTA-1 South	PCE	1.02	-13	64.00%	NT	21	21	54.7	0.45
DR1-4	TTA-1 South	PCE	1.13	-32	95.50%	D	14	12	12.4	0.435
DR1-5	TTA-1 South	PCE	0.68	19	76.75%	NT	17	17	95.8	4.3
DR1-5A	TTA-1 South	PCE	0.20	22	80.40%	NT	17	17	70.4	24
DR1-6	TTA-1 South	PCE	0.52	58	99.10%	I	17	17	239	13
DR1-6A	TTA-1 South	PCE	0.38	111	100.00%	I	17	17	60.3	17
DR1-7	TTA-1 North	PCE	0.95	-48	100.00%	D	11	11	30	1.6
DR1-8	TTA-1 North	PCE	0.00	0	46.87%	ND	11	0		
DR2-1	TTA-2	PCE	0.40	-75	98.80%	D	21	21	280	33.7
DR2-2	TTA-2	PCE	0.73	22	80.40%	NT	17	17	159	10
DR2-3	TTA-2	PCE	0.28	-15	71.50%	S	17	17	50.3	20.6
DR2-4	TTA-2	PCE	0.29	8	70.25%	NT	11	11	19.8	7.15
DR2-5	TTA-2	PCE	0.38	17	68.35%	NT	21	21	114	21.1
DR2-6	TTA-2	PCE	0.51	-40	94.60%	PD	17	17	115	20.9
MW-16	Background	PCE	0.00	0	40.80%	ND	5	0		
MW-19	Background	PCE	0.00	0	40.80%	ND	5	0		
MW-21	TTA-1 North	PCE	0.37	50	93.00%	PI	21	21	192	53
MW-22	Boundary	PCE	1.15	-2	59.20%	NT	5	1	0.79	0.79
MW-23	Boundary	PCE	0.00	0	40.80%	ND	5	0		
MW-24	Boundary	PCE	0.00	0	40.80%	ND	5	0		
MW-25A	-	PCE	0.28	-15	85.90%	S	11	11	13.6	4.91
MW-26	TTA-2	PCE	0.34	27	85.55%	NT	17	17	52.5	13.7
MW-34	Sentinel	PCE	0.42	0	47.80%	S	14	12	0.753	0.269
MW-38	Sentinel	PCE	0.83	5	68.30%	NT	8	2	0.591	0.446
MW-39	West Central	PCE	0.61	-99	100.00%	D	18	18	158	5.08
MW-39A	West Central	PCE	0.63	-70	99.80%	D	17	17	234	25.6
MW-50	Boundary	PCE	0.45	10	99.20%	I	5	4	0.492	0.263
MW-52	-	PCE	0.28	-12	77.00%	S	12	12	10.8	4.7
MW-53	Background	PCE	0.42	0	40.80%	S	5	5	2.26	0.59
MW-55	Background	PCE	0.00	0	40.80%	ND	5	0		
MW-62	Building 835	PCE	0.55	34	89.25%	NT	18	15	1.1	0.318
MW-63A	Sentinel	PCE	0.74	12	87.00%	NT	9	8	2.31	0.32
MW-63B	Sentinel	PCE	0.51	8	76.20%	NT	9	9	7.47	1.58
MW-64	TTA-2	PCE	0.13	23	85.90%	NT	15	15	23.8	16
MW-66A	Background	PCE	0.25	8	80.10%	NT	8	8	3.31	1.7
MW-85	TTA-2	PCE	0.36	-34	83.80%	S	21	21	74.8	14.4
MW-88	TTA-2	PCE	0.40	75	99.90%	I	17	17	56.1	14
MW-89	Sentinel	PCE	1.26	18	96.20%	I	9	8	4.25	0.251
MW-90	Sentinel	PCE	0.53	4	55.80%	NT	15	15	80.8	19
MW-92	TTA-2	PCE	0.84	-46	96.80%	D	17	16	193	0.499
MW-93	Boundary	PCE	0.10	-6	76.40%	S	7	1	0.16	0.16
MW-94A	West Central	PCE	0.29	-69	99.80%	D	17	17	52.2	15.3
MW-96	TTA-2	PCE	1.96	-41	98.70%	D	14	14	63	0.306
MW-97	-	PCE	0.00	0	48.00%	ND	15	0		
MW-98	West Central	PCE	0.21	63	99.55%	I	17	17	41.7	17
MW-99	Background	PCE	0.00	0	43.73%	ND	7	0		
MW-100B	TTA-1 North	PCE	1.36	15	71.50%	NT	17	11	101	0.706
MW-101B	TTA-1 South	PCE	0.52	-88	100.00%	D	17	17	239	47

TABLE 22
MAIN INSTALLATION MANN-KENDALL TREND ANALYSIS - PCE
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

Well	Plume	COC	Coefficient of Variation	MK (S)	Confidence Factor	Concentration Trend	Sample Rounds	Detects	Max	Min
MW-101T	TTA-1 South	PCE	0.57	-92	100.00%	D	17	17	251	16.5
MW-102B	Boundary	PCE	0.46	-2	55.70%	S	7	1	0.308	0.308
MW-103	North Central	PCE	0.00	0	46.00%	ND	9	0		
MW-104	North Central	PCE	0.00	0	46.87%	ND	11	0		
MW-107B	Sentinel	PCE	1.43	30	100.00%	I	9	9	62.5	0.291
MW-107T	Sentinel	PCE	1.20	22	99.80%	I	8	8	47	0.411
MW-108	Sentinel	PCE	0.27	6	59.60%	NT	15	15	7.25	2.67
MW-113	TTA-2	PCE	0.23	51	98.10%	I	17	17	200	64
MW-140	Sentinel	PCE	0.81	52	100.00%	I	11	10	2.51	0.38
MW-141	Sentinel	PCE	0.30	16	72.90%	NT	17	17	31	5.9
MW-142	Building 835	PCE	0.00	0	46.87%	ND	11	0		
MW-143	Building 835	PCE	0.64	17	89.10%	NT	11	2	0.431	0.368
MW-197A	West Central	PCE	0.60	-99	100.00%	D	15	15	130	27.7
MW-197B	West Central	PCE	0.89	-53	99.60%	D	15	15	179	16.7
MW-198	Building 835	PCE	0.00	0	47.30%	ND	12	0		
MW-199A	Sentinel	PCE	0.50	-3	56.90%	S	10	1	0.361	0.361
MW-199B	Building 835	PCE	2.79	5	57.70%	NT	15	15	23.4	0.393
MW-200	West Central	PCE	0.69	-54	99.65%	D	15	15	132	3
MW-202A	Sentinel	PCE	0.93	36	99.30%	I	12	12	2.28	0.257
MW-202B	Sentinel	PCE	0.49	62	99.90%	I	15	15	27.1	3.82
MW-203A	West Central	PCE	0.27	29	93.70%	PI	14	14	170	62.6
MW-203B	West Central	PCE	0.40	13	74.10%	NT	14	14	38.4	9.39
MW-204A	West Central	PCE	0.11	44	99.15%	I	14	14	50.2	36.2
MW-204B	West Central	PCE	0.28	-37	97.60%	D	14	14	29.4	13.8
MW-205A	West Central	PCE	0.66	-67	100.00%	D	14	14	180	28.9
MW-205B	West Central	PCE	0.84	-39	98.20%	D	14	14	149	19.7
MW-206A	West Central	PCE	0.72	-61	100.00%	D	14	14	114	14
MW-206B	West Central	PCE	0.71	-50	99.75%	D	14	14	77.5	12.3
MW-207A	Sentinel	PCE	0.28	50	99.75%	I	14	14	18.6	7.92
MW-207B	Sentinel	PCE	0.86	17	80.60%	NT	14	14	124	11.8
MW-208A	West Central	PCE	0.77	-60	100.00%	D	14	14	198	3.94
MW-208B	West Central	PCE	0.91	71	100.00%	I	14	14	26.5	1.68
MW-209A	Sentinel	PCE	0.50	-9	72.90%	S	11	2	0.326	0.323
MW-209B	Building 835	PCE	0.52	52	99.80%	I	14	9	0.557	0.278
MW-210A	Sentinel	PCE	0.51	-79	100.00%	D	14	14	38.2	8.21
MW-210B	West Central	PCE	0.56	-85	100.00%	D	14	14	32.4	4.8
MW-211	Sentinel	PCE	0.70	11	81.00%	NT	10	6	0.811	0.275
MW-212	Building 835	PCE	0.74	-12	72.30%	S	14	3	0.516	0.407
MW-213	Building 835	PCE	0.00	0	0.00%	N/A	2	0		
MW-214A	West Central	PCE	0.30	-2	52.70%	S	12	12	11.1	4.51
MW-214B	West Central	PCE	0.32	0	47.30%	S	12	12	10	4
MW-215A	West Central	PCE	0.20	-22	94.85%	PD	11	11	7.01	3.51
MW-215B	West Central	PCE	0.22	37	99.80%	I	11	11	5.91	2.1
MW-216	-	PCE	3.04	3	56.90%	NT	10	2	34.2	0.285
MW-217	TTA-2	PCE	0.18	-29	93.70%	PD	14	14	34.7	17.9
MW-218	TTA-2	PCE	0.16	9	66.60%	NT	14	14	20.3	11.2
MW-219	Boundary	PCE	0.64	-33	96.00%	D	14	14	48	4.55
MW-229	Sentinel	PCE	0.00	0	45.20%	ND	8	0		
MW-252	Sentinel	PCE	1.39	1	50.00%	NT	7	3	5.64	1.65
MW-253	Sentinel	PCE	0.00	0	43.73%	ND	7	0		
MW-254	Sentinel	PCE	0.40	-5	71.90%	S	7	6	0.854	0.573

TABLE 22
MAIN INSTALLATION MANN-KENDALL TREND ANALYSIS - PCE
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Defense Depot Memphis, Tennessee

Well	Plume	COC	Coefficient of Variation	MK (S)	Confidence Factor	Concentration Trend	Sample Rounds	Detects	Max	Min
MW-255	Sentinel	PCE	0.00	0	43.73%	ND	7	0		
MW-256	Sentinel	PCE	0.68	17	99.50%	I	7	7	39.5	8.64
MW-257	Building 835	PCE	0.00	0	0.00%	N/A	2	0		
MW-258	North Central	PCE	0.00	0	0.00%	N/A	2	2	22.1	19.4
MW-259	TTA-2	PCE	0.00	0	0.00%	N/A	2	2	15.1	15.1
PMW101-04A	TTA-1 South	PCE	1.03	-8	62.20%	NT	16	16	199	4.64
PMW101-04B	TTA-1 South	PCE	0.82	-16	74.70%	S	16	16	109	5.33
PMW21-03	TTA-1 North	PCE	0.84	-8	62.20%	S	16	16	185	12.3
PMW21-05	TTA-1 North	PCE	0.56	50	98.70%	I	16	16	88.8	6.37
PMW85-05	TTA-2	PCE	0.35	-18	93.40%	PD	10	10	138	30.5
PMW92-03	TTA-2	PCE	0.78	-3	53.55%	S	16	16	252	15.6
PMW92-06	TTA-2	PCE	0.75	-33	94.30%	PD	15	15	179	0.67
PZ-03	West Central	PCE	0.40	-16	94.00%	PD	9	9	5	0.523

Notes:

D: Decreasing
I: Increasing
N/A: Insufficent Data
ND: Not Detected
NT: No Trend
PD: Probably Decreasing
PI: Probably Increasing
S: Stable

TABLE 23
MAIN INSTALLATION MANN-KENDALL TREND ANALYSIS - TCE
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

Well	Plume	COC	Coefficient of Variation	MK (S)	Confidence Factor	Concentration Trend	Sample Rounds	Detects	Max	Min
DR1-1	TTA-1 South	TCE	0.30	21	94.00%	PI	11	9	0.399	0.255
DR1-1A	TTA-1 South	TCE	0.36	-51	99.80%	D	14	14	6.9	2.3
DR1-2	TTA-1 North	TCE	1.84	2	53.00%	NT	11	1	1.83	1.83
DR1-3	TTA-1 South	TCE	0.59	-46	91.20%	PD	21	20	5.13	0.303
DR1-4	TTA-1 South	TCE	0.71	-31	95.00%	D	14	11	1.69	0.252
DR1-5	TTA-1 South	TCE	2.73	0	48.40%	NT	17	1	4.28	4.28
DR1-5A	TTA-1 South	TCE	0.21	-31	89.00%	S	17	17	114	47
DR1-6	TTA-1 South	TCE	0.42	-60	99.30%	D	17	17	4.61	1.16
DR1-6A	TTA-1 South	TCE	0.21	89	100.00%	I	17	17	166	87
DR1-7	TTA-1 North	TCE	0.63	-38	99.85%	D	11	10	2.2	0.441
DR1-8	TTA-1 North	TCE	1.21	3	56.00%	NT	11	2	1.03	0.341
DR2-1	TTA-2	TCE	0.32	-80	99.20%	D	21	21	12.7	2.61
DR2-2	TTA-2	TCE	0.17	-23	81.50%	S	17	17	4.25	2.45
DR2-3	TTA-2	TCE	0.12	-62	99.50%	D	17	17	2.7	1.85
DR2-4	TTA-2	TCE	0.16	-33	99.50%	D	11	11	2.2	1.12
DR2-5	TTA-2	TCE	0.38	42	89.10%	NT	21	21	38.2	12.1
DR2-6	TTA-2	TCE	0.47	-24	82.60%	S	17	17	19.7	2.2
MW-16	Background	TCE	0.00	0	40.80%	ND	5	0		
MW-19	Background	TCE	1.02	4	75.80%	NT	5	1	0.651	0.651
MW-21	TTA-1 North	TCE	0.50	-72	98.50%	D	21	21	32.5	5.3
MW-22	Boundary	TCE	0.74	-3	67.50%	S	5	2	0.531	0.329
MW-23	Boundary	TCE	0.00	0	40.80%	ND	5	0		
MW-24	Boundary	TCE	0.00	0	40.80%	ND	5	0		
MW-25A	-	TCE	0.26	-26	97.50%	D	11	11	0.644	0.301
MW-26	TTA-2	TCE	0.20	-30	88.20%	S	17	17	2.5	1.3
MW-34	Sentinel	TCE	0.43	39	98.20%	I	14	14	1.48	0.29
MW-38	Sentinel	TCE	1.19	5	68.30%	NT	8	5	4.86	0.291
MW-39	West Central	TCE	0.24	34	89.25%	NT	18	18	13.9	5.96
MW-39A	West Central	TCE	0.32	31	89.00%	NT	17	17	11.8	4.04
MW-50	Boundary	TCE	0.43	6	88.30%	NT	5	5	2.65	1.1
MW-52	-	TCE	0.28	3	55.35%	NT	12	12	1.4	0.34
MW-53	Background	TCE	0.00	0	40.80%	ND	5	0		
MW-55	Background	TCE	0.00	0	40.80%	ND	5	0		
MW-62	Building 835	TCE	0.28	40	92.90%	PI	18	18	185	59.2
MW-63A	Sentinel	TCE	0.45	12	87.00%	NT	9	9	1.81	0.432
MW-63B	Sentinel	TCE	0.51	18	96.20%	I	9	9	4.56	0.92
MW-64	TTA-2	TCE	0.12	9	65.10%	NT	15	15	41.5	26.1
MW-66A	Background	TCE	0.00	0	45.20%	ND	8	0		
MW-85	TTA-2	TCE	0.34	-72	98.50%	D	21	21	25.1	7
MW-88	TTA-2	TCE	0.14	13	68.65%	NT	17	17	4.8	2.7
MW-89	Sentinel	TCE	0.21	-6	69.40%	S	9	9	2.13	1.1
MW-90	Sentinel	TCE	0.41	7	61.50%	NT	15	15	8.55	2.4
MW-92	TTA-2	TCE	0.97	29	87.35%	NT	17	15	26.7	1.72
MW-93	Boundary	TCE	0.00	0	43.73%	ND	7	0		
MW-94A	West Central	TCE	0.21	67	99.75%	I	17	17	10.2	4.2
MW-96	TTA-2	TCE	0.53	-15	77.50%	S	14	2	0.419	0.22
MW-97	-	TCE	0.56	99	100.00%	I	15	15	62	2.2
MW-98	West Central	TCE	0.22	92	100.00%	I	17	17	3.44	1.2
MW-99	Background	TCE	0.40	-6	76.40%	S	7	1	0.28	0.28
MW-100B	TTA-1 North	TCE	1.75	-7	59.60%	NT	17	11	43.1	0.309
MW-101B	TTA-1 South	TCE	1.38	-25	83.60%	NT	17	11	4.15	0.293

TABLE 23
MAIN INSTALLATION MANN-KENDALL TREND ANALYSIS - TCE
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Well	Plume	COC	Coefficient of Variation	MK (S)	Confidence Factor	Concentration Trend	Sample Rounds	Detects	Max	Min
MW-101T	TTA-1 South	TCE	1.11	-17	74.20%	NT	17	10	2.16	0.298
MW-102B	Boundary	TCE	0.00	0	43.73%	ND	7	0		
MW-103	North Central	TCE	0.36	20	97.80%	I	9	9	10.6	3.98
MW-104	North Central	TCE	0.19	21	94.00%	PI	11	11	21.9	11
MW-107B	Sentinel	TCE	0.53	34	100.00%	I	9	9	4.15	0.585
MW-107T	Sentinel	TCE	0.34	24	99.90%	I	8	8	3.44	0.999
MW-108	Sentinel	TCE	0.19	3	53.90%	NT	15	15	38.4	15
MW-113	TTA-2	TCE	0.25	-4	54.80%	S	17	17	29.5	8.8
MW-140	Sentinel	TCE	0.23	14	84.00%	NT	11	11	1.6	0.54
MW-141	Sentinel	TCE	0.24	79	100.00%	I	17	17	3.86	1.2
MW-142	Building 835	TCE	1.24	37	99.80%	I	11	11	11	0.3
MW-143	Building 835	TCE	1.08	50	100.00%	I	11	8	13.5	0.31
MW-197A	West Central	TCE	0.19	-58	99.85%	D	15	15	2.42	1.34
MW-197B	West Central	TCE	0.12	41	97.70%	I	15	15	12.6	8.51
MW-198	Building 835	TCE	0.86	-36	99.30%	D	12	12	25.8	0.44
MW-199A	Sentinel	TCE	0.98	28	99.35%	I	10	4	1	0.419
MW-199B	Building 835	TCE	0.28	-40	97.40%	D	15	15	136	53.8
MW-200	West Central	TCE	0.25	-6	59.60%	S	15	15	8.04	3.42
MW-202A	Sentinel	TCE	0.17	-22	92.40%	PD	12	12	2.22	1.21
MW-202B	Sentinel	TCE	0.49	89	100.00%	I	15	15	5.13	0.811
MW-203A	West Central	TCE	0.23	87	100.00%	I	14	14	2.89	1.27
MW-203B	West Central	TCE	0.22	-3	54.30%	S	14	14	11.3	4.74
MW-204A	West Central	TCE	0.30	-19	83.50%	S	14	14	1.83	0.723
MW-204B	West Central	TCE	0.26	25	90.40%	PI	14	14	5.92	2.37
MW-205A	West Central	TCE	0.20	59	100.00%	I	14	14	9.18	3.69
MW-205B	West Central	TCE	0.18	17	80.60%	NT	14	14	11.8	5.15
MW-206A	West Central	TCE	0.10	3	54.30%	NT	14	14	13.9	9.81
MW-206B	West Central	TCE	0.17	-49	99.70%	D	14	14	11.7	6.51
MW-207A	Sentinel	TCE	0.40	9	66.60%	NT	14	14	52.7	15.7
MW-207B	Sentinel	TCE	0.65	-25	90.40%	PD	14	14	109	3.24
MW-208A	West Central	TCE	0.41	64	100.00%	I	14	14	20.2	6.48
MW-208B	West Central	TCE	0.43	33	96.00%	I	14	14	45.1	13.2
MW-209A	Sentinel	TCE	0.95	33	99.50%	I	11	11	3.06	0.404
MW-209B	Building 835	TCE	0.44	67	100.00%	I	14	14	32	6.4
MW-210A	Sentinel	TCE	0.11	-27	92.10%	PD	14	14	6.37	4.43
MW-210B	West Central	TCE	0.15	-5	58.50%	S	14	14	10.7	6.76
MW-211	Sentinel	TCE	0.49	5	63.60%	NT	10	10	1.38	0.39
MW-212	Building 835	TCE	0.39	-63	100.00%	D	14	14	47.9	12.2
MW-213	Building 835	TCE	0.00	0	0.00%	N/A	2	2	44.6	34.2
MW-214A	West Central	TCE	0.48	-18	87.50%	S	12	12	7.88	1.95
MW-214B	West Central	TCE	0.38	-19	88.85%	S	12	12	5.65	1.93
MW-215A	West Central	TCE	0.44	-33	99.50%	D	11	11	10.2	2.08
MW-215B	West Central	TCE	0.10	5	61.90%	NT	11	11	1.76	1.25
MW-216	-	TCE	1.51	7	70.00%	NT	10	2	1.5	0.363
MW-217	TTA-2	TCE	0.17	33	96.00%	I	14	14	46.1	25.6
MW-218	TTA-2	TCE	0.11	0	47.80%	S	14	14	49.2	32.8
MW-219	Boundary	TCE	0.56	-31	95.00%	D	14	14	3.74	0.439
MW-229	Sentinel	TCE	0.00	0	45.20%	ND	8	0		
MW-252	Sentinel	TCE	1.40	1	50.00%	NT	7	3	3.73	0.891
MW-253	Sentinel	TCE	1.06	0	43.73%	NT	7	5	9.81	0.344
MW-254	Sentinel	TCE	0.13	6	76.40%	NT	7	7	2.63	1.8

TABLE 23
MAIN INSTALLATION MANN-KENDALL TREND ANALYSIS - TCE
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

Well	Plume	COC	Coefficient of Variation	MK (S)	Confidence Factor	Concentration Trend	Sample Rounds	Detects	Max	Min
MW-255	Sentinel	TCE	0.45	15	98.50%	I	7	6	0.586	0.269
MW-256	Sentinel	TCE	0.76	21	100.00%	I	7	7	13.7	2.43
MW-257	Building 835	TCE	0.00	0	0.00%	N/A	2	0		
MW-258	North Central	TCE	0.00	0	0.00%	N/A	2	2	93	57.7
MW-259	TTA-2	TCE	0.00	0	0.00%	N/A	2	2	15.9	15.7
PMW101-04A	TTA-1 South	TCE	1.08	57	99.50%	I	16	14	7.89	0.26
PMW101-04B	TTA-1 South	TCE	1.09	8	62.20%	NT	16	16	23.2	1.24
PMW21-03	TTA-1 North	TCE	0.89	-2	51.80%	S	16	16	58	0.867
PMW21-05	TTA-1 North	TCE	0.74	-66	99.90%	D	16	16	34.6	1.34
PMW85-05	TTA-2	TCE	0.26	-29	99.50%	D	10	10	39.3	14.8
PMW92-03	TTA-2	TCE	0.45	44	97.40%	I	16	16	21.1	4.66
PMW92-06	TTA-2	TCE	0.71	-30	92.30%	PD	15	13	39.7	0.747
PZ-03	West Central	TCE	0.78	29	99.95%	I	9	9	3.76	0.321

Notes:

D: Decreasing
I: Increasing
N/A: Insufficent Data
NT: No Trend
PD: Probably Decreasing
PI: Probably Increasing

TABLE 24
MAIN INSTALLATION MANN-KENDALL TREND ANALYSIS - cDCE
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

Well	Plume	COC	Coefficient of Variation	MK (S)	Confidence Factor	Concentration Trend	Sample Rounds	Detects	Max	Min
DR1-1	TTA-1 South	cDCE	0.35	23	95.70%	I	11	10	1.52	0.8
DR1-1A	TTA-1 South	cDCE	0.59	-56	99.90%	D	14	12	1	0.262
DR1-2	TTA-1 North	cDCE	0.16	11	77.70%	NT	11	11	0.856	0.48
DR1-3	TTA-1 South	cDCE	1.36	-33	83.05%	NT	21	11	32.9	0.22
DR1-4	TTA-1 South	cDCE	2.00	-1	50.00%	NT	14	5	8.09	0.582
DR1-5	TTA-1 South	cDCE	0.31	0	48.40%	S	17	1	0.295	0.295
DR1-5A	TTA-1 South	cDCE	0.30	-43	95.80%	D	17	17	5.2	1.7
DR1-6	TTA-1 South	cDCE	0.69	-83	100.00%	D	17	17	6.2	0.865
DR1-6A	TTA-1 South	cDCE	0.40	84	100.00%	I	17	17	9.24	2.6
DR1-7	TTA-1 North	cDCE	0.25	-3	56.00%	S	11	11	0.787	0.344
DR1-8	TTA-1 North	cDCE	0.00	0	46.87%	ND	11	0		
DR2-1	TTA-2	cDCE	0.84	-56	95.10%	D	21	21	86.4	4.89
DR2-2	TTA-2	cDCE	0.72	-10	64.20%	S	17	16	7.39	1.06
DR2-3	TTA-2	cDCE	0.46	-29	87.35%	S	17	17	1.8	0.549
DR2-4	TTA-2	cDCE	0.43	27	98.00%	I	11	8	0.414	0.22
DR2-5	TTA-2	cDCE	0.48	82	99.30%	I	21	21	105	25.9
DR2-6	TTA-2	cDCE	0.55	64	99.60%	I	17	17	50.5	0.69
MW-16	Background	cDCE	0.00	0	40.80%	ND	5	0		
MW-19	Background	cDCE	0.00	0	40.80%	ND	5	0		
MW-21	TTA-1 North	cDCE	0.32	156	100.00%	I	21	21	3.64	0.99
MW-22	Boundary	cDCE	0.88	-2	59.20%	S	5	1	0.527	0.527
MW-23	Boundary	cDCE	0.00	0	40.80%	ND	5	0		
MW-24	Boundary	cDCE	0.00	0	40.80%	ND	5	0		
MW-25A	-	cDCE	0.00	0	46.87%	ND	11	0		
MW-26	TTA-2	cDCE	0.49	4	54.80%	NT	17	16	1.23	0.295
MW-34	Sentinel	cDCE	0.00	0	47.80%	ND	14	0		
MW-38	Sentinel	cDCE	0.00	0	45.20%	ND	8	0		
MW-39	West Central	cDCE	1.23	84	99.95%	I	18	15	21.3	0.435
MW-39A	West Central	cDCE	1.14	81	100.00%	I	17	15	40.8	0.362
MW-50	Boundary	cDCE	0.30	-2	59.20%	S	5	5	0.617	0.297
MW-52	-	cDCE	0.19	6	63.10%	NT	12	12	0.993	0.58
MW-53	Background	cDCE	0.00	0	40.80%	ND	5	0		
MW-55	Background	cDCE	0.00	0	40.80%	ND	5	0		
MW-62	Building 835	cDCE	1.59	5	55.90%	NT	18	9	3.76	0.26
MW-63A	Sentinel	cDCE	0.00	0	46.00%	ND	9	0		
MW-63B	Sentinel	cDCE	0.58	5	65.65%	NT	9	3	0.401	0.253
MW-64	TTA-2	cDCE	0.16	63	99.90%	I	15	15	0.544	0.31
MW-66A	Background	cDCE	0.00	0	45.20%	ND	8	0		
MW-85	TTA-2	cDCE	0.64	-9	59.45%	S	21	21	59.2	1.3
MW-88	TTA-2	cDCE	0.46	48	97.40%	I	17	17	2.54	0.325
MW-89	Sentinel	cDCE	0.54	-18	96.20%	D	9	4	0.404	0.27
MW-90	Sentinel	cDCE	0.28	16	76.70%	NT	15	14	0.484	0.267
MW-92	TTA-2	cDCE	0.73	37	93.00%	PI	17	17	123	7.32
MW-93	Boundary	cDCE	0.00	0	43.73%	ND	7	0		
MW-94A	West Central	cDCE	0.70	66	99.70%	I	17	17	3.41	0.42
MW-96	TTA-2	cDCE	2.82	-32	95.50%	D	14	9	19	0.34
MW-97	-	cDCE	0.00	0	48.00%	ND	15	0		
MW-98	West Central	cDCE	2.64	71	99.85%	I	17	11	8.6	0.22
MW-99	Background	cDCE	0.00	0	43.73%	ND	7	0		
MW-100B	TTA-1 North	cDCE	0.82	-88	100.00%	D	17	17	160	5.94
MW-101B	TTA-1 South	cDCE	1.47	-42	95.40%	D	17	13	35.6	0.253

TABLE 24
MAIN INSTALLATION MANN-KENDALL TREND ANALYSIS - cDCE
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

Well	Plume	COC	Coefficient of Variation	MK (S)	Confidence Factor	Concentration Trend	Sample Rounds	Detects	Max	Min
MW-101T	TTA-1 South	cDCE	2.31	-20	78.00%	NT	17	13	51.2	0.266
MW-102B	Boundary	cDCE	0.00	0	43.73%	ND	7	0		
MW-103	North Central	cDCE	0.28	-2	54.00%	S	9	8	0.44	0.314
MW-104	North Central	cDCE	0.23	25	97.00%	I	11	11	0.637	0.305
MW-107B	Sentinel	cDCE	0.59	-5	65.65%	S	9	3	0.449	0.252
MW-107T	Sentinel	cDCE	0.52	-10	86.20%	S	8	3	0.385	0.257
MW-108	Sentinel	cDCE	0.21	25	88.00%	NT	15	15	0.927	0.33
MW-113	TTA-2	cDCE	0.51	-104	100.00%	D	17	17	110	22.2
MW-140	Sentinel	cDCE	0.40	-7	67.60%	S	11	4	0.294	0.22
MW-141	Sentinel	cDCE	0.00	0	48.40%	ND	17	0		
MW-142	Building 835	cDCE	0.00	0	46.87%	ND	11	0		
MW-143	Building 835	cDCE	0.00	0	46.87%	ND	11	0		
MW-197A	West Central	cDCE	0.74	19	81.00%	NT	15	15	3.69	0.345
MW-197B	West Central	cDCE	1.12	1	50.00%	NT	15	15	48.7	0.484
MW-198	Building 835	cDCE	0.00	0	47.30%	ND	12	0		
MW-199A	Sentinel	cDCE	0.00	0	46.43%	ND	10	0		
MW-199B	Building 835	cDCE	0.00	0	48.00%	ND	15	0		
MW-200	West Central	cDCE	1.14	55	99.70%	I	15	15	16.7	0.303
MW-202A	Sentinel	cDCE	0.27	-5	60.55%	S	12	1	0.251	0.251
MW-202B	Sentinel	cDCE	0.66	52	99.50%	I	15	5	0.485	0.299
MW-203A	West Central	cDCE	0.86	88	100.00%	I	14	12	8.54	0.294
MW-203B	West Central	cDCE	0.86	-77	100.00%	D	14	14	63.5	1.59
MW-204A	West Central	cDCE	0.99	37	97.60%	I	14	14	6.88	0.763
MW-204B	West Central	cDCE	0.85	-1	50.00%	S	14	14	6.13	0.793
MW-205A	West Central	cDCE	0.89	43	99.00%	I	14	14	31.8	0.337
MW-205B	West Central	cDCE	0.87	-5	58.50%	S	14	14	43	0.546
MW-206A	West Central	cDCE	0.90	37	97.60%	I	14	14	18.6	0.607
MW-206B	West Central	cDCE	0.87	17	80.60%	NT	14	14	11	0.582
MW-207A	Sentinel	cDCE	0.31	31	95.00%	I	14	14	0.974	0.382
MW-207B	Sentinel	cDCE	0.93	33	96.00%	I	14	5	0.9	0.544
MW-208A	West Central	cDCE	1.07	47	99.50%	I	14	14	41	0.517
MW-208B	West Central	cDCE	0.25	17	80.60%	NT	14	14	2.14	0.932
MW-209A	Sentinel	cDCE	0.00	0	46.87%	ND	11	0		
MW-209B	Building 835	cDCE	0.00	0	47.80%	ND	14	0		
MW-210A	Sentinel	cDCE	0.41	59	100.00%	I	14	14	2.25	0.727
MW-210B	West Central	cDCE	0.34	34	96.45%	I	14	14	1.3	0.433
MW-211	Sentinel	cDCE	0.00	0	46.43%	ND	10	0		
MW-212	Building 835	cDCE	0.00	0	47.80%	ND	14	0		
MW-213	Building 835	cDCE	0.00	0	0.00%	N/A	2	0		
MW-214A	West Central	cDCE	0.00	0	47.30%	ND	12	0		
MW-214B	West Central	cDCE	0.00	0	47.30%	ND	12	0		
MW-215A	West Central	cDCE	0.00	0	46.87%	ND	11	0		
MW-215B	West Central	cDCE	0.00	0	46.87%	ND	11	0		
MW-216	-	cDCE	0.36	-1	50.00%	S	10	1	0.288	0.288
MW-217	TTA-2	cDCE	0.71	-45	99.30%	D	14	14	4.8	0.519
MW-218	TTA-2	cDCE	0.24	-26	91.25%	PD	14	13	0.508	0.303
MW-219	Boundary	cDCE	0.58	-14	75.80%	S	14	11	1.64	0.393
MW-229	Sentinel	cDCE	0.00	0	45.20%	ND	8	0		
MW-252	Sentinel	cDCE	0.00	0	43.73%	ND	7	0		
MW-253	Sentinel	cDCE	0.00	0	43.73%	ND	7	0		
MW-254	Sentinel	cDCE	0.48	7	80.90%	NT	7	3	0.321	0.299

TABLE 24
MAIN INSTALLATION MANN-KENDALL TREND ANALYSIS - cDCE
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

Well	Plume	COC	Coefficient of Variation	MK (S)	Confidence Factor	Concentration Trend	Sample Rounds	Detects	Max	Min
MW-255	Sentinel	cDCE	0.00	0	43.73%	ND	7	0		
MW-256	Sentinel	cDCE	0.00	0	43.73%	ND	7	0		
MW-257	Building 835	cDCE	0.00	0	0.00%	N/A	2	0		
MW-258	North Central	cDCE	0.00	0	0.00%	N/A	2	2	2.54	1.75
MW-259	TTA-2	cDCE	0.00	0	0.00%	N/A	2	0		
PMW101-04A	TTA-1 South	cDCE	1.08	-19	78.80%	NT	16	13	86.9	1.35
PMW101-04B	TTA-1 South	cDCE	1.19	-52	99.00%	D	16	12	86.3	0.281
PMW21-03	TTA-1 North	cDCE	2.64	19	78.80%	NT	16	15	57.4	0.355
PMW21-05	TTA-1 North	cDCE	0.76	38	95.20%	I	16	15	2.11	0.278
PMW85-05	TTA-2	cDCE	0.27	19	94.60%	PI	10	10	166	81.9
PMW92-03	TTA-2	cDCE	0.55	-33	92.35%	PD	16	16	182	19.9
PMW92-06	TTA-2	cDCE	0.46	-19	81.00%	S	15	15	200	57.7
PZ-03	West Central	cDCE	0.42	-1	50.00%	S	9	2	0.287	0.26

Notes:

D: Decreasing
I: Increasing
N/A: Insufficent Data
ND: Not Detected
NT: No Trend
PD: Probably Decreasing
PI: Probably Increasing
S: Stable

TABLE 25
MAIN INSTALLATION MANN-KENDALL TREND ANALYSIS - CT
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

Well	Plume	COC	Coefficient of Variation	MK (S)	Confidence Factor	Concentration Trend	Sample Rounds	Detects	Max	Min
DR2-1	TTA-2	CT	0.46	-49	92.55%	PD	21	21	35	1.26
DR2-2	TTA-2	CT	0.57	20	78.00%	NT	17	17	16.2	1.8
DR2-3	TTA-2	CT	0.20	30	88.20%	NT	17	17	7.38	4.1
DR2-4	TTA-2	CT	0.17	7	67.60%	NT	11	11	4.56	2.2
DR2-5	TTA-2	CT	0.37	-35	84.55%	S	21	21	260	25
DR2-6	TTA-2	CT	0.65	-18	75.50%	S	17	17	92	7.2
MW-26	TTA-2	CT	0.26	5	56.40%	NT	17	17	9.99	4.38
MW-64	TTA-2	CT	0.12	-22	84.75%	S	15	15	3.68	2.52
MW-85	TTA-2	CT	0.41	-24	75.40%	S	21	21	188	22.5
MW-88	TTA-2	CT	0.43	54	98.60%	I	17	17	12.2	2.66
MW-92	TTA-2	CT	1.30	-88	100.00%	D	17	8	27.2	6.3
MW-96	TTA-2	CT	3.03	-23	88.30%	NT	14	14	150	0.69
MW-113	TTA-2	CT	0.32	16	72.90%	NT	17	17	110	20
MW-217	TTA-2	CT	0.40	-25	90.40%	PD	14	14	96.3	23.9
MW-218	TTA-2	CT	0.32	-49	99.70%	D	14	14	17.7	6.73
MW-259	TTA-2	CT	0.00	0	0.00%	N/A	2	2	5.12	4.69
PMW85-05	TTA-2	CT	0.52	-27	99.20%	D	10	10	158	5.13
PMW92-03	TTA-2	CT	2.10	-84	100.00%	D	16	7	58.1	0.586
PMW92-06	TTA-2	CT	0.80	-28	90.75%	PD	15	11	182	1.53

Notes:

D: Decreasing
I: Increasing
N/A: Insufficent Data
ND: Not Detected
NT: No Trend
PD: Probably Decreasing
PI: Probably Increasing
S: Stable

TABLE 26
MAIN INSTALLATION MANN-KENDALL TREND ANALYSIS - CF
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

Well	Plume	COC	Coefficient of Variation	MK (S)	Confidence Factor	Concentration Trend	Sample Rounds	Detects	Max	Min
DR2-1	TTA-2	CF	0.40	-125	100.00%	D	21	21	16	3.76
DR2-2	TTA-2	CF	0.70	-17	74.20%	S	17	17	4.23	0.563
DR2-3	TTA-2	CF	0.35	-63	99.55%	D	17	17	1.9	0.677
DR2-4	TTA-2	CF	0.18	-27	98.00%	D	11	11	1.06	0.575
DR2-5	TTA-2	CF	0.31	-19	70.45%	S	21	21	82	21.5
DR2-6	TTA-2	CF	0.69	-38	93.60%	PD	17	17	43.1	1.5
MW-26	TTA-2	CF	0.28	-36	92.40%	PD	17	17	1.8	0.683
MW-64	TTA-2	CF	0.19	46	98.80%	I	15	15	1.45	0.818
MW-85	TTA-2	CF	0.47	-52	93.80%	PD	21	21	51.5	8.03
MW-88	TTA-2	CF	0.40	4	54.80%	NT	17	17	2.5	0.406
MW-92	TTA-2	CF	1.11	-70	99.80%	D	17	8	13.2	7.6
MW-96	TTA-2	CF	2.91	-23	88.30%	NT	14	14	33	0.288
MW-113	TTA-2	CF	0.32	-69	99.80%	D	17	17	45.3	13.4
MW-217	TTA-2	CF	0.47	-39	98.20%	D	14	14	13.4	3.54
MW-218	TTA-2	CF	0.09	-12	72.30%	S	14	14	3.15	2.28
MW-259	TTA-2	CF	0.00	0	0.00%	N/A	2	2	3.07	2.69
PMW85-05	TTA-2	CF	0.31	-5	63.60%	S	10	10	98.7	30.1
PMW92-03	TTA-2	CF	1.48	-85	100.00%	D	16	10	31	0.151
PMW92-06	TTA-2	CF	0.71	-44	98.40%	D	15	13	114	1.11

Notes:

D: Decreasing
I: Increasing
N/A: Insufficent Data
ND: Not Detected
NT: No Trend
PD: Probably Decreasing
PI: Probably Increasing
S: Stable

TABLE 27
DUNN FIELD MANN-KENDALL TREND ANALYSIS - TeCA
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Well	Classification	COC	Coefficient of Variation	MK (S)	Confidence Factor	Concentration Trend	Sample Rounds	Detects	Max	Min
MW-03	Performance-FSVE	TeCA	1.80	-21	91.30%	PD	12	5	96.2	0.425
MW-04	Background	TeCA	0.63	1	50.00%	NT	6	1	0.23	0.23
MW-06	Performance-FSVE	TeCA	2.50	-89	100.00%	D	14	14	613	0.486
MW-07	Background-NE	TeCA	0.49	-15	75.20%	ND	15	0		
MW-08	Background-NE	TeCA	0.78	3	67.50%	NT	5	1	0.26	0.26
MW-13	Background	TeCA	1.95	0	45.20%	NT	8	2	2.64	0.66
MW-15	Performance	TeCA	1.94	-50	99.90%	D	13	11	273	0.239
MW-28	Background	TeCA	0.00	0	0.00%	N/A	2	0		
MW-31	Performance	TeCA	0.93	26	84.60%	NT	17	2	0.526	0.262
MW-32	Performance	TeCA	1.17	-32	91.70%	PD	16	12	46	1.59
MW-33	Performance	TeCA	0.51	-9	68.35%	ND	13	0		
MW-44	Performance	TeCA	0.46	9	63.85%	ND	16	0		
MW-54	Performance	TeCA	1.30	-252	100.00%	D	26	26	4700	1.64
MW-57	Performance	TeCA	0.44	17	71.00%	ND	19	0		
MW-58	Performance	TeCA	0.73	4	75.80%	NT	5	1	0.213	0.213
MW-67	Sentinel	TeCA	0.63	-5	60.55%	S	12	1	0.251	0.251
MW-68	Performance	TeCA	3.15	-50	99.30%	D	15	8	81	0.24
MW-69	Performance	TeCA	3.05	7	61.50%	NT	15	2	5.51	0.229
MW-70	Performance	TeCA	1.40	-149	100.00%	D	22	21	9200	0.415
MW-71	Performance	TeCA	0.95	-44	97.40%	D	16	16	27.6	0.892
MW-76	Performance	TeCA	2.12	-100	99.90%	D	21	20	77	0.276
MW-77	Performance	TeCA	1.40	-181	100.00%	D	23	23	21700	5.34
MW-78	Performance	TeCA	2.11	-5	71.90%	NT	7	2	5.2	0.35
MW-79	Performance	TeCA	4.49	61	94.30%	PI	23	1	30.4	30.4
MW-80	Background	TeCA	0.22	5	76.50%	ND	6	0		
MW-87	Performance-FSVE	TeCA	1.96	-25	98.60%	D	10	9	180	0.207
MW-91	Performance	TeCA	1.11	3	61.40%	NT	7	3	0.92	0.26
MW-126	Background	TeCA	0.24	4	75.80%	ND	5	0		
MW-129	Background-NE	TeCA	0.58	3	67.50%	NT	5	1	0.19	0.19
MW-130	Background-NE	TeCA	0.51	-9	68.35%	ND	13	0		
MW-134	Performance-FSVE	TeCA	1.85	-42	98.85%	D	14	7	240	0.717
MW-144	Performance	TeCA	1.06	-152	100.00%	D	19	19	13000	14.7
MW-145	Performance	TeCA	0.62	19	76.75%	NT	17	1	0.274	0.274
MW-147	Performance	TeCA	1.35	-62	98.45%	D	19	13	634	0.373
MW-148	Performance	TeCA	1.66	-105	99.90%	D	22	15	21.2	0.179
MW-149	Performance	TeCA	0.69	-103	99.80%	D	22	22	50.4	1.53
MW-150	Performance	TeCA	1.07	-222	100.00%	D	24	24	10900	0.917
MW-151	Performance	TeCA	1.51	104	99.70%	I	23	12	4.26	0.23
MW-152	Performance	TeCA	4.09	-84	98.10%	D	24	21	1500	1.1
MW-153	Performance	TeCA	0.51	-13	79.00%	ND	12	0		
MW-154	Background	TeCA	0.53	-15	82.75%	ND	12	0	0	0
MW-155	Performance	TeCA	0.97	-117	100.00%	D	22	22	4090	0.983
MW-157	Performance	TeCA	1.11	-77	97.80%	D	23	23	27	0.533
MW-158	Performance	TeCA	1.37	-137	100.00%	D	22	22	53	0.49
MW-158A	Performance	TeCA	1.12	-155	100.00%	D	22	20	844	0.663
MW-159	Performance	TeCA	1.43	-173	100.00%	D	23	23	3500	1.25
MW-160	Performance	TeCA	2.35	-89	99.65%	D	21	19	3560	0.254
MW-163	Performance	TeCA	1.43	-178	100.00%	D	21	21	4800	1.78
MW-164	Performance	TeCA	1.01	-6	56.40%	NT	20	19	45	0.826
MW-165	Performance	TeCA	0.87	-14	65.10%	S	21	21	38.8	1.79
MW-165A	Performance	TeCA	1.41	44	90.20%	PI	21	21	104	0.188

TABLE 27
DUNN FIELD MANN-KENDALL TREND ANALYSIS - TeCA
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Well	Classification	COC	Coefficient of Variation	MK (S)	Confidence Factor	Concentration Trend	Sample Rounds	Detects	Max	Min
MW-166	Performance	TeCA	0.76	40	86.25%	NT	22	22	28.5	0.519
MW-166A	Performance	TeCA	0.65	64	97.20%	I	21	21	13.6	0.149
MW-167	Background	TeCA	2.35	-21	86.00%	NT	14	1	2.67	2.67
MW-169	Sentinel	TeCA	0.98	-28	96.90%	ND	12	0		
MW-170	Sentinel	TeCA	0.98	-28	96.90%	ND	12	0		
MW-171	Sentinel	TeCA	0.98	-28	96.90%	ND	12	0		
MW-174	Performance-FSVE	TeCA	1.37	2	52.15%	NT	14	6	2.08	0.315
MW-176	Performance	TeCA	0.26	12	94.85%	ND	7	0		
MW-180	Performance	TeCA	2.28	-16	87.50%	NT	11	4	44.2	0.763
MW-182	Sentinel	TeCA	0.26	8	89.80%	ND	6	0		
MW-184	Performance	TeCA	1.14	2	57.00%	NT	6	4	5.06	0.716
MW-187	Background	TeCA	0.34	5	63.60%	NT	10	1	0.141	0.141
MW-190	Performance	TeCA	2.11	-24	99.90%	D	8	8	4410	10.4
MW-220	Performance-FSVE	TeCA	3.16	4	60.25%	NT	10	2	780	0.267
MW-221	Performance-FSVE	TeCA	3.40	-17	86.00%	NT	12	4	110	0.147
MW-222	Performance-FSVE	TeCA	2.58	-40	99.70%	D	12	6	1130	1.19
MW-223	Performance-FSVE	TeCA	2.33	-44	99.90%	D	12	7	30.3	0.227
MW-224	Performance-FSVE	TeCA	3.44	19	88.85%	NT	12	1	140	140
MW-225	Performance-FSVE	TeCA	1.65	-50	100.00%	D	12	8	75.9	0.926
MW-226	Performance-FSVE	TeCA	3.30	4	58.00%	NT	12	2	220	9.56
MW-227	Performance-FSVE	TeCA	1.81	-40	99.70%	D	12	6	120	5.14
MW-228	Performance-FSVE	TeCA	3.01	-23	93.30%	PD	12	4	46	0.22
MW-230	Background-NE	TeCA	0.22	5	76.50%	ND	6	0		
MW-235	Sentinel	TeCA	0.26	8	89.80%	ND	6	0		
MW-237	Sentinel	TeCA	0.26	8	89.80%	ND	6	0		
MW-241	Performance	TeCA	2.73	-15	92.50%	PD	9	2	16.8	0.744
MW-242	Performance	TeCA	2.34	-43	100.00%	D	10	9	1040	0.325
MW-243	Performance	TeCA	1.38	-43	100.00%	D	10	10	90	2.31
MW-244	Performance	TeCA	2.12	-33	99.90%	D	10	10	1620	1.28
MW-245	Performance	TeCA	1.76	-43	100.00%	D	10	10	383	0.615
MW-246	Performance	TeCA	2.12	-25	98.60%	D	10	10	2290	9.79
MW-247	Performance	TeCA	0.94	-13	85.40%	S	10	9	44.8	0.738
MW-248	Performance	TeCA	1.10	1	50.00%	NT	9	1	0.589	0.589
MW-249	Performance	TeCA	1.61	22	97.05%	I	10	4	5.03	0.6
MW-250	Sentinel	TeCA	0.19	12	91.10%	ND	8	0		
MW-251	Sentinel	TeCA	0.19	12	91.10%	ND	8	0		

Notes:

D: Decreasing
I: Increasing
N/A: Insufficent Data
ND: Not Detected
NT: No Trend
PD: Probably Decreasing
PI: Probably Increasing
S: Stable

TABLE 28
DUNN FIELD MANN-KENDALL TREND ANALYSIS - PCE
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Well	Classification	COC	Coefficient of Variation	MK (S)	Confidence Factor	Concentration Trend	Sample Rounds	Detects	Max	Min
MW-03	Performance-FSVE	PCE	0.77	-18	87.50%	S	12	12	12.3	0.871
MW-04	Background	PCE	1.56	-9	93.20%	PD	6	2	33.4	23.4
MW-06	Performance-FSVE	PCE	1.05	-66	100.00%	D	14	8	1.9	0.254
MW-07	Background-NE	PCE	0.39	53	99.60%	I	15	15	70.6	18
MW-08	Background-NE	PCE	1.04	2	59.20%	NT	5	4	5.28	0.37
MW-13	Background	PCE	1.02	-25	99.95%	D	8	5	4.69	0.571
MW-15	Performance	PCE	1.22	-58	100.00%	D	13	13	14.4	0.442
MW-28	Background	PCE	0.00	0	0.00%	N/A	2	0		
MW-31	Performance	PCE	1.73	64	99.60%	I	17	17	43.5	0.31
MW-32	Performance	PCE	1.26	2	51.80%	NT	16	10	5.41	0.37
MW-33	Performance	PCE	0.26	-3	54.75%	S	13	1	0.254	0.254
MW-44	Performance	PCE	0.13	-21	81.30%	ND	16	0		
MW-54	Performance	PCE	1.11	-91	97.70%	D	26	22	14.2	0.377
MW-57	Performance	PCE	0.69	-100	100.00%	D	19	16	5.06	0.27
MW-58	Performance	PCE	0.51	2	59.20%	NT	5	1	0.309	0.309
MW-67	Sentinel	PCE	0.14	-15	82.75%	ND	12	0		
MW-68	Performance	PCE	0.94	-2	51.95%	S	15	9	2.1	0.32
MW-69	Performance	PCE	1.25	-56	99.75%	D	15	11	4.72	0.271
MW-70	Performance	PCE	1.75	-1	50.00%	NT	22	18	29.5	0.58
MW-71	Performance	PCE	1.32	-39	95.65%	D	16	13	7.34	0.264
MW-76	Performance	PCE	1.11	-96	99.80%	D	21	18	4.82	0.27
MW-77	Performance	PCE	1.61	-78	97.95%	D	23	19	48	0.353
MW-78	Performance	PCE	0.00	0	43.73%	ND	7	0		
MW-79	Performance	PCE	1.58	44	87.05%	NT	23	22	50.8	0.47
MW-80	Background	PCE	0.00	0	42.27%	ND	6	0		
MW-87	Performance-FSVE	PCE	1.20	-24	98.15%	D	10	3	1.45	0.676
MW-91	Performance	PCE	0.58	-19	99.90%	D	7	6	1.18	0.305
MW-126	Background	PCE	0.00	0	40.80%	ND	5	0		
MW-129	Background-NE	PCE	0.28	2	59.20%	NT	5	5	30.2	3.9
MW-130	Background-NE	PCE	0.41	14	78.20%	NT	13	13	196	48.8
MW-134	Performance-FSVE	PCE	0.84	1	50.00%	NT	14	14	3.1	0.328
MW-144	Performance	PCE	1.05	-50	95.65%	D	19	16	19.9	0.798
MW-145	Performance	PCE	0.12	-18	75.50%	ND	17	0		
MW-147	Performance	PCE	0.88	-79	99.70%	D	19	13	12.2	2.95
MW-148	Performance	PCE	0.93	-148	100.00%	D	22	15	7.83	0.254
MW-149	Performance	PCE	0.57	-92	99.55%	D	22	22	3.81	0.296
MW-150	Performance	PCE	1.15	-87	98.40%	D	24	18	18.9	0.361
MW-151	Performance	PCE	0.94	0	48.93%	S	23	12	1.69	0.286
MW-152	Performance	PCE	0.94	-75	96.70%	D	24	17	15.7	0.681
MW-153	Performance	PCE	0.71	-13	79.00%	S	12	5	0.714	0.24
MW-154	Background	PCE	0.55	-9	70.40%	S	12	1	0.437	0
MW-155	Performance	PCE	1.19	-44	88.55%	NT	22	12	16.3	0.6
MW-157	Performance	PCE	0.96	-99	99.60%	D	23	17	7.43	1.03
MW-158	Performance	PCE	0.92	-72	97.75%	D	22	16	9.28	0.697
MW-158A	Performance	PCE	1.00	-90	99.45%	D	22	14	17.8	0.252
MW-159	Performance	PCE	0.85	-40	84.65%	S	23	21	9.33	0.93
MW-160	Performance	PCE	0.92	-150	100.00%	D	21	14	21	0.251
MW-163	Performance	PCE	1.26	-61	96.55%	D	21	18	12.6	0.487
MW-164	Performance	PCE	0.83	-38	88.30%	S	20	17	3.62	0.284
MW-165	Performance	PCE	0.67	-102	99.90%	D	21	16	2.3	0.327
MW-165A	Performance	PCE	0.98	-96	99.80%	D	21	12	2.49	0.252

TABLE 28
DUNN FIELD MANN-KENDALL TREND ANALYSIS - PCE
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Well	Classification	COC	Coefficient of Variation	MK (S)	Confidence Factor	Concentration Trend	Sample Rounds	Detects	Max	Min
MW-166	Performance	PCE	0.48	47	90.10%	PI	22	21	2.47	0.498
MW-166A	Performance	PCE	0.44	-28	79.00%	S	21	20	1.57	0.24
MW-167	Background	PCE	0.62	-23	88.30%	ND	14	0	0	0
MW-169	Sentinel	PCE	0.64	-35	99.15%	ND	12	0		
MW-170	Sentinel	PCE	0.71	-32	98.40%	D	12	1	0.485	0.485
MW-171	Sentinel	PCE	0.64	-35	99.15%	ND	12	0		
MW-174	Performance-FSVE	PCE	0.81	-28	92.90%	PD	14	12	1.9	0.263
MW-176	Performance	PCE	0.64	-11	93.20%	PD	7	2	0.44	0.287
MW-180	Performance	PCE	1.42	-24	96.35%	D	11	5	5.02	0.766
MW-182	Sentinel	PCE	0.00	0	42.27%	ND	6	0		
MW-184	Performance	PCE	1.52	3	64.00%	NT	6	5	4.98	0.393
MW-187	Background	PCE	0.51	6	66.80%	NT	10	3	0.36	0.253
MW-190	Performance	PCE	1.43	-10	86.20%	NT	8	8	12.5	0.588
MW-220	Performance-FSVE	PCE	0.60	-9	75.80%	S	10	10	19.8	1.95
MW-221	Performance-FSVE	PCE	2.33	-30	97.80%	D	12	3	6.9	0.893
MW-222	Performance-FSVE	PCE	1.98	-38	99.60%	D	12	8	5.7	0.291
MW-223	Performance-FSVE	PCE	1.33	-16	84.50%	NT	12	11	3.7	0.262
MW-224	Performance-FSVE	PCE	1.00	-48	100.00%	D	12	8	2.23	0.305
MW-225	Performance-FSVE	PCE	0.70	-38	99.60%	D	12	12	2.3	0.252
MW-226	Performance-FSVE	PCE	1.93	-17	86.00%	NT	12	9	7.1	0.376
MW-227	Performance-FSVE	PCE	1.80	-36	99.30%	D	12	12	22	0.267
MW-228	Performance-FSVE	PCE	1.11	22	92.40%	PI	12	7	1.8	0.264
MW-230	Background-NE	PCE	0.29	-3	64.00%	S	6	6	100	35.9
MW-235	Sentinel	PCE	0.00	0	42.27%	ND	6	0		
MW-237	Sentinel	PCE	0.34	-2	57.00%	S	6	4	0.286	0.256
MW-241	Performance	PCE	0.00	0	46.00%	ND	9	0		
MW-242	Performance	PCE	2.29	-22	97.05%	D	10	2	4.54	0.373
MW-243	Performance	PCE	1.69	-17	92.20%	PD	10	2	2.77	2.48
MW-244	Performance	PCE	1.88	-10	78.40%	NT	10	2	3.17	0.389
MW-245	Performance	PCE	1.92	-17	92.20%	PD	10	2	6.38	4.55
MW-246	Performance	PCE	1.88	-15	89.20%	NT	10	2	5.47	5.3
MW-247	Performance	PCE	1.79	-17	92.20%	PD	10	2	3.81	3.38
MW-248	Performance	PCE	0.00	0	46.00%	ND	9	0		
MW-249	Performance	PCE	1.04	22	97.05%	I	10	3	1.02	0.51
MW-250	Sentinel	PCE	0.00	0	45.20%	ND	8	0		
MW-251	Sentinel	PCE	0.08	2	54.80%	NT	8	8	0.716	0.572

Notes:

D: Decreasing
I: Increasing
N/A: Insufficent Data
ND: Not Detected
NT: No Trend
PD: Probably Decreasing
PI: Probably Increasing
S: Stable

TABLE 29
DUNN FIELD MANN-KENDALL TREND ANALYSIS - TCE
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Well	Well Classification	COC	Coefficient of Variation	MK (S)	Confidence Factor	Concentration Trend	Sample Rounds	Detects	Max	Min
MW-03	Performance-FSVE	TCE	1.58	-34	99.00%	D	12	12	138	1
MW-04	Background	TCE	1.36	-9	93.20%	PD	6	2	2.23	1.11
MW-06	Performance-FSVE	TCE	1.57	-85	100.00%	D	14	14	236	0.938
MW-07	Background-NE	TCE	0.35	59	99.90%	I	15	15	40.9	14
MW-08	Background-NE	TCE	1.04	4	75.80%	NT	5	4	7	0.85
MW-13	Background	TCE	0.99	-10	86.20%	S	8	3	0.91	0.262
MW-15	Performance	TCE	1.40	-60	100.00%	D	13	13	403	0.289
MW-28	Background	TCE	0.00	0	0.00%	N/A	2	0		
MW-31	Performance	TCE	0.78	-8	61.20%	S	17	17	34.2	1.83
MW-32	Performance	TCE	1.22	-6	58.80%	NT	16	15	113	2.47
MW-33	Performance	TCE	0.14	-18	84.70%	ND	13	0		
MW-44	Performance	TCE	0.88	15	73.25%	NT	16	12	2.03	0.252
MW-54	Performance	TCE	1.11	-247	100.00%	D	26	26	2700	4.4
MW-57	Performance	TCE	0.57	-75	99.60%	D	19	19	48	0.961
MW-58	Performance	TCE	0.57	-6	88.30%	S	5	4	0.67	0.26
MW-67	Sentinel	TCE	0.33	-5	60.55%	S	12	1	0.292	0.292
MW-68	Performance	TCE	1.63	-24	86.95%	NT	15	12	20	0.36
MW-69	Performance	TCE	1.58	-42	97.95%	D	15	8	9.84	0.334
MW-70	Performance	TCE	1.40	-155	100.00%	D	22	22	3700	0.581
MW-71	Performance	TCE	1.47	-52	99.00%	D	16	16	158	0.612
MW-76	Performance	TCE	2.65	-124	100.00%	D	21	21	336	0.717
MW-77	Performance	TCE	1.29	-160	100.00%	D	23	23	6500	5.68
MW-78	Performance	TCE	0.81	-9	88.10%	S	7	2	0.59	0.26
MW-79	Performance	TCE	0.88	-2	51.05%	S	23	23	39	0.501
MW-80	Background	TCE	0.00	0	42.27%	ND	6	0		
MW-87	Performance-FSVE	TCE	1.61	-26	98.90%	D	10	7	105	0.778
MW-91	Performance	TCE	1.21	-10	90.65%	PD	7	5	13.8	0.567
MW-126	Background	TCE	0.00	0	40.80%	ND	5	0		
MW-129	Background-NE	TCE	0.22	2	59.20%	NT	5	5	19.3	11
MW-130	Background-NE	TCE	0.19	26	93.60%	PI	13	13	76	37.9
MW-134	Performance-FSVE	TCE	1.86	-53	99.80%	D	14	9	169	0.262
MW-144	Performance	TCE	0.92	-121	100.00%	D	19	19	4500	37.6
MW-145	Performance	TCE	0.77	19	76.75%	NT	17	2	0.639	0.425
MW-147	Performance	TCE	0.98	-101	100.00%	D	19	14	278	0.313
MW-148	Performance	TCE	1.40	-126	100.00%	D	22	16	266	0.613
MW-149	Performance	TCE	0.54	-66	96.70%	D	22	22	87.9	4.3
MW-150	Performance	TCE	1.01	-179	100.00%	D	24	24	3060	0.515
MW-151	Performance	TCE	0.56	116	99.90%	I	23	23	20.1	0.422
MW-152	Performance	TCE	1.51	-88	98.50%	D	24	24	950	0.277
MW-153	Performance	TCE	0.55	-6	63.10%	S	12	3	0.469	0.251
MW-154	Background	TCE	0.14	-15	82.75%	ND	12	0		
MW-155	Performance	TCE	0.97	-104	99.85%	D	22	22	2220	0.408
MW-157	Performance	TCE	0.70	-87	98.90%	D	23	23	286	2.03
MW-158	Performance	TCE	1.05	-88	99.35%	D	22	22	162	0.681
MW-158A	Performance	TCE	0.98	-139	100.00%	D	22	21	689	0.302
MW-159	Performance	TCE	0.75	-118	99.90%	D	23	23	2700	120
MW-160	Performance	TCE	1.31	-100	99.90%	D	21	16	1130	0.323
MW-163	Performance	TCE	1.34	-152	100.00%	D	21	21	2030	3.4
MW-164	Performance	TCE	0.64	-87	99.80%	D	20	20	136	5.86
MW-165	Performance	TCE	0.80	-64	97.20%	D	21	21	194	3.9
MW-165A	Performance	TCE	0.90	-96	99.80%	D	21	21	165	0.493

TABLE 29
DUNN FIELD MANN-KENDALL TREND ANALYSIS - TCE
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Well	Well Classification	COC	Coefficient of Variation	MK (S)	Confidence Factor	Concentration Trend	Sample Rounds	Detects	Max	Min
MW-166	Performance	TCE	1.13	84	99.10%	I	22	22	223	5.78
MW-166A	Performance	TCE	0.71	24	75.40%	NT	21	21	85.9	4.93
MW-167	Background	TCE	1.02	-14	75.80%	NT	14	2	0.961	0.34
MW-169	Sentinel	TCE	0.64	-35	99.15%	ND	12	0		
MW-170	Sentinel	TCE	0.64	-35	99.15%	ND	12	0		
MW-171	Sentinel	TCE	0.64	-35	99.15%	ND	12	0		
MW-174	Performance-FSVE	TCE	1.76	-39	98.20%	D	14	9	33	0.324
MW-176	Performance	TCE	1.54	-13	96.50%	D	7	3	3.07	0.579
MW-180	Performance	TCE	2.45	-24	96.35%	D	11	5	78	0.893
MW-182	Sentinel	TCE	1.13	-5	76.50%	NT	6	1	0.77	0.77
MW-184	Performance	TCE	1.60	-5	76.50%	NT	6	6	84	2.27
MW-187	Background	TCE	2.27	-15	89.20%	NT	10	2	3.7	0.26
MW-190	Performance	TCE	2.07	-20	99.30%	D	8	8	2720	19.4
MW-220	Performance-FSVE	TCE	2.61	-7	70.00%	NT	10	10	530	4.61
MW-221	Performance-FSVE	TCE	3.33	-34	99.00%	D	12	4	140	0.501
MW-222	Performance-FSVE	TCE	2.64	-48	100.00%	D	12	8	1100	1.04
MW-223	Performance-FSVE	TCE	2.62	-46	100.00%	D	12	12	500	0.25
MW-224	Performance-FSVE	TCE	2.98	-21	91.30%	PD	12	2	92	13.4
MW-225	Performance-FSVE	TCE	2.02	-60	100.00%	D	12	11	320	0.653
MW-226	Performance-FSVE	TCE	3.33	-30	97.80%	D	12	3	740	0.855
MW-227	Performance-FSVE	TCE	1.95	-39	99.65%	D	12	9	420	0.37
MW-228	Performance-FSVE	TCE	3.21	-28	96.90%	D	12	3	42	0.911
MW-230	Background-NE	TCE	0.20	-3	64.00%	S	6	6	98.4	54.3
MW-235	Sentinel	TCE	0.00	0	42.27%	ND	6	0		
MW-237	Sentinel	TCE	0.00	0	42.27%	ND	6	0		
MW-241	Performance	TCE	0.88	-20	97.80%	D	9	9	3.23	0.362
MW-242	Performance	TCE	2.47	-45	100.00%	D	10	10	308	0.498
MW-243	Performance	TCE	1.85	-33	99.90%	D	10	10	146	1.55
MW-244	Performance	TCE	2.27	-19	94.60%	PD	10	10	346	0.389
MW-245	Performance	TCE	2.03	-43	100.00%	D	10	10	473	0.554
MW-246	Performance	TCE	2.19	-24	98.15%	D	10	10	1800	1.17
MW-247	Performance	TCE	1.83	-19	94.60%	PD	10	10	134	0.431
MW-248	Performance	TCE	0.00	0	46.00%	ND	9	0		
MW-249	Performance	TCE	1.34	32	99.85%	I	10	8	14.9	0.519
MW-250	Sentinel	TCE	0.00	0	45.20%	ND	8	0		
MW-251	Sentinel	TCE	0.49	-20	99.30%	D	8	7	0.707	0.253

Notes:

D: Decreasing
I: Increasing
N/A: Insufficent Data
ND: Not Detected
NT: No Trend
PD: Probably Decreasing
PI: Probably Increasing
S: Stable

TABLE 30
DUNN FIELD MANN-KENDALL TREND ANALYSIS - DCE
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Well	Classification	COC	Coefficient of Variation	MK (S)	Confidence Factor	Concentration Trend	Sample Rounds	Detects	Max	Min
MW-03	Performance-FSVE	DCE	1.18	-17.00	86.00%	NT	12	10	34.5	0.52
MW-04	Background	DCE	0.00	0.00	42.27%	ND	6	0		
MW-06	Performance-FSVE	DCE	0.24	9.00	66.60%	ND	14	0		
MW-07	Background-NE	DCE	0.30	21.00	83.60%	NT	15	15	35.6	12.8
MW-08	Background-NE	DCE	0.78	0.00	40.80%	S	5	4	3.85	1.1
MW-13	Background	DCE	0.00	0.00	45.20%	ND	8	0		
MW-15	Performance	DCE	0.25	8.00	66.20%	ND	13	0		
MW-28	Background	DCE	0.00	0.00	0.00%	N/A	2	0		
MW-31	Performance	DCE	0.64	-46.00	96.80%	D	17	17	40	0.9
MW-32	Performance	DCE	0.14	15.00	73.25%	ND	16	0		
MW-33	Performance	DCE	0.16	18.00	84.70%	ND	13	0		
MW-44	Performance	DCE	0.14	21.00	81.30%	ND	16	0		
MW-54	Performance	DCE	0.70	30.00	73.70%	ND	26	0		
MW-57	Performance	DCE	0.38	33.00	86.70%	NT	19	1	0.54	0.54
MW-58	Performance	DCE	0.00	0.00	40.80%	ND	5	0		
MW-67	Sentinel	DCE	0.16	15.00	82.75%	ND	12	0		
MW-68	Performance	DCE	1.10	29.00	91.60%	PI	15	4	1.82	0.73
MW-69	Performance	DCE	0.15	24.00	86.95%	ND	15	0		
MW-70	Performance	DCE	1.12	-45.00	89.10%	NT	22	6	3.36	1.07
MW-71	Performance	DCE	0.14	21.00	81.30%	ND	16	0		
MW-76	Performance	DCE	0.13	36.00	85.30%	ND	21	0		
MW-77	Performance	DCE	2.45	1.00	50.00%	ND	23	0		
MW-78	Performance	DCE	0.00	0.00	43.73%	ND	7	0		
MW-79	Performance	DCE	0.66	47.00	88.60%	NT	23	23	35.7	1.17
MW-80	Background	DCE	0.00	0.00	42.27%	ND	6	0		
MW-87	Performance-FSVE	DCE	0.00	0.00	46.43%	ND	10	0		
MW-91	Performance	DCE	0.00	0.00	43.73%	ND	7	0		
MW-126	Background	DCE	0.00	0.00	40.80%	ND	5	0		
MW-129	Background-NE	DCE	0.31	0.00	40.80%	S	5	5	36	13.7
MW-130	Background-NE	DCE	0.40	14.00	78.20%	NT	13	13	80.2	22.6
MW-134	Performance-FSVE	DCE	0.24	5.00	58.50%	ND	14	0		
MW-144	Performance	DCE	1.37	-7.00	58.20%	ND	19	0		
MW-145	Performance	DCE	0.14	18.00	75.50%	ND	17	0		
MW-147	Performance	DCE	1.11	-67.00	99.00%	D	19	10	5.65	0.66
MW-148	Performance	DCE	0.18	7.00	56.60%	NT	22	1	0.43	0.43
MW-149	Performance	DCE	0.12	33.00	81.40%	ND	22	0		
MW-150	Performance	DCE	1.51	-23.00	70.55%	NT	24	3	0.99	0.62
MW-151	Performance	DCE	3.94	21.00	69.90%	NT	23	1	25.5	25.5
MW-152	Performance	DCE	0.44	26.00	73.00%	NT	24	1	0.76	0.76
MW-153	Performance	DCE	0.43	-16.00	84.50%	S	12	11	9.1	2.99
MW-154	Background	DCE	0.16	15.00	82.75%	ND	12	0		
MW-155	Performance	DCE	1.58	2.00	51.10%	NT	22	4	2.84	0.56
MW-157	Performance	DCE	0.25	31.00	78.40%	ND	23	0		
MW-158	Performance	DCE	0.12	27.00	76.60%	ND	22	0		
MW-158A	Performance	DCE	0.98	-16.00	66.20%	S	22	4	1.65	0.39
MW-159	Performance	DCE	0.98	148.00	100.00%	I	23	12	8.51	1.12
MW-160	Performance	DCE	0.80	2.00	51.20%	NT	21	3	1.05	0.54
MW-163	Performance	DCE	0.98	-15.00	66.20%	ND	21	0		
MW-164	Performance	DCE	0.13	45.00	92.25%	ND	20	0		
MW-165	Performance	DCE	2.13	19.00	70.45%	ND	21	0		
MW-165A	Performance	DCE	0.62	19.00	70.45%	ND	21	0		

TABLE 30
DUNN FIELD MANN-KENDALL TREND ANALYSIS - DCE
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Well	Classification	COC	Coefficient of Variation	MK (S)	Confidence Factor	Concentration Trend	Sample Rounds	Detects	Max	Min
MW-166	Performance	DCE	0.25	15.00	65.20%	ND	22	0		
MW-166A	Performance	DCE	0.26	19.00	70.45%	ND	21	0		
MW-167	Background	DCE	0.32	1.00	50.00%	ND	14	0		
MW-169	Sentinel	DCE	0.35	13.00	79.00%	ND	12	0		
MW-170	Sentinel	DCE	0.78	-36.00	99.30%	D	12	8	4.37	1.3
MW-171	Sentinel	DCE	0.44	8.00	68.10%	NT	12	1	0.54	0.54
MW-174	Performance-FSVE	DCE	0.24	9.00	66.60%	ND	14	0		
MW-176	Performance	DCE	0.00	0.00	43.73%	ND	7	0		
MW-180	Performance	DCE	1.19	6.00	64.75%	NT	11	3	2.04	0.56
MW-182	Sentinel	DCE	0.00	0.00	42.27%	ND	6	0		
MW-184	Performance	DCE	0.00	0.00	42.27%	ND	6	0		
MW-187	Background	DCE	0.29	7.00	70.00%	ND	10	0		
MW-190	Performance	DCE	0.00	0.00	45.20%	ND	8	0		
MW-220	Performance-FSVE	DCE	0.92	-13.00	85.40%	S	10	10	45.9	2.47
MW-221	Performance-FSVE	DCE	0.26	11.00	74.85%	ND	12	0		
MW-222	Performance-FSVE	DCE	0.08	11.00	74.85%	ND	12	0		
MW-223	Performance-FSVE	DCE	0.21	11.00	74.85%	ND	12	0		
MW-224	Performance-FSVE	DCE	0.26	11.00	74.85%	ND	12	0		
MW-225	Performance-FSVE	DCE	0.26	11.00	74.85%	ND	12	0		
MW-226	Performance-FSVE	DCE	0.21	11.00	74.85%	ND	12	0		
MW-227	Performance-FSVE	DCE	0.26	11.00	74.85%	ND	12	0		
MW-228	Performance-FSVE	DCE	0.26	11.00	74.85%	ND	12	0		
MW-230	Background-NE	DCE	0.30	-3.00	64.00%	S	6	6	32.7	13.2
MW-235	Sentinel	DCE	0.00	0.00	42.27%	ND	6	0		
MW-237	Sentinel	DCE	0.23	-3.00	64.00%	S	6	6	3.03	1.62
MW-241	Performance	DCE	0.00	0.00	46.00%	ND	9	0		
MW-242	Performance	DCE	0.29	-7.00	70.00%	ND	10	0		
MW-243	Performance	DCE	0.00	0.00	46.43%	ND	10	0		
MW-244	Performance	DCE	2.04	-17.00	92.20%	PD	10	1	6.73	6.73
MW-245	Performance	DCE	1.21	-17.00	92.20%	PD	10	2	2.03	1.85
MW-246	Performance	DCE	2.15	-17.00	92.20%	PD	10	2	36.2	18.2
MW-247	Performance	DCE	0.00	0.00	46.43%	ND	10	0		
MW-248	Performance	DCE	0.00	0.00	46.00%	ND	9	0		
MW-249	Performance	DCE	0.00	0.00	46.43%	ND	10	0		
MW-250	Sentinel	DCE	0.00	0.00	45.20%	ND	8	0		
MW-251	Sentinel	DCE	0.12	10.00	86.20%	NT	8	8	4.12	2.9

Notes:

D: Decreasing
I: Increasing
N/A: Insufficent Data
ND: Not Detected
NT: No Trend
PD: Probably Decreasing
PI: Probably Increasing
S: Stable

TABLE 31
DUNN FIELD MANN-KENDALL TREND ANALYSIS - CT
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Well	Classification	COC	Coefficient of Variation	MK (S)	Confidence Factor	Concentration Trend	Sample Rounds	Detects	Max	Min
MW-03	Performance-FSVE	CT	1.32	-26	95.70%	D	12	3	1.56	0.53
MW-04	Background	CT	0.00	0	42.27%	ND	6	0		
MW-06	Performance-FSVE	CT	1.59	-76	100.00%	D	14	8	31.2	0.463
MW-07	Background-NE	CT	0.76	-29	91.60%	PD	15	4	0.641	0.273
MW-08	Background-NE	CT	0.00	0	40.80%	ND	5	0		
MW-13	Background	CT	0.00	0	45.20%	ND	8	0		
MW-15	Performance	CT	1.41	-65	100.00%	D	13	11	58.2	0.288
MW-28	Background	CT	0.00	0	0.00%	N/A	2	0		
MW-31	Performance	CT	0.62	-32	89.80%	S	17	4	0.48	0.18
MW-32	Performance	CT	0.98	-21	81.30%	S	16	12	20.2	1.21
MW-33	Performance	CT	1.15	2	52.40%	NT	13	5	1.5	0.278
MW-44	Performance	CT	0.64	-49	98.55%	D	16	11	1.3	0.5
MW-54	Performance	CT	1.42	-65	92.00%	PD	26	12	6.76	0.745
MW-57	Performance	CT	0.85	-119	100.00%	D	19	15	33	0.9
MW-58	Performance	CT	0.97	7	92.05%	PI	5	2	0.946	0.81
MW-67	Sentinel	CT	0.14	-15	82.75%	ND	12	0		
MW-68	Performance	CT	1.13	-36	95.85%	D	15	2	0.951	0.21
MW-69	Performance	CT	0.13	-24	86.95%	ND	15	0		
MW-70	Performance	CT	1.50	-50	91.55%	PD	22	1	0.575	0.575
MW-71	Performance	CT	1.03	-51	98.85%	D	16	14	37.8	0.301
MW-76	Performance	CT	0.11	-36	85.30%	ND	21	0		
MW-77	Performance	CT	1.84	-67	95.90%	D	23	4	1.12	0.922
MW-78	Performance	CT	0.00	0	43.73%	ND	7	0		
MW-79	Performance	CT	0.80	-114	99.90%	D	23	4	0.77	0.2
MW-80	Background	CT	0.00	0	42.27%	ND	6	0		
MW-87	Performance-FSVE	CT	1.78	-24	98.15%	D	10	3	18.7	7.16
MW-91	Performance	CT	1.27	-19	99.90%	D	7	6	9.35	0.391
MW-126	Background	CT	0.00	0	40.80%	ND	5	0		
MW-129	Background-NE	CT	0.00	0	40.80%	ND	5	0		
MW-130	Background-NE	CT	0.14	-18	84.70%	ND	13	0		
MW-134	Performance-FSVE	CT	0.16	5	58.50%	ND	14	0		
MW-144	Performance	CT	1.19	-31	85.10%	NT	19	4	1.59	0.9
MW-145	Performance	CT	1.05	19	76.75%	NT	17	2	0.886	0.682
MW-147	Performance	CT	1.31	-95	100.00%	D	19	11	4.3	0.36
MW-148	Performance	CT	0.83	-115	100.00%	D	22	6	0.73	0.19
MW-149	Performance	CT	0.69	-153	100.00%	D	22	22	22	0.517
MW-150	Performance	CT	1.31	-58	92.10%	PD	24	3	1.54	0.31
MW-151	Performance	CT	0.76	-57	93.00%	PD	23	22	6.19	0.493
MW-152	Performance	CT	1.53	-63	93.75%	PD	24	5	2.1	0.24
MW-153	Performance	CT	0.14	-21	91.30%	ND	12	0		
MW-154	Background	CT	0.14	-15	82.75%	ND	12	0		
MW-155	Performance	CT	1.85	-12	62.05%	ND	22	0		
MW-157	Performance	CT	1.02	-145	100.00%	D	23	21	26	0.314
MW-158	Performance	CT	0.11	-27	76.60%	ND	22	0		
MW-158A	Performance	CT	1.28	-37	84.30%	NT	22	4	1.54	0.55
MW-159	Performance	CT	1.61	-26	74.35%	NT	23	4	4.13	0.252
MW-160	Performance	CT	0.95	-85	99.50%	D	21	10	1.91	0.388
MW-163	Performance	CT	1.07	-99	99.90%	D	21	3	0.882	0.683
MW-164	Performance	CT	0.91	-78	99.40%	D	20	20	24.8	0.957
MW-165	Performance	CT	1.18	-112	100.00%	D	21	11	11	0.769
MW-165A	Performance	CT	1.17	-97	99.85%	D	21	11	16.4	0.449

TABLE 31
DUNN FIELD MANN-KENDALL TREND ANALYSIS - CT
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Well	Classification	COC	Coefficient of Variation	MK (S)	Confidence Factor	Concentration Trend	Sample Rounds	Detects	Max	Min
MW-166	Performance	CT	0.77	8	57.70%	NT	22	22	16.5	0.692
MW-166A	Performance	CT	0.66	-103	99.90%	D	21	20	9.75	0.464
MW-167	Background	CT	0.62	-23	88.30%	ND	14	0		
MW-169	Sentinel	CT	0.64	-35	99.15%	ND	12	0		
MW-170	Sentinel	CT	0.64	-35	99.15%	ND	12	0		
MW-171	Sentinel	CT	0.64	-35	99.15%	ND	12	0		
MW-174	Performance-FSVE	CT	1.15	-32	95.50%	D	14	10	5.9	0.442
MW-176	Performance	CT	0.66	-4	66.65%	S	7	1	0.415	0.415
MW-180	Performance	CT	0.94	-19	91.80%	PD	11	2	0.72	0.26
MW-182	Sentinel	CT	0.00	0	42.27%	ND	6	0		
MW-184	Performance	CT	0.80	-7	86.40%	S	6	6	13.4	1.31
MW-187	Background	CT	1.11	-7	70.00%	NT	10	1	0.8	0.8
MW-190	Performance	CT	1.21	-11	88.65%	NT	8	2	1.17	0.63
MW-220	Performance-FSVE	CT	0.19	9	75.80%	ND	10	0		
MW-221	Performance-FSVE	CT	0.17	11	74.85%	ND	12	0		
MW-222	Performance-FSVE	CT	0.31	-11	74.85%	ND	12	0		
MW-223	Performance-FSVE	CT	0.53	-21	91.30%	PD	12	2	0.39	0.283
MW-224	Performance-FSVE	CT	0.17	11	74.85%	ND	12	0		
MW-225	Performance-FSVE	CT	0.17	11	74.85%	ND	12	0		
MW-226	Performance-FSVE	CT	0.05	11	74.85%	ND	12	0		
MW-227	Performance-FSVE	CT	1.85	-47	100.00%	D	12	10	43	0.348
MW-228	Performance-FSVE	CT	1.71	-3	55.35%	NT	12	5	3.4	0.327
MW-230	Background-NE	CT	0.00	0	42.27%	ND	6	0		
MW-235	Sentinel	CT	0.00	0	42.27%	ND	6	0		
MW-237	Sentinel	CT	0.00	0	42.27%	ND	6	0		
MW-241	Performance	CT	0.00	0	46.00%	ND	9	0		
MW-242	Performance	CT	0.29	-7	70.00%	ND	10	0		
MW-243	Performance	CT	0.00	0	46.43%	ND	10	0		
MW-244	Performance	CT	0.90	-7	70.00%	ND	10	0		
MW-245	Performance	CT	0.29	-7	70.00%	ND	10	0		
MW-246	Performance	CT	1.50	-7	70.00%	ND	10	0		
MW-247	Performance	CT	1.90	-24	98.15%	D	10	3	5.85	0.378
MW-248	Performance	CT	0.00	0	46.00%	ND	9	0		
MW-249	Performance	CT	1.00	36	100.00%	I	10	7	3.55	0.437
MW-250	Sentinel	CT	0.00	0	45.20%	ND	8	0		
MW-251	Sentinel	CT	0.00	0	45.20%	ND	8	0		

Notes:

D: Decreasing
I: Increasing
N/A: Insufficent Data
ND: Not Detected
NT: No Trend
PD: Probably Decreasing
PI: Probably Increasing
S: Stable

TABLE 32
DUNN FIELD MANN-KENDALL TREND ANALYSIS - CF
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Well	Classification	COC	Coefficient of Variation	MK (S)	Confidence Factor	Concentration Trend	Sample Rounds	Detects	Max	Min
MW-03	Performance-FSVE	CF	1.73	-52	100.00%	D	12	8	12.4	0.14
MW-04	Background	CF	0.37	-7	86.40%	S	6	6	0.43	0.16
MW-06	Performance-FSVE	CF	1.41	-55	99.90%	D	14	14	84.7	2.72
MW-07	Background-NE	CF	1.78	-33	94.30%	PD	15	14	20	0.192
MW-08	Background-NE	CF	0.52	2	59.20%	NT	5	1	0.158	0.158
MW-13	Background	CF	0.47	-8	80.10%	S	8	8	0.522	0.127
MW-15	Performance	CF	1.83	-62	100.00%	D	13	13	1530	0.524
MW-28	Background	CF	0.00	0	0.00%	N/A	2	1	0.154	0.154
MW-31	Performance	CF	0.89	-25	83.60%	S	17	9	0.802	0.131
MW-32	Performance	CF	1.12	-22	82.50%	NT	16	15	176	0.2
MW-33	Performance	CF	0.97	9	68.35%	NT	13	2	0.517	0.184
MW-44	Performance	CF	1.21	-19	78.80%	NT	16	12	2.84	0.8
MW-54	Performance	CF	1.21	-45	83.20%	NT	26	22	9.78	0.185
MW-57	Performance	CF	1.26	59	97.90%	I	19	19	73	0.24
MW-58	Performance	CF	1.51	-4	75.80%	NT	5	4	8.89	0.227
MW-67	Sentinel	CF	0.53	-15	82.75%	ND	12	0		
MW-68	Performance	CF	1.18	-30	92.30%	PD	15	8	1.57	0.147
MW-69	Performance	CF	0.41	-14	73.65%	S	15	8	0.261	0.136
MW-70	Performance	CF	2.61	-52	92.40%	PD	22	6	11.6	0.174
MW-71	Performance	CF	1.36	-56	99.40%	D	16	16	303	1.47
MW-76	Performance	CF	1.04	-113	100.00%	D	21	14	0.978	0.134
MW-77	Performance	CF	1.31	0	48.93%	NT	23	17	5.05	0.13
MW-78	Performance	CF	0.00	0	43.73%	ND	7	0		
MW-79	Performance	CF	1.32	18	67.15%	NT	23	11	1.31	0.127
MW-80	Background	CF	0.00	0	42.27%	ND	6	0		
MW-87	Performance-FSVE	CF	0.94	-15	89.20%	S	10	10	6.25	0.148
MW-91	Performance	CF	1.31	-9	88.10%	NT	7	7	25.6	0.538
MW-126	Background	CF	0.35	0	40.80%	S	5	1	0.12	0.12
MW-129	Background-NE	CF	0.00	0	40.80%	ND	5	0		
MW-130	Background-NE	CF	0.39	32	97.10%	I	13	8	0.315	0.206
MW-134	Performance-FSVE	CF	1.24	22	87.15%	NT	14	4	0.668	0.128
MW-144	Performance	CF	0.83	-56	97.30%	D	19	14	4.3	0.28
MW-145	Performance	CF	1.45	19	76.75%	NT	17	2	0.927	0.585
MW-147	Performance	CF	1.09	-113	100.00%	D	19	14	13.4	0.147
MW-148	Performance	CF	1.03	-125	100.00%	D	22	17	3.07	0.137
MW-149	Performance	CF	0.69	-123	100.00%	D	22	22	200	7.37
MW-150	Performance	CF	0.96	-61	93.10%	PD	24	18	5	0.16
MW-151	Performance	CF	0.91	55	92.20%	PI	23	23	37.4	0.15
MW-152	Performance	CF	0.99	-34	79.10%	S	24	14	2.59	0.446
MW-153	Performance	CF	0.53	-21	91.30%	ND	12	0		
MW-154	Background	CF	0.53	-15	82.75%	ND	12	0		
MW-155	Performance	CF	1.09	-48	90.60%	PD	22	9	2.1	0.256
MW-157	Performance	CF	1.94	-140	100.00%	D	23	23	235	2.46
MW-158	Performance	CF	0.83	-108	99.90%	D	22	15	1.07	0.156
MW-158A	Performance	CF	1.08	-83	99.00%	D	22	14	3.94	0.155
MW-159	Performance	CF	1.73	-101	99.60%	D	23	17	12.1	0.242
MW-160	Performance	CF	0.93	-110	100.00%	D	21	13	3.53	0.56
MW-163	Performance	CF	1.91	-69	98.05%	D	21	17	11.9	0.142
MW-164	Performance	CF	1.21	-38	88.30%	NT	20	20	247	5.15
MW-165	Performance	CF	1.37	-140	100.00%	D	21	20	140	0.245
MW-165A	Performance	CF	1.41	-115	100.00%	D	21	20	82.7	0.15

TABLE 32
DUNN FIELD MANN-KENDALL TREND ANALYSIS - CF
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Well	Classification	COC	Coefficient of Variation	MK (S)	Confidence Factor	Concentration Trend	Sample Rounds	Detects	Max	Min
MW-166	Performance	CF	0.79	0	48.87%	S	22	22	140	1.03
MW-166A	Performance	CF	0.55	-44	90.20%	PD	21	21	65.5	7.54
MW-167	Background	CF	1.78	-46	99.40%	D	14	3	2.1	0.47
MW-169	Sentinel	CF	1.40	-35	99.15%	D	12	1	0.8	0.8
MW-170	Sentinel	CF	0.89	-35	99.15%	D	12	1	0.42	0.42
MW-171	Sentinel	CF	1.02	-35	99.15%	ND	12	0		
MW-174	Performance-FSVE	CF	1.71	-61	100.00%	D	14	14	68	0.154
MW-176	Performance	CF	0.34	-5	71.90%	S	7	6	0.246	0.147
MW-180	Performance	CF	1.79	-16	87.50%	NT	11	4	2.04	0.136
MW-182	Sentinel	CF	0.00	0	42.27%	ND	6	0		
MW-184	Performance	CF	1.48	-3	64.00%	NT	6	6	117	2.94
MW-187	Background	CF	0.53	10	78.40%	NT	10	7	0.29	0.13
MW-190	Performance	CF	1.28	-13	92.85%	PD	8	8	2.73	0.135
MW-220	Performance-FSVE	CF	2.06	-13	85.40%	NT	10	5	2.5	0.184
MW-221	Performance-FSVE	CF	1.79	-26	95.70%	D	12	4	1.4	0.134
MW-222	Performance-FSVE	CF	0.79	0	47.30%	S	12	6	0.523	0.156
MW-223	Performance-FSVE	CF	0.80	-8	68.10%	S	12	12	2	0.177
MW-224	Performance-FSVE	CF	1.16	24	94.20%	PI	12	7	1.03	0.17
MW-225	Performance-FSVE	CF	0.74	0	47.30%	S	12	11	0.803	0.149
MW-226	Performance-FSVE	CF	1.19	9	70.40%	NT	12	11	1.52	0.133
MW-227	Performance-FSVE	CF	2.02	-38	99.60%	D	12	11	1100	0.322
MW-228	Performance-FSVE	CF	3.20	-27	96.30%	D	12	9	120	0.155
MW-230	Background-NE	CF	0.15	-1	50.00%	S	6	6	0.276	0.188
MW-235	Sentinel	CF	0.00	0	42.27%	ND	6	0		
MW-237	Sentinel	CF	0.30	-1	50.00%	S	6	5	0.181	0.129
MW-241	Performance	CF	0.56	6	69.40%	NT	9	4	0.227	0.132
MW-242	Performance	CF	0.90	-22	97.05%	D	10	8	0.897	0.165
MW-243	Performance	CF	0.87	-17	92.20%	PD	10	2	0.315	0.233
MW-244	Performance	CF	1.56	-4	60.25%	NT	10	4	1.55	0.161
MW-245	Performance	CF	1.09	-17	92.20%	PD	10	2	0.438	0.338
MW-246	Performance	CF	1.45	-17	92.20%	PD	10	1	0.829	0.829
MW-247	Performance	CF	2.08	-13	85.40%	NT	10	10	193	0.229
MW-248	Performance	CF	0.00	0	46.00%	ND	9	0		
MW-249	Performance	CF	1.41	36	100.00%	I	10	8	20.3	0.399
MW-250	Sentinel	CF	0.00	0	45.20%	ND	8	0		
MW-251	Sentinel	CF	0.15	8	80.10%	NT	8	8	0.328	0.197

Notes:

D: Decreasing
I: Increasing
N/A: Insufficent Data
ND: Not Detected
NT: No Trend
PD: Probably Decreasing
PI: Probably Increasing
S: Stable

TABLE 33
2013 MAIN INSTALLATION LTM SCHEDULE
ANNUAL LONG-TERM MONITORING REPORT-2012
Defense Depot Memphis, Tennessee

Well ID	Well Classification	Sample Frequency	Semiannual Apr-2013	Annual Oct-2013
DR1-1	Performance	Annual	-	P
DR1-1A	Performance	Annual	-	P
DR1-2	Performance	Annual	-	P
DR1-3	Performance	Semiannual	P	P
DR1-4	Performance	Annual	-	P
DR1-7	Performance	Annual	-	P
DR1-8	Performance	Annual	-	P
DR2-1	Performance	Semiannual	P	P
DR2-3	Performance	Semiannual	P	P
DR2-4	Performance	Annual	-	P
DR2-6	Performance	Semiannual	P	P
MW-16	Background	Biennial	-	-
MW-19	Background	Biennial	-	-
MW-22	Boundary	Biennial	-	-
MW-23	Boundary	Biennial	-	-
MW-24	Boundary	Biennial	-	-
MW-25A	Performance	Annual	-	P
MW-26	Performance	Semiannual	P	P
MW-34	Sentinel	Biennial	-	-
MW-38	Sentinel	Biennial	-	-
MW-39	Performance	Semiannual	P	P
MW-39A	Performance	Semiannual	P	P
MW-50	Boundary	Biennial	-	-
MW-52	Performance	Annual	-	P
MW-53	Background	Biennial	-	-
MW-55	Background	Biennial	-	-
MW-63A	Sentinel	Annual	-	P
MW-63B	Sentinel	Annual	-	P
MW-64	Performance	Semiannual	P	P
MW-66A	Background	Biennial	-	-
MW-88	Performance	Semiannual	P	P
MW-89	Sentinel	Annual	-	P
MW-90	Sentinel	Semiannual	P	P
MW-92	Performance	Semiannual	P	P
MW-93	Boundary	Biennial	-	-
MW-94A	Performance	Semiannual	P	P
MW-96	Performance	Annual	-	P
MW-97	Performance	Semiannual	P	P
MW-98	Performance	Semiannual	P	P
MW-99	Background	Biennial	-	-
MW-100B	Performance	Semiannual	P	P
MW-101[1]	Performance	Semiannual	P	P
MW-102B	Boundary	Biennial	-	-
MW-103	Performance	Annual	-	P
MW-104	Performance	Annual	-	P
MW-107[1]	Sentinel	Semiannual	P	P
MW-108	Sentinel	Semiannual	P	P
MW-140	Sentinel	Annual	-	P
MW-141	Sentinel	Semiannual	P	P
MW-142	Performance	Annual	-	P
MW-143	Performance	Semiannual	P	P
MW-198	Performance	Annual	-	P
MW-199A	Sentinel	Annual	-	P
MW-199B	Performance	Semiannual	P	P
MW-200	Performance	Semiannual	P	P
MW-202A	Sentinel	Annual	-	P

TABLE 33
2013 MAIN INSTALLATION LTM SCHEDULE
ANNUAL LONG-TERM MONITORING REPORT-2012
Defense Depot Memphis, Tennessee

Well ID	Well Classification	Sample Frequency	Semiannual Apr-2013	Annual Oct-2013
MW-202B	Sentinel	Semiannual	P	P
MW-204A	Performance	Semiannual	P	P
MW-204B	Performance	Semiannual	P	P
MW-205A	Performance	Semiannual	P	P
MW-205B	Performance	Semiannual	P	P
MW-206A	Performance	Semiannual	P	P
MW-206B	Performance	Semiannual	P	P
MW-207A	Sentinel	Semiannual	P	P
MW-207B	Sentinel	Semiannual	P	P
MW-208A	Performance	Semiannual	P	P
MW-208B	Performance	Semiannual	P	P
MW-209A	Sentinel	Annual	-	P
MW-209B	Performance	Semiannual	P	P
MW-210A	Sentinel	Semiannual	P	P
MW-210B	Performance	Semiannual	P	P
MW-211	Sentinel	Annual	-	P
MW-214A	Performance	Semiannual	P	P
MW-214B	Performance	Semiannual	P	P
MW-215A	Performance	Annual	-	P
MW-215B	Performance	Annual	-	P
MW-216	Performance	Annual	-	P
MW-217	Performance	Semiannual	P	P
MW-218	Performance	Semiannual	P	P
MW-219	Boundary	Semiannual	P	P
MW-229	Sentinel	Biennial	-	-
MW-252	Sentinel	Semiannual	P	P
MW-253	Sentinel	Semiannual	P	P
MW-254	Sentinel	Semiannual	P	P
MW-255	Sentinel	Semiannual	P	P
MW-256	Sentinel	Semiannual	P	P
MW-257	TBD	TBD	P	P
MW-258	TBD	TBD	P	P
MW-259	TBD	TBD	P	P
PMW21-03	Performance	Semiannual	P	P
PMW21-05	Performance	Semiannual	P	P
PMW92-02	Performance	Semiannual	P	P
PMW101-03A	Performance	Semiannual	P	P
PMW101-03B	Performance	Semiannual	P	P
PMW101-06A	Performance	Semiannual	P	P
PMW101-06B	Performance	Semiannual	P	P
PZ-03	Performance	Annual	-	P

Notes:
1) Samples to be collected from two screened intervals in MW-101 and MW-107
PDB: Passive diffusion bag
P: Sample planned
B: Sample collected with bailer
LF: Sample collected by low-flow method
S: Sample collected with PDB
NS: Sample not collected
-: Sample not planned or collected

TABLE 34
2013 DUNN FIELD LTM SCHEDULE
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

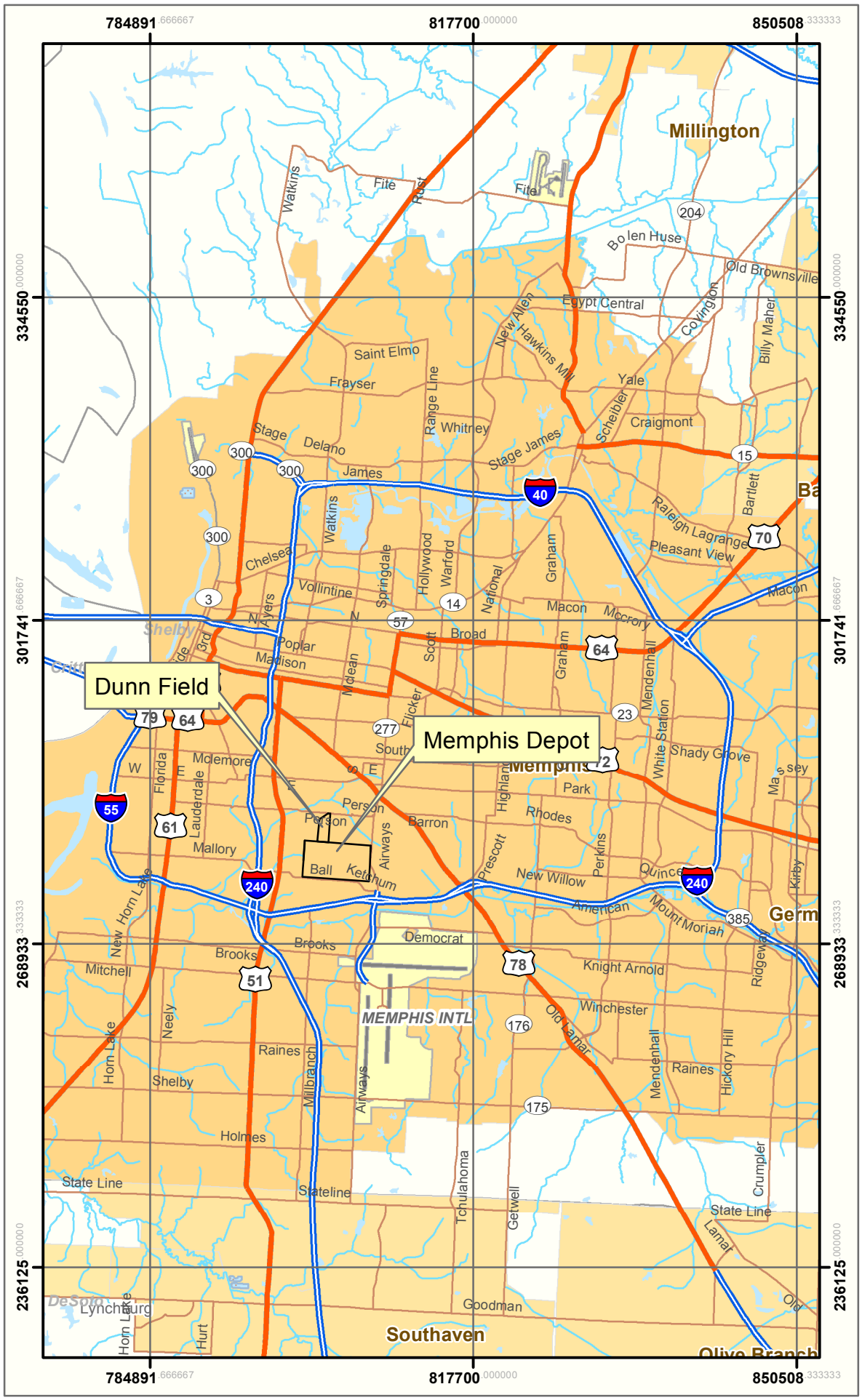
Well ID	Well Classification	Sample Frequency	Biennial Apr 2013	Semiannual Sep 2013
MW-03	Performance-FSVE	Semiannual	P	P
MW-04	Background	Annual	P	-
MW-06	Performance-FSVE	Semiannual	P	P
MW-07	Background-NE	Annual	P	-
MW-08	Background-NE	Annual	P	-
MW-13	Background	Biennial	P	-
MW-15	Performance	Semiannual	P	P
MW-28	Background	Semiannual	P	P
MW-31	Performance	Semiannual	P	P
MW-33	Performance	Biennial	P	-
MW-44	Performance	Annual	P	-
MW-54	Performance	Semiannual	P	P
MW-57	Performance	Semiannual	P	P
MW-58	Performance	Biennial	P	-
MW-67	Background	Biennial	P	-
MW-68	Performance	Annual	P	-
MW-69	Performance	Annual	P	-
MW-70	Performance	Annual	P	-
MW-71	Performance	Annual	P	-
MW-76	Performance	Annual	P	-
MW-77	Performance	Semiannual	P	P
MW-78	Performance	Biennial	P	-
MW-79	Performance	Semiannual	P	P
MW-80	Background	Annual	P	-
MW-87	Performance-FSVE	Semiannual	P	P
MW-91	Performance	Annual	P	-
MW-126	Background	Annual	P	-
MW-129	Background-NE	Annual	P	-
MW-130	Background-NE	Annual	P	-
MW-134	Performance-FSVE	Semiannual	P	P
MW-144	Performance	Semiannual	P	P
MW-145	Performance	Annual	P	-
MW-147	Performance	Annual	P	-
MW-148	Performance	Annual	P	-
MW-149	Performance	Semiannual	P	P
MW-150	Performance	Semiannual	P	P
MW-151	Performance	Semiannual	P	P
MW-152	Performance	Annual	P	-
MW-153	Performance	Biennial	P	-
MW-154	Background	Biennial	P	-
MW-155	Performance	Annual	P	-
MW-157	Performance	Semiannual	P	P
MW-158	Performance	Annual	P	-
MW-158A	Performance	Annual	P	-
MW-159	Performance	Semiannual	P	P
MW-160	Performance	Annual	P	-
MW-163	Performance	Semiannual	P	P
MW-164	Performance	Semiannual	P	P
MW-165	Performance	Semiannual	P	P
MW-165A	Performance	Semiannual	P	P
MW-166	Performance	Semiannual	P	P
MW-166A	Performance	Semiannual	P	P
MW-167	Background	Biennial	P	-
MW-169	Sentinel	Biennial	P	-
MW-170	Sentinel	Biennial	P	-
MW-171	Sentinel	Biennial	P	-
MW-174	Performance-FSVE	Semiannual	P	P

TABLE 34
2013 DUNN FIELD LTM SCHEDULE
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

Well ID	Well Classification	Sample Frequency	Biennial Apr 2013	Semiannual Sep 2013
MW-176	Performance	Annual	P	-
MW-180	Performance	Annual	P	-
MW-182	Sentinel	Annual	P	-
MW-184	Performance	Annual	P	-
MW-187	Background	Biennial	P	-
MW-190	Performance	Semiannual	P	P
MW-220	Performance-FSVE	Semiannual	P	P
MW-221	Performance-FSVE	Semiannual	P	P
MW-222	Performance-FSVE	Semiannual	P	P
MW-223	Performance-FSVE	Semiannual	P	P
MW-224	Performance-FSVE	Semiannual	P	P
MW-225	Performance-FSVE	Semiannual	P	P
MW-226	Performance-FSVE	Semiannual	P	P
MW-227	Performance-FSVE	Semiannual	P	P
MW-228	Performance-FSVE	Semiannual	P	P
MW-230	Background-NE	Annual	P	-
MW-235	Sentinel	Annual	P	-
MW-237	Sentinel	Annual	P	-
MW-241	Performance	Annual	P	-
MW-242	Performance	Semiannual	P	P
MW-243	Performance	Semiannual	P	P
MW-244	Performance	Semiannual	P	P
MW-245	Performance	Semiannual	P	P
MW-246	Performance	Semiannual	P	P
MW-247	Performance	Semiannual	P	P
MW-248	Performance	Annual	P	-
MW-249	Performance	Semiannual	P	P
MW-250	Sentinel	Annual	P	-
MW-251	Sentinel	Annual	P	-

Notes:
PDB: Passive diffusion bag
P: Sample planned
LF: Sample collected by low-flow method
S: Sample collected with PDB
NS: Sample not collected
-: Sample not planned or collected

FIGURES



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Figure 1

SITE LOCATION MAP

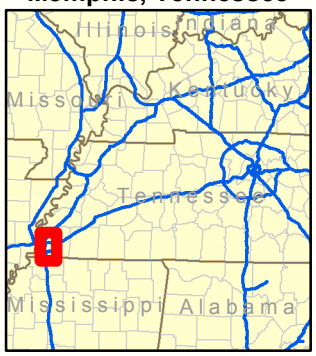
ANNUAL LONG TERM MONITORING REPORT - 2012

DEFENSE DEPOT MEMPHIS, TENNESSEE

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 0.6 1.2 1.8 2.4 3 Miles

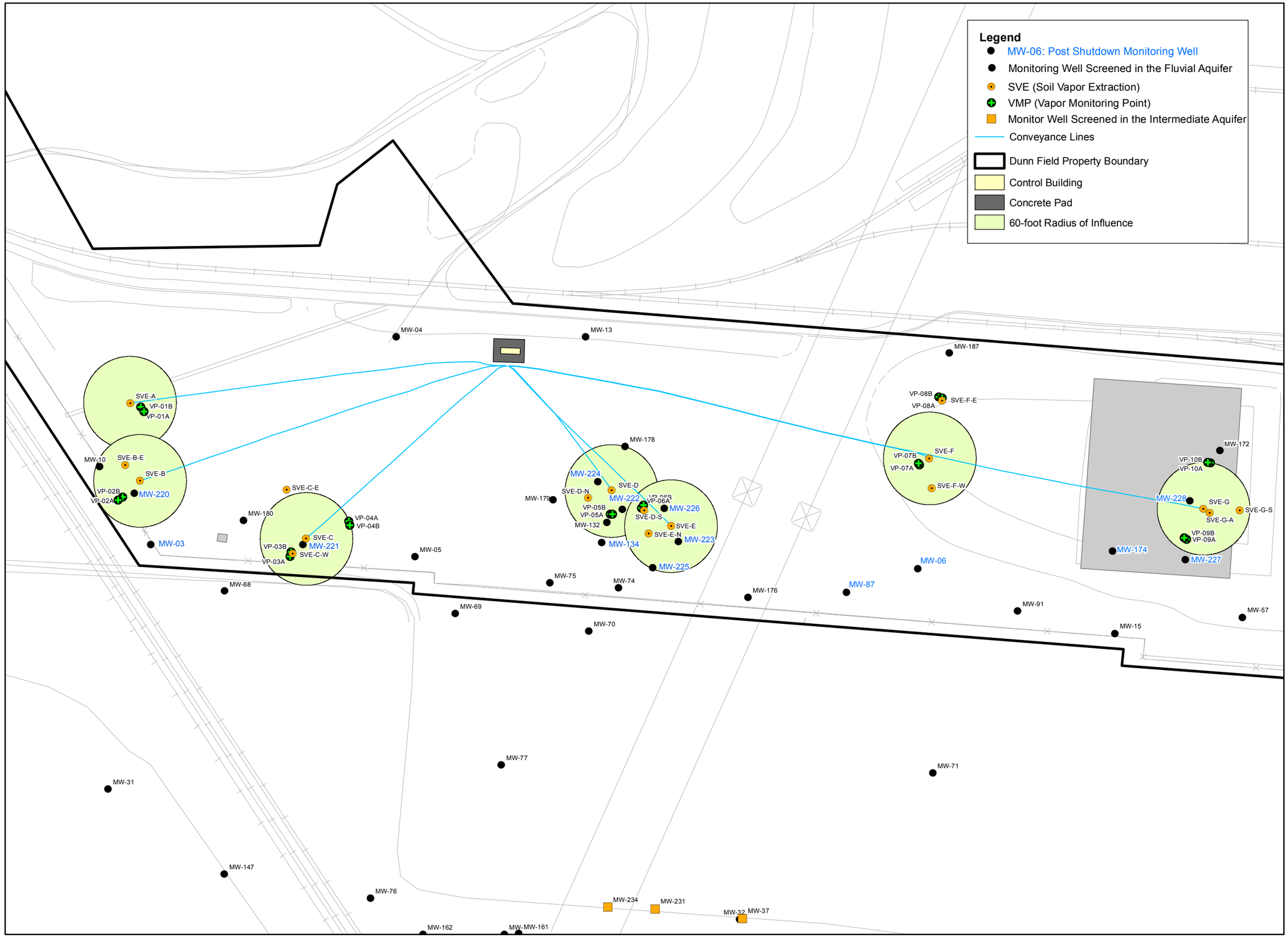
Installation Location
Memphis, Tennessee



Date: December 2012
Edition: Rev 0

HDR

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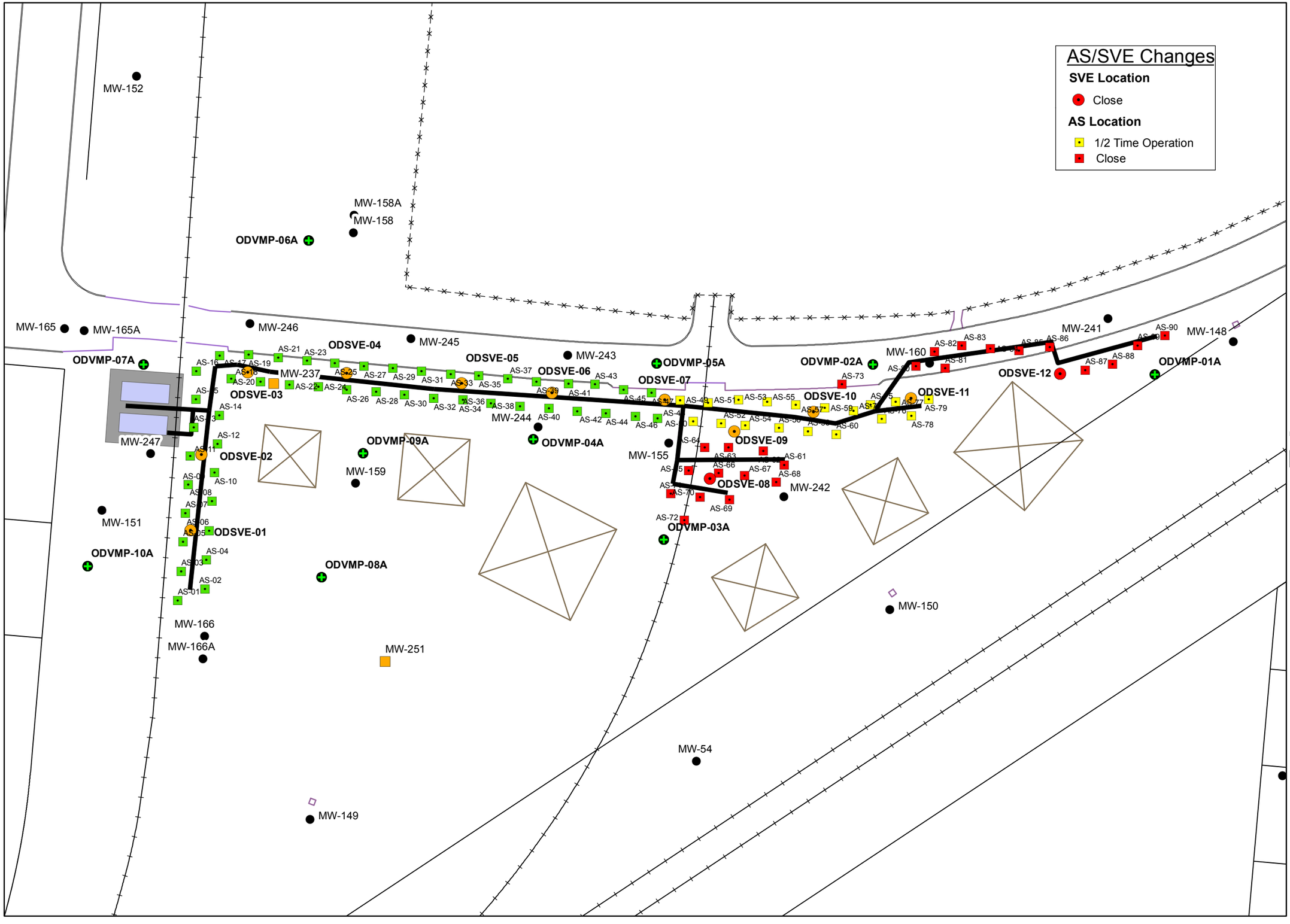
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Figure 2

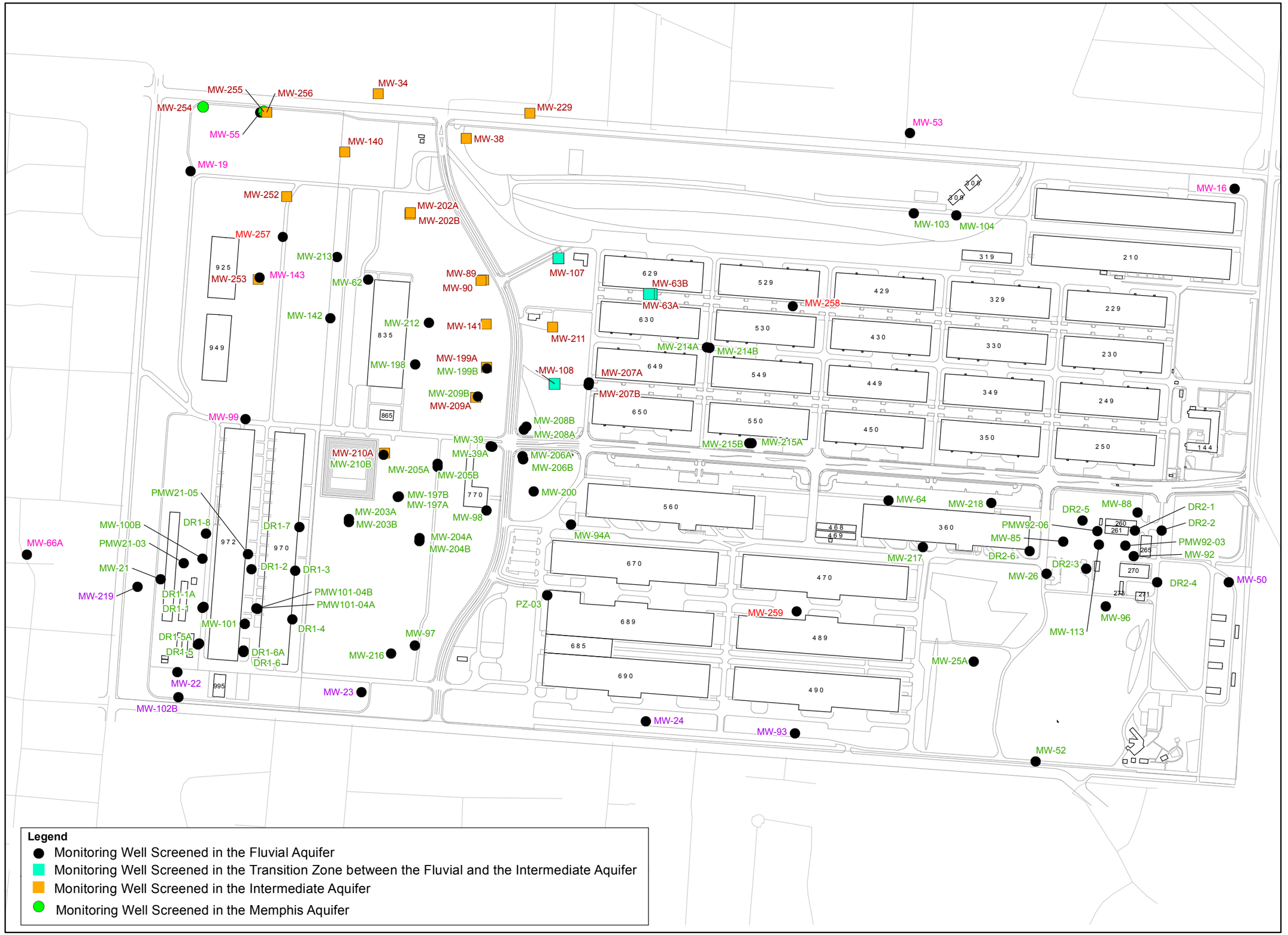
FLUVIAL SVE SYSTEM

ANNUAL LONG TERM MONITORING REPORT - 2012

DEFENSE DEPOT MEMPHIS, TENNESSEE



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Legend

- Monitoring Well Screened in the Fluvial Aquifer
- Monitoring Well Screened in the Transition Zone between the Fluvial and the Intermediate Aquifer
- Monitoring Well Screened in the Intermediate Aquifer
- Monitoring Well Screened in the Memphis Aquifer

Path: G:\DDMT\MI_LTM\LTM 2012 Annual Report\GIS\Figure 4 MI Well Location Map.mxd

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Figure 4

MAIN INSTALLATION LTM WELL LOCATION MAP

ANNUAL LONG TERM MONITORING REPORT - 2012

DEFENSE DEPOT MEMPHIS, TENNESSEE

Well Classification

- MW-16 Background
- MW-34 Sentinel
- MW-21 Performance
- MW-219 Boundary
- MW-257 New - Not Classified

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

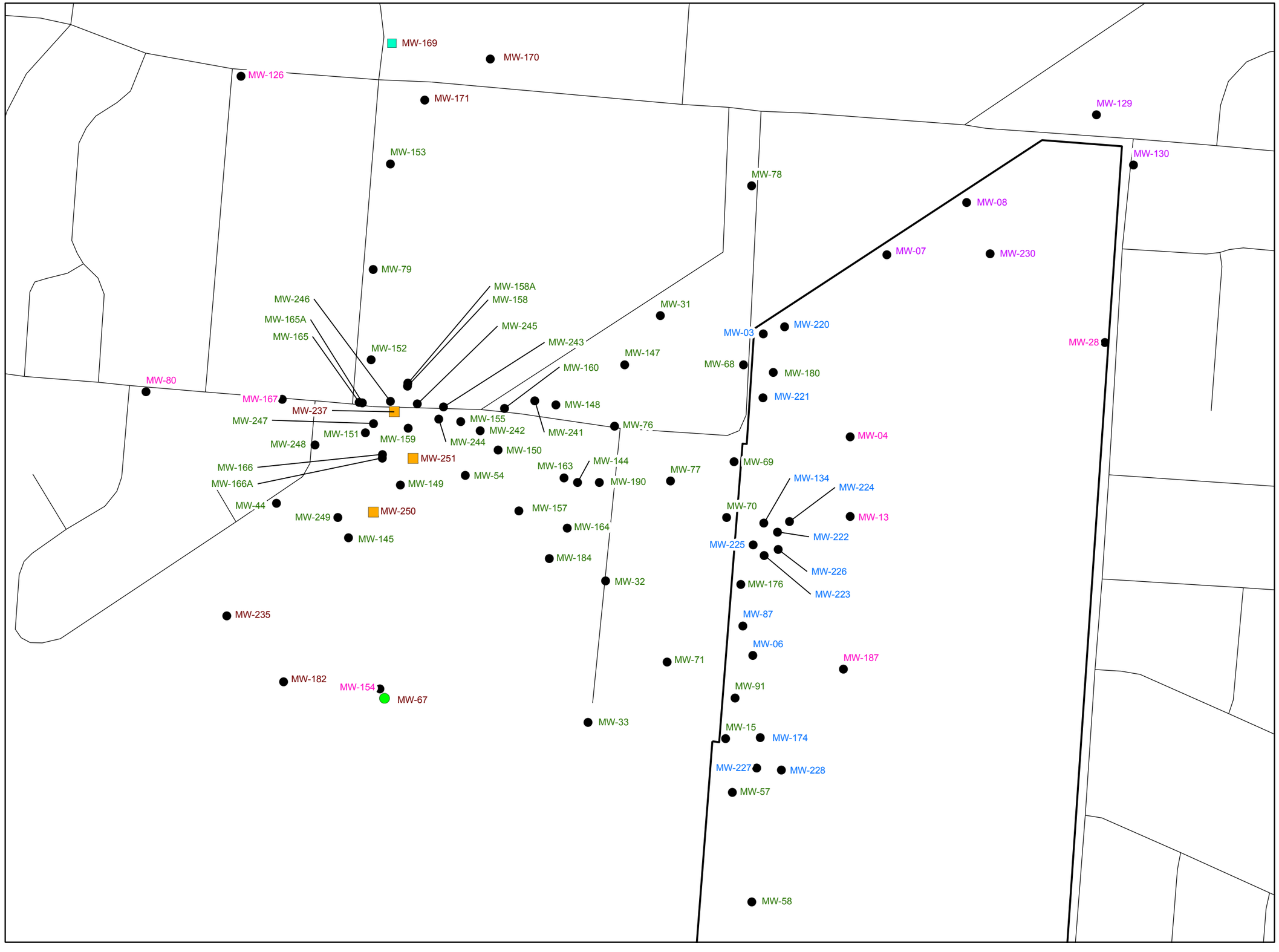
0 250 500 1,000
Feet

Installation Location
Memphis, Tennessee



Date: December 2012
Edition: Rev 0

HDR



Path: G:\DDMT\MI_LTM\LTM 2012 Annual Report\GIS\Figure 5 Dunn Field Well Location Map.mxd

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Figure 5

DUNN FIELD LTM WELL LOCATION MAP

ANNUAL LONG TERM MONITORING REPORT - 2012

DEFENSE DEPOT MEMPHIS, TENNESSEE

Legend

- Monitoring Well Screened in the Fluvial Aquifer
- Monitoring Well Screened in the Intermediate Aquifer
- Monitoring Well Screened in the Transition Zone
- Monitoring Well Screened in the Memphis Aquifer

Off Depot Well Classification

- MW-04 Background
- MW-07 Background-NE
- MW-250 Sentinel
- MW-15 Performance
- MW-03 Performance-FSVE

Dunn Field Boundary

0 150 300 450

Feet

Installation Location
Memphis, Tennessee



Date: December 2012
Edition: Rev 0

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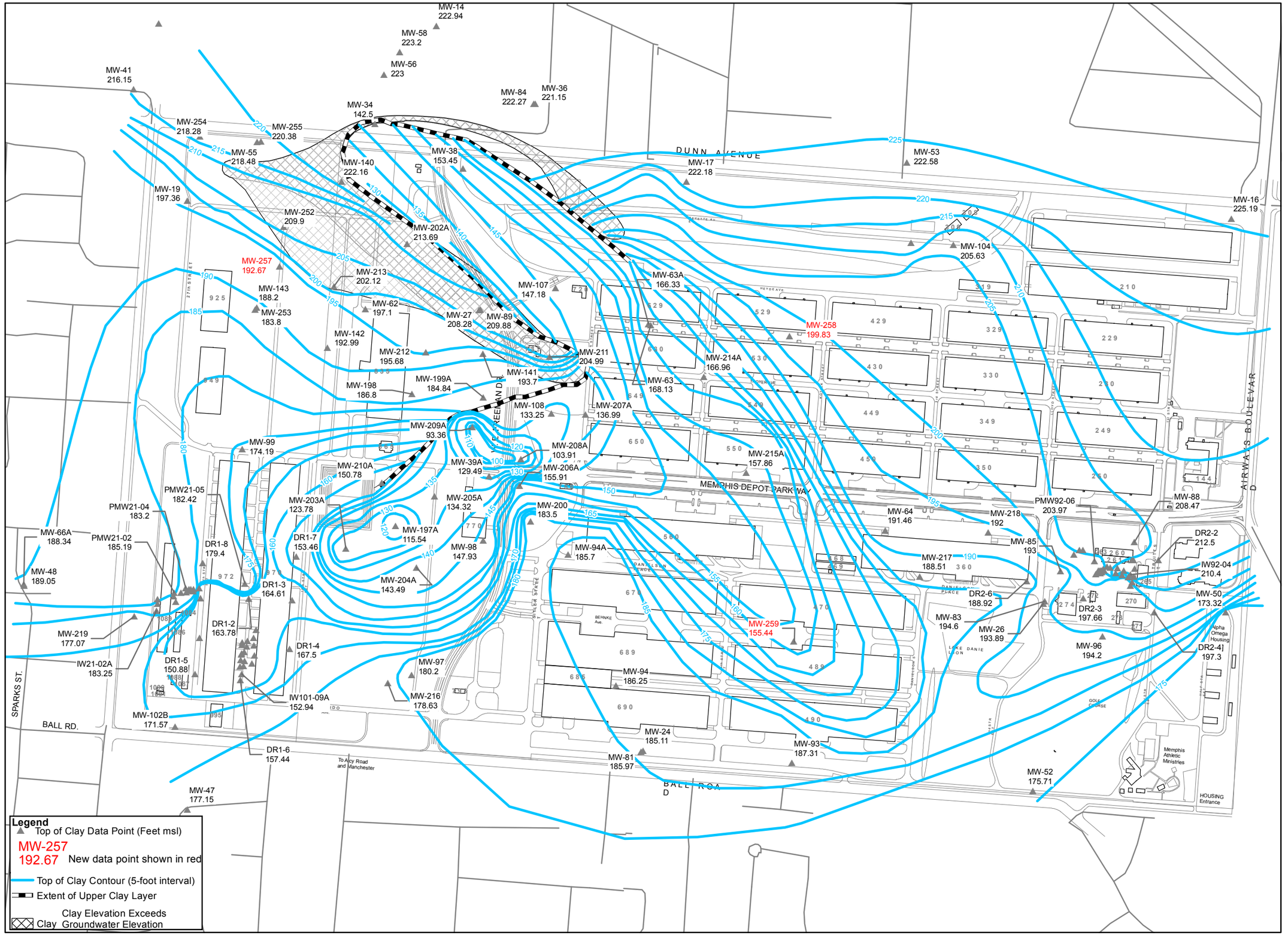


Figure 6

MAIN INSTALLATION TOP OF CLAY ELEVATIONS

ANNUAL LONG TERM MONITORING REPORT - 2012

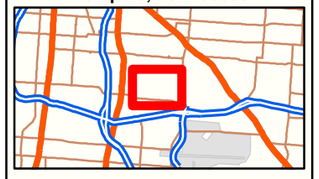
DEFENSE DEPOT MEMPHIS, TENNESSEE

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 200 400 800

Feet

Installation Location
Memphis, Tennessee



Date: Decemberl 2012
Edition: Rev 0

HDR

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Figure 7

MAIN INSTALLATION GROUNDWATER ELEVATIONS, APRIL 2012

ANNUAL LONG TERM MONITORING REPORT - 2012

DEFENSE DEPOT MEMPHIS, TENNESSEE

Legend

- Monitoring Well Screened in the Fluvial Aquifer
- Monitoring Well Screened in the Intermediate Aquifer
- Monitoring Well Screened in the Transition Zone
- Potentiometric surface of the Fluvial Aquifer 1-ft. contour
- Potentiometric surface of the Fluvial Aquifer 5-ft. contour
- Potentiometric surface of the Intermediate Aquifer 5-ft. contour
- Clay Elevation Exceeds Groundwater Elevation

MW-03 100.12 Blue: value used for Fluvial Aquifer groundwater contours

MW-237 100.15 Black: value used for Intermediate Aquifer groundwater contours

MW-254 156.83 Green: Memphis Aquifer, not contoured

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 250 500 1,000

Feet

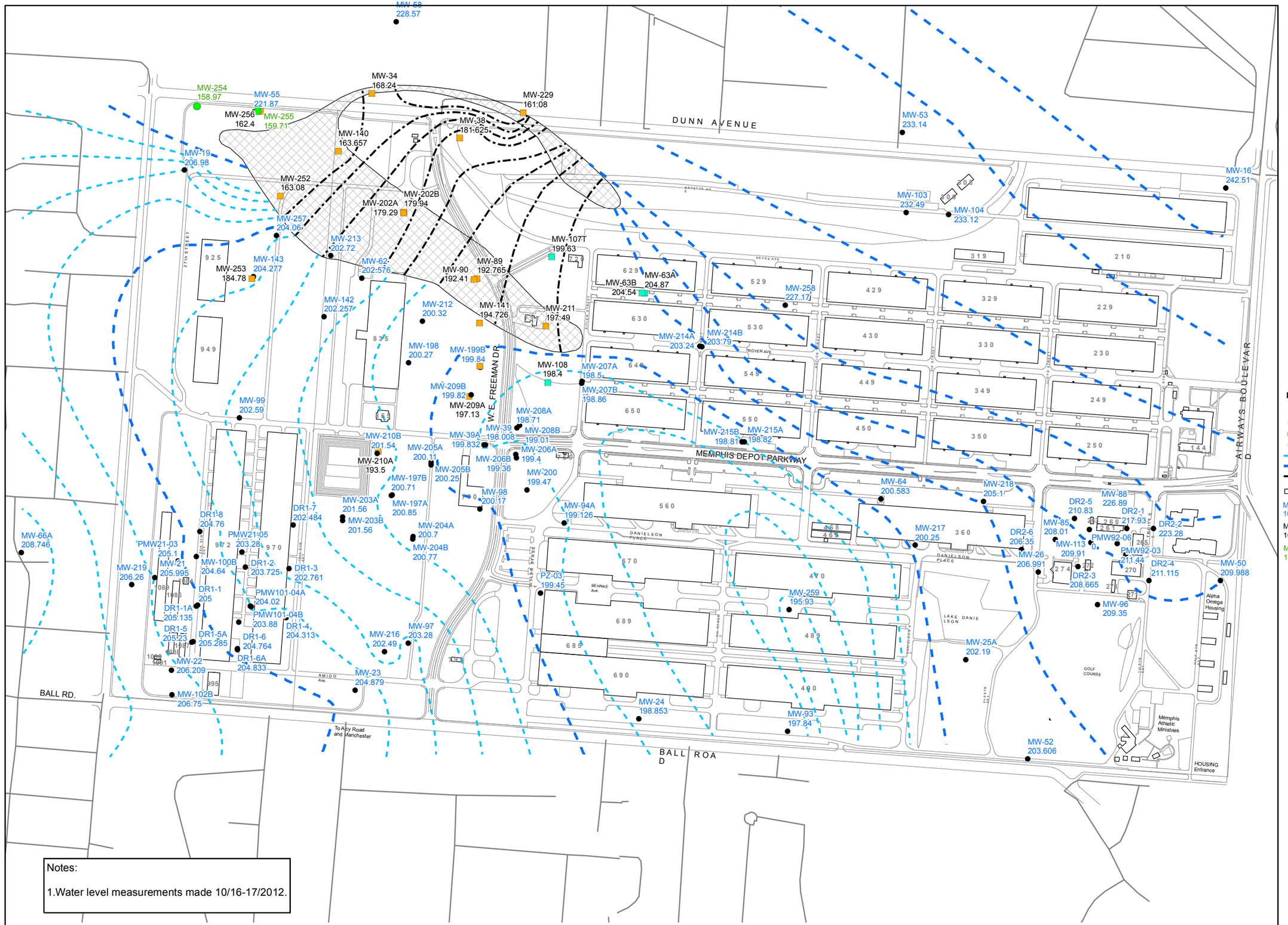
Installation Location
Memphis, Tennessee

Date: December 2012
Edition: Rev 0

Notes:

1.Water level measurements made 4/16-17/2012.

Path: G:\DDMT\MI_LTM\LTM 2012 Annual Report\GIS\Figure 8 MI Fluvial Aq GW Elev, Oct 2012.mxd



Notes:

1.Water level measurements made 10/16-17/2012.

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Figure 8

MAIN INSTALLATION GROUNDWATER ELEVATIONS, OCTOBER 2012

ANNUAL LONG TERM MONITORING REPORT - 2012

DEFENSE DEPOT MEMPHIS, TENNESSEE

Legend

- Monitoring Well Screened in the Fluvial Aquifer
- Monitoring Well Screened in the Intermediate Aquifer
- Monitoring Well Screened in the Transition Zone
- Potentiometric surface of the Fluvial Aquifer 1-ft. contour
- Potentiometric surface of the Fluvial Aquifer 5-ft. contour
- Potentiometric surface of the Intermediate Aquifer 5-ft. contour
- Clay Elevation Exceeds Groundwater Elevation

MW-03 100.12 Blue: value used for Fluvial Aquifer groundwater contours

MW-237 100.15 Black: value used for Intermediate Aquifer groundwater contours

MW-254 156.83 Green: Memphis Aquifer, not contoured

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 250 500 1,000

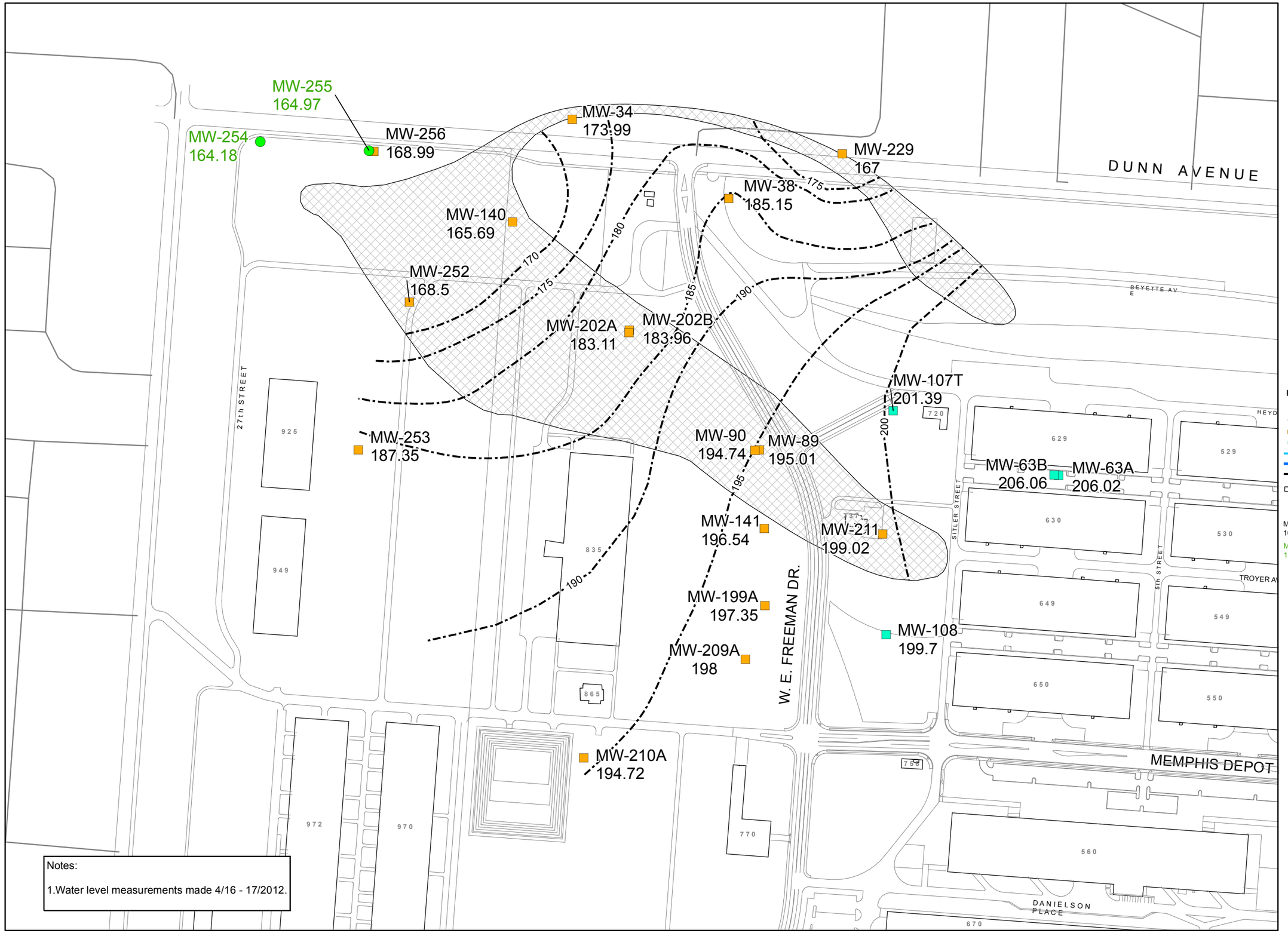
Feet

Installation Location
Memphis, Tennessee



Date: December 2012
Edition: Rev 0

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Path: G:\DDMT\MI_LTM\LTM 2012 Annual Report\GIS\Figure 9 IAQ-MAQ GW Elev, Apr 2012.mxd

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Figure 9

MAIN INSTALLATION INTERMEDIATE AND MEMPHIS AQUIFER GROUNDWATER ELEVATIONS, APRIL 2012

ANNUAL LONG TERM MONITORING REPORT - 2012

DEFENSE DEPOT MEMPHIS, TENNESSEE

Legend

- Monitoring Well Screened in the Fluvial Aquifer
- Monitoring Well Screened in the Intermediate Aquifer
- Monitoring Well Screened in the Transition Zone
- Potentiometric surface of the Fluvial Aquifer 1-ft. contour
- Potentiometric surface of the Fluvial Aquifer 5-ft. contour
- Potentiometric surface of the Intermediate Aquifer 5-ft. contour
- Clay Elevation Exceeds Groundwater Elevation

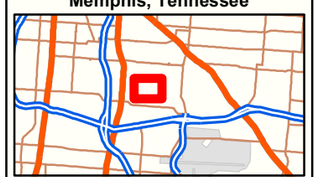
MW-237 100.15 Black: value used for Intermediate Aquifer groundwater contours

MW-254 156.83 Green: Memphis Aquifer, not contoured

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

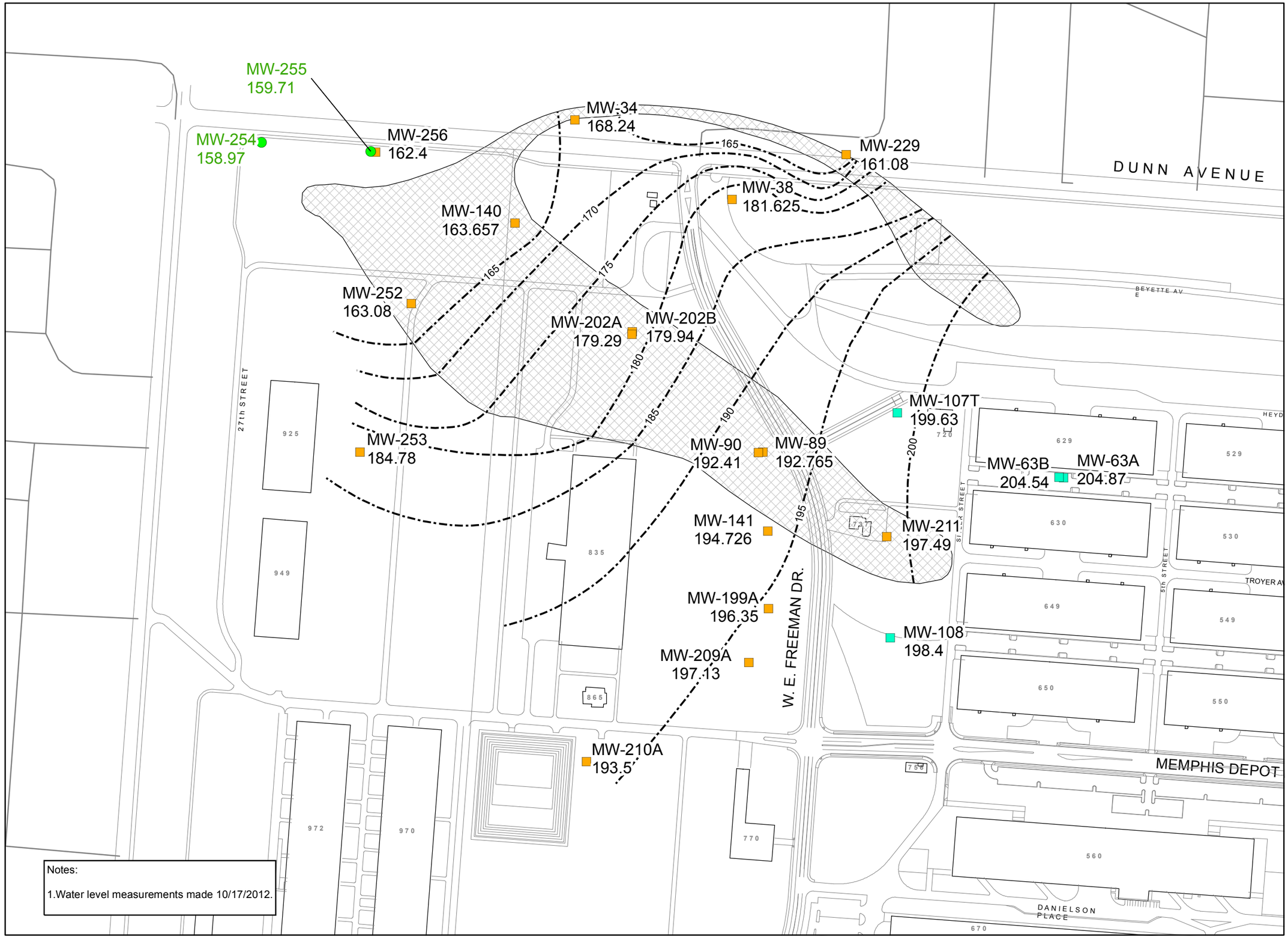
0 125 250 500
Feet

Installation Location
Memphis, Tennessee



Date: December 2012
Edition: Rev 0

HDR



Path: G:\DDMTM_LTM\LTM 2012 Annual Report\GIS\Figure 10 IAQ-MAQ GW Elev, Oct 2012.mxd

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Figure 10

MAIN INSTALLATION INTERMEDIATE AND MEMPHIS AQUIFER GROUNDWATER ELEVATIONS, OCTOBER 2012

ANNUAL LONG TERM MONITORING REPORT - 2012

DEFENSE DEPOT MEMPHIS, TENNESSEE

Legend

- Monitoring Well Screened in the Fluvial Aquifer
- Monitoring Well Screened in the Intermediate Aquifer
- Monitoring Well Screened in the Transition Zone
- Potentiometric surface of the Fluvial Aquifer 1-ft. contour
- Potentiometric surface of the Fluvial Aquifer 5-ft. contour
- Potentiometric surface of the Intermediate Aquifer 5-ft. contour
- Clay Elevation Exceeds Groundwater Elevation

MW-237 100.15 Black: value used for Intermediate Aquifer groundwater contours

MW-254 156.83 Green: Memphis Aquifer, not contoured

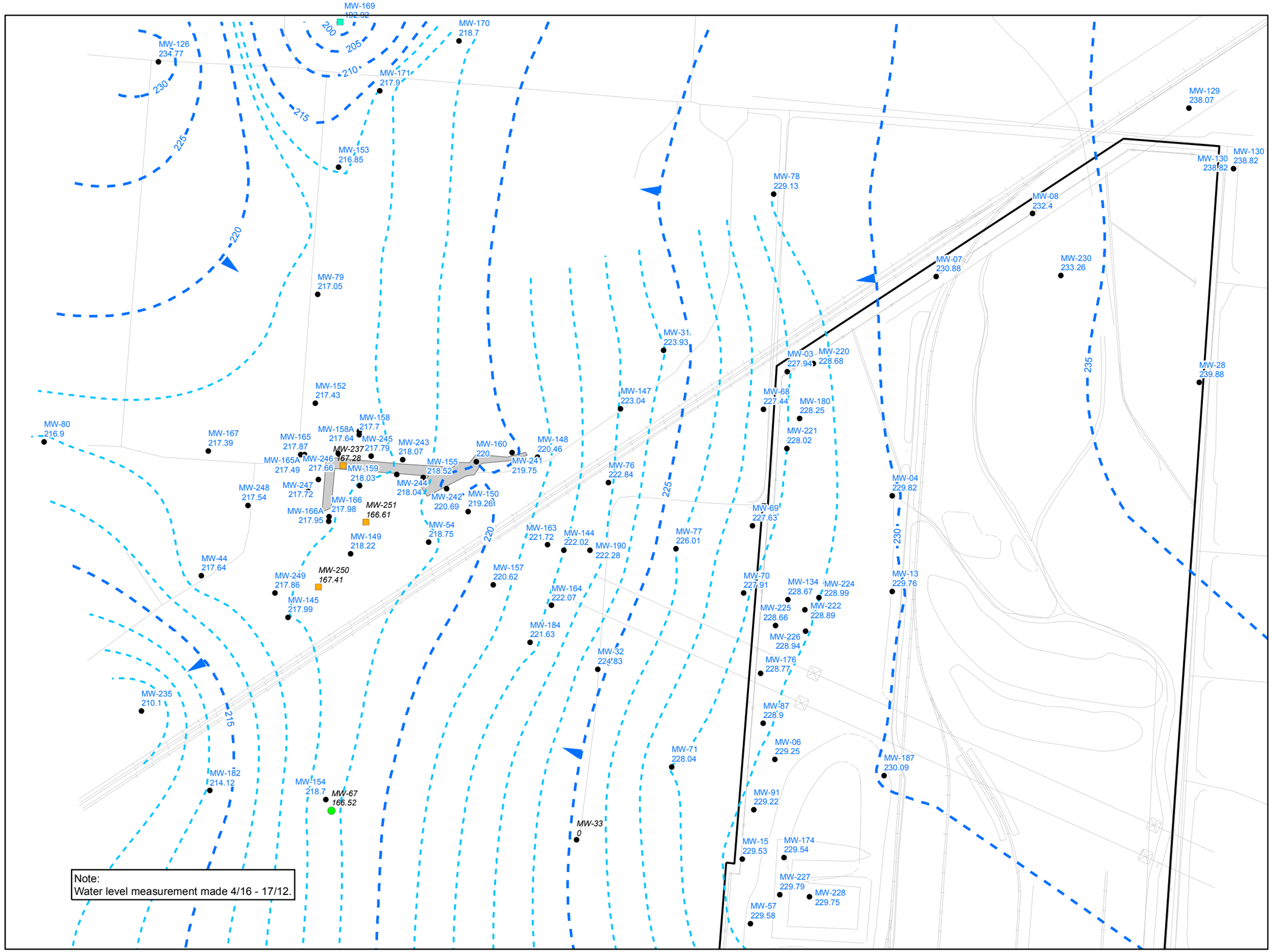
Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 125 250 500
Feet

Installation Location
Memphis, Tennessee

Date: December 2012
Edition: Rev 0

HDR



Path: G:\DDMT\MI_LTM\LTM 2012 Annual Report\GIS\Figure 11 OD GW Ele FluvAqApr2012.mxd

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Figure 11

DUNN FIELD GROUNDWATER ELEVATIONS, APRIL 2012

ANNUAL LONG TERM MONITORING REPORT - 2012

DEFENSE DEPOT MEMPHIS, TENNESSEE

Legend

- Monitoring Well Screened in the Fluvial Aquifer
- Monitoring Well Screened in the Intermediate Aquifer
- Monitoring Well Screened in the Transition Zone
- Monitoring Well Screened in the Memphis Aquifer
- Dunn Field Boundary
- Air Sparge Area

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

Groundwater Contours

- Potentiometric surface of the Fluvial Aquifer 1-ft. contour
- Potentiometric surface of the Fluvial Aquifer 5-ft. contour
- Groundwater Flow Direction

0 100 200 300

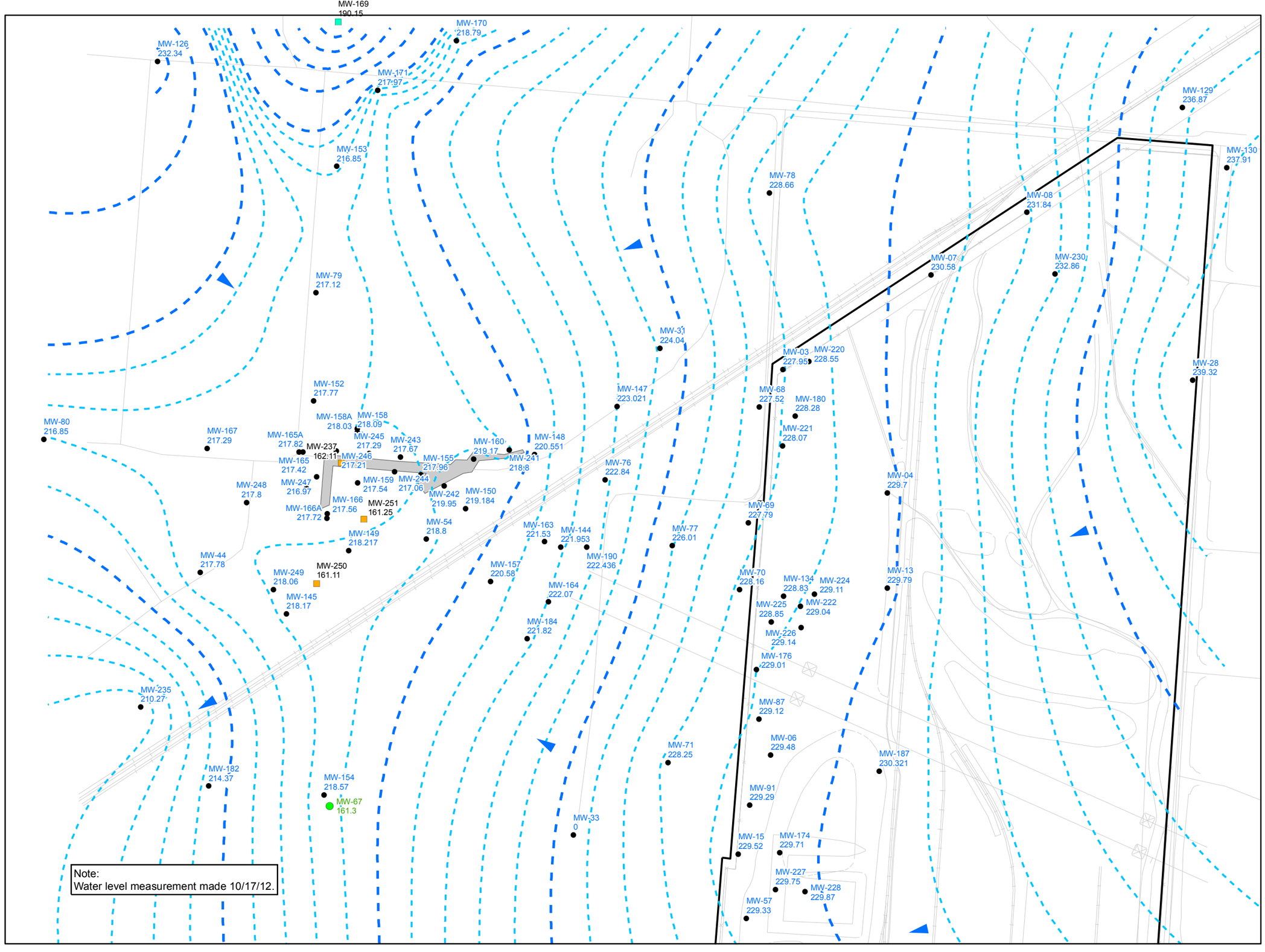
Feet

Installation Location
Memphis, Tennessee



Date: December 2012
Edition: Rev 0

HDR



Path: G:\DDMT\MI_LTM\LTM 2012 Annual Report\GIS\Figure 12 OD GW Ele FluvAqOct2012.mxd

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Figure 12

DUNN FIELD GROUNDWATER ELEVATIONS, OCTOBER 2012

ANNUAL LONG TERM MONITORING REPORT - 2012

DEFENSE DEPOT MEMPHIS, TENNESSEE

Legend

- Monitoring Well Screened in the Fluvial Aquifer
- Monitoring Well Screened in the Intermediate Aquifer
- Monitoring Well Screened in the Transition Zone
- Monitoring Well Screened in the Memphis Aquifer
- Dunn Field Boundary
- Air Sparge Area

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

Groundwater Contours

- Potentiometric surface of the Fluvial Aquifer 1-ft. contour
- Potentiometric surface of the Fluvial Aquifer 5-ft. contour
- Groundwater Flow Direction

0 100 200 300

Feet

Installation Location
Memphis, Tennessee



Date: December 2012
Edition: Rev 0

HDR

Figure 13

MAIN INSTALLATION PCE CONCENTRATIONS, APRIL 2012

ANNUAL LONG TERM MONITORING REPORT - 2012

DEFENSE DEPOT MEMPHIS, TENNESSEE

Legend

PCE Ranges
ug/L

- 0 - 5
- 5 - 10
- 10 - 50
- 50 - 100
- 100 - 300

PCE Isopleth
ug/L

- 5
- 10
- 50
- 100
- Clay Elevation Exceeds Groundwater Elevation

- Potentiometric surface of the Fluvial Aquifer 1-ft. contour
- Potentiometric surface of the Fluvial Aquifer 5-ft. contour
- Potentiometric surface of the Intermediate Aquifer 5-ft. contour

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 200 400 800

Feet

Installation Location
Memphis, Tennessee



Date: December 2012
Edition: Rev 0

HDR

Notes:

1. Analytical results from the Long Term Monitoring sample event (4/20/2012 - 4/23/2012).

Path: G:\DDMT\MI_LTM\LTM 2012 Annual Report\GIS\Figure 13 - PCE ISOPLETH Apr 2012.mxd

Figure 14

MAIN INSTALLATION TCE CONCENTRATIONS, APRIL 2012

ANNUAL LONG TERM MONITORING REPORT - 2012

DEFENSE DEPOT MEMPHIS, TENNESSEE

Legend

TCE Ranges
ug/L

- 0 - 5
- 5 - 10
- 10 - 50
- 50 - 100
- 100 - 300

TCE Isopleth
ug/L

- 5
- 10
- 50
- 100
- Clay Elevation Exceeds Groundwater Elevation
- Potentiometric surface of the Fluvial Aquifer 1-ft. contour
- Potentiometric surface of the Fluvial Aquifer 5-ft. contour
- Potentiometric surface of the Intermediate Aquifer 5-ft. contour

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 200 400 800

Feet

Installation Location
Memphis, Tennessee

Date: December 2012
Edition: Rev 0

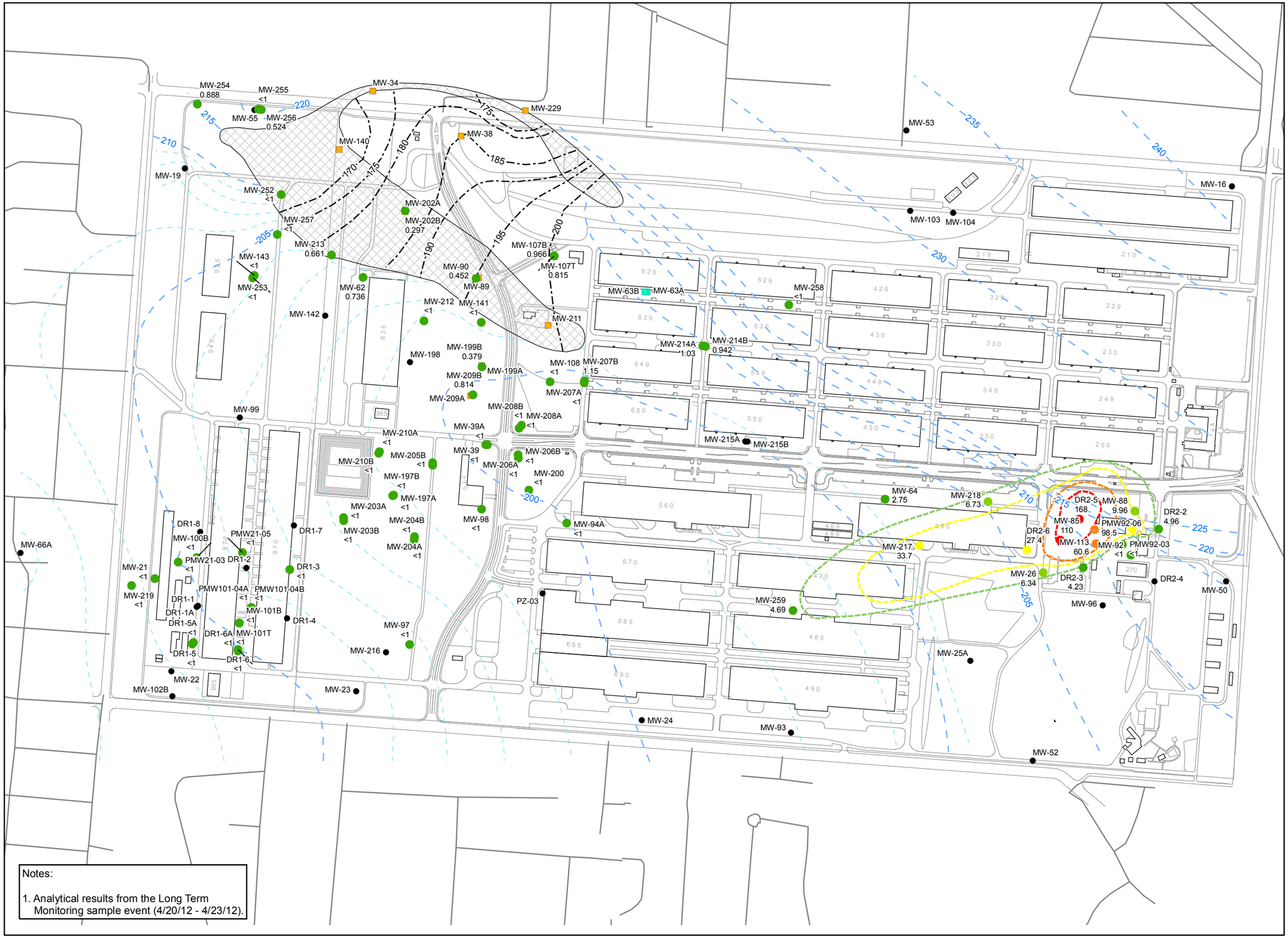
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Notes:

1. Analytical results from the Long Term Monitoring sample event (4/20/12 - 4/23/12).

Path: G:\DDMT\MI_LTM\LTM 2012 Annual Report\GIS\Figure 14 - TCE ISOPLETH Apr2012.mxd

Path: G:\DDMT\MI_LTM\LTM 2012 Annual Report\GIS\Figure 15 - CT ISOPLETH Apr2012.mxd



Notes:

1. Analytical results from the Long Term Monitoring sample event (4/20/12 - 4/23/12).

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Figure 15

MAIN INSTALLATION CT CONCENTRATIONS, APRIL 2012

ANNUAL LONG TERM MONITORING REPORT - 2012

DEFENSE DEPOT MEMPHIS, TENNESSEE

Legend

CT Ranges
ug/L

- 0-5
- 5-10
- 10-50
- 50-100
- 100-200

CT Isopleth
ug/L

- 5
- 10
- 50
- 100

Clay Elevation Exceeds Groundwater Elevation

- Potentiometric surface of the Fluvial Aquifer 1-ft. contour
- Potentiometric surface of the Fluvial Aquifer 5-ft. contour
- Potentiometric surface of the Intermediate Aquifer 5-ft. contour

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 200 400 800

Feet

Installation Location
Memphis, Tennessee



Date: December 2012
Edition: Rev 0

HDR

Path: G:\DDMT\MI_LTM\LTM 2012 Annual Report\GIS\Figure 16 - PCE ISOPLETH Oct 2012.mxd

MW-256 39.5
MW-255 <1
MW-55 <1
MW-254 0.649 F
MW-34 0.459 F
MW-229 <1
MW-140 2.51
MW-38 0.591 F
MW-53 2.15
MW-19 <1
MW-16 <1
MW-252 <1
MW-202A 2.28
MW-202B 21.3
MW-107T 36.5
MW-107B 46.5
MW-103 <1
MW-104 <1
MW-257 <1
MW-213 <1
MW-143 0.368 F
MW-253 <1
MW-89 4.25
MW-90 25.6
MW-62 0.482 F
MW-63B 2.17
MW-63A 2.31
MW-258 22.1
MW-142 <1
MW-141 27.4
MW-212 <1
MW-214B 6.79
MW-214A 6.54
MW-211 <1
MW-198 <1
MW-209B 0.557 F
MW-209A <1
MW-199B 0.676 F
MW-199A <1
MW-108 2.67
MW-207B 11.8
MW-207A 16.4
MW-99 <1
MW-210A 8.21
MW-210B 4.8
MW-39A 30.9
MW-39 5.08
MW-208B 26.5
MW-208A 21.4
MW-215A 6.06
MW-215B 5.91
PMW85-05 70.1
MW-205A 33.1
MW-205B 27.1
MW-206B 19.1
MW-206A 18.5
MW-85 51.5
MW-88 46.3
MW-203A 118
MW-203B 11.1
MW-197B 27.1
MW-197A 27.7
MW-64 20.8
MW-218 20.3
DR2-1 180
PMW21-05 12.3
DR1-8 <1
MW-200 11.8
DR2-5 99.9
DR2-2 41.6
PMW21-03 88.8
MW-100B 66.5
MW-98 41.7
MW-94A 32.1
MW-66A 2.48
DR1-7 1.6
MW-21 121
DR1-2 2.2
DR1-3 16.2
MW-217 23.7
DR2-6 50.2
PMW92-03 145
MW-204A 47.9
MW-204B 13.8
PMW101-04A 46.9
PMW101-04B 28.5
PZ-03 3.34
DR2-3 24.9
DR2-4 11
MW-50 0.492 F
MW-219 25.2
MW-259 15.1
MW-26 25.9
MW-113 166
MW-96 0.306 F
MW-92 78.3
DR1-1 2.97
DR1-4 1.25
MW-97 <1
MW-216 <1
DR1-1A 0.612 F
MW-101B 63.2
MW-101T 66.2
MW-25A 6.24
DR1-5A 49.7
DR1-5 38.6
MW-22 <1
MW-23 <1
MW-24 <1
MW-93 <1
MW-102B <1
DR1-6A 53.8
DR1-6 186
MW-52 7.55

Notes:

1. Analytical results from the Long Term Monitoring sample event (10/19/12 - 10/22/12).

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Figure 16

MAIN INSTALLATION PCE CONCENTRATIONS, OCTOBER 2012

ANNUAL LONG TERM MONITORING REPORT - 2012

DEFENSE DEPOT MEMPHIS, TENNESSEE

Legend

PCE Ranges
ug/L

- 0 - 5
- 5 - 10
- 10 - 50
- 50 - 100
- 100 - 300

PCE Isopleth
ug/L

- 5
- 10
- 50
- 100
- Clay Elevation Exceeds Groundwater Elevation
- Potentiometric surface of the Fluvial Aquifer 1-ft. contour
- Potentiometric surface of the Fluvial Aquifer 5-ft. contour
- Potentiometric surface of the Intermediate Aquifer 5-ft. contour

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

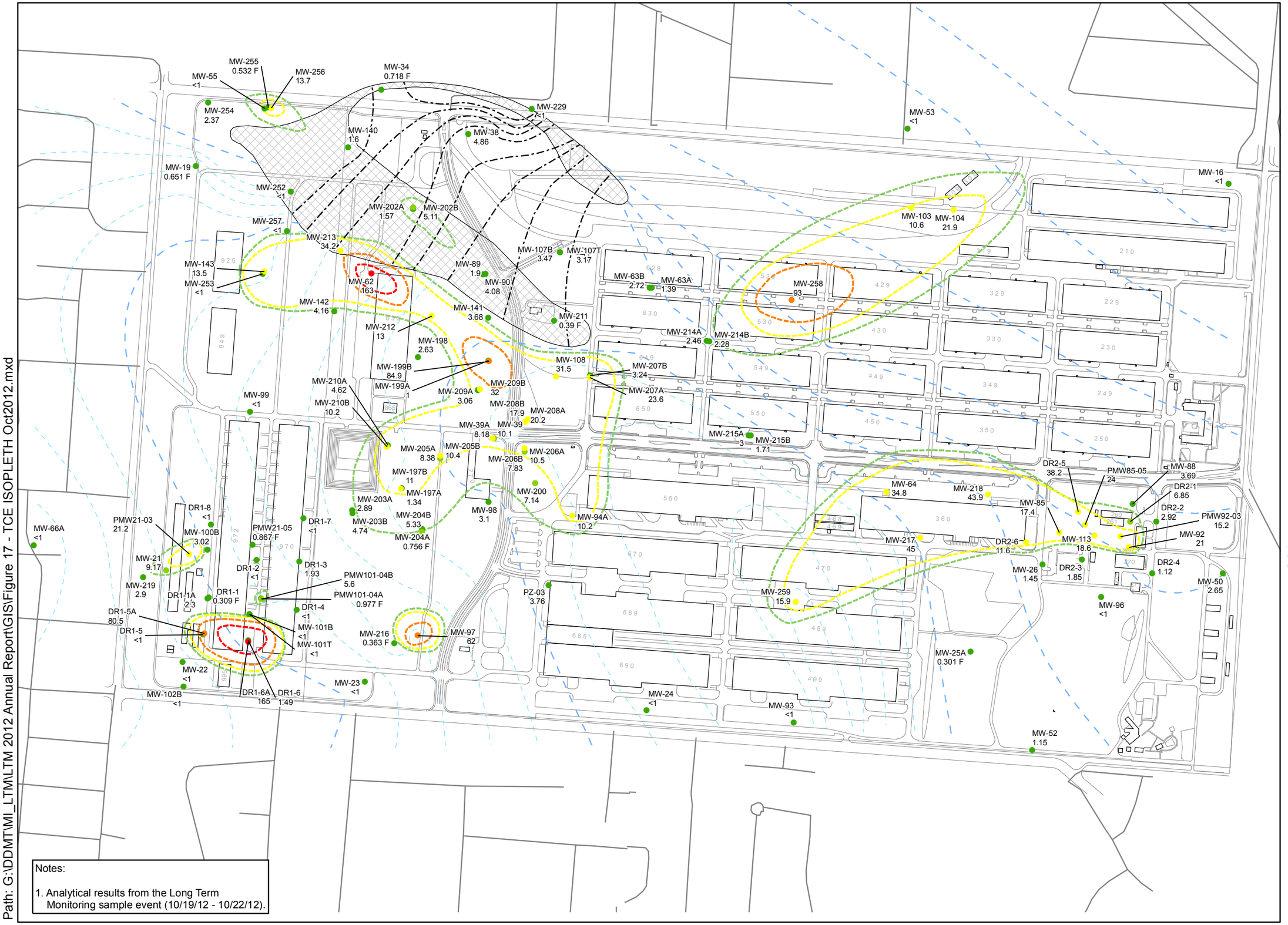
0 200 400 800
Feet

Installation Location
Memphis, Tennessee



Date: December 2012
Edition: Rev 0

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Notes:

1. Analytical results from the Long Term Monitoring sample event (10/19/12 - 10/22/12).

Path: G:\DDMT\MI_LTM\LTM 2012 Annual Report\GIS\Figure 17 - TCE ISOPLETH Oct2012.mxd

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Figure 17

MAIN INSTALLATION TCE CONCENTRATIONS, OCTOBER 2012

ANNUAL LONG TERM MONITORING REPORT - 2012

DEFENSE DEPOT MEMPHIS, TENNESSEE

Legend

TCE Ranges
ug/L

- 0 - 5
- 5 - 10
- 10 - 50
- 50 - 100
- 100 - 300

TCE Isopleth
ug/L

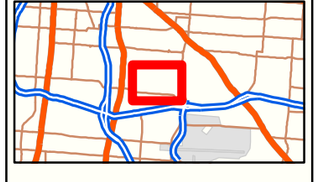
- 5
- 10
- 50
- 100
- Clay Elevation Exceeds Groundwater Elevation
- Potentiometric surface of the Fluvial Aquifer 1-ft. contour
- Potentiometric surface of the Fluvial Aquifer 5-ft. contour
- Potentiometric surface of the Intermediate Aquifer 5-ft. contour

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 200 400 800

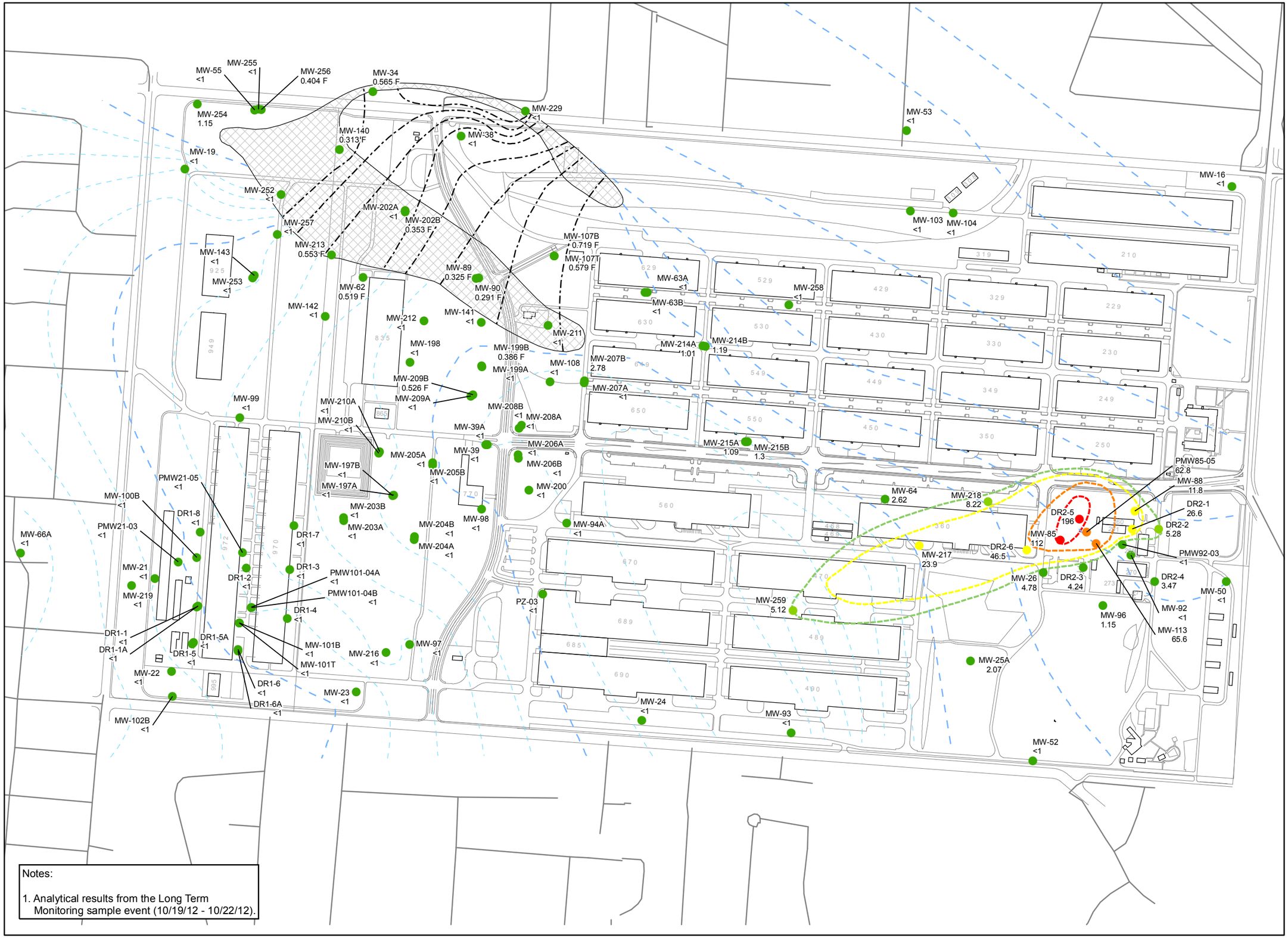
Feet

Installation Location
Memphis, Tennessee



Date: December 2012
Edition: Rev 0

HDR



Notes:

1. Analytical results from the Long Term Monitoring sample event (10/19/12 - 10/22/12).

Path: G:\DDMT\MI_LTM\LTM 2012 Annual Report\GIS\Figure 18 - CT ISOPLETH Oct2012.mxd

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Figure 18

MAIN INSTALLATION CT CONCENTRATIONS, OCTOBER 2012

ANNUAL LONG TERM MONITORING REPORT - 2012

DEFENSE DEPOT MEMPHIS, TENNESSEE

Legend

CT Ranges
ug/L

- 0-5
- 5-10
- 10-50
- 50-100
- 100-200

CT Isopleth
ug/L

- 5
- 10
- 50
- 100

Clay Elevation Exceeds Groundwater Elevation

- Potentiometric surface of the Fluvial Aquifer 1-ft. contour
- Potentiometric surface of the Fluvial Aquifer 5-ft. contour
- Potentiometric surface of the Intermediate Aquifer 5-ft. contour

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 200 400 800

Feet

Installation Location
Memphis, Tennessee



Date: December 2012
Edition: Rev 0

HDR

A
NORTH

A'
SOUTH

MW-254 MW-55 MW-256 MW-255 MW-252 offset 333-ft. from centerline MW-140 offset 88-ft. from centerline MW-202A/MW-202B MW-89/MW-90 MW-141 MW-199A MW-199B MW-209A MW-209B MW-39 MW-39A MW-206A MW-206B MW-200 MW-94A MW-94 MW-81/MW-24

Silty Clay to Clayey Silt

Sandy Clay to Clayey Sand

Sand with Gravel

Grey Clay

Clay

Clayey Sand

Sand

Silty Sand

Silty Sandy Clay

Memphis Sand

MW-55 MW-202B MW-90 MW-199B MW-209B MW-39 MW-206B MW-200 MW-94A MW-94 MW-24 MW-256 MW-252 MW-89 MW-141 MW-199A MW-206A MW-39A MW-202A MW-209A MW-140 MW-81 MW-255 MW-254

PCE 34.3
TCE 7.82

PCE 1.65
TCE 0.891 F

PCE 10.9
TCE 4.83

PCE 25.6
TCE 4.37

PCE 0.412F
TCE 76.7

PCE 0.392F
TCE 24.3

PCE 24.9
TCE 3.46

PCE <1
TCE 0.586 F

PCE 0.573 F
TCE 2.63

B.T.

300 280 260 240 220 200 180 160 140 120 100 80 60 40 20 0

20
0
200

Note:
PCE and TCE concentrations in ug/L from samples collected April 2012.

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Figure 19

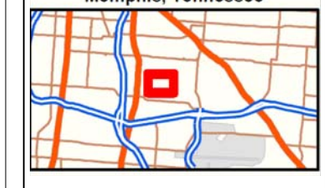
LITHOLOGIC CROSS-SECTION WITH PCE AND TCE RESULTS, APRIL 2012

ANNUAL LONG TERM MONITORING REPORT - 20102

DEFENSE DEPOT MEMPHIS, TENNESSEE

- Silty Clay to Clayey Silt
- Sandy Clay to Clayey Sand
- Fluvial Sand or Sand with Gravel
- Clayey Sand to Silty Clay
- Intermediate Sand
- Clay
- Memphis Sand
- Groundwater Elevation
- Fluvial Aquifer Groundwater Elevation 10/4/2010
- Intermediate Aquifer Groundwater Elevation 10/4/2010
- Memphis Aquifer Groundwater Elevation 10/4/2010
- Well Screen Interval

Installation Location
Memphis, Tennessee



Date: December 2012
Edition: Rev 0

HDR

A
NORTH

A'
SOUTH

MW-254 MW-55 MW-256 MW-255 MW-252 offset 333-ft. from centerline MW-140 offset 88-ft. from centerline MW-202A/MW-202B MW-89/MW-90 MW-141 MW-199A MW-199B MW-209A MW-209B MW-39 MW-39A MW-206A MW-206B MW-200 MW-94A MW-94 MW-81/MW-24

Silty Clay to Clayey Silt

Sandy Clay to Clayey Sand

Sand with Gravel

Grey Clay

Clayey Sand

Silty Sand

Clay

Sand

Memphis Sand

Silty Sandy Clay

MW-55 MW-256 MW-252 MW-140 MW-202B MW-202A MW-90 MW-89 MW-199B MW-141 MW-199A MW-209B MW-209A MW-39 MW-39A MW-206B MW-206A MW-200 MW-94A MW-94 MW-24 MW-81 MW-255 MW-254

PCE 39.5 TCE 13.7
PCE <1 TCE <1
PCE 21.3 TCE 5.11
PCE 2.28 TCE 1.57
PCE 2.51 TCE 1.6
PCE 25.6 TCE 4.08
PCE 4.25 TCE 1.9
PCE 0.676J TCE 84.9
PCE 27.4 TCE 3.68
PCE <1 TCE 1
PCE 0.557 J TCE 32
PCE <1 TCE 3.06
PCE <1 TCE 0.532 J
PCE 0.649 J TCE 2.37

B.T.

300 280 260 240 220 200 180 160 140 120 100 80 60 40 20 0

20 0 200

Note:
PCE and TCE concentrations in ug/L from samples collected October 2012.

N W E S

Figure 20

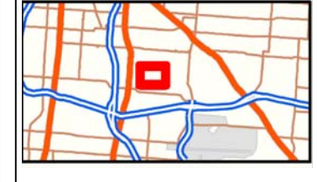
LITHOLOGIC CROSS-SECTION WITH PCE AND TCE RESULTS, OCTOBER 2012

ANNUAL LONG TERM MONITORING REPORT - 20102

DEFENSE DEPOT MEMPHIS, TENNESSEE

- Silty Clay to Clayey Silt
- Sandy Clay to Clayey Sand
- Fluvial Sand or Sand with Gravel
- Clayey Sand to Silty Clay
- Intermediate Sand
- Clay
- Memphis Sand
- Groundwater Elevation
- Fluvial Aquifer Groundwater Elevation 10/4/2010
- Intermediate Aquifer Groundwater Elevation 10/4/2010
- Memphis Aquifer Groundwater Elevation 10/4/2010
- Well Screen Interval

Installation Location
Memphis, Tennessee



Date: December 2012
Edition: Rev 0

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Path: G:\DDMT\MI_LTM\LTM 2012 Annual Report\GIS\Figure 21 TOTAL CVOC Apr2012.mxd

MW-126 ND
MW-169
MW-170
MW-171
MW-153
MW-78
MW-129 42.1
MW-130 162
MW-08 15.2
MW-07 82.1
MW-230 104
MW-28 ND
MW-79 32.7
MW-237 3.46
MW-245 1.27
MW-243 4.55
MW-244 3.28
MW-31 12.2
MW-158A ND
MW-158 1.90
MW-165A 8.88
MW-246 12.1
MW-165 13.2
MW-152 0.277
MW-247 2.62
MW-80 ND
MW-03 1.87
MW-220 14.3
MW-147 ND
MW-155 2.13
MW-241 0.803
MW-68 ND
MW-180 ND
MW-221 ND
MW-148 ND
MW-76 1.32
MW-160 ND
MW-242 1.30
MW-167
MW-248 ND
MW-151 66.4
MW-166 65.0
MW-166A 53.0
MW-159 389
MW-150 19.1
MW-144 68.6
MW-77 15.5
MW-69 ND
MW-04 0.162
MW-134 0.701
MW-54 12.6
MW-163 14.0
MW-190 34.1
MW-44 4.87
MW-251 5.24
MW-157 7.86
MW-224 0.563
MW-13
MW-222 ND
MW-70 2.61
MW-250 ND
MW-164 16.3
MW-225 1.41
MW-226 0.571
MW-149 29.1
MW-184 10.6
MW-32
MW-249 43.2
MW-145 2.45
MW-176 0.187
MW-223 1.17
MW-87 0.737
MW-235 ND
MW-71 15.4
MW-06 4.77
MW-187
MW-91 0.633
MW-182 ND
MW-154
MW-67
MW-33
MW-15 2.68
MW-174 1.30
MW-227 2.57
MW-228 0.450
MW-57 9.07
MW-58

200 205 210 215 220 225 230 235 240

Notes:
1. Highest concentration at well pairs used for contour.
2. Total CVOCs include: CT, CF, DCA, DCE, cDCE, tDCE, TCA, TCE, PCE, TeCA and VC.
3. Samples collected 4/17 - 20/2012.
4. Results from intermediate aquifer wells (shown in italics) were not used for isopleths.

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Figure 21

DUNN FIELD TOTAL CVOC CONCENTRATIONS, APRIL 2012

ANNUAL LONG TERM MONITORING REPORT - 2012

DEFENSE DEPOT MEMPHIS, TENNESSEE

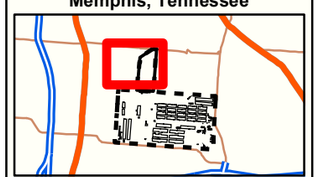
Legend

Total CVOC Ranges (ug/L)
- 0 - 10
- 10 - 50
- 50 - 100
- 100 - 500
- Not Sampled

Total CVOC Isopleth (ug/L)
- 10
- 50
- 100
- Air Sparge Well Area
- Original Dunn Field Property Boundary
- Potentiometric surface of the Fluvial Aquifer 1-ft. contour
- Potentiometric surface of the Fluvial Aquifer 5-ft. contour

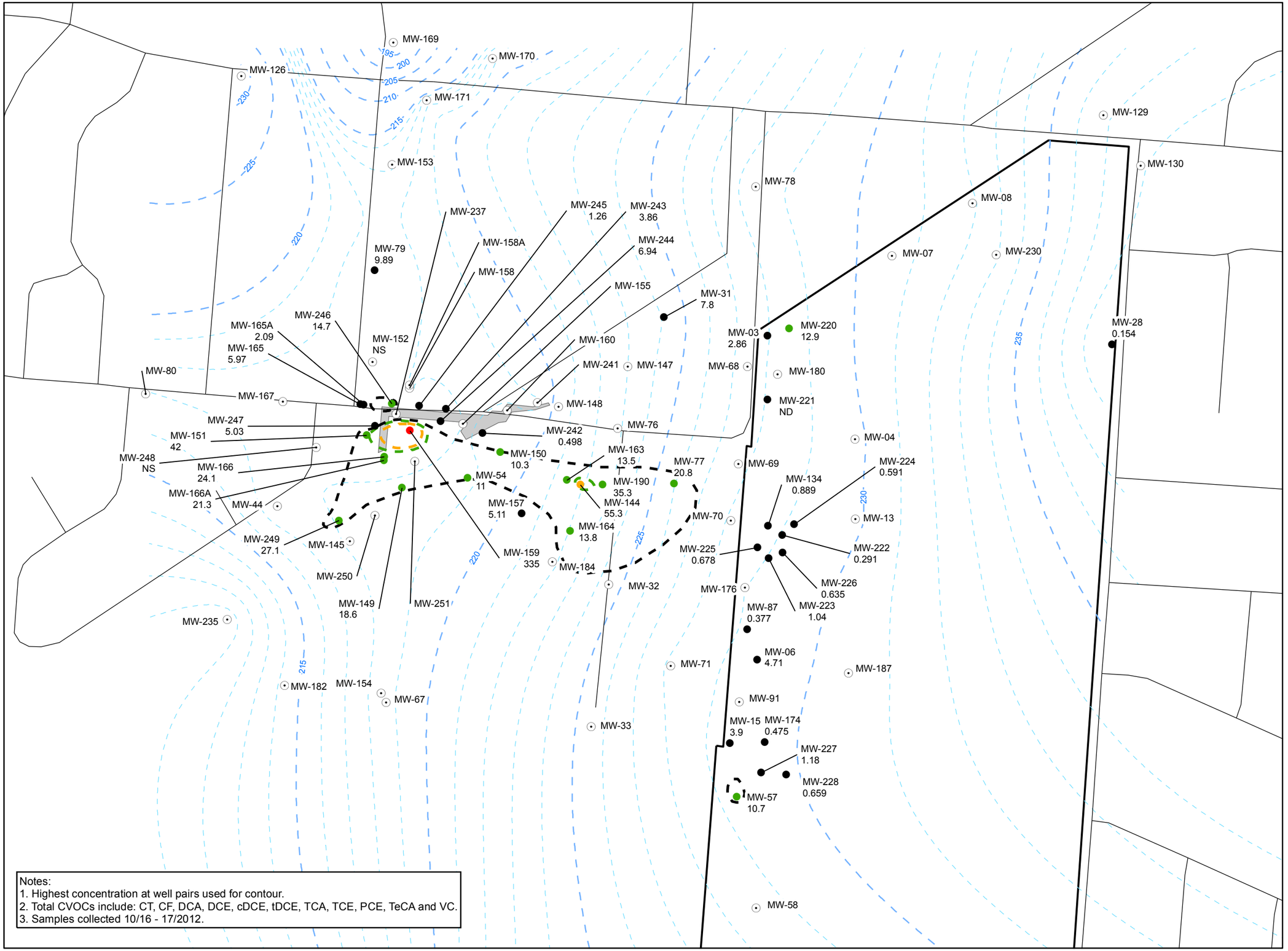
0 100 200 300
Feet

Installation Location
Memphis, Tennessee



Date: December 2012
Edition: Rev 0

HDR



Notes:
1. Highest concentration at well pairs used for contour.
2. Total CVOCs include: CT, CF, DCA, DCE, cDCE, tDCE, TCA, TCE, PCE, TeCA and VC.
3. Samples collected 10/16 - 17/2012.

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Figure 22

DUNN FIELD TOTAL CVOC CONCENTRATIONS, OCTOBER 2012

ANNUAL LONG TERM MONITORING REPORT - 2012

DEFENSE DEPOT MEMPHIS, TENNESSEE

Legend

Total CVOC Ranges (ug/L)

- 0 - 10
- 10 - 50
- 50 - 100
- 100 - 500
- Not Sampled

Total CVOC Isopleth (ug/L)

- 10
- 50
- 100

Air Sparge Well Area

Original Dunn Field Property Boundary

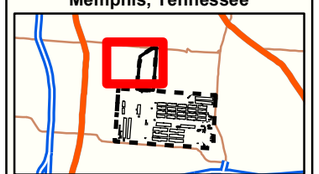
Potentiometric surface of the Fluvial Aquifer 1-ft. contour

Potentiometric surface of the Fluvial Aquifer 5-ft. contour

0 100 200 300

Feet

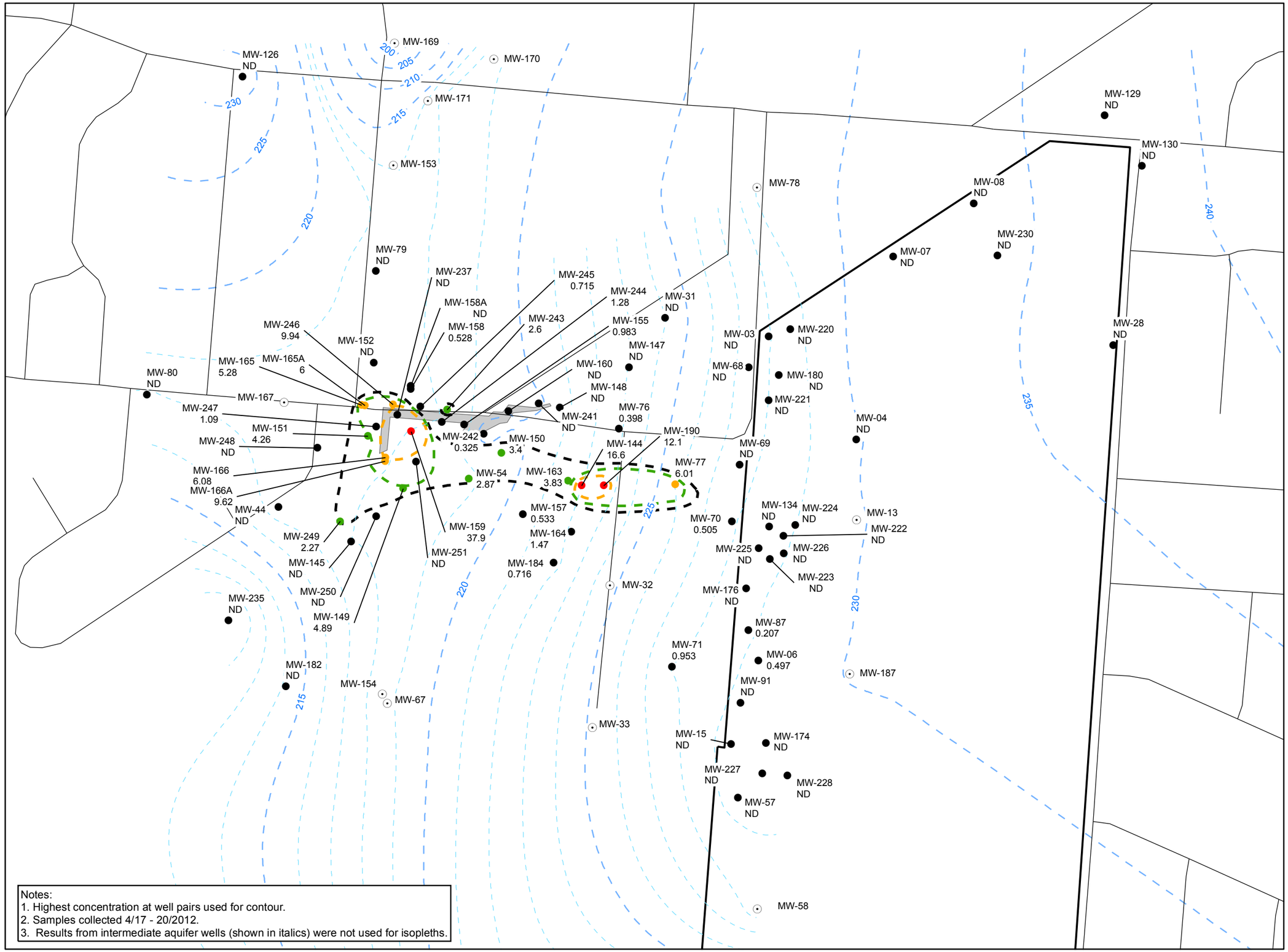
Installation Location
Memphis, Tennessee



Date: December 2012
Edition: Rev 0

HDR

Path: G:\DDMT\MI_LTM\LTM 2012 Annual Report\GIS\Figure 22 DF TOTAL CVOC Oct2012.mxd



Notes:
1. Highest concentration at well pairs used for contour.
2. Samples collected 4/17 - 20/2012.
3. Results from intermediate aquifer wells (shown in italics) were not used for isopleths.

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Figure 23

DUNN FIELD TeCA CONCENTRATIONS, APRIL 2012

ANNUAL LONG TERM MONITORING REPORT - 2012

DEFENSE DEPOT MEMPHIS, TENNESSEE

Legend

TeCA Ranges (ug/L)

- 0-2
- 2-5
- 5-10
- 10-50
- Not Sampled

TeCA Isopleth (ug/L)

- 2.2
- 5
- 10
- 50

Air Sparge Well Area

Original Dunn Field Property Boundary

Potentiometric surface of the Fluvial Aquifer 1-ft. contour

Potentiometric surface of the Fluvial Aquifer 5-ft. contour

0 100 200 300

Feet

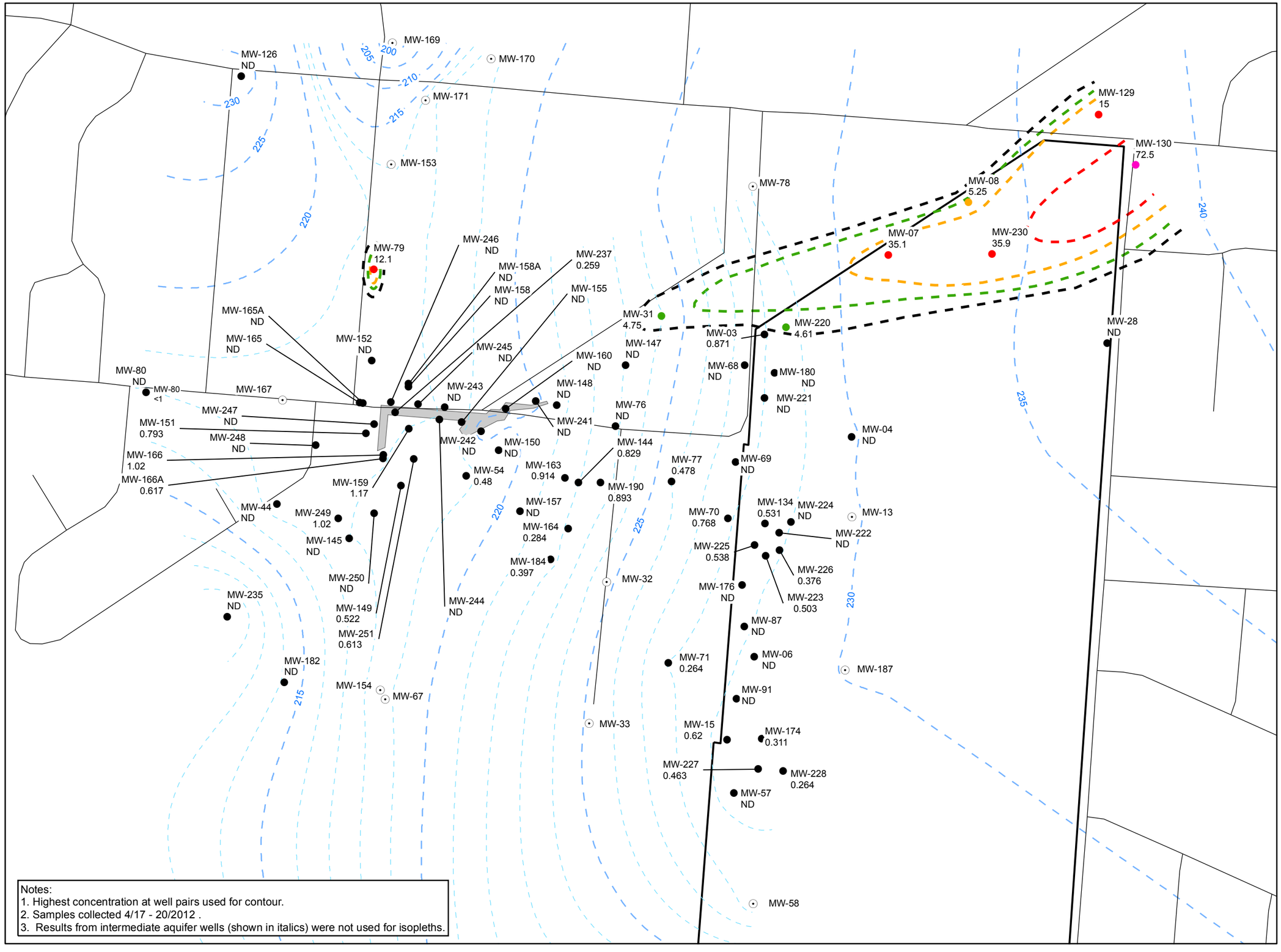
Installation Location
Memphis, Tennessee



Date: December 2012
Edition: Rev 0

HDR

Path: G:\DDMTM\LTM\LTM 2012 Annual Report\GIS\Figure 23 DF TeCA Apr2012.mxd



Notes:
1. Highest concentration at well pairs used for contour.
2. Samples collected 4/17 - 20/2012 .
3. Results from intermediate aquifer wells (shown in italics) were not used for isopleths.

Path: G:\DDMT\MI_LTM\LTM 2012 Annual Report\GIS\Figure 24 DF PCE Apr2012.mxd

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Figure 24

DUNN FIELD PCE CONCENTRATIONS, APRIL 2012

ANNUAL LONG TERM MONITORING REPORT - 2012

DEFENSE DEPOT MEMPHIS, TENNESSEE

Legend

PCE Ranges (ug/L)

- 0 - 2.5
- 2.5 - 5
- 5 - 10
- 10 - 50
- 50 - 250
- Not Sampled

PCE Isopleth (ug/L)

- 2.5
- 5
- 10
- 50

Air Sparge Well Area

Original Dunn Field Property Boundary

Potentiometric surface of the Fluvial Aquifer 1-ft. contour

Potentiometric surface of the Fluvial Aquifer 5-ft. contour

0 100 200 300

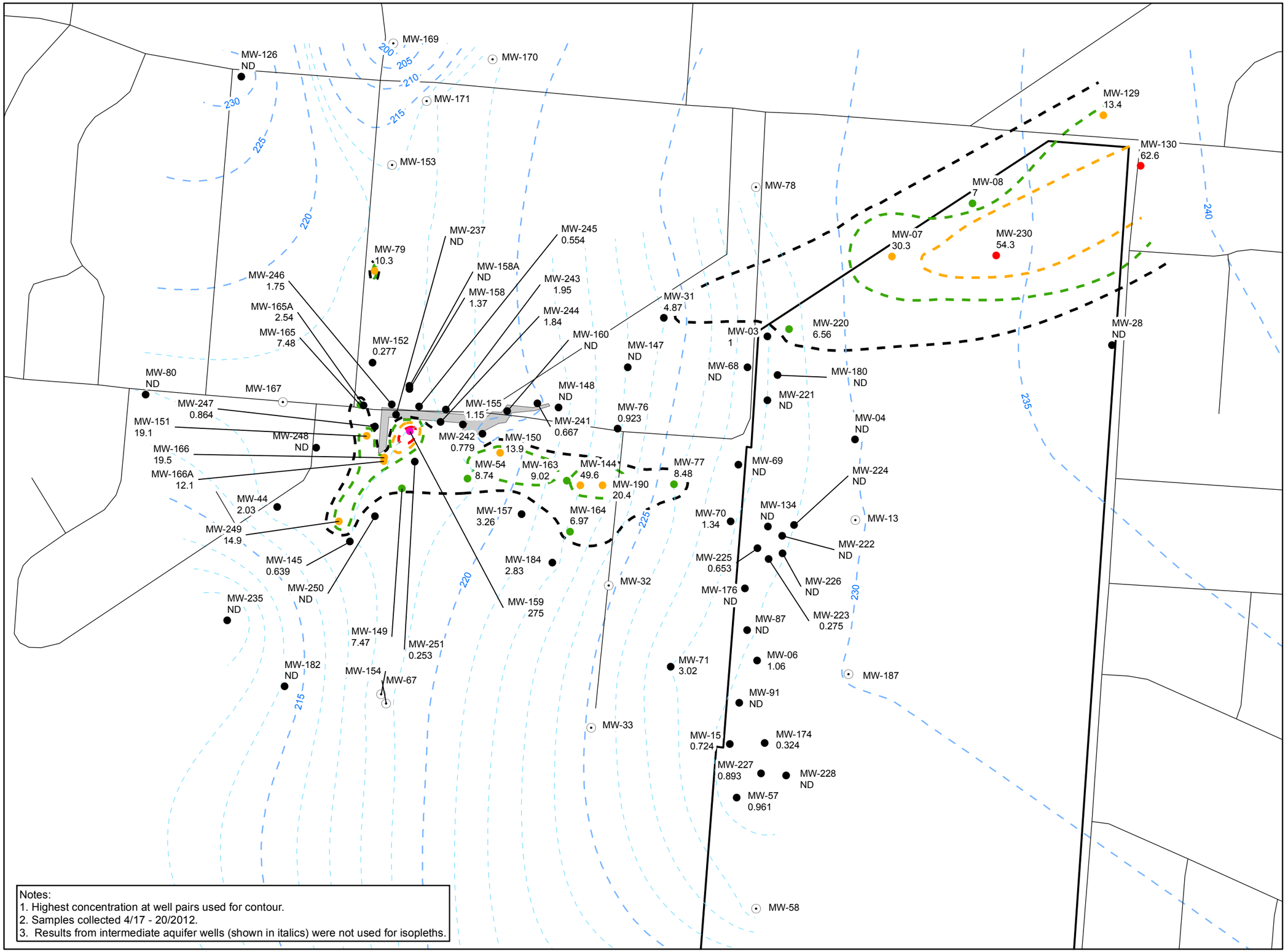
Feet

Installation Location
Memphis, Tennessee



Date: December 2012
Edition: Rev 0

HDR



Notes:
1. Highest concentration at well pairs used for contour.
2. Samples collected 4/17 - 20/2012.
3. Results from intermediate aquifer wells (shown in italics) were not used for isopleths.

Path: G:\DDMT\MI_LTM\LTM 2012 Annual Report\GIS\Figure 25 DF TCE Apr2012.mxd

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Figure 25

DUNN FIELD TCE CONCENTRATIONS, APRIL 2012

ANNUAL LONG TERM MONITORING REPORT - 2012

DEFENSE DEPOT MEMPHIS, TENNESSEE

Legend

TCE Ranges (ug/L)

- 0-5
- 5-10
- 10-50
- 50-100
- 100-300
- Not Sampled

TCE Isopleth (ug/L)

- 5
- 10
- 50
- 100

Air Sparge Well Area

Original Dunn Field Property Boundary

Potentiometric surface of the Fluvial Aquifer 1-ft. contour

Potentiometric surface of the Fluvial Aquifer 5-ft. contour

0 100 200 300

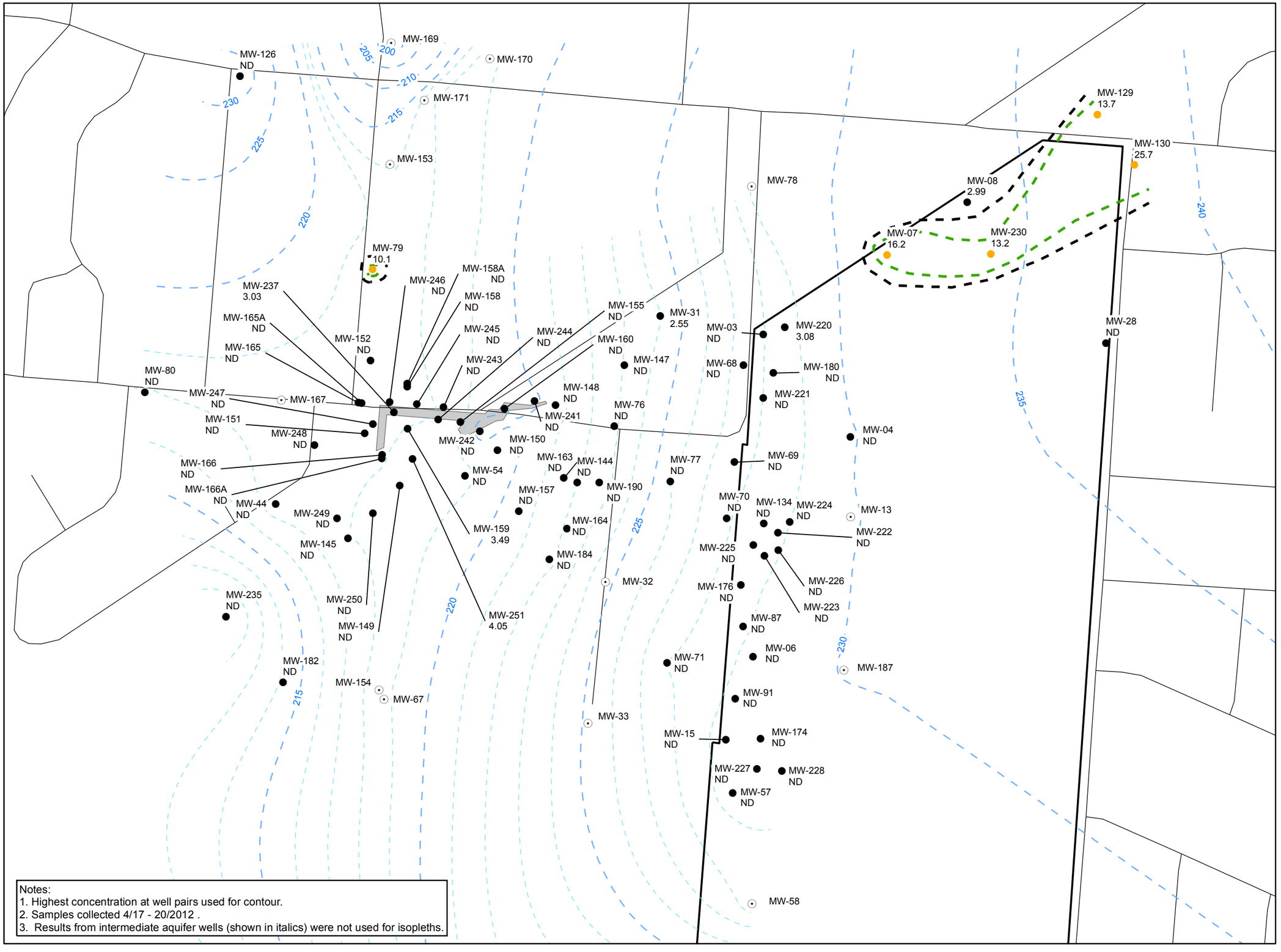
Feet

Installation Location
Memphis, Tennessee



Date: December 2012
Edition: Rev 0

HDR



Notes:
1. Highest concentration at well pairs used for contour.
2. Samples collected 4/17 - 20/2012 .
3. Results from intermediate aquifer wells (shown in italics) were not used for isopleths.

Path: G:\DDMT\MI_LTM\LTM 2012 Annual Report\GIS\Figure 26 DCE Apr2012.mxd

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Figure 26

DUNN FIELD DCE CONCENTRATIONS, APRIL 2012

ANNUAL LONG TERM MONITORING REPORT - 2012

DEFENSE DEPOT MEMPHIS, TENNESSEE

Legend

DCE Ranges (ug/L)

- 0-7
- 7-10
- 10-50
- Not Sampled

DCE Isopleth (ug/L)

- 7
- 10

Air Sparge Well Area

Original Dunn Field Property Boundary

0 100 200 300

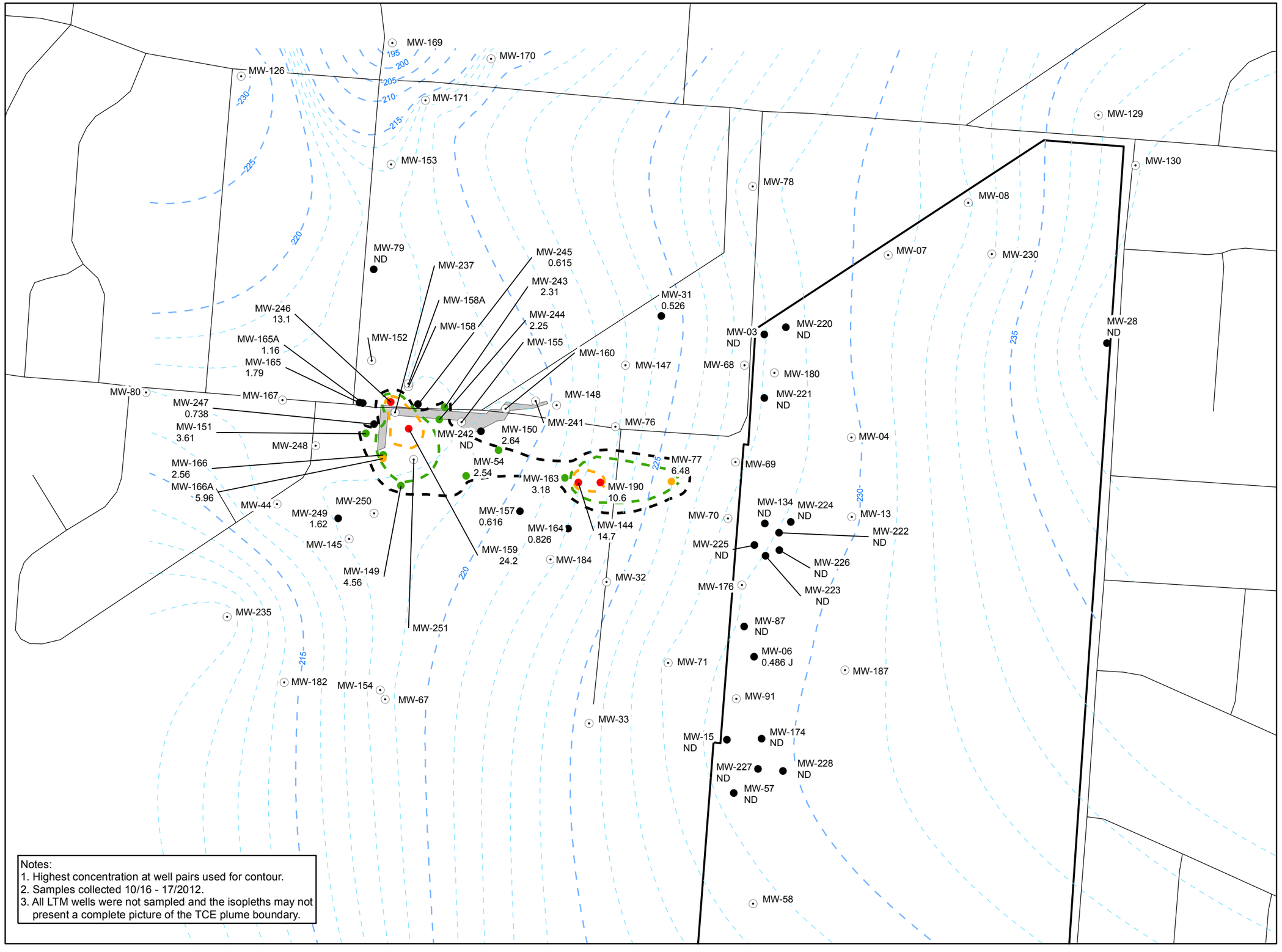
Feet

Installation Location
Memphis, Tennessee



Date: December 2012
Edition: Rev 0

HDR



Notes:
1. Highest concentration at well pairs used for contour.
2. Samples collected 10/16 - 17/2012.
3. All LTM wells were not sampled and the isopleths may not present a complete picture of the TCE plume boundary.

Path: G:\DDMT\MI_LTM\LTM 2012 Annual Report\GIS\Figure 27 TeCA Oct2012.mxd

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Figure 27

DUNN FIELD TeCA CONCENTRATIONS, OCTOBER 2012

ANNUAL LONG TERM MONITORING REPORT - 2012

DEFENSE DEPOT MEMPHIS, TENNESSEE

Legend

TeCA Ranges (ug/L)

- 0-2
- 2-5
- 5-10
- 10-50
- Not Sampled

TeCA Isopleth (ug/L)

- 2.2
- 5
- 10

Air Sparge Well Area

Original Dunn Field Property Boundary

Potentiometric surface of the Fluvial Aquifer 1-ft. contour

Potentiometric surface of the Fluvial Aquifer 5-ft. contour

0 100 200 300

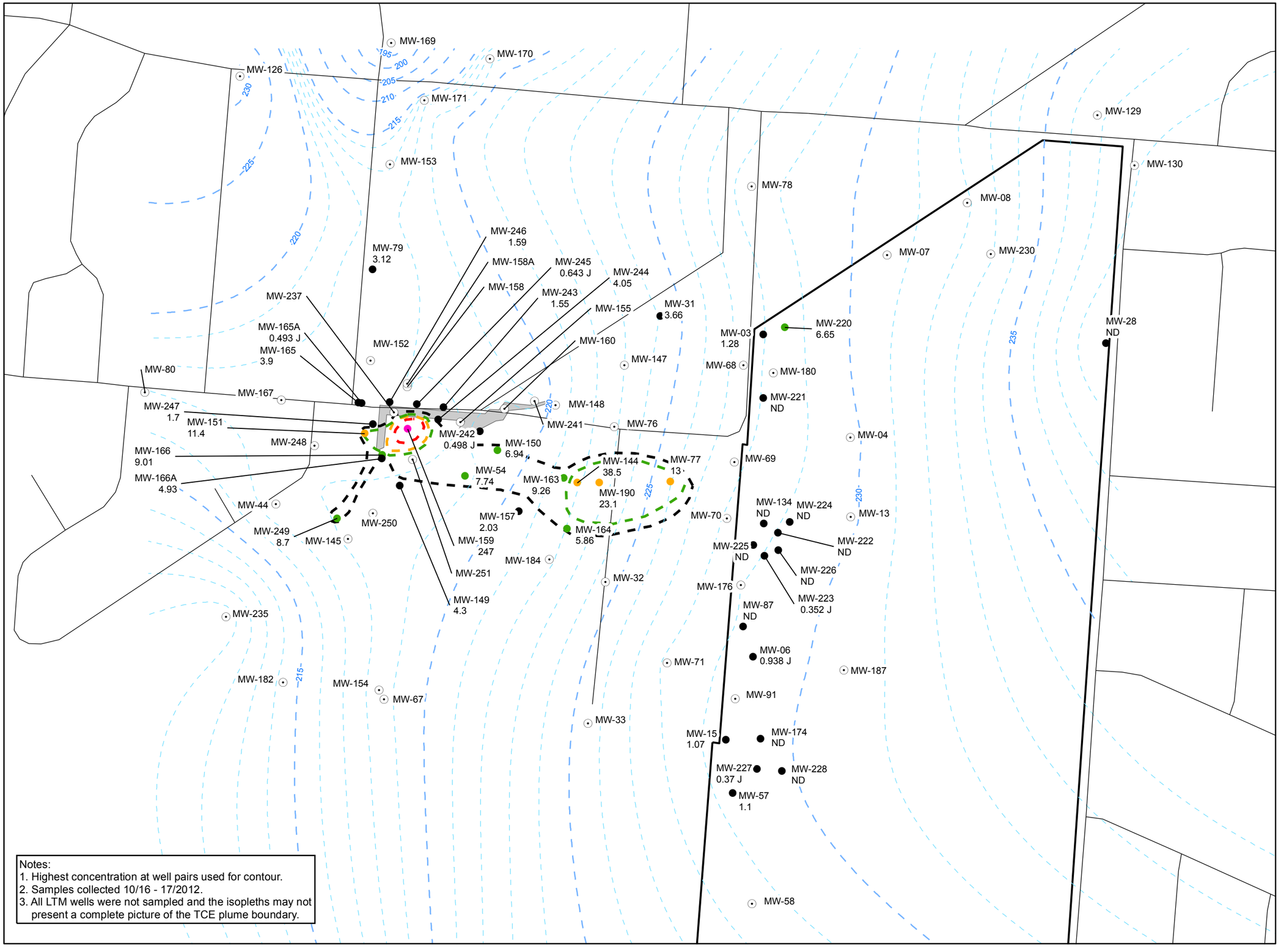
Feet

Installation Location
Memphis, Tennessee



Date: December 2012
Edition: Rev 0

HDR



Notes:
1. Highest concentration at well pairs used for contour.
2. Samples collected 10/16 - 17/2012.
3. All LTM wells were not sampled and the isopleths may not present a complete picture of the TCE plume boundary.

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Figure 28

DUNN FIELD TCE CONCENTRATIONS, OCTOBER 2012

ANNUAL LONG TERM MONITORING REPORT - 2012

DEFENSE DEPOT MEMPHIS, TENNESSEE

Legend

TCE Ranges (ug/L)

- 0-5
- 5-10
- 10-50
- 50-100
- 100-300
- Not Sampled

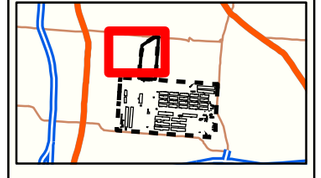
TCE Isopleth (ug/L)

- 5
- 10
- 50
- 100
- Air Sparge Well Area
- Original Dunn Field Property Boundary
- Potentiometric surface of the Fluvial Aquifer 1-ft. contour
- Potentiometric surface of the Fluvial Aquifer 5-ft. contour

0 100 200 300

Feet

Installation Location
Memphis, Tennessee



Date: December 2012
Edition: Rev 0

HDR

Path: G:\DDMT\MI_LTM\LTM 2012 Annual Report\GIS\Figure 28 DF TCE Oct2012.mxd

APPENDIX A

SOIL BORING LOGS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-257
TOTAL DEPTH (FT BGS): 105

PROJECT INFORMATION

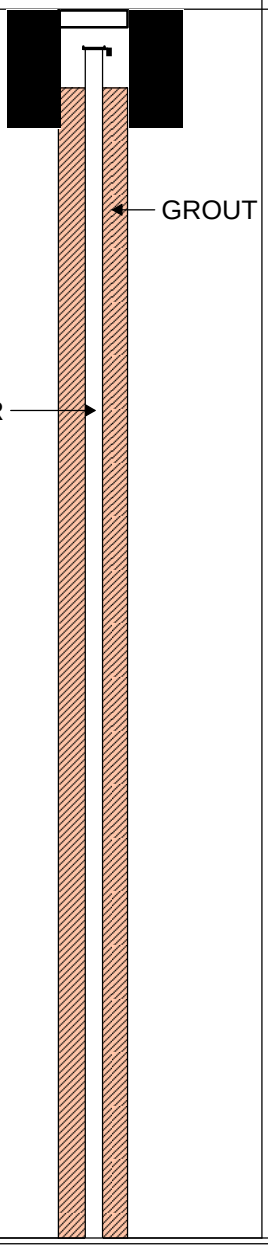
PROJECT: MI LTM
PROJECT NO.: 121842-005
SITE LOCATION: Main Installation
PROJECT MANAGER: T. Holmes
FIELD STAFF: K. Sedlak
BOREHOLE STARTED: 3/26/2012
BOREHOLE FINISHED: 3/26/2012

DRILLING INFORMATION

DRILLING CO.: WDC
DRILLER: Coben Rockhill
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-inch
GROUND SURFACE ELEVATION (FT MSL): 292.67
WATER DEPTH/ DATE: 88.5 ft. btoc on 4/4/2012
BOREHOLE USE: Monitoring Well

NOTES: Well installed 3/27; well pad constructed 3/29 and well developed 4/2-4/12.

Depth (ft, bgs)	Soil Symbol	Soil Description	Well Completion	Well Description
		Gravel crushed limestone road base.		
		CL Silty Clay, 7.5YR 5/6 (Brownish yellow), Dry, Low Plasticity.		
		CL Silty Clay, 7.5YR 5/8 (Strong Brown), Dry, Low Plasticity.	GROUT	
10			RISER	
		CH Silty Clay, 7.5YR 5/8 (Strong Brown), Moist, High Plasticity.		
20				
		CH Silty Clay, 7.5YR 5/8 (Strong Brown), Moist, High Plasticity.		
30				

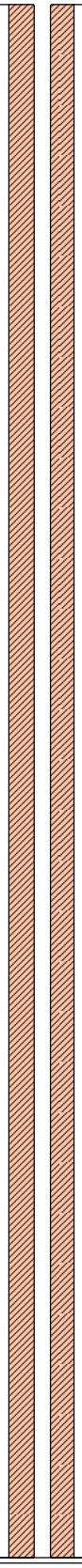


Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-257

TOTAL DEPTH (FT BGS): 105

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CH Sandy Clay with some subangular pebble-sized gravel, 7.5YR 5/8 (Strong Brown), Moist, Low Plasticity		
		SW Fine-coarse Sand and Gravel with some clay, 2.5YR 4/8 (Yellowish Red), Well Graded.		
40		**SW** Fine-medium Sand with some angular gravel and trace clay, 10R 4/8 (Red), Dry, Well Graded.		
		SP Fine-medium Sand with little gravel and trace clay 10R 4/8 (Red), Dry, Poorly Graded.		
50				
		SP Same as above.		
60				

Created By: WTR

Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-257

TOTAL DEPTH (FT BGS): 105

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Fine-coarse Sand and large angular Gravel, 7.5YR 4/8 (Brownish Yellow), Dry, Well Graded.		
70				
		SW Same as above.	BENTONITE	
80		**SP** Fine Sand with trace gravel, 7.5YR 7/6 (Yellow), Dry, Poorly Graded.	SAND PACK	
		CH Silty Clay with trace sand, 2.5YR 8/3 (Pink), gray with red veining, Moist, High Plasticity.	88.5 ft. btoc	
		SP Fine Sand, 10YR 6/8 (Olive Yellow), Moist, Poorly Graded.		
90				

Created By: WTR

Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-257

TOTAL DEPTH (FT BGS): 105

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Fine-coarse Sand and subangular Gravel, 10YR 6/8 (Olive Yellow), Wet, Well Graded.		
		SW Fine-coarse Sand and subangular Gravel, 5YR 5/8 (Strong Brown), Wet, Well Graded,	SCREEN	
		SW Same as above.		
100		**CH** Silty Clay, 5YR, 3/1 (Very Dark Gray), Stiff High Plasticity, Moist.	END CAP BENTONITE	
		End of Log		
110				
120				

Created By: WTR

Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-258
TOTAL DEPTH (FT BGS): 115

PROJECT INFORMATION

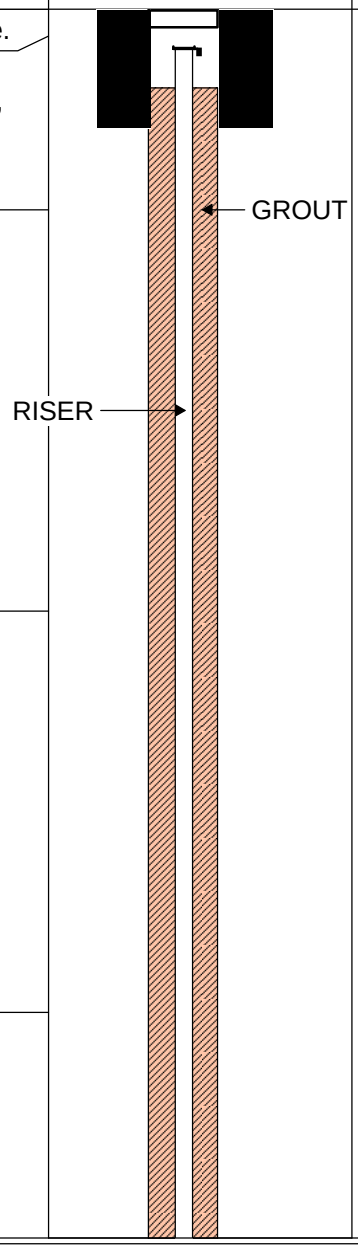
PROJECT: MI LTM
PROJECT NO.: 121842-005
SITE LOCATION: Main Installation
PROJECT MANAGER: T. Holmes
FIELD STAFF: K. Sedlak
BOREHOLE STARTED: 3/28/2012
BOREHOLE FINISHED: 3/29/2012

DRILLING INFORMATION

DRILLING CO.: WDC
DRILLER: Coben Rockhill
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-inch
GROUND SURFACE ELEVATION (FT MSL): 304.83
WATER DEPTH/ DATE: 77.31 on 4/4/2012
BOREHOLE USE: Monitoring Well

NOTES: Drilled to 115 feet; flowing sands filled borehole to 99 feet. Well installed 3/29; well pad constructed 3/30 and well developed 4/4/12.

Depth (ft, bgs)	Soil Symbol	Soil Description	Well Completion	Well Description
		2-inches of asphalt and 6-inches of concrete.		
		CL Silty Clay, 7.5YR 5/6 (Brownish yellow), Dry, Low Plasticity.		
		CL Silty clay, 7.5YR 5/6 (Strong Brown), Moist, Low Plasticity.		
10				
		CL Silty Clay with trace sand and pebbles, 7.5YR 5/6 (Strong Brown), Moist, Medium Plasticity.		
20				
		CL Sandy Clay, 10R 5/8 (Red), with 10YR 7/1 (light gray) veining, Moist, Low to Medium Plasticity.		
30				

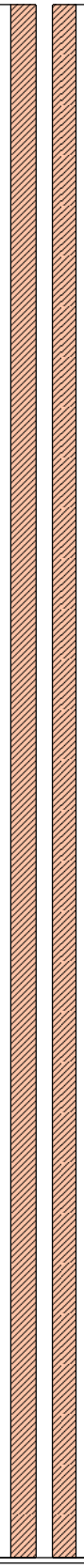


Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-258

TOTAL DEPTH (FT BGS): 115

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				
		CL Same as above.		
40		**SP** Fine Sand, 10YR 8/6 (Yellow), Dry, Poorly Graded.		
		SW Fine-coarse Sand with subrounded gravel, 10YR 8/4 (Very Pale Brown), Dry, Well Graded.		
50				
		SP Fine Sand with small to large subangular gravel, 10YR 8/3 (Very Pale Brown) Dry, Poorly Graded.		
60				

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-258

TOTAL DEPTH (FT BGS): 115

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
70		**SP** Fine-coarse Sand with some pebbles, 7.5YR 7/6 (Reddish Yellow), Dry, Poorly Graded.	BENTONITE	
		SW Fine-coarse Sand with small to medium subrounded Gravel 10Y 3/6 (Dark Red), Dry, Well Graded.	77.31 ft. btoc	
		SW Fine-coarse Sand with small to large subrounded Gravel 10Y 3/6 (Dark Red), Moist, Well Graded.		
80		**SW** Fine-coarse Sand with small to large Gravel, 10YR 6/6 (Brownish Yellow), Wet, Well Graded.	SAND PACK	
		SP Fine Sand, 10YR 7/8 (Yellow), Wet Poorly Graded.		
		SW Fine-coarse Sand with small to medium gravel, 5YR 7/8 (Reddish Yellow), Moist, Well Graded.	SCREEN	
90				

Created By: WTR

Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-258

TOTAL DEPTH (FT BGS): 115

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Fine-coarse Sand with small to large Gravel, 5YR 5/8 (Yellowish Red), Wet, Well Graded.	END CAP	
100		**CL** Silty Sandy Clay, 7.5YR 6/8 (Reddish Yellow), Moist, Low Plasticity.		
		CH Silty Clay 2.5Y 3/3, (Dark Olive Brown), Moist, High Plasticity.		
110				
		End of Log		
120				

Created By: WTR

Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-259
TOTAL DEPTH (FT BGS): 145

PROJECT INFORMATION

PROJECT: MI LTM
PROJECT NO.: 121842-005
SITE LOCATION: Main Installation
PROJECT MANAGER: T. Holmes
FIELD STAFF: K. Sedlak
BOREHOLE STARTED: 3/27/2012
BOREHOLE FINISHED: 3/28/2012

DRILLING INFORMATION

DRILLING CO.: WDC
DRILLER: Coben Rockhill
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-inch
GROUND SURFACE ELEVATION (FT MSL): 291.44
WATER DEPTH/ DATE: 93.27 ft. btoc on 4/3/2012
BOREHOLE USE: Monitoring Well

NOTES: Drilled to 145 feet; sands from natural collapse filled borehole to 118 feet. Well installed 3/28; well pad constructed 3/30 and well developed 4/3/12.

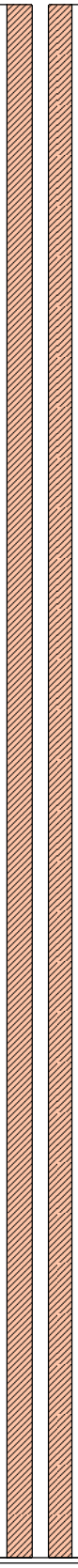
Depth (ft, bgs)	Soil Symbol	Soil Description	Well Completion	Well Description
		2-Inches of Asphalt and 4-inches of base material.		
		CL Silty Clay, 7.5YR 5/6 (Brownish yellow), Dry, Low Plasticity.		
		CH Silty Clay, 7.5YR 5/6 (Yellowish Brown), Moist, High Plasticity.	GROUT, RISER	
10				
		CH Silty Clay with some small angular gravel, 7.5YR 5/6 (Yellowish Brown), Moist, High Plasticity.		
20				
		CH Silty Clay with trace sand, 5YR 5/6 (Strong Brown), Moist, Medium Plasticity.		
30				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-259

TOTAL DEPTH (FT BGS): 145

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Fine Sand with some clay, 10YR 5/8 (Red), Dry, Poorly Graded.		
		SP Fine Sand, 7.5YR 7/8, Dry, Poorly Graded.		
		SW Fine-coarse Sand with small to large subrounded Gravel and some clay, 2.5YR 6/8 (Reddish Yellow), Moist, Well Graded.		
40				
		SP Fine-medium Sand with small subangular gravel, 5YR 6/8 (Reddish Yellow)		
50				
		SP Same as above.		
60				

Created By: WTR

Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-259

TOTAL DEPTH (FT BGS): 145

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Same as above		
70				
		SP Fine Sand, 7.5YR 7/8 (Yellow), Dry, Poorly Graded.		
		SW Fine-coarse Sand with small to large gravel, 7.5YR 6/8 (Brownish Yellow), Moist, Well Graded.		
80				
		SP Fine-coarse Sand with trace small gravel, 2.5YR 5/8 (Yellowish Red), Dry, Poorly Graded.		
		SP Fine Sand, 10YR 7/8 (Yellow), Dry, Poorly Graded.	BENTONITE	
90				

Created By: WTR

Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-259

TOTAL DEPTH (FT BGS): 145

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
			93.28 ft. btoc	
		SP Same as above		SAND PACK
100				
		SW Fine-coarse Sand with small to large gravel, 7.5YR 5/8 (Yellowish Brown), Wet, Well Graded.	SCREEN	
		GW Small to large Gravel with coarse sand and fines, 5YR 5/8 (Strong Brown), Wet, Well Graded.		
110		**SW** Fine-coarse Sand with small to large Gravel, 5YR 5/8 (Strong Brown), Wet, Well Graded.		
		SW Coarse Sand with fines and small to large Gravel 5YR 5/8 (Strong Brown), Wet, Well Graded.		END CAP
120				

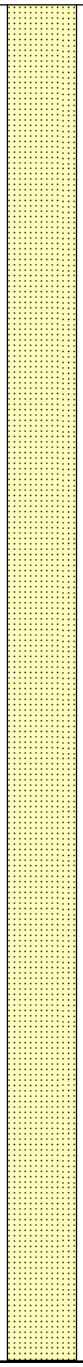
Created By: WTR

Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-259

TOTAL DEPTH (FT BGS): 145

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				
		SW Same as above		
130		**SW** Coarse Sand with fines and small to large Gravel, 7.5YR 7/6 (Yellow), Wet, Well Graded.		
		SP Fine Sand, 10YR 6/8 (Olive Yellow), Wet, Poorly Graded.		
		CH Silty Clay, 2.5Y 3/3 (Dark Olive), Moist, High Plasticity.		
140				
		End of Log		
150				

Created By: WTR

Checked By: KMS

APPENDIX B

WELL INSTALLATION DIAGRAMS

WELL INSTALLATION DIAGRAM

WELL NO.: MW-257

PROJECT: MI LTM
PROJECT NUMBER: 121842-005
SITE LOCATION: DDMT-MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: K. Sedlak
DATE COMPLETED: 3/27/2012
WELL LOCATION: DDMT-MI

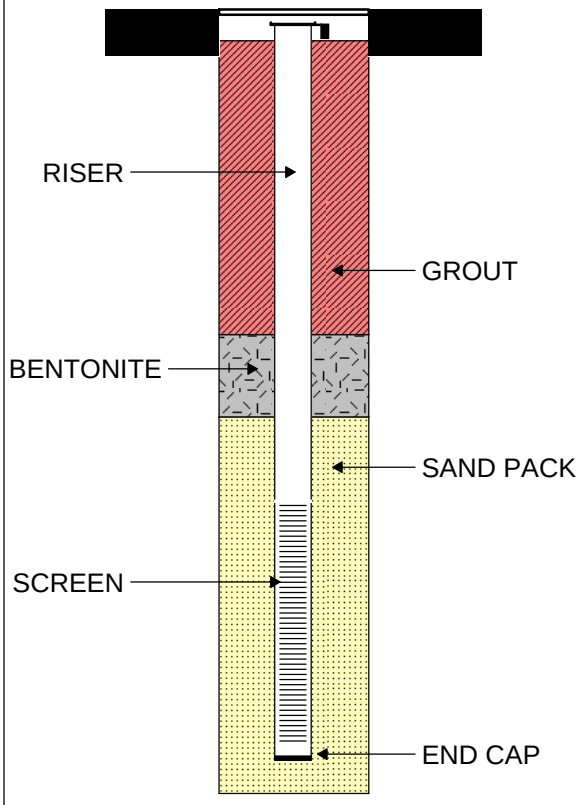
NORTHING: 278549.06
EASTING: 801340.58
GROUND SURFACE ELEVATION (ft, msl): 292.67
TOP OF CASING ELEVATION (ft, msl): 292.22
TOP OF SCREEN ELEVATION (ft, msl): 207.12

DRILLING CO.: WDC
DRILLING METHOD: Sonic
BOREHOLE DIAMETER (in): 6
SURFACE COMPLETION: Flush Mount
BOLLARDS: Yes
WELL DIAMETER (in): 2
TYPE OF SCREEN/RISER MATERIAL: PVC Schedule 40
SLOT SIZE OF SCREEN: 0.010

TYPE OF FILTER PACK: Silica Sand
GRADATION OF FILTER PACK: #5 (8-16) Sand
QUANTITY OF FILTER PACK: 6-50 lb. Bags
TYPE OF BENTONITE IN SEAL: Medium Chips
QUANTITY OF BENTONITE IN SEAL: 2-50 lb. Bag
TYPE OF GROUT: Portland Cement Type I/II
QUANTITY OF GROUT: 12-92 lb. Bags
DEVELOPMENT METHOD: Grundfos
DATE DEVELOPED: 4/2-4/4 2012
DEPTH TO WATER (ft.btoc): 88.5

NOTES: Drilled to 105 feet. Backfilled with bentonite to 101 feet and sand to 100 feet.
Centralizers installed 0, 30 and 60 feet above top of screen.

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3ft. x 3ft. x 4in.

LENGTH OF RISER (ft): 85.1

DEPTH TO TOP OF BENTONITE (ft, bgs): 76

DEPTH TO TOP OF SAND PACK (ft, bgs): 81

LENGTH OF SCREEN (ft): 15.05

LENGTH OF END CAP: 0.35 ft.

TOTAL DEPTH OF WELL (ft, btoc): 100.5

TOTAL DEPTH OF BORING (ft, bgs): 105

Prepared by: WTR **Date: 4/9/2012** **Checked by: KMS** **Date: 4/9/2012**

WELL INSTALLATION DIAGRAM

WELL NO.: MW-258

PROJECT: MI LTM
PROJECT NUMBER: 121842-005
SITE LOCATION: DDMT-MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: K. Sedlak
DATE COMPLETED: 3/29/2012
WELL LOCATION: DDMT-MI

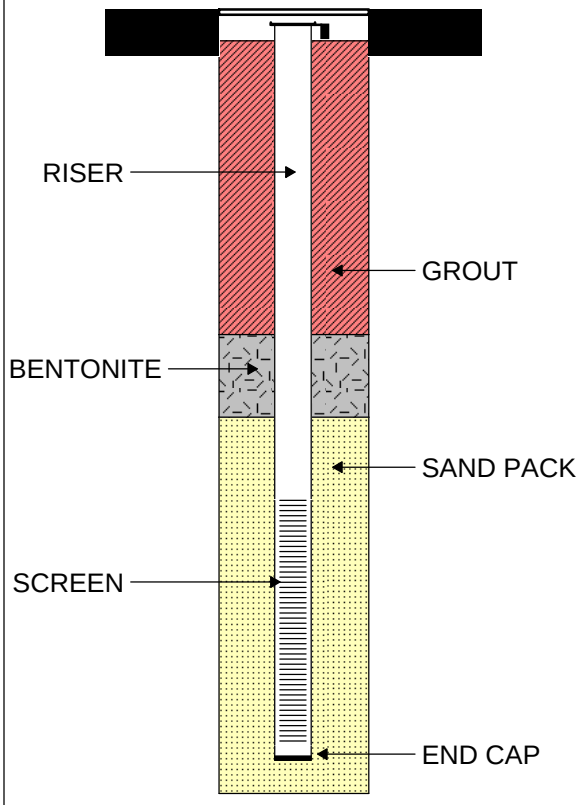
NORTHING: 278125.81
EASTING: 804426.82
GROUND SURFACE ELEVATION (ft, msl): 304.83
TOP OF CASING ELEVATION (ft, msl): 304.37
TOP OF SCREEN ELEVATION (ft, msl): 225.47

DRILLING CO.: WDC
DRILLING METHOD: Sonic
BOREHOLE DIAMETER (in): 6
SURFACE COMPLETION: Flush Mount
BOLLARDS: No
WELL DIAMETER (in): 2
TYPE OF SCREEN/RISER MATERIAL: PVC Schedule 40
SLOT SIZE OF SCREEN: 0.010

TYPE OF FILTER PACK: Silica Sand
GRADATION OF FILTER PACK: #5 (8-16) Sand
QUANTITY OF FILTER PACK: 9-50 lb. Bags
TYPE OF BENTONITE IN SEAL: Medium Chips
QUANTITY OF BENTONITE IN SEAL: 2-50 lb. Bag
TYPE OF GROUT: Portland Cement Type I/II
QUANTITY OF GROUT: 12-92 lb. Bags
DEVELOPMENT METHOD: Grundfos
DATE DEVELOPED: 4/4/2012
DEPTH TO WATER (ft.btoc): 77.3

NOTES: Drilled to 115 feet. Flowing sands filled borehole to 99 feet. Centralizers installed 0, 30 and 60 feet above top of screen.

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3 ft. x 3ft. x 4in.

LENGTH OF RISER (ft): 78.9

DEPTH TO TOP OF BENTONITE (ft, bgs): 68.5

DEPTH TO TOP OF SAND PACK (ft, bgs): 74

LENGTH OF SCREEN (ft): 20.05

LENGTH OF END CAP: 0.35 ft.

TOTAL DEPTH OF WELL (ft, btoc): 99.3

TOTAL DEPTH OF BORING (ft, bgs): 115

Prepared by: WTR **Date: 4/9/2012** **Checked by: KMS** **Date: 4/9/2012**

WELL INSTALLATION DIAGRAM

WELL NO.: MW-259

PROJECT: MI LTM
PROJECT NUMBER: 121842-005
SITE LOCATION: DDMT-MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: K. Sedlak
DATE COMPLETED: 3/28/2012
WELL LOCATION: DDMT-MI

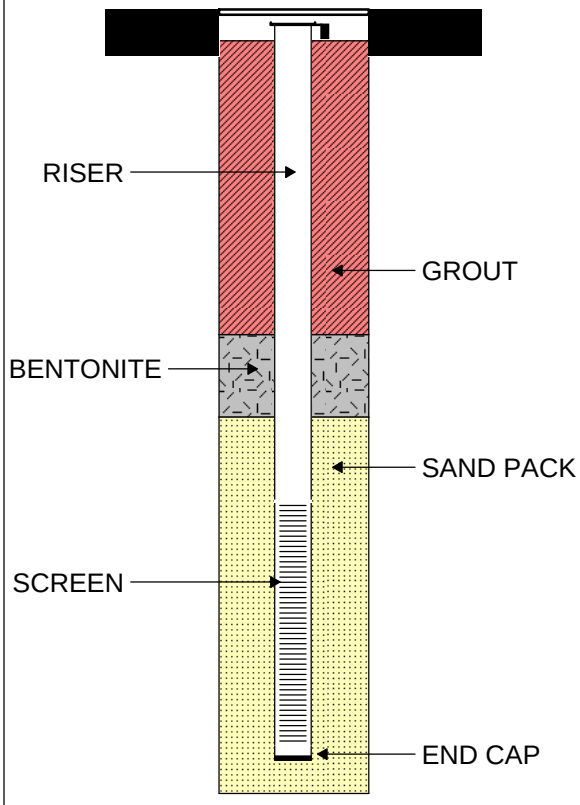
NORTHING: 276279.04
EASTING: 804450.97
GROUND SURFACE ELEVATION (ft, msl): 291.44
TOP OF CASING ELEVATION (ft, msl): 290.77
TOP OF SCREEN ELEVATION (ft, msl): 192.27

DRILLING CO.: WDC
DRILLING METHOD: Sonic
BOREHOLE DIAMETER (in): 6
SURFACE COMPLETION: Flush Mount
BOLLARDS: No
WELL DIAMETER (in): 2
TYPE OF SCREEN/RISER MATERIAL: PVC Schedule 40
SLOT SIZE OF SCREEN: 0.010

TYPE OF FILTER PACK: Silica Sand
GRADATION OF FILTER PACK: #5 (8-16) Sand
QUANTITY OF FILTER PACK: 9-50 lb. Bags
TYPE OF BENTONITE IN SEAL: Medium Chips
QUANTITY OF BENTONITE IN SEAL: 2-50 lb. Bag
TYPE OF GROUT: Portland Cement Type I/II
QUANTITY OF GROUT: 12-92 lb. Bags
DEVELOPMENT METHOD: Grundfos
DATE DEVELOPED: 4/3/2012
DEPTH TO WATER (ft.btoc): 93.3

NOTES: Drilled to 145 feet. Natural collapse to 118 feet. Centalizers at 0, 30 and 60 feet above top of screen.

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3ft. x 3ft. x 4 in.

LENGTH OF RISER (ft): 98.5

DEPTH TO TOP OF BENTONITE (ft, bgs): 88

DEPTH TO TOP OF SAND PACK (ft, bgs): 93.5

LENGTH OF SCREEN (ft): 20.05

LENGTH OF END CAP: 0.35 ft.

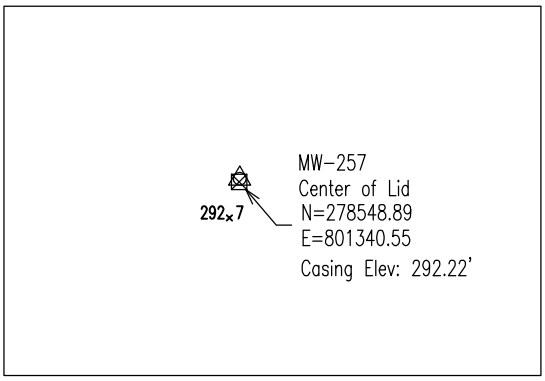
TOTAL DEPTH OF WELL (ft, btoc): 118.6

TOTAL DEPTH OF BORING (ft, bgs): 145

Prepared by: WTR **Date: 4/9/2012** **Checked by: KMS** **Date: 4/9/2012**

APPENDIX C

WELL LOCATION SURVEY PLATS



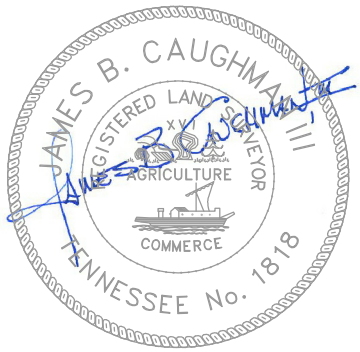
Point Table			
Northing	Easting	Elevation	Description
278547.02	801340.04	292.67'	Ground Elev.
278548.89	801340.55	293.17'	Center of Lid
278549.06	801340.58	292.22'	MW-257 Casing

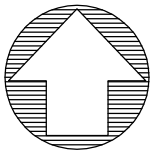
Site Location: at The Memphis Depot.

Locations/Elevations shown are dated: April 4, 2012.

Survey data by: Allen&Hoshall, Inc.
1661 International Drive, #100
Memphis, TN 38120
(901) 820-0820
Date of Survey: 4-4-12
Proj #: 77296
Sheet 1 of 1

Monitoring Well Data
MW-257



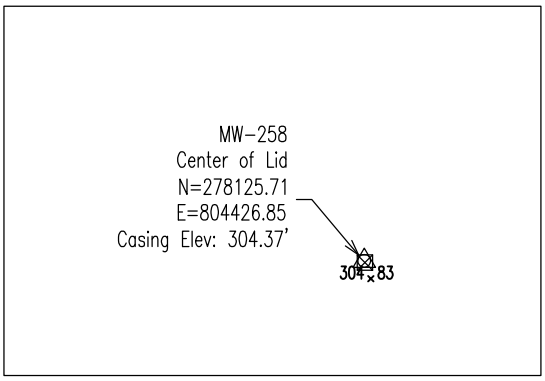


Grid North, NAD27

GRAPHIC SCALE

10 0 5 10

(IN FEET)
1 inch = 10 ft.



Point Table			
Northing	Easting	Elevation	Description
278125.71	804426.85	304.73'	Center of Lid
278124.87	804427.17	304.83'	Concrete Elev
278125.81	804426.82	304.37'	MW-258 Casing

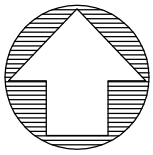
Site Location: at The Memphis Depot.

Locations/Elevations shown are dated:
April 4, 2012

Survey data by: Allen&Hoshall, Inc.
1661 International Drive, #100
Memphis, TN 38120
(901) 820-0820
Date of Survey: 4-4-12
Proj #: 77296
Sheet 1 of 1

Monitoring Well Data
MW-258



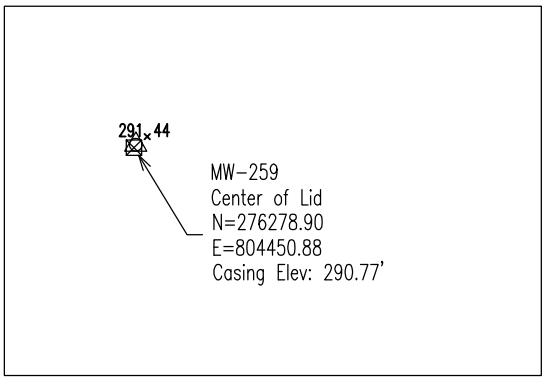


Grid North, NAD27

GRAPHIC SCALE

10 0 5 10

(IN FEET)
1 inch = 10 ft.



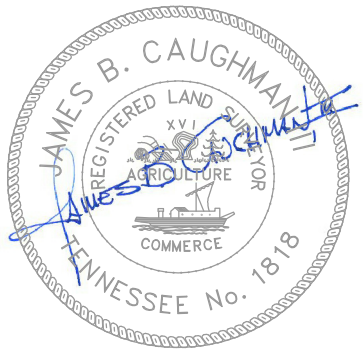
Point Table			
Northing	Easting	Elevation	Description
276279.47	804451.56	291.44'	Concrete Elev
276278.90	804450.88	291.42'	Center of Lid
276279.04	804450.97	290.77'	MW-259 Casing

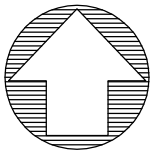
Site Location: at The Memphis Depot.

Locations/Elevations shown are dated:
April 4, 2012.

Survey data by: Allen&Hoshall, Inc.
1661 International Drive, #100
Memphis, TN 38120
(901) 820-0820
Date of Survey: 4-4-12
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Sheet 1 of 1

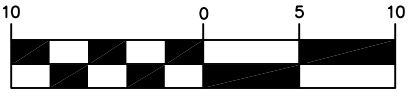
Monitoring Well Data
MW-259





Grid North, NAD27

GRAPHIC SCALE



(IN FEET)
1 inch = 10 ft.

APPENDIX D

COMPLETE ANALYTICAL RESULTS

TABLE D-1
MAIN INSTALLATION ANALYTICAL RESULTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Analyte	Well ID / Lab ID / Date	Units	DR1-3 L12040829-18 4/23/2012	DR1-5 L12040831-15 4/22/2012	DR1-5A L12040831-16 4/22/2012	DR1-6 L12040831-17 4/22/2012	DR1-6A L12040831-18 4/22/2012	DR2-1 L12040829-19 4/23/2012	DR2-1 DUP-8 L12040829-25 4/23/2012
1,1,1,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane		µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane		µg/L	<1	<1 UJ	<1 UJ	<1 UJ	<1 UJ	<1	<1
1,2-Dichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane		µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane		µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane		µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene		µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone		µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene		µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone		µg/L	<10	<10	<10	<10	<10	<10	<10
Benzene		µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform		µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	25.7 J	25.5 J
Chlorobenzene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	0.195 J	6.09	6.28
Chloromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene		µg/L	<1	<1	2.26	1.02	7.71	13.5	13.4
cis-1,3-Dichloropropene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene		µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene		µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)		µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)		µg/L	1.01 J	17.6	2.54 J	<5	<5	<5	<5
Methylene chloride		µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)		µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene		µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene		µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene		µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene		µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	11.2	29.3	46.7	161	51.3	119	122
Toluene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1.48	<1	74.4	1.16	154	6.95	6.86
Trichlorofluoromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration
B: Blank Contamination
UJ: Not detected, RL estimated

TABLE D-1
MAIN INSTALLATION ANALYTICAL RESULTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Analyte	Well ID / Lab ID / Date	Units	DR2-2 L12040762-01 4/20/2012	DR2-3 L12040829-20 4/23/2012	DR2-5 L12040762-02 4/20/2012	DR2-6 L12040829-23 4/23/2012	PMW21-03 L12040829-16 4/23/2012	PMW21-05 L12040829-17 4/23/2012	PMW92-03 L12040831-09 4/21/2012
1,1,1,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane		µg/L	<1	<1	14.3	15.1	<1	<1	<1
1,2,4-Trichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane		µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane		µg/L	<1 UJ	<1	<1 UJ	<1	<1	<1	<1 UJ
1,2-Dichlorobenzene		µg/L	<1	<1	0.175 J	<1	<1	<1	<1
1,2-Dichloroethane		µg/L	<0.5	<0.5	0.305 J	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane		µg/L	<1	<1	0.276 J	0.376 J	<1	<1	<1
1,3,5-Trimethylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane		µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane		µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane		µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene		µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone		µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene		µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone		µg/L	<10	<10	<10	<10	<10	2.57 J	<10
Benzene		µg/L	<0.4	<0.4	0.141 J	<0.4	<0.4	<0.4	<0.4
Bromobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform		µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	4.96	4.23 J	168	27.4 J	<1	<1	<1
Chlorobenzene		µg/L	<0.5	<0.5	0.315 J	<0.5	<0.5	<0.5	<0.5
Chloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.686	0.677	52	11	<0.3	<0.3	<0.3
Chloromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene		µg/L	1.25	0.55 J	65.1	22	1.83	0.378 J	54.2
cis-1,3-Dichloropropene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene		µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene		µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)		µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)		µg/L	<5	<5	<5	<5	4.57 J	<5	<5
Methylene chloride		µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)		µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene		µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene		µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene		µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene		µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	34.5	21.7	103	25.2	83.5	20.3	112
Toluene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2.89	1.87	38	8.5	19.9	1.34	18.9
Trichlorofluoromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	0.394 J	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration
B: Blank Contamination
UJ: Not detected, RL estimated

TABLE D-1
MAIN INSTALLATION ANALYTICAL RESULTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Analyte	Well ID / Lab ID / Date	Units	PMW92-06 L12040831-10 4/21/2012	PMW92-06 DUP-7 L12040831-11 4/21/2012	PMW101-04A L12040831-22 4/22/2012	PMW101-04B L12040831-23 4/22/2012	MW-21 L12040831-01 4/21/2012	MW-26 L12040829-01 4/23/2012
1,1,1,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane		µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene		µg/L	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane		µg/L	78.8	83.3	<1	<1	<1	<1
1,2,4-Trichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene		µg/L	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane		µg/L	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane		µg/L	<1 UJ	<1 UJ	<1 UJ	<1 UJ	<1	<1
1,2-Dichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane		µg/L	<0.5	0.346 J	<0.5	<0.5	0.814	<0.5
1,2-Dichloropropane		µg/L	0.474 J	0.456 J	<1	<1	<1	<1
1,3,5-Trimethylbenzene		µg/L	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane		µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane		µg/L	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane		µg/L	<1	<1	<1	<1	<1	<1
2-Chlorotoluene		µg/L	<1	<1	<1	<1	<1	<1
2-Hexanone		µg/L	<10	<10	<10	<10	<10	<10
4-Chlorotoluene		µg/L	<1	<1	<1	<1	<1	<1
Acetone		µg/L	<10	<10	<10	<10	<10	<10
Benzene		µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene		µg/L	<1	<1	<1	<1	<1	<1
Bromochloromethane		µg/L	<1	<1	<1	<1	<1	<1
Bromodichloromethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform		µg/L	<1	<1	<1	<1	<1	<1
Bromomethane		µg/L	<1	<1	<1	<1	<1	<1
Carbon disulfide		µg/L	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	98.5	97	<1	<1	<1	6.34 J
Chlorobenzene		µg/L	0.169 J	0.165 J	<0.5	<0.5	<0.5	<0.5
Chloroethane		µg/L	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	34.7	34.8	<0.3	<0.3	<0.3	0.74
Chloromethane		µg/L	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene		µg/L	57.7	57.9	2.09	<1	2.57	0.589 J
cis-1,3-Dichloropropene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane		µg/L	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane		µg/L	<1	<1	<1	<1	<1	<1
Ethylbenzene		µg/L	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene		µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene		µg/L	<1	<1	<1	<1	<1	<1
m-,p-Xylene		µg/L	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)		µg/L	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)		µg/L	<5	<5	1.27 J	3.16 J	<5	<5
Methylene chloride		µg/L	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)		µg/L	<10	<10	<10	<10	<10	<10
Naphthalene		µg/L	<1	<1	<1	<1	<1	<1
n-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1
n-Propylbenzene		µg/L	<1	<1	<1	<1	<1	<1
o-Xylene		µg/L	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene		µg/L	<1	<1	<1	<1	<1	<1
sec-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1
Styrene		µg/L	<1	<1	<1	<1	<1	<1
tert-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	137	137	53.4	30.9	88	31.2
Toluene		µg/L	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene		µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	30.3	30	1.44	3.82	7	1.68
Trichlorofluoromethane		µg/L	<1	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration
B: Blank Contamination
UJ: Not detected, RL estimated

TABLE D-1
MAIN INSTALLATION ANALYTICAL RESULTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Analyte	Well ID / Lab ID / Date	Units	MW-39 L12040859-01 4/23/2012	MW-39A L12040859-02 4/23/2012	MW-62 L12040831-04 4/21/2012	MW-64 L12040859-03 4/23/2012	MW-64 DUP-1 L12040859-34 4/23/2012	MW-85 L12040831-05 4/21/2012	MW-88 L12040829-02 4/23/2012
1,1,1,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	0.389 J	0.683	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	1.21	<1	<1	<1	<1
1,1-Dichloropropene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane		µg/L	<1	<1	<1	<1	<1	6.31	<1
1,2,4-Trichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane		µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane		µg/L	<1	<1	<1	<1	<1	<1	<1 UJ
1,2-Dichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane		µg/L	<1	<1	<1	<1	<1	0.246 J	<1
1,3,5-Trimethylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane		µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane		µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane		µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene		µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone		µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene		µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone		µg/L	<10	<10	<10	<10	<10	<10	<10
Benzene		µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform		µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	0.736 J	2.75	2.05	110	9.96 J
Chlorobenzene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	0.137 J	<0.5
Chloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	0.403	0.876 B	0.788 B	23.8	1.38
Chloromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene		µg/L	3.94	19.3	0.88 J	0.475 J	0.417 J	21.1	1.88
cis-1,3-Dichloropropene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene		µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene		µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)		µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)		µg/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride		µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)		µg/L	<10	<10	<10	<10	<10	<10	<10 UJ
Naphthalene		µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene		µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene		µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene		µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	9.78	29	0.692 J	20.8	18.5	44.3	38.4
Toluene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	5.96	7.4	185	35.7	28.1	14.4	3.47
Trichlorofluoromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	1.93	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration
B: Blank Contamination
UJ: Not detected, RL estimated

TABLE D-1
MAIN INSTALLATION ANALYTICAL RESULTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Analyte	Well ID / Lab ID / Date	Units	MW-90 L12040859-04 4/23/2012	MW-92 L12040829-05 4/23/2012	MW-94A L12040859-05 4/23/2012	MW-97 L12040859-06 4/23/2012	MW-98 L12040859-07 4/23/2012	MW-100B L12040831-02 4/21/2012	MW-101T L12040829-06 4/23/2012
1,1,1,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	0.527	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane		µg/L	0.645 J	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	0.634 J	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane		µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane		µg/L	<1	<1	0.261 J	<1	<1	<1	<1
1,3,5-Trimethylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane		µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane		µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane		µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene		µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone		µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene		µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone		µg/L	<10	<10	<10	<10	<10	<10	<10
Benzene		µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform		µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	0.452 J	<1	<1	<1	<1	<1	<1
Chlorobenzene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	2.07	<0.3	<0.3	0.346 B	0.135 JB	<0.3	<0.3
Chloromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene		µg/L	0.267 J	66.1	1.51	<1	0.358 J	5.94	0.395 J
cis-1,3-Dichloropropene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene		µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene		µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)		µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)		µg/L	<5	<5	<5	<5	<5	38.1	1.14 J
Methylene chloride		µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)		µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene		µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene		µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene		µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene		µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	25.6	51.6	15.3	<1	21.7	44.1	66.6
Toluene		µg/L	<1	<1	<1	<1	<1	0.301 JB	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	1.11	<1
trans-1,3-Dichloropropene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	4.37	26.7	8.04	54.7	3.03	0.811 J	<1
Trichlorofluoromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	0.353 J	<1	<1	<1	132	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration
B: Blank Contamination
UJ: Not detected, RL estimated

TABLE D-1
MAIN INSTALLATION ANALYTICAL RESULTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-101B	MW-107T	MW-107B	MW-108	MW-108 DUP-2	MW-113	MW-141
	Lab ID	L12040829-07	L12040859-08	L12040859-09	L12040859-10	L12040859-35	L12040831-06	L12040859-11
	Date	4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/21/2012	4/23/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	0.897 J	0.898 J	<1	0.303 J
1,1-Dichloroethene	µg/L	<1	<1	<1	1.29	1.24	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	3.02	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	<10	<10	<10	<10	<10	<10	<10
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	0.815 J	0.966 J	<1	<1	60.6	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	0.392 B	0.492 B	9.86	9.49	13.4	2.58
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	0.646 J	0.649 J	22.2	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	1.25 J	<5	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	64.1	47	62.5	3.61	3.08	150	24.9
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	3.44	4.15	25.4	21.1	16.9	3.46
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration
B: Blank Contamination
UJ: Not detected, RL estimated

TABLE D-1
MAIN INSTALLATION ANALYTICAL RESULTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Analyte	Well ID / Lab ID / Date	Units	MW-143 L12040829-08 4/23/2012	MW-197A L12040762-03 4/20/2012	MW-197A DUP-3 L12040762-06 4/20/2012	MW-197B L12040831-07 4/21/2012	MW-199B L12040859-12 4/23/2012	MW-200 L12040859-13 4/23/2012
1,1,1,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane		µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene		µg/L	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane		µg/L	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene		µg/L	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane		µg/L	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane		µg/L	<1	<1 UJ	<1 UJ	<1 UJ	<1	<1
1,2-Dichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane		µg/L	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene		µg/L	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane		µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane		µg/L	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane		µg/L	<1	<1	<1	<1	<1	<1
2-Chlorotoluene		µg/L	<1	<1	<1	<1	<1	<1
2-Hexanone		µg/L	<10	<10	<10	<10	<10	<10
4-Chlorotoluene		µg/L	<1	<1	<1	<1	<1	<1
Acetone		µg/L	<10	<10	<10	<10	<10	2.76 J
Benzene		µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene		µg/L	<1	<1	<1	<1	<1	<1
Bromochloromethane		µg/L	<1	<1	<1	<1	<1	<1
Bromodichloromethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform		µg/L	<1	<1	<1	<1	<1	<1
Bromomethane		µg/L	<1	<1	<1	<1	<1	<1
Carbon disulfide		µg/L	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	0.379 J	<1
Chlorobenzene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane		µg/L	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	0.159 JB	0.159 JB
Chloromethane		µg/L	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene		µg/L	<1	0.926 J	0.953 J	3.53	<1	2.98
cis-1,3-Dichloropropene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane		µg/L	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane		µg/L	<1	<1	<1	<1	<1	<1
Ethylbenzene		µg/L	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene		µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene		µg/L	<1	<1	<1	<1	<1	<1
m-,p-Xylene		µg/L	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)		µg/L	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)		µg/L	0.724 J	<5	<5	0.832 J	<5	<5
Methylene chloride		µg/L	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)		µg/L	<10	<10	<10	<10	<10	<10
Naphthalene		µg/L	<1	<1	<1	<1	<1	<1
n-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1
n-Propylbenzene		µg/L	<1	<1	<1	<1	<1	<1
o-Xylene		µg/L	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene		µg/L	<1	<1	<1	<1	<1	<1
sec-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1
Styrene		µg/L	<1	<1	<1	<1	<1	<1
tert-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	0.431 J	31	30.6	28.5	0.412 J	3
Toluene		µg/L	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene		µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	12.5	1.52	1.6	10.3	76.7	3.94
Trichlorofluoromethane		µg/L	<1	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	0.732 J	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration
B: Blank Contamination
UJ: Not detected, RL estimated

TABLE D-1
MAIN INSTALLATION ANALYTICAL RESULTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Analyte	Well ID / Lab ID / Date	Units	MW-202B L12040859-14 4/23/2012	MW-203A L12040762-04 4/20/2012	MW-203B L12040762-05 4/20/2012	MW-204A L12040859-15 4/23/2012	MW-204B L12040859-18 4/23/2012	MW-205A L12040859-19 4/23/2012	MW-205B L12040859-20 4/23/2012
1,1,1,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	0.605	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane		µg/L	0.198 J	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane		µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane		µg/L	<1	<1 UJ	<1 UJ	<1	<1	<1	<1
1,2-Dichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane		µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane		µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane		µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene		µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone		µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene		µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone		µg/L	<10	<10	<10	<10	<10	<10	<10
Benzene		µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform		µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	0.297 J	<1	<1	<1	<1	<1	<1
Chlorobenzene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.655 B	0.284 J	<0.3	<0.3	<0.3	<0.3	<0.3
Chloromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene		µg/L	0.485 J	5.78	4.39	1.11	0.937 J	9.21	5.01
cis-1,3-Dichloropropene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene		µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene		µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)		µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)		µg/L	<5	<5	1.5 J	<5	<5	<5	<5
Methylene chloride		µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)		µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene		µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene		µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene		µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene		µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	10.9	127	24.8	42.7	14.2	28.9	26.9
Toluene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	4.83	2.78	9.92	0.723 J	4.23	7.04	8.17
Trichlorofluoromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	2.13	<1	<1	1.43	1.32

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration
B: Blank Contamination
UJ: Not detected, RL estimated

TABLE D-1
MAIN INSTALLATION ANALYTICAL RESULTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Analyte	Well ID / Lab ID / Date	Units	MW-205B DUP-4 L12040859-36 4/23/2012	MW-206A L12040859-21 4/23/2012	MW-206B L12040859-22 4/23/2012	MW-207A L12040859-23 4/23/2012	MW-207B L12040859-24 4/23/2012	MW-208A L12040859-25 4/23/2012
1,1,1,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane		µg/L	<1	<1	<1	0.874 J	0.407 J	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	1.19	0.716 J	<1
1,1-Dichloropropene		µg/L	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane		µg/L	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene		µg/L	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane		µg/L	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane		µg/L	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane		µg/L	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene		µg/L	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane		µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane		µg/L	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane		µg/L	<1	<1	<1	<1	<1	<1
2-Chlorotoluene		µg/L	<1	<1	<1	<1	<1	<1
2-Hexanone		µg/L	<10	<10	<10	<10	<10	<10
4-Chlorotoluene		µg/L	<1	<1	<1	<1	<1	<1
Acetone		µg/L	2.55 J	<10	<10	<10	<10	<10
Benzene		µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene		µg/L	<1	<1	<1	<1	<1	<1
Bromochloromethane		µg/L	<1	<1	<1	<1	<1	<1
Bromodichloromethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform		µg/L	<1	<1	<1	<1	<1	<1
Bromomethane		µg/L	<1	<1	<1	<1	<1	<1
Carbon disulfide		µg/L	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	1.15	<1
Chlorobenzene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane		µg/L	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	8.14	7.73	<0.3
Chloromethane		µg/L	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene		µg/L	5.3	5.94	1.76	0.442 J	0.881 J	21.3
cis-1,3-Dichloropropene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane		µg/L	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane		µg/L	<1	<1	<1	<1	<1	<1
Ethylbenzene		µg/L	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene		µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene		µg/L	<1	<1	<1	<1	<1	<1
m-,p-Xylene		µg/L	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)		µg/L	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)		µg/L	<5	<5	<5	<5	<5	<5
Methylene chloride		µg/L	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)		µg/L	<10	<10	<10	<10	<10	<10
Naphthalene		µg/L	<1	<1	<1	<1	<1	<1
n-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1
n-Propylbenzene		µg/L	<1	<1	<1	<1	<1	<1
o-Xylene		µg/L	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene		µg/L	<1	<1	<1	<1	<1	<1
sec-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1
Styrene		µg/L	<1	<1	<1	<1	<1	<1
tert-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	24.3	16	15.2	10.5	124	19.3
Toluene		µg/L	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene		µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	7.19	11.5	6.51	15.7	30.5	18.9
Trichlorofluoromethane		µg/L	<1	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	0.763 J	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration
B: Blank Contamination
UJ: Not detected, RL estimated

TABLE D-1
MAIN INSTALLATION ANALYTICAL RESULTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Analyte	Well ID / Lab ID / Date	Units	MW-208B L12040859-26 4/23/2012	MW-209B L12040859-27 4/23/2012	MW-210A L12040859-28 4/23/2012	MW-210B L12040859-29 4/23/2012	MW-212 L12040831-20 4/22/2012	MW-212 DUP-5 L12040831-24 4/22/2012	MW-213 L12040831-08 4/21/2012
1,1,1,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	1.81
1,1-Dichloropropene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane		µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane		µg/L	<1	<1	<1	<1	<1 UJ	<1 UJ	<1 UJ
1,2-Dichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane		µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane		µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane		µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene		µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone		µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene		µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone		µg/L	<10	<10	<10	<10	<10	<10	<10
Benzene		µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform		µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	0.814 J	<1	<1	<1	<1	0.661 J
Chlorobenzene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.373 B	0.227 JB	0.127 JB	<0.3	<0.3	<0.3	0.217 J
Chloromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene		µg/L	1.39	<1	1.92	0.902 J	<1	<1	<1
cis-1,3-Dichloropropene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene		µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene		µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)		µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)		µg/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride		µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)		µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene		µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene		µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene		µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene		µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	24.2	0.392 J	10.4	7.42	<1	<1	<1
Toluene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	25	24.3	4.43	6.76	12.2	11.9	44.6
Trichlorofluoromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration
B: Blank Contamination
UJ: Not detected, RL estimated

TABLE D-1
MAIN INSTALLATION ANALYTICAL RESULTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Analyte	Well ID / Lab ID / Date	Units	MW-214A L12040859-30 4/23/2012	MW-214B L12040859-31 4/23/2012	MW-217 L12040859-32 4/23/2012	MW-218 L12040859-33 4/23/2012	MW-219 L12040829-09 4/23/2012	MW-252 L12040829-10 4/23/2012	MW-253 L12040829-11 4/23/2012
1,1,1,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane		µg/L	0.298 J	<0.5	<0.5	2.4	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	0.955 J	<1	<1	<1
1,1-Dichloropropene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane		µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	0.834	<0.5	<0.5
1,2-Dichloropropane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane		µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane		µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane		µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene		µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone		µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene		µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone		µg/L	<10	<10	<10	<10	<10	<10	2.77 J
Benzene		µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform		µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	1.03	0.942 J	33.7	6.73	<1	<1	<1
Chlorobenzene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	2.93	2.7	3.54	2.28	<0.3	<0.3	<0.3
Chloromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene		µg/L	<1	<1	0.555 J	<1	0.677 J	<1	<1
cis-1,3-Dichloropropene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene		µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene		µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)		µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)		µg/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride		µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)		µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene		µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene		µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene		µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene		µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	7.59	5.78	17.9	17.9	11	1.65	<1
Toluene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2.69	2.6	41.7	44.7	1.36	0.891 J	<1
Trichlorofluoromethane		µg/L	<1	<1	1.06	1.31	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration
B: Blank Contamination
UJ: Not detected, RL estimated

TABLE D-1
MAIN INSTALLATION ANALYTICAL RESULTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-254	MW-255	MW-256	MW-257	MW-257 DUP-6	MW-258	MW-259
	Lab ID	L12040829-12	L12040829-13	L12040829-14	L12040829-15	L12040829-24	L12040831-12	L12040831-21
	Date	4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/22/2012	4/22/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	0.252 J	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	1.34	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1 UJ	<1 UJ
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.263 J
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	0.362 J
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	<10	<10	<10	<10	<10	<10	<10
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	0.888 J	<1	0.524 J	<1	<1	<1	4.69
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.201 J	<0.3	2.25	<0.3	<0.3	2.34	2.69
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	0.321 J	<1	<1	<1	<1	1.75	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5	4.26 J	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	0.573 J	<1	34.3	<1	<1	19.4	15.1
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	2.63	0.586 J	7.82	<1	<1	57.7 UJ	15.7
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration
B: Blank Contamination
UJ: Not detected, RL estimated

TABLE D-2
MAIN INSTALLATION ANALYTICAL RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	DR1-1	DR1-1A	DR1-2	DR1-3	DR1-3-DUP-11	DR1-4	DR1-5
	Lab ID	L12100776-08	L12100776-09	L12100776-10	L12100776-11	L12100776-21	L12100776-12	L12100845-01
	Date	10/19/2012	10/19/2012	10/19/2012	10/19/2012	10/19/2012	10/19/2012	10/20/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	<10	<10	<10	6.3 J	6.18 J	<10	<10
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	0.427	0.129 J	<0.3	<0.3	<0.3	<0.3
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	1.52	<1	0.856 J	<1	<1	<1	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	4.1 J	3.56 J	<5	31.8 J
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	2.97	0.612 J	2.2	16.2	16.1	1.25	38.6
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.309 J	2.3	<1	1.93	1.78	<1	<1
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-2
MAIN INSTALLATION ANALYTICAL RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	DR1-5A	DR1-6	DR1-6A	DR1-7	DR1-8	DR2-1	DR2-2
	Lab ID	L12100845-02	L12100845-03	L12100845-06	L12100776-13	L12100776-14	L12100847-04	L12100842-01
	Date	10/20/2012	10/20/2012	10/20/2012	10/19/2012	10/19/2012	10/21/2012	10/22/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	0.244 J	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	0.389 J	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	<10	<10	<10	<10	<10	4.86 J	<10
Benzene	µg/L	<0.4	<0.4	0.186 J	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	26.6	5.28
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.167 J	<0.3	0.238 J	<0.3	<0.3	6.38	0.944
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	2.41	0.865 J	8.58	0.401 J	<1	13.9	1.66
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	2.27 J	<5	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	49.7	186	53.8	1.6	<1	180	41.6
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	80.5	1.49	165	<1	<1	6.85	2.92
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-2
MAIN INSTALLATION ANALYTICAL RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	DR2-3	DR2-4	DR2-5	DR2-6	PMW21-03	PMW21-05	PMW92-03
	Lab ID	L12100847-05	L12100847-06	L12100777-01	L12100847-07	L12100776-15	L12100776-16	L12100842-02
	Date	10/21/2012	10/21/2012	10/19/2012	10/21/2012	10/19/2012	10/19/2012	10/22/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	19.4	19.7	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	0.165 J	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	0.436 J	0.25 J	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	0.354 J	0.64 J	<1	<1	0.21 J
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	0.248 J	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	<10	<10	<10	6.81 J	3.81 J	4.48 J	<10
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	4.24	3.47	196	46.5 J	<1	<1	<1
Chlorobenzene	µg/L	<0.5	<0.5	0.26 J	0.203 J	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.727	0.683	56.1	10.6	<0.3	<0.3	<0.3
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	0.617 J	0.375 J	72.8	29.6	<1	2.11	42.6
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5	12.1	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	24.9	11	99.9	50.2 J	12.3	88.8	145
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	0.271 J	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	1.85	1.12	38.2	11.6	0.867 J	21.2	15.2
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	0.76 J	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-2
MAIN INSTALLATION ANALYTICAL RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	PMW85-05	PMW101-04A	PMW101-04A-DUP-12	PMW101-04B	PZ-03-16	MW-16
	Lab ID	L12100832-01	L12100842-03	L12100842-04	L12100777-02	L12100841-01	L12100847-19
	Date	10/22/2012	10/22/2012	10/22/2012	10/19/2012	10/22/2012	10/21/2012
Analyte	**Units**						
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	62.7	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	0.329 J	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	0.593	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	1.02	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	0.234 J	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	0.134 J	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1
Acetone	µg/L	<10	<10	<10	<10	<10	4.12 J
Benzene	µg/L	0.174 J	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	1.87 J	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	62.8	<1	<1	<1	<1	<1
Chlorobenzene	µg/L	0.325 J	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	30.1	<0.3	<0.3	<0.3	0.261 J	<0.3
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	101	1.35	1.4	0.281 J	<1	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	2.04 J	2.13 J	5.89 J	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	70.1	46.9	48.6	28.5	3.34	<1
Toluene	µg/L	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	24	0.977 J	1.01	5.6	3.76	<1
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	0.304 J	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-2
MAIN INSTALLATION ANALYTICAL RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-19	MW-21	MW-22	MW-22-DUP-1	MW-23	MW-24	MW-25A
	Lab ID	L12100776-22	L12100845-07	L12100776-23	L12100776-17	L12100848-13	L12100847-20	L12100776-24
	Date	10/19/2012	10/20/2012	10/19/2012	10/19/2012	10/20/2012	10/21/2012	10/19/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	0.988	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	<10	<10	<10	<10	4.18 J	3.01 J	<10
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	2.07
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.334	<0.3	<0.3	<0.3	<0.3	0.241 J	0.28 J
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	3.64	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	1.39 J	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	121	<1	0.289 J	<1	<1	6.24
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.651 J	9.17	<1	<1	<1	<1	0.301 J
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	0.298 J
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-2
MAIN INSTALLATION ANALYTICAL RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-25A-DUP-2	MW-26	MW-34	MW-34-DUP-3	MW-38	MW-39	MW-39A
	Lab ID	L12100776-18	L12100847-21	L12100776-25	L12100776-19	L12100847-22	L12100848-14	L12100848-15
	Date	10/19/2012	10/21/2012	10/19/2012	10/19/2012	10/21/2012	10/20/2012	10/20/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	<10	<10	<10	<10	4.45 J	9.67 J	10.6
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	2.08	4.78	0.565 J	0.529 J	<1	<1	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.316	0.683	0.4	0.408	0.211 J	<0.3	<0.3
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	0.496 J	<1	<1	<1	7.24	14.5
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	6.5	25.9	0.459 J	0.461 J	0.591 J	5.08	30.9
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.28 J	1.45	0.718 J	0.705 J	4.86	10.1	8.18
Trichlorofluoromethane	µg/L	0.273 J	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	1.94

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-2
MAIN INSTALLATION ANALYTICAL RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-50	MW-52	MW-53	MW-55	MW-62	MW-63A	MW-63B
	Lab ID	L12100776-26	L12100776-27	L12100776-28	L12100846-04	L12100841-04	L12100847-23	L12100847-24
	Date	10/19/2012	10/19/2012	10/19/2012	10/21/2012	10/22/2012	10/21/2012	10/21/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	0.386 J
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	1.04	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	<10	<10	3.52 J	<10	<10	3.58 J	4.04 J
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	0.519 J	<1	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	1.57	0.729	<0.3	<0.3	0.457	<0.3	0.578
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	0.617 J	0.641 J	<1	<1	3.76	<1	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	0.927 J	<5	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	0.492 J	7.55	2.15	<1	0.482 J	2.31	2.17
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	2.65	1.15	<1	<1	163	1.39	2.72
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	1.2	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-2
MAIN INSTALLATION ANALYTICAL RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-64	MW-64-DUP-4	MW-66A	MW-85	MW-88	MW-89	MW-90
	Lab ID	L12100847-25	L12100847-10	L12100776-29	L12100777-04	L12100847-26	L12100848-16	L12100848-17
	Date	10/21/2012	10/21/2012	10/19/2012	10/19/2012	10/21/2012	10/20/2012	10/20/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	0.557	0.448 J	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	0.75 J
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	0.522 J
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	10.6	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5.12	4.71	0.545	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	0.335 J	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	7.02 J	7.39 J	<10	<10	<10	4.27 J	4.17 J
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	2.62	2.51	<1	112	11.8	0.325 J	0.291 J
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	1.16	1.18	<0.3	28.1	1.7	0.305	1.64
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	0.488 J	0.486 J	<1	30.3	2.47	<1	0.34 J
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	20.8	20.9	2.48	51.5	46.3	4.25	25.6
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	34.8	34.7	<1	17.4	3.69	1.9	4.08
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-2
MAIN INSTALLATION ANALYTICAL RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-92	MW-93	MW-94A	MW-96	MW-97	MW-98	MW-99
	Lab ID	L12100847-27	L12100847-28	L12100847-29	L12100776-30	L12100848-18	L12100848-19	L12100776-33
	Date	10/21/2012	10/21/2012	10/21/2012	10/19/2012	10/20/2012	10/20/2012	10/19/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	0.899	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	0.374 J	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	4.89 J	3.16 J	5.43 J	<10	7.73 J	5.84 J	<10
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	1.15	<1	<1	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	0.149 J	0.288 J	0.311	0.134 J	0.3
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	50.9	<1	1.63	<1	<1	0.5 J	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	78.3	<1	32.1	0.306 J	<1	41.7	<1
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	21	<1	10.2	<1	62	3.1	<1
Trichlorofluoromethane	µg/L	<1	<1	<1	0.672 J	<1	<1	<1
Vinyl chloride	µg/L	0.61 J	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-2
MAIN INSTALLATION ANALYTICAL RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-100B	MW-101T	MW-101B	MW-102B	MW-103	MW-104	MW-107T
	Lab ID	L12100777-05	L12100776-34	L12100776-35	L12100776-36	L12100847-30	L12100847-31	L12100847-32
	Date	10/19/2012	10/19/2012	10/19/2012	10/19/2012	10/21/2012	10/21/2012	10/21/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	2	1.08	<1
1,1-Dichloroethene	µg/L	0.872 J	<1	<1	<1	2.11	2.33	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	<10	<10	2.61 J	<10	<10	<10	4.52 J
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	0.579 J
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3	<0.3	10.4	9.89	0.391
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	16.3	<1	<1	<1	0.419 J	0.637 J	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	37.7 J	4.39 J	4.61 J	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	66.5	66.2	63.2	<1	<1	<1	36.5
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	1.27	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	3.02	<1	<1	<1	10.6	21.9	3.17
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	164 J	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-2
MAIN INSTALLATION ANALYTICAL RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-107B	MW-108	MW-113	MW-140	MW-141	MW-142	MW-143
	Lab ID	L12100847-35	L12100847-36	L12100842-05	L12100848-20	L12100848-21	L12100848-22	L12100776-37
	Date	10/21/2012	10/21/2012	10/22/2012	10/20/2012	10/20/2012	10/20/2012	10/19/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	0.83 J	<1	<1	0.324 J	<1	<1
1,1-Dichloroethene	µg/L	<1	1.37	<1	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	4.27	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	0.232 J	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	5.38 J	6.48 J	<10	3.93 J	4.57 J	3.38 J	4.77 J
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	0.719 J	<1	65.6	0.313 J	<1	<1	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.422	10.1	16.4	0.146 J	3.04	<0.3	<0.3
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	0.927 J	28.6	0.294 J	<1	<1	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5	3.91 J	2.05 J
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	46.5	2.67	166	2.51	27.4	<1	0.368 J
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	3.47	31.5	18.6	1.6	3.68	4.16	13.5
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-2
MAIN INSTALLATION ANALYTICAL RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-197A	MW-197B	MW-198	MW-199A	MW-199B	MW-199B-DUP-6	MW-200
	Lab ID	L12100846-05	L12100846-06	L12100848-23	L12100848-24	L12100848-05	L12100848-02	L12100848-06
	Date	10/21/2012	10/21/2012	10/20/2012	10/20/2012	10/20/2012	10/20/2012	10/20/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	<10	<10	5.21 J	<10	5.49 J	5.73 J	6.17 J
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	0.386 J	0.355 J	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.139 J	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	0.798 J	4.6	<1	<1	<1	<1	3.08
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	1.67 J	<5	2.09 J	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	27.7	27.1	<1	<1	0.676 J	0.562 J	11.8
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	1.34	11	2.63	1	84.9	79.3	7.14
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	1.41	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-2
MAIN INSTALLATION ANALYTICAL RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-202A	MW-202B	MW-203A	MW-203B	MW-204A	MW-204B	MW-204B-DUP-7
	Lab ID	L12100848-07	L12100848-08	L12100846-02	L12100846-03	L12100848-09	L12100848-10	L12100848-03
	Date	10/20/2012	10/20/2012	10/21/2012	10/21/2012	10/20/2012	10/20/2012	10/20/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	0.684	0.483 J
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	2.5 J	3.5 J	<10	<10	5.66 J	5.09 J	<10
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	0.353 J	<1	<1	<1	<1	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.23 J	0.606	<0.3	<0.3	<0.3	0.134 J	<0.3
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	0.401 J	8.54	1.59	0.937 J	1.08	0.907 J
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	0.993 J	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	2.28	21.3	118	11.1	47.9	13.8	13.2
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	1.57	5.11	2.89	4.74	0.756 J	5.33	5.02
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	0.697 J	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-2
MAIN INSTALLATION ANALYTICAL RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-205A	MW-205B	MW-206A	MW-206B	MW-207A	MW-207B	MW-208A
	Lab ID	L12100848-11	L12100848-25	L12100848-26	L12100848-27	L12100847-37	L12100847-38	L12100848-28
	Date	10/20/2012	10/20/2012	10/20/2012	10/20/2012	10/21/2012	10/21/2012	10/20/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	0.933 J	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	0.937 J	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	2.9	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	5.53 J	4.44 J	7.11 J	5.49 J	6.48 J	2.82 J	7.28 J
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	2.78	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3	<0.3	11	0.519	<0.3
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	8.84	5.29	4.21	2.14	0.599 J	<1	18.2
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	0.525 J	1.25 J	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	33.1	27.1	18.5	19.1	16.4	11.8	21.4
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	8.38	10.4	10.5	7.83	23.6	3.24	20.2
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	0.393 J	0.87 J	<1	<1	<1	<1	1.97 J

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-2
MAIN INSTALLATION ANALYTICAL RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-208B	MW-209A	MW-209B	MW-210A	MW-210B	MW-211	MW-212
	Lab ID	L12100848-29	L12100848-30	L12100848-31	L12100848-32	L12100848-35	L12100847-39	L12100841-05
	Date	10/20/2012	10/20/2012	10/20/2012	10/20/2012	10/20/2012	10/21/2012	10/22/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	6.01 J	2.74 J	5.72 J	4.8 J	5.24 J	3.2 J	<10
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	0.526 J	<1	<1	<1	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.688	<0.3	0.208 J	<0.3	<0.3	0.166 J	<0.3
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	1.13	<1	<1	2.08	0.723 J	<1	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	3.86 J	<5	0.766 J	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	26.5	<1	0.557 J	8.21	4.8	<1	<1
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	17.9	3.06	32	4.62	10.2	0.39 J	13
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-2
MAIN INSTALLATION ANALYTICAL RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-212-DUP-8	MW-213	MW-214A	MW-214A-DUP-9	MW-214B	MW-215A
	Lab ID	L12100841-02	L12100841-06	L12100847-40	L12100847-11	L12100847-12	L12100847-13
	Date	10/22/2012	10/22/2012	10/21/2012	10/21/2012	10/21/2012	10/21/2012
Analyte	**Units**						
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	0.538	0.275 J	0.326 J	0.301 J
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	1.65	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1
Acetone	µg/L	<10	<10	<10	<10	6.27 J	5.11 J
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	0.553 J	1.01	1.1	1.19	1.09
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	0.215 J	2.7	3.2	2.53	2.4
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	1.03 J	1.19 J	1.01 J	1.13 J
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	6.54	7.49	6.79	6.06
Toluene	µg/L	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	13.4	34.2	2.46	2.63	2.28	3
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-2
MAIN INSTALLATION ANALYTICAL RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-215B	MW-216	MW-216-DUP-5	MW-217	MW-218	MW-219	MW-229
	Lab ID	L12100847-14	L12100848-12	L12100848-01	L12100847-15	L12100847-18	L12100776-01	L12100776-02
	Date	10/21/2012	10/20/2012	10/20/2012	10/21/2012	10/21/2012	10/19/2012	10/19/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	0.658	2.19	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	1.18	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	0.362 J	0.67	1.77	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	0.475 J	0.489 J	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	4.87 J	5.48 J	3.68 J	7.09 J	7.33 J	5.02 J	<10
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	0.704 J	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	1.3	<1	<1	23.9	8.22	<1	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.845	<0.3	<0.3	4.12	2.82	<0.3	<0.3
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	0.519 J	0.379 J	1.64	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	0.76 J	<5	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	5.91	<1	<1	23.7	20.3	25.2	<1
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	1.71	0.363 J	0.284 J	45 J	43.9	2.9	<1
Trichlorofluoromethane	µg/L	<1	<1	<1	1.52	1.61	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-2
MAIN INSTALLATION ANALYTICAL RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-252	MW-253	MW-253-DUP-10	MW-254	MW-255	MW-256	MW-257
	Lab ID	L12100776-03	L12100776-04	L12100776-20	L12100776-05	L12100776-06	L12100776-07	L12100847-01
	Date	10/19/2012	10/19/2012	10/19/2012	10/19/2012	10/19/2012	10/19/2012	10/21/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	0.386 J	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	4.59 J	5.63 J	3.84 J	5.23 J	3.97 J	6.27 J	2.57 J
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	1.15	<1	0.404 J	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3	0.295 J	<0.3	2.47	<0.3
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	0.649 J	<1	39.5	<1
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	2.37	0.532 J	13.7	<1
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-2
MAIN INSTALLATION ANALYTICAL RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-258	MW-259
	Lab ID	L12100847-02	L12100847-03
	Date	10/21/2012	10/21/2012
Analyte	**Units**		
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1
1,1-Dichloroethane	µg/L	0.351 J	<1
1,1-Dichloroethene	µg/L	2.1	<1
1,1-Dichloropropene	µg/L	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2
1,2-Dibromoethane	µg/L	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1
1,2-Dichloroethane	µg/L	<0.5	0.388 J
1,2-Dichloropropane	µg/L	<1	0.398 J
1,3,5-Trimethylbenzene	µg/L	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1
2,2-Dichloropropane	µg/L	<1	<1
2-Chlorotoluene	µg/L	<1	<1
2-Hexanone	µg/L	<10	<10
4-Chlorotoluene	µg/L	<1	<1
Acetone	µg/L	<10	7.02 J
Benzene	µg/L	<0.4	<0.4
Bromobenzene	µg/L	<1	<1
Bromochloromethane	µg/L	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5
Bromoform	µg/L	<1	<1
Bromomethane	µg/L	<1	<1
Carbon disulfide	µg/L	<1	<1
Carbon tetrachloride	µg/L	<1	5.12
Chlorobenzene	µg/L	<0.5	<0.5
Chloroethane	µg/L	<1	<1
Chloroform	µg/L	4.1	3.07
Chloromethane	µg/L	<1	<1
cis-1,2-Dichloroethene	µg/L	2.54	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5
Dibromomethane	µg/L	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1
Ethylbenzene	µg/L	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1
m-,p-Xylene	µg/L	<2	<2
MEK (2-Butanone)	µg/L	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	4.49 J	<5
Methylene chloride	µg/L	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10
Naphthalene	µg/L	<1	<1
n-Butylbenzene	µg/L	<1	<1
n-Propylbenzene	µg/L	<1	<1
o-Xylene	µg/L	<1	<1
p-Isopropyltoluene	µg/L	<1	<1
sec-Butylbenzene	µg/L	<1	<1
Styrene	µg/L	<1	<1
tert-Butylbenzene	µg/L	<1	<1
Tetrachloroethene	µg/L	22.1	15.1
Toluene	µg/L	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1
Trichloroethene	µg/L	93	15.9
Trichlorofluoromethane	µg/L	<1	<1
Vinyl chloride	µg/L	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-3
DUNN FIELD ANALYTICAL RESULTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-03	MW-04	MW-06	MW-07	MW-08	MW-15	MW-28
	Lab ID	L12040763-01	L12040763-02	L12040763-03	L12040763-06	L12040692-27	L12040764-01	L12040764-02
	Date	4/19/2012	4/19/2012	4/19/2012	4/19/2012	4/18/2012	4/19/2012	4/19/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	0.277 J	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	0.497 J	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	0.874 J	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	16.2	2.99	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	<10	<10	<10	<10	<10	<10	<10
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	0.162 J	2.9	0.192 J	<0.3	1.34	<0.3
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	0.311 J	0.29 J	<1	<1	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	0.871 J	<1	<1	35.1	5.25	0.62 J	<1
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	1	<1	1.06	30.3	7	0.724 J	<1
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-3
DUNN FIELD ANALYTICAL RESULTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-31	MW-44	MW-44 DUP-1	MW-54	MW-57	MW-68	MW-69
	Lab ID	L12040764-03	L12040782-05	L12040782-14	L12040692-08	L12040763-07	L12040764-04	L12040782-06
	Date	4/19/2012	4/20/2012	4/20/2012	4/18/2012	4/19/2012	4/19/2012	4/20/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	2.87	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	2.55	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	2.76 J	<10	<10	<10	<10	<10	<10
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	0.334 J	<1	<1	<1	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	2.84	2.91	0.521	8.11	<0.3	<0.3
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	4.75	<1	<1	0.48 J	<1	<1	<1
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	4.87	2.03	2.21	8.74	0.961 J	<1	<1
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-3
DUNN FIELD ANALYTICAL RESULTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-70	MW-71	MW-76	MW-77	MW-79	MW-80	MW-80 DUP-2
	Lab ID	L12040764-05	L12040764-06	L12040764-07	L12040764-08	L12040692-09	L12040782-07	L12040782-15
	Date	4/19/2012	4/19/2012	4/19/2012	4/19/2012	4/18/2012	4/20/2012	4/20/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	0.505	0.953	0.398 J	6.01	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	0.368 J	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	10.1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	<10	<10	<10	<10	<10	<10	<10
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	0.53 J	<1	<1	<1	<1	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	10.6	<0.3	0.509	0.233 J	<0.3	<0.3
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	0.768 J	0.264 J	<1	0.478 J	12.1	<1	<1
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	1.34	3.02	0.923 J	8.48	10.3	<1	<1
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-3
DUNN FIELD ANALYTICAL RESULTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-87	MW-91	MW-126	MW-129	MW-130	MW-134	MW-144
	Lab ID	L12040764-09	L12040763-08	L12040692-28	L12040764-10	L12040764-11	L12040782-08	L12040764-12
	Date	4/19/2012	4/19/2012	4/18/2012	4/19/2012	4/19/2012	4/20/2012	4/19/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	0.558 J	1.27	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	0.207 J	<0.5	<0.5	<0.5	<0.5	<0.5	16.6
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	1.3	1.45	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	13.7	25.7	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	0.305 J	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	<10	<10	<10	3.08 J	2.76 J	<10	3.59 J
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.53	0.633	<0.3	<0.3	0.227 J	0.17 J	0.519
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	0.766 J	<1	1.05
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	15	72.5	0.531 J	0.829 J
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	13.4	62.6	<1	49.6
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-3
DUNN FIELD ANALYTICAL RESULTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-145	MW-147	MW-148	MW-148 DUP-3	MW-149	MW-150	MW-151
	Lab ID	L12040764-13	L12040764-14	L12040764-15	L12040764-24	L12040782-01	L12040764-16	L12040764-17
	Date	4/19/2012	4/19/2012	4/19/2012	4/19/2012	4/20/2012	4/19/2012	4/19/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	4.89	3.4	4.26
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	2.66 J	<10	<10	<10	<10	<10	<10
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	0.886 J	<1	<1	<1	1.07	<1	2.67
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.927	<0.3	<0.3	<0.3	13.4	1.55	37.4
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	1.74	0.263 J	1.93
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	0.522 J	<1	0.793 J
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	0.262 J
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.639 J	<1	<1	<1	7.47	13.9	19.1
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-3
DUNN FIELD ANALYTICAL RESULTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-152	MW-155	MW-157	MW-158	MW-158A	MW-159	MW-160
	Lab ID	L12040692-10	L12040764-18	L12040764-19	L12040692-11	L12040692-12	L12040782-02	L12040782-03
	Date	4/18/2012	4/19/2012	4/19/2012	4/18/2012	4/18/2012	4/20/2012	4/20/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	0.983	0.533	0.528	<0.5	37.9	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	6.14	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	3.49	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	<10	<10	<10	<10	<10	<10	<10
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	0.346 J	<1	<1	<1	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	3.24	<0.3	<0.3	0.34	<0.3
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	0.476 J	<1	<1	42.8	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	1.17	<1
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	4.36	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.277 J	1.15	3.26	1.37	<1	275	<1
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	17.3	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-3
DUNN FIELD ANALYTICAL RESULTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-160 DUP-4	MW-163	MW-164	MW-165	MW-165A	MW-166	MW-166A
	Lab ID	L12040782-04	L12040764-20	L12040764-21	L12040692-13	L12040692-16	L12040692-17	L12040692-18
	Date	4/20/2012	4/19/2012	4/19/2012	4/18/2012	4/18/2012	4/18/2012	4/18/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	3.83	1.47	5.28	6	6.08	9.62
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	0.4 J
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	<10	<10	<10	<10	<10	4.16 J	2.54 J
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	0.957 J	<1	<1	2.99	1.88
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	0.187 J	5.3	0.394	0.337	32.5	25.9
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	1.36	<1	<1	2.63	2.47
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	0.914 J	0.284 J	<1	<1	1.02	0.617 J
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	0.293 J	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	9.02	6.97	7.48	2.54	19.5	12.1
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-3
DUNN FIELD ANALYTICAL RESULTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-174	MW-176	MW-180	MW-182	MW-182 DUP-5	MW-184	MW-190
	Lab ID	L12040763-09	L12040692-19	L12040763-10	L12040763-11	L12040763-20	L12040764-22	L12040764-23
	Date	4/19/2012	4/18/2012	4/19/2012	4/19/2012	4/19/2012	4/19/2012	4/19/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	0.716	12.1
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	<10	<10	<10	<10	<10	<10	6.99 J
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	0.442 J	<1	<1	<1	<1	1.31	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.22 J	0.187 J	<0.3	<0.3	<0.3	4.67	0.291 J
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	0.642 J	0.459 J
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	0.311 J	<1	<1	<1	<1	0.397 J	0.893 J
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.324 J	<1	<1	<1	<1	2.83	20.4
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-3
DUNN FIELD ANALYTICAL RESULTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-220	MW-221	MW-222	MW-223	MW-224	MW-225	MW-226
	Lab ID	L12040763-12	L12040782-09	L12040782-10	L12040782-11	L12040782-12	L12040782-13	L12040763-13
	Date	4/19/2012	4/20/2012	4/20/2012	4/20/2012	4/20/2012	4/20/2012	4/19/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	3.08	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	<10	<10	23.4	19.4	<10	<10	<10
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3	0.391	0.563	0.221 J	0.195 J
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	4.61	<1	<1	0.503 J	<1	0.538 J	0.376 J
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	6.56	<1	<1	0.275 J	<1	0.653 J	<1
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-3
DUNN FIELD ANALYTICAL RESULTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

Analyte	Well ID / Lab ID / Date	Units	MW-227 L12040763-14 4/19/2012	MW-227 DUP-6 L12040763-21 4/19/2012	MW-228 L12040763-15 4/19/2012	MW-230 L12040763-16 4/19/2012	MW-235 L12040763-17 4/19/2012	MW-237 L12040692-31 4/18/2012	MW-241 L12040692-01 4/17/2012
1,1,1,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane		µg/L	<1	<1	<1	0.429 J	<1	<1	<1
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane		µg/L	<1	<1	<1	0.981 J	<1	0.395 J	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	13.2	<1	3.03	<1
1,1-Dichloropropene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane		µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane		µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane		µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane		µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene		µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone		µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene		µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone		µg/L	<10	<10	<10	<10	<10	<10	<10
Benzene		µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform		µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	0.348 J	0.574 J	<1	<1	<1	<1	<1
Chlorobenzene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.865	0.822	0.186 J	0.225 J	<0.3	0.172 J	0.136 J
Chloromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	0.499 J	<1	<1	<1
cis-1,3-Dichloropropene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene		µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene		µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)		µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)		µg/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride		µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)		µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene		µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene		µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene		µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene		µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	0.463 J	0.489 J	0.264 J	35.9	<1	0.259 J	<1
Toluene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.893 J	1.06	<1	54.3	<1	<1	0.667 J
Trichlorofluoromethane		µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-3
DUNN FIELD ANALYTICAL RESULTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-242	MW-243	MW-244	MW-245	MW-246	MW-246 DUP-7	MW-247
	Lab ID	L12040692-02	L12040692-03	L12040692-20	L12040692-04	L12040692-05	L12040692-06	L12040692-21
	Date	4/17/2012	4/17/2012	4/18/2012	4/17/2012	4/17/2012	4/17/2012	4/18/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	0.325 J	2.6	1.28	0.715	9.94	10.4	1.09
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	<10	<10	<10	<10	<10	<10	<10
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.197 J	<0.3	0.161 J	<0.3	<0.3	<0.3	0.661
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	0.44 J	0.379 J	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.779 J	1.95	1.84	0.554 J	1.75	1.6	0.864 J
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-3
DUNN FIELD ANALYTICAL RESULTS, APRIL 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Well ID	MW-248	MW-249	MW-250	MW-251	MW-251 DUP-8
	Lab ID	L12040692-22	L12040692-23	L12040692-24	L12040692-25	L12040692-26
	Date	4/18/2012	4/18/2012	4/18/2012	4/18/2012	4/18/2012
Analyte	**Units**					
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	2.27	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	0.561 J	0.578 J
1,1-Dichloroethene	µg/L	<1	<1	<1	4.05	4.22
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1
Acetone	µg/L	<10	<10	2.54 J	<10	<10
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	3.55	<1	<1	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	20.3	<0.3	0.328	0.351
Chloromethane	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	1.15	<1	<1	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	1.02	<1	0.613 J	0.622 J
Toluene	µg/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	14.9	<1	0.253 J	0.256 J
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-4
DUNN FIELD ANALYTICAL RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Sample ID	MW-03	MW-06	MW-15	MW-28	MW-28-DUP-1	MW-31	MW-54
	Lab ID	L12100695-40	L12100695-41	L12100695-42	L12100695-09	L12100695-17	L12100695-01	L12100695-19
	Date	10/17/2012	10/17/2012	10/17/2012	10/16/2012	10/16/2012	10/16/2012	10/17/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	0.486 J	<0.5	<0.5	<0.5	0.526	2.54
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	0.524 J	<1	<1	<1	<1	0.902 J	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	<10	<10	3.15 J	5.84 J	5.9 J	4.34 J	<10
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	2.72	2.29	0.154 J	0.168 J	<0.3	0.354
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	0.569 J	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	1.06	<1	0.539 J	<1	<1	2.71	0.377 J
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	1.28	0.938 J	1.07	<1	<1	3.66	7.74
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-4
DUNN FIELD ANALYTICAL RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Sample ID	MW-57	MW-77	MW-79	MW-87	MW-134	MW-144	MW-149
	Lab ID	L12100695-43	L12100695-20	L12100695-23	L12100695-44	L12100695-45	L12100695-46	L12100695-24
	Date	10/17/2012	10/17/2012	10/17/2012	10/17/2012	10/17/2012	10/17/2012	10/17/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	6.48	<0.5	<0.5	<0.5	14.7	4.56
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	2.71	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	<10	4.5 J	<10	<10	<10	<10	4.9 J
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	0.517 J
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	9.57	0.62	<0.3	0.377	<0.3	0.377	7.37
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	0.264 J	<1	<1	<1	0.942 J	1.6
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	0.411 J	4.06	<1	0.889 J	0.798 J	0.296 J
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	1.1	13	3.12	<1	<1	38.5	4.3
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-4
DUNN FIELD ANALYTICAL RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Sample ID	MW-149-DUP-2	MW-150	MW-151	MW-157	MW-159	MW-159-DUP-3	MW-163
	Lab ID	L12100695-37	L12100695-25	L12100695-26	L12100695-27	L12100695-28	L12100695-38	L12100695-47
	Date	10/17/2012	10/17/2012	10/17/2012	10/17/2012	10/17/2012	10/17/2012	10/17/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	4.75	2.64	3.61	0.616	24.2	24.9	3.18
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	4.82	5.37	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	3.2	4.2	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	6.87 J	<10	4.46 J	<10	<10	6.28 J	<10
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	0.536 J	<1	1.42	<1	<1	<1	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	7.74	0.746	23.9	2.46	0.242 J	0.306	0.215 J
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	1.97	<1	1.17	<1	35.3	41.4	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	0.345 J	<1	0.507 J	<1	1.06	1.03	0.832 J
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	4.93	6.11	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	4.76	6.94	11.4	2.03	247	237	9.26
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	14.6	14.2	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-4
DUNN FIELD ANALYTICAL RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Sample ID	MW-164	MW-165	MW-165-DUP-5	MW-165A	MW-166	MW-166A	MW-174
	Lab ID	L12100695-48	L12100695-02	L12100695-07	L12100695-03	L12100695-29	L12100695-32	L12100695-49
	Date	10/17/2012	10/16/2012	10/16/2012	10/16/2012	10/17/2012	10/17/2012	10/17/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	0.826	1.79	1.64	1.16	2.56	5.96	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	4.36 J	6.09 J	6.18 J	6.08 J	6.35 J	<10	<10
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	1.03	<1	<1	<1	0.692 J	0.464 J	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	5.15	0.281 J	0.292 J	0.433	10	8.6	0.212 J
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	0.925 J	<1	<1	<1	1.29	1.37	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	0.521 J	<1	0.263 J
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5.86	3.9	3.84	0.493 J	9.01	4.93	<1
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-4
DUNN FIELD ANALYTICAL RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Sample ID	MW-190	MW-220	MW-221	MW-222	MW-223	MW-224	MW-224-DUP-4
	Lab ID	L12100695-50	L12100695-51	L12100695-52	L12100695-10	L12100695-11	L12100695-12	L12100695-18
	Date	10/17/2012	10/17/2012	10/17/2012	10/16/2012	10/16/2012	10/16/2012	10/16/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	10.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	2.47	<1	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	<10	5.19 J	<10	5.13 J	7.12 J	<10	<10
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.186 J	<0.3	<0.3	<0.3	0.207 J	0.286 J	0.266 J
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	0.373 J	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	1.05	3.78	<1	0.291 J	0.476 J	0.305 J	0.281 J
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	23.1	6.65	<1	<1	0.352 J	<1	<1
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-4
DUNN FIELD ANALYTICAL RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Sample ID	MW-225	MW-226	MW-227	MW-228	MW-242	MW-243	MW-244
	Lab ID	L12100695-13	L12100695-14	L12100695-53	L12100695-54	L12100695-33	L12100695-04	L12100695-34
	Date	10/16/2012	10/16/2012	10/17/2012	10/17/2012	10/17/2012	10/16/2012	10/17/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	2.31	2.25
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	5.51 J	<10	<10	<10	<10	6.08 J	6.55 J
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.214 J	0.242 J	0.42	0.199 J	<0.3	<0.3	0.246 J
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	0.464 J	0.393 J	0.392 J	0.46 J	<1	<1	0.389 J
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	0.37 J	<1	0.498 J	1.55	4.05
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-4
DUNN FIELD ANALYTICAL RESULTS, OCTOBER 2012
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Sample ID	MW-245	MW-246	MW-247	MW-249
	Lab ID	L12100695-05	L12100695-06	L12100695-35	L12100695-36
	Date	10/16/2012	10/16/2012	10/17/2012	10/17/2012
Analyte	**Units**				
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	0.615	13.1	0.738	1.62
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1
Acetone	µg/L	6.29 J	5.77 J	5.14 J	5.34 J
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	2.52
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	2.17	13
Chloromethane	µg/L	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	0.42 J	0.515 J
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	0.744 J
Toluene	µg/L	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	0.643 J	1.59	1.7	8.7
Trichlorofluoromethane	µg/L	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

TABLE D-5
MAIN INSTALLATION QUALITY CONTROL SAMPLE ANALYTICAL RESULTS
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Sample ID	TB-1-LS-15	TB-2-LS-15	TB-3-LS-15	TB-4-LS-15	TB-5-LS-15	RB-1-LS-15	RB-2-LS-15
	Lab ID	L12040762-07	L12040831-03	L12040831-25	L12040829-26	L12040859-37	L12040859-38	L12040831-19
	Date	4/20/2012	4/21/2012	4/22/2012	4/23/2012	4/23/2012	4/23/2012	4/22/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1 UJ	<1	<1 UJ	<1	<1	<1	<1 UJ
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	0.218 J	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	<10	<10	<10	<10	<10	<10	7.49 J
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	0.15 J	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	0.298 J	<0.3
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	0.585 J	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	<1	0.381 J	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Toluene	µg/L	<1	<1	<1	0.299 J	<1	0.263 J	0.336 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration
UJ: Not detected, RL estimated

TABLE D-5
MAIN INSTALLATION QUALITY CONTROL SAMPLE ANALYTICAL RESULTS
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Sample ID	TB-101912-LB-16	TB-102212-LB-16	TB-101812-LB-16	TB-102312-LB-16
	Lab ID	L12100777-03	L12100848-04	L12100846-01	L12100841-03
	Date	10/19/2012	10/20/2012	10/21/2012	10/22/2012
Analyte	**Units**				
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1
Acetone	µg/L	<10	<10	<10	<10
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3	<0.3
Chloromethane	µg/L	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1
Toluene	µg/L	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1
Trichlorofluoromethane	µg/L	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration
UJ: Not detected, RL estimated

TABLE D-6
DUNN FIELD QUALITY CONTROL SAMPLE ANALYTICAL RESULTS
ANNUAL LONG-TERM MONITORING REPORT – 2012
Defense Depot Memphis, Tennessee

	Sample ID	TB-1-ODLA-4	TB-2-ODLA-4	TB-3-ODLA-4	TB-4-ODLA-4	RB-1-ODLA-4	TB-1-ODLS-5	TB-2-ODLS-5
	Lab ID	L12040692-07	L12040692-32	L12040763-22	L12040782-16	L12040763-23	L12100695-08	L12100695-39
	Date	4/17/2012	4/18/2012	4/19/2012	4/20/2012	4/19/2012	10/16/2012	10/17/2012
Analyte	**Units**							
1,1,1,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	µg/L	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	µg/L	0.161 J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	µg/L	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorotoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	<10	<10	<10	<10	6.27 J	<10	<10
Benzene	µg/L	<0.4	<0.4	<0.4	<0.4	0.177 J	<0.4	<0.4
Bromobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
m-,p-Xylene	µg/L	<2	<2	<2	<2	<2	<2	<2
MEK (2-Butanone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	0.389 J	<1	<1	<1
MIBK (methyl isobutyl ketone)	µg/L	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	<1	<1	<1	<1	0.432 J	<1	<1
n-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
n-Propylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
o-Xylene	µg/L	<1	<1	<1	<1	<1	<1	<1
p-Isopropyltoluene	µg/L	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Toluene	µg/L	<1	<1	<1	<1	0.687 J	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
Samples analyzed using method 8260B
µg/L: micrograms per liter
RL: reporting limit
<: Not detected above RL
DQE Flags:
J: Estimated concentration

APPENDIX E

DATA QUALITY EVALUATION

DATA QUALITY EVALUATION

Main Installation: Long-Term Monitoring (LTM) at the Main Installation was conducted by HDR during two sample events in 2012. Wells were selected for sampling in accordance with the MI LTM Plan in Appendix B of the *Main Installation Final Remedial Design, Rev.1* (CH2M Hill, 2004). Groundwater samples were submitted to Microbac Laboratories in Marietta, Ohio for analysis.

Dunn Field: Long-Term Monitoring at Dunn Field was conducted by HDR during two sample events in 2012. Wells were selected for sampling in accordance with the Dunn Field LTM Plan in Appendix C of *Off Depot Groundwater Final Remedial Design, Rev. 1* (CH2M HILL, 2008). Groundwater samples were submitted to Microbac Laboratories in Marietta, Ohio for analysis.

Field activities and laboratory analyses were performed in accordance with the *Remedial Action Sampling and Analysis Plan, Rev. 1* (RA SAP) (MACTEC 2005) and *Remedial Action Operations and Long Term Monitoring Quality Assurance Project Plan, Rev. 0* (QAPP) (HDR 2011c). The QAPP is consistent with the RA SAP but has not received final approval.

The data quality evaluation (DQE) process involves assessment of all field and laboratory procedures, including data validation in accordance with the RA SAP/QAPP completed by Diane Short and Associates, Inc (DSA). The data validation reports are included in this appendix. This assessment is designed to evaluate problems with the quality assurance (QA)/quality control (QC) associated with the laboratory data and potential impact to the data quality objectives (DQOs). The DQE findings are summarized in the following sections.

FIELD ACTIVITIES AND FIELD QUALITY CONTROL

Main Installation: The field effort included the collection of groundwater samples from designated wells and piezometers during the semiannual and biennial Main Installation LTM events in April and October 2012, respectively. The Main Installation LTM well locations are shown on Figure 4 of the report.

Dunn Field: The field effort included the collection of groundwater samples from designated wells during the annual and semiannual Dunn Field events in April and October 2012, respectively. The Dunn Field LTM well locations are shown on Figure 5 of the report.

Field QC samples were collected at selected wells to evaluate sampling technique and decontamination procedures. These samples included field duplicates, trip blanks and field equipment (rinsate) blanks. Additional samples were collected at selected locations for matrix spike/matrix spike duplicate

(MS/MSD) analyses in the laboratory. Sample bottles met U.S. Environmental Protection Agency (USEPA) requirements for environmentally clean containers. Sample labels were pre-printed to facilitate sample tracking from the field through the laboratory. Documentation of the sampling was performed in the field to ensure that the samples collected, sample labels, chain-of-custody (COC) records, which were generated electronically using a personal digital assistant (PDA) supplied by the laboratory, and request for analysis were consistent. Where necessary, additional COC forms were filled out manually. Custody seals were placed on each sample cooler prior to shipment by common carrier.

ANALYTICAL METHODS

The groundwater samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) by method SW 8260B.

LABORATORY QUALITY CONTROL

The laboratory QC program, including sample handling, laboratory control, and reporting, is documented in the RA SAP. Sample handling includes documentation of sample receipt, placement in storage, lab personnel using the sample, and disposal. The laboratory control consists of instrument calibration and maintenance, laboratory control samples (LCS), method blanks and matrix spikes. Reporting of the laboratory control data was planned prior to the collection of the data, allowing the laboratory to place the appropriate information into the data package so that the DQE could be performed in a timely manner.

DQE SUMMARY

The objective of the DQE was to provide a review of the chemical data reports submitted by the laboratory and to assess the data in relation to the data quality objectives stated in the RA SAP/QAPP. The DQE consisted of review of laboratory QC data and field QC parameters, and flagging of the data as usable, usable with qualification, or unusable in accordance with the DQE standard operating procedures (SOPs) using the criteria stated in the RA SAP/QAPP for each analytical method performed. The following information was reviewed:

- Sample Integrity (Deliverables)
- Sample Completeness
- Sample Holding Times
- Laboratory Methods for Extraction and Analysis (Calibration, Internal Standards)
- Method Accuracy (bias) and Precision (Surrogates, MS/MSD, LCS Recoveries)

- Laboratory Performance Criteria (Blanks, Instrument Performance Checks)

Field QC parameters were evaluated through field duplicates, rinsate blanks, field documentation, and shipping criteria.

The DQE was summarized by use of flags that indicate to the reviewer that the data being considered has been qualified using the established criteria. Sample delivery group (SDG) narratives detailing the evaluation of the laboratory data by DSA are included as attachments in this Appendix. The SDGs and associated groundwater samples are listed on Table E-1 (Main Installation) and Table E-2 (Dunn Field).

The following sections provide summary discussions of the required data qualifications for each sampling event. A Level III DQE was performed and the data quality indicators (DQIs), expressed in terms of precision, accuracy, representativeness, comparability, completeness, and sensitivity, were assessed. This included the evaluation of sample integrity, holding times, trip blanks, rinsate blanks, method blanks, internal standards, surrogate recoveries, MS/MSD recoveries, LCSs, and field duplicate precision. The results of the DQI assessment are provided below.

Precision

Field duplicates were collected to assess sampling precision. They consisted of replicate grab samples collected concurrently with the associated field samples. Precision is best expressed in terms of relative percent difference (RPD).

Main Installation: Field precision goals were met for the duplicate sample pairs collected during the two LTM sampling events. Laboratory precision is discussed in more detail in the attached narratives.

Dunn Field: Field precision goals were met for the duplicate sample pairs collected during the two LTM sampling events. Laboratory precision is discussed in more detail in the attached narratives.

Accuracy

Accuracy or bias was measured through the analyses of LCSs and MS/MSDs. Sample specific accuracy is measured through surrogate recovery. Accuracy is expressed as percent recovery (%R).

Main Installation: Although there were a number of elevated LCS recoveries and low MS/MSD recoveries observed in the two events, all associated data are qualified J or UJ and as such are valid. Accuracy goals based upon LCS were met. Further discussion of the LCS and MS/MSD recoveries is provided in the attached DQE narratives.

Dunn Field: Although there were a number of elevated LCS recoveries and elevated MS/MSD recoveries observed in the two events, all associated sample results were non-detect and did not require qualification and as such are valid. Accuracy goals based upon LCS were met. Further discussion of the LCS and MS/MSD recoveries is provided in the attached DQE narratives.

Representativeness

Representativeness refers to the degree sample data accurately and precisely describes the population of samples at a sampling point or under certain environmental conditions. Samples that are not properly preserved or are analyzed beyond holding times may not be considered representative. Review of sampling procedures, laboratory preparation, analysis holding times, trip blank and rinsate blank analysis help in providing this assessment.

Main Installation: Sampling procedures followed the RA SAP/QAPP and were considered representative of the matrices collected. Laboratory preparation and analysis followed method guidelines.

Dunn Field: Sampling procedures followed the RA SAP/QAPP and were considered representative of the matrices collected. Laboratory preparation and analysis followed method guidelines.

Comparability

The selection of standardized methods and consistent laboratory practices facilitates the comparison of data between sampling events.

Main Installation: Past LTM data are comparable to recent events. Passive diffusion bags (PDBs) were installed in most of the wells in March 2012; previously the wells were sampled using low-flow pumps. This is discussed in Section 1.4.1 of the report. Otherwise, consistent methodology has been maintained throughout the LTM sampling events.

Dunn Field: Past LTM data are comparable to recent events. Passive diffusion bags (PDBs) were installed in March 2012 in some wells that had been omitted from sampling for one or more years. This is discussed in Section 1.4.2 of the report. Otherwise, consistent methodology has been maintained throughout the LTM sampling events.

Completeness

Completeness is determined for both field and analytical objectives. Field completeness is calculated from the number of samples proposed versus the actual number of samples collected. Analytical completeness

is expressed in terms of usable data. The project completeness goal for DDMT is 90% as stated in the RA SAP/QAPP.

Main Installation: Data from the two LTM events in April and October 2012 were 100% complete and therefore met the completeness DQO.

Dunn Field: Data from the two LTM events in April and October 2012 were 100% complete and therefore met the completeness DQO.

Sensitivity

Analytical sensitivity is the concentration at which the measurement system can quantitate target analytes in the environmental matrices of concern. Analytical sensitivity is expressed in terms of the reporting limit (RL), which is provided by the respective laboratories as their reasonable and defensible quantitation limit for environmental samples above the method detection limit (MDL), which is established by each laboratory using pure water or clean matrix.

Main Installation and Dunn Field: The analytical method RLs and MDLs were compared to groundwater protection standards as listed in the RA SAP/QAPP and were determined to meet the overall project objectives. (The MDLs for six VOCs [1,1,2,2-tetrachloroethane, 1,1,2-trichloroethane, 1,2-dichloroethane, bromodichloromethane, carbon tetrachloride, and dibromochloromethane] were above the standards; however, as noted in the QAPP, ... "MDLs for these VOC … compounds are higher than their corresponding screening levels because current VOC … analytical method technology can not achieve MDLs lower than those listed.")

The following sections discuss only those deficiencies encountered during the evaluation that resulted in qualified and/or unusable data.

Main Installation Semi-Annual Event – April 2012

A total of 96 water samples including 73 groundwater field samples and 23 QA/QC samples (duplicates, MS/MSD, trip blanks, rinsate blanks) were collected from 71 LTM wells in April 2012. Samples were collected from two screened intervals in MW-101 and MW-107. Samples were analyzed for TCL VOCs. The data are usable with qualifications as described below:

- Trichloroethene (TCE) was qualified as estimated J in one sample (MW-258-LS-15) and 1,2-dibromoethane (EDB) and methyl isobutyl ketone (MIBK) were qualified as non-detect estimated

(UJ) in one sample (MW-88-LS-15) due to low MS/MSD recoveries. The sample results could be biased low approximately proportional to the recoveries.

- When a high LCS recovery is associated with a non-detect in samples, no qualifier is added since the indicated bias is high. When the analyte is detected, the result is qualified as J and data could be biased high proportional to the LCS %R. All results associated with low recoveries are qualified J. EDB in 24 samples was qualified UJ due to low LCS recoveries. EDB is not a contaminant of concern and will not impact the use of the data.
- Nine carbon tetrachloride results were qualified J due to low results in the continuing calibration standard. Carbon tetrachloride is not a contaminant of concern and will not impact the use of the data.
- Twelve chloroform results and one toluene result were qualified (B) for equipment blank contamination. The sample results could be biased high.
- Any result reported below the reporting limit (RL) but above the method detection limit (MDL) was qualified J and considered an estimated result (unless overridden by other QC flags).

Main Installation Biennial Event – October 2012

A total of 142 water samples including 114 groundwater field samples and 28 QA/QC samples (duplicates, MS/MSD, trip blanks, rinsate blanks) were collected from 112 LTM wells in October 2012. Samples were collected from two screened intervals in MW101 and MW107. Samples were analyzed for TCL VOCs. The data are usable with qualifications as described below:

- Trichloroethene (TCE) was qualified as estimated J in one sample (MW-217-LB-16) and carbon tetrachloride and tetrachloroethene were qualified as estimated J in one sample (DR2-6-LB-16) due to low MS/MSD recoveries. The sample results could be biased low approximately proportional to the recoveries.
- When a high LCS recovery is associated with a non-detect in samples, no qualifier is added since the indicated bias is high. When the analyte is detected, the result is qualified as J. All results associated with low recoveries are qualified. Carbon disulfide in one sample (PMW-85-05-LB-16) was qualified J based on an elevated LCS recovery, and data could be biased high proportional to the LCS %R. Dichlorodifluoromethane had high LCS recoveries but was not detected in all associated sample and required no qualification.

- Methyl tert-butyl ether (MTBE) was detected and qualified J in 11 samples due to elevated response in continuing calibration standards.
- Vinyl chloride was qualified J in two samples due to an elevated relative standard deviation (RSD) in the initial calibration.
- Any result reported below the RL but above the MDL was qualified J and considered an estimated result (unless overridden by other QC flags).

Dunn Field Annual Event – April 2012

A total of 95 water samples including 74 groundwater field samples and 21 QA/QC samples (duplicates, MS/MSD, trip blanks, rinsate blanks) were collected from 74 LTM wells in April 2012. Samples were analyzed for TCL VOCs. The data are usable with qualifications as described below:

- When a high MS/MSD recovery is associated with a non-detect in samples, no qualifier is added since the indicated bias is high. Dichlorodifluoromethane, bromodichloromethane and methyl tert-butyl ether (MTBE) had high recoveries in two sets of MS/MSDs; no data were qualified as the compounds were not detected in client samples.
- Any result reported below the RL but above the MDL was qualified J and considered an estimated result (unless overridden by other QC flags).

Dunn Field Semiannual Event – October 2012

A total of 54 water samples including 41 groundwater field samples and 13 QA/QC samples (duplicates, MS/MSD, trip blanks) were collected from 54 LTM wells in October 2012. Samples were analyzed for TCL VOCs. The data are usable with qualifications as described below:

- When a high LCS recovery is associated with a non-detect in samples, no qualifier is added since the indicated bias is high. Dichlorodifluoromethane had high recoveries in three LCSs; no data were qualified as the compound was not detected in client samples. Results associated with low recoveries are qualified. One LCS recovery of 1,2-dibromoethane was slightly low, but the LCSD recovery was within control limits, and there was no qualification.
- Any result reported below the RL but above the MDL was qualified J and considered an estimated result (unless overridden by other QC flags).

SUMMARY

Main Installation: The sample data from the April and October 2012 LTM events at the Main Installation met the data quality objectives and are of sufficient quality to support the evaluation of remedial actions.

Dunn Field: The sample data from the April and October 2012 LTM events at Dunn Field met the data quality objectives and are of sufficient quality to support the evaluation of remedial actions.

TABLE E-1
MAIN INSTALLATION SAMPLE DATA GROUP SUMMARY TABLE
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

SDG	Groundwater Samples			Quality Control Samples
Semi-Annual Sampling Event - April 2012				
L12040762	DR2-2-LS-15	MW-197A-LS-15	MW-203B-LS-15	DUP-3-LS-15
	DR2-5-LS-15	MW-203A-LS-15		TB-1-LS-15
L12040829	DR1-3-LS-15	MW-92-LS-15	MW-253-LS-15	DUP-6-LS-15
	DR2-1-LS-15	MW-101T-LS-15	MW-254-LS-15	DUP-8-LS-15
	DR2-3-LS-15	MW-101B-LS-15	MW-255-LS-15	DR2-3-LS-15-MS
	DR2-6-LS-15	MW-143-LS-15	MW-256-LS-15	DR2-3-LS-15-MSD
	MW-26-LS-15	MW-219-LS-15	MW-257-LS-15	MW-88-LS-15-MS
	MW-88-LS-15	MW-252-LS-15	PMW21-03-LS-15	MW-88-LS-15-MSD
			PMW21-05-LS-15	TB-4-LS-15
L12040831	DR1-5-LS-15	MW-85-LS-15	MW-258-LS-15	DUP-5-LS-15
	DR1-5A-LS-15	MW-100B-LS-15	MW-259-LS-15	DUP-7-LS-15
	DR1-6-LS-15	MW-113-LS-15	PMW92-03-LS-15	MW-258-LS-15-MS
	DR1-6A-LS-15	MW-197B-LS-15	PMW92-06-LS-15	MW-258-LS-15-MSD
	MW-21-LS-15	MW-212-LS-15	PMW101-04A-LS-15	RB-2-LS-15
	MW-62-LS-15	MW-213-LS-15	PMW101-04B-LS-15	TB-2-LS-15
				TB-3-LS-15
L12040859	MW-39-LS-15	MW-141-LS-15	MW-207A-LS-15	DUP-1-LS-15
	MW-39A-LS-15	MW-199B-LS-15	MW-207B-LS-15	DUP-2-LS-15
	MW-64-LS-15	MW-200-LS-15	MW-208A-LS-15	DUP-4-LS-15
	MW-90-LS-15	MW-202B-LS-15	MW-208B-LS-15	MW-204A-LS-15-MS
	MW-94A-LS-15	MW-204A-LS-15	MW-209B-LS-15	MW-204A-LS-15-MSD
	MW-97-LS-15	MW-204B-LS-15	MW-210A-LS-15	TB-5-LS-15
	MW-98-LS-15	MW-205A-LS-15	MW-210B-LS-15	RB-1-LS-15
	MW-107T-LS-15	MW-205B-LS-15	MW-214A-LS-15	
	MW-107B-LS-15	MW-206A-LS-15	MW-214B-LS-15	
	MW-108-LS-15	MW-206B-LS-15	MW-217-LS-15	
			MW-218-LS-15	

TABLE E-1
MAIN INSTALLATION SAMPLE DATA GROUP SUMMARY TABLE
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

SDG	Groundwater Samples			Quality Control Samples
Biennial Sampling Event - October 2012				
L12100776	DR1-1-LB-16	MW-34-LB-16	MW-143-LB-16	DUP-1-LB-16
	DR1-1A-LB-16	MW-50-LB-16	MW-219-LB-16	DUP-2-LB-16
	DR1-2-LB-16	MW-52-LB-16	MW-229-LB-16	DUP-3-LB-16
	DR1-3-LB-16	MW-53-LB-16	MW-252-LB-16	DUP-10-LB-16
	DR1-4-LB-16	MW-66A-LB-16	MW-253-LB-16	DUP-11-LB-16
	DR1-7-LB-16	MW-96-LB-16	MW-254-LB-16	MW-96-LB-16-MS
	DR1-8-LB-16	MW-99-LB-16	MW-255-LB-16	MW-96-LB-16-MSD
	MW-19-LB-16	MW-101T-LB-16	MW-256-LB-16	
	MW-22-LB-16	MW-101B-LB-16	PMW21-03-LB-16	
	MW-25A-LB-16	MW-102B-LB-16	PMW21-05-LB-16	
L12100777	DR2-5-LB-16	MW-85-LB-16	MW-100B-LB-16	TB-101912-LB-16
			PMW101-04B-LB-16	
L12100832	PMW85-05-LB-16			
L12100841	MW-62-LB-16	MW-212-LB-16	MW-213-LB-16	DUP-8-LB-16
			PZ-03-16	TB-102312-LB-16
L12100842	DR2-2-LB-16	MW-113-LB-16	PMW92-03-LB-16	DUP-12-LB-16
			PMW101-04A-LB-16	
L12100845	DR1-5-LB-16	DR1-6-LB-16	MW-21-LB-16	DR1-6-LB-16-MS
	DR1-5A-LB-16	DR1-6A-LB-16		DR1-6-LB-16-MSD
L12100846	MW-55-LB-16	MW-197B-LB-16	MW-203B-LB-16	TB-101812-LB-16
	MW-197A-LB-16	MW-203A-LB-16		
L12100847	DR2-1-LB-16	MW-88-LB-16	MW-211-LB-16	DUP-4-LB-16
	DR2-3-LB-16	MW-92-LB-16	MW-214A-LB-16	DUP-9-LB-16
	DR2-4-LB-16	MW-93-LB-16	MW-214B-LB-16	DR2-6-LB-16-MS
	DR2-6-LB-16	MW-94A-LB-16	MW-215A-LB-16	DR2-6-LB-16-MSD
	MW-16-LB-16	MW-103-LB-16	MW-215B-LB-16	MW-107T-LB-16-MS
	MW-24-LB-16	MW-104-LB-16	MW-217-LB-16	MW-107T-LB-16-MSD
	MW-26-LB-16	MW-107T-LB-16	MW-218-LB-16	MW-217-LB-16-MS
	MW-38-LB-16	MW-107B-LB-16	MW-257-LB-16	MW-217-LB-16-MSD
	MW-63A-LB-16	MW-108-LB-16	MW-258-LB-16	
	MW-63B-LB-16	MW-207A-LB-16	MW-259-LB-16	
	MW-64-LB-16	MW-207B-LB-16		
L12100848	MW-23-LB-16	MW-198-LB-16	MW-206A-LB-16	DUP-5-LB-16
	MW-39-LB-16	MW-199A-LB-16	MW-206B-LB-16	DUP-6-LB-16
	MW-39A-LB-16	MW-199B-LB-16	MW-208A-LB-16	DUP-7-LB-16
	MW-89-LB-16	MW-200-LB-16	MW-208B-LB-16	MW-210A-LB-16-MS
	MW-90-LB-16	MW-202A-LB-16	MW-209A-LB-16	MW-210A-LB-16-MSD
	MW-97-LB-16	MW-202B-LB-16	MW-209B-LB-16	TB-102212-LB-16
	MW-98-LB-16	MW-204A-LB-16	MW-210A-LB-16	
	MW-140-LB-16	MW-204B-LB-16	MW-210B-LB-16	
	MW-141-LB-16	MW-205A-LB-16	MW-216-LB-16	
	MW-142-LB-16	MW-205B-LB-16		

TABLE E-2
DUNN FIELD SAMPLE DATA GROUP SUMMARY TABLE
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

SDG	Groundwater Samples			Quality Control Samples
Annual Sampling Event - April 2012				
L12040692	MW-08-ODLA-4	MW-165A-ODLA-4	MW-244-ODLA-4	DUP-7-ODLA-4
	MW-54-ODLA-4	MW-166-ODLA-4	MW-245-ODLA-4	DUP-8-ODLA-4
	MW-79-ODLA-4	MW-166A-ODLA-4	MW-246-ODLA-4	MW-126-ODLA-4-MS
	MW-126-ODLA-4	MW-176-ODLA-4	MW-247-ODLA-4	MW-126-ODLA-4-MSD
	MW-152-ODLA-4	MW-237-ODLA-4	MW-248-ODLA-4	MW-165-ODLA-4-MS
	MW-158-ODLA-4	MW-241-ODLA-4	MW-249-ODLA-4	MW-165-ODLA-4-MSD
	MW-158A-ODLA-4	MW-242-ODLA-4	MW-250-ODLA-4	TB-1-ODLA-4
	MW-165-ODLA-4	MW-243-ODLA-4	MW-251-ODLA-4	TB-2-ODLA-4
L12040763	MW-03-ODLA-4	MW-91-ODLA-4	MW-226-ODLA-4	DUP-5-ODLA-4
	MW-04-ODLA-4	MW-174-ODLA-4	MW-227-ODLA-4	DUP-6-ODLA-4
	MW-06-ODLA-4	MW-180-ODLA-4	MW-228-ODLA-4	MW-06-ODLA-4-MS
	MW-07-ODLA-4	MW-182-ODLA-4	MW-230-ODLA-4	MW-06-ODLA-4-MSD
	MW-57-ODLA-4	MW-220-ODLA-4	MW-235-ODLA-4	MW-235-ODLA-4-MS
				MW-235-ODLA-4-MSD
				RB-1-ODLA-4
				TB-3-ODLA-4
L12040764	MW-15-ODLA-4	MW-87-ODLA-4	MW-151-ODLA-4	DUP-3-ODLA-4
	MW-28-ODLA-4	MW-129-ODLA-4	MW-155-ODLA-4	
	MW-31-ODLA-4	MW-130-ODLA-4	MW-157-ODLA-4	
	MW-68-ODLA-4	MW-144-ODLA-4	MW-163-ODLA-4	
	MW-70-ODLA-4	MW-145-ODLA-4	MW-164-ODLA-4	
	MW-71-ODLA-4	MW-147-ODLA-4	MW-184-ODLA-4	
	MW-76-ODLA-4	MW-148-ODLA-4	MW-190-ODLA-4	
	MW-77-ODLA-4	MW-150-ODLA-4		
L12040782	MW-44-ODLA-4	MW-149-ODLA-4	MW-222-ODLA-4	DUP-1-ODLA-4
	MW-69-ODLA-4	MW-159-ODLA-4	MW-223-ODLA-4	DUP-2-ODLA-4
	MW-80-ODLA-4	MW-160-ODLA-4	MW-224-ODLA-4	DUP-4-ODLA-4
	MW-134-ODLA-4	MW-221-ODLA-4	MW-225-ODLA-4	TB-4-ODLA-4
Semi-Annual Sampling Event - October 2012				
L12110695	MW-03-ODLS-5	MW-151-ODLS-5	MW-223-ODLS-5	DUP-1-ODLS-5
	MW-06-ODLS-5	MW-157-ODLS-5	MW-224-ODLS-5	DUP-2-ODLS-5
	MW-15-ODLS-5	MW-159-ODLS-5	MW-225-ODLS-5	DUP-3-ODLS-5
	MW-28-ODLS-5	MW-163-ODLS-5	MW-226-ODLS-5	DUP-4-ODLS-5
	MW-31-ODLS-5	MW-164-ODLS-5	MW-227-ODLS-5	DUP-5-ODLS-5
	MW-54-ODLS-5	MW-165-ODLS-5	MW-228-ODLS-5	MW-77-ODLS-5-MS
	MW-57-ODLS-5	MW-165A-ODLS-5	MW-242-ODLS-5	MW-77-ODLS-5-MSD
	MW-77-ODLS-5	MW-166-ODLS-5	MW-243-ODLS-5	MW-166-ODLS-5-MS
	MW-79-ODLS-5	MW-166A-ODLS-5	MW-244-ODLS-5	MW-166-ODLS-5-MSD
	MW-87-ODLS-5	MW-174-ODLS-5	MW-245-ODLS-5	MW-226-ODLS-5-MS
	MW-134-ODLS-5	MW-190-ODLS-5	MW-246-ODLS-5	MW-226-ODLS-5-MSD
	MW-144-ODLS-5	MW-220-ODLS-5	MW-247-ODLS-5	TB-1-ODLS-5
	MW-149-ODLS-5	MW-221-ODLS-5	MW-249-ODLS-5	TB-2-ODLS-5
	MW-150-ODLS-5	MW-222-ODLS-5		

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ORGANIC DATA QUALITY REVIEW REPORT
Volatile Organics by SW-846 Method 8260B (GC/MS)

SDG	L12040: 762, 829, 831, 859
PROJECT	Memphis Defense Depot, LS-15 Sampling for HDR, Denver
LABORATORY	Microbac Laboratories, Inc., Marietta, OH
SAMPLE MATRIX	Water
SAMPLING DATE	April 2012
NUMBER OF SAMPLES	88, including 8 field duplicates, 5 trip blanks and 2 rinse blanks
ANALYSES REQUESTED	SW-846 8260B (VOA by GC/MS)
SAMPLE NUMBER	See result forms attached and associated EDD

DATA REVIEWER: Diane Short

QA REVIEWER: Diane Short & Associates, Inc. INITIALS/DATE: __ DLS 06/1/2012

Telephone Logs included Yes____ No __X_

Contractual Violations Yes____ No __X_

The project QAPP (09/11), the EPA Contract Laboratory Program National Functional Guidelines for Organic Review, 1999 and 2001, and the SW-846 Method 8260B have been referenced by the reviewer to perform this data validation review. The EPA qualifiers have been expanded to include a descriptor code and value to define QC violations and their values, per the approval of the Project Manager. Per the Scope of Work, the review of these samples includes Level III validation of all chains of custody, calibrations and QC forms referencing the QC limits in the above documents.

I. DELIVERABLES

A. All deliverables were present as specified in the Statement of Work (SOW), SW-846, or in the project contract.
Yes __X__ No _____
This report has been requested to include the following review: QC, hold times, sample integrity (Chains of Custody, sample login), and summary calibrations. Note that there are 4 instruments used for the analyses. There are some redundant initial calibration data which are reviewed only the first time it is present in the packages.

The 2011 QAPP has been used for all review with the exception of the CCAL limits where the 25% NFG limits were applied. Final application of these limits is being considered by project management.

B. Chain of Custody documentation was complete and accurate.
Yes __X__ No _____
Chains of Custody (COC) were complete and airbill numbers were on the log-in forms as is acceptable. Most of the chains are computer generated.

C. Samples were received at the required temperature, preservation and intact with no bubbles.
Yes __X__ No _____
EPA regulations (See Federal Register, March 12, 2007, 40CFR Part 122) require only that the temperature of samples delivered to the laboratory be equal to or less than 6 °C. The sample temperature conditions are fully compliant with applicable regulations.

II. ANALYTICAL REPORT FORMS

A. The Analytical Report or Data Sheets are present and complete for all requested analyses.
Yes __X__ No _____

B. Holding Times
1. The contract holding times were met for all analyses [time of sample receipt to time of analysis (VOA) or time of extraction to time of analysis].
Yes __X__ No _____

2. The Clean Water Act (40 CFR 136) or method holding times were met for all analyses (14 days from time of sample collection to analysis or extraction).
Yes __X__ No _____

III. INSTRUMENT CALIBRATION – GC/MS

A. Initial Calibration
1. The Response (RF) and Relative Response Factors (RRF) and average RRF for all compounds for all analyses met the contract criteria of > 0.05 or > 0.01 for poor responding (pr) volatiles.
Yes __X__ No _____ NA _____
Method 8260: Per the Project Manager, the 2001 EPA CLP validation guidance has been applied to the common “poor responders.” Calibration response factors below 0.05 have been observed for Acetone, 2-butanone and on some instruments 2-hexanone. The validation guidance used for this project allows for a response of 0.01 for these compounds if spectral integrity can be verified at low concentrations. These spectra are not commonly provided and are not part of the deliverable for this data set. The laboratory has been tasked with providing to the client verification that the 0.01 RF is valid. If the spectral verification is available, data are not qualified for response factors greater than 0.01 and less than 0.05 for “poor responders.” No data have been qualified.

Most of the low-responding compounds are highly water-soluble and capable of hydrogen bonding with water. This decreases their purge efficiency and results in the relatively low response. The implication of this low

purge efficiency is that a relatively low absolute recovery of such compounds is achieved in the purge step of the analysis. If this recovery is consistent, reasonable accuracy and precision can be achieved in a given matrix, which is indicated for the lab matrix by acceptable recoveries in LCS and calibration checks. However, this causes these targets to be more sensitive to matrix variations that impact purge efficiency (such as ionic strength or the presence of varying levels of soluble non-target organic material) than are the more hydrophobic compounds typically analyzed by this method, and as a result they are more likely to exhibit matrix bias.

2a. The relative standard deviation (RSD) for the five point calibration was within the 30% limit for the CCCs.
Yes __X__ No _____ NA _____
This is a method requirement and indicates that the analytical system is in control.

2b. The relative standard deviation (RSD) for the five point calibration was within the 30% limit for all other compounds, the average % RSD was < 15%, or a linear curve was used.
Yes __X__ No _____ NA _____
Per the table below, there were no % RSDs out of the EPA limits with the exception of instrument 11 for the May 3, 2012 ICAL. The previous 20% limits are noted and not applied. In all cases, the compound was not detected and no qualifiers have been applied as response factors are fully acceptable to verify the non-detects.

	MS6	lim. 25		**MS8**		
	4/25/12	5/2,3/12	5/4/12	3/27/12	5/3/12	5/4/12
	ICAL/ICV	CCAL	CCAL	ICAL/ICV	CCAL	CCAL
1,1,1-Trichloroethane			OK			
1,2,4-Trimethylbenzene				23.6		
1,2-Dibromoethane (pr)	27.98					
2-Hexanone	27.53					
1,2-dibromomethane						
Acetone (pr)	0.047/.041	0.0455		0.037	pr	
Bromomethane	25.2					
Dichlorodifluoromethane (pr)				ok/54.9+		
Hexachlorobutadiene						
MEK (2-Butanone) (pr)					pr	
trans-1,3-Dichloropropene	28.2					
Chloromethane (pr)						pr
					3 cmpds >20<25 ok	
	MS10			**MS11**		
	4/17/12	5/3/12	5/4/12	5/3/2012	5/4/12	5/5/12
	ICAL/ICV	CCAL	CCAL	ICAL/ICV	CCAL	CCAL
1,1,1,2-tetrachloroethane				34.02/ok	ok	
1,1,1-Trichloroethane						
Bromoform	20.9/ok			35.27/ok		
Acetone (pr)			pr			

Carbon tetrachloride		**-29.5**	-26.8			
Dichlorodifluoromethane (pr)	ok/ 55			ok/41.9		
Bromomethane		-27.7				-30.9
Hexachlorobutadiene		30.4	29.9			-39.5
Chloromethane (pr)		-36.9		ok/27.2		
MEK (2-Butanone) (pr)						
			3 cmpds >20<25 ok			

3. The 12 hour system Performance Check was performed as required in SW-846 and met the QC limits of 80 – 120%.
Yes ____ No __X___ NA _____
Dichlorodifluoromethane is high in several ICV calibrations. The CCV's were acceptable and the compounds noted are not detected in client samples and no qualification is applied. See table above.

B. Continuing Calibrations
1. The midpoint standard was analyzed for each analysis at the required frequency, and the QC criterion of > 0.05 (> 0.01 for CLP 2001 VOA) was met.
Yes __X__ No _____ NA _____

2. The percent difference (% D) limits of ± 25% were met. The 2001 NFG also allow for 40% D for the "poor responders." For other compounds, the QAPP notes rejection of detected compounds with % D > 40%.
Yes _____ No __X__ NA _____
The table above shows the outliers observed in CCVs for this report. In all cases, the compound was non-detect and the response factor was acceptable to verify the non-detect, particularly as the response (%D) increases. The exception is carbon tetrachloride on instrument 10 which had low %D and detections. Data are qualified "JC#", where # is the % D. There could be variability to the data as there is variability to the response.
When there are no detections, no qualification is required unless the % D is biased low and so large as to indicate a significant probability of false negatives. Qualification is required for a % D biased high for detected compounds only. This requires that the RF is acceptable to verify the non-detect status, which is the case here. Data would be qualified "JC#", where # is the % D. There could be variability to the data as there is variability to the response. No qualifiers have been required for this.

The QAPP indicates that compounds in a run should be rejected if the % D is > 40%. There were no cases of this for these data. We interpret this to mean that non-detects should be rejected and that detected compounds should be "J" qualified, which is the normal validation process for rejection. Professional judgment is that high bias CCVs with a % D greater than 40% should not be qualified for non-detects if the response factors are sufficient to ensure verification of the non-detect. Non-detects with % D values > 40% (low bias) are qualified "RC#", where # is the % D. There is no %D reported with this low bias.

IV. GC/MS INSTRUMENT PERFORMANCE CHECK

The BFB (VOA) performance check was injected once at the beginning of each 12-hour period and relative abundance criteria for the ions were met.
Yes __X__ No _____ NA _____

V. INTERNAL STANDARDS
The Internal Standards met the 100% upper and -50% lower limits criteria, and the Retention times were within the required windows.
Yes __X__ No _____ NA _____

VI. SURROGATE STANDARDS
Surrogate spikes were analyzed with every sample.
Yes __X__ No _____

And met the recovery limits defined in the QAPP , which are the laboratory limits.
Yes __X__ No _____

VII. MATRIX SPIKE/MATRIX SPIKE DUPLICATE
A. Matrix Spike (MS) and Matrix Spike Duplicate (MSD) were analyzed for every analysis performed and for every 20 samples or for every matrix whichever is more frequent.
Yes __X__ No _____
There are 4 MS/MSD samples associated with the 77 non-QC (not field dups, TB and RB) client samples: MW-88-LS-15, DR2-3- LS-15, MW-258- LS-15, MW-204A- LS-15. This meets the recommendation of 1 per 20 field samples. As this is an ongoing project an overall adherence to the 1:20 frequency is monitored by the Project Manager.

B. The MS and MSD percent recoveries were within the limits defined in the updated 2011 QAPP, which now references the laboratory limits.
Yes ____ No __X___ NA _____
The full target list has been spiked.
The QC is within limits with the exception of
DR2-3- LS-15. Recoveries were high for hexachlorobutadiene (138/132%);
MW-204A- LS-15. Recoveries were high for hexachlorobutadiene (135/127%);
All compounds are non-detect. No data have been qualified as all associated samples were non-detect for these compounds and there is no qualification for high bias.

MW-88- LS-15. Recoveries were low for 1,2-dibromomethane (75.8/75.3%) and methyl isobutyl ketone (MIBK) at 58.1/ 56.6%.
MW-258- LS-15. Recoveries for TCE were low (67.6/ 45.5%).
Data have been qualified JMS#, where # is the recovery; data could be biased low or false non-detected data could be reported.

C. The MSD relative percent differences (RPD) were within the defined contract limits, which are 30%.
Yes __X__ No _____ NA _____
Qualifiers are added only when the MS or MSD recovery is also out of limits or the RPD exceeds 30%. Data are qualified "JD#", where # is the RPD. As the RPD increases, the matrix precision decreases. All RPD limits are met.

D. The MS/MSD were client samples.
Yes __X__ No _____ NA _____
There was no MS/MSD reported in one of the SDGs, but sufficient client samples are contained in the event overall .

VIII. LABORATORY CONTROL SAMPLE
A. Laboratory Control Sample (LCS) was analyzed for every analysis performed and for every 20 samples.
Yes __X__ No _____

B. The LCS percent recoveries were within the limits defined in the updated 2011 QAPP, which are the laboratory limits. If an LCS and LCSD are analyzed, both samples must have the same compounds out for data to be qualified.
Yes ____ No __X___
The full target list has been spiked. When a high LCS recovery is associated with a non-detect in samples, no qualifier is added since the indicated bias is high. For all noted compounds with high bias, this is the case and no qualifier is applied. When the target is detected, data are qualified "JL#", where # is the recovery. Data could be biased high proportional to the LCS percent recovery. All results associated with low recoveries are qualified and data could be biased low. Only 1,2-dibromoethane data are qualified. The laboratory uses the same control limits on all 4 instruments used for analysis even though the responses are different on each instrument. The control limits should be instrument specific. For the MS 8 LCS/D data are not qualified for the RPD as the recoveries are acceptable.

	MS6			**MS8**	**MS8**
	5/3/12	5/4/12	5/2/12	5/3/12	5/4/12
	LCS/D	LCS/D	LCS/D	LCS/D	LCS/D
1,1,1-Trichloroethane	ok				
1,2-Dibromoethane (pr)				**78.4**	
Dichlorodifluoromethane (pr)			**78.5/** 78.8	147 ok lab	
MEK (2-Butanone) (pr)					95.6/78 RPD 20.3
Chloromethane (pr)		130/132			
	MS10	**MS10**		**MS11**	**MS11**
	5/3/12	5/4/12		5/4/12	5/5/12
	LCS	LCS		LCS	LCS
1,1,1,2-tetrachloroethane	Ok			ok	ok
MEK (2-Butanone) (pr)		145			

IX. BLANKS
A. Method Blanks were analyzed at the required frequency and for each matrix and analysis.
Yes __X__ No _____

B. No blank contamination was found in the Method Blank.
Yes __X___ No ____
Whenever Methylene Chloride, Acetone, 2-Butanone are detected in associated samples at a level less than 10 × the Method Blank (corrected for dilution), data are qualified "BMB#", where # is the corrected Method Blank level. Results are usable as non-detect. None of these compounds are in the method blanks.

C. If Field Blanks were identified, no blank contamination was found.
Yes _____ No __X___ NA ____
The field blank is RB-2-LS-15, collected on 4/22/12. Acetone is reported at 7.49 ug/L and toluene at 0.336 ug/L. No acetone are detected. One detection of toluene is qualified BFB.336 and data are fully usable as non-detected values.

RB-1- LS-15 collected 4/23/12 reported benzene at 0.15, chloroform at 0.298 , naphthalene at 0.381 and toluene at 0.263. Only chloroform is detected in client samples. Data less than 5 x blank are qualified BFB.298 and are fully usable as non-detected values.
Trip blanks were non-detect with the exception of TB-4 collected on 4/23/12 which reported 1,4-dichlorobenzene at 0.218 ug/L, methylene chloride at 0.585 ug/L and toluene at 0.299 ug/L. These compounds are not in the client samples and no qualifier is applied. TB-4-ODLA-4 with methylene chloride at 0.389 ug/L. The samples were non-detect for these compounds and no qualifiers have been applied for trip or rinse blanks.

X. FIELD QC
If Field Duplicates were identified, they met guidance for VOA of RPD of < 30% for water or < 50% for soil. For values reported at < 5 × the reporting limit (RL), a difference of 2 × RL or 3.5 × RL for soil is used as guidance. This is referred to as the CRDL Rule. Data are not qualified for Field Duplicates as these are evaluated for the total project by the Project Manager.
Yes _____ No __X__ NA _____
There are eight identified field duplicates as described in the following table. If data were qualified they would be J, FD#, where # is the difference between the two values as both values are less than 5 x RL. All precision criteria were met. For Dup-7 pair, there was a low level detection of 1,2-DCA and a non-detect and less than 5 x MDL. For DUP-4/ MW205B acetone is at 2.55 and ND ug/L; cis-1,2-DCE is at 5.3 and 9.2 ug/L for an RPD of 53.8 and vinyl chloride is within the RL limits.

MW-64-LS-15	DUP-1
MW-108-LS-15	DUP-2
MW-197A-LS-15	DUP-3
MW-205B-LS-15	DUP-4
MW-212-LS-15	DUP-5
MW-257-LS-15	DUP-6
PMW92-06-LS-15	DUP-7
DR2-1-LS-15	DUP-8

XI. SYSTEM PERFORMANCE
A. The RICs, chromatograms, tunes and general system performance were acceptable for all instruments and analytical systems.
Yes _____ No _____ NA __X__
Not part of this review level.

B. The suggested EQLs for the sample matrices in this set were met.
Yes __X__ No _____ NA _____

XII. TCL COMPOUNDS
A. The identification is accurate and all retention times, library spectra and reconstructed ion chromatograms (RIC) were evaluated for all detected compounds.
Yes _____ No _____ NA __X__
Not part of this review level.

B. Quantitation was checked to determine the accuracy of calculations for representative compounds in each internal standards quantitation set.
Yes _____ No _____ NA __X__
Not part of this review level.

XIII. TENTATIVELY IDENTIFIED COMPOUNDS

TICs were properly identified and met the library identification criteria.
Yes _____ No _____ NA __X__
Not part of this review level.

XIV. OVERALL ASSESSMENT OF THE CASE

The laboratory has complied with the requested method. Data are fully usable after consideration of qualifiers. The following is noted:
This report has been requested to include the following review: QC, hold times, sample integrity (Chains of Custody, sample login), and summary calibrations. Note that there are 4 instruments used for the analyses. There is some redundant calibration data which is reviewed only the first time it is present in the packages.

Sample Preservation

EPA regulations (See Federal Register, March 12, 2007, 40CFR Part 122) require only that the temperature of samples delivered to the laboratory be equal to or less than 6 °C. The sample temperature conditions are fully compliant with applicable regulations.

Initial Calibrations

Method 8260: Per the Project Manager, the 2001 EPA CLP validation guidance has been applied to the common "poor responders." Calibration response factors below 0.05 have been observed for Acetone, 2-butanone and on some instruments 2-hexanone. The validation guidance used for this project allows for a response of 0.01 for these compounds if spectral integrity can be verified at low concentrations.
Per the table in the text there were no % RSD out of the EPA limits. The previous 25% limits are noted and not applied. In all cases, the compound was not detected and no qualifiers have been applied as response factors are fully acceptable to verify the non-detects.

ICV

Dichlorodifluoromethane is high in several ICV calibrations. The CCV's were acceptable and the compounds noted are not detected in client samples and no qualification is applied. See table in the text.

Continuing Calibrations

Per the table in the text there were % D out of the EPA limits. The previous 25% limits are noted and not applied. The table above shows the outliers observed in CCVs for this report. In all cases, the compound was non-detect and the response factor was acceptable to verify the non-detect, particularly as the response (%D) increases. The exception is carbon tetrachloride on instrument 10 which had low %D and detections. Data are qualified "JC#", where # is the % D. There could be variability to the data as there is variability to the response. When there are no detections, no qualification is required unless the % D is biased low and so large as to indicate a significant probability of false negatives. Qualification is required for a % D biased high for detected compounds only. This requires that the RF is acceptable to verify the non-detect status, which is the case here. Data would be qualified "JC#", where # is the % D. There could be variability to the data as there is variability to the response. No qualifiers have been required for this.

Matrix Spikes

There are 4 MS/MSD samples associated with the 77 non-QC (not field dups, TB and RB) client samples: MW-88-LS-15, DR2-3- LS-15, MW-258- LS-15, MW-204A- LS-15. This meets the recommendation of 1 per 20 field samples. As this is an ongoing project an overall adherence to the 1:20 frequency is monitored by the Project Manager.
The full target list has been spiked.
The QC is within limits with the exception of
DR2-3- LS-15. Recoveries were high for hexachlorobutadiene (138/132%);

MW-204A- LS-15. Recoveries were high for hexachlorobutadiene (135/127%);
All compounds are non-detect. No data have been qualified as all associated samples were non-detect for these compounds and there is no qualification for high bias.

MW-88- LS-15. Recoveries were low for 1,2-dibromomethane (75.8/75.3%) and methyl isobutyl ketone (MIBK) at 58.1/ 56.6%.
MW-258- LS-15. Recoveries for TCE were low (67.6/ 45.5%).
Data have been qualified JMS#, where # is the recovery; data could be biased low or false non-detected data could be reported.

Laboratory Control Samples
The full target list has been spiked. When a high LCS recovery is associated with a non-detect in samples, no qualifier is added since the indicated bias is high. For all noted compounds with high bias, this is the case and no qualifier is applied. When the target is detected, data are qualified "JL#", where # is the recovery. Data could be biased high proportional to the LCS percent recovery. All results associated with low recoveries are qualified and data could be biased low. Only 1,2-dibromoethane data are qualified. The laboratory uses the same control limits on all 3 instruments used for analysis even though the responses are different on each instrument. The control limits should be instrument specific. For the MS 8 LCS/D data are not qualified for the RPD as the recoveries are acceptable.

Field Blanks
The field blank is RB-2-LS-15, collected on 4/22/12. Acetone is reported at 7.49 ug/L and toluene at 0.336 ug/L. No acetone are detected. One detection of toluene is qualified BFB.336 and data are fully usable as non-detected values.
RB-1- LS-15 collected 4/23/12 reported benzene at 0.15, chloroform at 0.298 , naphthalene at 0.381 and toluene at 0.263. Only chloroform is detected in client samples. Data less than 5 x blank are qualified BFB.298 and are fully usable as non-detected values.
Trip blanks were non-detect with the exception of TB-4 collected on 4/23/12 which reported 1,4-dichlorobenzene at 0.218 ug/L, methylene chloride at 0.585 ug/L and toluene at 0.299 ug/L. These compounds are not in the client samples and no qualifier is applied. TB-4-ODLA-4 with methylene chloride at 0.389 ug/L. The samples were non-detect for these compounds and no qualifiers have been applied for trip or rinse blanks.

Field QC
There are eight identified field duplicates as described in the following table. If data were qualified they would be J, FD#, where # is the difference between the two values as both values are less than 5 x RL. All precision criteria were met. For Dup-7 pair, there was a low level detection of 1,2-DCA and a non-detect and less than 5 x MDL. For DUP-4/ MW205B acetone is at 2.55 and ND ug/L; cis-1,2-DCE is at 5.3 and 9.2 ug/L for an RPD of 53.8 and vinyl chloride is within the RL limits.

MW-64-LS-15	DUP-1
MW-108-LS-15	DUP-2
MW-197A-LS-15	DUP-3
MW-205B-LS-15	DUP-4
MW-212-LS-15	DUP-5
MW-257-LS-15	DUP-6
PMW92-06-LS-15	DUP-7
DR2-1-LS-15	DUP-8

TABLE OF QUALIFIED DATA

LAB_ID	CLIENT_ID	COMPOUND	Result ug/L	flag	MDL	Qualifier
L12040762-01	DR2-2-LS-15	1,2-Dibromoethane		U	0.25	JL78.5
L12040762-02	DR2-5-LS-15	1,2-Dibromoethane		U	0.25	JL78.5
L12040762-03	MW-197A-LS-15	1,2-Dibromoethane		U	0.25	JL78.5
L12040762-04	MW-203A-LS-15	1,2-Dibromoethane		U	0.25	JL78.5
L12040762-05	MW-203B-LS-15	1,2-Dibromoethane		U	0.25	JL78.5
L12040762-06	DUP-3-LS-15	1,2-Dibromoethane		U	0.25	JL78.5
L12040762-07	TB-1-LS-15	1,2-Dibromoethane		U	0.25	JL78.5
L12040829-01	MW-26-LS-15	Carbon tetrachloride	6.34		0.25	JC-29.5
L12040829-02	MW-88-LS-15	1,2-Dibromoethane		U	0.25	JMS75.3
L12040829-02	MW-88-LS-15	Carbon tetrachloride	9.96		0.25	JC-29.5
L12040829-02	MW-88-LS-15	MIBK (methyl isobutyl ketone)		U	2.5	JMS56.6
L12040829-12	MW-254-LS-15	Carbon tetrachloride	0.888	F	0.25	JC-29.5
L12040829-14	MW-256-LS-15	Carbon tetrachloride	0.524	F	0.25	JC-29.5
L12040829-19	DR2-1-LS-15	Carbon tetrachloride	25.7		0.25	JC-29.5
L12040829-20	DR2-3-LS-15	Carbon tetrachloride	4.23		0.25	JC-29.5
L12040829-23	DR2-6-LS-15	Carbon tetrachloride	27.4		0.25	JC-29.5
L12040829-25	DUP-8-LS-15	Carbon tetrachloride	25.5		0.25	JC-29.5
L12040831-02	MW-100B-LS-15	Toluene	0.301	F	0.25	BFB.336
L12040831-07	MW-197B-LS-15	1,2-Dibromoethane		U	0.25	JL78.5
L12040831-08	MW-213-LS-15	1,2-Dibromoethane		U	0.25	JL78.5
L12040831-09	PMW92-03-LS-15	1,2-Dibromoethane		U	0.25	JL78.5
L12040831-10	PMW92-06-LS-15	1,2-Dibromoethane		U	0.25	JL78.5
L12040831-11	DUP-7-LS-15	1,2-Dibromoethane		U	0.25	JL78.5
L12040831-12	MW-258-LS-15	1,2-Dibromoethane		U	0.25	JL78.5
L12040831-12	MW-258-LS-15	Trichloroethene	57.7		0.25	JMS45.5
L12040831-15	DR1-5-LS-15	1,2-Dibromoethane		U	0.25	JL78.5
L12040831-16	DR1-5A-LS-15	1,2-Dibromoethane		U	0.25	JL78.5
L12040831-17	DR1-6-LS-15	1,2-Dibromoethane		U	0.25	JL78.5
L12040831-18	DR1-6A-LS-15	1,2-Dibromoethane		U	0.25	JL78.5
L12040831-19	RB-2-LS-15	1,2-Dibromoethane		U	0.25	JL78.5
L12040831-20	MW-212-LS-15	1,2-Dibromoethane		U	0.25	JL78.4
L12040831-21	MW-259-LS-15	1,2-Dibromoethane		U	0.25	JL78.4
L12040831-22	PMW101-04A-LS-15	1,2-Dibromoethane		U	0.25	JL78.4
L12040831-23	PMW101-04B-LS-15	1,2-Dibromoethane		U	0.25	JL78.4
L12040831-24	DUP-5-LS-15	1,2-Dibromoethane		U	0.25	JL78.4

L12040831-25	TB-3-LS-15	1,2-Dibromoethane		U	0.25	JL78.4
L12040859-03	MW-64-LS-15	Chloroform	0.876		0.125	BFB.298
L12040859-04	MW-90-LS-15	Carbon tetrachloride	0.452	F	0.25	JC-29.5
L12040859-06	MW-97-LS-15	Chloroform	0.346		0.125	BFB.298
L12040859-07	MW-98-LS-15	Chloroform	0.135	F	0.125	BFB.298
L12040859-08	MW-107T-LS-15	Chloroform	0.392		0.125	BFB.298
L12040859-09	MW-107B-LS-15	Chloroform	0.492		0.125	BFB.298
L12040859-12	MW-199B-LS-15	Chloroform	0.159	F	0.125	BFB.298
L12040859-13	MW-200-LS-15	Chloroform	0.159	F	0.125	BFB.298
L12040859-14	MW-202B-LS-15	Chloroform	0.655		0.125	BFB.298
L12040859-26	MW-208B-LS-15	Chloroform	0.373		0.125	BFB.298
L12040859-27	MW-209B-LS-15	Chloroform	0.227	F	0.125	BFB.298
L12040859-28	MW-210A-LS-15	Chloroform	0.127	F	0.125	BFB.298
L12040859-34	DUP-1-LS-15	Chloroform	0.788		0.125	BFB.298

Final Data Qualification and Usability Report

Project:	Defense Depot Memphis, TN (DDMT) Main Installation LTM
Sampling Event:	LS-15
Project / Task Number:	145803-005
Sample Data Package(s):	L12040762, L12040829, L12040831, L12040859
Data Validation Performed by:	Diane Short & Associates (DSA)
Final Data Qualification and Usability Report Prepared by:	Lynn K. Lutz, HDR Inc.

Data Validation Report Review and Comments

The data validation report was acceptable. It appears the validator did not include the four sets of MS/MSD in the total sample count.

Final Data Qualifiers

Final qualifiers for detected carbon tetrachloride results with CCV %D values of -29.5% were J where DSA had qualified as JC-29.5.

Final qualifiers for non-detect EDB and MIBK results with MS/MSD recoveries below control limits were UJ where DSA had qualified as JMS75.3 or JMS56.6.

Final qualifier for detected trichloroethene result with MS/MSD recoveries below control limits was J where DSA had qualified as JMS45.5.

Final qualifiers for non-detect EDB results with LCS recoveries below control limits were UJ where DSA had qualified as JL78.4 JL78.5.

Final qualifiers for detected toluene and chloroform results less than five times rinsate blank concentrations were B where DSA had qualified as BFB.336 or BFB.298 and determined they were fully usable as non-detect results, as the Memphis QAPP requires a “B” qualifier rather than a non-detect result.

Final qualifiers were J where detected results were between the MDL and RL.

Sample DR2-5-LS-15 required a 5X dilution due to a high concentration of carbon tetrachloride. The diluted result for this analyte should be reported; all other analytes should be reported from the undiluted analytical run.

Data Usability

There were no rejected sample results. All results are usable as qualified.



08 June 2012

Lynn K. Lutz, HDR Inc. Date

DIANE SHORT & ASSOCIATES, INC.
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ORGANIC DATA QUALITY REVIEW REPORT
Volatile Organics by SW-846 Method 8260B (GC/MS)

SDG	L12040: 692, 763, 764, 782
PROJECT	Memphis Defense Depot, ODLA-4 Sampling for HDR, Denver
LABORATORY	Microbac Laboratories, Inc., Marietta, OH
SAMPLE MATRIX	Water
SAMPLING DATE	March/2012
NUMBER OF SAMPLES	87, including 8 field duplicates, 4 trip blanks and 1 rinse blank
ANALYSES REQUESTED	SW-846 8260B (VOA by GC/MS)
SAMPLE NUMBER	See result forms attached and associated EDD

DATA REVIEWER: Diane Short

QA REVIEWER: Diane Short & Associates, Inc. INITIALS/DATE: __ DLS 05/24/2012

Telephone Logs included Yes____ No __X_

Contractual Violations Yes____ No __X_

The project QAPP (09/11), the EPA Contract Laboratory Program National Functional Guidelines for Organic Review, 1999 and 2001, and the SW-846 Method 8260B have been referenced by the reviewer to perform this data validation review. The EPA qualifiers have been expanded to include a descriptor code and value to define QC violations and their values, per the approval of the Project Manager. Per the Scope of Work, the review of these samples includes Level III validation of all chains of custody, calibrations and QC forms referencing the QC limits in the above documents.

I. DELIVERABLES

A. All deliverables were present as specified in the Statement of Work (SOW), SW-846, or in the project contract.
Yes __X__ No _____
This report has been requested to include the following review: QC, hold times, sample integrity (Chains of Custody, sample login), and summary calibrations. Note that there are 4 instruments used for the analyses. There is some redundant calibration data which is reviewed only the first time it is present in the packages.

The 2011 QAPP has been used for all review with the exception of the CCAL limits where the 25% NFG limits were applied. Final application of these limits is being considered by project management.

B. Chain of Custody documentation was complete and accurate.
Yes __X__ No _____
Chains of Custody (COC) were complete and airbill numbers were on the log-in forms as is acceptable. Most of the chains are computer generated with only 1 standard COC form.

C. Samples were received at the required temperature, preservation and intact with no bubbles.
Yes __X__ No _____
EPA regulations (See Federal Register, March 12, 2007, 40CFR Part 122) require only that the temperature of samples delivered to the laboratory be equal to or less than 6 °C. The sample temperature conditions are fully compliant with applicable regulations.

II. ANALYTICAL REPORT FORMS

A. The Analytical Report or Data Sheets are present and complete for all requested analyses.
Yes __X__ No _____

B. Holding Times
1. The contract holding times were met for all analyses [time of sample receipt to time of analysis (VOA) or time of extraction to time of analysis].
Yes __X__ No _____

2. The Clean Water Act (40 CFR 136) or method holding times were met for all analyses (14 days from time of sample collection to analysis or extraction).
Yes __X__ No _____

III. INSTRUMENT CALIBRATION – GC/MS

A. Initial Calibration
1. The Response (RF) and Relative Response Factors (RRF) and average RRF for all compounds for all analyses met the contract criteria of > 0.05 or > 0.01 for poor responding (pr) volatiles.
Yes __X__ No _____ NA _____
Method 8260: Per the Project Manager, the 2001 EPA CLP validation guidance has been applied to the common "poor responders." Calibration response factors below 0.05 have been observed for Acetone, 2-butanone and on some instruments 2-hexanone. The validation guidance used for this project allows for a response of 0.01 for these compounds if spectral integrity can be verified at low concentrations. These spectra are not commonly provided and are not part of the deliverable for this data set. The laboratory has been tasked with providing to the client verification that the 0.01 RF is valid. If the spectral verification is available, data are not qualified for response factors greater than 0.01 and less than 0.05 for "poor responders." No data have been qualified.

Most of the low-responding compounds are highly water-soluble and capable of hydrogen bonding with water. This decreases their purge efficiency and results in the relatively low response. The implication of this low purge efficiency is that a relatively low absolute recovery of such compounds is achieved in the purge step of

the analysis. If this recovery is consistent, reasonable accuracy and precision can be achieved in a given matrix, which is indicated for the lab matrix by acceptable recoveries in LCS and calibration checks. However, this causes these targets to be more sensitive to matrix variations that impact purge efficiency (such as ionic strength or the presence of varying levels of soluble non-target organic material) than are the more hydrophobic compounds typically analyzed by this method, and as a result they are more likely to exhibit matrix bias.

2a. The relative standard deviation (RSD) for the five point calibration was within the 30% limit for the CCCs.
Yes __X__ No _____ NA _____
This is a method requirement and indicates that the analytical system is in control.

2b. The relative standard deviation (RSD) for the five point calibration was within the 30% limit for all other compounds, the average % RSD was < 15%, or a linear curve was used.
Yes __X__ No _____ NA _____
Per the table below, there were no % RSDs out of the EPA limits. The previous 20% limits are noted and not applied. In all cases, the compound was not detected and no qualifiers have been applied as response factors are fully acceptable to verify the non-detects.

Compound	**MS6**			**MS8**		
2012:	**25-Apr**	**26-Apr**	**3-May**	**27-Mar**	**5-May**	**1-May**
	ICAL/ICV	**CCAL**	**CCAL**	**ICAL/ICV**	**CCAL**	**CCAL**
1,1,1-Trichloroethane						
1,2,4-Trimethylbenzene				23.6		
1,2-Dibromoethane -pr	27.98					
2-Hexanone – (pr)	27.53				.044/.042; -20.7	0.0476
1,2-dibromomethane						
Acetone – poor responder (pr)	0.047/.041	0.045	0.0455	0.037	.035/.033	0.0353
Bromomethane	25.2					
Dichlorodifluoromethane				ok/54.9+		
Hexachlorobutadiene					20.9	
MEK (2-Butanone)- (pr)					.047/.046	0.0485
Trichlorofluoromethane- pr					23/ 21	21.4
trans-1,3-Dichloropropene	28.2					
Set 763 4/28 CCV, LCS/D ok					5/4 dil'n only ok	
					5/4 TCE only ok	
	MS10					
2012:	17-Apr	28-Apr	30-Apr			
	ICAL/ICV	CCAL	CCAL			
1,1,1-Trichloroethane						
Bromoform	20.9/ok					
Carbon tetrachloride		-22.8	-24.1			
Dichlorodifluoromethane -pr	ok/ 55		-20.6			

	MS11					
2012	6-Mar	25-Apr	26-Apr	28-Apr		
	ICAL/ICV	CCAL	CCAL	CCAL		
1,1,1-Trichloroethane		20.2	20.3	22.9		
Acetone – poor responder (pr)	0.048	0.0487				
Bromochloromethane						
Bromodichloromethane						
Bromoform			21.4			
Bromomethane		20.7		-31.4		
Carbon tetrachloride		21.6	22.2	22.4		
Dichlorodifluoromethane -pr	ok/43.5	22.4	24.1	29.3		
Trichlorofluoromethane -pr		20.3		25.6		
cis-1,3-Dichloropropene			20.9			

3. The 12 hour system Performance Check was performed as required in SW-846 and met the QC limits of 80 – 120%.
Yes ____ No __X___ NA _____
Dichlorodifluoromethane is high in several ICV calibrations. The CCV's were acceptable and the compounds noted are not detected in client samples and no qualification is applied. See table above.

B. Continuing Calibrations
1. The midpoint standard was analyzed for each analysis at the required frequency, and the QC criterion of > 0.05 (> 0.01 for CLP 2001 VOA) was met.
Yes __X__ No _____ NA _____

2. The percent difference (% D) limits of ± 25% were met. The 2001 NFG also allow for 40% D for the "poor responders." For other compounds, the QAPP notes rejection of detected compounds with % D > 40%.
Yes _____ No __X__ NA _____
The table above shows the outliers observed in CCVs for this report. In all cases, the compound was non-detect and the response factor was acceptable to verify the non-detect, particularly as the response (%D) increases. When there are no detections, no qualification is required unless the % D is biased low and so large as to indicate a significant probability of false negatives. Qualification is required for a % D biased high for detected compounds only. This requires that the RF is acceptable to verify the non-detect status, which is the case here. Data would be qualified "JC#", where # is the % D. There could be variability to the data as there is variability to the response. No qualifiers have been required.

The QAPP indicates that compounds in a run should be rejected if the % D is > 40%. There were no cases of this for these data. We interpret this to mean that non-detects should be rejected and that detected compounds should be "J" qualified, which is the normal validation process for rejection. Professional judgment is that high bias CCVs with a % D greater than 40% should not be qualified for non-detects if the response factors are sufficient to ensure verification of the non-detect. Non-detects with % D values > 40% (low bias) are qualified "RC#", where # is the % D. There is no %D reported with this low bias.

IV. GC/MS INSTRUMENT PERFORMANCE CHECK

The BFB (VOA) performance check was injected once at the beginning of each 12-hour period and relative abundance criteria for the ions were met.

Yes __X__ No _____ NA _____

V. INTERNAL STANDARDS

The Internal Standards met the 100% upper and -50% lower limits criteria, and the Retention times were within the required windows.
Yes __X__ No _____ NA _____

VI. SURROGATE STANDARDS

Surrogate spikes were analyzed with every sample.
Yes __X__ No _____

And met the recovery limits defined in the QAPP , which are the laboratory limits.
Yes __X__ No _____

VII. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A. Matrix Spike (MS) and Matrix Spike Duplicate (MSD) were analyzed for every analysis performed and for every 20 samples or for every matrix whichever is more frequent.
Yes __X__ No _____
There are 4 MS/MSD samples associated with the 75non-QC (not field dups, TB and RB) client samples: MW-06-ODLA-4, MW-235-ODLA-4, MW-165-ODLA-4, and MW-126-ODLA-4. This meets the recommendation of 1 per 20 field samples. As this is an ongoing project an overall adherence to the 1:20 frequency is monitored by the Project Manager.

B. The MS and MSD percent recoveries were within the limits defined in the updated 2011 QAPP, which now references the laboratory limits.
Yes ____ No __X___ NA _____
The full target list has been spiked.
The QC is within limits with the exception of
MW-235-ODLA-4. Recoveries were high for bromodichloromethane (129/126%); dichlorodifluoromethane (175/170%) and MTBE (128/ 126%).
MW-165-ODLA-4. Recoveries were high for bromodichloromethane (122/126%); dichlorodifluoromethane (173/172%) and MTBE (119/ 128%).
All compounds are non-detect. No data have been qualified JMS#, where # is the recovery as all associated samples were non-detect for these compounds and there is no qualification for high bias.

C. The MSD relative percent differences (RPD) were within the defined contract limits, which are 30%.
Yes __X__ No _____ NA _____
Qualifiers are added only when the MS or MSD recovery is also out of limits or the RPD exceeds 30%. Data are qualified "JD#", where # is the RPD. As the RPD increases, the matrix precision decreases. All RPD limits are met.

D. The MS/MSD were client samples.
Yes __X__ No _____ NA _____
There were no MS/MSD reported in two of the SDGs, but sufficient client samples are contained in the event overall .

VIII. LABORATORY CONTROL SAMPLE

A. Laboratory Control Sample (LCS) was analyzed for every analysis performed and for every 20 samples.
Yes __X__ No _____

B. The LCS percent recoveries were within the limits defined in the updated 2011 QAPP, which are the laboratory limits. If an LCS and LCSD are analyzed, both samples must have the same compounds out for data to be qualified.
Yes ____ No __X___
The full target list has been spiked. When a high LCS recovery is associated with a non-detect in samples, no qualifier is added since the indicated bias is high. For all noted compounds with high bias, this is the case and no qualifier is applied. When the target is detected, data are qualified "JL#", where # is the recovery. Data could be biased high proportional to the LCS percent recovery. All results associated with low recoveries are qualified and data could be biased low. For 1,2 dibromomethane, the LCS is within limits and the data are not qualified. The laboratory uses the same control limits on all 3 instruments used for analysis even though the responses are different on each instrument. The control limits should be instrument specific.

Compound	**MS11**			**MS8**
2012:	25-Apr	26-Apr	28-Apr	5-May
	LCS	LCS	LCS	LCS
Acetone	145			
Bromochloromethane		132		
Bromodichloromethane		129	125	
Dichlorodifluoromethane	157	174	171	142/136 ok lab lim
1,2 dibromomethane				85.3/78.8

IX. BLANKS
A. Method Blanks were analyzed at the required frequency and for each matrix and analysis.
Yes __X__ No _____

B. No blank contamination was found in the Method Blank.
Yes __X___ No ____
Whenever Methylene Chloride, Acetone, 2-Butanone are detected in associated samples at a level less than 10 × the Method Blank (corrected for dilution), data are qualified "BMB#", where # is the corrected Method Blank level. Results are usable as non-detect.

C. If Field Blanks were identified, no blank contamination was found.
Yes _____ No __X___ NA ____
The field blank is RB-ODLA-4, collected on 4/19/12. Acetone is reported at 6.27 ug/L and benzene at 0.177 ug/L. Trip blanks were non-detect with the exception of TB-1 collected on 4/17 which reported 1,4-dichlorobenzene at 0.16 ug/L. This compound is not in the client samples and no qualifier is applied. TB-4-ODLA-4 with methylene chloride at 0.389 ug/L. The samples were non-detect for these compounds and no qualifiers have been applied for trip or rinse blanks.

X. FIELD QC
If Field Duplicates were identified, they met guidance for VOA of RPD of < 30% for water or < 50% for soil. For values reported at < 5 × the reporting limit (RL), a difference of 2 × RL or 3.5 × RL for soil is used as guidance. This is referred to as the CRDL Rule. Data are not qualified for Field Duplicates as these are evaluated for the total project by the Project Manager.
Yes ___X__ No ____ NA _____
There are eight identified field duplicates as described in the following table. If data were qualified they would be J, FD#, where # is the difference between the two values as both values are less than 5 x RL. All precision criteria were met. For Dup-1 pair, there was a low level detection of carbon tetrachloride and less than 5 x MDL.

Parent	Field Duplicate
MW-44-ODLA-4	DUP-1
MW-80-ODLA-4	DUP-2
MW-148-ODLA-4	DUP-3
MW-160-ODLA-4	DUP-4
MW-182-ODLA-4	DUP-5
MW-227-ODLA-4	DUP-6
MW-246-ODLA-4	DUP-7
MW-251-ODLA-4	DUP-8

XI. SYSTEM PERFORMANCE

A. The RICs, chromatograms, tunes and general system performance were acceptable for all instruments and analytical systems.
Yes _____ No _____ NA __X__
Not part of this review level.

B. The suggested EQLs for the sample matrices in this set were met.
Yes __X__ No _____ NA _____

XII. TCL COMPOUNDS

A. The identification is accurate and all retention times, library spectra and reconstructed ion chromatograms (RIC) were evaluated for all detected compounds.
Yes _____ No _____ NA __X__
Not part of this review level.

B. Quantitation was checked to determine the accuracy of calculations for representative compounds in each internal standards quantitation set.
Yes _____ No _____ NA __X__
Not part of this review level.

XIII. TENTATIVELY IDENTIFIED COMPOUNDS

TICs were properly identified and met the library identification criteria.
Yes _____ No _____ NA __X__
Not part of this review level.

XIV. OVERALL ASSESSMENT OF THE CASE

The laboratory has complied with the requested method. Data are fully usable after consideration of qualifiers. The following is noted:
This report has been requested to include the following review: QC, hold times, sample integrity (Chains of Custody, sample login), and summary calibrations. Note that there are 4 instruments used for the analyses. There is some redundant calibration data which is reviewed only the first time it is present in the packages.

Sample Preservation

EPA regulations (See Federal Register, March 12, 2007, 40CFR Part 122) require only that the temperature of samples delivered to the laboratory be equal to or less than 6 °C. The sample temperature conditions are fully compliant with applicable regulations.

Initial Calibrations

Method 8260: Per the Project Manager, the 2001 EPA CLP validation guidance has been applied to the common "poor responders." Calibration response factors below 0.05 have been observed for Acetone, 2-butanone and on some instruments 2-hexanone. The validation guidance used for this project allows for a response of 0.01 for these compounds if spectral integrity can be verified at low concentrations.
Per the table in the text there were no % RSD out of the EPA limits. The previous 25% limits are noted and not applied. In all cases, the compound was not detected and no qualifiers have been applied as response factors are fully acceptable to verify the non-detects.

ICV

Dichlorodifluoromethane is high in several ICV calibrations. The CCV's were acceptable and the compounds noted are not detected in client samples and no qualification is applied. See table in the text.

Continuing Calibrations

Per the table in the text there were % D out of the EPA limits. The previous 25% limits are noted and not applied. In all cases, the compound was not detected and no qualifiers have been applied as response factors are fully acceptable to verify the non-detects.

Matrix Spikes

There are 4 MS/MSD samples associated with the 75non-QC (not field dups, TB and RB) client samples: MW-06-ODLA-4, MW-235-ODLA-4, MW-165-ODLA-4, and MW-126-ODLA-4. This meets the recommendation of 1 per 20 field samples. As this is an ongoing project an overall adherence to the 1:20 frequency is monitored by the Project Manager.
The full target list has been spiked.
The QC is within limits with the exception of
MW-235-ODLA-4. Recoveries were high for bromodichloromethane (129/126%); dichlorodifluoromethane (175/170%) and MTBE (128/ 126%).
MW-165-ODLA-4. Recoveries were high for bromodichloromethane (122/126%); dichlorodifluoromethane (173/172%) and MTBE (119/ 128%).
All compounds are non-detect. No data have been qualified JMS#, where # is the recovery as all associated samples were non-detect for these compounds and there is no qualification for high bias.

Laboratory Control Samples

The full target list has been spiked. When a high LCS recovery is associated with a non-detect in samples, no qualifier is added since the indicated bias is high. For all noted compounds with high bias, this is the case and no qualifier is applied. When the target is detected, data are qualified "JL#", where # is the recovery. Data could be biased high proportional to the LCS percent recovery. All results associated with low recoveries are qualified and data could be biased low. For 1,2 dibromomethane, the LCS is within limits and the data are not qualified. The laboratory uses the same control limits on all 3 instruments used for analysis even though the responses are different on each instrument. The control limits should be instrument specific.

Field Blanks

The field blank is RB-ODLA-4, collected on 4/19/12. Acetone is reported at 6.27 ug/L and benzene at 0.177 ug/L.
Trip blanks were non-detect with the exception of TB-1 collected on 4/17 which reported 1,4-dichlorobenzene at 0.16 ug/L. This compound is not in the client samples and no qualifier is applied. TB-4-ODLA-4 with methylene chloride at 0.389 ug/L.
The samples were non-detect for these compounds and no qualifiers have been applied for trip or rinse blanks.

Field QC

There are eight identified field duplicates as described in the following table. If data were qualified they would be J, FD#, where # is the difference between the two values as both values are less than 5 x RL. All precision criteria were met. For Dup-1 pair, there was a low level detection of carbon tetrachloride and less than 5 x MDL.

Parent	Field Duplicate
MW-44-ODLA-4	DUP-1
MW-80-ODLA-4	DUP-2
MW-148-ODLA-4	DUP-3
MW-160-ODLA-4	DUP-4
MW-182-ODLA-4	DUP-5
MW-227-ODLA-4	DUP-6
MW-246-ODLA-4	DUP-7
MW-251-ODLA-4	DUP-8

TABLE OF QUALIFIED DATA

No data have been qualified.

Final Data Qualification and Usability Report

Project:	Defense Depot Memphis, TN (DDMT) Off-Depot PM/LTM
Sampling Event:	ODLA-4
Project / Task Number:	145803-003
Sample Data Package(s):	L12040692, L12040763, L12040764, L12040782
Data Validation Performed by:	Diane Short & Associates (DSA)
Final Data Qualification and Usability Report Prepared by:	Lynn K. Lutz, HDR Inc.

Data Validation Report Review and Comments

The data validation report was acceptable. It appears the validator did not include the four sets of MS/MSD in the total sample count.

Final Data Qualifiers

Final qualifiers were J where detected results were between the MDL and RL.

Sample MW-159-ODLA-4 was analyzed at no dilution and a 5X dilution due to a high concentration of TCE. Only TCE was reported from the 5X analysis.

Data Usability

There were no rejected sample results. All results are usable as qualified.



23 May 2012

Lynn K. Lutz, HDR Inc. Date

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ORGANIC DATA QUALITY REVIEW REPORT
Volatile Organics by SW-846 Method 8260B (GC/MS)

SDG	L12100: 776, 777, 832, 841, 842, 845, 846, 847, 848
PROJECT	Memphis Defense Depot, LB-16 Sampling for HDR, Denver
LABORATORY	Microbac Laboratories, Inc., Marietta, OH
SAMPLE MATRIX	Water
SAMPLING DATE	10/2012
NUMBER OF SAMPLES	140, including 12 field duplicates, 4 trip blanks
ANALYSES REQUESTED	SW-846 8260B (VOA by GC/MS)
SAMPLE NUMBER	See result forms attached and associated EDD

DATA REVIEWER: Diane Short

QA REVIEWER: Diane Short & Associates, Inc. INITIALS/DATE: __ DLS 11/14/2012

Telephone Logs included Yes____ No __X_

Contractual Violations Yes____ No __X_

The project QAPP (09/11), the EPA Contract Laboratory Program National Functional Guidelines for Organic Review, 1999 and 2001, and the SW-846 Method 8260B have been referenced by the reviewer to perform this data validation review. The EPA qualifiers have been expanded to include a descriptor code and value to define QC violations and their values, per the approval of the Project Manager. Per the Scope of Work, the review of these samples includes Level III validation of all chains of custody, calibrations and QC forms referencing the QC limits in the above documents.

I. DELIVERABLES

A. All deliverables were present as specified in the Statement of Work (SOW), SW-846, or in the project contract.
Yes __X__ No _____
This report has been requested to include the following review: QC, hold times, sample integrity (Chains of Custody, sample login), and summary calibrations.
The 2011 QAPP has been used for all review with the exception of the CCAL limits where the 25% NFG limits were applied as Method 8260B was used, not 8260C nor the CLP method. Final application of these limits is being considered by project management.

B. Chain of Custody documentation was complete and accurate.
Yes __X__ No _____
Computer generated chains are submitted for all SDGs except for L12100832. Auto-signatures are present for relinquishment and bar code tags are signed and affixed to each page upon receipt for all SDGs except for SDG L12100776 which does not have relinquishment for pages 2, 3 and has receipt verification only on page 1. The project manager will update the chains in cooperation with the laboratory to complete the record.

C. Samples were received at the required temperature, preservation and intact with no bubbles.
Yes ____ No __X___
EPA regulations (See Federal Register, March 12, 2007, 40CFR Part 122) require only that the temperature of samples delivered to the laboratory be equal to or less than 6 °C. The sample temperature conditions are fully compliant with applicable regulations.
For SDG 12100847, sample MW257 is noted with headspace > 6 mm for 2 of the 3 vials. It appears that the one vial was sufficient to perform the analysis as no problems are reported with the analysis. No further action is taken.

II. ANALYTICAL REPORT FORMS

A. The Analytical Report or Data Sheets are present and complete for all requested analyses.
Yes __X__ No _____
One CCAL form was in error. The laboratory submitted the correct form as soon as it was requested.

B. Holding Times
1. The contract holding times were met for all analyses [time of sample receipt to time of analysis (VOA) or time of extraction to time of analysis].
Yes __X__ No _____

2. The Clean Water Act (40 CFR 136) or method holding times were met for all analyses (14 days from time of sample collection to analysis or extraction).
Yes __X__ No _____

III. INSTRUMENT CALIBRATION – GC/MS

A. Initial Calibration
1. The Response (RF) and Relative Response Factors (RRF) and average RRF for all compounds for all analyses met the contract criteria of > 0.05 or > 0.01 for poor responding volatiles.
Yes __X__ No _____ NA _____
Method 8260: Per the Project Manager, the 2001 EPA CLP validation guidance has been applied to the common “poor responders.” Calibration response factors below 0.05 have historically been observed for Acetone, 2-butanone and sometimes 4-methyl-2-pentanone. This is predominately for Instrument 6. The validation guidance used for this project allows for a response of 0.01 for these compounds if spectral integrity can be verified at low concentrations. These spectra are not commonly provided and are not part of the deliverable for this data set. The laboratory has been tasked with providing to the client verification that the 0.01

RF is valid. If the spectral verification is available, data are not qualified for response factors greater than 0.01 and less than 0.05 for "poor responders." No data have been qualified.

Most of the low-responding compounds are highly water-soluble and capable of hydrogen bonding with water. This decreases their purge efficiency and results in the relatively low response. The implication of this low purge efficiency is that a relatively low absolute recovery of such compounds is achieved in the purge step of the analysis. If this recovery is consistent, reasonable accuracy and precision can be achieved in a given matrix, which is indicated for the lab matrix by acceptable recoveries in LCS and calibration checks. However, this causes these targets to be more sensitive to matrix variations that impact purge efficiency (such as ionic strength or the presence of varying levels of soluble non-target organic material) than are the more hydrophobic compounds typically analyzed by this method, and as a result they are more likely to exhibit matrix bias.

2a. The relative standard deviation (RSD) for the five point calibration was within the 30% limit for the CCCs.
Yes __X__ No _____ NA _____
This is a method requirement and indicates that the analytical system is in control.

2b. The relative standard deviation (RSD) for the five point calibration was within the 30% limit for all other compounds, the average % RSD was < 15%, or a linear curve was used.
Yes ____ No __X___ NA _____
For Instrument 11, vinyl chloride was at 35 %RSD. Data are qualified JC35 to indicate a variability in the instrument response. Only detected data are qualified.

3. The 12 hour system Performance Check was performed as required in SW-846 and met the QC limits of 80 – 120%.
Yes ____ No __X___ NA _____
Dichlorodifluoromethane is high in the ICV for all three instruments. It is also high in the CCAL for some of the calibrations for Instrument 8 and 11, and LCS's for instrument 8 for several QC sets. The compound is not detected in client samples and no qualification is required for high recovery.
For instrument 11, carbon disulfide was out at 28.4% (77.6 %R) and MTBE at 30.3 (69.7%R)%. These are poor responders. They have been qualified per the project manager as the QAPP determines that the ICV does not follow the CCAL limits. The qualifiers would be JC#, where # is the %D. Data could be biased slightly low due to a decrease in response. The CCALs were within limits which would substantiate a decision to not apply the qualifiers.

B. Continuing Calibrations
1. The midpoint standard was analyzed for each analysis at the required frequency, and the QC criterion of > 0.05 (> 0.01 for CLP 2001 VOA) was met.
Yes __X__ No _____ NA _____
Note that the poor responders are out in the CCAL for the same compounds that were out in the ICAL.

2. The percent difference (% D) limits of ± 25% were met. The 2001 NFG also allow for 40% D for the "poor responders." For other compounds, the QAPP notes rejection of detected compounds with % D > 40%.
Yes _____ No __X__ NA _____
As noted, dichlorodifluoromethane is high in CCALs for Instruments 8 and 11. No detections are reported and no qualification has been required. The CCAL for Instrument 8 for the 10/30/12 calibration at 19:40 was reported in error for carbon disulfide. The resubmitted forms verify acceptable recovery.

IV. GC/MS INSTRUMENT PERFORMANCE CHECK

The BFB (VOA) performance check was injected once at the beginning of each 12-hour period and relative abundance criteria for the ions were met.
Yes __X__ No _____ NA _____

V. INTERNAL STANDARDS

The Internal Standards (IS) met the 100% upper and -50% lower limits criteria, and the Retention times were within the required windows.

Yes __X__ No _____ NA _____

Note that the IS, especially 1,4-dichlorobenzene and somewhat for chlorobenzene, are consistently low for Instrument 11. The limits are not exceeded, but the trend for this instrument is noted. IS limits were fully acceptable for the other instruments for samples of the same matrix indicating this is an Instrument issue, not a matrix one. Surrogates were all acceptable indicating that any low bias has not impacted data results.

VI. SURROGATE STANDARDS

Surrogate spikes were analyzed with every sample.

Yes __X__ No _____

And met the recovery limits defined in the QAPP , which are the laboratory limits.

Yes __X__ No _____

VII. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A. Matrix Spike (MS) and Matrix Spike Duplicate (MSD) were analyzed for every analysis performed and for every 20 samples or for every matrix whichever is more frequent.

Yes __X__ No _____

There are six MS/MSD samples associated with the 112 non-QC client samples. The QC samples are noted and all have an LB-16 as part of the ID at the end: MW-96, MW-271, MW210A, and MW-107T; DR1-6, DR2-6. This meets the recommendation of 1 per 20 field samples. As this is an ongoing project an overall adherence to the 1:20 frequency is monitored by the Project Manager.

Note that the laboratory has not submitted MS/MSD samples with every SDG and has reported only the client designated samples. LCS and LCSD are usually, but not always submitted. As only client samples are used for qualification and for frequency review, no further action is taken.

B. The MS and MSD percent recoveries were within the limits defined in the updated 2011 QAPP, which now references the laboratory limits.

Yes ____ No __X___ NA _____

The full target list has been spiked.

For DR1-6, tetrachloroethane was at zero recovery but the parent sample result was significantly < 4 x spike and the recovery cannot be calculated. For MW217, trichloroethane was recovered at 76.9 and 67.4% (limit 70%) and for DR2-6, tetrachloroethane was at 67.6%/ 52.7% and carbon tetrachloride at 76.6%/ 65.1% (limit 66). Data have been qualified JMS#, where # is the lowest spike recovery. There could be a slight low bias to the results proportional to the recovery.

Lab ID	Client ID	Compound	Result ug/L	MDL	Qualifier
L12100847-07	DR2-6-LB-16	Carbon tetrachloride	46.5	0.25	JMS65.1
L12100847-07	DR2-6-LB-16	Tetrachloroethene	50.2	0.25	JMS52.7
L12100847-15	MW-217-LB-16	Trichloroethene	45	0.25	JMS67.4

C. The MSD relative percent differences (RPD) were within the defined contract limits, which are 30%.

Yes __X__ No _____ NA _____

Qualifiers are added only when the MS or MSD recovery is also out of limits or the RPD exceeds 30%. Data are qualified "JD#", where # is the RPD. As the RPD increases, the matrix precision decreases. All RPD limits are met.

D. The MS/MSD were client samples.
Yes __X__ No _____ NA _____

VIII. LABORATORY CONTROL SAMPLE
A. Laboratory Control Sample (LCS) was analyzed for every analysis performed and for every 20 samples.
Yes __X__ No _____

B. The LCS percent recoveries were within the limits defined in the updated 2011 QAPP, which are the laboratory limits. If an LCS and LCSD are analyzed, both samples must have the same compounds out for data to be qualified.
Yes ____ No __X___
The full target list has been spiked. When a high LCS recovery is associated with a non-detect in samples, no qualifier is added since the indicated bias is high. When the target is detected, data are qualified "JL#", where # is the recovery. Data could be biased high proportional to the LCS percent recovery. Dichlorodifluoromethane reported consistent high recoveries on Instruments 8. No data are qualified as the compound is not detected in client samples. Carbon disulfide was high at 130% for SDG L12100832 and high for WG 412857 for SDG L12100848 at 129%. Data are qualified JL#, where # is the %R to indicate a possible high bias. All client samples were non-detect for the L12100848 work group and no qualifier is applied. The laboratory uses the same control limits on both instruments used for analysis even though the responses are different on each instrument. The control limits should be instrument specific.

IX. BLANKS
A. Method Blanks were analyzed at the required frequency and for each matrix and analysis.
Yes __X__ No _____

B. No blank contamination was found in the Method Blank.
Yes _____ No __X__
Whenever Methylene Chloride, Acetone, 2-Butanone are detected in associated samples at a level less than 10 × the Method Blank (corrected for dilution), data are qualified "BMB#", where # is the corrected Method Blank level. Results are usable as non-detect. All method blanks were reported as non-detect with the exception of SDG L12100776 for WG 412743, hexachlorobutadiene was reported at 0.262 ug/L . All client data are non-detect and no qualifier is required.

C. If Field Blanks were identified, no blank contamination was found.
Yes _X____ No _____ NA ____
No field blank is reported and there are 4 trip blanks, one for each day of sampling although not one per cooler. The samples were clean and no qualifiers have been applied.

X. FIELD QC
If Field Duplicates were identified, they met guidance for VOA of RPD of < 30% for water or < 50% for soil. For values reported at < 5 × the reporting limit (RL), a difference of 2 × RL or 3.5 × RL for soil is used as guidance. This is referred to as the CRDL Rule. Data are not qualified for Field Duplicates as these are evaluated for the total project by the Project Manager.
Yes ___X__ No ____ NA _____
There are 12 identified field duplicates as described in the following table. If data were qualified they would be J, FD#, where # is the difference between the two values as both values are less than 5 x RL. All RPDs were acceptable or differences between low level values were less than 2 x RL.

MW22-LB-16	DUP-1
MW25A -LB-16	DUP-2
MW34 -LB-16	DUP-3

MW64 -LB-16	DUP-4
MW-216-LB-16	DUP-5
MW-199B-LB-16	DUP-6
MW-204B-LB-16	DUP-7
MW-212-LB-16	DUP-8
MW-214A-LB-16	DUP-9
MW-253-LB-16	DUP-10
DR1-3-LB-16	DUP-11
PMW101-04A-LB-16	DUP-12

XI. SYSTEM PERFORMANCE

A. The RICs, chromatograms, tunes and general system performance were acceptable for all instruments and analytical systems.
Yes _____ No _____ NA __X__
Not part of this review level.

B. The suggested EQLs for the sample matrices in this set were met.
Yes __X__ No _____ NA _____

XII. OVERALL ASSESSMENT OF THE CASE

The laboratory has complied with the requested method. Data are fully usable after consideration of qualifiers. The following is noted:
This report has been requested to include the following review: QC, hold times, sample integrity (Chains of Custody, sample login), and summary calibrations.

The 2011 QAPP has been used for all review with the exception of the CCAL limits where the 25% NFG limits were applied as Method 8260B was used, not 8260C or the CLP method. Final application of these limits is being considered by project management.

Sample Preservation

EPA regulations (See Federal Register, March 12, 2007, 40CFR Part 122) require only that the temperature of samples delivered to the laboratory be equal to or less than 6 °C. The sample temperature conditions are fully compliant with applicable regulations.
For SDG 12100847, sample MW257 is noted with headspace > 6 mm for 2 of the 3 vials. It appears that the one vial was sufficient to perform the analysis as no problems are reported with the analysis. No further action is taken.

Chains of Custody

Computer generated chains are submitted for all SDGs except for L12100832. Auto-signatures are present for relinquishment and bar code tags are signed and affixed to each page upon receipt for all SDGs except for SDG L12100776 which does not have relinquishment for pages 2, 3 and has receipt verification only on page 1. The project manager will update the chains in cooperation with the laboratory to complete the record.

Initial Calibrations

Method 8260: Per the Project Manager, the 2001 EPA CLP validation guidance has been applied to the common “poor responders.” Calibration response factors below 0.05 have historically been observed for Acetone, 2-butanone and sometimes 4-methyl-2-pentanone. This is predominately for Instrument 6. The validation guidance used for this project allows for a response of 0.01 for these compounds if spectral integrity can be verified at low concentrations. These spectra are not commonly provided and are not part of the

deliverable for this data set. The laboratory has been tasked with providing to the client verification that the 0.01 RF is valid. If the spectral verification is available, data are not qualified for response factors greater than 0.01 and less than 0.05 for "poor responders." No data have been qualified.

For Instrument 11, vinyl chloride was at 35 %RSD. Data are qualified JC35 to indicate a variability in the instrument response. Only detected data are qualified.

ICV

Dichlorodifluoromethane is high in the ICV for all three instruments. It is also high in the CCAL for some of the calibrations for Instrument 8 and 11, and LCS's for instrument 8 for several QC sets. The compound is not detected in client samples and no qualification is required for high recovery.
For instrument 11, carbon disulfide was out at 28.4% (77.6 %R) and MTBE at 30.3 (69.7%R)%. These are poor responders. They have been qualified per the project manager as the QAPP determines that the ICV does not follow the CCAL limits. The qualifiers would be JC#, where # is the %D. Data could be biased slightly low due to a decrease in response. The CCALs were within limits which would substantiate a decision to not apply the qualifiers.

CCAL

As noted, dichlorodifluoromethane is high in CCALs for Instruments 8 and 11. No detections are reported and no qualification has been required. The CCAL for Instrument 8 for the 10/30/12 calibration at 19:40 was reported in error for carbon disulfide. The resubmitted forms verify acceptable recovery.

Matrix Spikes

There are six MS/MSD samples associated with the 120 non-QC client samples. The QC samples are noted and all have an LB-16 as part of the ID at the end: MW-96, MW-271, MW210A, and MW-107T; DR1-6, DR2-6. This meets the recommendation of 1 per 20 field samples. As this is an ongoing project an overall adherence to the 1:20 frequency is monitored by the Project Manager.
Note that the laboratory has not submitted MS/MSD samples with every SDG and has used only the client designated samples. LCS and LCSD are usually, but not always submitted. As only client samples are used for qualification and for frequency review, no further action is taken.
For DR1-6, tetrachloroethane was at zero recovery but the parent sample result was significantly < 4 x spike and the recovery cannot be calculated. For MW217, trichloroethane was recovered at 76.9 and 67.4% (limit 70%) and for DR2-6, tetrachloroethane was at 67.6%/ 52.7% and carbon tetrachloride at 76.6%/ 65.1% (limit 66). Data have been qualified JMS#, where # is the lowest spike recovery. There could be a slight low bias to the results proportional to the recovery.

Lab ID	Client ID	Compound	Result ug/L	MDL	Qualifier
L12100847-07	DR2-6-LB-16	Carbon tetrachloride	46.5	0.25	JMS65.1
L12100847-07	DR2-6-LB-16	Tetrachloroethene	50.2	0.25	JMS52.7
L12100847-15	MW-217-LB-16	Trichloroethene	45	0.25	JMS67.4

Laboratory Control Samples

The full target list has been spiked. When a high LCS recovery is associated with a non-detect in samples, no qualifier is added since the indicated bias is high. When the target is detected, data are qualified "JL#", where # is the recovery. Data could be biased high proportional to the LCS percent recovery.
Dichlorodifluoromethane reported consistent high recoveries on Instruments 8. No data are qualified as the compound is not detected in client samples. Carbon disulfide was high at 130% for SDG L12100832 and high for WG 412857 for SDG L12100848 at 129%. Data are qualified JL#, where # is the %R to indicate a possible high bias. All client samples were non-detect for the L12100848 work group and no qualifier is

applied. The laboratory uses the same control limits on both instruments used for analysis even though the responses are different on each instrument. The control limits should be instrument specific.

Method Blanks

SDG L12100776 for WG 412743, hexachlorobutadiene was reported at 0.262 ug/L . All client data are non-detect and no qualifier is required.

Internal Standards

Note that the IS, especially 1,4-dichlorobenzene and somewhat for chlorobenzene, are consistently low for Instrument 11. The limits are not exceeded, but the trend for this instrument is noted. IS limits were fully acceptable for the other instruments for samples of the same matrix indicating this is an Instrument issue, not a matrix one. Surrogates were all acceptable indicating that any low bias has not impacted data results.

Field Blanks

No field blank is reported and there are 4 trip blanks, one for each day of sampling although not one per cooler. The samples were clean and no qualifiers have been applied.

Field QC

There are 12 identified field duplicates as described in the following table. If data were qualified they would be J, FD#, where # is the difference between the two values as both values are less than 5 x RL. All RPDs were acceptable or differences between low level values were less than 2 x RL.

MW22-LB-16	DUP-1
MW25A -LB-16	DUP-2
MW34 -LB-16	DUP-3
MW64 -LB-16	DUP-4
MW-216-LB-16	DUP-5
MW-199B-LB-16	DUP-6
MW-204B-LB-16	DUP-7
MW-212-LB-16	DUP-8
MW-214A-LB-16	DUP-9
MW-253-LB-16	DUP-10
DR1-3-LB-16	DUP-11
PMW101-04A-LB-16	DUP-12

TABLE OF QUALIFIED DATA

Lab ID	Client ID	Compound	Result ug/L	MDL	Qualifier
L12100776-34	MW-101T-LB-16	Methyl t-butyl ether (MTBE)	4.39	0.5	JC30.3
L12100776-35	MW-101B-LB-16	Methyl t-butyl ether (MTBE)	4.61	0.5	JC30.3
L12100776-37	MW-143-LB-16	Methyl t-butyl ether (MTBE)	2.05	0.5	JC30.3
L12100777-02	PMW101-04B-LB-16	Methyl t-butyl ether (MTBE)	5.89	0.5	JC30.3
L12100777-05	MW-100B-LB-16	Methyl t-butyl ether (MTBE)	37.7	0.5	JC30.3
L12100777-05	MW-100B-LB-16	Vinyl chloride	164	0.25	JC35
L12100832-01	PMW85-05-LB-16	Carbon disulfide	1.87	0.5	JL130C28
L12100845-01	DR1-5-LB-16	Methyl t-butyl ether (MTBE)	31.8	0.5	JC30.3
L12100845-02	DR1-5A-LB-16	Methyl t-butyl ether (MTBE)	2.27	0.5	JC30.3
L12100845-07	MW-21-LB-16	Methyl t-butyl ether (MTBE)	1.39	0.5	JC30.3
L12100847-07	DR2-6-LB-16	Carbon tetrachloride	46.5	0.25	JMS65.1
L12100847-07	DR2-6-LB-16	Tetrachloroethene	50.2	0.25	JMS52.7
L12100847-15	MW-217-LB-16	Trichloroethene	45	0.25	JMS67.4
L12100847-40	MW-214A-LB-16	Methyl t-butyl ether (MTBE)	1.03	0.5	JC30.3
L12100848-28	MW-208A-LB-16	Vinyl chloride	1.97	0.25	JC35
L12100848-30	MW-209A-LB-16	Methyl t-butyl ether (MTBE)	3.86	0.5	JC30.3
L12100848-32	MW-210A-LB-16	Methyl t-butyl ether (MTBE)	0.766	0.5	JC30.3

Final Data Qualification and Usability Report

Project:	Defense Depot Memphis, TN (DDMT) Main Installation LTM
Sampling Event:	LB-16
Project / Task Number:	145803-005
Sample Data Package(s):	L12100776, L12100777, L12100832, L12100841, L12100842, L12100845, L12100846, L12100847, L12100848
Data Validation Performed by:	Diane Short & Associates (DSA)
Final Data Qualification and Usability Report Prepared by:	Lynn K. Lutz, HDR Inc.

Data Validation Report Review and Comments

The data validation report was acceptable. It appears the validator did not include one set of MS/MSD in the total sample count.

The validator noted that three of the four pages of chains of custody in L12100776 did not have receipt acknowledgment and signatures of the lab's sample receipt personnel. This information was requested and received from the lab.

The validator noted that mass spectra for the initial calibration on instrument HPMS6 should be provided for acetone, 2-butanone and MIBK. This information was requested and received from the lab and reviewed by the Project Chemist. The response factors of >0.010 were verified.

Final Data Qualifiers

The final qualifier was J where DSA had qualified as JC35 due to initial calibration RSD.

The final qualifier was J where DSA had qualified as JC30.3 or JC20.8 due to initial calibration verification.

The final qualifier was J where DSA had qualified as JMS65.1, JMS52.7 or JMS67.4 due to matrix spike recoveries.

The final qualifier was J where DSA had qualified as JL130 due to high LCS recovery.

Final qualifiers were J where detected results were between the MDL and RL.

Data Usability

There were no rejected sample results. All results are usable as qualified.



3 December 2012

Lynn K. Lutz, HDR Inc. Date

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ORGANIC DATA QUALITY REVIEW REPORT
Volatile Organics by SW-846 Method 8260B (GC/MS)

SDG	L12100695		
PROJECT	Memphis Defense Depot, ODLS-5 Sampling for HDR, Denver		
LABORATORY	Microbac Laboratories, Inc., Marietta, OH		
SAMPLE MATRIX	Water	SAMPLING DATE	10/2012
NUMBER OF SAMPLES	48, including 5 field duplicates, 2 trip blanks		
ANALYSES REQUESTED	SW-846 8260B (VOA by GC/MS)		
SAMPLE NUMBER	See result forms attached and associated EDD		

DATA REVIEWER: Diane Short

QA REVIEWER: Diane Short & Associates, Inc. INITIALS/DATE: __ DLS 11/5/2012

Telephone Logs included Yes____ No __X_

Contractual Violations Yes____ No __X_

The project QAPP (09/11), the EPA Contract Laboratory Program National Functional Guidelines for Organic Review, 1999 and 2001, and the SW-846 Method 8260B have been referenced by the reviewer to perform this data validation review. The EPA qualifiers have been expanded to include a descriptor code and value to define QC violations and their values, per the approval of the Project Manager. Per the Scope of Work, the review of these samples includes Level III validation of all chains of custody, calibrations and QC forms referencing the QC limits in the above documents.

I. DELIVERABLES

A. All deliverables were present as specified in the Statement of Work (SOW), SW-846, or in the project contract.
Yes __X__ No _____
This report has been requested to include the following review: QC, hold times, sample integrity (Chains of Custody, sample login), and summary calibrations. Note that there are 7 QC sets (days of analysis per instrument) and 2 instruments for the 48 samples plus MS/MSDs.
The 2011 QAPP has been used for all review with the exception of the CCAL limits where the 25% NFG limits were applied as Method 8026B was used, not 8260C or the CLP method. Final application of these limits is being considered by project management.

B. Chain of Custody documentation was complete and accurate.
Yes __X__ No _____

C. Samples were received at the required temperature, preservation and intact with no bubbles.
Yes __X__ No _____
EPA regulations (See Federal Register, March 12, 2007, 40CFR Part 122) require only that the temperature of samples delivered to the laboratory be equal to or less than 6 °C. The sample temperature conditions are fully compliant with applicable regulations.

II. ANALYTICAL REPORT FORMS

A. The Analytical Report or Data Sheets are present and complete for all requested analyses.
Yes __X__ No _____

B. Holding Times
1. The contract holding times were met for all analyses [time of sample receipt to time of analysis (VOA) or time of extraction to time of analysis].
Yes __X__ No _____

2. The Clean Water Act (40 CFR 136) or method holding times were met for all analyses (14 days from time of sample collection to analysis or extraction).
Yes __X__ No _____

III. INSTRUMENT CALIBRATION – GC/MS

A. Initial Calibration
1. The Response (RF) and Relative Response Factors (RRF) and average RRF for all compounds for all analyses met the contract criteria of > 0.05 or > 0.01 for poor responding volatiles.
Yes __X__ No _____ NA _____
Method 8260: Per the Project Manager, the 2001 EPA CLP validation guidance has been applied to the common “poor responders.” Calibration response factors below 0.05 have historically been observed for Acetone. The validation guidance used for this project allows for a response of 0.01 for these compounds if spectral integrity can be verified at low concentrations. These spectra are not commonly provided and are not part of the deliverable for this data set. The laboratory has been tasked with providing to the client verification that the 0.01 RF is valid. If the spectral verification is available, data are not qualified for response factors greater than 0.01 and less than 0.05 for “poor responders.” No data have been qualified.

Most of the low-responding compounds are highly water-soluble and capable of hydrogen bonding with water. This decreases their purge efficiency and results in the relatively low response. The implication of this low purge efficiency is that a relatively low absolute recovery of such compounds is achieved in the purge step of the analysis. If this recovery is consistent, reasonable accuracy and precision can be achieved in a given matrix, which is indicated for the lab matrix by acceptable recoveries in LCS and calibration checks. However, this causes these targets to be more sensitive to matrix variations that impact purge efficiency (such as ionic strength

or the presence of varying levels of soluble non-target organic material) than are the more hydrophobic compounds typically analyzed by this method, and as a result they are more likely to exhibit matrix bias.

2a. The relative standard deviation (RSD) for the five point calibration was within the 30% limit for the CCCs.
Yes __X__ No _____ NA _____
This is a method requirement and indicates that the analytical system is in control.

2b. The relative standard deviation (RSD) for the five point calibration was within the 30% limit for all other compounds, the average % RSD was < 15%, or a linear curve was used.
Yes __X__ No _____ NA _____

3. The 12 hour system Performance Check was performed as required in SW-846 and met the QC limits of 80 – 120%.
Yes ____ No __X___ NA _____
Dichlorodifluoromethane is high is the 10/16/12 ICV for Instrument 8 and the 10/1/12 ICV for Instrument 6. It is also high in the LCS's for instrument 8 for several QC sets. The compound is not detected in client samples and no qualification is required for high recovery.

B. Continuing Calibrations
1. The midpoint standard was analyzed for each analysis at the required frequency, and the QC criterion of > 0.05 (> 0.01 for CLP 2001 VOA) was met.
Yes __X__ No _____ NA _____

2. The percent difference (% D) limits of ± 25% were met. The 2001 NFG also allow for 40% D for the "poor responders." For other compounds, the QAPP notes rejection of detected compounds with % D > 40%.
Yes __X___ No ____ NA _____

IV. GC/MS INSTRUMENT PERFORMANCE CHECK
The BFB (VOA) performance check was injected once at the beginning of each 12-hour period and relative abundance criteria for the ions were met.
Yes __X__ No _____ NA _____

V. INTERNAL STANDARDS
The Internal Standards met the 100% upper and -50% lower limits criteria, and the Retention times were within the required windows.
Yes __X__ No _____ NA _____

VI. SURROGATE STANDARDS
Surrogate spikes were analyzed with every sample.
Yes __X__ No _____

And met the recovery limits defined in the QAPP , which are the laboratory limits.
Yes __X__ No _____

VII. MATRIX SPIKE/MATRIX SPIKE DUPLICATE
A. Matrix Spike (MS) and Matrix Spike Duplicate (MSD) were analyzed for every analysis performed and for every 20 samples or for every matrix whichever is more frequent.
Yes __X__ No _____
There are three MS/MSD samples associated with the 41 non-QC client samples: MW-226-ODLS-5, MW-77-ODLS-5, and MW-166-ODLS-5. This meets the recommendation of 1 per 20 field samples. As this is an ongoing project an overall adherence to the 1:20 frequency is monitored by the Project Manager.

B. The MS and MSD percent recoveries were within the limits defined in the updated 2011 QAPP, which now references the laboratory limits.
Yes __X__ No _____ NA _____
The full target list has been spiked.
For MW-77-ODLS-5, Dichlorodifluoromethane was reported at 152/ 148% (limit 152%). This is just at the limit. No data have been qualified JMS#, where # is the lowest recovery as all associated samples were non-detect for these compounds and there is no qualification for high bias.

C. The MSD relative percent differences (RPD) were within the defined contract limits, which are 30%.
Yes __X__ No _____ NA _____
Qualifiers are added only when the MS or MSD recovery is also out of limits or the RPD exceeds 30%. Data are qualified "JD#", where # is the RPD. As the RPD increases, the matrix precision decreases. All RPD limits are met.

D. The MS/MSD were client samples.
Yes __X__ No _____ NA _____

VIII. LABORATORY CONTROL SAMPLE
A. Laboratory Control Sample (LCS) was analyzed for every analysis performed and for every 20 samples.
Yes __X__ No _____

B. The LCS percent recoveries were within the limits defined in the updated 2011 QAPP, which are the laboratory limits. If an LCS and LCSD are analyzed, both samples must have the same compounds out for data to be qualified.
Yes ____ No __X___
The full target list has been spiked. When a high LCS recovery is associated with a non-detect in samples, no qualifier is added since the indicated bias is high. When the target is detected, data are qualified "JL#", where # is the recovery. Data could be biased high proportional to the LCS percent recovery. Dichlorodifluoromethane reported high recoveries on Instruments 8 (WG: 412407, 412197, 412315). No data are qualified as the compound is not detected in client samples. 1,2 dibromomethane was slightly low at 79.3% but acceptable in the LCSD at 85.5%. Both recoveries are required to be out for data to be qualified. The laboratory uses the same control limits on both instruments used for analysis even though the responses are different on each instrument. The control limits should be instrument specific.

IX. BLANKS
A. Method Blanks were analyzed at the required frequency and for each matrix and analysis.
Yes __X__ No _____

B. No blank contamination was found in the Method Blank.
Yes __X___ No ____
Whenever Methylene Chloride, Acetone, 2-Butanone are detected in associated samples at a level less than 10 × the Method Blank (corrected for dilution), data are qualified "BMB#", where # is the corrected Method Blank level. Results are usable as non-detect. All method blanks were reported as non-detect.

C. If Field Blanks were identified, no blank contamination was found.
Yes _X____ No _____ NA ____
No field blank is reported and there are 2 trip blanks. The sample were clean and no qualifiers have been applied.

X. FIELD QC

If Field Duplicates were identified, they met guidance for VOA of RPD of < 30% for water or < 50% for soil. For values reported at < 5 × the reporting limit (RL), a difference of 2 × RL or 3.5 × RL for soil is used as guidance. This is referred to as the CRDL Rule. Data are not qualified for Field Duplicates as these are evaluated for the total project by the Project Manager.
Yes ___X__ No ____ NA _____
There are five identified field duplicates as described in the following table. If data were qualified they would be J, FD#, where # is the difference between the two values as both values are less than 5 x RL. All RPDs were acceptable or differences between low level values were less than 2 x RL.

Parent Sample	Field Dup	Observations
MW-28-ODLS-5	DUP-1-ODLS-5	OK
MW-149-ODLS-5	DUP-2-ODLS-5	OK
MW-159-ODLS-5	DUP-3-ODLS-5	OK
MW-224-ODLS-5	DUP-4-ODLS-5	OK
MW-165-ODLS-5	DUP-5-ODLS-5	OK

XI. SYSTEM PERFORMANCE

A. The RICs, chromatograms, tunes and general system performance were acceptable for all instruments and analytical systems.
Yes _____ No _____ NA __X__
Not part of this review level.

B. The suggested EQLs for the sample matrices in this set were met.
Yes __X__ No _____ NA _____

XII. OVERALL ASSESSMENT OF THE CASE

The laboratory has complied with the requested method. Data are fully usable after consideration of qualifiers. The following is noted:
This report has been requested to include the following review: QC, hold times, sample integrity (Chains of Custody, sample login), and summary calibrations. Note that there are 7 QC sets (days of analysis per instrument) and 2 instruments for the 48 samples plus MS/MSDs.
The 2011 QAPP has been used for all review with the exception of the CCAL limits where the 25% NFG limits were applied as Method 8026B was used, not 8260C or the CLP method. Final application of these limits is being considered by project management.

Sample Preservation
EPA regulations (See Federal Register, March 12, 2007, 40CFR Part 122) require only that the temperature of samples delivered to the laboratory be equal to or less than 6 °C. The sample temperature conditions are fully compliant with applicable regulations.

Initial Calibrations
ICV
Dichlorodifluoromethane is high is the 10/16/12 ICV for Instrument 8 and the 10/1/12 ICV for Instrument 6. It is also high in the LCS's for instrument 8 for several QC sets. The compound is not detected in client samples and no qualification is required for high recovery.

Matrix Spikes

There are three MS/MSD samples associated with the 41 non-QC client samples: MW-226-ODLS-5, MW-77-ODLS-5, and MW-166-ODLS-5. This meets the recommendation of 1 per 20 field samples. As this is an ongoing project an overall adherence to the 1:20 frequency is monitored by the Project Manager.
The full target list has been spiked.
For MW-77-ODLS-5, Dichlorodifluoromethane was reported at 152/ 148% (limit 152%). This is just at the limit. No data have been qualified JMS#, where # is the lowest recovery as all associated samples were non-detect for these compounds and there is no qualification for high bias.

Laboratory Control Samples

The full target list has been spiked.
Dichlorodifluoromethane reported high recoveries on Instruments 8 (WG: 412407, 412197, 412315). No data are qualified as the compound is not detected in client samples. 1,2- dibromomethane was slightly low at 79.3% but acceptable in the LCSD at 85.5%. Both recoveries are required to be out for data to be qualified. The laboratory uses the same control limits on both instruments used for analysis even though the responses are different on each instrument. The control limits should be instrument specific.

Field Blanks

No field blank is reported and there are 2 trip blanks. The samples were clean and no qualifiers have been applied.

Field QC

There are five identified field duplicates as described in the following table. If data were qualified they would be J, FD#, where # is the difference between the two values as both values are less than 5 x RL. All RPDs were acceptable or differences between low level values were less than 2 x RL.

Parent Sample	Field Dup	Observations
MW-28-ODLS-5	DUP-1-ODLS-5	OK
MW-149-ODLS-5	DUP-2-ODLS-5	OK
MW-159-ODLS-5	DUP-3-ODLS-5	OK
MW-224-ODLS-5	DUP-4-ODLS-5	OK
MW-165-ODLS-5	DUP-5-ODLS-5	OK

TABLE OF QUALIFIED DATA

No data have been qualified

Final Data Qualification and Usability Report

Project:	Defense Depot Memphis, TN (DDMT) Off-Depot LTM
Sampling Event:	ODLS-5
Project / Task Number:	145803-003
Sample Data Package(s):	L12100695
Data Validation Performed by:	Diane Short & Associates (DSA)
Final Data Qualification and Usability Report Prepared by:	Lynn K. Lutz, HDR Inc.

Data Validation Report Review and Comments

The data validation report was acceptable. It appears the validator did not include the three sets of MS/MSD in the total sample count.

Final Data Qualifiers

Final qualifiers were J where detected results were between the MDL and RL.

Data Usability

There were no rejected sample results. All results are usable as qualified.



21 November 2012

Lynn K. Lutz, HDR Inc. Date

APPENDIX F

HISTORICAL CVOC RESULTS – MAIN INSTALLATION

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

DR1-1

Analyte	Sample Name / Sample Date	Units	DR1-1 5/21/2004	DR1-1 11/12/2004	DR1-1 2/17/2005	DR1-1 5/18/2005	DR1-1-LB-1 10/23/2006	DR1-1-LA-5 10/1/2007	DR1-1-LB-8 10/8/2008
Carbon tetrachloride		µg/L	<1 J	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.24 J	<1	<1	<1	<0.3	<0.3	0.126 J
cis-1,2-Dichloroethene		µg/L	0.8 J	1.2	1	1.1	1.02	0.969 J	<1
Tetrachloroethene		µg/L	2.8	3.3	3.3 J	3	2.46	2.49	2.69
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	0.3 J	0.29 J	0.3 J	0.255 J	<1	0.399 J
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL CVOC RESULTS - MI LTM
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DR1-1

	Sample Name	DR1-1-LA-10	DR1-1-LB-12	DR1-1-LA-14	DR1-1-LB-16
	Sample Date	10/6/2009	10/9/2010	10/6/2011	10/19/2012
Analyte	**Units**				
Carbon tetrachloride	µg/L	<1	<1	<1 UJ	<1
Chloroform	µg/L	<0.3	<0.3	<0.3 UJ	<0.3
cis-1,2-Dichloroethene	µg/L	1.08	1.26	1.31	1.52
Tetrachloroethene	µg/L	2.12	2.56	3	2.97
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	0.328 J	0.304 J	0.326 J	0.309 J
Vinyl chloride	µg/L	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL CVOC RESULTS - MI LTM
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DR1-1A

Analyte	Sample Name / Sample Date	Units	DR1 CLUSTER A 5/27/04	DR1-1A 11/13/04	DR1-1A 2/16/05	DR1-1A 5/18/05	DR1-1A-LB-1 10/2/06	DR1-1A-LS-3 4/13/07
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.66 J	0.18 J	0.21 B	0.16 B	0.324	0.313
cis-1,2-Dichloroethene		µg/L	0.72 J	0.85 J	1	0.75 J	0.634	0.416 J
Tetrachloroethene		µg/L	1.5	1.8	1.8	1.6	1.18	0.959 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	3.5	4	6.9	5.2	6.28	4.57
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data
UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL CVOC RESULTS - MI LTM
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DR1-1A

Analyte	Sample Name / Sample Date	Units	DR1-1A-LA-5 10/1/2007	DR1-1A-LS-7 4/8/2008	DR1-1A-LB-8 10/8/2008	DR1-1A-LQ-9 4/8/2009	DR1-1A-LA-10 10/6/2009	DR1-1A-LB-12 10/9/2010
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.307	0.274 J	0.372 J	0.424	0.518	0.348
cis-1,2-Dichloroethene		µg/L	0.312 J	0.273 J	0.262 J	0.295 J	<1	0.42 J
Tetrachloroethene		µg/L	0.813 J	0.776 J	0.747 J	0.838 J	0.749 J	1.33
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	3.61	3.21	3.03 J	3.85	2.33	3.6
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data
UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL CVOC RESULTS - MI LTM
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DR1-1A

	Sample Name	DR1-1A-LA-14	DR1-1A-LB-16
	Sample Date	10/6/2011	10/19/2012
Analyte	**Units**		
Carbon tetrachloride	µg/L	<1 UJ	<1
Chloroform	µg/L	0.288 J	0.427
cis-1,2-Dichloroethene	µg/L	0.356 J	<1
Tetrachloroethene	µg/L	1.08	0.612 J
trans-1,2-Dichloroethene	µg/L	<1	<1
Trichloroethene	µg/L	2.35	2.3
Vinyl chloride	µg/L	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data
UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL CVOC RESULTS - MI LTM
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DR1-2

Analyte	Sample Name / Sample Date	Units	DR1-2 5/17/2004	DR1-2 11/11/2004	DR1-2 2/16/2005	DR1-2 5/19/2005	DR1-2-LB-1 10/24/2006	DR1-2-LA-5 10/1/2007	DR1-2-LB-8 10/7/2008
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1 J
Chloroform		µg/L	<1	<1	<1	<1	0.163	<0.3	0.131 J
cis-1,2-Dichloroethene		µg/L	0.68 J	0.77 J	0.67 J	0.75 J	0.602	0.48 J	0.595 J
Tetrachloroethene		µg/L	1.8	2.5 J	2.3	2.1	1.82	1.52	1.5 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1 J
Trichloroethene		µg/L	<1	<1	<1	<1	<1	<1	1.83 J
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1 J

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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DR1-2

	Sample Name	DR1-2-LA-10	DR1-2-LB-12	DR1-2-LA-14	DR1-2-LB-16
	Sample Date	10/6/2009	10/5/2010	10/5/2011	10/19/2012
Analyte	**Units**				
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Chloroform	µg/L	0.17 J	0.179 J	<0.3	0.129 J
cis-1,2-Dichloroethene	µg/L	0.607 J	0.805 J	0.791 J	0.856 J
Tetrachloroethene	µg/L	1.47	2.1	1.92	2.2
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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DR1-3

Analyte	Sample Name / Sample Date	Units	DR1-3 5/10/2004	DR1-3 11/11/2004	DR1-3 2/15/2005	DR1-3 5/17/2005	DR1-3-BL 8/25/2006	DR1-3-EBT-1 12/5/2006	DR1-3-EBT-2 3/7/2007
Carbon tetrachloride		µg/L	<1	<1.2	<1	<1	<1	<1	<1
Chloroform		µg/L	<1	<1.2	<1	<1	<0.3	<1	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1.2	<1	0.22 J	<1	<1	27.6
Tetrachloroethene		µg/L	34	43 J	46	47	45.7	54.7	8.31
trans-1,2-Dichloroethene		µg/L	<1	<1.2	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2.6	3.2	3.7	4.1	4.18	5.13	2.74
Vinyl chloride		µg/L	<1	<1.2	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

DR1-3

	Sample Name	DR1-3-EBT-3	DR1-3-EBT-4	DR1-3-EBT-5	DR1-3-EBT-6	DR1-3-EBT-7	DR1-3-EBT-8	DR1-3-EBT-9
	Sample Date	6/1/2007	9/19/2007	12/13/2007	3/14/2008	6/13/2008	12/11/2008	3/12/2009
Analyte	**Units**							
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<1	<1	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	32.9	30.7	22.6	17	19.5	16.5	13.3
Tetrachloroethene	µg/L	2.18	0.45 J	0.904 J	2.12	2.95	2.59	2.43
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.572 J	<1	0.303 J	1.28	2.02	1.32	1.26
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

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J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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DR1-3

	Sample Name	DR1-3-LA-10	DR1-3-LS-11	DR1-3-LB-12	DR1-3-LS-13	DR1-3-LA-14	DR1-3-LS-15	DR1-3-LB-16
	Sample Date	10/6/2009	4/5/2010	10/6/2010	4/1/2011	10/4/2011	4/23/2012	10/19/2012
Analyte	**Units**							
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	1.5	0.29 J	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	10	13.9	9.13	13.2	13.9	11.2	16.2
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	2.15	2.47	1.75	2.1	1.81	1.48	1.93
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
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DR1-4

Analyte	Sample Name / Sample Date	Units	DR1-4 5/21/2004	DR1-4 11/11/2004	DR1-4 2/15/2005	DR1-4 5/17/2005	DR1-4 10/25/2006	DR1-4 4/13/2007	DR1-4 10/1/2007
Carbon tetrachloride		µg/L	<1 J	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<1	<1	<1	<1	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	8.09	5.29
Tetrachloroethene		µg/L	4.8	8.3 J	9.3	8.9	12.4	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.72 J	1.1	1.1	1	1.33	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

DR1-4

Analyte	Sample Name / Sample Date	Units	DR1-4 4/7/2008	DR1-4 10/7/2008	DR1-4 4/8/2009	DR1-4 10/6/2009	DR1-4 10/6/2010	DR1-4-LA-14 10/4/2011	DR1-4-LB-16 10/19/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	0.582 J	0.987 J	0.755 J	<1	<1	<1	<1
Tetrachloroethene		µg/L	2.74	1.22	0.947 J	0.844 J	0.435 J	0.831 J	1.25
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.573 J	1.69	0.393 J	0.64 J	0.543 J	0.252 J	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

DR1-5

	Sample Name	DR1-5	DR1-5	DR1-5	DR1-5	DR1-5-LB-1	DR1-5-LS-3	DR1-5-LA-5
	Sample Date	5/22/2004	11/12/2004	2/18/2005	5/19/2005	10/24/2006	4/16/2007	10/1/2007
Analyte	**Units**							
Carbon tetrachloride	µg/L	<1 J	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<1	<1	0.129	<0.3	0.148 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	4.3	11	17	15	57	69.2	69.9
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

DR1-5

Analyte	Sample Name / Sample Date	Units	DR1-5 4/7/2008	DR1-5 10/9/2008	DR1-5 4/8/2009	DR1-5 10/5/2009	DR1-5 3/30/2010	DR1-5 10/5/2010	DR1-5 3/31/2011
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.165 J	0.181 J	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	0.295 J	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	95.8	69.2 J	53.2	37.3	22.2	18.3	18.2
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	4.28 J	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

DR1-5

	Sample Name	DR1-5	DR1-5	DR1-5
	Sample Date	10/4/2011	4/22/2012	10/20/2012
Analyte	**Units**			
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	29	29.3	38.6
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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DR1-5A

Analyte	Sample Name / Sample Date	Units	DR1-5A 5/27/2004	DR1-5A 11/12/2004	DR1-5A 2/21/2005	DR1-5A 5/19/2005	DR1-5A 10/23/2006	DR1-5A 4/13/2007	DR1-5A 10/1/2007
Carbon tetrachloride		µg/L	<1.7	<5	<1	<1	<1	<1	<1
Chloroform		µg/L	0.71 J	<5	0.4 B	0.29 B	0.306	0.274 J	0.252 J
cis-1,2-Dichloroethene		µg/L	1.7	5.2	4.6	4.1	3.46	3.19	3.16
Tetrachloroethene		µg/L	24	47	55	47	50.9	49.6	46.8
trans-1,2-Dichloroethene		µg/L	<1.7	<5	<1	<1	<1	<1	<1
Trichloroethene		µg/L	47	110	110	100	98.1	84	78.6
Vinyl chloride		µg/L	<1.7	<5	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

DR1-5A

Analyte	Sample Name / Sample Date	Units	DR1-5A 4/8/2008	DR1-5A 10/9/2008	DR1-5A 4/8/2009	DR1-5A 10/5/2009	DR1-5A 3/30/2010	DR1-5A 10/5/2010	DR1-5A 3/31/2011
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.187 J	0.343 J	0.217 J	0.204 J	0.205 J	0.197 J	0.197 J
cis-1,2-Dichloroethene		µg/L	1.82	4.75 J	3.19	3.39	3.58	3.88	2.9
Tetrachloroethene		µg/L	34.9	59.7 J	56.3	54.9	59.4	70.4	50.4
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	58.7	114 J	95.7	92.8	96.6	110	86.3
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

DR1-5A

	Sample Name	DR1-5A	DR1-5A	DR1-5A
	Sample Date	10/4/2011	4/22/2012	10/20/2012
Analyte	**Units**			
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	0.191 J	<0.3	0.167 J
cis-1,2-Dichloroethene	µg/L	2.76	2.26	2.41
Tetrachloroethene	µg/L	49.7	46.7	49.7
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	77.6	74.4	80.5
Vinyl chloride	µg/L	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

DR1-6

Analyte	Sample Name / Sample Date	Units	DR1-6 6/26/2004	DR1-6 11/10/2004	DR1-6 2/17/2005	DR1-6 5/18/2005	DR1-6-LB-1 10/24/2006	DR1-6-LS-3 4/13/2007	DR1-6-LA-5 10/1/2007
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<1	<1	<1	<1	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	3.3	6.2	4.1	3.8	1.59	1.91	1.42
Tetrachloroethene		µg/L	13	21	20	26	184	173	191 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1.6	2.4	2.2	2.1	1.85	1.83	1.58
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

DR1-6

Analyte	Sample Name / Sample Date	Units	DR1-6 4/8/2008	DR1-6 10/7/2008	DR1-6 4/8/2009	DR1-6 10/6/2009	DR1-6 4/1/2010	DR1-6 10/5/2010	DR1-6 4/1/2011
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	1.09	1.38	1.31	1.49	1.37	1.69	1.56
Tetrachloroethene		µg/L	195	122	197	183	225	239	193
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1.27	4.61	1.44	1.59	1.56	1.89	1.7
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

DR1-6

	Sample Name	DR1-6	DR1-6	DR1-6
	Sample Date	10/4/2011	4/22/2012	10/20/2012
Analyte	**Units**			
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	1.31	1.02	0.865 J
Tetrachloroethene	µg/L	168	161	186
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	1.28	1.16	1.49
Vinyl chloride	µg/L	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

DR1-6A

Analyte	Sample Name / Sample Date	Units	DR1-6A 6/26/2004	DR1-6A 11/10/2004	DR1-6A 2/17/2005	DR1-6A 5/18/2005	DR1-6A-LB-1 10/24/2006	DR1-6A-LS-3 4/13/2007	DR1-6A-LA-5 10/1/2007
Carbon tetrachloride		µg/L	<1	<3.3	<1	<1	<1	<1	<1
Chloroform		µg/L	<1	<3.3	0.17 J	<1	0.18	0.236 J	0.183 J
cis-1,2-Dichloroethene		µg/L	--	3 J	4.1	3.5	4.81	5.98	4.24
Tetrachloroethene		µg/L	--	17	28	21	28.4	34.4	30.2
trans-1,2-Dichloroethene		µg/L	--	<3.3	<1	<1	<1	<1	<1
Trichloroethene		µg/L	9.1	88	140	97	118	139	107
Vinyl chloride		µg/L	--	<3.3	<1	<2	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

DR1-6A

Analyte	Sample Name / Sample Date	Units	DR1-6A 4/8/2008	DR1-6A 10/7/2008	DR1-6A 4/8/2009	DR1-6A 10/6/2009	DR1-6A 4/1/2010	DR1-6A 10/5/2010	DR1-6A 4/1/2011
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.215 J	0.238 J	0.214 J	0.245 J	0.193 J	0.271 J	0.32
cis-1,2-Dichloroethene		µg/L	2.99	3.81	4.33	4.89	4.05	5.08	7.83
Tetrachloroethene		µg/L	30.8	39.6	32.5	43	43.5	60.1	57.8
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	110	142	125	163	122	149	166
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

DR1-6A

Analyte	Sample Name / Sample Date / Units	DR1-6A 10/4/2011	DR1-6A 4/22/2012	DR1-6A 10/20/2012
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	0.248 J	0.195 J	0.238 J
cis-1,2-Dichloroethene	µg/L	9.24	7.71	8.58
Tetrachloroethene	µg/L	60.3	51.3	53.8
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	166	154	165
Vinyl chloride	µg/L	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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DR1-7

Analyte	Sample Name / Sample Date	Units	DR1-7 6/24/2004	DR1-7 11/12/2004	DR1-7 2/21/2005	DR1-7 5/17/2005	DR1-7 10/25/2006	DR1-7 10/1/2007	DR1-7 10/7/2008
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.18 J	0.19 J	<1	<1	<0.3	<0.3	0.163 J
cis-1,2-Dichloroethene		µg/L	0.46 J	0.58 J	0.45 J	0.48 J	0.374 J	0.344 J	0.787 J
Tetrachloroethene		µg/L	30	26	27	27	5.68	5.15	4.35
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1.6	1.8	2.2	2	0.76 J	0.812 J	1.6
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

DR1-7

	Sample Name	DR1-7	DR1-7	DR1-7	DR1-7
	Sample Date	10/6/2009	10/5/2010	10/4/2011	10/19/2012
Analyte	**Units**				
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Chloroform	µg/L	<0.3	0.169 J	0.174 J	<0.3
cis-1,2-Dichloroethene	µg/L	0.449 J	0.525 J	0.532 J	0.401 J
Tetrachloroethene	µg/L	4.75	3.81	2.62	1.6
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	0.622 J	0.549 J	0.441 J	<1
Vinyl chloride	µg/L	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

DR1-8

Analyte	Sample Name / Sample Date	Units	DR1-8 6/24/2004	DR1-8 11/11/2004	DR1-8 2/18/2005	DR1-8 5/19/2005	DR1-8 10/18/2006	DR1-8 10/1/2007	DR1-8 10/7/2008
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<1	<1	<1	<1	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1 J	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	<1	<1	<1	<1	0.341 J	1.03
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

DR1-8

	Sample Name	DR1-8	DR1-8	DR1-8	DR1-8
	Sample Date	10/5/2009	10/6/2010	10/6/2011	10/19/2012
Analyte	**Units**				
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

DR2-1

Analyte	Sample Name / Sample Date	Units	DR2-1 6/23/2004	DR2-1 11/14/2004	DR2-1 2/22/2005	DR2-1 5/19/2005	DR2-1-BL 8/31/2006	DR2-1-EBT-1 12/6/2006	DR2-1-EBT-2 3/8/2007
Carbon tetrachloride		µg/L	25	35	24	32	32.3	29 J	22.6
Chloroform		µg/L	16	16	12	13	9.91	13.3	10
cis-1,2-Dichloroethene		µg/L	16	24	21	22	17	34.7	19.3
Tetrachloroethene		µg/L	180	280	190	250	176	191	194
trans-1,2-Dichloroethene		µg/L	<5.3	<8.3	<1	<1	0.319 J	<1	<1
Trichloroethene		µg/L	7.3	9.8	7.8	9.1	8.51	8.49	7.91
Vinyl chloride		µg/L	<5.3	<8.3	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

DR2-1

Analyte	Sample Name / Sample Date / Units	DR2-1-EBT-3 5/29/2007	DR2-1-EBT-4 9/12/2007	DR2-1-EBT-5 12/10/2007	DR2-1 3/10/2008	DR2-1 6/9/2008	DR2-1 12/12/2008	DR2-1 3/12/2009
Carbon tetrachloride	µg/L	25.7 J	13.4	15.5	1.26	2.8	20.4	22.7
Chloroform	µg/L	8.76	8.58	11.3	4.19	5.75	9.18	7.53
cis-1,2-Dichloroethene	µg/L	15.2	50.4	7.71	86.4	38.1	9.14	7.59
Tetrachloroethene	µg/L	160	138	192	33.7	50.7	137	150
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	7.21	4.54	5.72	12.7	5.36	5.46	5.09
Vinyl chloride	µg/L	<1	1.25	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

DR2-1

Analyte	Sample Name / Sample Date	Units	DR2-1 10/10/2009	DR2-1 3/30/2010	DR2-1 10/14/2010	DR2-1 4/2/2011	DR2-1 10/2/2011	DR2-1 4/23/2012	DR2-1 10/21/2012
Carbon tetrachloride		µg/L	7.39	10.1	13.2	19.2	23.3	25.7 J	26.6
Chloroform		µg/L	3.76	5.25	6.9	6.75	7.87	6.09	6.38
cis-1,2-Dichloroethene		µg/L	4.89	9.88	14.3	15.3	17.8	13.5	13.9
Tetrachloroethene		µg/L	66.2	98.5	106	152	151	119	180
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2.61	4.21	5.23	6.02	7.07	6.95	6.85
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

DR2-2

Analyte	Sample Name / Sample Date	Units	DR2-2 6/9/2004	DR2-2 11/13/2004	DR2-2 2/23/2005	DR2-2 5/19/2005	DR2-2-LB-1 10/3/2006	DR2-2-LS-3 4/13/2007	DR2-2-LA-5 10/1/2007
Carbon tetrachloride		µg/L	1.8	5	4.2	4.7	4.19	6.78	10.8
Chloroform		µg/L	0.64 J	1.5	1.5	1.2 B	1.05	1.76	2.86
cis-1,2-Dichloroethene		µg/L	<1	2.7	2.5	2.4	1.9	3.47	5.7
Tetrachloroethene		µg/L	10	36	16	40	23.2	49.2	76.7
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2.6	4.1	2.8	3.8	3.13	3.49	4.04
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

DR2-2

Analyte	Sample Name / Sample Date	Units	DR2-2 4/8/2008	DR2-2 10/9/2008	DR2-2 4/10/2009	DR2-2 10/11/2009	DR2-2 4/7/2010	DR2-2 10/12/2010	DR2-2 4/3/2011
Carbon tetrachloride		µg/L	13.4	13.8	16.2	7.75	7.46	4.87	4.56
Chloroform		µg/L	3.65	3.87	4.23	1.91	1.44	0.63	0.563
cis-1,2-Dichloroethene		µg/L	7.04	6.86	7.39	4.79	3.3	1.06	1.14
Tetrachloroethene		µg/L	124	120	159	97.3	69.2	25.6	38.9
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	4.25	3.96	3.82	4.02	3.63	2.45 B	3.27
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

DR2-2

	Sample Name	DR2-2	DR2-2	DR2-2
	Sample Date	10/2/2011	4/20/2012	10/22/2012
Analyte	**Units**			
Carbon tetrachloride	µg/L	4.37	4.96	5.28
Chloroform	µg/L	0.714	0.686	0.944
cis-1,2-Dichloroethene	µg/L	1.31	1.25	1.66
Tetrachloroethene	µg/L	35.9 J	34.5	41.6
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	2.92	2.89	2.92
Vinyl chloride	µg/L	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

DR2-3

Analyte	Sample Name / Sample Date	Units	DR2-3 5/23/2004	DR2-3 11/14/2004	DR2-3 2/24/2005	DR2-3 5/20/2005	DR2-3-LB-1 10/3/2006	DR2-3-LS-3 4/15/2007	DR2-3-LA-5 10/1/2007
Carbon tetrachloride		µg/L	4.1 J	5.6	6.1	4.7	4.2	4.29	4.12
Chloroform		µg/L	1.8	1.9	1.8 B	1.2 B	0.939	0.913	0.76
cis-1,2-Dichloroethene		µg/L	1.4 J	1.8	1.8	1.2	0.601 J	0.673 J	0.549 J
Tetrachloroethene		µg/L	47	43	33	33	22.8	23.9	20.6
trans-1,2-Dichloroethene		µg/L	<1.7	<1.4	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2	2.7	2.7	2.6	2.47	2.28	2.15
Vinyl chloride		µg/L	<1.7	<1.4	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

DR2-3

Analyte	Sample Name / Sample Date	Units	DR2-3 4/8/2008	DR2-3 10/10/2008	DR2-3 4/8/2009	DR2-3 10/10/2009	DR2-3 4/7/2010	DR2-3 10/6/2010	DR2-3 4/1/2011
Carbon tetrachloride		µg/L	4.72	4.97 J	6.66	4.62	5.88	5.81	7.38
Chloroform		µg/L	0.933	0.978 J	1.19	0.861	0.925	0.828	1.3
cis-1,2-Dichloroethene		µg/L	0.683 J	0.594 J	1.41	0.816 J	0.888 J	0.674 J	1.7
Tetrachloroethene		µg/L	28.3	22.1 J	38.9	33.3	34.2	31.6	50.3
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2.15	2.03 J	2.47	2.09	2.03	2.07	2.41
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
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DR2-3

	Sample Name	DR2-3	DR2-3	DR2-3
	Sample Date	10/2/2011	4/23/2012	10/21/2012
Analyte	**Units**			
Carbon tetrachloride	µg/L	6.7	4.23 J	4.24
Chloroform	µg/L	1.04	0.677	0.727
cis-1,2-Dichloroethene	µg/L	1.19	0.55 J	0.617 J
Tetrachloroethene	µg/L	33.5	21.7	24.9
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	2.38	1.87	1.85
Vinyl chloride	µg/L	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
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DR2-4

Analyte	Sample Name / Sample Date	Units	DR2-4 5/24/2004	DR2-4 11/14/2004	DR2-4 2/22/2005	DR2-4 5/20/2005	DR2-4 10/5/2006	DR2-4 10/1/2007	DR2-4 10/8/2008
Carbon tetrachloride		µg/L	2.2	3.8	3.7	3.6	4.06	3.96	3.55
Chloroform		µg/L	1	0.94 J	0.84 J	0.77 B	1.06	0.973	0.715
cis-1,2-Dichloroethene		µg/L	<1	0.27 J	0.22 J	0.22 J	<1	<1	0.304 J
Tetrachloroethene		µg/L	12	14	12	10	7.15	9.28	14.5
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1.9	2.2	1.9	1.7	1.61	1.54	1.74
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
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DR2-4

	Sample Name	DR2-4	DR2-4	DR2-4	DR2-4
	Sample Date	10/11/2009	10/13/2010	10/2/2011	10/21/2012
Analyte	**Units**				
Carbon tetrachloride	µg/L	3.34	4.56	4.45	3.47
Chloroform	µg/L	0.575	0.716	0.835	0.683
cis-1,2-Dichloroethene	µg/L	0.414 J	0.373 J	0.412 J	0.375 J
Tetrachloroethene	µg/L	18	19.8	13.7	11
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	1.7	1.7	1.58	1.12
Vinyl chloride	µg/L	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
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DR2-5

Analyte	Sample Name / Sample Date	Units	DR2-5 6/23/2004	DR2-5 11/14/2004	DR2-5 2/23/2005	DR2-5 5/23/2005	DR2-5-BL 8/31/2006	DR2-5-EBT-1 12/7/2006	DR2-5-EBT-2 3/13/2007
Carbon tetrachloride		µg/L	240	200	200	260	142	100	130
Chloroform		µg/L	82	68	64	79	46.7	35.8	43
cis-1,2-Dichloroethene		µg/L	44	39	41	35J	31	27.7	32.9
Tetrachloroethene		µg/L	88	71	75	88	54.2	45.3	48.4
trans-1,2-Dichloroethene		µg/L	<6.7	<5.7	<1	<1	0.506 J	0.287 J	<1
Trichloroethene		µg/L	29	25	32	21J	18.3	15.4	18.5
Vinyl chloride		µg/L	<6.7	<5.7	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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DR2-5

Analyte	Sample Name / Sample Date	Units	DR2-5-EBT-3 5/29/2007	DR2-5-EBT-4 9/13/2007	DR2-5-EBT-5 12/10/2007	DR2-5 3/12/2008	DR2-5 6/18/2008	DR2-5 12/17/2008	DR2-5 3/13/2009
Carbon tetrachloride		µg/L	132 J	123	138	114	103	112 J	206
Chloroform		µg/L	37.6	42.2	43.6	40.9	37.2	37.9	68.8
cis-1,2-Dichloroethene		µg/L	25.9	30.5	33.7	32	29.2	34.5	62
Tetrachloroethene		µg/L	41.1	46.8	57.3	49.5	41.7	48.9	114
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	1.62	1.07	<1
Trichloroethene		µg/L	14.4	16	18.9	17.5	13.7	17	35
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
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HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

DR2-5

Analyte	Sample Name / Sample Date	Units	DR2-5 10/10/2009	DR2-5 4/7/2010	DR2-5 10/13/2010	DR2-5 4/2/2011	DR2-5 10/2/2011	DR2-5 4/20/2012	DR2-5 10/19/2012
Carbon tetrachloride		µg/L	94.4	217	25	175 J	167	168	196
Chloroform		µg/L	52	69.3	21.5	67	66.2	52	56.1
cis-1,2-Dichloroethene		µg/L	47.2	71.7	105	87.1	87.4	65.1	72.8
Tetrachloroethene		µg/L	47.7	98.7	21.1	68.3	86.5	103	99.9
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	0.396 J	<1	0.271 J
Trichloroethene		µg/L	20.7	33.2	12.1	32.3	37.8	38	38.2
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
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HISTORICAL CVOC RESULTS - MI LTM
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DR2-6

Analyte	Sample Name / Sample Date	Units	DR2-6 6/22/2004	DR2-6 11/13/2004	DR2-6 2/24/2005	DR2-6 5/23/2005	DR2-6-LB-1 10/17/2006	DR2-6-LS-3 4/15/2007	DR2-6-LA-5 10/1/2007
Carbon tetrachloride		µg/L	34	66	7.2	68	82.7	92	82.8
Chloroform		µg/L	16	25	1.5 B	29	27.3	33.1	43.1
cis-1,2-Dichloroethene		µg/L	7.3	13	0.69 J	16	9.97	14.1	31.6
Tetrachloroethene		µg/L	44	75	36	78	77.2	90.8	115
trans-1,2-Dichloroethene		µg/L	<1.7	<2	<1	<1	<1	<1	<1
Trichloroethene		µg/L	11	13	2.2	16	15.5	16.4	19.7
Vinyl chloride		µg/L	<1.7	<2	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

DR2-6

Analyte	Sample Name / Sample Date	Units	DR2-6 4/8/2008	DR2-6 10/8/2008	DR2-6 4/7/2009	DR2-6 10/8/2009	DR2-6 3/31/2010	DR2-6 10/7/2010	DR2-6 4/1/2011
Carbon tetrachloride		µg/L	29.2	39.6	12.9	26.4	8.59	74.4	14.9
Chloroform		µg/L	16.3	18.4	7.83	10.3	3.31	16.1	5.76
cis-1,2-Dichloroethene		µg/L	36	33	29	23.8	24.9	18.5	43.7
Tetrachloroethene		µg/L	48.3	70.5	24.5	44.5	20.9	52.9	22.3
trans-1,2-Dichloroethene		µg/L	<1	0.552 J	<1	<1	<1	<1	<1
Trichloroethene		µg/L	7.55	12.4	5.33	8.79	3.81	10.1	4.09
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
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DR2-6

Analyte	Sample Name / Sample Date / Units	DR2-6 10/3/2011	DR2-6 4/23/2012	DR2-6 10/21/2012
Carbon tetrachloride	µg/L	27.1	27.4 J	46.5 J
Chloroform	µg/L	7.82	11	10.6
cis-1,2-Dichloroethene	µg/L	50.5	22	29.6
Tetrachloroethene	µg/L	32.7	25.2	50.2 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	11.7	8.5	11.6
Vinyl chloride	µg/L	0.302 J	0.394 J	0.76 J

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
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HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-16

	Sample Name	MW-16-2	MW-16-3	MW-16-4	MW-16-5	MW16-63-68BL	MW-16
	Sample Date	6/19/1997	9/23/1997	3/24/1998	10/16/1998	3/20/2002	5/18/2004
Analyte	**Units**						
Carbon tetrachloride	µg/L	<10	<10	<10	<10	<1	<1 J
Chloroform	µg/L	<10	<10	<10	<10	<1	<1
cis-1,2-Dichloroethene	µg/L	--	--	--	--	<1	<1
Tetrachloroethene	µg/L	<10	<10	<10	<10	<1	<1
trans-1,2-Dichloroethene	µg/L	--	--	--	--	<1	<1
Trichloroethene	µg/L	<10	<10	<10	<10	<1	<1
Vinyl chloride	µg/L	<10	<10	<10	<10	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-16

	Sample Name	MW-16-LB-1	MW-16	MW-16	MW-16
	Sample Date	10/16/2006	10/10/2008	10/13/2010	10/21/2012
Analyte	**Units**				
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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MW-19

Analyte	Sample Name / Sample Date	Units	MW-19-2 6/18/1997	MW-19-3 9/24/1997	MW-19-4 3/26/1998	MW-19-5 10/17/1998	MW19-90-92BL 3/18/2002	MW-19 5/5/2004	MW-19-LB-1 10/17/2006
Carbon tetrachloride		µg/L	<10	<10	<10	<10	<1	<1	<1
Chloroform		µg/L	<10	<10	<10	<10	<1	<1	<0.3
cis-1,2-Dichloroethene		µg/L	--	--	--	--	<1	<1	<1
Tetrachloroethene		µg/L	<10	<10	<10	<10	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	--	--	--	--	<1	<1 J	<1
Trichloroethene		µg/L	<10	<10	<10	<10	<1	<1	<1
Vinyl chloride		µg/L	<10	<10	<10	<10	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-19

Analyte	Sample Name / Sample Date	Units	MW-19 10/9/2008	MW-19 10/11/2010	MW-19 10/19/2012
Carbon tetrachloride		µg/L	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	0.334
cis-1,2-Dichloroethene		µg/L	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1
Trichloroethene		µg/L	<1	<1	0.651 J
Vinyl chloride		µg/L	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-21

Analyte	Sample Name / Sample Date	Units	MW-21-2 6/20/1997	MW-21-3 9/27/1997	MW-21-4 3/27/1998	MW-21-5 10/19/1998	MW-21-NA 3/24/2000	MW21-98-103BL 3/20/2002	MW21-EBT-TS1-98.5-103.5 7/8/2002
Carbon tetrachloride		µg/L	<10	<10	<10	<10	0.4 J	<1	<1
Chloroform		µg/L	<10	<10	<10	<10	6	<1	<1
cis-1,2-Dichloroethene		µg/L	--	--	--	--	1	1.9	1.7
Tetrachloroethene		µg/L	63	62	76	120	78	90	110
trans-1,2-Dichloroethene		µg/L	--	--	--	--	0.2 J	<1	0.25 J
Trichloroethene		µg/L	14	12	16	31	39	76	66
Vinyl chloride		µg/L	<10	<10	<10	<10	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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MW-21

	Sample Name	MW21-EBT-TS2-98.5-103.5	MW21-EBT-TS3-98.5-103.5	MW21-EBT-TS4-98.5-103.5	MW21-EBT-TS5-98.5-103.5	MW21-EBT-TS6-98.5-103.5	MW21-EBT-TS7-98.5-103.5
	Sample Date	7/29/2002	9/3/2002	10/7/2002	11/11/2002	12/16/2002	1/20/2003
Analyte	**Units**						
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	0.132 J	0.18 J	<1	0.171 J	<1
cis-1,2-Dichloroethene	µg/L	1.27	1.02	1.63	1.32	1.22	0.985 J
Tetrachloroethene	µg/L	125	178	152	188	195	194
trans-1,2-Dichloroethene	µg/L	0.4 J	0.516 J	0.518 J	0.481 J	0.416 J	0.403 J
Trichloroethene	µg/L	53.6	38.1	49.2	37.6	38.3	32.4
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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MW-21

Analyte	Sample Name / Sample Date / Units	MW21-EBT-TS8-98.5-103.5 2/24/2003	MW21-EBT-TS9-98.5-103.5 3/24/2003	MW21-EBT-TS10-98.5-4/21/2003	MW21-EBT-TS11-98.5-5/19/2003	MW21-EBT-TS12-98.5-6/23/2003	MW21-EBT-TS13-98.5-7/21/2003
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	0.14 J	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	1.68	1.28	1.12	1.25	1.36	1.25
Tetrachloroethene	µg/L	200	190	171	172	159	120
trans-1,2-Dichloroethene	µg/L	0.331 J	0.342 J	0.304 J	<1	<1	<1
Trichloroethene	µg/L	50.7	38.6	33.8	38.6	34	33.6
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-21

	Sample Name	MW-21	MW-21	MW-21	MW-21	MW-21-BL	MW-21-EBT-1	MW-21-EBT-2
	Sample Date	3/31/2004	11/12/2004	2/21/2005	5/19/2005	8/8/2006	12/6/2006	3/7/2007
Analyte	**Units**							
Carbon tetrachloride	µg/L	<2.5	<2.5	<1	<1	<1	<1	<1
Chloroform	µg/L	<2.5	<2.5	<1	<1	<0.3	0.129 J	0.126 J
cis-1,2-Dichloroethene	µg/L	1.5 J	1.6 J	1.1	0.99 J	1.33	1.17	1.66
Tetrachloroethene	µg/L	75	71	61	53	106	129	130 J
trans-1,2-Dichloroethene	µg/L	<2.5	<2.5	<1	<1	<1	<1	<1
Trichloroethene	µg/L	20	17	14	13	16.3	19.8	25
Vinyl chloride	µg/L	<2.5	<2.5	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-21

	Sample Name	MW-21-EBT-3	MW-21-EBT-4	MW-21-EBT-5	MW-21	MW-21	MW-21	MW-21
	Sample Date	6/4/2007	9/18/2007	12/18/2007	3/14/2008	6/16/2008	12/11/2008	3/13/2009
Analyte	**Units**							
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	0.137 J	0.184 J	0.157 J	0.183 J	<0.3
cis-1,2-Dichloroethene	µg/L	1.53	1.95	2.12	1.83	2.26	2.44	2.3
Tetrachloroethene	µg/L	134	132	178	173	154	192	179
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	0.252 J	0.274 J	<1
Trichloroethene	µg/L	28.3	27.5	32.5	28.9	26.1	20.4	16.6
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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MW-21

	Sample Name	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21
	Sample Date	10/5/2009	3/30/2010	10/6/2010	4/1/2011	10/6/2011	4/21/2012	10/20/2012
Analyte	**Units**							
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	2.3	2.27	2.39	2.75	2.27	2.57	3.64
Tetrachloroethene	µg/L	187	146	83.5	74	80	88	121
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	12.9	8.59	5.67	5.89	5.3	7	9.17
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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MW-22

	Sample Name	MW-22-2	MW-22-3	MW-22-4	MW-22-5	MW-22-NA	MW22-99-104BL	MW-022
	Sample Date	6/19/1997	9/25/1997	3/28/1998	10/19/1998	3/23/2000	3/18/2002	3/30/2004
Analyte	**Units**							
Carbon tetrachloride	µg/L	<10	<10	<10	<10	<1	<1	<1
Chloroform	µg/L	<10	<10	<10	<10	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	--	--	--	--	0.5 J	<1	<1
Tetrachloroethene	µg/L	<10	2 J	<10	<10	0.9 J	0.27 J	<1
trans-1,2-Dichloroethene	µg/L	--	--	--	--	<1	<1	<1
Trichloroethene	µg/L	2 J	4 J	1 J	<10	1	<1	<1
Vinyl chloride	µg/L	<10	<10	<10	<10	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-22

	Sample Name	MW-22-LB-1	MW-22	MW-22	MW-22
	Sample Date	10/18/2006	10/9/2008	10/12/2010	10/19/2012
Analyte	**Units**				
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	0.527 J	<1	<1	<1
Tetrachloroethene	µg/L	0.79 J	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	0.531 J	0.329 J	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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MW-23

Analyte	Sample Name / Sample Date	Units	MW-23-2 6/18/1997	MW-23-3 9/26/1997	MW-23-4 3/26/1998	MW-23-5 10/19/1998	MW-23-NA 3/23/2000	MW23-95-100BL 3/18/2002	MW-23 5/19/2004
Carbon tetrachloride		µg/L	<10	<10	<10	<10	<1	<1	<1
Chloroform		µg/L	<10	<10	<10	<10	<1	<1	<1
cis-1,2-Dichloroethene		µg/L	--	--	--	--	<1	<1	<1
Tetrachloroethene		µg/L	<10	<10	<10	<10	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	--	--	--	--	<1	<1	<1
Trichloroethene		µg/L	<10	<10	<10	<10	<1	<1	<1
Vinyl chloride		µg/L	<10	<10	<10	<10	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit

HISTORICAL CVOC RESULTS - MI LTM
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MW-23

	Sample Name	MW-23-LB-1	MW-23	MW-23	MW-23
	Sample Date	10/18/2006	10/14/2008	10/12/2010	10/20/2012
Analyte	**Units**				
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-24

	Sample Name	MW-24-2	MW-24-3	MW-24-4	MW-24-5	MW-24-NA	MW24-109-111BL	MW-24
	Sample Date	6/19/1997	9/24/1997	4/2/1998	10/19/1998	3/22/2000	3/18/2002	5/19/2004
Analyte	**Units**							
Carbon tetrachloride	µg/L	<10	<10	<10	<10	<1	<1	<1
Chloroform	µg/L	<10	<10	<10	<10	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	--	--	--	--	<1	<1	<1
Tetrachloroethene	µg/L	<10	<10	<10	<10	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	--	--	--	--	<1	<1	<1
Trichloroethene	µg/L	<10	<10	<10	<10	<1	<1	<1
Vinyl chloride	µg/L	<10	<10	<10	<10	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-24

	Sample Name	MW-24-LB-1	MW-24	MW-24	MW-24
	Sample Date	10/18/2006	10/14/2008	10/14/2010	10/21/2012
Analyte	**Units**				
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Chloroform	µg/L	<0.3	0.181 J	<0.3	0.241 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-25A

	Sample Name	MW-25A-111102	MW-25A	MW-25A	MW-25A-LB-1	MW-25A-LS-3	MW-25A-LA-5	MW-25A
	Sample Date	11/11/2002	5/12/2004	2/21/2005	10/2/2006	4/13/2007	10/3/2007	4/8/2008
Analyte	**Units**							
Carbon tetrachloride	µg/L	2.01	2.3	2.4	2.66	2.54	2.38	2.15
Chloroform	µg/L	0.517 J	0.57J	0.59 B	0.608	0.507	0.531	0.399
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	5.64	8	9.3	8.61	10.3	9.24	6.64
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.453 J	0.6 J	0.57J	0.352 J	0.525 J	0.433 J	0.352 J
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-25A

Analyte	Sample Name / Sample Date	Units	MW-25A 10/10/2008	MW-25A 4/6/2009	MW-25A 10/7/2010	MW-25A 10/7/2011	MW-25A 10/19/2012
Carbon tetrachloride		µg/L	1.67	1.54	2.74	2.22	2.07
Chloroform		µg/L	0.377	0.449	0.411	0.324	0.28 J
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	4.91	7.84	13.6	6.94	6.24
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.45 J	0.644 J	0.386 J	0.335 J	0.301 J
Vinyl chloride		µg/L	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
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MW-26

Analyte	Sample Name / Sample Date / Units	MW-26-2 6/20/1997	MW-26-3 9/26/1997	MW-26-4 3/28/1998	MW-26-5 10/20/1998	MW-26-106-BL 3/21/2002	MW26-EBT-TS13 7/24/2003	MW26-EBT-TS14 8/18/2003
Carbon tetrachloride	µg/L	4 J	4 J	4 J	4 J	3.7 J	3.29	5.17 J
Chloroform	µg/L	1 J	<10	2 J	1 J	<5	1.11	1.28
cis-1,2-Dichloroethene	µg/L	--	--	--	--	<5	<1	<1
Tetrachloroethene	µg/L	12	11	14	16	8.1	7.92	13.8
trans-1,2-Dichloroethene	µg/L	--	--	--	--	<5	<1	<1
Trichloroethene	µg/L	2 J	2 J	2 J	2 J	1.6 J	1.72	1.9
Vinyl chloride	µg/L	<10	<10	<10	<10	<10	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-26

Analyte	Sample Name / Sample Date	Units	MW-26 4/2/2004	MW-26 11/13/2004	MW-26 2/22/2005	MW-26 5/24/2005	MW-26-LB-1 10/2/2006	MW-26-LS-3 4/16/2007	MW-26-LA-5 10/1/2007
Carbon tetrachloride		µg/L	5.3	7.2	7.5	7.2	5.24	5.23	6.52
Chloroform		µg/L	1.4 B	1.6	1.7	1.8 B	0.935	1.05	1.29
cis-1,2-Dichloroethene		µg/L	0.76 J	0.64 J	0.71 J	0.57 J	0.45 J	0.313 J	0.41 J
Tetrachloroethene		µg/L	25	40	40	35	25.5	20.1	29
trans-1,2-Dichloroethene		µg/L	<2.5	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2.1 J	2.3	2.2	2.5	1.77	1.56	1.75
Vinyl chloride		µg/L	<2.5	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-26

Analyte	Sample Name / Sample Date	Units	MW-26 4/7/2008	MW-26 10/8/2008	MW-26 4/7/2009	MW-26 10/8/2009	MW-26 3/31/2010	MW-26 10/7/2010	MW-26 3/31/2011
Carbon tetrachloride		µg/L	4.38	5.31	5.91	4.81	7.09	9.18	9.99
Chloroform		µg/L	0.976	1.14	1.16	0.871	1.14	1.79	1.33
cis-1,2-Dichloroethene		µg/L	<1	0.295 J	0.332 J	0.411 J	0.466 J	0.606 J	1.23
Tetrachloroethene		µg/L	13.7	21.1	25.3	27.3	38.9	46.4	50.4
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1.3	1.54	1.33	1.59	1.63	1.98	2.33
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-26

	Sample Name	MW-26	MW-26	MW-26
	Sample Date	10/3/2011	4/23/2012	10/21/2012
Analyte	**Units**			
Carbon tetrachloride	µg/L	8.97	6.34 J	4.78
Chloroform	µg/L	1.4	0.74	0.683
cis-1,2-Dichloroethene	µg/L	1.01	0.589 J	0.496 J
Tetrachloroethene	µg/L	52.5	31.2	25.9
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	1.92	1.68	1.45
Vinyl chloride	µg/L	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-34

	Sample Name	MW-34-2	MW-34-3	MW-34-4	MW-34-Y1Q1	MW-34-Y1Q2	MW-34-Y1Q3	MW-34-Y1Q4
	Sample Date	6/19/1997	9/26/1997	3/27/1998	2/4/1999	5/25/1999	8/27/1999	11/3/1999
Analyte	**Units**							
Carbon tetrachloride	µg/L	<10	<10	<10	1.01	1.23	0.51 J	<1
Chloroform	µg/L	2 J	1 J	<10	4.34	<1	0.66 J	<1
cis-1,2-Dichloroethene	µg/L	--	--	--	1.03	<1	<1	<1
Tetrachloroethene	µg/L	<10	<10	<10	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	--	--	--	<1	<1	<1	<1
Trichloroethene	µg/L	<10	<10	<10	4.39	<1	0.64 J	<1
Vinyl chloride	µg/L	<10	<10	<10	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-34

Analyte	Sample Name / Sample Date	Units	MW-34-Y2Q1 2/16/2000	MW-34 5/18/2000	MW-34-Y2Q3 8/24/2000	MW-34-Y2Q4 11/7/2000	MW-34 2/20/2001	MW-34-Y3S2-A 10/3/2001	MW-34-Y3S2-B 10/3/2001
Carbon tetrachloride		µg/L	1.04	1.03	0.86 J	<1	0.82 J	<1	<1
Chloroform		µg/L	1.98	3.49	<1	<1	4.24	1.46	<1
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.85 J	2.15	2.55	1.43	1.62	<1	1.48
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-34

	Sample Name	MW-34-Y3S2-C	MW34-147-152BL	MW-34-3_020410	MW-34-2_020410	MW-34-1_020410	MW-34-3_021001
	Sample Date	10/3/2001	3/18/2002	4/10/2002	4/10/2002	4/10/2002	10/1/2002
Analyte	**Units**						
Carbon tetrachloride	µg/L	0.96 J	0.7 J	<1	<1	<1	<1
Chloroform	µg/L	<1	3	<1	7.78	10.5	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	2	0.93 J	0.9 J	0.97 J	1.16	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-34

	Sample Name	MW-34-1_021001	MW-34-2_021001	MW-34-3	MW-34-2	MW-34-1	MW34-EBT-TS13	MW-34-1
	Sample Date	10/1/2002	10/1/2002	4/8/2003	4/8/2003	4/8/2003	7/24/2003	10/28/2003
Analyte	**Units**							
Carbon tetrachloride	µg/L	<1	<1	<1	<1	1.08	<1	<1
Chloroform	µg/L	2.56	1.26	4.45	7.66	13.9	<1	3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<0.5	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	0.74	120	1.75	0.476 J	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-34

	Sample Name	MW-34-2	MW-34-3	MW-34,152	MW-34,147	MW-34,142	MW-34,138	MW-34
	Sample Date	10/28/2003	10/28/2003	4/28/2004	4/28/2004	4/28/2004	4/28/2004	5/23/2004
Analyte	**Units**							
Carbon tetrachloride	µg/L	<1	<1	<1	0.19 J	<4	<4	0.4 J
Chloroform	µg/L	<1	<1	1.2	1.2	1.2 J	1.1 J	0.29 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<4	<4	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<4	<4	0.55 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1 J	<1 J	<4 J	<4 J	<1
Trichloroethene	µg/L	<1	<1	0.29 J	0.39 J	<4	<4	0.5 J
Vinyl chloride	µg/L	<1	<1	<1	<1	<4	<4	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-34

	Sample Name	MW34,152	MW34,147.3	MW34,142.3	MW-34	MW-34	MW-34	MW-34-LB-1
	Sample Date	10/20/2004	10/20/2004	10/20/2004	11/11/2004	2/23/2005	5/23/2005	10/16/2006
Analyte	**Units**							
Carbon tetrachloride	µg/L	0.35 J	0.64 J	0.62 J	0.55 J	0.41 J	0.44 J	0.381 J
Chloroform	µg/L	1.7	2.4	3.8	0.51 B	1.1	0.31 B	0.531
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	0.52 J	0.37 J	0.46 J	0.336 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.54 J	0.83 J	0.98 J	0.49 J	0.4 J	0.67 J	1.06
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

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B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-34

Analyte	Sample Name / Sample Date	Units	MW-34 10/1/2007	MW-34 11/7/2007	MW-34 10/13/2008	MW-34 10/8/2009	MW-34 10/6/2010	MW-34 10/9/2011	MW-34 10/19/2012
Carbon tetrachloride		µg/L	1.05	0.479	0.826 J	0.978 J	0.572	0.783 J	0.565 J
Chloroform		µg/L	0.434	0.371	0.345 J	0.236 J	0.325	0.406	0.4
cis-1,2-Dichloroethene		µg/L	<1	<1	<1 J	<1	<1	<1	<1
Tetrachloroethene		µg/L	0.753 J	0.34	0.451 J	0.358 J	0.269 J	0.341 J	0.459 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1 J	<1	<1	<1	<1
Trichloroethene		µg/L	1.38	1.39	0.885 J	1.11	0.756 J	1.48	0.718 J
Vinyl chloride		µg/L	<1	<1	<1 J	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-38

Analyte	Sample Name / Sample Date	Units	MW-38-2 6/19/1997	MW-38-3 9/25/1997	MW-38-4 3/26/1998	MW-38-5 10/17/1998	MW-38-145-150BL 3/18/2002	MW-38 5/20/2004	MW-38-LB-1 10/17/2006
Carbon tetrachloride		µg/L	<10	<10	<10	<10	<1	<9.1	1.24
Chloroform		µg/L	<10	<10	<10	<10	<1	<9.1	0.513
cis-1,2-Dichloroethene		µg/L	--	--	--	--	<1	<9.1	<1
Tetrachloroethene		µg/L	<10	<10	<10	<10	<1	<9.1	<1
trans-1,2-Dichloroethene		µg/L	--	--	--	--	<1	<9.1	<1
Trichloroethene		µg/L	<10	1 J	1 J	<10	<1	<9.1	4.63
Vinyl chloride		µg/L	<10	<10	<10	<10	<1	<9.1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-38

	Sample Name	MW-38-LA-5	MW-38	MW-38	MW-38	MW-38	MW-38
	Sample Date	10/1/2007	10/8/2008	10/5/2009	10/9/2010	10/3/2011	10/21/2012
Analyte	**Units**						
Carbon tetrachloride	µg/L	1.37	<1	<1	<1	<1	<1
Chloroform	µg/L	0.646	<0.3	<0.3	0.141 J	<0.3	0.211 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	0.446 J	<1	<1	<1	<1	0.591 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	4.37	<1	<1	0.717 J	0.291 J	4.86
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-39

Analyte	Sample Name / Sample Date	Units	MW-39-2 6/20/1997	MW-39-3 9/26/1997	MW-39-4 3/27/1998	MW-39-5 10/19/1998	MW-39-NA 3/23/2000	MW-39-107-112BL 3/18/2002	MW-39 4/1/2004
Carbon tetrachloride		µg/L	<10	<10	<10	<10	<1	<1	<3.3
Chloroform		µg/L	<10	<10	<10	<10	<1	0.18 J	<3.3
cis-1,2-Dichloroethene		µg/L	--	--	--	--	0.4 J	0.48 J	<3.3
Tetrachloroethene		µg/L	6 J	9 J	8 J	8 J	12	8.2	120
trans-1,2-Dichloroethene		µg/L	--	--	--	--	<1	<1	<3.3
Trichloroethene		µg/L	5 J	8 J	7 J	7 J	5	3.8	10
Vinyl chloride		µg/L	<10	<10	<10	<10	<1	<1	<3.3

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-39

	Sample Name	MW-39	MW-39	MW-39	MW-39	MW-39-LB-1	MW-39-LS-3	MW-39-LA-5
	Sample Date	5/23/2004	11/9/2004	2/15/2005	5/16/2005	10/17/2006	4/13/2007	10/1/2007
Analyte	**Units**							
Carbon tetrachloride	µg/L	<2.5	<4	<1	<1	<1	<1	<1
Chloroform	µg/L	<2.5	<4	0.17 J	0.17 B	<0.3	0.155 J	0.225 J
cis-1,2-Dichloroethene	µg/L	<2.5	<4	0.52 J	0.68 J	0.622 J	0.462 J	0.435 J
Tetrachloroethene	µg/L	95	130	79	110	149	106	111
trans-1,2-Dichloroethene	µg/L	<2.5	<4	<1	<1	<1	<1	<1
Trichloroethene	µg/L	7.2	10	7.6	11	8.94	8.17	8.81
Vinyl chloride	µg/L	<2.5	<4	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-39

Analyte	Sample Name / Sample Date	Units	MW-39 4/9/2008	MW-39 10/9/2008	MW-39 4/9/2009	MW-39 10/10/2009	MW-39 3/31/2010	MW-39 10/9/2010	MW-39 4/1/2011
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.161 J	0.237 J	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	0.525 J	1.26 J	17.5	21.3	17.7	18.3	13.5
Tetrachloroethene		µg/L	100	158 J	62.9 J	50.9	37.4	29.1	33.8
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	9.3	6.15 J	11.6	13.9	12.3	13.6	12.4
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	0.414 J	0.6 J

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

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J Estimated results based on QC data or reported below RL

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HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-39

	Sample Name	MW-39	MW-39	MW-39
	Sample Date	10/6/2011	4/23/2012	10/20/2012
Analyte	**Units**			
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	9.96	3.94	7.24
Tetrachloroethene	µg/L	29	9.78	5.08
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	10.9	5.96	10.1
Vinyl chloride	µg/L	0.914 J	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-39A

Analyte	Sample Name / Sample Date	Units	MW-39A 5/23/2004	MW-39A 11/9/2004	MW-39A 2/15/2005	MW-39A 5/16/2005	MW-39A-LB-1 10/17/2006	MW-39A-LS-3 4/13/2007	MW-39A-LA-5 10/2/2007
Carbon tetrachloride		µg/L	<5J	<6.7	<1	<1	<1	<1	<1
Chloroform		µg/L	<5	<6.7	0.22 J	0.23 B	0.251 J	0.215 J	0.215 J
cis-1,2-Dichloroethene		µg/L	<5	<6.7	0.59 J	0.51 J	0.418 J	0.4 J	0.362 J
Tetrachloroethene		µg/L	140	150	190	150	196	176	162
trans-1,2-Dichloroethene		µg/L	<5	<6.7	<1	<1	<1	<1	<1
Trichloroethene		µg/L	5.8	8.3	8.7	7.9	4.68	4.04	4.4
Vinyl chloride		µg/L	<5	<6.7	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-39A

Analyte	Sample Name / Sample Date	Units	MW-39A 4/7/2008	MW-39A 10/9/2008	MW-39A 4/9/2009	MW-39A 10/5/2009	MW-39A 4/2/2010	MW-39A 10/9/2010	MW-39A 4/1/2011
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.257 J	0.16 J	0.145 J	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	0.499 J	12.2	7.61	24.4	35.4	36	40.8
Tetrachloroethene		µg/L	234	95.7	156	79.9	43.8	25.6	29.5
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	4.63	11.8	7.21	9.49	11.4	10.9	11.4
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-39A

	Sample Name	MW-39A	MW-39A	MW-39A
	Sample Date	10/5/2011	4/23/2012	10/20/2012
Analyte	**Units**			
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	30.9	19.3	14.5
Tetrachloroethene	µg/L	30.9	29	30.9
trans-1,2-Dichloroethene	µg/L	0.465 J	<1	<1
Trichloroethene	µg/L	8.74	7.4	8.18
Vinyl chloride	µg/L	1.06	1.93	1.94

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-50

Analyte	Sample Name / Sample Date	Units	MW-50-2 6/19/1997	MW-50-3 9/24/1997	MW-50-4 3/25/1998	MW-50-5 10/16/1998	MW-50-117.5-122.5BL 3/19/2002	MW-50 5/17/2004	MW-50-LB-1 10/18/2006
Carbon tetrachloride		µg/L	<10	<10	<10	<10	<1	<1	<1
Chloroform		µg/L	<10	<10	<10	<10	0.25 J	0.23 J	0.746
cis-1,2-Dichloroethene		µg/L	--	--	--	--	0.48 J	0.52 J	0.483 J
Tetrachloroethene		µg/L	<10	<10	<10	<10	<1	<1	0.263 J
trans-1,2-Dichloroethene		µg/L	--	--	--	--	<1	<1	<1
Trichloroethene		µg/L	<10	<10	<10	<10	1.2	1.1	1.5
Vinyl chloride		µg/L	<10	<10	<10	<10	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-50

Analyte	Sample Name / Sample Date / Units	MW-50 10/13/2008	MW-50 10/13/2010	MW-50 10/19/2012
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	0.469	0.281 J	1.57
cis-1,2-Dichloroethene	µg/L	0.321 J	0.297 J	0.617 J
Tetrachloroethene	µg/L	0.335 J	0.46 J	0.492 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	1.12	1.24 B	2.65
Vinyl chloride	µg/L	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-52

Analyte	Sample Name / Sample Date	Units	MW-52-2 6/18/1997	MW-52-3 9/24/1997	MW-52-4 3/25/1998	MW-52-5 10/16/1998	MW-52-96.5-101.5BL 3/19/2002	MW-52 5/6/2004	MW-52 2/21/2005
Carbon tetrachloride		µg/L	<10	<10	<10	<10	<1	<1	<1
Chloroform		µg/L	<10	<10	<10	<10	0.35 J	0.68 J	0.77 B
cis-1,2-Dichloroethene		µg/L	--	--	--	--	0.53 J	0.58 J	0.6 J
Tetrachloroethene		µg/L	4 J	2 J	4 J	<10	6.4	4.7	6.2
trans-1,2-Dichloroethene		µg/L	--	--	--	--	<1	<1 J	<1
Trichloroethene		µg/L	<10	<10	1 J	<10	0.59 J	0.34 J	0.67 J
Vinyl chloride		µg/L	<10	<10	<10	<10	<1	<1 J	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-52

	Sample Name	MW-52	MW-52	MW-52	MW-52	MW-52	MW-52	MW-52
	Sample Date	10/2/2006	4/16/2007	10/3/2007	4/8/2008	10/10/2008	4/6/2009	10/12/2009
Analyte	**Units**							
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.899	0.828	0.75	0.861	1.12 J	0.891	0.842
cis-1,2-Dichloroethene	µg/L	0.639 J	0.938 J	0.993 J	0.805 J	0.866 J	0.81 J	0.831 J
Tetrachloroethene	µg/L	10.2	10.8	9.62	9.4	6.86 J	5.85	6.07
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	1.04	1.4	1.17	1.16	1.17 J	1.12	1.06
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-52

	Sample Name	MW-52	MW-52	MW-52
	Sample Date	10/7/2010	10/7/2011	10/19/2012
Analyte	**Units**			
Carbon tetrachloride	µg/L	<1	<1 UJ	<1
Chloroform	µg/L	0.893	0.794 UJ	0.729
cis-1,2-Dichloroethene	µg/L	0.608 J	0.632 J	0.641 J
Tetrachloroethene	µg/L	5.25	6.19	7.55
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	0.838 J	0.98 J	1.15
Vinyl chloride	µg/L	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-53

Analyte	Sample Name / Sample Date	Units	MW-53-2 6/19/1997	MW-53-3 9/26/1997	MW-53-4 3/26/1998	MW-53-5 10/19/1998	MW-53-75-80BL 3/18/2002	MW-53 5/10/2004	MW-53-LB-1 10/17/2006
Carbon tetrachloride		µg/L	<10	<10	<10	<10	<1	<1	<1
Chloroform		µg/L	<10	<10	<10	<10	<1	<1	<0.3
cis-1,2-Dichloroethene		µg/L	--	--	--	--	<1	<1	<1
Tetrachloroethene		µg/L	<10	<10	<10	<10	0.6 J	0.59 J	2.26
trans-1,2-Dichloroethene		µg/L	--	--	--	--	<1	<1	<1
Trichloroethene		µg/L	<10	<10	<10	<10	<1	<1	<1
Vinyl chloride		µg/L	<10	<10	<10	<10	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-53

	Sample Name	MW-53	MW-53	MW-53
	Sample Date	10/13/2008	10/13/2010	10/19/2012
Analyte	**Units**			
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	2.25	1.39	2.15
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-55

	Sample Name	MW-55-2	MW-55-3	MW-55-4	MW-55-5	MW-55-71-73BL	MW-55	MW-55-LB-1
	Sample Date	6/18/1997	9/26/1997	3/25/1998	10/16/1998	3/18/2002	5/20/2004	10/16/2006
Analyte	**Units**							
Carbon tetrachloride	µg/L	<10	<10	<10	<10	<1	<1	<1
Chloroform	µg/L	<10	<10	<10	<10	<1	<1	<0.3
cis-1,2-Dichloroethene	µg/L	--	--	--	--	<1	<1	<1
Tetrachloroethene	µg/L	<10	<10	<10	<10	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	--	--	--	--	<1	<1	<1
Trichloroethene	µg/L	<10	<10	<10	<10	<1	<1	<1
Vinyl chloride	µg/L	<10	<10	<10	<10	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-55

	Sample Name	MW-55	MW-55	MW-55
	Sample Date	10/13/2008	10/11/2010	10/21/2012
Analyte	**Units**			
Carbon tetrachloride	µg/L	<1 J	<1	<1
Chloroform	µg/L	<0.3 J	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1 J	<1	<1
Tetrachloroethene	µg/L	<1 J	<1	<1
trans-1,2-Dichloroethene	µg/L	<1 J	<1	<1
Trichloroethene	µg/L	<1 J	<1	<1
Vinyl chloride	µg/L	<1 J	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-62

Analyte	Sample Name / Sample Date	Units	MW-62-5 10/26/1998	MW-62-NA 3/23/2000	MW-62-94-95BL 3/18/2002	MW-62 2/4/2004	MW-62 4/7/2004	MW-62 5/11/2004	MW-62 2/18/2005
Carbon tetrachloride		µg/L	<10	<1	<1	1.38	1.19	<3.3	0.56 J
Chloroform		µg/L	<10	0.2 J	0.18 J	0.368 J	0.431 J	<3.3	0.46 J
cis-1,2-Dichloroethene		µg/L	--	<1	190	0.418 J	<1	<3.3	<1
Tetrachloroethene		µg/L	<10	<1	<1	0.318 J	0.853	<3.3	1.1
trans-1,2-Dichloroethene		µg/L	--	<1	<1	<1	<1	<3.3	<1
Trichloroethene		µg/L	37	32	6.5	134	183	100	150
Vinyl chloride		µg/L	<10	<1	28	1.27	<1	<3.3	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-62

Analyte	Sample Name / Sample Date	Units	MW-62 5/16/2005	MW-62-LB-1 10/4/2006	MW-62-LS-3 4/17/2007	MW-62-LA-5 10/3/2007	MW-62 4/9/2008	MW-62 10/14/2008	MW-62 4/10/2009
Carbon tetrachloride		µg/L	0.84 J	0.279 J	0.703 J	0.744 J	0.525 J	0.634 J	0.369 J
Chloroform		µg/L	0.23 B	0.25 J	0.311	0.476	0.416	0.394 J	0.361
cis-1,2-Dichloroethene		µg/L	1.3	0.26 J	1.16	0.33 J	<1	<1	0.424 J
Tetrachloroethene		µg/L	0.34 J	<1	0.362 J	0.8 J	0.413 J	0.39 J	0.33 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	92	77.7 J	102	184	152	157 J	169
Vinyl chloride		µg/L	1.2 J	<1	2.71	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-62

Analyte	Sample Name / Sample Date	Units	MW-62 10/10/2009	MW-62 4/7/2010	MW-62 10/14/2010	MW-62 4/3/2011	MW-62 10/8/2011	MW-62 4/21/2012	MW-62 10/22/2012
Carbon tetrachloride		µg/L	<1	0.485 J	0.577 J	0.732 J	0.563 J	0.736 J	0.519 J
Chloroform		µg/L	0.154 J	0.296 J	0.291 J	0.356	0.315	0.403	0.457
cis-1,2-Dichloroethene		µg/L	0.308 J	<1	<1	<1	<1	0.88 J	3.76
Tetrachloroethene		µg/L	<1	0.474 J	0.447 J	0.584 J	0.504 J	0.692 J	0.482 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	59.2	178	119	153	157	185	163
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	1.2

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-63A

Analyte	Sample Name / Sample Date	Units	MW-63A 11/11/2002	MW-63A 5/7/2004	MW-63A 2/22/2005	MW-63A 10/23/2006	MW-63A 10/2/2007	MW-63A 10/8/2008	MW-63A 10/10/2009
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	5.03	<1	<1	<0.3	<0.3	0.471 J	0.194 J
cis-1,2-Dichloroethene		µg/L	0.42 J	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	0.466 J	0.32 J	0.64 J	1.24	1.23	<1	0.674 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1.67	0.68 J	0.63 J	0.765 J	1.09	1.66 J	1.81
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-63A

Analyte	Sample Name / Sample Date	Units	MW-63A 10/7/2010	MW-63A 10/6/2011	MW-63A 10/21/2012
Carbon tetrachloride		µg/L	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1
Tetrachloroethene		µg/L	1.69	0.466 J	2.31
trans-1,2-Dichloroethene		µg/L	<1	<1	<1
Trichloroethene		µg/L	1.37	0.432 J	1.39
Vinyl chloride		µg/L	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-63B

Analyte	Sample Name / Sample Date	Units	MW-63B 11/11/2002	MW-63B 5/7/2004	MW-63B 2/22/2005	MW-63B-LB-1 10/23/2006	MW-63B-LA-5 10/2/2007	MW-63B 10/7/2008	MW-63B 10/10/2009
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	11.1	1.8	1.5	0.604	1.44	2.9	1.23
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	0.401 J	0.253 J
Tetrachloroethene		µg/L	6.78	2.3	2.8	3.71	2.95	4.6	1.58
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	7.9	0.92 J	1.1	1.12	2.1	4.56	3.1
Vinyl chloride		µg/L	<0.25	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-63B

Analyte	Sample Name / Sample Date / Units	MW-63B 10/7/2010	MW-63B 10/7/2011	MW-63B 10/21/2012
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	1.71	0.759	0.578
cis-1,2-Dichloroethene	µg/L	0.372 J	<1	<1
Tetrachloroethene	µg/L	7.47	5.11	2.17
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	3.55	2.76	2.72
Vinyl chloride	µg/L	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-64

Analyte	Sample Name / Sample Date	Units	MW-64-5 10/25/1998	MW64-108-110BL 3/18/2002	MW-64 4/1/2004	MW-64 2/21/2005	MW-64-LB-1 10/23/2006	MW-64-LS-3 4/17/2007	MW-64-LA-5 10/3/2007
Carbon tetrachloride		µg/L	2 J	3.3	3.3	3	2.9	3.26	2.82
Chloroform		µg/L	1 J	0.85 J	0.86 B	0.92 B	1.01	0.818	0.891
cis-1,2-Dichloroethene		µg/L	--	0.45 J	0.41 J	0.31 J	0.397	0.345 J	0.363 J
Tetrachloroethene		µg/L	10	10	16	18	18.2	18.1	17.1
trans-1,2-Dichloroethene		µg/L	--	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	28	45	39	34	28.9	30.6	30.2
Vinyl chloride		µg/L	<10	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-64

Analyte	Sample Name / Sample Date	Units	MW-64 4/7/2008	MW-64 10/8/2008	MW-64 4/9/2009	MW-64 10/8/2009	MW-64 3/29/2010	MW-64 10/7/2010	MW-64 3/31/2011
Carbon tetrachloride		µg/L	3.68	3.3	3.37	2.78	3.56	3.08	3.61
Chloroform		µg/L	1.16	0.989	1.08	0.926	1.34	1.17	1.45
cis-1,2-Dichloroethene		µg/L	0.401 J	0.439 J	0.481 J	0.519 J	0.482 J	0.423 J	0.514 J
Tetrachloroethene		µg/L	22.5	22.3	23	23.8	23	20.8	21.4
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	35.7	36.4	38.1	41.5	38.8	34.1	38.8
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-64

	Sample Name	MW-64	MW-64	MW-64
	Sample Date	10/3/2011	4/23/2012	10/21/2012
Analyte	**Units**			
Carbon tetrachloride	µg/L	2.52	2.75	2.62
Chloroform	µg/L	1.41	0.876 B	1.16
cis-1,2-Dichloroethene	µg/L	0.544 J	0.475 J	0.488 J
Tetrachloroethene	µg/L	16.2	20.8	20.8
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	26.1	35.7	34.8
Vinyl chloride	µg/L	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-66A

Analyte	Sample Name / Sample Date	Units	MW-66A 6/23/2004	MW-66A 11/13/2004	MW-66A 2/22/2005	MW-66A 5/23/2005	MW-66A-LB-1 10/18/2006	MW-66A 10/10/2008	MW-66A 10/12/2010	MW-66A 10/19/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<1	<1	<1	<1	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	1.7	2.2	1.8	2	1.79	1.78	3.31	2.48
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit

HISTORICAL CVOC RESULTS - MI LTM
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MW-85

Analyte	Sample Name / Sample Date	Units	MW-85-1 11/30/2001	MW-85-2 11/30/2001	MW-85-3 11/30/2001	MW-85-4 11/30/2001	MW-85-5 11/30/2001	MW-85-6 11/30/2001	MW-85 4/2/2004
Carbon tetrachloride		µg/L	77	110	140	130	120	110	110
Chloroform		µg/L	27	61	66	67	63	64	30
cis-1,2-Dichloroethene		µg/L	10	25	30	30	28	28	17
Tetrachloroethene		µg/L	34	45	67	54	49	31	46
trans-1,2-Dichloroethene		µg/L	<1	0.49 J	0.74 J	0.62 J	0.96 J	0.58 J	<4
Trichloroethene		µg/L	20	21	26	23	25	21	18
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<4

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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MW-85

Analyte	Sample Name / Sample Date	Units	MW-85 11/14/2004	MW-85 2/22/2005	MW-85 5/20/2005	MW-85-BL 8/30/2006	MW-85-EBT-1 12/8/2006	MW-85-EBT-2 3/12/2007	MW-85-EBT-3 5/29/2007
Carbon tetrachloride		µg/L	120	110	110	188	179	123	106 J
Chloroform		µg/L	36	35	38	43.8	49.5	36.2	34.6
cis-1,2-Dichloroethene		µg/L	21	21	24	26.1	32.2	23.8	18.6
Tetrachloroethene		µg/L	57	51	48	74.8	73.4	58.6	37.8
trans-1,2-Dichloroethene		µg/L	<3.3	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	22	22	24	25.1	24.4	20.3	15.5
Vinyl chloride		µg/L	<3.3	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-85

	Sample Name	MW-85-EBT-4	MW-85-EBT-5	MW-85	MW-85	MW-85	MW-85	MW-85
	Sample Date	9/11/2007	12/10/2007	3/12/2008	6/16/2008	12/17/2008	3/17/2009	10/12/2009
Analyte	**Units**							
Carbon tetrachloride	µg/L	75.1	34.3	22.5	47.2	76.2	69.9	108
Chloroform	µg/L	44.2	51.5	38.6	8.03	9.84	8.51	10.4
cis-1,2-Dichloroethene	µg/L	37.4	51	59.2	39.1	7.45	7.29	1.3
Tetrachloroethene	µg/L	32.5	21	14.4	22	36.4	33.9	41
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	14.3	9.15	7	10.4	14.4	11.6	15.1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-85

Analyte	Sample Name / Sample Date	Units	MW-85 3/30/2010	MW-85 10/14/2010	MW-85 4/3/2011	MW-85 10/9/2011	MW-85 4/21/2012	MW-85 10/19/2012
Carbon tetrachloride		µg/L	116 J	121	119	55.9	110	112
Chloroform		µg/L	14.9	27.1	27	16.4	23.8	28.1
cis-1,2-Dichloroethene		µg/L	1.69	9.47	17.3	21.2	21.1	30.3
Tetrachloroethene		µg/L	38.1	39.2	46.2	29.4	44.3	51.5
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	12.1	12.3	13.5	9.96	14.4	17.4
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-88

	Sample Name	MW-88-1	MW-88-2	MW-88-3	MW-88-4	MW-88-5	MW-88-6	MW-88-7
	Sample Date	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001
Analyte	**Units**							
Carbon tetrachloride	µg/L	3.2	2.9	1.8	1.3	1	3.1	5.2
Chloroform	µg/L	1.1	1	0.64 J	0.51 J	0.42 J	1.2	1.9
cis-1,2-Dichloroethene	µg/L	2.1	1.8	1.1	0.81 J	0.63 J	0.94 J	1.4
Tetrachloroethene	µg/L	8.1	5.3	2.5	2.3	2.2	8.8	29
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	1.1	0.97 J	0.71 J	0.58 J	0.52 J	3.8	5.6
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
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J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-88

	Sample Name	MW-88-8	MW-88	MW-88	MW-88	MW-88	MW-88	MW-88
	Sample Date	11/30/2001	7/8/2002	7/29/2002	9/3/2002	10/7/2002	11/11/2002	12/16/2002
Analyte	**Units**							
Carbon tetrachloride	µg/L	5.6	4.7	5.54	6.61	5.3	5.79	6.76 J
Chloroform	µg/L	1.9	1.9	2.1	1.86	1.81	1.89	1.88
cis-1,2-Dichloroethene	µg/L	1.5	1.5	1.37	0.93 J	1.23	1.66	1.22
Tetrachloroethene	µg/L	27	17	17.2	21.8	16.1	23.8	22.2
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	6.1	7.1	7.55	7.72	6.9	7.66	7.41
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
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J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-88

Analyte	Sample Name / Sample Date	Units	MW-88 1/20/2003	MW-88 3/24/2003	MW-88 4/21/2003	MW-88 5/19/2003	MW-88 6/23/2003	MW-88 7/21/2003	MW-88 8/18/2003
Carbon tetrachloride		µg/L	6.98	4.63	5.61 J	5.08	6.17 J	8.17	7.3
Chloroform		µg/L	1.64	1.23	1.43	1.71	1.93	2.08	1.51
cis-1,2-Dichloroethene		µg/L	0.99 J	0.793 J	0.869 J	1.1	1.32	1.41 J	1.34
Tetrachloroethene		µg/L	19.8	13.4	18.2	14.5	19.9	21.8	21
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	7.24	6.49	6.65	5.34	5.98	6.26	5.37
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

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B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-88

Analyte	Sample Name / Sample Date	Units	MW-88 4/1/2004	MW-88 11/13/2004	MW-88 2/22/2005	MW-088 5/23/2005	MW-88-LB-1 10/3/2006	MW-88-LS-3 4/13/2007	MW-88-LA-5 10/4/2007
Carbon tetrachloride		µg/L	7.9	6	6.2	3.5	8.59	3.88	4.83
Chloroform		µg/L	1.9 B	2.5	1.6	1.1 B	1.78	0.671	0.827
cis-1,2-Dichloroethene		µg/L	1.5	1.8	1.2	0.87 J	1.3	0.588 J	0.751 J
Tetrachloroethene		µg/L	22	22	20	14	26.4	18.5	21.3
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	4.8	3.6	3.8	2.7	3.5	2.94	3.42
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
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HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-88

Analyte	Sample Name / Sample Date	Units	MW-88 4/7/2008	MW-88 10/6/2008	MW-88 4/9/2009	MW-88 10/11/2009	MW-88 3/30/2010	MW-88 10/4/2010	MW-88 3/31/2011
Carbon tetrachloride		µg/L	2.66	3.69	4.87	7.12	10.4	10.5	12.2
Chloroform		µg/L	0.406	0.878	0.825	1.32	1.74	1.85	1.93
cis-1,2-Dichloroethene		µg/L	0.325 J	1.21	0.732 J	1.53	2.15	2.54	2.34
Tetrachloroethene		µg/L	16.6	32.8	31.7	39.4	46.2	56.1	47.2
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	3.11	3.65	3.26	3.83	3.83	4.11	4.15
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

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J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-88

	Sample Name	MW-88	MW-88	MW-88
	Sample Date	10/2/2011	4/23/2012	10/21/2012
Analyte	**Units**			
Carbon tetrachloride	µg/L	7.56	9.96 J	11.8
Chloroform	µg/L	1.34	1.38	1.7
cis-1,2-Dichloroethene	µg/L	1.68	1.88	2.47
Tetrachloroethene	µg/L	35.2	38.4	46.3
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	2.92	3.47	3.69
Vinyl chloride	µg/L	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
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HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-89

Analyte	Sample Name / Sample Date	Units	MW-89 3/19/2002	MW-89 3/19/2002	MW-89 5/22/2004	MW-89 2/16/2005	MW-89-LB-1 10/24/2006	MW-89-LA-5 10/1/2007	MW-89 10/6/2008
Carbon tetrachloride		µg/L	<1	<1	0.49 J	0.44 J	0.7 J	0.56 J	0.252 J
Chloroform		µg/L	<1	<1	0.32 J	0.3B	0.348	0.224 J	0.156 J
cis-1,2-Dichloroethene		µg/L	<1	<1	0.27 J	0.37 J	0.404 J	0.279 J	<1
Tetrachloroethene		µg/L	<1	<1	0.3 J	0.29 J	0.363 J	0.644 J	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.89 J	<1	2	2.1	2.13	1.55	1.1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-89

	Sample Name	MW-89	MW-89	MW-89	MW-89
	Sample Date	10/5/2009	10/8/2010	10/1/2011	10/20/2012
Analyte	**Units**				
Carbon tetrachloride	µg/L	<1	0.261 J	0.38 J	0.325 J
Chloroform	µg/L	0.145 J	0.212 J	0.278 J	0.305
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Tetrachloroethene	µg/L	0.251 J	1.43	3.68	4.25
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	1.27	1.63	1.95	1.9
Vinyl chloride	µg/L	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
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J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-90

Analyte	Sample Name / Sample Date	Units	MW-90 3/19/2002	MW-90 3/19/2002	MW-90 5/22/2004	MW-90 2/16/2005	MW-90-LB-1 10/24/2006	MW-90-LS-3 4/16/2007	MW-90-LA-5 10/1/2007
Carbon tetrachloride		µg/L	0.65 J	0.32 J	0.3 J	0.33 J	0.466 J	0.401 J	0.462 J
Chloroform		µg/L	8.9	3.5	7.4	6.1	3.11	3.18	3.64
cis-1,2-Dichloroethene		µg/L	0.44 J	<1	0.29 J	0.29 J	0.294 J	0.313 J	0.36 J
Tetrachloroethene		µg/L	58	8.8	19	19	26.7	26.7	50.7
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	10	2.7	7.2	4.3	2.53	2.4	3.69
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-90

Analyte	Sample Name / Sample Date	Units	MW-90 4/7/2008	MW-90 10/6/2008	MW-90 4/7/2009	MW-90 10/10/2009	MW-90 4/2/2010	MW-90 10/8/2010	MW-90 4/1/2011
Carbon tetrachloride		µg/L	<1	0.288 J	0.268 J	<1	<1	<1	0.355 J
Chloroform		µg/L	4.66	4.65	4.91	0.817	3.94	4.07	2.77
cis-1,2-Dichloroethene		µg/L	0.484 J	0.335 J	0.481 J	<1	0.424 J	0.483 J	0.303 J
Tetrachloroethene		µg/L	77.7	79.3	80.8	35	58.3	47.9	31.1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	5.9	6.08	8.47	2.41	8.55	8.17	5.25
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
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HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-90

	Sample Name	MW-90	MW-90	MW-90
	Sample Date	10/1/2011	4/23/2012	10/20/2012
Analyte	**Units**			
Carbon tetrachloride	µg/L	<1	0.452 J	0.291 J
Chloroform	µg/L	3.07	2.07	1.64
cis-1,2-Dichloroethene	µg/L	0.322 J	0.267 J	0.34 J
Tetrachloroethene	µg/L	29.2	25.6	25.6
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	5.64	4.37	4.08
Vinyl chloride	µg/L	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
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MW-92

	Sample Name	MW-92	MW-92	MW-92	MW-92	MW-92	MW-92	MW-92
	Sample Date	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	4/1/2004
Analyte	**Units**							
Carbon tetrachloride	µg/L	18	19	18	20	20	18	24
Chloroform	µg/L	6.2	6.5	6.1	6.7	6.9	7.7	9 B
cis-1,2-Dichloroethene	µg/L	6.1	6.6	6.2	7	7	3.2	12
Tetrachloroethene	µg/L	130	160	150	160	150	110	170
trans-1,2-Dichloroethene	µg/L	0.21 J	0.19 J	<1	<1	<1	<1	<5
Trichloroethene	µg/L	4.3	4.5	4.2	4.5	4.5	3	5.2
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<5

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-92

Analyte	Sample Name / Sample Date	Units	MW-92 11/14/2004	MW-92 2/24/2005	MW-92 5/20/2005	MW-92-LB-1 10/5/2006	MW-92-LS-3 4/16/2007	MW-92-LA-5 10/4/2007	MW-92 4/8/2008
Carbon tetrachloride		µg/L	23	25	21	27.2	7.67	6.45	6.3
Chloroform		µg/L	9.4	8.6	7.6	8.02	13.2	11	8.91
cis-1,2-Dichloroethene		µg/L	12	11	11	10.8	7.32	67.5	66.2
Tetrachloroethene		µg/L	180	140	160	193	159	55	65.9
trans-1,2-Dichloroethene		µg/L	<6.7	<1	<1	<1	<1	<1	0.727 J
Trichloroethene		µg/L	5.7 J	5.8	5.5	6.14	5.01	3.12	4.22
Vinyl chloride		µg/L	<6.7	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

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J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-92

Analyte	Sample Name / Sample Date	Units	MW-92 10/9/2008	MW-92 4/10/2009	MW-92 10/10/2009	MW-92 4/7/2010	MW-92 10/9/2010	MW-92 4/2/2011	MW-92 10/3/2011
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	119	119	120	123	119	86.7	64.2
Tetrachloroethene		µg/L	0.499 J	<1	1.3	4.76	20.7	50.9	78.4
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	<1	1.72	1.99	8.64	13.8	13.6
Vinyl chloride		µg/L	<1	1.64	<1	0.791 J	0.314 J	13.6 J	3.02

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
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HISTORICAL CVOC RESULTS - MI LTM
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MW-92

	Sample Name	MW-92	MW-92
	Sample Date	4/23/2012	10/21/2012
Analyte	**Units**		
Carbon tetrachloride	µg/L	<1	<1
Chloroform	µg/L	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	66.1	50.9
Tetrachloroethene	µg/L	51.6	78.3
trans-1,2-Dichloroethene	µg/L	<1	<1
Trichloroethene	µg/L	26.7	21
Vinyl chloride	µg/L	0.353 J	0.61 J

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-93

	Sample Name	MW-93	MW-93	MW-93	MW-93	MW-93	MW-93	MW-93
	Sample Date	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001
Analyte	**Units**							
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.69 J	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	2.4	7	7.5	7.1	7.3
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	0.19 J	0.64 J	0.84 J	0.77 J	0.86 J
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-93

Analyte	Sample Name / Sample Date	Units	MW-93 5/7/2004	MW-93-LB-1 10/18/2006	MW-93 10/4/2007	MW-93 10/13/2008	MW-93 10/11/2009	MW-93 10/14/2010	MW-93 10/21/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1 J	<1	<1	<1
Chloroform		µg/L	<1	<0.3	<0.3	<0.3 J	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1 J	<1	<1	<1
Tetrachloroethene		µg/L	0.16 J	<1	<1	<1 J	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1 J	<1	<1	<1
Trichloroethene		µg/L	<1	<1	<1	<1 J	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1 J	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-94A

Analyte	Sample Name / Sample Date	Units	MW-94A 5/23/2004	MW-94A 11/10/2004	MW-94A 2/20/2005	MW-94A 5/17/2005	MW-94A-LB-1 10/24/2006	MW-94A-LS-3 4/16/2007	MW-94A-LA-5 10/4/2007
Carbon tetrachloride		µg/L	<1.4 J	<2	<1	<1	<1	<1	<1
Chloroform		µg/L	<1.4	<2	0.19 J	<1	0.139 J	0.196 J	0.129 J
cis-1,2-Dichloroethene		µg/L	0.52 J	0.71 J	0.82 J	0.68 J	0.624 J	0.532 J	0.61 J
Tetrachloroethene		µg/L	37	47	42	47	52.2	48	43.5
trans-1,2-Dichloroethene		µg/L	<1.4	<2	<1	<1	<1	<1	<1
Trichloroethene		µg/L	4.2	6	6.5	5.8	5.58	6.08	7.44
Vinyl chloride		µg/L	<1.4	<2	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-94A

Analyte	Sample Name / Sample Date	Units	MW-94A 4/8/2008	MW-94A 10/13/2008	MW-94A 4/9/2009	MW-94A 10/12/2009	MW-94A 3/29/2010	MW-94A 10/11/2010	MW-94A 4/2/2011
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.138 J	0.147 J	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	0.42 J	1.93	3.06	2.74	3.15	3.17	3.29
Tetrachloroethene		µg/L	27.3	32.8	30	27.7	27.7	30	28.8
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	9.49	6.89	6.78	7.46	7.83	6.89	6.59
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-94A

Analyte	Sample Name / Sample Date	Units	MW-94A 10/4/2011	MW-94A 4/23/2012	MW-94A 10/21/2012
Carbon tetrachloride		µg/L	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	0.149 J
cis-1,2-Dichloroethene		µg/L	3.41	1.51	1.63
Tetrachloroethene		µg/L	24.9	15.3	32.1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1
Trichloroethene		µg/L	6.29	8.04	10.2
Vinyl chloride		µg/L	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-96

Analyte	Sample Name / Sample Date	Units	MW-96-1 11/30/2001	MW-96-2 11/30/2001	MW-96-3 11/30/2001	MW-96-4 11/30/2001	MW-96-5 11/30/2001	MW-96-6 11/30/2001	MW-96 3/31/2004
Carbon tetrachloride		µg/L	1.8	<1	<1	<1	<1	<1	3.6
Chloroform		µg/L	2	2.7	3.8	5.6	6.3	5.9	0.69 B
cis-1,2-Dichloroethene		µg/L	0.23 J	<1	<1	<1	<1	<1	0.67 J
Tetrachloroethene		µg/L	19	0.88 J	0.21 J	0.3 J	0.13 J	0.14 J	8.9
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.19 J	<1	<1	<1	<1	<1	0.22 J
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-96

Analyte	Sample Name / Sample Date	Units	MW-96 11/15/2004	MW-96 2/21/2005	MW-96 5/20/2005	MW-96 5/20/2005	MW-96-LS-3 4/16/2007	MW-96-LA-5 10/4/2007	MW-96 10/10/2008
Carbon tetrachloride		µg/L	2.9	1.5	3.4	3.4	3.47	3.4	1.03 J
Chloroform		µg/L	0.6 J	0.5 B	0.64 B	0.64 B	0.901	0.739	0.663 J
cis-1,2-Dichloroethene		µg/L	0.52 J	0.34 J	19	0.6 J	0.814 J	0.836 J	<1
Tetrachloroethene		µg/L	6.1	3.4	6.5	6.5	4.35	4.33	1.46 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	<1	<1	<1	0.419 J	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-96

Analyte	Sample Name / Sample Date	Units	MW-96 4/6/2009	MW-96 10/8/2009	MW-96 10/7/2010	MW-96 10/7/2011	MW-96 10/19/2012
Carbon tetrachloride		µg/L	0.69 J	2	2.45	4.64	1.15
Chloroform		µg/L	0.73	0.58	0.557	0.972	0.288 J
cis-1,2-Dichloroethene		µg/L	<1	<1	0.34 J	0.631 J	<1
Tetrachloroethene		µg/L	3	7.78	3.99	2.42	0.306 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

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B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-97

	Sample Name	MW-97	MW-97	MW-97	MW-97	MW-97	MW-97	MW-97
	Sample Date	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001
Analyte	**Units**							
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

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B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-97

Analyte	Sample Name / Sample Date	Units	MW-97 11/30/2001	MW-97 3/31/2004	MW-97 2/21/2005	MW-97-LB-1 10/25/2006	MW-97-LS-3 4/16/2007	MW-97-LA-5 10/2/2007	MW-97 4/8/2008
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<1	<1	0.16 B	0.228 J	0.292 J	0.255 J	0.164 J
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.14 J	2.2	5.8	14.7	18.8	25.7	21.8
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
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HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-97

Analyte	Sample Name / Sample Date	Units	MW-97 10/13/2008	MW-97 4/10/2009	MW-97 10/7/2009	MW-97 3/31/2010	MW-97 10/9/2010	MW-97 3/31/2011	MW-97 10/5/2011
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.267 J	0.316	0.277 J	0.249 J	0.368	0.235 J	0.238 J
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	29.6	31.3	37.4	36.8	49.8	40.7	53.8
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

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HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-97

	Sample Name	MW-97	MW-97
	Sample Date	4/23/2012	10/20/2012
Analyte	**Units**		
Carbon tetrachloride	µg/L	<1	<1
Chloroform	µg/L	0.346 B	0.311
cis-1,2-Dichloroethene	µg/L	<1	<1
Tetrachloroethene	µg/L	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1
Trichloroethene	µg/L	54.7	62
Vinyl chloride	µg/L	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
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HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-98

Analyte	Sample Name / Sample Date	Units	MW-98 11/30/2001	MW-98 11/30/2001	MW-98 11/30/2001	MW-98 11/30/2001	MW-98 11/30/2001	MW-98 4/1/2004	MW-98 11/10/2004	MW-98 2/16/2005
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.23 J	0.26 J	0.24 J	0.26 J	0.24 J	<1	0.17 B	<1
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	0.22 J	<1
Tetrachloroethene		µg/L	1.5	3.7	7.7	5.5	4.4	17	31	33
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.46 J	0.9 J	0.88 J	0.89 J	0.83 J	1.2	2.2	2.1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

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B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-98

Analyte	Sample Name / Sample Date	Units	MW-98 5/19/2005	MW-98 10/25/2006	MW-98 4/13/2007	MW-98 10/3/2007	MW-98 4/7/2008	MW-98 10/10/2008	MW-98 4/10/2009
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<1	0.133 J	0.147 J	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	0.252 J	<1	<1	<1	8.6 J	0.346 J
Tetrachloroethene		µg/L	28	33.1	35.2	36.9	34.8	25.5 J	30.1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2	2.37	2.63	2.69	1.93	2.34 J	2.18
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-98

Analyte	Sample Name / Sample Date	Units	MW-98 10/7/2009	MW-98 4/5/2010	MW-98 10/9/2010	MW-98 4/1/2011	MW-98 10/4/2011	MW-98 4/23/2012	MW-98 10/20/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	0.128 J	0.127 J	0.125 J	<0.3	0.135 JB	0.134 J
cis-1,2-Dichloroethene		µg/L	0.304 J	0.367 J	0.502 J	0.448 J	0.374 J	0.358 J	0.5 J
Tetrachloroethene		µg/L	38.8	40.1	35.4	38	41.7	21.7	41.7
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2.79	2.99	2.85	3.44	3.05	3.03	3.1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

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HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-99

	Sample Name	MW-99	MW-99	MW-99	MW-99	MW-99	MW-99	MW-99
	Sample Date	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001
Analyte	**Units**							
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.14 J	0.14 J	0.13 J	0.15 J	<1	0.15 J	0.13 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1	0.14 J	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-99

	Sample Name	MW-99	MW-99	MW-99	MW-99	MW-99-LB-1	MW-99-LA-5	MW-99
	Sample Date	11/30/2001	11/30/2001	11/30/2001	5/18/2004	10/18/2006	10/3/2007	10/9/2008
Analyte	**Units**							
Carbon tetrachloride	µg/L	<1	<1	<1	<1 J	<1	<1	<1
Chloroform	µg/L	<1	<1	<1	<1	0.22 J	0.2 J	0.265 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.28 J	0.38 J	0.58 J	0.28 J	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-99

Analyte	Sample Name / Sample Date	Units	MW-99 10/7/2009	MW-99 10/12/2010	MW-99 10/19/2012
Carbon tetrachloride		µg/L	<1	<1	<1
Chloroform		µg/L	0.238 J	0.252 J	0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1
Trichloroethene		µg/L	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-100B

Analyte	Sample Name / Sample Date	Units	MW100B-EBT-TS1-110-115 7/8/2002	MW100B-EBT-TS2-110-115 7/29/2002	MW100B-EBT-TS3-110-115 9/3/2002	MW100B-EBT-TS4-110-115 10/7/2002	MW100B-EBT-TS5-110-115 11/11/2002
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1
Chloroform		µg/L	0.19 J	<1	<1	<1	<1
cis-1,2-Dichloroethene		µg/L	1.3	0.509 J	17.7	33.4	31.4
Tetrachloroethene		µg/L	49	1.56	25.3	14.5	1.77
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	0.269 J	<1
Trichloroethene		µg/L	72	22.8	33.1	11.6	2.27
Vinyl chloride		µg/L	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-100B

	Sample Name	MW100B-EBT-TS6-100-115	MW100B-EBT-TS7	MW100B-EBT-TS8-110-115	MW100B-EBT-TS9-100-115	MW100B-EBT-TS10-110-115
	Sample Date	12/16/2002	1/20/2003	2/24/2003	3/24/2003	4/21/2003
Analyte	**Units**					
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	24.1	26.4	28.7	59.4	61.3
Tetrachloroethene	µg/L	2.35	0.395 J	0.53	0.341 J	<0.5
trans-1,2-Dichloroethene	µg/L	0.321 J	<1	<1	0.274 J	0.323 J
Trichloroethene	µg/L	2.06	0.4 J	0.407 J	<1	<1
Vinyl chloride	µg/L	<1	2.57	0.436 J	0.968 J	0.797 J

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-100B

Analyte	Sample Name / Sample Date / Units	MW100B-EBT-TS11-110-115 5/19/2003	MW100B-EBT-TS12-110-115 6/23/2003	MW100B-EBT-TS13-110-115 7/21/2003	MW-100B 3/30/2004	MW-100B 11/12/2004	MW-100B 2/18/2005
Carbon tetrachloride	µg/L	<1	<1	<1	<5	<5	<1
Chloroform	µg/L	<1	<1	<1	<5	<5	<1
cis-1,2-Dichloroethene	µg/L	75.2	88.2	89	140	160	120
Tetrachloroethene	µg/L	<0.5	<0.5	<0.5	<5	<5	2.8
trans-1,2-Dichloroethene	µg/L	0.333 J	0.356 J	0.312 J	<5	<5	<1
Trichloroethene	µg/L	<1	<1	<1	<5	<5	3.4
Vinyl chloride	µg/L	0.819 J	0.646 J	0.66 J	<5	<5	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-100B

	Sample Name	MW-100B	MW-100B	MW-100B	MW-100B	MW-100B	MW-100B	MW-100B
	Sample Date	5/18/2005	10/23/2006	4/13/2007	10/2/2007	4/7/2008	10/8/2008	4/8/2009
Analyte	**Units**							
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	100	112	94.4	143	89.3	158	22.3
Tetrachloroethene	µg/L	5.8	101	98.9	29.6	64.2	0.706 J	<1
trans-1,2-Dichloroethene	µg/L	<1	0.39 J	0.432 J	0.605 J	0.92 J	0.783 J	<1
Trichloroethene	µg/L	6.2	43.1	39.4	12.6	31.4	0.309 J	<1
Vinyl chloride	µg/L	0.29 J	0.716 J	0.595 J	1.02	0.836 J	1.75	94.6

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-100B

Analyte	Sample Name / Sample Date	Units	MW-100B 10/7/2009	MW-100B 3/30/2010	MW-100B 10/6/2010	MW-100B 4/4/2011	MW-100B 10/7/2011	MW-100B 4/21/2012	MW-100B 10/19/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	21.5	8.8	11	23.6	9.9	5.94	16.3
Tetrachloroethene		µg/L	<1	<1	<1	3.87	28.7	44.1	66.5
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	0.269 J	0.845 J	1.11	1.27
Trichloroethene		µg/L	<1	<1	<1	0.62 J	0.521 J	0.811 J	3.02
Vinyl chloride		µg/L	85.2 J	131 J	132	153	181 J	132	164 J

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-101

Analyte	Sample Name / Sample Date	Units	MW-101-89 12/21/2001	MW-101-109 12/21/2001	MW-101-124 12/21/2001	MW-101 3/30/2004	MW-101 11/11/2004	MW-101,97.5 2/18/2005	MW-101,129 2/18/2005
Carbon tetrachloride		µg/L	<1	<1	<1	<20	<17	<1.4	<1.3
Chloroform		µg/L	0.38 J	<1	0.42 J	<20	<17	0.27 B	0.31 B
cis-1,2-Dichloroethene		µg/L	0.34 J	0.27 J	0.39 J	<20	<17	<1.4	0.3 J
Tetrachloroethene		µg/L	530	450	460	450	450 J	470	460
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<20	<17	<1.4	<1.3
Trichloroethene		µg/L	0.95 J	0.87 J	0.84 J	<20	<17	0.47 J	0.43 J
Vinyl chloride		µg/L	<1	<1	<1	<20	<17	<1.4	<1.3

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-101

Analyte	Sample Name / Sample Date	Units	MW-101,97.5 5/20/2005	MW-101,129 5/20/2005	MW-101T 8/25/2006	MW-101B 8/25/2006	MW-101T 12/7/2006	MW-101B 12/7/2006	MW-101T 3/6/2007
Carbon tetrachloride		µg/L	<1.2	<1.2	<1	<1	<1	<1	<1
Chloroform		µg/L	0.24 B	0.23 B	0.261 J	0.233 J	0.155 J	0.156 J	0.164 J
cis-1,2-Dichloroethene		µg/L	0.32 J	<1.2	0.266 J	0.279 J	<1	<1	0.621 J
Tetrachloroethene		µg/L	350	340	251	239	196	192	192
trans-1,2-Dichloroethene		µg/L	<1.2	<1.2	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1.2	0.35 J	0.298 J	0.293 J	<1	<1	<1
Vinyl chloride		µg/L	<1.2	<1.2	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-101

Analyte	Sample Name / Sample Date	Units	MW-101B 3/6/2007	MW-101T 5/30/2007	MW-101B 5/30/2007	MW-101T 9/11/2007	MW-101B 9/11/2007	MW-101T 12/11/2007	MW-101B 12/11/2007
Carbon tetrachloride		µg/L	<1	<1 J	<1 J	<1	<1	<1	<1
Chloroform		µg/L	0.129 J	0.148 J	0.206 J	0.162 J	0.164 J	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	9.4	0.428 J	1.01	0.609 J	7.35	0.578	5.26
Tetrachloroethene		µg/L	193	123	135	134	147	125	120
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.358 J	0.364 J	0.311 J	0.46 J	0.646 J	0.305	0.843
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-101

Analyte	Sample Name / Sample Date	Units	MW-101T 3/14/2008	MW-101B 3/14/2008	MW-101T 6/10/2008	MW-101B 6/10/2008	MW-101T 12/10/2008	MW-101B 12/10/2008	MW-101T 3/11/2009
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.149 J	<0.3	0.137 J	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	10.1	35.6	3.22	23.3	51.2	29.1	35.2
Tetrachloroethene		µg/L	113	81.3	101	78.9	16.5	47	46.9
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1.37	2.17	1.09	4.15	1.63	0.923 J	2.16
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-101

	Sample Name	MW-101B	MW-101T	MW-101B	MW-101T	MW-101B	MW-101T	MW-101B
	Sample Date	3/11/2009	10/7/2009	10/7/2009	4/5/2010	4/5/2010	10/13/2010	10/13/2010
Analyte	**Units**							
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	31.2	1.85	2.03	0.512 J	0.498 J	<1	0.264 J
Tetrachloroethene	µg/L	55.6	76.5	96.2	82.9	99.6	75.6	66.4
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	3.53	0.746 J	0.809 J	0.307 J	0.325 J	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
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MW-101

Analyte	Sample Name / Sample Date	Units	MW-101T 4/5/2011	MW-101B 4/5/2011	MW-101T 10/7/2011	MW-101B 10/7/2011	MW-101T 4/23/2012	MW-101B 4/23/2012	MW-101T 10/19/2012	MW-101B 10/19/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	0.342 J	0.253 J	<1	<1	0.395 J	<1	<1	<1
Tetrachloroethene		µg/L	80	76.3	53.1	72.3	66.6	64.1	66.2	63.2
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-102B

Analyte	Sample Name / Sample Date	Units	MW-102B 5/8/2004	MW-102B 10/19/2006	MW-102B 10/3/2007	MW-102B 10/13/2008	MW-102B 10/8/2009	MW-102B 10/11/2010	MW-102B 10/19/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1 J	<1	<1	<1
Chloroform		µg/L	<1	<0.3	<0.3	<0.3 J	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1 J	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	0.308 J	<1 J	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1 J	<1	<1	<1
Trichloroethene		µg/L	<1	<1	<1	<1 J	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1 J	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-103

	Sample Name	MW-103-10	MW-103-9	MW-103-8	MW-103-7	MW-103-6	MW-103-5	MW-103-4
	Sample Date	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001
Analyte	**Units**							
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	16	17	16	17	16	15	14
cis-1,2-Dichloroethene	µg/L	0.39 J	0.37 J	0.36 J	0.39 J	0.36 J	0.34 J	0.33 J
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5.8	5.6	4.9	4.9	4.6	4.4	3.9
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-103

	Sample Name	MW-103-3	MW-103-2	MW-103-1	MW-103	MW-103	MW-103	MW-103
	Sample Date	11/30/2001	11/30/2001	11/30/2001	5/11/2004	2/20/2005	10/3/2006	10/4/2007
Analyte	**Units**							
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	16	4.3	1.9	12	13	12.2	11.7
cis-1,2-Dichloroethene	µg/L	0.39 J	<1	<1	0.44 J	0.43 J	0.322 J	0.35 J
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	4.8	0.69 J	0.3 J	4	4.4	5.04	6.63
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-103

Analyte	Sample Name / Sample Date	Units	MW-103 10/6/2008	MW-103 10/11/2009	MW-103 10/7/2010	MW-103 10/7/2011	MW-103 10/21/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1
Chloroform		µg/L	11.1	8.02	7.78	9.61	10.4
cis-1,2-Dichloroethene		µg/L	<1	0.314 J	0.386 J	0.439 J	0.419 J
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Trichloroethene		µg/L	5.27	5.44	3.98	7.2	10.6
Vinyl chloride		µg/L	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-104

	Sample Name	MW-104-10	MW-104-9	MW-104-8	MW-104-7	MW-104-6	MW-104-5	MW-104-4
	Sample Date	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001
Analyte	**Units**							
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	20	19	14	18	17	10	5
cis-1,2-Dichloroethene	µg/L	0.46 J	0.45 J	0.36 J	0.47 J	0.4 J	0.22 J	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	24	20	19	19	16	6.4	1.3
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-104

	Sample Name	MW-104-3	MW-104-2	MW-104-1	MW-104	MW-104	MW-104	MW-104
	Sample Date	11/30/2001	11/30/2001	11/30/2001	5/11/2004	2/21/2005	10/3/2006	4/13/2007
Analyte	**Units**							
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	4.8	4.6	4	13	16	15.9	13.7
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	0.36 J	0.38 J	0.446 J	0.589 J
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	1.1	1.1	0.89 J	11	14	17.6	17
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-104

Analyte	Sample Name / Sample Date	Units	MW-104 10/4/2007	MW-104 4/8/2008	MW-104 10/6/2008	MW-104 10/11/2009	MW-104 10/7/2010	MW-104 10/9/2011	MW-104 10/21/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	12.8	13.6	11.2	8.45	10.2	8.78	9.89
cis-1,2-Dichloroethene		µg/L	0.554 J	0.63 J	0.305 J	0.473 J	0.477 J	0.574 J	0.637 J
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	17.8	18.2	12.6	14.1	14.4	17.3	21.9
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-107

Analyte	Sample Name / Sample Date	Units	MW-107-147 12/21/2001	MW-107-125B 12/21/2001	MW-107 5/26/2004	MW-107,153 2/20/2005	MW-107,135.5 2/20/2005	MW-107T-LB-1 10/17/2006
Carbon tetrachloride		µg/L	0.6 J	0.52 J	0.28 J	0.31 J	0.34 J	<1
Chloroform		µg/L	0.16 J	0.14 J	<1	<1	<1	<0.3
cis-1,2-Dichloroethene		µg/L	0.29 J	0.34 J	0.25 J	<1	<1	<1
Tetrachloroethene		µg/L	0.67 J	0.95 J	<1	0.21 J	0.32 J	0.564 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2.6	2.8	0.7 J	0.57 J	0.63 J	0.999 J
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
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MW-107

	Sample Name	MW-107B-LB-1	MW-107B-LA-5	MW-107T	MW-107B	MW-107T	MW-107B	MW-107T
	Sample Date	10/17/2006	10/2/2007	4/9/2008	4/9/2008	10/10/2008	10/10/2008	10/7/2009
Analyte	**Units**							
Carbon tetrachloride	µg/L	<1	0.415 J	0.616 J	0.574 J	<1	<1	0.787 J
Chloroform	µg/L	<0.3	<0.3	0.324	0.262 J	0.287 J	0.32 J	0.239 J
cis-1,2-Dichloroethene	µg/L	<1	<1	0.283 J	0.265 J	0.385 J	0.449 J	0.257 J
Tetrachloroethene	µg/L	0.377 J	0.476 J	0.411 J	0.291 J	1.93	0.965 J	5.05
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.585 J	0.95 J	1.67	1.56	2.11	1.8 J	2.51
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
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MW-107

Analyte	Sample Name / Sample Date	Units	MW-107B 10/7/2009	MW-107T 10/13/2010	MW-107B 10/13/2010	MW-107T 10/8/2011	MW-107B 10/8/2011	MW-107T 4/23/2012	MW-107T 10/21/2012
Carbon tetrachloride		µg/L	0.773 J	0.6	0.629	0.704 J	0.655 J	0.815 J	0.579 J
Chloroform		µg/L	0.238 J	0.357	0.375	0.3 J	0.308	0.392 B	0.391
cis-1,2-Dichloroethene		µg/L	<1	<1	0.252 J	<1	<1	<1	<1
Tetrachloroethene		µg/L	3.36	4.26	4.22	31.7	32.1	47	36.5
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2.12	2.17 U	2.2	2.84	2.86	3.44	3.17
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
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MW-107

	Sample Name	MW-107B	MW-107B
	Sample Date	4/23/2012	10/21/2012
Analyte	**Units**		
Carbon tetrachloride	µg/L	0.966 J	0.719 J
Chloroform	µg/L	0.492 B	0.422
cis-1,2-Dichloroethene	µg/L	<1	<1
Tetrachloroethene	µg/L	62.5	46.5
trans-1,2-Dichloroethene	µg/L	<1	<1
Trichloroethene	µg/L	4.15	3.47
Vinyl chloride	µg/L	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
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MW-108

Analyte	Sample Name / Sample Date	Units	MW-108 12/21/2001	MW-108 5/25/2004	MW-108 2/22/2005	MW-108-LB-1 10/24/2006	MW-108-LS-3 4/16/2007	MW-108 10/1/2007	MW-108 4/7/2008
Carbon tetrachloride		µg/L	<1	0.19 J	0.26 J	<1	<1	0.461 J	0.477 J
Chloroform		µg/L	6.4	8.2	6.9	11.7	10.8	12.1	11.7
cis-1,2-Dichloroethene		µg/L	0.18 J	0.46 J	0.33 J	0.75 J	0.634 J	0.71 J	0.647 J
Tetrachloroethene		µg/L	2.6	3.3	3.3	5.41	6.03	5.03	3.93
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	6.4	15	28	32	33.5	38.4 J	32.7
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-108

Analyte	Sample Name / Sample Date	Units	MW-108 10/10/2008	MW-108 4/7/2009	MW-108 10/5/2009	MW-108 4/1/2010	MW-108 10/12/2010	MW-108 4/1/2011	MW-108 10/6/2011
Carbon tetrachloride		µg/L	0.272 J	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	12.3 J	10.1	9.44	9.62	11.9	11.9	11.6
cis-1,2-Dichloroethene		µg/L	0.598 J	0.674 J	0.584 J	0.627 J	0.744 J	0.677 J	0.619 J
Tetrachloroethene		µg/L	3.72 J	4.49	4.39	4.29	5.23	7.25	6.06
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	28.5 J	28.1	29.1	34.7	37.7	33.1	26
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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MW-108

	Sample Name	MW-108	MW-108
	Sample Date	4/23/2012	10/21/2012
Analyte	**Units**		
Carbon tetrachloride	µg/L	<1	<1
Chloroform	µg/L	9.86	10.1
cis-1,2-Dichloroethene	µg/L	0.646 J	0.927 J
Tetrachloroethene	µg/L	3.61	2.67
trans-1,2-Dichloroethene	µg/L	<1	<1
Trichloroethene	µg/L	25.4	31.5
Vinyl chloride	µg/L	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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MW-113

	Sample Name	MW-113-EBT-B-99.5-104.5	MW113-EBT-TS1-99.5-104.5	MW113-EBT-TS2-99.5-104.5	MW113-EBT-TS3-99.5-104.5	MW113-EBT-TS4-99.5-104.5	MW113-EBT-TS5-99.5-104.5
	Sample Date	5/20/2002	7/8/2002	7/29/2002	9/3/2002	10/7/2002	11/11/2002
Analyte	**Units**						
Carbon tetrachloride	µg/L	30	50	69.1	60.7	64.5	59
Chloroform	µg/L	76	79	98	90.6	83.2	78.2
cis-1,2-Dichloroethene	µg/L	44	48	55.5	59.9	92.4	77.3
Tetrachloroethene	µg/L	30	45	59.3	112	80.4	97
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	15	20	26.7	29.4	28	31.6
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-113

Analyte	Sample Name / Sample Date	Units	MW113-EBT-TS6-99.5-104.5 12/16/2002	MW113-EBT-TS7-99.5-104.5 1/20/2003	MW113-EBT-TS9-99.5-104.5 3/24/2003	MW113-EBT-TS10-99.5-104.5 4/21/2003	MW113-EBT-TS11-99.5-104.5 5/19/2003	MW113-EBT-TS12-99.5-104.5 6/23/2003
Carbon tetrachloride		µg/L	69.6 J	71.6	50.8	53.2 J	26	43.6 J
Chloroform		µg/L	87.6	93.8	70.8	81	84.4	89.8
cis-1,2-Dichloroethene		µg/L	83.4	94.1	69.7	71.2	71.6	93.9
Tetrachloroethene		µg/L	96.9	91.1	48.7	49.4	27.5	54.5
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	0.266 J	<1	<1
Trichloroethene		µg/L	32.7	30.4	23.3	21.1	15.3	19.7
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-113

Analyte	Units	Sample Name / Sample Date	MW113-EBT-TS13-99.5-104.5 7/21/2003	MW113-EBT-TS14-99.5-104.5 8/18/2003	MW-113 5/24/2004	MW-113 11/14/2004	MW-113 2/24/2005	MW-113 5/20/2005	MW-113-LB-1 10/23/2006
Carbon tetrachloride	µg/L		38	42.7	20	44	49	47	75.6
Chloroform	µg/L		89.7	80.4	27	34	39	36	33.8
cis-1,2-Dichloroethene	µg/L		102 J	109	100	110	87	78	54.9
Tetrachloroethene	µg/L		56.1	63.6	64	100	130	130	182
trans-1,2-Dichloroethene	µg/L		<1	<1	<5	<5	<1	<1	<1
Trichloroethene	µg/L		19.3	18.5	8.8	15	21	22	25.9
Vinyl chloride	µg/L		<1	<1	<5	<5	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-113

	Sample Name	MW-113-LS-3	MW-113	MW-113	MW-113	MW-113	MW-113	MW-113
	Sample Date	4/16/2007	10/4/2007	4/7/2008	10/8/2008	4/9/2009	10/10/2009	3/30/2010
Analyte	**Units**							
Carbon tetrachloride	µg/L	89.1	96.9	75.1	110	101	67.4	72.2
Chloroform	µg/L	35.9	36.4	30.9	45.3	39	29.5	26.5
cis-1,2-Dichloroethene	µg/L	46.3	50.2	37.8	59.6	57.1	49.5	37.1
Tetrachloroethene	µg/L	163	151	170	156 J	192	200	191
trans-1,2-Dichloroethene	µg/L	<1	<1	0.354 J	<1	<1	<1	<1
Trichloroethene	µg/L	24.1	26	20.2	28.9	29.5	26.7	23.2
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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Defense Depot Memphis, Tennessee

MW-113

Analyte	Sample Name / Sample Date / Units	MW-113 10/14/2010	MW-113 4/3/2011	MW-113 10/3/2011	MW-113 4/21/2012	MW-113 10/22/2012
Carbon tetrachloride	µg/L	77.3	63.5	65.8	60.6	65.6
Chloroform	µg/L	24.3	16.9	16.2	13.4	16.4
cis-1,2-Dichloroethene	µg/L	29.7	25.1	26.2	22.2	28.6
Tetrachloroethene	µg/L	149	157	189	150	166
trans-1,2-Dichloroethene	µg/L	0.358 J	<1	<1	<1	<1
Trichloroethene	µg/L	19.9	17.6	18	16.9	18.6
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
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MW-140

Analyte	Sample Name / Sample Date	Units	MW-140 5/27/2004	MW-140 11/10/2004	MW-140 2/17/2005	MW-140 5/17/2005	MW-140-LB-1 10/23/2006	MW-140-LA-5 10/2/2007	MW-140 10/9/2008
Carbon tetrachloride		µg/L	<1	0.48 J	0.44 J	0.92 J	0.313 J	<1	<1
Chloroform		µg/L	0.42 J	0.21 B	0.18 J	0.16 B	0.162 J	0.16 J	0.259 J
cis-1,2-Dichloroethene		µg/L	<1	0.28 J	0.22 J	0.22 J	<1	<1	<1
Tetrachloroethene		µg/L	<1	0.38 J	0.42 J	0.42 J	0.424 J	0.59 J	0.933 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.54 J	1.4	1.4	1.3	1.49	1.19	1.41
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-140

Analyte	Sample Name / Sample Date	Units	MW-140 10/12/2009	MW-140 10/13/2010	MW-140 10/3/2011	MW-140 10/20/2012
Carbon tetrachloride		µg/L	0.558 J	<1	0.27 J	0.313 J
Chloroform		µg/L	0.205 J	0.242 J	<0.3	0.146 J
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	0.294 J
Tetrachloroethene		µg/L	0.806 J	1.18	1.19	2.51
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1
Trichloroethene		µg/L	1.25	0.971 J	1.43	1.6
Vinyl chloride		µg/L	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
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MW-141

Analyte	Sample Name / Sample Date	Units	MW-141 6/24/2004	MW-141 11/9/2004	MW-141 2/15/2005	MW-141 5/17/2005	MW-141-LB-1 10/23/2006	MW-141-LS-3 4/17/2007	MW-141 10/2/2007
Carbon tetrachloride		µg/L	<1	<1	<1	0.82 J	<1	<1	<1
Chloroform		µg/L	1.4	1.5 B	1.8	2 B	2.37	2.46	2.09
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	5.9	19	26	31	27.6	21.3	18
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1.2	2.1	2.2	2.8	3.56	3.02	2.52
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-141

Analyte	Sample Name / Sample Date	Units	MW-141 4/8/2008	MW-141 10/10/2008	MW-141 4/9/2009	MW-141 10/5/2009	MW-141 4/2/2010	MW-141 10/8/2010	MW-141 4/1/2011
Carbon tetrachloride		µg/L	0.418 J	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	2.31	2.48 J	1.85	1.78	1.54	2.06	2.67
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	16.9	19.7 J	15.7	17.1	16.6	19.6	30.4
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2.47	3.24 J	2.48	3.02	2.58	3.18	3.86
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
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MW-141

	Sample Name	MW-141	MW-141	MW-141
	Sample Date	10/2/2011	4/23/2012	10/20/2012
Analyte	**Units**			
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	2.68	2.58	3.04
cis-1,2-Dichloroethene	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	23.7	24.9	27.4
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	3.6	3.46	3.68
Vinyl chloride	µg/L	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-142

Analyte	Sample Name / Sample Date	Units	MW-142 5/26/2004	MW-142 11/9/2004	MW-142 2/16/2005	MW-142 5/17/2005	MW-142-LB-1 10/2/2006	MW-142-LA-5 10/3/2007	MW-142 10/8/2008
Carbon tetrachloride		µg/L	<1	0.36 J	<1	0.77 J	<1	<1	<1
Chloroform		µg/L	<1	0.25 B	0.17 B	<1	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.3 J	1.4	0.65 J	0.39 J	0.371 J	0.709 J	1.61
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-142

	Sample Name	MW-142	MW-142	MW-142	MW-142
	Sample Date	10/8/2009	10/9/2010	10/9/2011	10/20/2012
Analyte	**Units**				
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Chloroform	µg/L	0.128 J	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	2.74	6.71	11	4.16
Vinyl chloride	µg/L	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-143

Analyte	Sample Name / Sample Date	Units	MW-143 5/5/2004	MW-143 11/11/2004	MW-143 2/17/2005	MW-143 5/17/2005	MW-143 10/19/2006	MW-143 10/13/2008	MW-143 10/12/2010
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1 J	<1
Chloroform		µg/L	<1	<1	<1	<1	<0.3	<0.3 J	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1 J	<1
Tetrachloroethene		µg/L	<1	<1 J	<1	<1	<1	<1 J	<1
trans-1,2-Dichloroethene		µg/L	<1 J	<1	<1	<1	<1	<1 J	<1
Trichloroethene		µg/L	<1	<1	<1	0.31 J	0.7 J	1.19 J	8.83
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1 J	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-143

Analyte	Sample Name / Sample Date	Units	MW-143 4/5/2011	MW-143 10/7/2011	MW-143 4/23/2012	MW-143 10/19/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	0.431 J	0.368 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1
Trichloroethene		µg/L	10.1	12.6	12.5	13.5
Vinyl chloride		µg/L	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-197A

Analyte	Sample Name / Sample Date	Units	MW-197A-LB-1 10/24/2006	MW-197A-RW-2 1/24/2007	MW-197A-LS-3 4/13/2007	MW-197A-LQ-4 7/9/2007	MW-197A-LA-5 10/3/2007	MW-197A 4/8/2008
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.237 J	0.226 J	0.212 J	0.208 J	0.179 J	0.185 J
cis-1,2-Dichloroethene		µg/L	0.447 J	0.345 J	0.432 J	0.419 J	0.445 J	1.48
Tetrachloroethene		µg/L	130	125	114	103	87.3	82.8
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2.04	2.04	2.28	2.31	2.42	2.42
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-197A

Analyte	Sample Name / Sample Date	Units	MW-197A 10/6/2008	MW-197A 4/6/2009	MW-197A 10/6/2009	MW-197A 4/2/2010	MW-197A 10/11/2010	MW-197A 4/2/2011	MW-197A 10/5/2011
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.174 J	0.13 J	0.187 J	<0.3	<0.3	<0.3	0.126 J
cis-1,2-Dichloroethene		µg/L	3.13	3.69	2.57	2.22	1.84	1.64	1.26
Tetrachloroethene		µg/L	54.8	42.1	33.8	34	35	32.8	32.2 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2.4	2.09	2.04	1.81	1.72	1.51	1.51
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-197A

	Sample Name	MW-197A	MW-197A
	Sample Date	4/20/2012	10/21/2012
Analyte	**Units**		
Carbon tetrachloride	µg/L	<1	<1
Chloroform	µg/L	<0.3	0.139 J
cis-1,2-Dichloroethene	µg/L	0.926 J	0.798 J
Tetrachloroethene	µg/L	31	27.7
trans-1,2-Dichloroethene	µg/L	<1	<1
Trichloroethene	µg/L	1.52	1.34
Vinyl chloride	µg/L	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-197B

Analyte	Sample Name / Sample Date	Units	MW-197B-LB-1 10/2/2006	MW-197B-RW-2 1/24/2007	MW-197B-LS-3 4/13/2007	MW-197B-LQ-4 7/9/2007	MW-197B-LA-5 10/3/2007	MW-197B 4/8/2008
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	0.227 J	0.208 J	<0.3	0.166 J	<0.3
cis-1,2-Dichloroethene		µg/L	0.625 J	0.484 J	0.792 J	5.29	10.7	47.6
Tetrachloroethene		µg/L	179	166	138	134	105 J	38.6
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	8.51	8.76	9.11	10.2	10.3	9.01
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-197B

Analyte	Sample Name / Sample Date	Units	MW-197B 10/6/2008	MW-197B 4/6/2009	MW-197B 10/6/2009	MW-197B 4/2/2010	MW-197B 10/11/2010	MW-197B 4/2/2011	MW-197B 10/5/2011
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	48.7	38.2	25.9	16.6	9.66	8.85	5.27
Tetrachloroethene		µg/L	16.7	20.2	24.1	26.8	34.1	31.5	29.7
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	9.77	12.6	12.3	10.9	10.2	10	9.4
Vinyl chloride		µg/L	<1	0.684 J	3.09	7.24	3.99 J	3.25 J	1.86

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-197B

	Sample Name	MW-197B	MW-197B
	Sample Date	4/21/2012	10/21/2012
Analyte	**Units**		
Carbon tetrachloride	µg/L	<1	<1
Chloroform	µg/L	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	3.53	4.6
Tetrachloroethene	µg/L	28.5	27.1
trans-1,2-Dichloroethene	µg/L	<1	<1
Trichloroethene	µg/L	10.3	11
Vinyl chloride	µg/L	0.732 J	1.41

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-198

	Sample Name	MW-198-LB-1	MW-198-RW-2	MW-198-LS-3	MW-198-LQ-4	MW-198-LA-5	MW-198	MW-198
	Sample Date	10/2/2006	1/24/2007	4/15/2007	7/10/2007	10/2/2007	4/9/2008	10/8/2008
Analyte	**Units**							
Carbon tetrachloride	µg/L	<1	0.915 J	0.32 J	0.267 J	0.438 J	0.326 J	<1
Chloroform	µg/L	<0.3	0.2 J	0.146 J	<0.3	<0.3	<0.3	0.171 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	3.28	25.8	20.2	15.1	6.53	8.36	10.4 J
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-198

Analyte	Sample Name / Sample Date	Units	MW-198 4/9/2009	MW-198 10/12/2009	MW-198 10/8/2010	MW-198 10/8/2011	MW-198 10/20/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Trichloroethene		µg/L	3.73	8.39	3.14	0.44 J	2.63
Vinyl chloride		µg/L	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-199A

	Sample Name	MW-199A-LB-1	MW-199A-RW-2	MW-199A-LS-3	MW-199A-LQ-4	MW-199A-LA-5	MW-199A
	Sample Date	10/23/2006	1/24/2007	4/13/2007	7/12/2007	10/2/2007	10/9/2008
Analyte	**Units**						
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.126 J	<0.3	<0.3	0.132 J	<0.3	0.137 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	0.361 J	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-199A

	Sample Name	MW-199A	MW-199A	MW-199A	MW-199A
	Sample Date	10/5/2009	10/7/2010	10/3/2011	10/20/2012
Analyte	**Units**				
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	0.419 J	0.968 J	0.963 J	1
Vinyl chloride	µg/L	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-199B

	Sample Name	MW-199B-LB-1	MW-199B-RW-2	MW-199B-LS-3	MW-199B-LQ-4	MW-199B-LA-5	MW-199B
	Sample Date	10/23/2006	1/24/2007	4/13/2007	7/11/2007	10/2/2007	4/8/2008
Analyte	**Units**						
Carbon tetrachloride	µg/L	0.719 J	0.949 J	0.555 J	1.05	0.376 J	0.6 J
Chloroform	µg/L	0.197 J	0.179 J	0.232 J	0.279 J	0.146 J	0.177 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	0.632 J	0.497 J	0.715 J	0.517 J	0.393 J	23.4
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	99.2 J	115	115	136	78.6	56.5
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-199B

Analyte	Sample Name / Sample Date	Units	MW-199B 10/9/2008	MW-199B 4/9/2009	MW-199B 10/7/2009	MW-199B 4/2/2010	MW-199B 10/8/2010	MW-199B 4/2/2011	MW-199B 10/3/2011
Carbon tetrachloride		µg/L	<1	0.476 J	0.324 J	0.378 J	0.287 J	0.545 J	0.324 J
Chloroform		µg/L	0.24 J	0.217 J	0.158 J	0.154 J	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	0.612 J	0.494 J	0.694 J	0.511 J	0.707 J	0.567 J	0.881 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	124	115	93.2	87.5	53.8	71.5	59.7
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-199B

	Sample Name	MW-199B	MW-199B
	Sample Date	4/23/2012	10/20/2012
Analyte	**Units**		
Carbon tetrachloride	µg/L	0.379 J	0.386 J
Chloroform	µg/L	0.159 JB	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1
Tetrachloroethene	µg/L	0.412 J	0.676 J
trans-1,2-Dichloroethene	µg/L	<1	<1
Trichloroethene	µg/L	76.7	84.9
Vinyl chloride	µg/L	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-200

	Sample Name	MW-200A-LB-1	MW-200-RW-2	MW-200-LS-3	MW-200-LQ-4	MW-200-LA-5	MW-200-LQ-6
	Sample Date	10/25/2006	1/24/2007	4/15/2007	7/10/2007	10/3/2007	4/8/2008
Analyte	**Units**						
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	0.146 J	<0.3	<0.3	0.206 J
cis-1,2-Dichloroethene	µg/L	0.466 J	0.303 J	0.532 J	0.543 J	0.419 J	0.345 J
Tetrachloroethene	µg/L	72	81.9	70.2	62.9	73.9	132
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5.47	5.94	7.49	7.49	6.88	4.13
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-200

Analyte	Sample Name / Sample Date	Units	MW-200-LB-8 10/6/2008	MW-200 4/7/2009	MW-200 10/10/2009	MW-200 3/29/2010	MW-200 10/11/2010	MW-200 4/1/2011	MW-200 10/4/2011
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.175 J	<0.3	<0.3	0.157 J	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	0.531 J	5.68	11.6	8.57	16.7	13	15.3
Tetrachloroethene		µg/L	125	74.7	25.6	23.8	31.5	31.8	25.6
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	3.42	4.82	8.04	7.99	7.24	6.66	5.05
Vinyl chloride		µg/L	<1	<1	<1	<1	<1 J	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-200

	Sample Name	MW-200	MW-200
	Sample Date	4/23/2012	10/20/2012
Analyte	**Units**		
Carbon tetrachloride	µg/L	<1	<1
Chloroform	µg/L	0.159 JB	<0.3
cis-1,2-Dichloroethene	µg/L	2.98	3.08
Tetrachloroethene	µg/L	3	11.8
trans-1,2-Dichloroethene	µg/L	<1	<1
Trichloroethene	µg/L	3.94	7.14
Vinyl chloride	µg/L	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-202A

Analyte	Sample Name / Sample Date	Units	MW-202A-LB-1 10/23/2006	MW-202A-RW-2 1/24/2007	MW-202A-LS-3 4/16/2007	MW-202A-LQ-4 7/11/2007	MW-202A-LA-5 10/1/2007	MW-202A 4/7/2008
Carbon tetrachloride		µg/L	0.365 J	0.749 J	0.382 J	0.904 J	0.552 J	0.695 J
Chloroform		µg/L	0.232 J	0.198 J	0.213 J	0.249 J	0.238 J	0.225 J
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	0.251 J	<1	<1
Tetrachloroethene		µg/L	0.257 J	0.326 J	0.316 J	0.371 J	0.672 J	0.443 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1.85	1.59	1.88	2.22	1.66	1.77
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-202A

Analyte	Sample Name / Sample Date	Units	MW-202A 10/7/2008	MW-202A 4/7/2009	MW-202A 10/6/2009	MW-202A 10/9/2010	MW-202A 10/1/2011	MW-202A 10/20/2012
Carbon tetrachloride		µg/L	<1	<1	0.466 J	<1	0.265 J	<1
Chloroform		µg/L	0.17 J	0.171 J	<0.3	0.21 J	0.222 J	0.23 J
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	0.262 J	0.399 J	0.294 J	1	1.56	2.28
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1.21	1.35	1.45	1.43	1.5	1.57
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-202B

Analyte	Sample Name / Sample Date	Units	MW-202B-LB-1 10/24/2006	MW-202B-RW-2 1/24/2007	MW-202B-LS-3 4/16/2007	MW-202B-LQ-4 7/11/2007	MW-202B-LA-5 10/2/2007	MW-202B 4/9/2008
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	0.263 J
Chloroform		µg/L	0.778	0.857	0.752	1.05	0.907	1.46
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	5.51	8.42	8.6	8.16	3.82	16.3
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.811 J	1.27	1.46	2.2	1.36	2.21
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-202B

Analyte	Sample Name / Sample Date	Units	MW-202B 10/7/2008	MW-202B 4/7/2009	MW-202B 10/6/2009	MW-202B 4/6/2010	MW-202B 10/9/2010	MW-202B 4/2/2011	MW-202B 10/1/2011
Carbon tetrachloride		µg/L	<1	<1	0.506 J	<1	<1	0.45 J	0.31 J
Chloroform		µg/L	1.92	1.96	1.92	1.81	1.46	1.24	0.712
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	0.299 J	0.477 J	0.411 J
Tetrachloroethene		µg/L	21.3	19.5	18.6	21.4	23.1	26.6	27.1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2.57	3.3	3.79	3.78	3.43	4.98	5.13
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-202B

	Sample Name	MW-202B	MW-202B
	Sample Date	4/23/2012	10/20/2012
Analyte	**Units**		
Carbon tetrachloride	µg/L	0.297 J	0.353 J
Chloroform	µg/L	0.655 B	0.606
cis-1,2-Dichloroethene	µg/L	0.485 J	0.401 J
Tetrachloroethene	µg/L	10.9	21.3
trans-1,2-Dichloroethene	µg/L	<1	<1
Trichloroethene	µg/L	4.83	5.11
Vinyl chloride	µg/L	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-203A

Analyte	Sample Name / Sample Date	Units	MW-203A 4/17/2007	MW-203A-LQ-4 7/9/2007	MW-203A-LA-5 10/3/2007	MW-203A-LQ-6 1/8/2008	MW-203A 4/8/2008	MW-203A 10/6/2008	MW-203A 4/9/2009
Carbon tetrachloride		µg/L	<1	<1 J	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	0.128 J	0.172 J	0.206 J	0.201 J	0.203 J
cis-1,2-Dichloroethene		µg/L	<1	<1	0.294 J	0.972 J	1.14	1.2	1.68
Tetrachloroethene		µg/L	62.6	69.1 J	86.8	108	144	143	170
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1.27	1.46	1.69	1.93	2.03	2.11	2.23
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-203A

Analyte	Sample Name / Sample Date	Units	MW-203A 10/6/2009	MW-203A 4/2/2010	MW-203A 10/9/2010	MW-203A 4/3/2011	MW-203A 10/5/2011	MW-203A 4/20/2012	MW-203A 10/21/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.158 J	0.185 J	<0.3	<0.3	<0.3	0.284 J	<0.3
cis-1,2-Dichloroethene		µg/L	3.38	4.11	5.32	5.27	5.75	5.78	8.54
Tetrachloroethene		µg/L	149	162	143	147	147	127	118
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2.34	2.43	2.55	2.8	2.72	2.78	2.89
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-203B

Analyte	Sample Name / Sample Date	Units	MW-203B 4/27/2007	MW-203B-LQ-4 7/9/2007	MW-203B-LA-5 10/3/2007	MW-203B-LQ-6 1/8/2008	MW-203B 4/8/2008	MW-203B 10/6/2008	MW-203B 4/9/2009
Carbon tetrachloride		µg/L	<1 J	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	50.1	63.5	55	58.6	59.7	39.2	26.6
Tetrachloroethene		µg/L	38.4	21.1	13.9	9.39	10.8	19	21.1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	8.97	7.68	7.92	6.31	6.25	11.3	9.15
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	0.358 J	7.12

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-203B

Analyte	Sample Name / Sample Date	Units	MW-203B 10/6/2009	MW-203B 4/2/2010	MW-203B 10/11/2010	MW-203B 4/3/2011	MW-203B 10/5/2011	MW-203B 4/20/2012	MW-203B 10/21/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	14.4	9.53	6.65	6.15	4.81	4.39	1.59
Tetrachloroethene		µg/L	24.8	31.8	31.9	30.6	23.2	24.8	11.1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	9.16	6.74	6.76	7.64	8.72	9.92	4.74
Vinyl chloride		µg/L	5.14	5.51	5.11 J	3.01	2.74	2.13	0.697 J

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-204A

Analyte	Sample Name / Sample Date	Units	MW-204A 4/23/2007	MW-204A-LQ-4 7/10/2007	MW-204A-LA-5 10/2/2007	MW-204A-LQ-6 1/8/2008	MW-204A 4/7/2008	MW-204A 10/6/2008	MW-204A 4/7/2009
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	0.763 J	0.785 J	0.846 J	0.922 J	1.05	0.769 J	1.21
Tetrachloroethene		µg/L	38.8	36.2	37	42.7	44.6 J	42	47.4
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1.19	1.17	1.06	1.12	1.04	0.852 J	0.981 J
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-204A

Analyte	Sample Name / Sample Date	Units	MW-204A 10/7/2009	MW-204A 4/6/2010	MW-204A 10/8/2010	MW-204A 4/2/2011	MW-204A 10/4/2011	MW-204A 4/23/2012	MW-204A 10/20/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	6.45	6.88	4.36	2.7	1.53	1.11	0.937 J
Tetrachloroethene		µg/L	39.2 J	37.3	47.2	46.8	50.2	42.7	47.9
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1.21	1.79	1.83	1.48	0.91 J	0.723 J	0.756 J
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-204B

Analyte	Sample Name / Sample Date	Units	MW-204B 4/23/2007	MW-204B-LQ-4 7/11/2007	MW-204B-LA-5 10/2/2007	MW-204B-LQ-6 1/8/2008	MW-204B 4/9/2008	MW-204B 10/6/2008	MW-204B 4/8/2009
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	0.125 J	<0.3	<0.3	0.13	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	0.906 J	0.916 J	1.05	2.3	1.39	1.26	1.29
Tetrachloroethene		µg/L	26.3	17.2	19	24.5	20.2	29.4	16.3
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2.37	4.88	4.7	3.2	4.27	2.53	4.98
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-204B

Analyte	Sample Name / Sample Date	Units	MW-204B 10/6/2009	MW-204B 4/6/2010	MW-204B 10/11/2010	MW-204B 4/2/2011	MW-204B 10/4/2011	MW-204B 4/23/2012	MW-204B 10/20/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.177 J	<0.3	<0.3	0.166 J	<0.3	<0.3	0.134 J
cis-1,2-Dichloroethene		µg/L	6.13	2.33	1.11	1.25	0.793 J	0.937 J	1.08
Tetrachloroethene		µg/L	14.9	23.5	15.7	13.9	27.8	14.2	13.8
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	4.95	3.71	5.35	5.92	2.99	4.23	5.33
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-205A

Analyte	Sample Name / Sample Date	Units	MW-205A 4/23/2007	MW-205A-LQ-4 7/10/2007	MW-205A-LA-5 10/3/2007	MW-205A-LQ-6 1/8/2008	MW-205A 4/7/2008	MW-205A 10/9/2008	MW-205A 4/10/2009
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.238 J	0.222 J	0.185 J	0.165 J	0.212 J	0.223 J	0.132 J
cis-1,2-Dichloroethene		µg/L	0.337 J	0.465 J	0.538 J	3.12	1.14	9.58 J	16.8
Tetrachloroethene		µg/L	102	180	145	153	141	126 J	82.6
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	3.69	5.84	6.25	6.14	6.02	7.56 J	7.12
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-205A

Analyte	Sample Name / Sample Date	Units	MW-205A 10/5/2009	MW-205A 4/6/2010	MW-205A 10/8/2010	MW-205A 4/2/2011	MW-205A 10/4/2011	MW-205A 4/23/2012	MW-205A 10/20/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	23.5	31.8	25.2	24.6	13.4	9.21	8.84
Tetrachloroethene		µg/L	53.1	32.3	39.1	30.1	30.9	28.9	33.1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	7.28	7.77	9.03	9.18	8.03	7.04	8.38
Vinyl chloride		µg/L	<1	<1	1.2	2.34 J	1.83	1.43	0.393 J

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-205B

Analyte	Sample Name / Sample Date	Units	MW-205B 4/23/2007	MW-205B-LQ-4 7/10/2007	MW-205B-LA-5 10/4/2007	MW-205B-LQ-6 1/8/2008	MW-205B 4/9/2008	MW-205B 10/9/2008	MW-205B 4/7/2009
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.206 J	<0.3	0.15 J	0.146 J	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	0.546 J	0.616 J	4.41	26.4	22.4	43	38.8
Tetrachloroethene		µg/L	129	149	100	82.3	31.2	24.9	19.7
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	7.2	9.22	8.74	9.75	5.15	8.48	9.36
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-205B

Analyte	Sample Name / Sample Date	Units	MW-205B 10/7/2009	MW-205B 4/6/2010	MW-205B 10/11/2010	MW-205B 4/2/2011	MW-205B 10/4/2011	MW-205B 4/23/2012	MW-205B 10/20/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	29.5	19.8	13.5	10.4	6.46	5.01	5.29
Tetrachloroethene		µg/L	24.4	24	30.8	31.3	28.9	26.9	27.1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	11.8	10.9	10.7	9.9	8.38	8.17	10.4
Vinyl chloride		µg/L	2.06 J	5.05	4.59 J	2.6 J	1.73	1.32	0.87 J

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-206A

Analyte	Sample Name / Sample Date	Units	MW-206A 4/15/2007	MW-206A-LQ-4 7/11/2007	MW-206A-LA-5 10/3/2007	MW-206A-LQ-6 1/8/2008	MW-206A 4/9/2008	MW-206A 10/13/2008	MW-206A 4/7/2009
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.155 J	<0.3	0.166 J	0.174 J	0.173 J	0.134 J	<0.3
cis-1,2-Dichloroethene		µg/L	0.607 J	0.765 J	0.762 J	0.717 J	0.78 J	5.2	14.2
Tetrachloroethene		µg/L	76.6	99.2	76.4	114	96.5	80.5	46.5
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	9.81	10.1	12.4	12	13.9	13.2	12.6
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-206A

Analyte	Sample Name / Sample Date	Units	MW-206A 10/7/2009	MW-206A 4/6/2010	MW-206A 10/8/2010	MW-206A 4/2/2011	MW-206A 10/4/2011	MW-206A 4/23/2012	MW-206A 10/20/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	18.6	14.8	13.5	15.6	7.81	5.94	4.21
Tetrachloroethene		µg/L	25.6	22.3	15.6	18.1	14	16	18.5
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	12.3	11.5	12.2	13.9	12.5	11.5	10.5
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-206B

Analyte	Sample Name / Sample Date	Units	MW-206B 4/15/2007	MW-206B-LQ-4 7/11/2007	MW-206B-LA-5 10/3/2007	MW-206B-LQ-6 1/9/2008	MW-206B 4/9/2008	MW-206B 10/13/2008	MW-206B 4/7/2009
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.139 J	0.14 J	0.148 J	0.147 J	0.136 J	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	0.582 J	0.722 J	0.698 J	0.688 J	2.51	7.85	9.78
Tetrachloroethene		µg/L	57.2	77.5	64.9	69.5	69.1	36.4	22.8
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	8.94	11	11	11.7	11.5	9.91	9.31
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-206B

Analyte	Sample Name / Sample Date	Units	MW-206B 10/7/2009	MW-206B 4/6/2010	MW-206B 10/8/2010	MW-206B 4/2/2011	MW-206B 10/4/2011	MW-206B 4/23/2012	MW-206B 10/20/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	11	6.56	6.68	5	2.38	1.76	2.14
Tetrachloroethene		µg/L	17.3	12.3	12.3	13.7	15.4	15.2	19.1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	9.57	7.5	8.81	9.57	8.08	6.51	7.83
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-207A

Analyte	Sample Name / Sample Date	Units	MW-207A 4/16/2007	MW-207A-LQ-4 7/10/2007	MW-207A-LA-5 10/3/2007	MW-207A-LQ-6 1/9/2008	MW-207A 4/9/2008	MW-207A 10/7/2008	MW-207A 4/10/2009
Carbon tetrachloride		µg/L	<1	<1	<1	0.44 J	<1	<1	<1
Chloroform		µg/L	5.86	9.99	8.28	10.6	9.12	9.13	10.3
cis-1,2-Dichloroethene		µg/L	0.468 J	0.387 J	0.479 J	0.382 J	0.475 J	0.476 J	0.561 J
Tetrachloroethene		µg/L	7.92	8.32	10.3	10.5	12.1	13.7	9.75
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	21.4	18.6	21.6	24.3	24.2	26.9	47.4
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-207A

Analyte	Sample Name / Sample Date	Units	MW-207A 10/5/2009	MW-207A 4/1/2010	MW-207A 10/14/2010	MW-207A 4/1/2011	MW-207A 10/2/2011	MW-207A 4/23/2012	MW-207A 10/21/2012
Carbon tetrachloride		µg/L	<1	<1	<1	0.307 J	<1	<1	<1
Chloroform		µg/L	9.72	9.02	12.1	11	11.8	8.14	11
cis-1,2-Dichloroethene		µg/L	0.974 J	0.893 J	0.768 J	0.627 J	0.592 J	0.442 J	0.599 J
Tetrachloroethene		µg/L	11	10.7	18.1	18.6	14.4	10.5	16.4
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	52.7	46.4	36.2	27.9	21.3	15.7	23.6
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-207B

Analyte	Sample Name / Sample Date	Units	MW-207B 4/16/2007	MW-207B-LQ-4 7/11/2007	MW-207B-LA-5 10/3/2007	MW-207B-LQ-6 1/9/2008	MW-207B 4/9/2008	MW-207B 10/7/2008	MW-207B 4/10/2009
Carbon tetrachloride		µg/L	1.36	1.91	1.37	1.13	1.22	0.916 J	0.851 J
Chloroform		µg/L	3.09	2.54	1.9	1.26	1.27	1.41	1.6
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	35.7	32.5	23.7	13	13.1	18	25.5
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	12.1	17.6	62	109	96.2	75.3	102
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-207B

Analyte	Sample Name / Sample Date	Units	MW-207B 10/6/2009	MW-207B 4/2/2010	MW-207B 10/12/2010	MW-207B 4/1/2011	MW-207B 10/6/2011	MW-207B 4/23/2012	MW-207B 10/21/2012
Carbon tetrachloride		µg/L	1.23	0.752 J	1.85 J	1.89	2.08	1.15	2.78
Chloroform		µg/L	3.64	1.35	6.99	7.34	4.01	7.73	0.519
cis-1,2-Dichloroethene		µg/L	0.558 J	<1	0.9 J	0.777 J	0.544 J	0.881 J	<1
Tetrachloroethene		µg/L	63.1	15.3	113	99.4	55	124	11.8
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	67.5	92.1	53.6	38.4	16.2	30.5	3.24
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-208A

Analyte	Sample Name / Sample Date	Units	MW-208A 4/16/2007	MW-208A-LQ-4 7/10/2007	MW-208A-LA-5 10/4/2007	MW-208A-LQ-6 1/8/2008	MW-208A 4/8/2008	MW-208A 10/13/2008	MW-208A 4/7/2009
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.216 J	0.228 J	0.214 J	0.221 J	0.217 J	0.21 J	0.18 J
cis-1,2-Dichloroethene		µg/L	0.554 J	0.541 J	0.557 J	0.56 J	0.538 J	0.517 J	3.61
Tetrachloroethene		µg/L	174 J	193	163	198	189	182	163
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	8.12	8.26	8.44	8.45	7.64	9.8	9.8
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-208A

Analyte	Sample Name / Sample Date	Units	MW-208A 10/8/2009	MW-208A 4/5/2010	MW-208A 10/8/2010	MW-208A 4/2/2011	MW-208A 10/6/2011	MW-208A 4/23/2012	MW-208A 10/20/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	23.5	20.9	25.7	41	39.7	21.3	18.2
Tetrachloroethene		µg/L	92.8	24.4	38	3.94	10.5	19.3	21.4
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	10.9	6.48	12.2	16.5	19.1	18.9	20.2
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	1.97 J

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-208B

Analyte	Sample Name / Sample Date	Units	MW-208B 4/16/2007	MW-208B-LQ-4 7/11/2007	MW-208B-LA-5 10/4/2007	MW-208B-LQ-6 1/9/2008	MW-208B 4/8/2008	MW-208B 10/13/2008	MW-208B 4/7/2009
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	0.131 J	<0.3	<0.3	<0.3	<0.3	0.165 J
cis-1,2-Dichloroethene		µg/L	1.12	1.3	1.08	0.932 J	1.51	1.4	2.14
Tetrachloroethene		µg/L	3.42	2.8	3.02	1.68	2.22	2.94	3.81
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	18.4	15.7	15	13.2	17.1	21.3	28
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-208B

Analyte	Sample Name / Sample Date	Units	MW-208B 10/8/2009	MW-208B 4/5/2010	MW-208B 10/8/2010	MW-208B 4/2/2011	MW-208B 10/6/2011	MW-208B 4/23/2012	MW-208B 10/20/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.136 J	0.184 J	0.262 J	0.328	0.384	0.373 B	0.688
cis-1,2-Dichloroethene		µg/L	2.06	1.81	1.45	1.91	1.67	1.39	1.13
Tetrachloroethene		µg/L	5.39	9.29	16.5	16.9	19.8	24.2	26.5
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	37.8	45.1	42.9	41.2	34.8	25	17.9
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-209A

Analyte	Sample Name / Sample Date	Units	MW-209A 4/23/2007	MW-209A-LQ-4 7/10/2007	MW-209A-LA-5 10/4/2007	MW-209A-LQ-6 1/9/2008	MW-209A 4/9/2008	MW-209A 10/9/2008	MW-209A 4/9/2009
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	0.165 J	0.136 J	0.131 J	0.159 J	0.175 J	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	0.326 J	<1	<1	<1	<1	<1	0.323 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.576 J	0.487 J	0.404 J	0.467 J	0.523 J	0.611 J	0.495 J
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-209A

Analyte	Sample Name / Sample Date	Units	MW-209A 10/5/2009	MW-209A 10/9/2010	MW-209A 10/3/2011	MW-209A 10/20/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1
Chloroform		µg/L	0.132 J	0.134 J	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1
Trichloroethene		µg/L	0.568 J	0.659 J	1.04	3.06
Vinyl chloride		µg/L	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-209B

Analyte	Sample Name / Sample Date	Units	MW-209B 4/23/2007	MW-209B-LQ-4 7/11/2007	MW-209B-LA-5 10/5/2007	MW-209B-LQ-6 1/8/2008	MW-209B 4/9/2008	MW-209B 10/9/2008	MW-209B 4/9/2009
Carbon tetrachloride		µg/L	0.327 J	0.962 J	1.86	0.474 J	0.681 J	0.611 J	0.668 J
Chloroform		µg/L	0.251 J	0.56	0.215 J	0.198 J	0.22 J	0.183 J	0.272 J
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1 J	<1
Tetrachloroethene		µg/L	<1	<1	<1	0.357 J	<1	0.33 J	0.278 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1 J	<1
Trichloroethene		µg/L	6.4	7.2	14.8	11.7	13	20 J	22.4
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1 J	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-209B

Analyte	Sample Name / Sample Date	Units	MW-209B 10/10/2009	MW-209B 4/6/2010	MW-209B 10/8/2010	MW-209B 4/2/2011	MW-209B 10/3/2011	MW-209B 4/23/2012	MW-209B 10/20/2012
Carbon tetrachloride		µg/L	0.725 J	0.658 J	0.659 J	0.932 J	0.563 J	0.814 J	0.526 J
Chloroform		µg/L	0.194 J	0.243 J	0.217 J	0.353	0.173 J	0.227 JB	0.208 J
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	0.278 J	<1	0.479 J	0.342 J	0.492 J	0.392 J	0.557 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	30.8	21.2	31.8	29.5	30.6	24.3	32
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-210A

Analyte	Sample Name / Sample Date	Units	MW-210A 4/27/2007	MW-210A-LQ-4 7/9/2007	MW-210A-LA-5 10/4/2007	MW-210A-LQ-6 1/8/2008	MW-210A 4/8/2008	MW-210A 10/6/2008	MW-210A 4/6/2009
Carbon tetrachloride		µg/L	<1 J	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.201 J	0.199 J	<0.3	0.149 J	0.183 J	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	0.828 J	0.813 J	0.727 J	0.757 J	0.887 J	1.02	1.47
Tetrachloroethene		µg/L	38.2	36.1	28.8	23.3	28.2	19.4	16.9
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	5.85	6.05	5.63	5.55	6.2	6.09	6.28
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-210A

Analyte	Sample Name / Sample Date	Units	MW-210A 10/6/2009	MW-210A 4/2/2010	MW-210A 10/11/2010	MW-210A 4/3/2011	MW-210A 10/4/2011	MW-210A 4/23/2012	MW-210A 10/20/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	0.156 J	0.13 J	<0.3	<0.3	0.127 JB	<0.3
cis-1,2-Dichloroethene		µg/L	1.63	2.18	2.25	2.11	1.81	1.92	2.08
Tetrachloroethene		µg/L	8.48	14.7	13.6	13.3	12.6	10.4	8.21
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	4.92	6.37	6.16	5.54	5.4	4.43	4.62
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL
B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-210B

Analyte	Sample Name / Sample Date	Units	MW-210B 4/27/2007	MW-210B-LQ-4 7/9/2007	MW-210B-LA-5 10/5/2007	MW-210B-LQ-6 1/8/2008	MW-210B 4/8/2008	MW-210B 10/6/2008	MW-210B 4/6/2009
Carbon tetrachloride		µg/L	<1 J	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.15 J	<0.3	0.143 J	0.14 J	0.155 J	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	0.646 J	0.57 J	0.433 J	0.529 J	0.613 J	0.462 J	0.889 J
Tetrachloroethene		µg/L	32.4	24.4	21	19.8	20	12.6	12.2
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	7.29	8.42	10.7	8.46	7.84	7.49	7.2
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-210B

Analyte	Sample Name / Sample Date	Units	MW-210B 10/6/2009	MW-210B 4/2/2010	MW-210B 10/11/2010	MW-210B 4/3/2011	MW-210B 10/4/2011	MW-210B 4/23/2012	MW-210B 10/20/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	0.995 J	1.3	1.1	1.1	0.781 J	0.902 J	0.723 J
Tetrachloroethene		µg/L	9.39	10.3	9.27	8.64	7.24	7.42	4.8
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	7.78	7.06	7.77	8.21	9.73	6.76	10.2
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-211

Analyte	Sample Name / Sample Date	Units	MW-211 4/16/2007	MW-211-LQ-4 7/10/2007	MW-211-LA-5 10/2/2007	MW-211-LQ-6 1/9/2008	MW-211 10/10/2008	MW-211 4/10/2009	MW-211 10/7/2009
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.139 J	<0.3	<0.3	0.214 J	2.24 J	2.71	1.24
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	0.502 J	0.431 J	0.469 J	0.811 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.536 J	0.576 J	0.436 J	0.602 J	1.18 J	1.38	1.2
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-211

	Sample Name	MW-211	MW-211	MW-211
	Sample Date	10/13/2010	10/3/2011	10/21/2012
Analyte	**Units**			
Carbon tetrachloride	µg/L	0.344	<1	<1
Chloroform	µg/L	0.218 J	0.152 J	0.166 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	0.745 J	0.275 J	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	1.3	0.512 J	0.39 J
Vinyl chloride	µg/L	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-212

Analyte	Sample Name / Sample Date	Units	MW-212 4/27/2007	MW-212-LQ-4 7/9/2007	MW-212-LA-5 10/3/2007	MW-212-LQ-6 1/9/2008	MW-212 4/8/2008	MW-212 10/8/2008	MW-212 4/10/2009
Carbon tetrachloride		µg/L	0.257 J	0.479 J	0.568 J	0.635 J	0.519 J	<1	0.29 J
Chloroform		µg/L	0.289 J	0.135 J	0.13 J	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	0.516 J	<1	0.477 J	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	34.4	47.9	41.7	43.9	45.1	37.9 J	38
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-212

Analyte	Sample Name / Sample Date	Units	MW-212 10/10/2009	MW-212 4/7/2010	MW-212 10/15/2010	MW-212 4/3/2011	MW-212 10/8/2011	MW-212 4/22/2012	MW-212 10/22/2012
Carbon tetrachloride		µg/L	0.271 J	0.277 J	0.323 J	0.319 J	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	0.407 J	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	38.4	31.5	23.8	20.1	16.5	12.2	13
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-213

Analyte	Sample Name / Sample Date / Units	MW-212 4/21/2012	MW-212 10/22/2012
Carbon tetrachloride	µg/L	0.661 J	0.553 J
Chloroform	µg/L	0.217 J	0.215 J
cis-1,2-Dichloroethene	µg/L	<1	<1
Tetrachloroethene	µg/L	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1
Trichloroethene	µg/L	44.6	34.2
Vinyl chloride	µg/L	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-214A

Analyte	Sample Name / Sample Date	Units	MW-214A 4/16/2007	MW-214A 7/10/2007	MW-214A 10/3/2007	MW-214A 1/9/2008	MW-214A 4/7/2008	MW-214A 10/7/2008	MW-214A 4/10/2009
Carbon tetrachloride		µg/L	0.601 J	0.476 J	0.725 J	0.575 J	0.709 J	0.647 J	0.752 J
Chloroform		µg/L	2.63	2.32	2.26	2.02	2.06	1.58	2.22
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	8.83	6.81	6.99	7.29	6.22	4.81	4.51
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	5.59	4.49	4.11	3.65	3.02	1.95	2.31
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-214A

Analyte	Sample Name / Sample Date	Units	MW-214A 10/11/2009	MW-214A 10/7/2010	MW-214A 10/2/2011	MW-214A 4/23/2012	MW-214A 10/21/2012
Carbon tetrachloride		µg/L	0.891 J	1.12 J	1.18	1.03	1.01
Chloroform		µg/L	2.21	5.01 J	4.34	2.93	2.7
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	4.64	10.5 J	11.1	7.59	6.54
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2.6	7.88 J	6.71	2.69	2.46
Vinyl chloride		µg/L	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-214B

	Sample Name	MW-214B	MW-214B-LQ-4	MW-214B-LA-5	MW-214B-LQ-6	MW-214B	MW-214B	MW-214B
	Sample Date	4/17/2007	7/11/2007	10/3/2007	1/9/2008	4/7/2008	10/21/2008	4/10/2009
Analyte	**Units**							
Carbon tetrachloride	µg/L	0.645 J	1.05	0.76 J	0.959 J	0.843 J	0.772 J	0.797 J
Chloroform	µg/L	2.06	1.85	1.47	1.44	1.22	1.27	1.47
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	6.4	6	4.89	5.44	4.55	4.39	4
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	4.24	3.83	3.06	2.88	2.36	2.28	1.93
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-214B

Analyte	Sample Name / Sample Date	Units	MW-214B 10/11/2009	MW-214B 10/12/2010	MW-214B 10/2/2011	MW-214B 4/23/2012	MW-214B 10/21/2012
Carbon tetrachloride		µg/L	0.92 J	1.08	1.27	0.942 J	1.19
Chloroform		µg/L	1.8	3.79	3.94	2.7	2.53
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	4.14	10	9.24	5.78	6.79
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2.25	5.65 B	5.16	2.6	2.28
Vinyl chloride		µg/L	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-215A

Analyte	Sample Name / Sample Date	Units	MW-215A 4/16/2007	MW-215A-LQ-4 7/10/2007	MW-215A-LA-5 10/4/2007	MW-215A-LQ-6 1/9/2008	MW-215A 4/9/2008	MW-215A 10/7/2008	MW-215A 4/10/2009
Carbon tetrachloride		µg/L	0.679 J	0.538 J	0.671 J	0.552 J	0.651 J	0.382 J	0.591 J
Chloroform		µg/L	1.66	1.67	1.76	1.68	1.66	1.44	1.52
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	5.81	5.58	6.95	7.01	6.27	5.85	4.91
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	7.82	8.12	7.79	10.2	8.96	7.99	6.2
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-215A

Analyte	Sample Name / Sample Date	Units	MW-215A 10/12/2009	MW-215A 10/6/2010	MW-215A 10/7/2011	MW-215A 10/21/2012
Carbon tetrachloride		µg/L	0.579 J	0.747 J	0.596 J	1.09
Chloroform		µg/L	1.43	1.03	0.908	2.4
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1
Tetrachloroethene		µg/L	4.91	4.19	3.51	6.06
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1
Trichloroethene		µg/L	4.88	2.72	2.08	3
Vinyl chloride		µg/L	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-215B

Analyte	Sample Name / Sample Date	Units	MW-215B 4/16/2007	MW-215B-LQ-4 7/9/2007	MW-215B-LA-5 10/4/2007	MW-215B-LQ-6 1/9/2008	MW-215B 4/9/2008	MW-215B 10/7/2008	MW-215B 4/9/2009
Carbon tetrachloride		µg/L	0.956 J	1.01	0.894 J	0.856 J	0.988 J	0.271 J	0.97 J
Chloroform		µg/L	0.68	0.71	0.651	0.61	0.663	0.474	0.767
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	4.36	4.39	4.49	4.71	4.7	2.1	4.99
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1.52	1.53	1.47	1.36	1.46	1.25	1.66
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-215B

Analyte	Sample Name / Sample Date	Units	MW-215B 10/12/2009	MW-215B 10/12/2010	MW-215B 10/4/2011	MW-215B 10/21/2012
Carbon tetrachloride		µg/L	1.17	1.23 J	1.12	1.3
Chloroform		µg/L	0.686	0.63	0.589	0.845
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1
Tetrachloroethene		µg/L	5.66	5.81	4.82	5.91
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1
Trichloroethene		µg/L	1.76	1.5	1.42	1.71
Vinyl chloride		µg/L	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-216

Analyte	Sample Name / Sample Date	Units	MW-216 4/27/2007	MW-216-LQ-4 7/10/2007	MW-216-LA-5 10/2/2007	MW-216-LQ-6 1/8/2008	MW-216 10/6/2008	MW-216 4/6/2009	MW-216 10/12/2009
Carbon tetrachloride		µg/L	<1 J	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	0.169 J	0.183 J	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	0.288 J	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	34.2	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	<1	<1	<1	1.5	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-216

	Sample Name	MW-216	MW-216	MW-216
	Sample Date	10/9/2010	10/5/2011	10/20/2012
Analyte	**Units**			
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	0.285 J	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	<1	<1	0.363 J
Vinyl chloride	µg/L	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-217

Analyte	Sample Name / Sample Date	Units	MW-217 4/27/2007	MW-217-LQ-4 7/9/2007	MW-217-LA-5 10/2/2007	MW-217-LQ-6 1/9/2008	MW-217 4/7/2008	MW-217 10/8/2008	MW-217 4/8/2009
Carbon tetrachloride		µg/L	34.8	42.3 J	53.4	57.3	72.1	96.3 J	92.4
Chloroform		µg/L	5.05	5.33	5.18	7.43	8.56	13.4 J	9.43
cis-1,2-Dichloroethene		µg/L	1.34	1.45	1.89	2.43	2.88	4.8 J	3.58
Tetrachloroethene		µg/L	18.4	25.4 J	31.3	31.7	34.7	26.5 J	31.2
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	29.5	40.6 J	39.4	35.9	34.4	25.6 J	28.7
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-217

Analyte	Sample Name / Sample Date	Units	MW-217 10/8/2009	MW-217 3/31/2010	MW-217 10/7/2010	MW-217 3/31/2011	MW-217 10/4/2011	MW-217 4/23/2012	MW-217 10/21/2012
Carbon tetrachloride		µg/L	55.6	65.6	48.8	47.7	32.1	33.7	23.9
Chloroform		µg/L	5.24	4.4	3.73	4.25	3.77	3.54	4.12
cis-1,2-Dichloroethene		µg/L	1.8	1.33	0.819 J	0.871 J	0.581 J	0.555 J	0.519 J
Tetrachloroethene		µg/L	29.9	29.7	27.4	27.7	24.6	17.9	23.7
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	32.9	34.6	37.9	46.1	44.1	41.7	45 J
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-218

Analyte	Sample Name / Sample Date	Units	MW-218 4/17/2007	MW-218-LQ-4 7/9/2007	MW-218-LA-5 10/2/2007	MW-218-LQ-6 1/9/2008	MW-218 4/7/2008	MW-218 10/8/2008	MW-218 4/8/2009
Carbon tetrachloride		µg/L	15.1	13.3	17.6	15	17.7	15.6 J	15.7
Chloroform		µg/L	3.15	2.79	2.45	2.58	2.62	2.78 J	2.75
cis-1,2-Dichloroethene		µg/L	0.459 J	0.468 J	0.508 J	0.352 J	0.392 J	0.373 J	0.426 J
Tetrachloroethene		µg/L	17.7	16.7	18.5	17.2	17.4	12.2 J	15.2
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	44.2	47.6	42.8	42.5	40.7	35.9 J	37.1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-218

Analyte	Sample Name / Sample Date	Units	MW-218 10/8/2009	MW-218 3/31/2010	MW-218 10/14/2010	MW-218 4/3/2011	MW-218 10/7/2011	MW-218 4/23/2012	MW-218 10/21/2012
Carbon tetrachloride		µg/L	10.1	7.56	8.81	9.84 J	9.75	6.73	8.22
Chloroform		µg/L	2.49	2.42	2.98	2.79	2.52	2.28	2.82
cis-1,2-Dichloroethene		µg/L	0.404 J	0.303 J	0.373 J	0.419 J	0.436 J	<1	0.379 J
Tetrachloroethene		µg/L	16.3	11.2	13.7	16.8	19.5	17.9	20.3
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	42.5	32.8	37.6	46.2	49.2	44.7	43.9
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-219

Analyte	Sample Name / Sample Date	Units	MW-219 4/27/2007	MW-219-LQ-4 7/10/2007	MW-219-LA-5 10/3/2007	MW-219-LQ-6 1/9/2008	MW-219 4/7/2008	MW-219 10/10/2008	MW-219 4/6/2009
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	0.643 J	1.06	1.01	0.875 J	0.928 J	1.14 J	1.15
Tetrachloroethene		µg/L	16.3	27.6	33.9	48	41.4	47 J	39.4
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1.72	2.79	3.37	3.74	3.26	3.53 J	2.84
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-219

Analyte	Sample Name / Sample Date	Units	MW-219 10/8/2009	MW-219 4/1/2010	MW-219 10/6/2010	MW-219 4/3/2011	MW-219 10/6/2011	MW-219 4/23/2012	MW-219 10/19/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	0.935 J	0.393 J	<1	<1	<1	0.677 J	1.64
Tetrachloroethene		µg/L	26.9	10.6	5.57	4.55	6.51	11	25.2
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2.09	0.868 J	0.575 J	0.439 J	0.614 J	1.36	2.9
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-229

Analyte	Sample Name / Sample Date	Units	MW-229 10/5/2007	MW-229 1/9/2008	MW-229 10/8/2008	MW-229 4/8/2009	MW-229 10/8/2009	MW-229 10/6/2010	MW-229 10/2/2011	MW-229 10/19/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-252

Analyte	Sample Name / Sample Date	Units	MW-252 6/18/2010	MW-252 10/6/2010	MW-252 12/9/2010	MW-252 3/31/2011	MW-252 10/6/2011	MW-252 4/23/2012	MW-252 10/19/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	0.332	1.07	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	2.75	5.64	<1	1.65	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	<1	1.62	3.73	<1	0.891 J	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-253

Analyte	Sample Name / Sample Date	Units	MW-253 6/18/2010	MW-253 10/6/2010	MW-253 12/9/2010	MW-253 3/31/2011	MW-253 9/30/2011	MW-253 4/23/2012	MW-253 10/19/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.156	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.344	2.99	4.87	7.75	9.81	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-254

Analyte	Sample Name / Sample Date	Units	MW-254 8/16/2010	MW-254 10/5/2010	MW-254 12/8/2010	MW-254 3/31/2011	MW-254 9/30/2011	MW-254 4/23/2012	MW-254 10/19/2012
Carbon tetrachloride		µg/L	0.695	0.872 J	1.18	1.06	0.869 J	0.888 J	1.15
Chloroform		µg/L	0.241	0.223 J	0.29	0.249 J	0.205 J	0.201 J	0.295 J
cis-1,2-Dichloroethene		µg/L	<1	<1	0.299	<1	0.303 J	0.321 J	<1
Tetrachloroethene		µg/L	0.814	0.623 J	0.854	<1	0.578 J	0.573 J	0.649 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2.28	2.07	2.58	1.8	2.28	2.63	2.37
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-255

Analyte	Sample Name / Sample Date	Units	MW-255 8/9/2010	MW-255 10/5/2010	MW-255 12/8/2010	MW-255 3/31/2011	MW-255 9/30/2011	MW-255 4/23/2012	MW-255 10/19/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	0.297 J	0.269	0.345 J	0.298 J	0.586 J	0.532 J
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-256

Analyte	Sample Name / Sample Date	Units	MW-256 8/9/2010	MW-256 10/5/2010	MW-256 12/9/2010	MW-256 3/31/2011	MW-256 9/30/2011	MW-256 4/23/2012	MW-256 10/19/2012
Carbon tetrachloride		µg/L	0.302	0.32	0.613 J	0.36	0.268 J	0.524 J	0.404 J
Chloroform		µg/L	1.74	2.01	1.95	2.35	2.27	2.25	2.47
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	8.71	9.44	8.64	12.1	20	34.3	39.5
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2.43	2.77	2.9	3.51	4.68	7.82	13.7
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-257

	Sample Name	MW-257	MW-257
	Sample Date	4/23/2012	10/21/2012
Analyte	**Units**		
Carbon tetrachloride	µg/L	<1	<1
Chloroform	µg/L	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1
Tetrachloroethene	µg/L	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1
Trichloroethene	µg/L	<1	<1
Vinyl chloride	µg/L	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-258

	Sample Name	MW-258	MW-258
	Sample Date	4/22/2012	10/21/2012
Analyte	**Units**		
Carbon tetrachloride	µg/L	<1	<1
Chloroform	µg/L	2.34	4.1
cis-1,2-Dichloroethene	µg/L	1.75	2.54
Tetrachloroethene	µg/L	19.4	22.1
trans-1,2-Dichloroethene	µg/L	<1	<1
Trichloroethene	µg/L	57.7 J	93
Vinyl chloride	µg/L	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-259

	Sample Name	MW-259	MW-259
	Sample Date	4/22/2012	10/21/2012
Analyte	**Units**		
Carbon tetrachloride	µg/L	4.69	5.12
Chloroform	µg/L	2.69	3.07
cis-1,2-Dichloroethene	µg/L	<1	<1
Tetrachloroethene	µg/L	15.1	15.1
trans-1,2-Dichloroethene	µg/L	<1	<1
Trichloroethene	µg/L	15.7	15.9
Vinyl chloride	µg/L	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

PMW21-03

Analyte	Sample Name / Sample Date	Units	PMW21-03 8/10/2006	PMW21-03 12/6/2006	PMW21-03 3/7/2007	PMW21-03 6/4/2007	PMW21-03 9/19/2007	PMW21-03 12/18/2007	PMW21-03 3/17/2008	PMW21-03 6/13/2008
Carbon tetrachloride		µg/L	<1	J	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.173 J	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	2.55	0.527 J	0.485 J	0.355 J	0.636 J	0.403 J	0.407 J	0.504 J
Tetrachloroethene		µg/L	185	46.3	32.5	25.6	49	28.5	36.9	30.8
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	58	14.6	9.78	6.73	15.9	9.84	8.96	9.73
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

PMW21-03

Analyte	Sample Name / Sample Date	Units	PMW21-03 12/12/2008	PMW21-03 3/12/2009	PMW21-03 3/30/2010	PMW21-03 10/5/2010	PMW21-03 4/4/2011	PMW21-03 10/5/2011	PMW21-03 4/23/2012	PMW21-03 10/19/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	19.2	57.4	1.11	0.687 J	1.07	1.11	1.83	2.11
Tetrachloroethene		µg/L	22.2	18.7	59.7	45.9	39.5	55	83.5	88.8
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	9.79	8.01	16.2	11.4	11.6	14.4	19.9	21.2
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

PMW21-05

Analyte	Sample Name / Sample Date	Units	PMW21-05 8/10/2006	PMW21-05 12/5/2006	PMW21-05 3/7/2007	PMW21-05 6/5/2007	PMW21-05 9/18/2007	PMW21-05 12/18/2007	PMW21-05 3/14/2008	PMW21-05 6/16/2008
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	0.525 J	0.278 J	0.346 J	0.442 J	0.52 J	0.527 J	0.29 J	<1
Tetrachloroethene		µg/L	6.37	8.66	18.7	27.9	36.3	50.3	43.2	36.9
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	34.4	18.3	14	17.1	30.2	18.2	34.6	10.3
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

PMW21-05

Analyte	Sample Name / Sample Date	Units	PMW21-05 12/11/2008	PMW21-05 3/12/2009	PMW21-05 4/1/2010	PMW21-05 10/6/2010	PMW21-05 4/4/2011	PMW21-05 10/5/2011	PMW21-05 4/23/2012	PMW21-05 10/19/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	0.865 J	1.47	0.851 J	0.798 J	0.939 J	0.298 J	0.378 J	<1
Tetrachloroethene		µg/L	40.3	61.2	57.7	43.1	40.6	19.5	20.3	12.3
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	10.4	13	5.71	4.24	3.78	1.46	1.34	0.867 J
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

PMW85-05

Analyte	Sample Name / Sample Date	Units	PMW85-05 3/13/2007	PMW85-05 5/31/2007	PMW85-05 9/10/2007	PMW85-05 12/11/2007	PMW85-05 3/12/2008	PMW85-05 6/18/2008	PMW85-05 12/8/2008	PMW85-05 3/17/2009
Carbon tetrachloride		µg/L	155	157	152	158	154	143	44.5 J	5.13
Chloroform		µg/L	68.9	69	70.9	64.6	63.8	73.6	98.7 J	86.4
cis-1,2-Dichloroethene		µg/L	83.3	84.1	88.9	83.8	87.9	94.8	127	166
Tetrachloroethene		µg/L	119	119	116	127	138	126	71	30.5
trans-1,2-Dichloroethene		µg/L	0.333 J	1.93	0.489 J	1.74	0.438 J	<1	<1	<1
Trichloroethene		µg/L	37.9	36.5	35.4	39.3	38.7	34.5	26.6	14.8
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

PMW85-05

	Sample Name	PMW85-05	PMW85-05
	Sample Date	12/13/2011	10/22/2012
Analyte	**Units**		
Carbon tetrachloride	µg/L	77.6	62.8
Chloroform	µg/L	34.8	30.1
cis-1,2-Dichloroethene	µg/L	81.9	101
Tetrachloroethene	µg/L	79.1	70.1
trans-1,2-Dichloroethene	µg/L	0.464 J	<1
Trichloroethene	µg/L	25.6	24
Vinyl chloride	µg/L	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

PMW92-03

Analyte	Sample Name / Sample Date	Units	PMW92-03 8/30/2006	PMW92-03 12/7/2006	PMW92-03 3/8/2007	PMW92-03 5/30/2007	PMW92-03 9/12/2007	PMW92-03 12/12/2007	PMW92-03 3/11/2008	PMW92-03 6/11/2008
Carbon tetrachloride		µg/L	58.1	41.9	19.3	7.59	2.32	0.969 J	0.586 J	<1
Chloroform		µg/L	19.2	18.9	27.4	31	25.7	3.12	0.994	0.49
cis-1,2-Dichloroethene		µg/L	19.9	21.3	70.7	166	182	159	161	159
Tetrachloroethene		µg/L	252	252	170	54.4	31.8	30.9	30.8	27.1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	11.5	12	9.92	7.03	5.09	6.91	4.66	8.79
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	0.262 J	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

PMW92-03

Analyte	Sample Name / Sample Date	Units	PMW92-03 12/11/2008	PMW92-03 3/16/2009	PMW92-03 4/7/2010	PMW92-03 10/4/2010	PMW92-03 4/3/2011	PMW92-03 10/3/2011	PMW92-03 4/21/2012	PMW92-03 10/22/2012
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.151 J	<0.3	<0.3	0.26 J	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	159	139	112	83	73.4 J	51.9	54.2	42.6
Tetrachloroethene		µg/L	33.3	15.6	66.6	104	136	147	112	145
trans-1,2-Dichloroethene		µg/L	0.339 J	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	12.7	5.99	18.2	19	21.1	15.1	18.9	15.2
Vinyl chloride		µg/L	<1	<1	<1	0.528 J	0.286 J	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

PMW92-06

Analyte	Sample Name / Sample Date	Units	PMW92-06 8/30/2006	PMW92-06 12/7/2006	PMW92-06 3/12/2007	PMW92-06 5/31/2007	PMW92-06 9/11/2007	PMW92-06 12/11/2007	PMW92-06 3/11/2008	PMW92-06 6/16/2008
Carbon tetrachloride		µg/L	182	132	114	117	53.2	1.53	<1	<1
Chloroform		µg/L	82.7	68.9	79.4	85.8	114	78.7	22.9	1.11
cis-1,2-Dichloroethene		µg/L	91.4	81.1	74.5	91.5	149	150	179	178
Tetrachloroethene		µg/L	179	173	155	153	69.7	6.76	2.01	0.785 J
trans-1,2-Dichloroethene		µg/L	0.443 J	0.31 J	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	39.7	37.8	34	36.4	21.5	2.31	0.747 J	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

PMW92-06

Analyte	Sample Name / Sample Date	Units	PMW92-06 12/8/2008	PMW92-06 3/12/2009	PMW92-06 4/7/2010	PMW92-06 10/4/2010	PMW92-06 4/2/2011	PMW92-06 10/3/2011	PMW92-06 4/21/2012
Carbon tetrachloride		µg/L	<1	<1	98.3	110	110	106	98.5
Chloroform		µg/L	<0.3	<0.3	48	41.1	41.5	36.3	34.7
cis-1,2-Dichloroethene		µg/L	193	200	85.4	68.5 J	67.1	58	57.7
Tetrachloroethene		µg/L	0.67 J	3.88	148	141	133	135	137
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	2.98	33.5	33 J	33.1	29.8	30.3
Vinyl chloride		µg/L	<1	<1	<1	0.379 J	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

PMW101-04A

Analyte	Sample Name / Sample Date	Units	PMW101-04A 8/22/2006	PMW101-04A 12/5/2006	PMW101-04A 3/6/2007	PMW101-04A 5/31/2007	PMW101-04A 9/17/2007	PMW101-04A 12/14/2007
Carbon tetrachloride		µg/L	<1	<1	<1	<1 J	<1	<1
Chloroform		µg/L	0.199 J	0.163 J	0.144 J	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	20.9	86.9	72.6
Tetrachloroethene		µg/L	199	176	177	138	12.2	5.89
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.26 J	<1	<1	1.2	1.31	0.294 J
Vinyl chloride		µg/L	<1	<1	<1	<1	0.277 J	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

PMW101-04A

Analyte	Sample Name / Sample Date	Units	PMW101-04A 3/11/2008	PMW101-04A 6/11/2008	PMW101-04A 12/8/2008	PMW101-04A 3/10/2009	PMW101-04A 4/1/2010	PMW101-04A 10/14/2010
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	81.3	42.6	60.7	47	29	13.5 J
Tetrachloroethene		µg/L	5.7	4.64	13.9	22.6	33	44.6 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.559 J	1.65	2.65	6.83	6.93	7.89 J
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

PMW101-04A

	Sample Name	PMW101-04A	PMW101-04A	PMW101-04A	PMW101-04A
	Sample Date	4/4/2011	10/6/2011	4/22/2012	10/22/2012
Analyte	**Units**				
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	7.76	3.12	2.09	1.35
Tetrachloroethene	µg/L	57.3	59.6	53.4	46.9
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	6.1	2.11	1.44	0.977 J
Vinyl chloride	µg/L	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

PMW101-04B

Analyte	Sample Name / Sample Date	Units	PMW101-04B 8/29/2006	PMW101-04B 12/5/2006	PMW101-04B 3/6/2007	PMW101-04B 5/31/2007	PMW101-04B 9/17/2007	PMW101-04B 12/14/2007
Carbon tetrachloride		µg/L	<1	<1	<1	<1 J	<1	<1
Chloroform		µg/L	<0.3	0.172 J	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	0.971 J	0.394 J	18.8	86.3	72.1	48.1
Tetrachloroethene		µg/L	90.4	109	104	19.1	14.1	29.3
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	23.2	9.06	3.04	1.24	1.65	2.91
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

PMW101-04B

Analyte	Sample Name / Sample Date	Units	PMW101-04B 3/11/2008	PMW101-04B 6/10/2008	PMW101-04B 12/10/2008	PMW101-04B 3/10/2009	PMW101-04B 4/1/2010	PMW101-04B 10/5/2010
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	69.3	52.2	26	37.2	0.708 J	<1
Tetrachloroethene		µg/L	5.33	12.8	37	22.4	35.7	28.7
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1.6	4.85	5.02	2.39	3.87	3.09
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1

Notes:

VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

µg/L micrograms per liter

DQE Flags:

< Not detected at sample reporting limit

J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

PMW101-04B

	Sample Name	PMW101-04B	PMW101-04B	PMW101-04B	PMW101-04B
	Sample Date	4/4/2011	10/6/2011	4/22/2012	10/19/2012
Analyte	**Units**				
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	0.281 J
Tetrachloroethene	µg/L	26.1	31.2	30.9	28.5
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	2.79	3.23	3.82	5.6
Vinyl chloride	µg/L	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

PZ-03

Analyte	Sample Name / Sample Date / Units	PZ-03 3/20/2002	PZ-03 5/26/2004	PZ-03 2/23/2005	PZ-03 10/5/2006	PZ-03 10/5/2007	PZ-03 10/14/2008	PZ-03 10/11/2009	PZ-03 10/15/2010
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	0.2 J	0.198 J	0.139 J	0.29 J	0.192 J	0.203 J
cis-1,2-Dichloroethene	µg/L	0.55 J	<1	0.26 J	<1	<1	<1	<1	0.287 J
Tetrachloroethene	µg/L	7.1	4.4	5	3.89	0.523 J	4.38	3.99	2.04
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.86 J	0.6 J	0.85 J	0.917 J	0.321 J	1.07	1.23	1.23
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

HISTORICAL CVOC RESULTS - MI LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

PZ-03

	Sample Name	PZ-03	PZ-03
	Sample Date	10/8/2011	10/22/2012
Analyte	**Units**		
Carbon tetrachloride	µg/L	<1	<1
Chloroform	µg/L	0.235 J	0.261 J
cis-1,2-Dichloroethene	µg/L	<1	<1
Tetrachloroethene	µg/L	3.39	3.34
trans-1,2-Dichloroethene	µg/L	<1	<1
Trichloroethene	µg/L	2.64	3.76
Vinyl chloride	µg/L	<1	<1

Notes:
VOC samples analyzed using methods SW8010/8020.
SW8240, SW8260, SW8260A, SW8260B, or CV3990
-- not analyzed
µg/L micrograms per liter

DQE Flags:
< Not detected at sample reporting limit
J Estimated results based on QC data or reported below RL

APPENDIX G

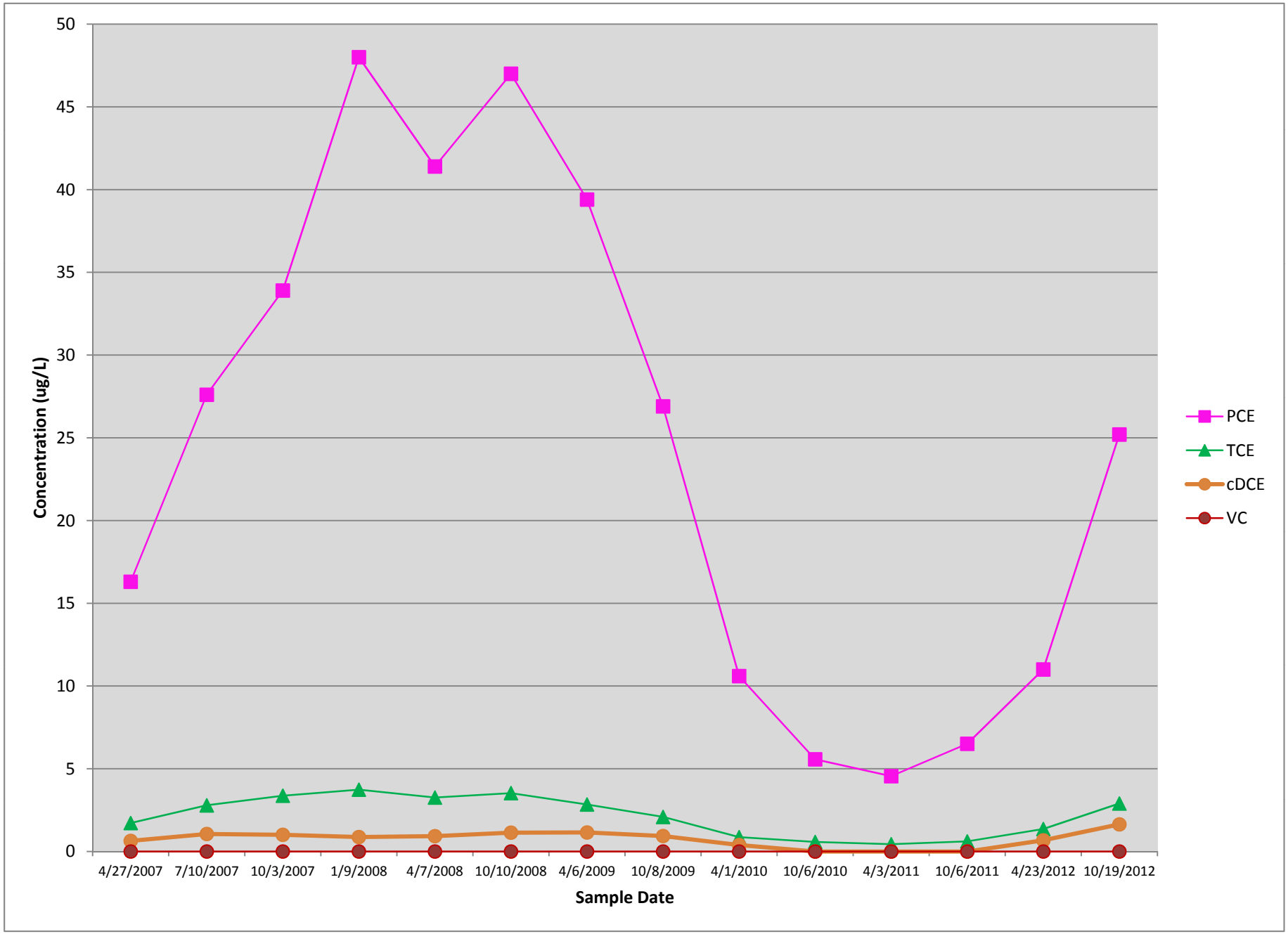
CVOC TIME-TREND PLOTS – MAIN INSTALLATION

APPENDIX G-1

CVOC TIME-TREND PLOTS – MAIN INSTALLATION

BOUNDARY WELLS

MW-219

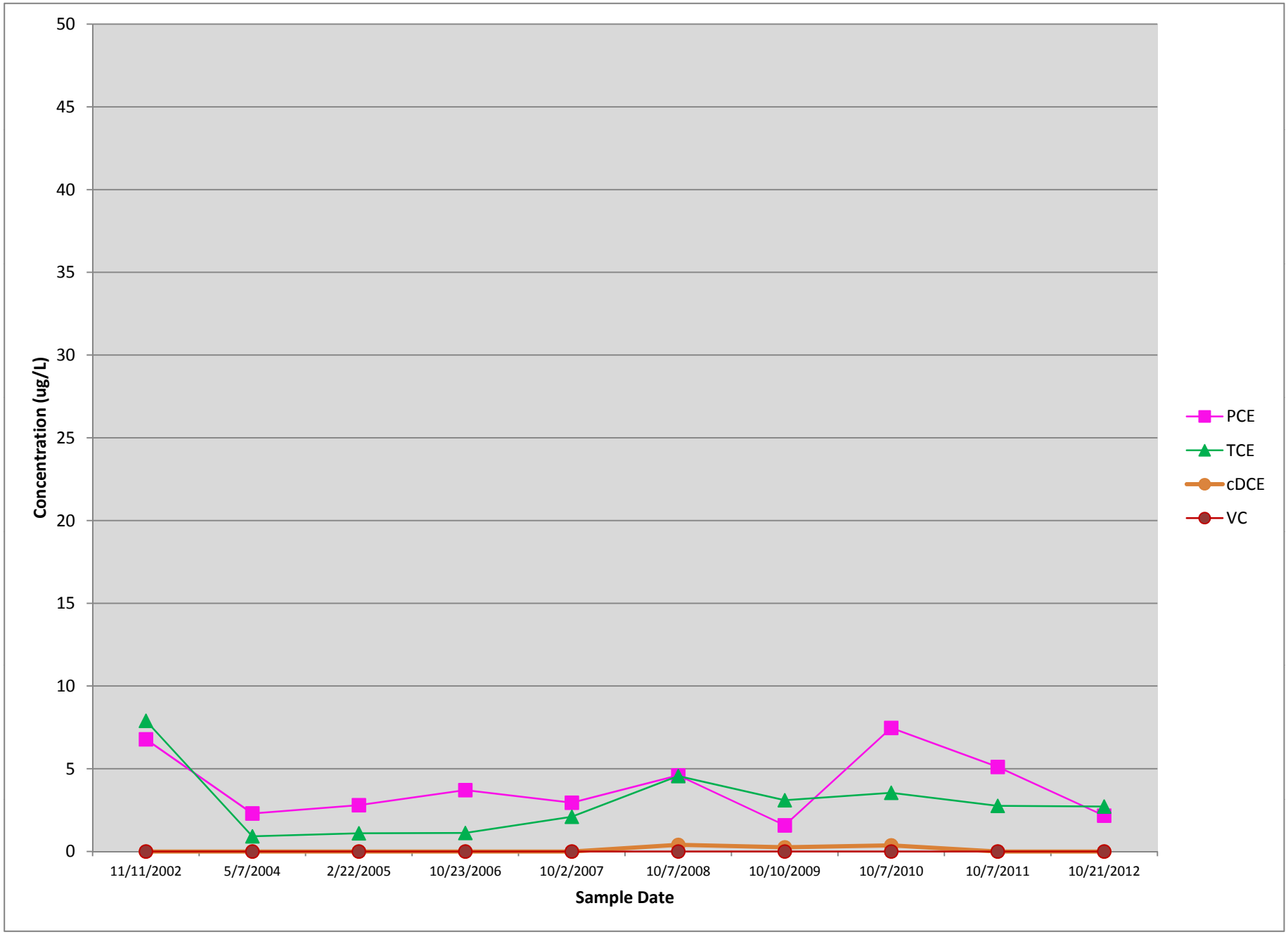

50
45
40
35
30
25
20
15
10
5
0
Concentration (ug/L)
4/27/2007
7/10/2007
10/3/2007
1/9/2008
4/7/2008
10/10/2008
4/6/2009
10/8/2009
4/1/2010
10/6/2010
4/3/2011
10/6/2011
4/23/2012
10/19/2012
Sample Date
PCE
TCE
cDCE
VC

APPENDIX G-2

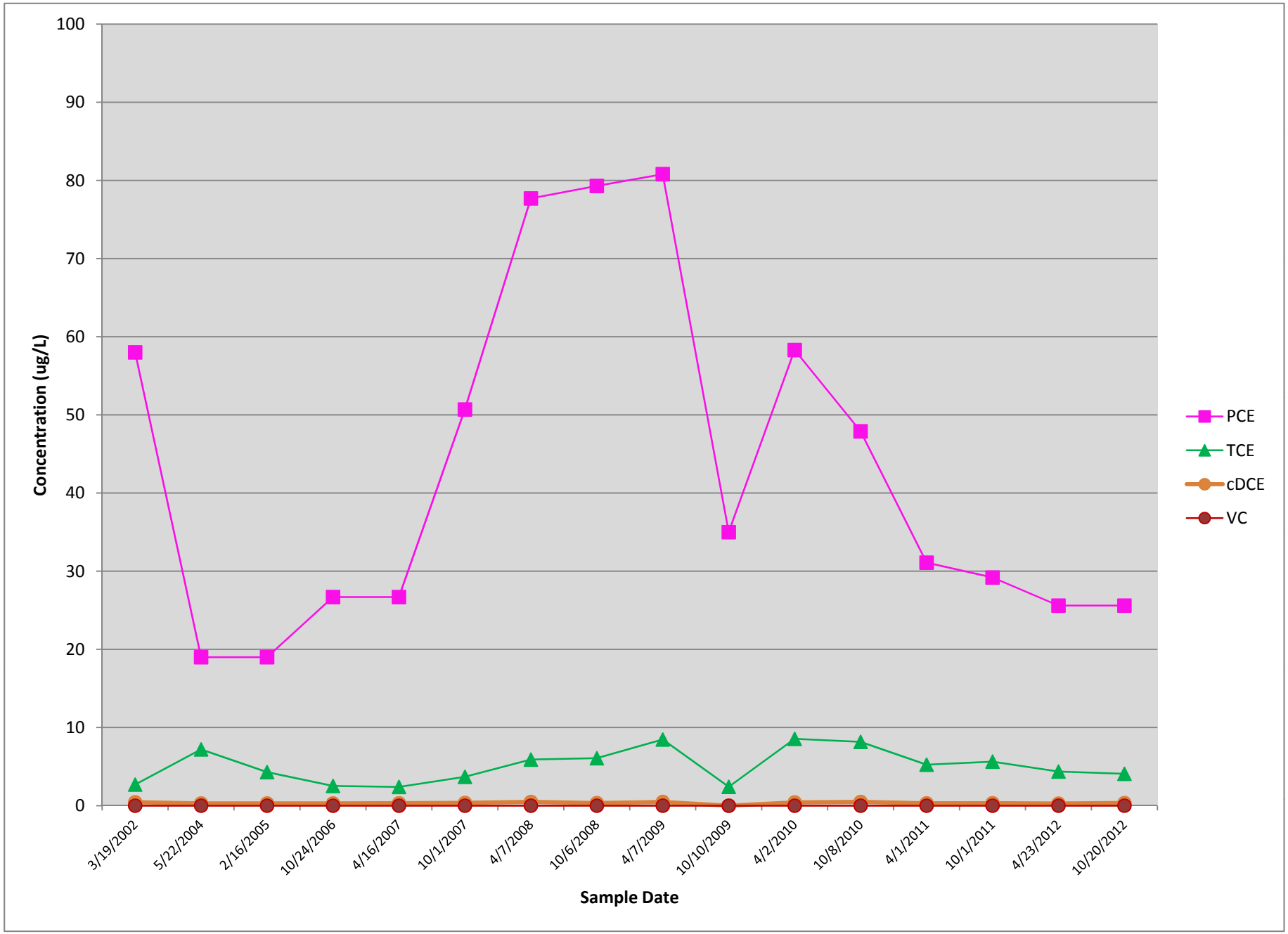
CVOC TIME-TREND PLOTS – MAIN INSTALLATION

SENTINEL WELLS

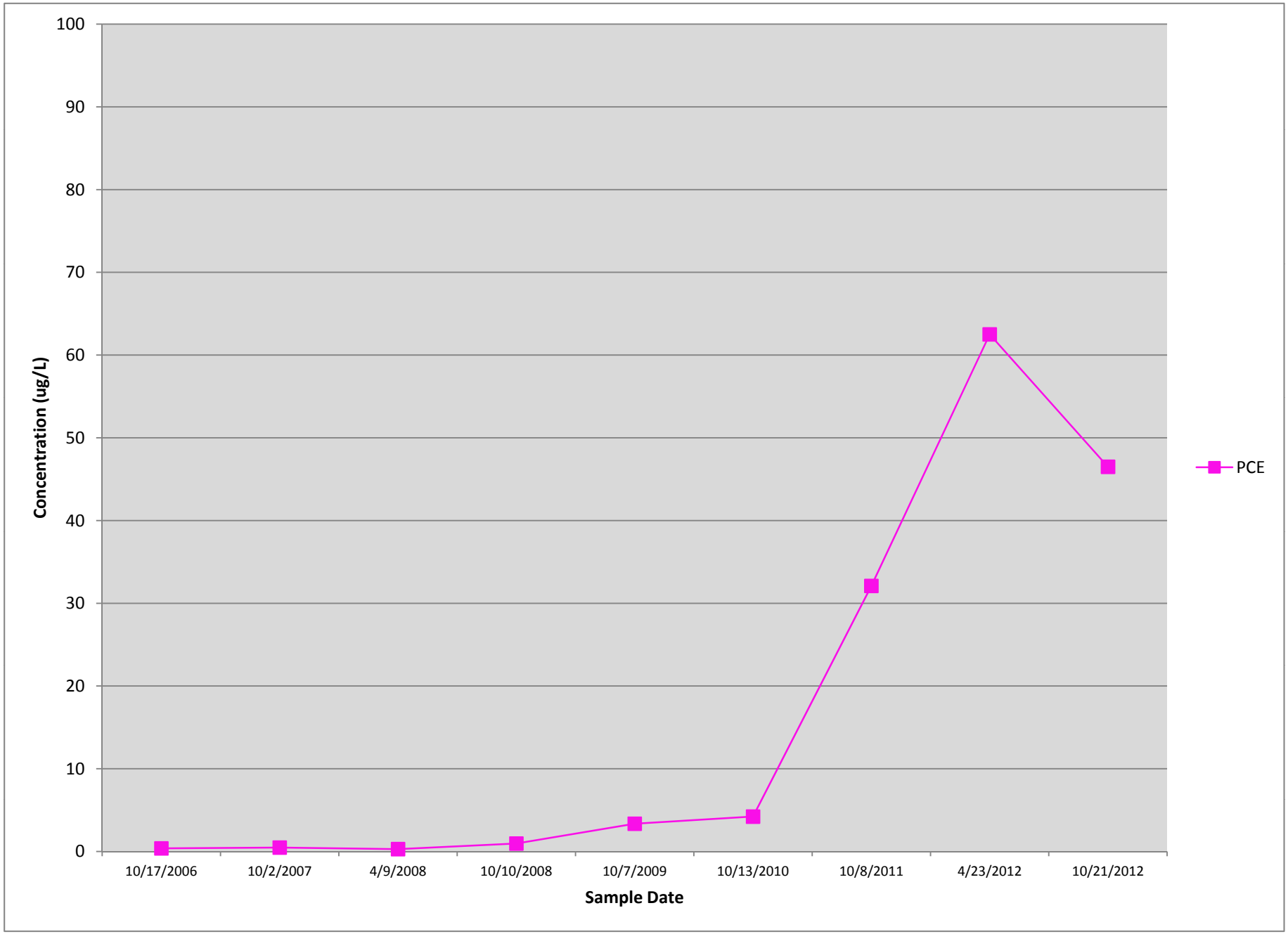
MW-63B


50
45
40
35
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25
20
15
10
5
0
Concentration (ug/L)
11/11/2002
5/7/2004
2/22/2005
10/23/2006
10/2/2007
10/7/2008
10/10/2009
10/7/2010
10/7/2011
10/21/2012
Sample Date
PCE
TCE
cDCE
VC

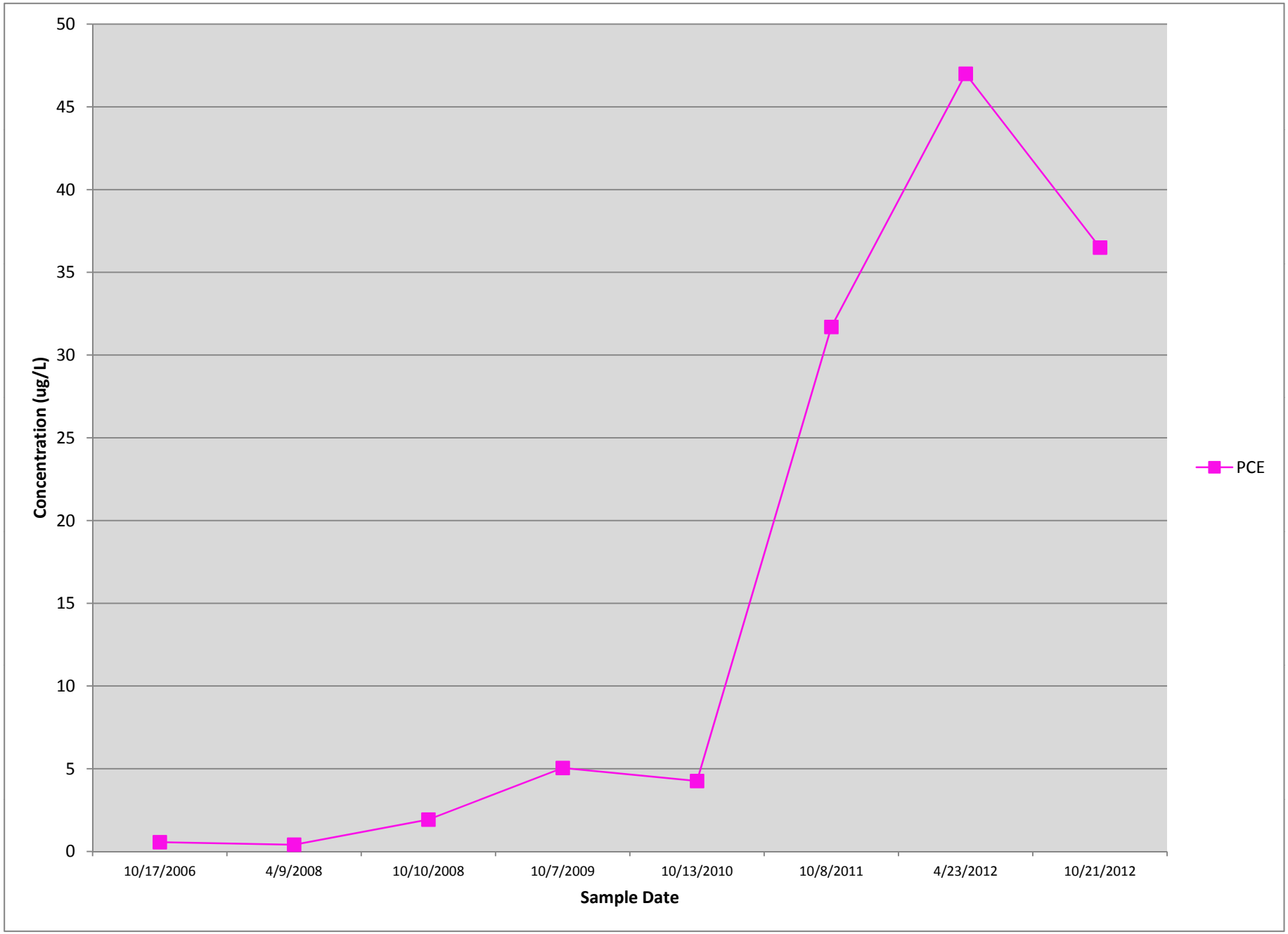
MW-90


100
90
80
70
60
50
40
30
20
10
0
Concentration (ug/L)
3/19/2002
5/22/2004
2/16/2005
10/24/2006
4/16/2007
10/1/2007
4/7/2008
10/6/2008
4/7/2009
10/10/2009
4/2/2010
10/8/2010
4/1/2011
10/1/2011
4/23/2012
10/20/2012
Sample Date
PCE
TCE
cDCE
VC

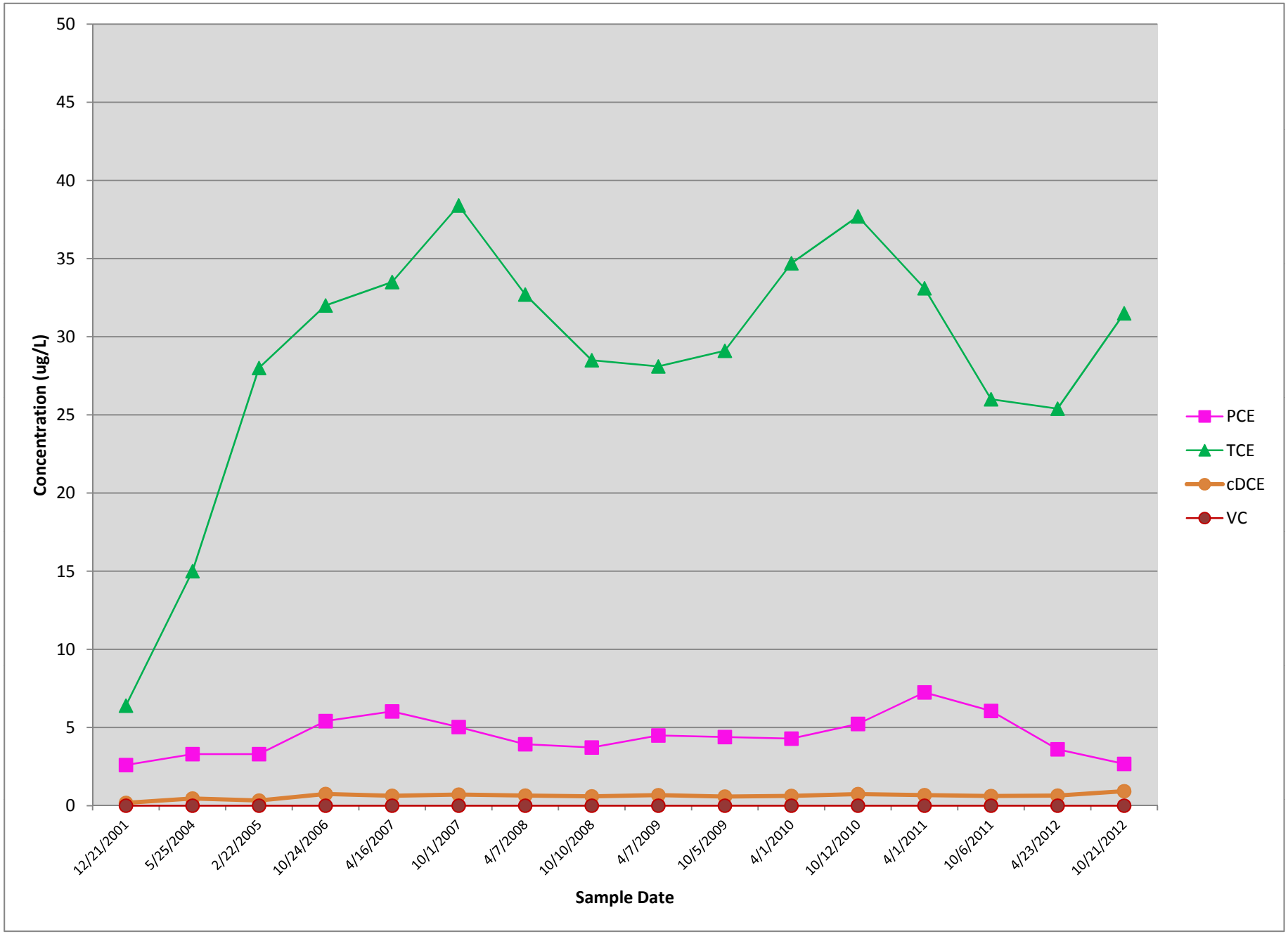
MW-107 Bottom



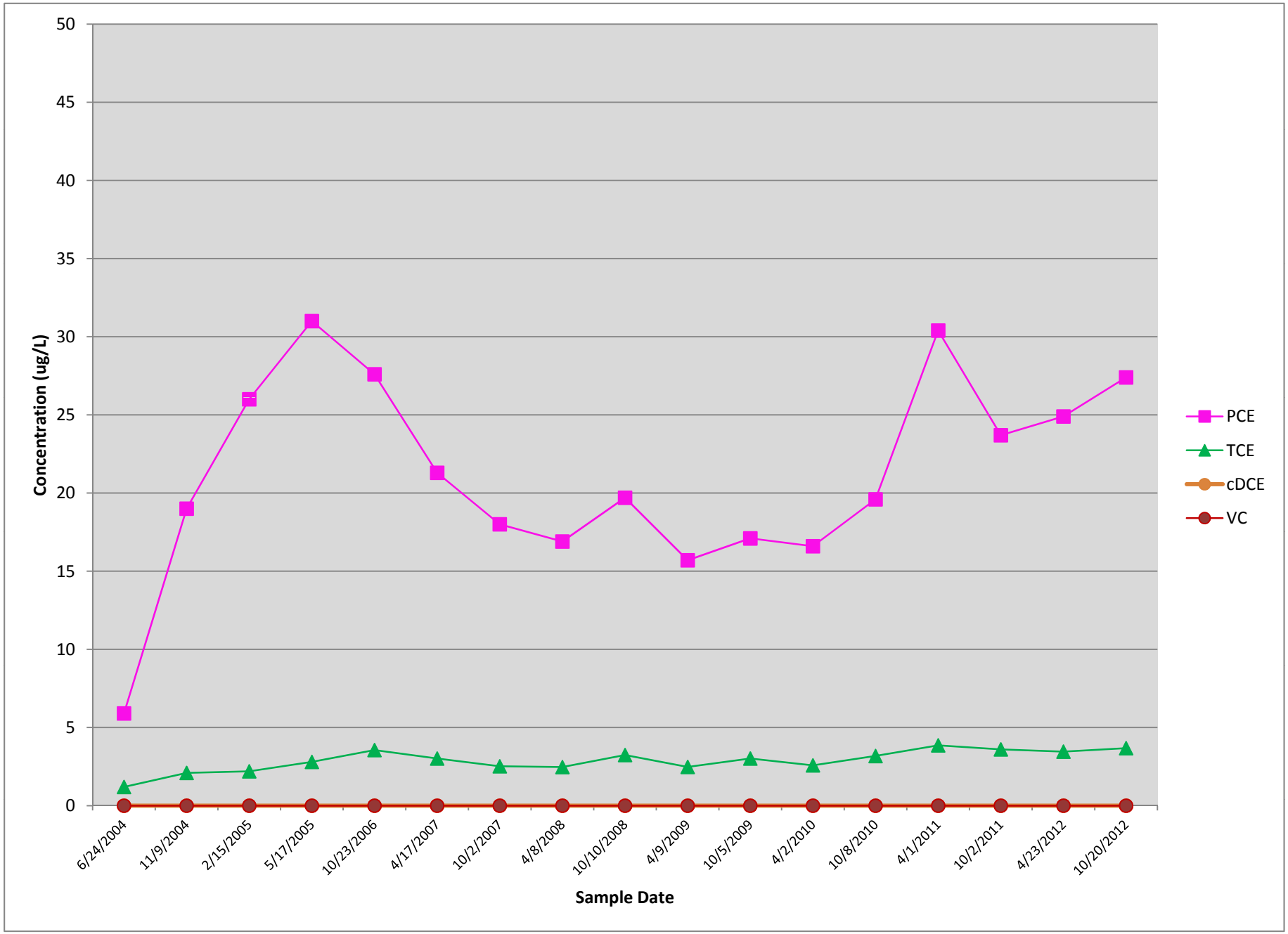
MW-107Top


50
45
40
35
30
25
20
15
10
5
0
Concentration (ug/L)
10/17/2006
4/9/2008
10/10/2008
10/7/2009
10/13/2010
10/8/2011
4/23/2012
10/21/2012
Sample Date
PCE

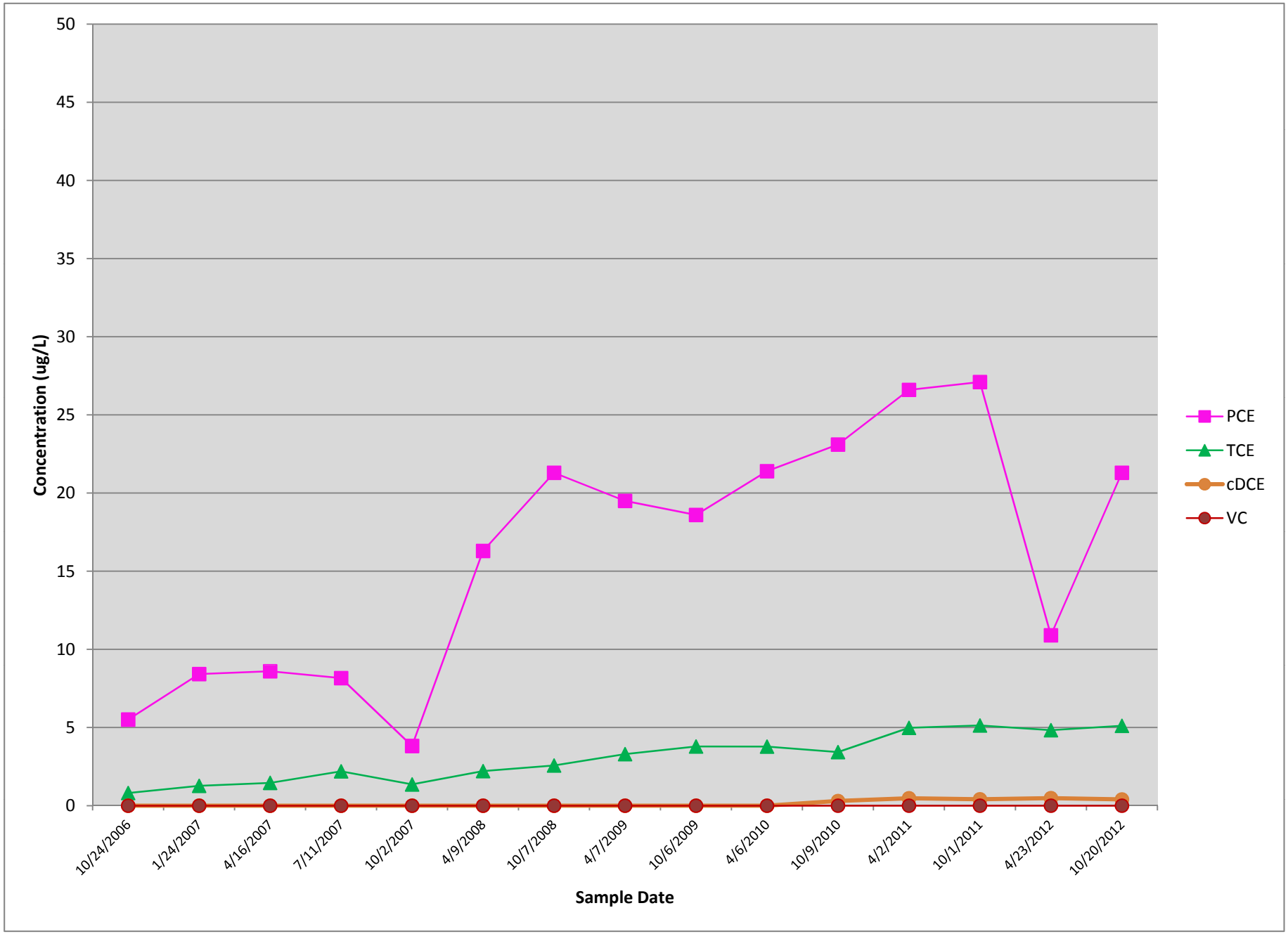
MW-108


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40
35
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10
5
0
Concentration (ug/L)
12/21/2001
5/25/2004
2/22/2005
10/24/2006
4/16/2007
10/1/2007
4/7/2008
10/10/2008
4/7/2009
10/5/2009
4/1/2010
10/12/2010
4/1/2011
10/6/2011
4/23/2012
10/21/2012
Sample Date
PCE
TCE
cDCE
VC

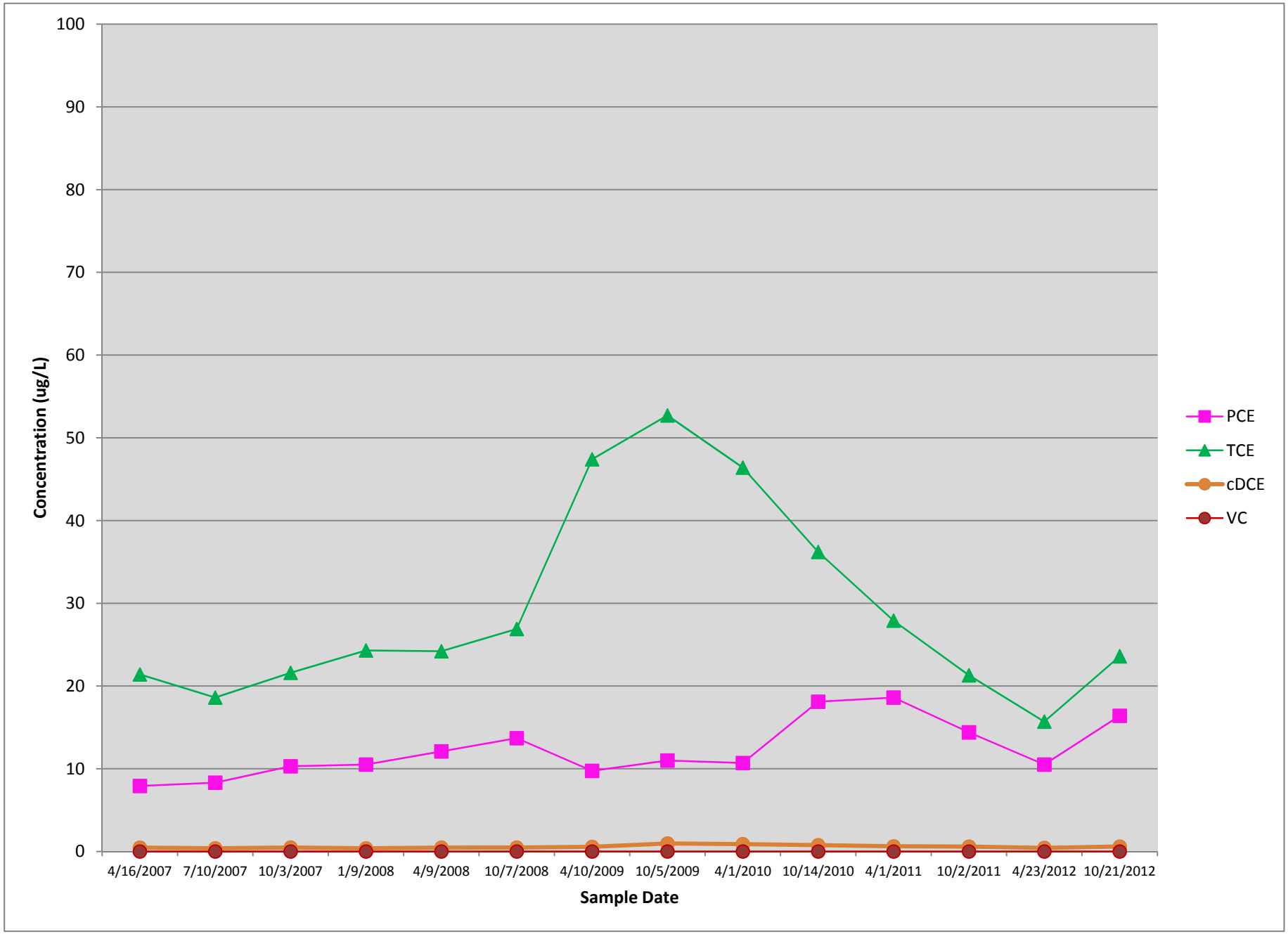
MW-141


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20
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10
5
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Concentration (ug/L)
6/24/2004
11/9/2004
2/15/2005
5/17/2005
10/23/2006
4/17/2007
10/2/2007
4/8/2008
10/10/2008
4/9/2009
10/5/2009
4/2/2010
10/8/2010
4/1/2011
10/2/2011
4/23/2012
10/20/2012
Sample Date
PCE
TCE
cDCE
VC

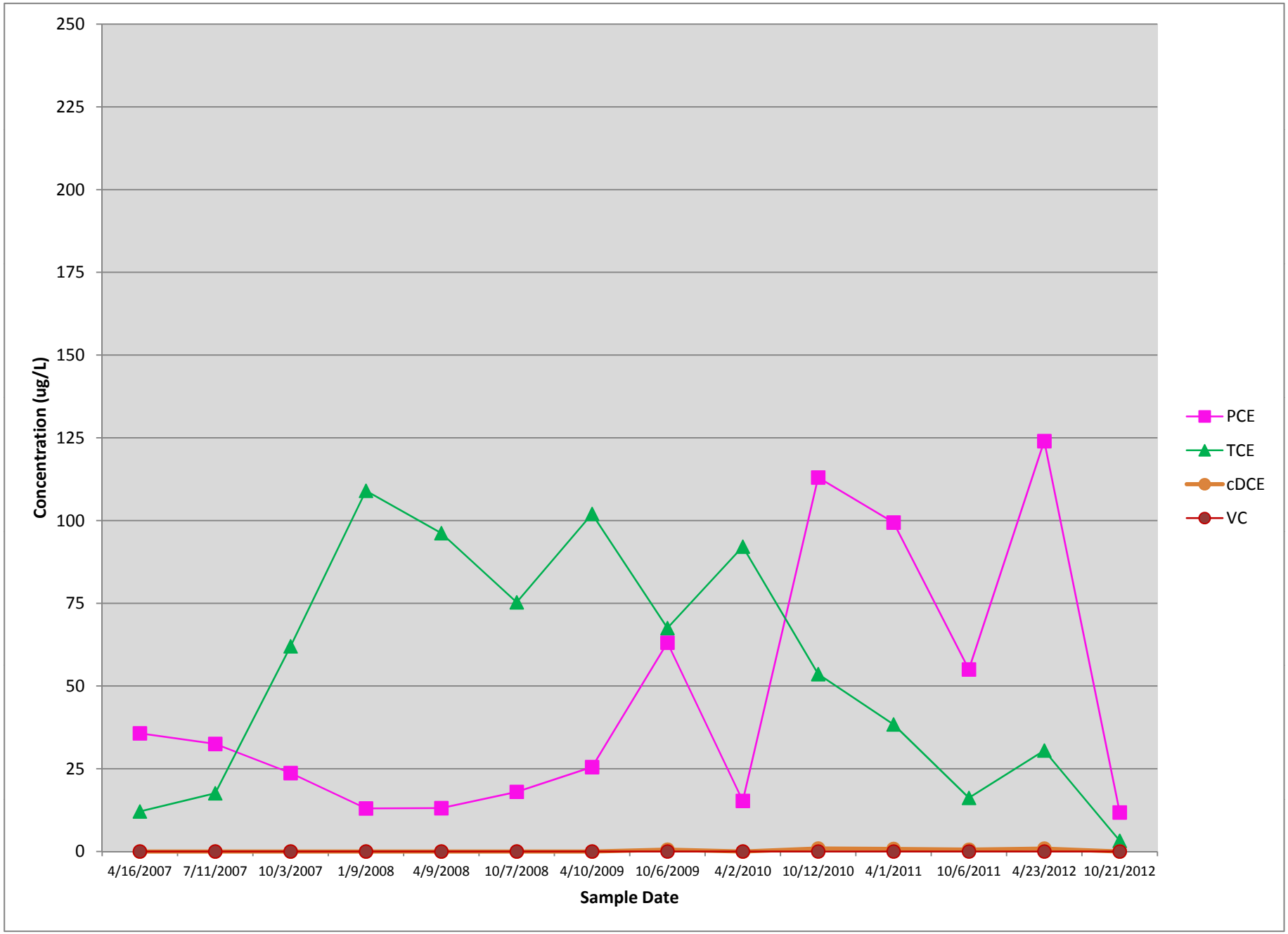
MW-202B


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35
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25
20
15
10
5
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Concentration (ug/L)
10/24/2006
1/24/2007
4/16/2007
7/11/2007
10/2/2007
4/9/2008
10/7/2008
4/7/2009
10/6/2009
4/6/2010
10/9/2010
4/2/2011
10/1/2011
4/23/2012
10/20/2012
Sample Date
PCE
TCE
cDCE
VC

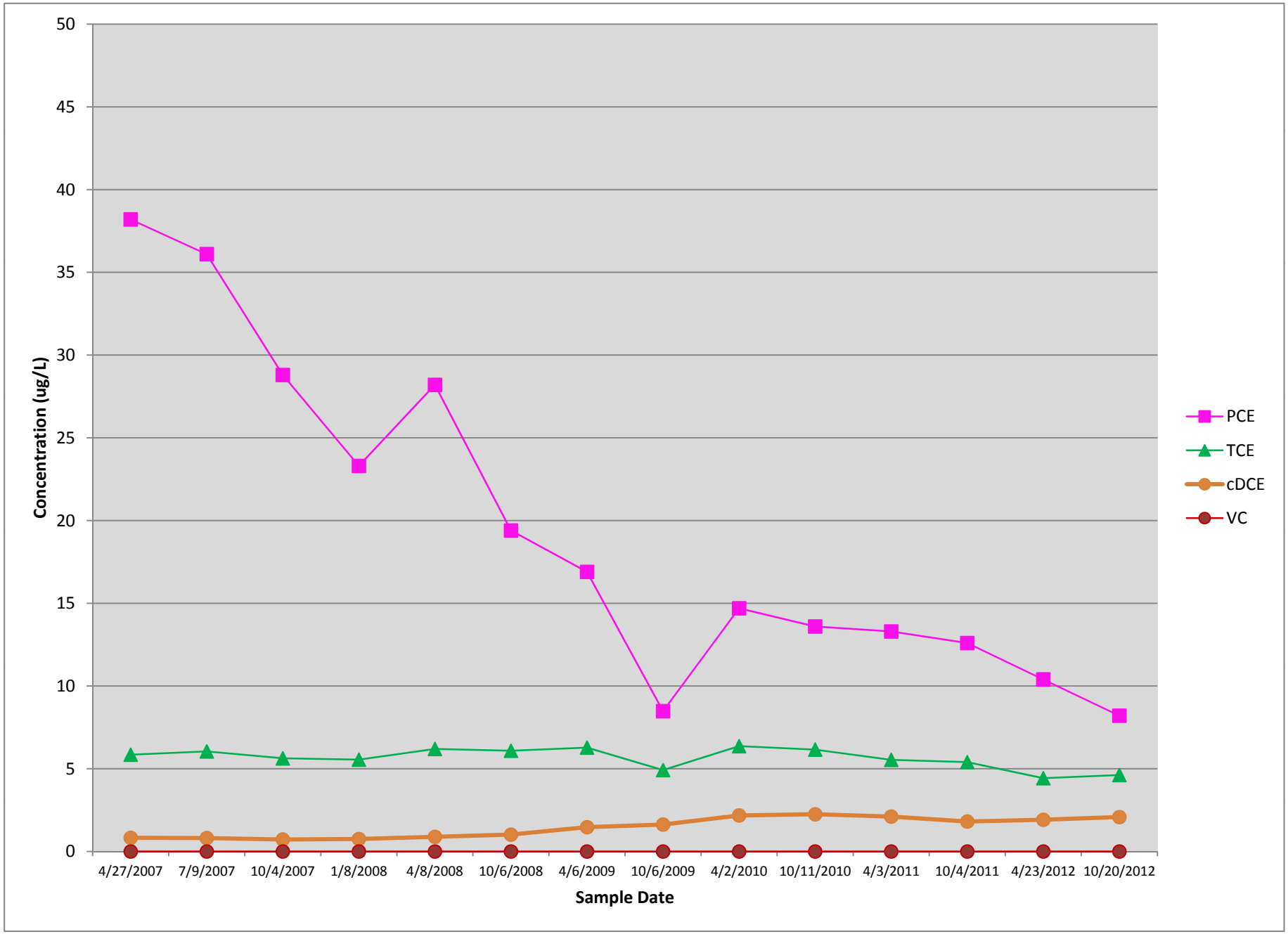
MW-207A


100
90
80
70
60
50
40
30
20
10
0
Concentration (ug/L)
4/16/2007
7/10/2007
10/3/2007
1/9/2008
4/9/2008
10/7/2008
4/10/2009
10/5/2009
4/1/2010
10/14/2010
4/1/2011
10/2/2011
4/23/2012
10/21/2012
Sample Date
PCE
TCE
cDCE
VC

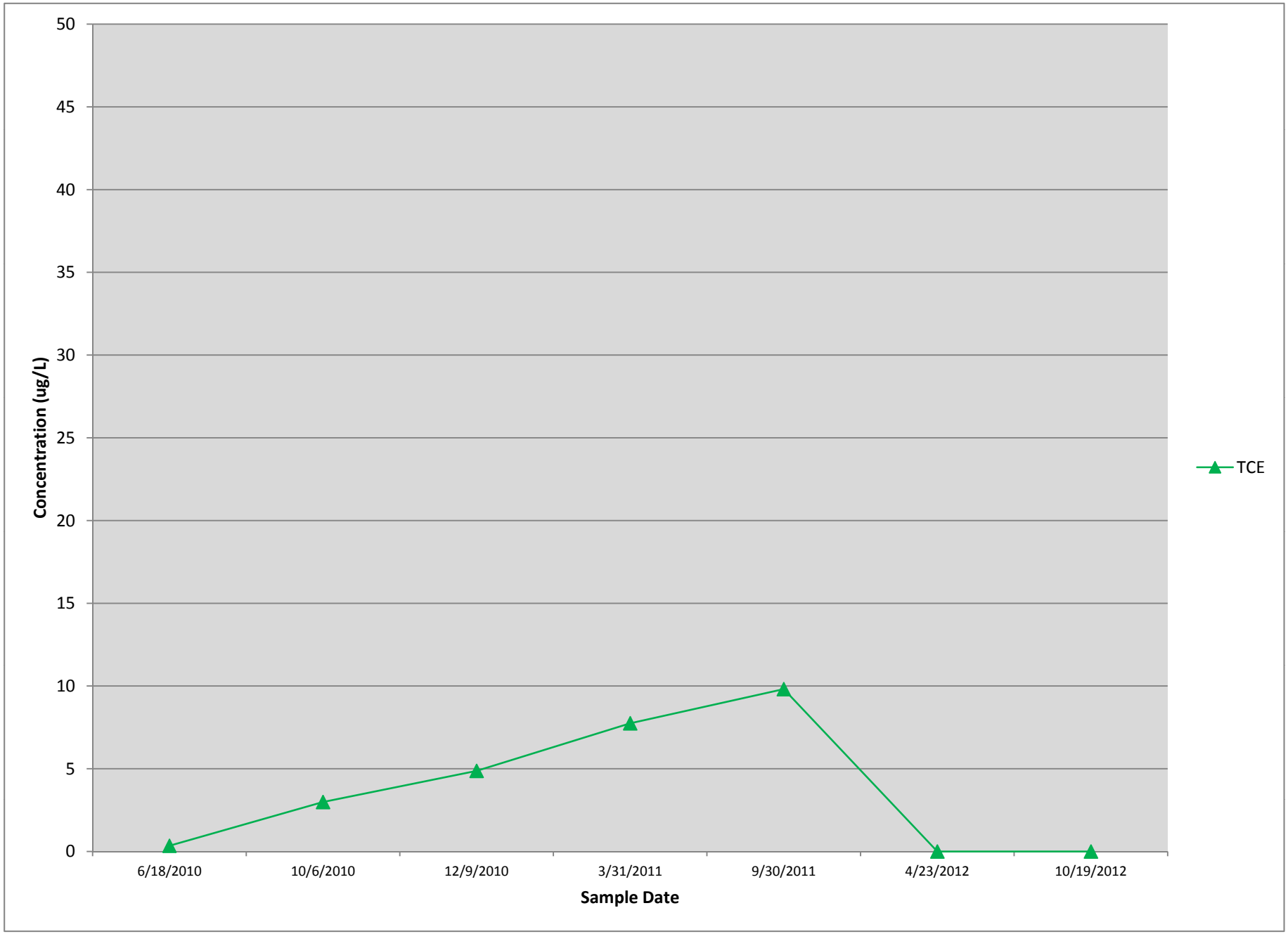
MW-207B


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
4/16/2007
7/11/2007
10/3/2007
1/9/2008
4/9/2008
10/7/2008
4/10/2009
10/6/2009
4/2/2010
10/12/2010
4/1/2011
10/6/2011
4/23/2012
10/21/2012
Sample Date
PCE
TCE
cDCE
VC

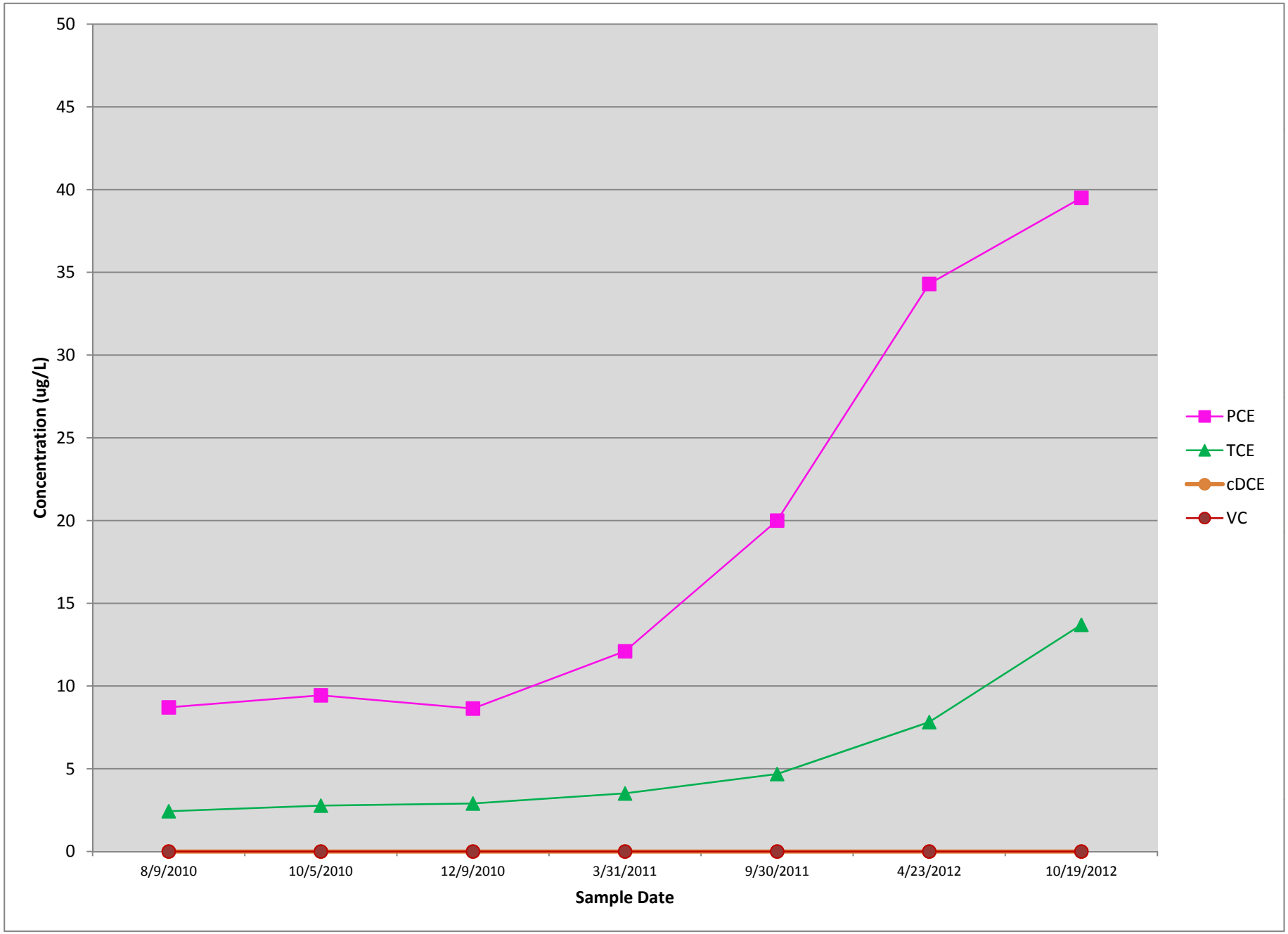
MW-210A


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35
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25
20
15
10
5
0
Concentration (ug/L)
4/27/2007
7/9/2007
10/4/2007
1/8/2008
4/8/2008
10/6/2008
4/6/2009
10/6/2009
4/2/2010
10/11/2010
4/3/2011
10/4/2011
4/23/2012
10/20/2012
Sample Date
PCE
TCE
cDCE
VC

MW-253


50
45
40
35
30
25
20
15
10
5
0
Concentration (ug/L)
6/18/2010
10/6/2010
12/9/2010
3/31/2011
9/30/2011
4/23/2012
10/19/2012
Sample Date
TCE

MW-256

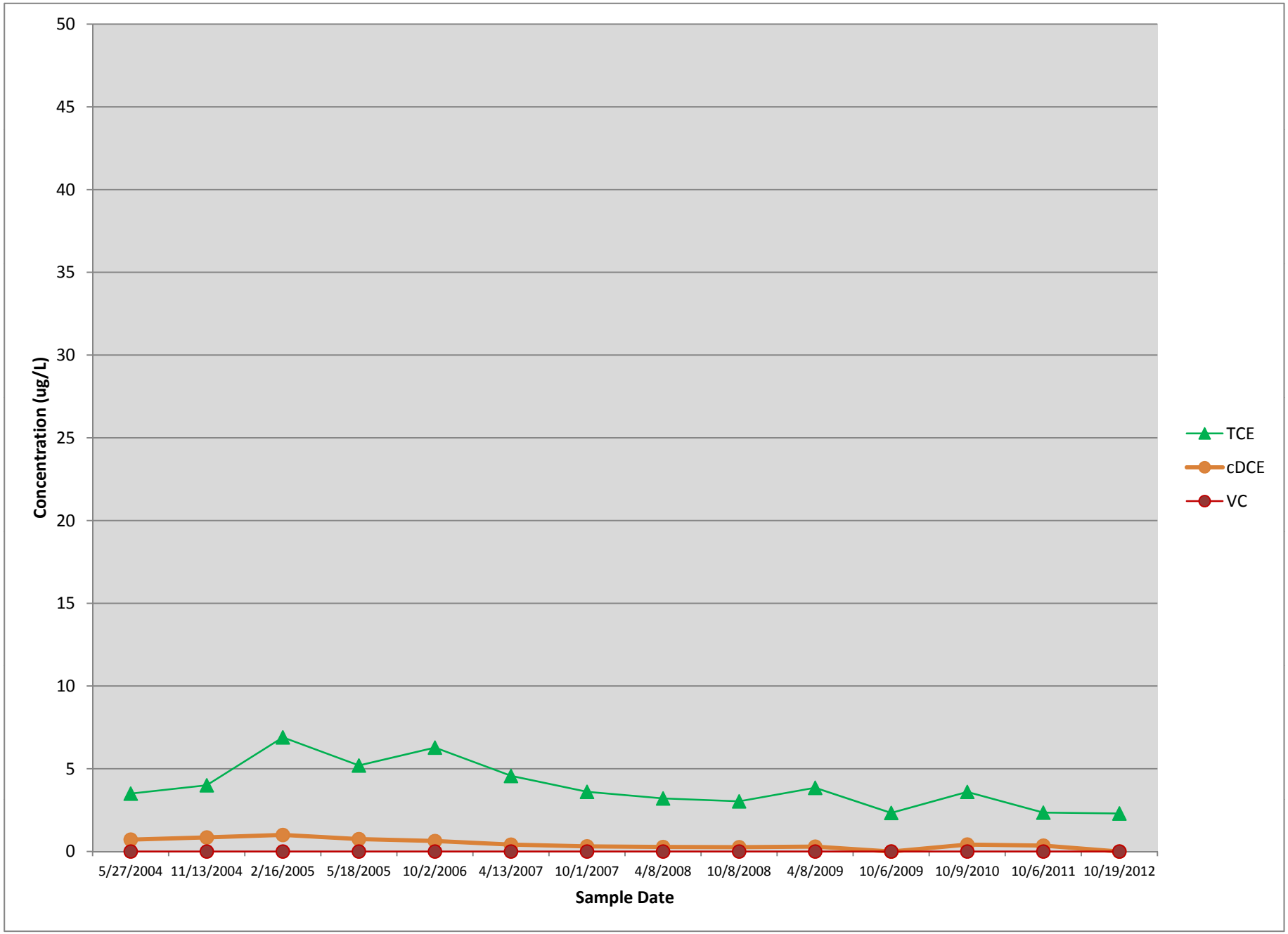

50
45
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35
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25
20
15
10
5
0
Concentration (ug/L)
8/9/2010
10/5/2010
12/9/2010
3/31/2011
9/30/2011
4/23/2012
10/19/2012
Sample Date
PCE
TCE
cDCE
VC

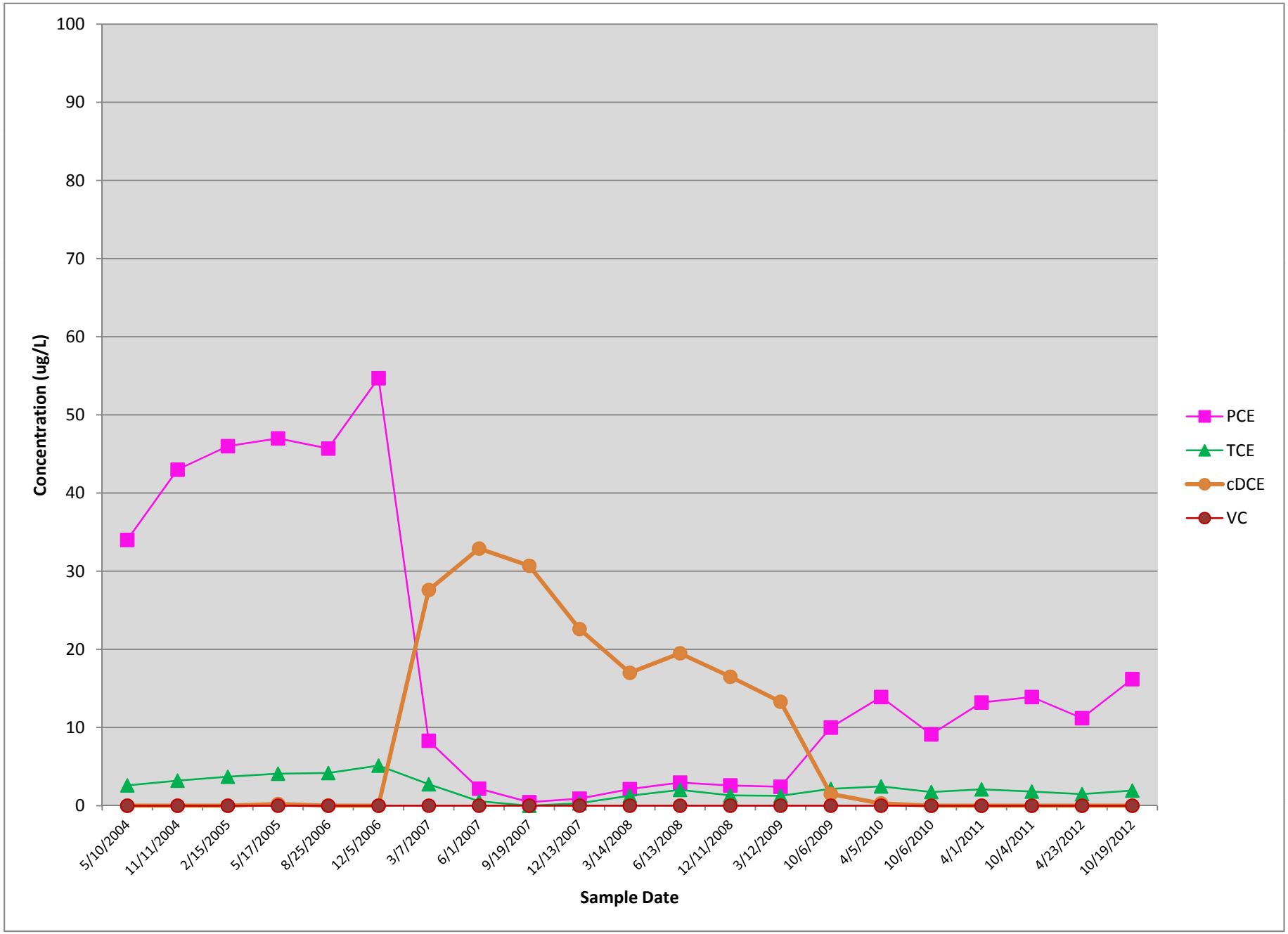
APPENDIX G-3

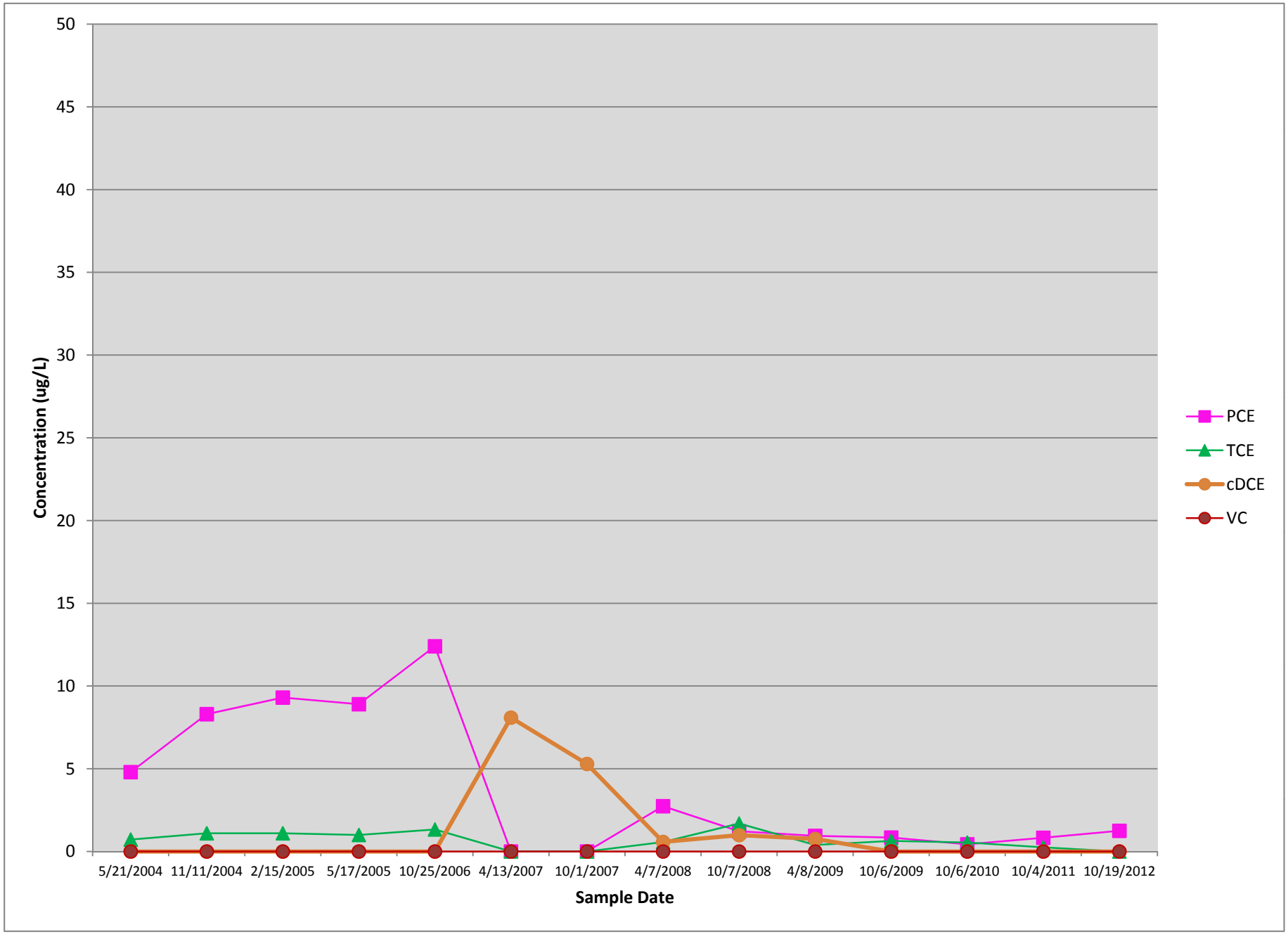
CVOC TIME-TREND PLOTS –
MAIN INSTALLATION

PERFORMANCE WELLS

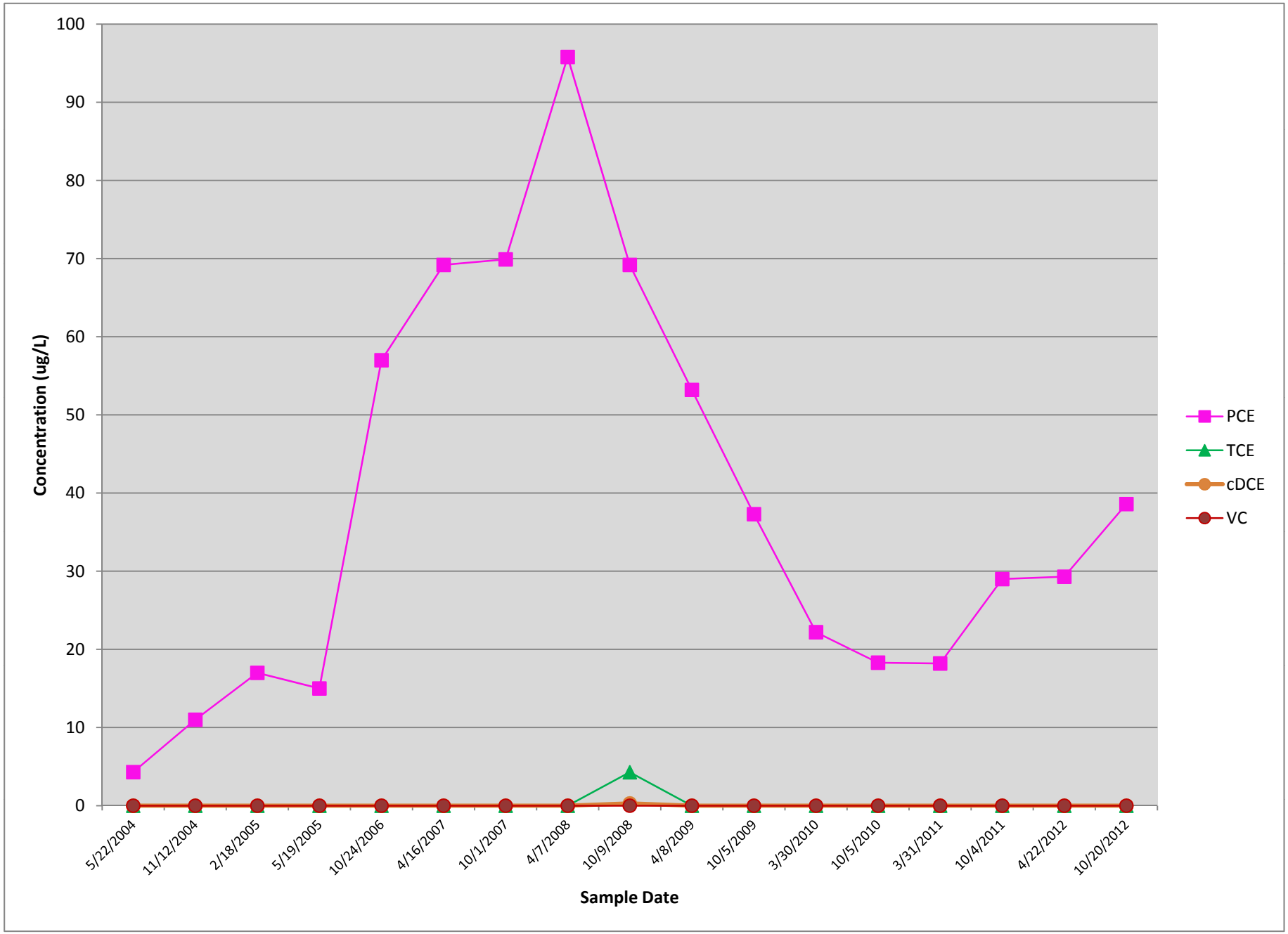
DR1-1A


50
45
40
35
30
25
20
15
10
5
0
Concentration (ug/L)
5/27/2004
11/13/2004
2/16/2005
5/18/2005
10/2/2006
4/13/2007
10/1/2007
4/8/2008
10/8/2008
4/8/2009
10/6/2009
10/9/2010
10/6/2011
10/19/2012
Sample Date
TCE
cDCE
VC

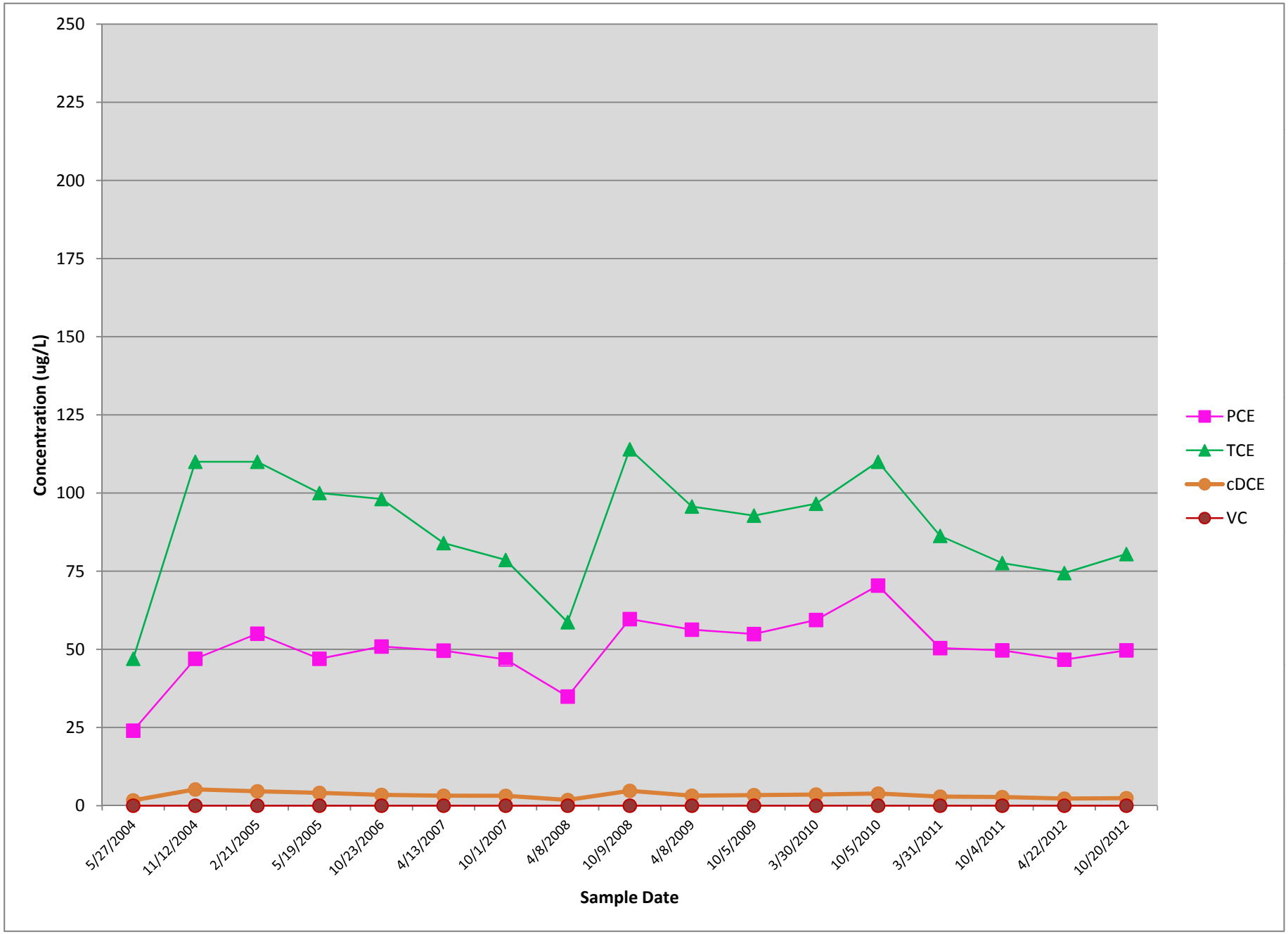

100
90
80
70
60
50
40
30
20
10
0
Concentration (ug/L)
5/10/2004
11/11/2004
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5/17/2005
8/25/2006
12/5/2006
3/7/2007
6/1/2007
9/19/2007
12/13/2007
3/14/2008
6/13/2008
12/11/2008
3/12/2009
10/6/2009
4/5/2010
10/6/2010
4/1/2011
10/4/2011
4/23/2012
10/19/2012
Sample Date
PCE
TCE
cDCE
VC


50
45
40
35
30
25
20
15
10
5
0
Concentration (ug/L)
5/21/2004
11/11/2004
2/15/2005
5/17/2005
10/25/2006
4/13/2007
10/1/2007
4/7/2008
10/7/2008
4/8/2009
10/6/2009
10/6/2010
10/4/2011
10/19/2012
Sample Date
PCE
TCE
cDCE
VC

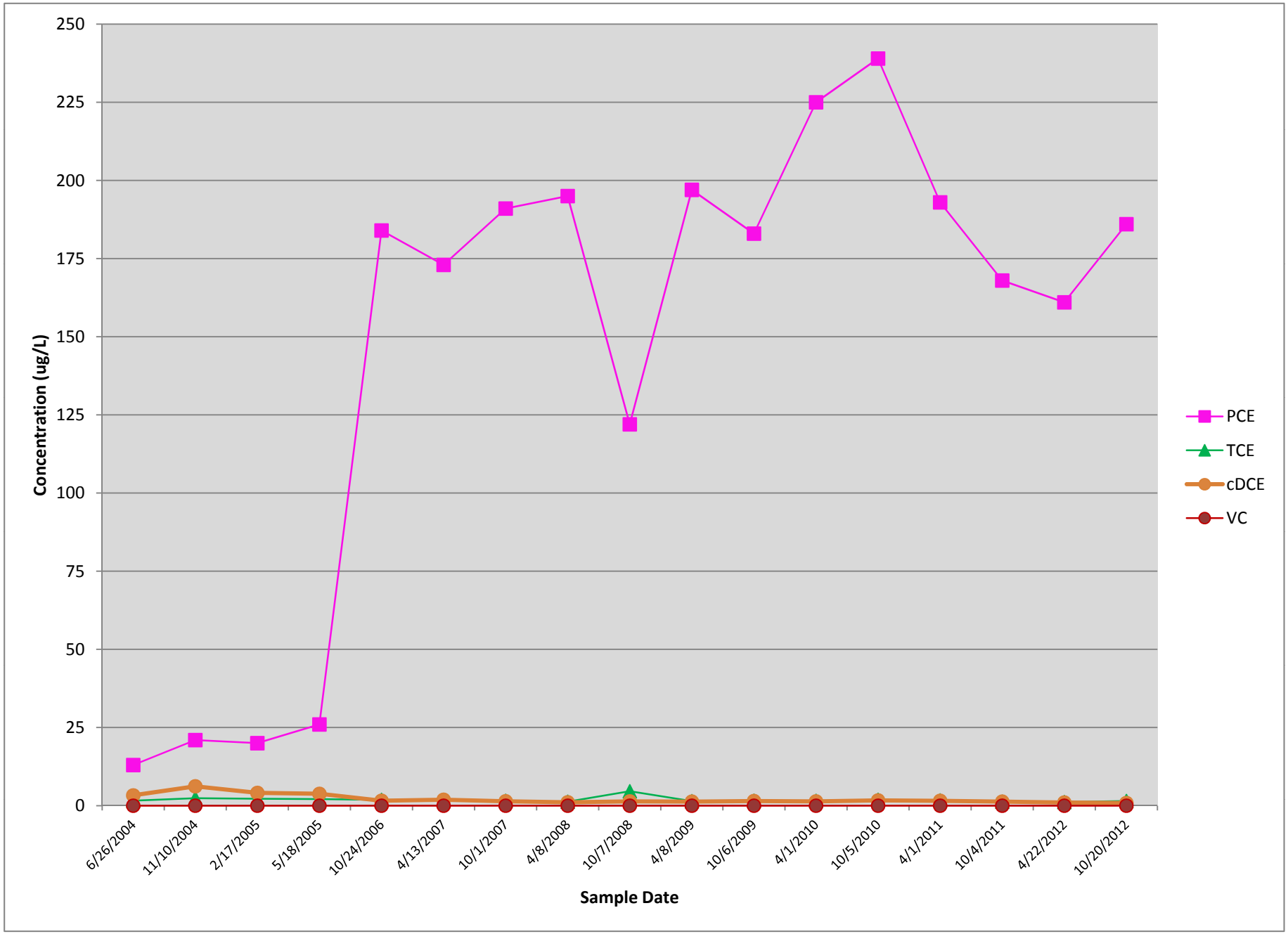
DR1-5


100
90
80
70
60
50
40
30
20
10
0
Concentration (ug/L)
5/22/2004
11/12/2004
2/18/2005
5/19/2005
10/24/2006
4/16/2007
10/1/2007
4/7/2008
10/9/2008
4/8/2009
10/5/2009
3/30/2010
10/5/2010
3/31/2011
10/4/2011
4/22/2012
10/20/2012
Sample Date
PCE
TCE
cDCE
VC

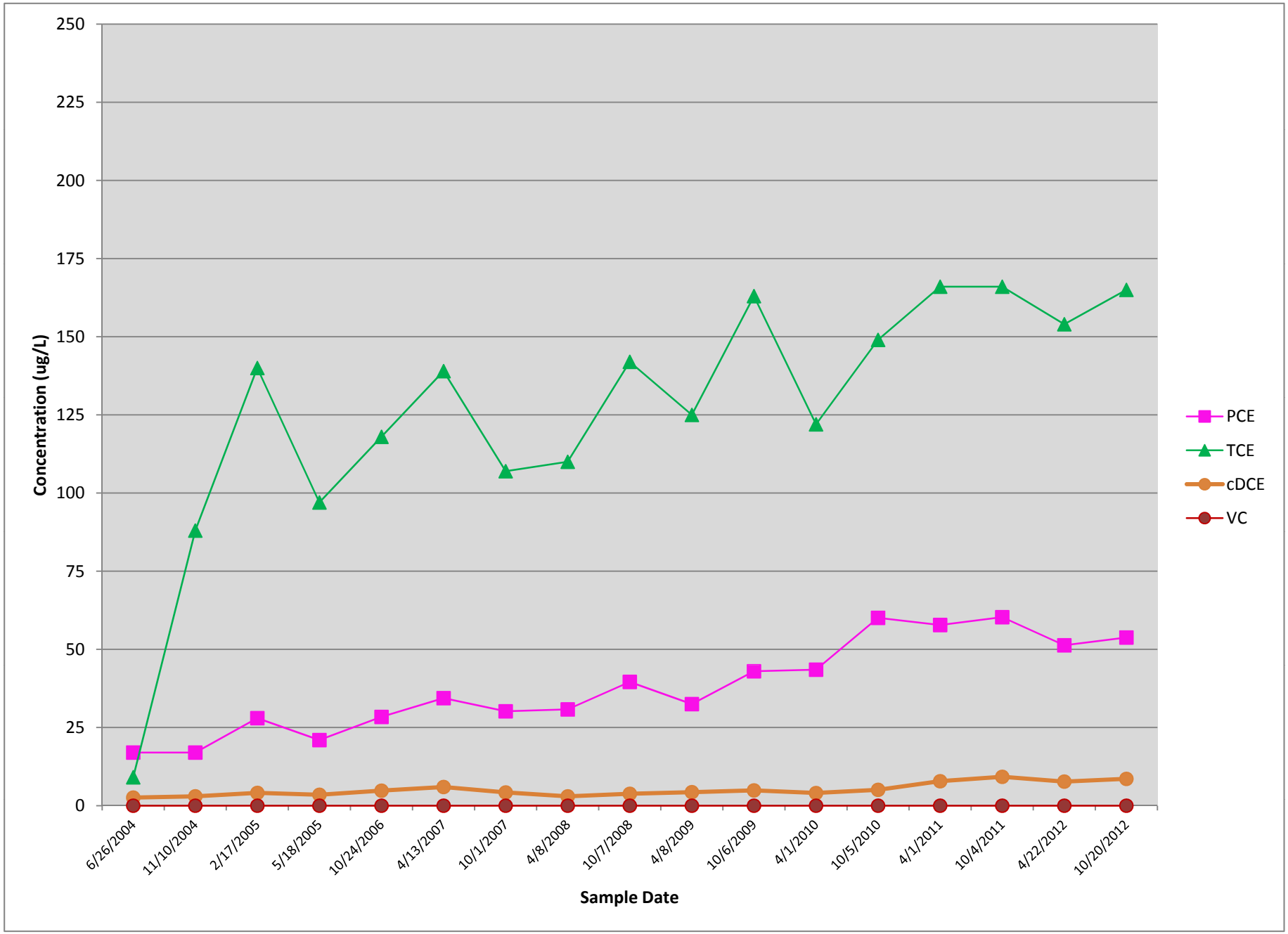
DR1-5A

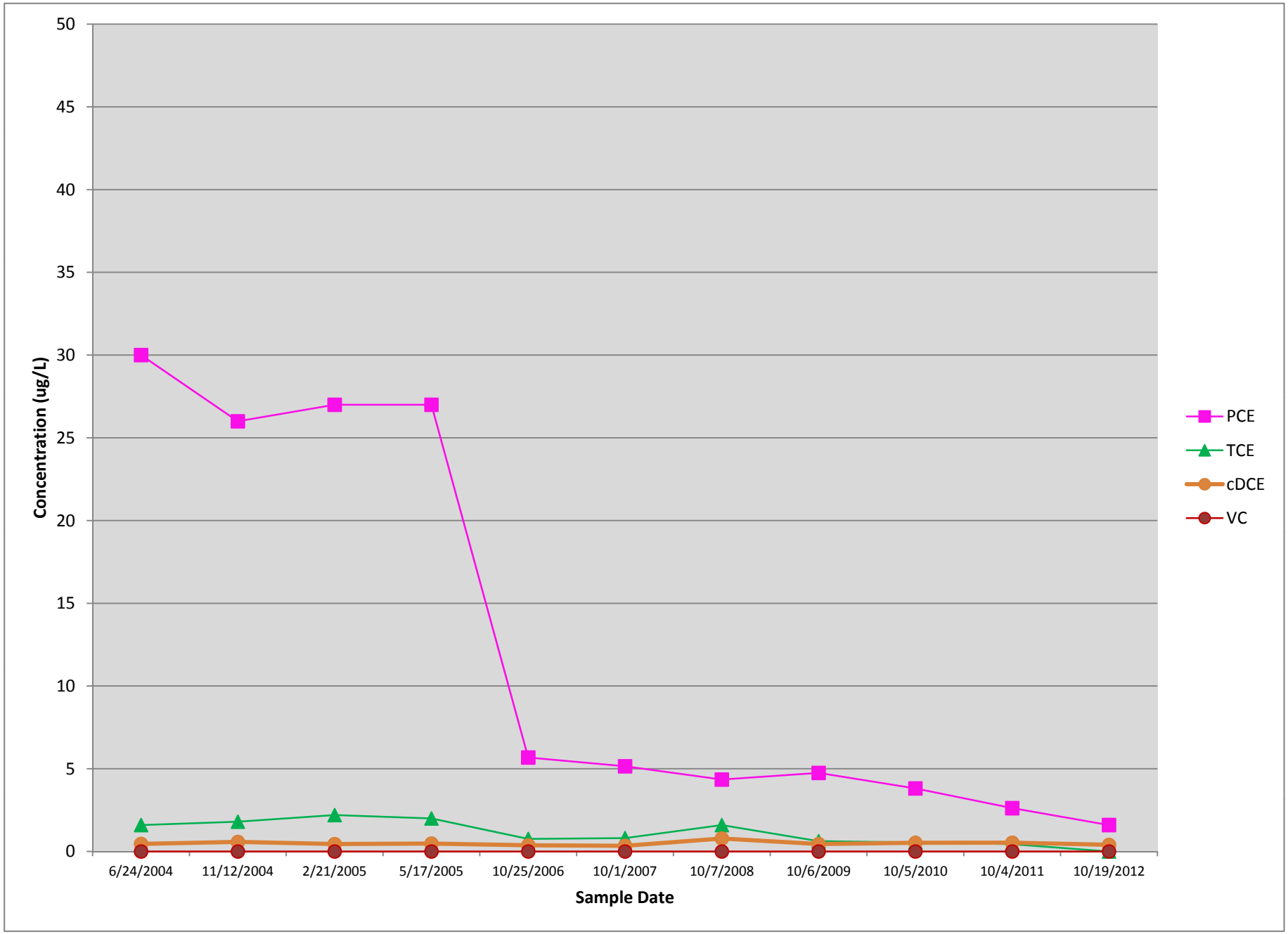

250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
5/27/2004
11/12/2004
2/21/2005
5/19/2005
10/23/2006
4/13/2007
10/1/2007
4/8/2008
10/9/2008
4/8/2009
10/5/2009
3/30/2010
10/5/2010
3/31/2011
10/4/2011
4/22/2012
10/20/2012
Sample Date
PCE
TCE
cDCE
VC

DR1-6

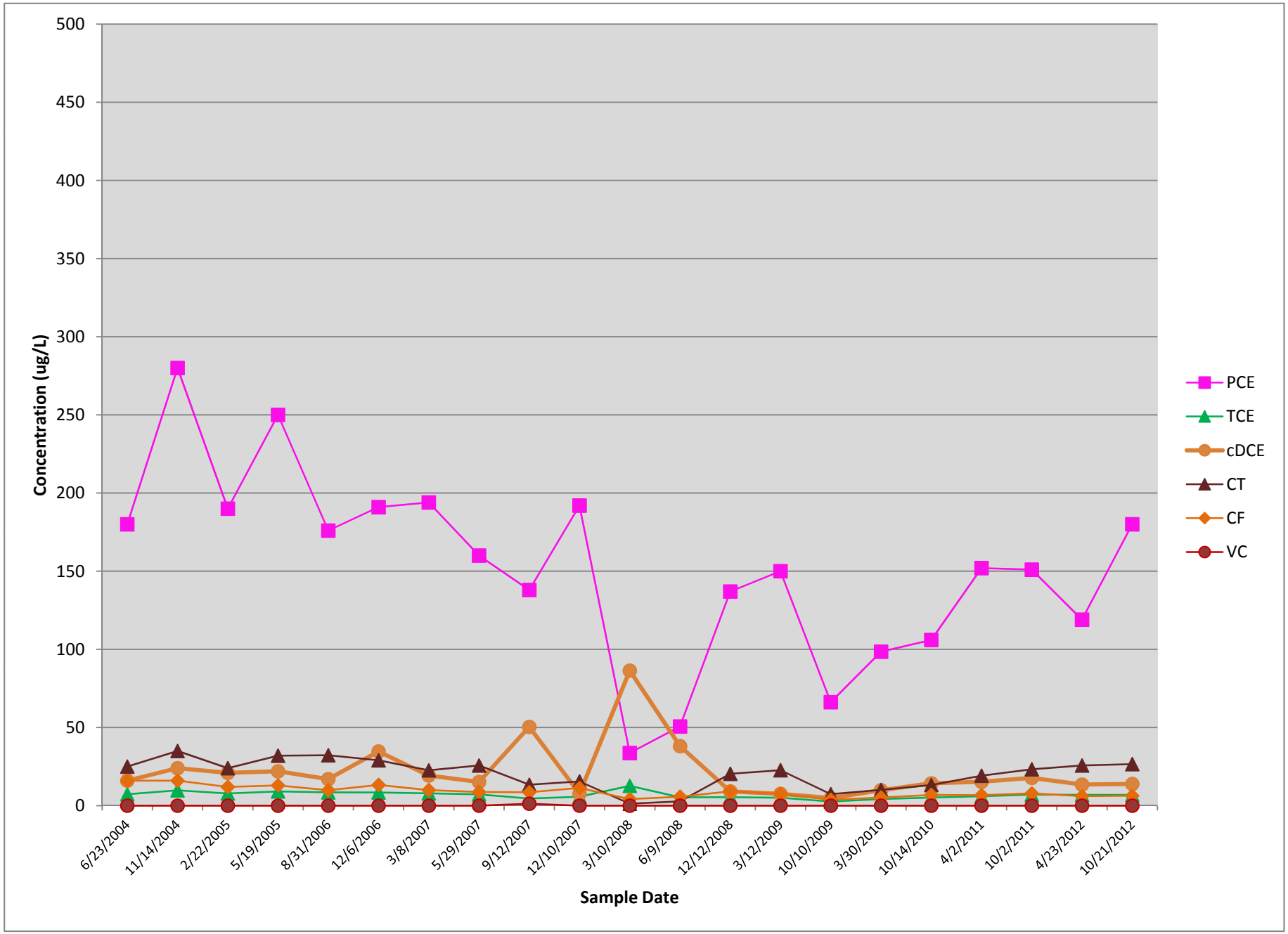

250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
6/26/2004
11/10/2004
2/17/2005
5/18/2005
10/24/2006
4/13/2007
10/1/2007
4/8/2008
10/7/2008
4/8/2009
10/6/2009
4/1/2010
10/5/2010
4/1/2011
10/4/2011
4/22/2012
10/20/2012
Sample Date
PCE
TCE
cDCE
VC

DR1-6A

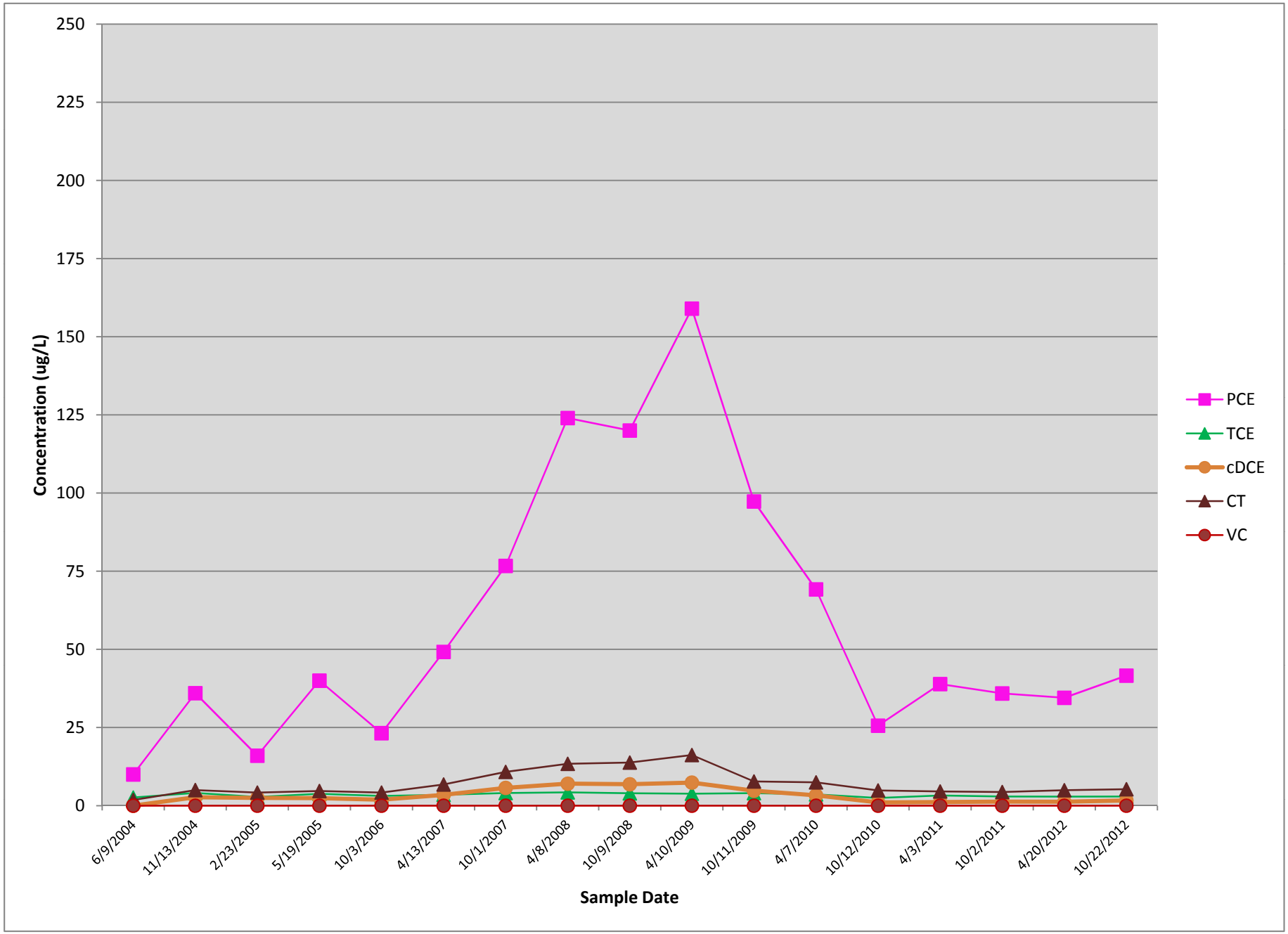

250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
6/26/2004
11/10/2004
2/17/2005
5/18/2005
10/24/2006
4/13/2007
10/1/2007
4/8/2008
10/7/2008
4/8/2009
10/6/2009
4/1/2010
10/5/2010
4/1/2011
10/4/2011
4/22/2012
10/20/2012
Sample Date
PCE
TCE
cDCE
VC

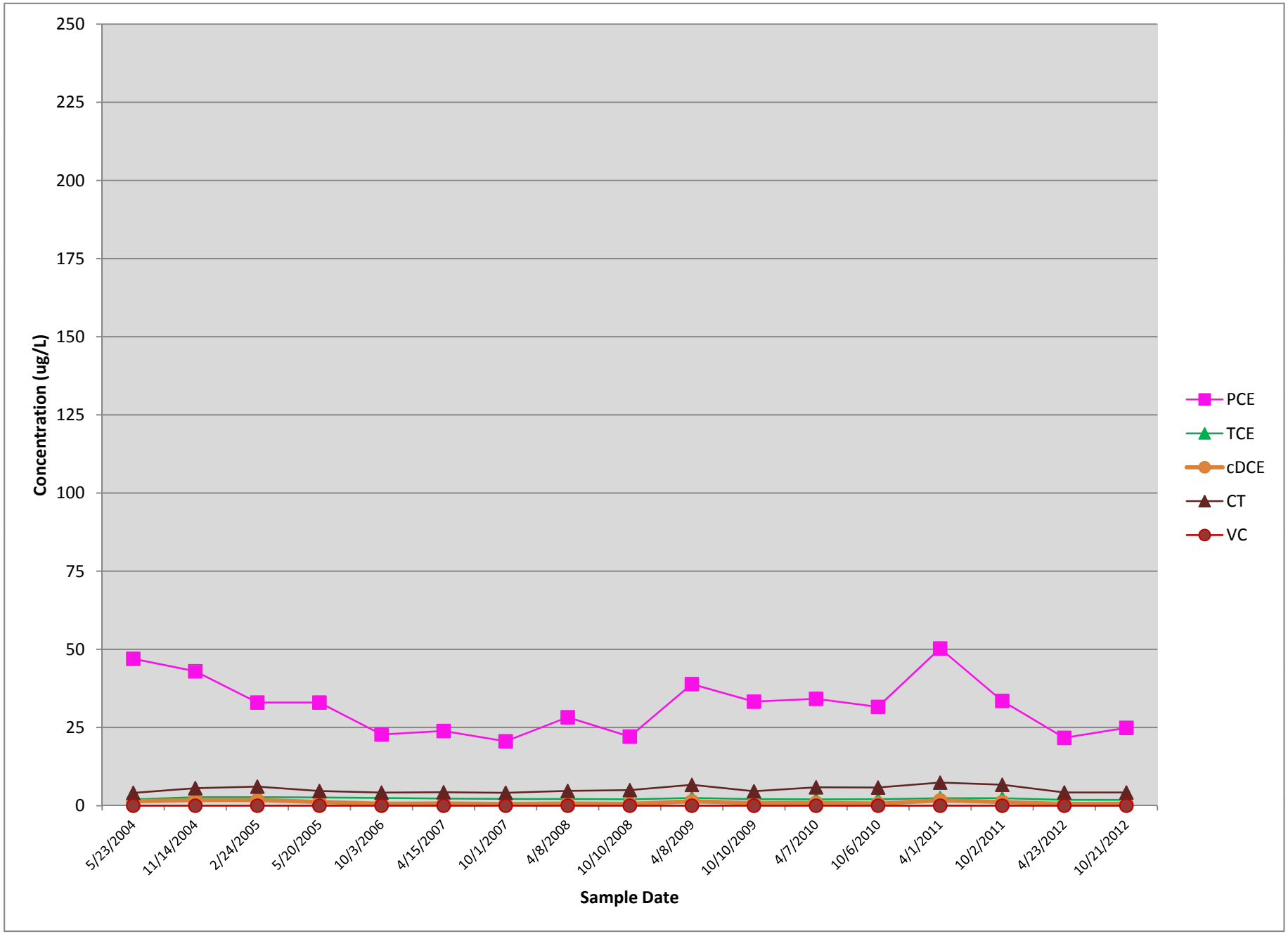

50
45
40
35
30
25
20
15
10
5
0
Concentration (ug/L)
6/24/2004
11/12/2004
2/21/2005
5/17/2005
10/25/2006
10/1/2007
10/7/2008
10/6/2009
10/5/2010
10/4/2011
10/19/2012
Sample Date
PCE
TCE
cDCE
VC

DR2-1

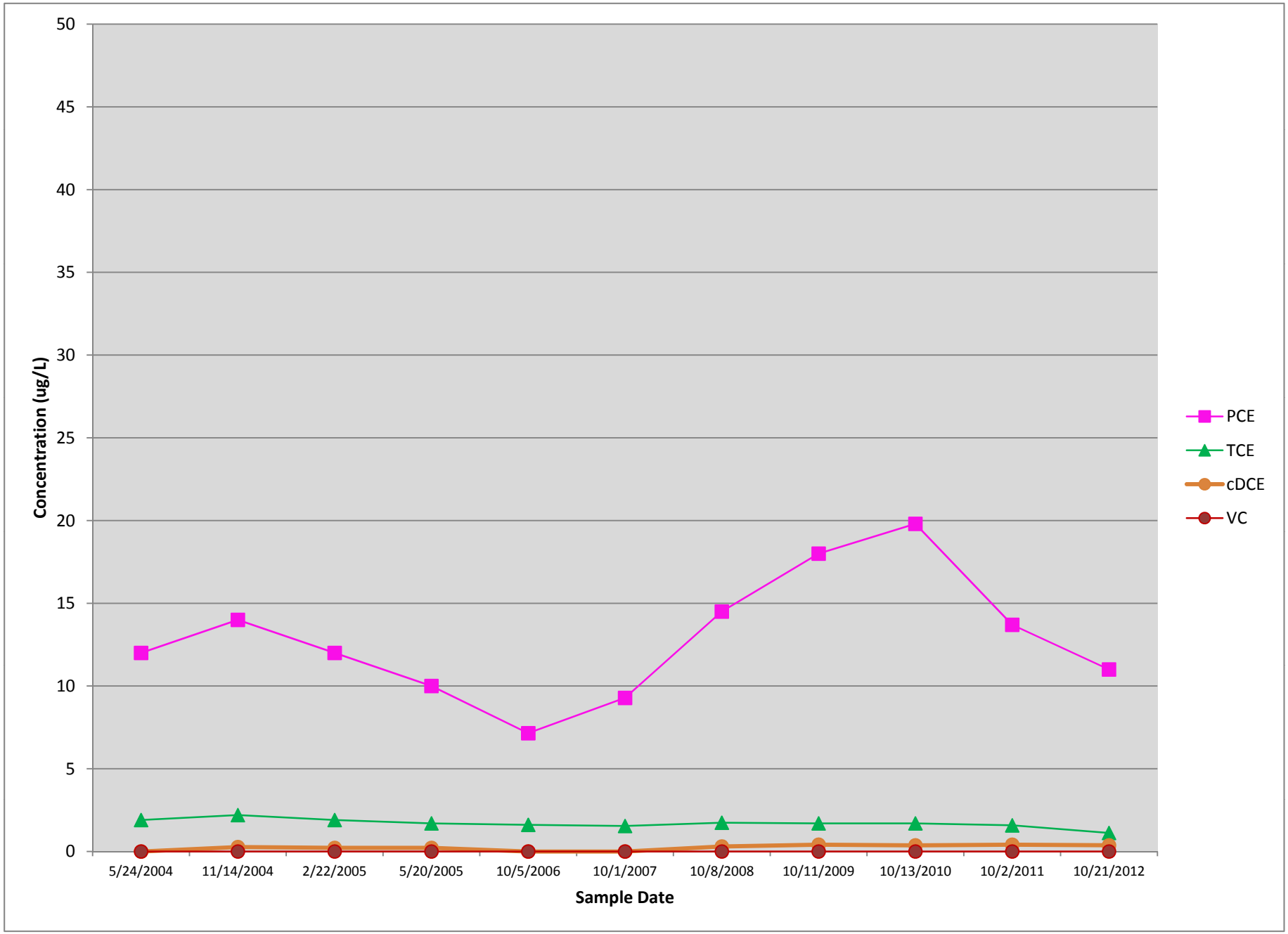

500
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300
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200
150
100
50
0
Concentration (ug/L)
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11/14/2004
2/22/2005
5/19/2005
8/31/2006
12/6/2006
3/8/2007
5/29/2007
9/12/2007
12/10/2007
3/10/2008
6/9/2008
12/12/2008
3/12/2009
10/10/2009
3/30/2010
10/14/2010
4/2/2011
10/2/2011
4/23/2012
10/21/2012
Sample Date
PCE
TCE
cDCE
CT
CF
VC

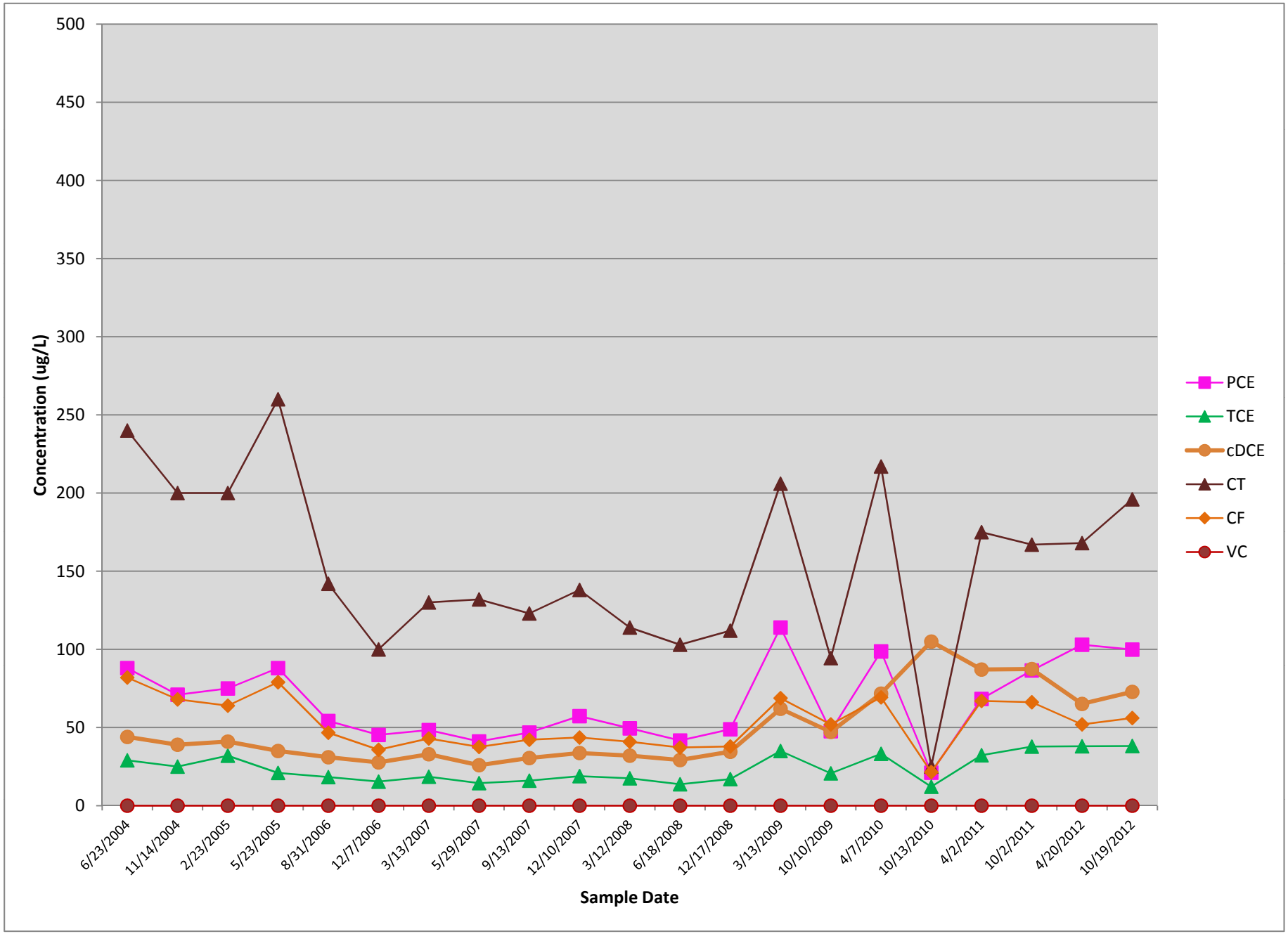
DR2-2

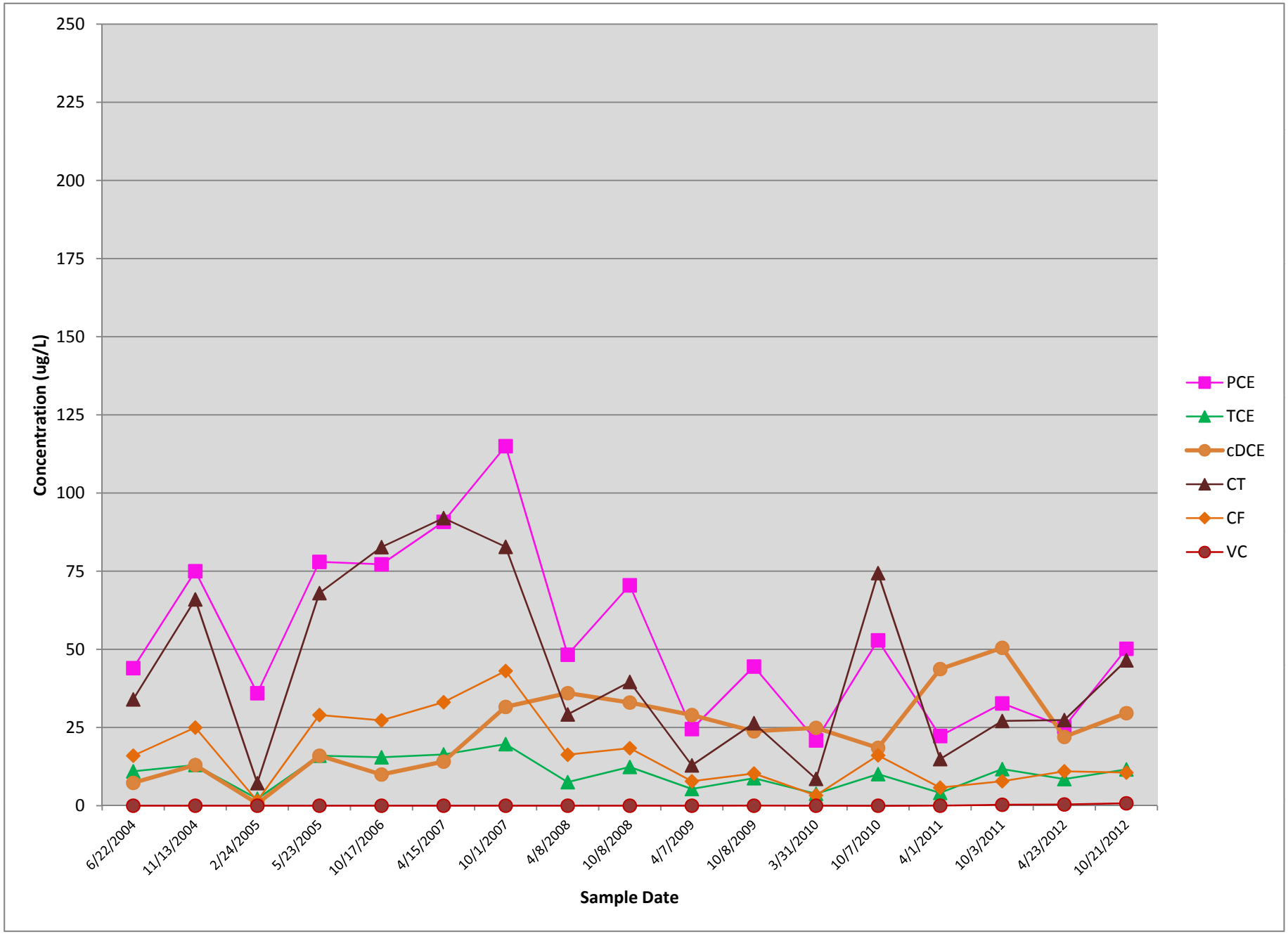

250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
6/9/2004
11/13/2004
2/23/2005
5/19/2005
10/3/2006
4/13/2007
10/1/2007
4/8/2008
10/9/2008
4/10/2009
10/11/2009
4/7/2010
10/12/2010
4/3/2011
10/2/2011
4/20/2012
10/22/2012
Sample Date
PCE
TCE
cDCE
CT
VC


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
5/23/2004
11/14/2004
2/24/2005
5/20/2005
10/3/2006
4/15/2007
10/1/2007
4/8/2008
10/10/2008
4/8/2009
10/10/2009
4/7/2010
10/6/2010
4/1/2011
10/2/2011
4/23/2012
10/21/2012
Sample Date
PCE
TCE
cDCE
CT
VC

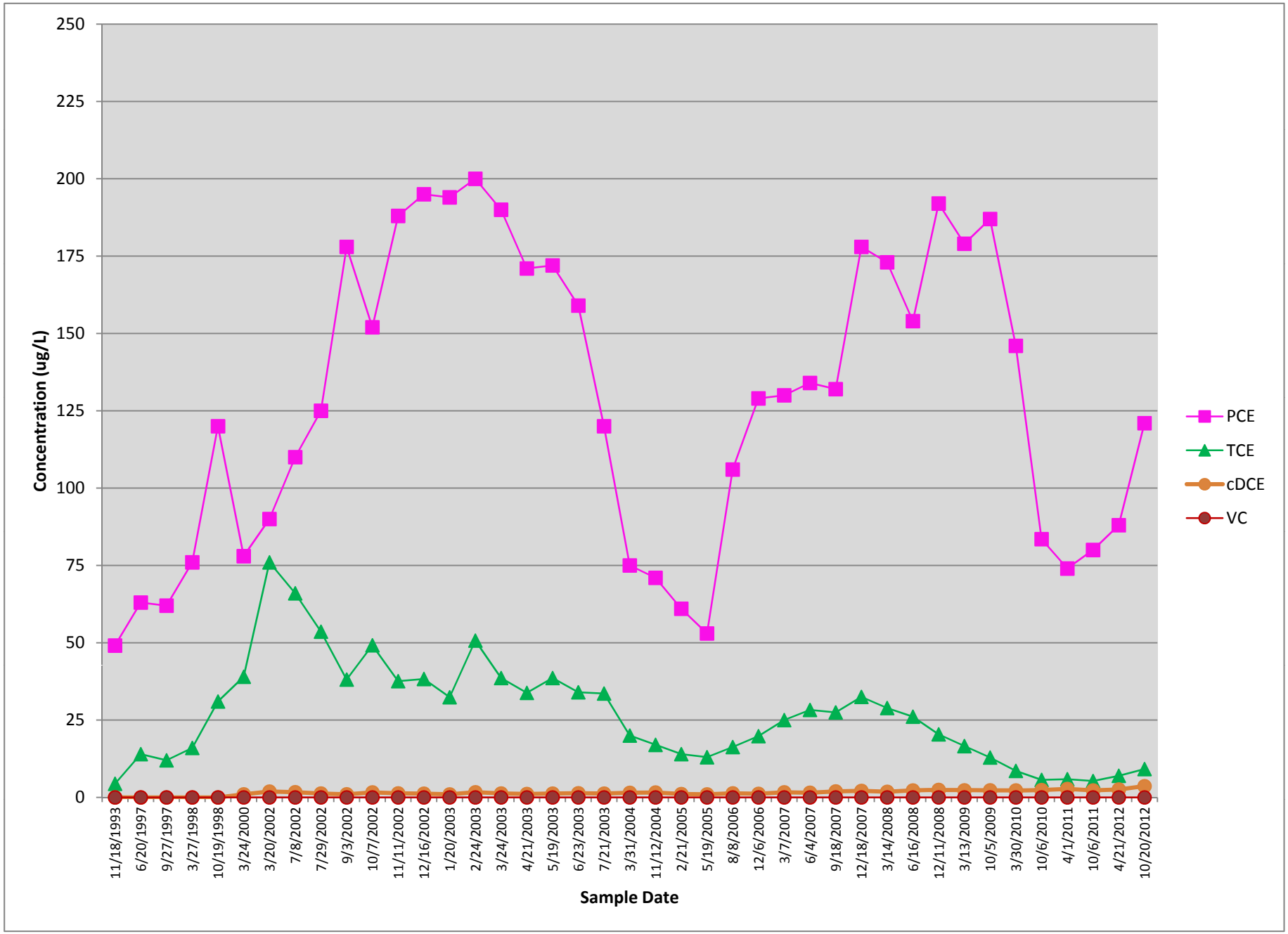
DR2-4


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45
40
35
30
25
20
15
10
5
0
Concentration (ug/L)
5/24/2004
11/14/2004
2/22/2005
5/20/2005
10/5/2006
10/1/2007
10/8/2008
10/11/2009
10/13/2010
10/2/2011
10/21/2012
Sample Date
PCE
TCE
cDCE
VC

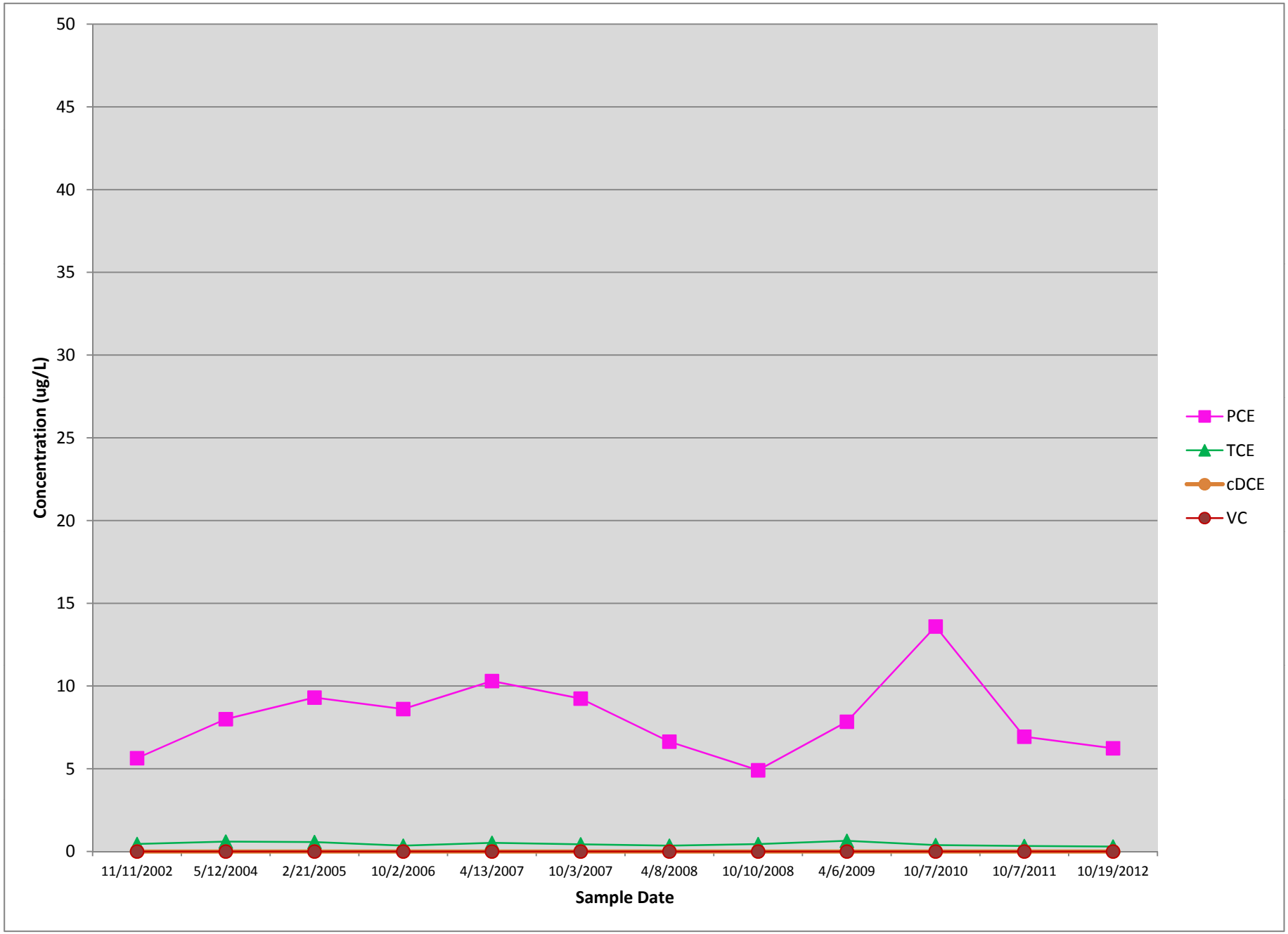

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150
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50
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Concentration (ug/L)
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11/14/2004
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8/31/2006
12/7/2006
3/13/2007
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9/13/2007
12/10/2007
3/12/2008
6/18/2008
12/17/2008
3/13/2009
10/10/2009
4/7/2010
10/13/2010
4/2/2011
10/2/2011
4/20/2012
10/19/2012
Sample Date
PCE
TCE
cDCE
CT
CF
VC


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
6/22/2004
11/13/2004
2/24/2005
5/23/2005
10/17/2006
4/15/2007
10/1/2007
4/8/2008
10/8/2008
4/7/2009
10/8/2009
3/31/2010
10/7/2010
4/1/2011
10/3/2011
4/23/2012
10/21/2012
Sample Date
PCE
TCE
cDCE
CT
CF
VC

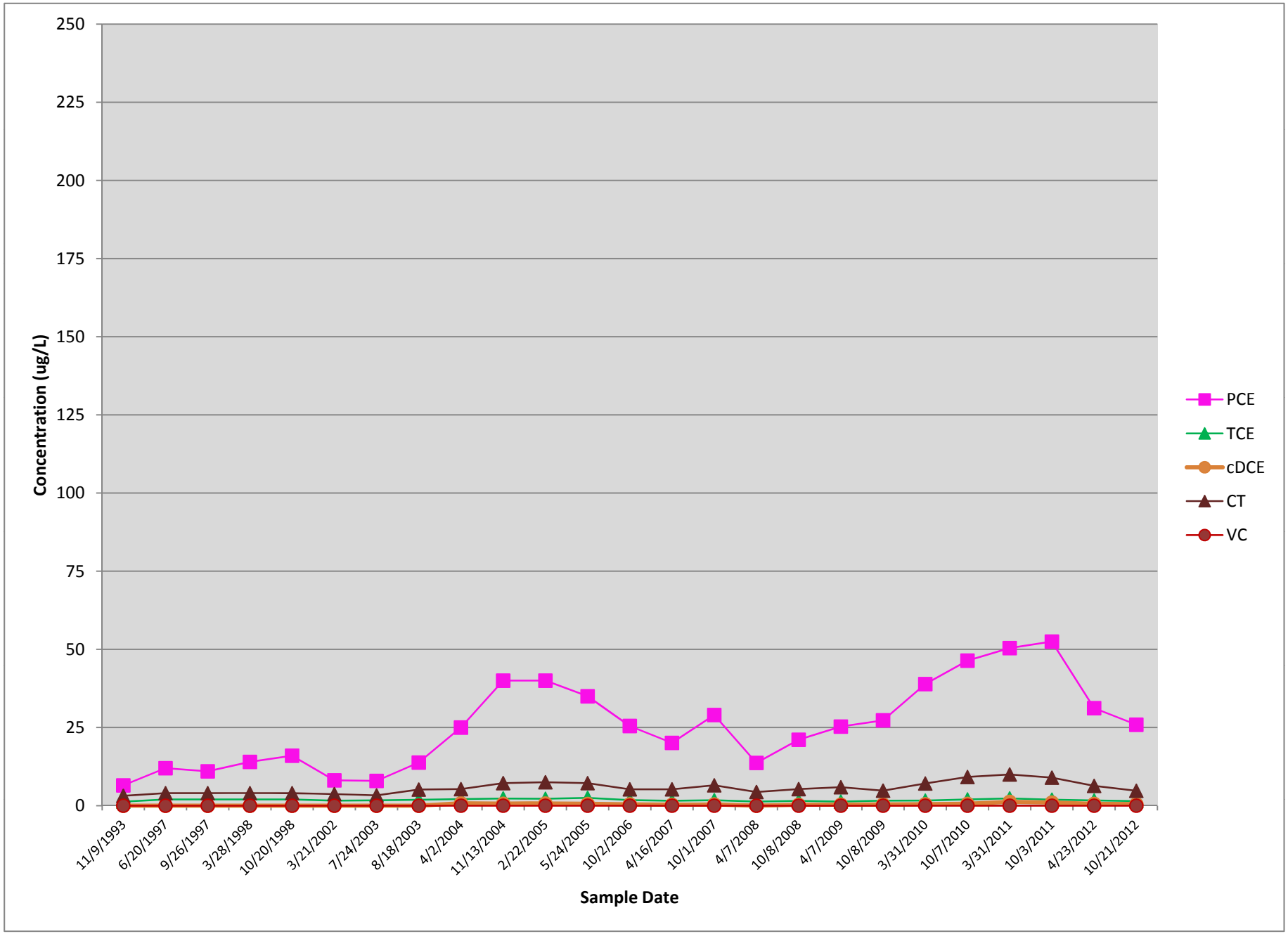
MW-21


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
11/18/1993
6/20/1997
9/27/1997
3/27/1998
10/19/1998
3/24/2000
3/20/2002
7/8/2002
7/29/2002
9/3/2002
10/7/2002
11/11/2002
12/16/2002
1/20/2003
2/24/2003
3/24/2003
4/21/2003
5/19/2003
6/23/2003
7/21/2003
3/31/2004
11/12/2004
2/21/2005
5/19/2005
8/8/2006
12/6/2006
3/7/2007
6/4/2007
9/18/2007
12/18/2007
3/14/2008
6/16/2008
12/11/2008
3/13/2009
10/5/2009
3/30/2010
10/6/2010
4/1/2011
10/6/2011
4/21/2012
10/20/2012
Sample Date
PCE
TCE
cDCE
VC

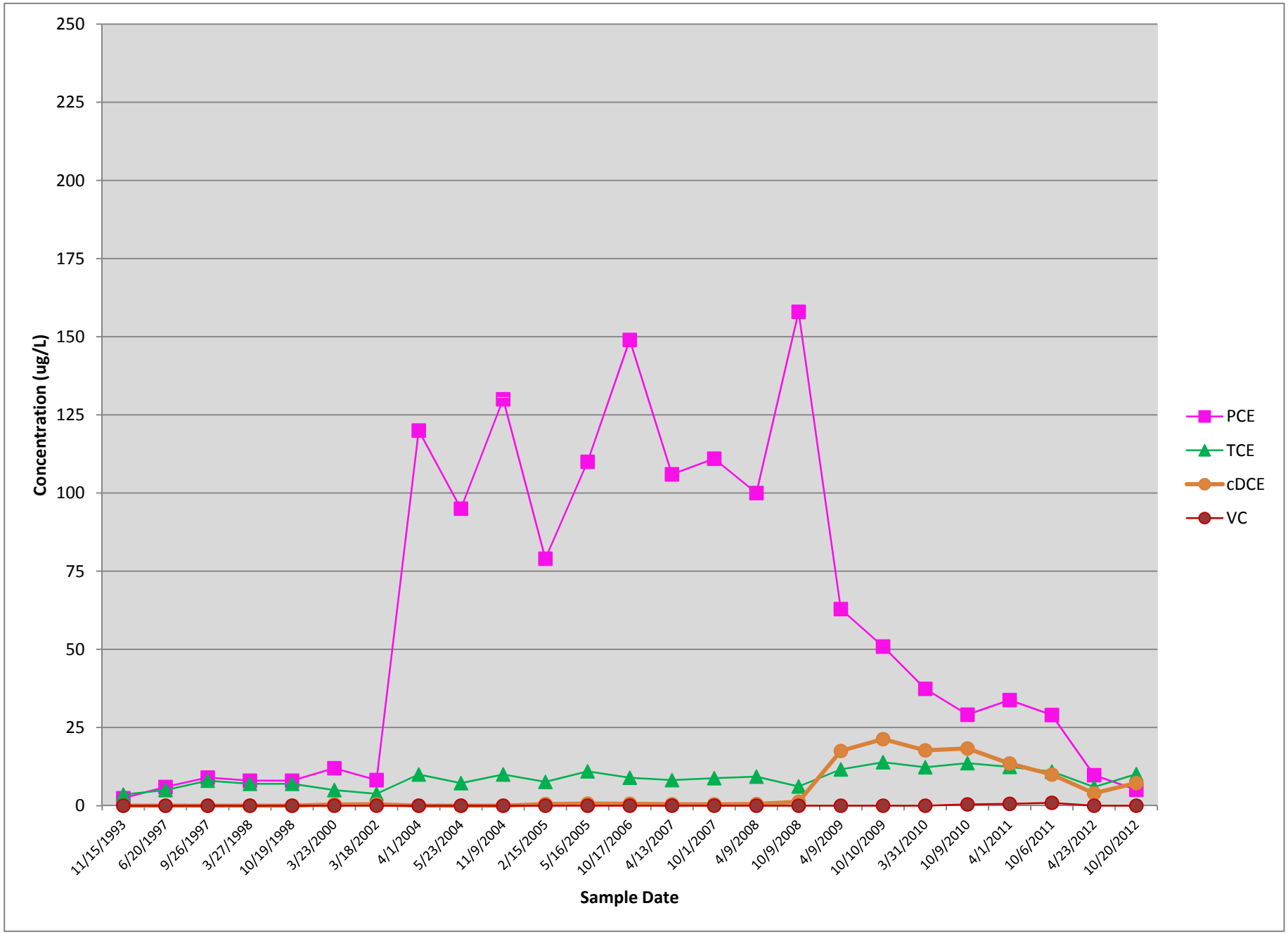
MW-25A


50
45
40
35
30
25
20
15
10
5
0
Concentration (ug/L)
11/11/2002
5/12/2004
2/21/2005
10/2/2006
4/13/2007
10/3/2007
4/8/2008
10/10/2008
4/6/2009
10/7/2010
10/7/2011
10/19/2012
Sample Date
PCE
TCE
cDCE
VC

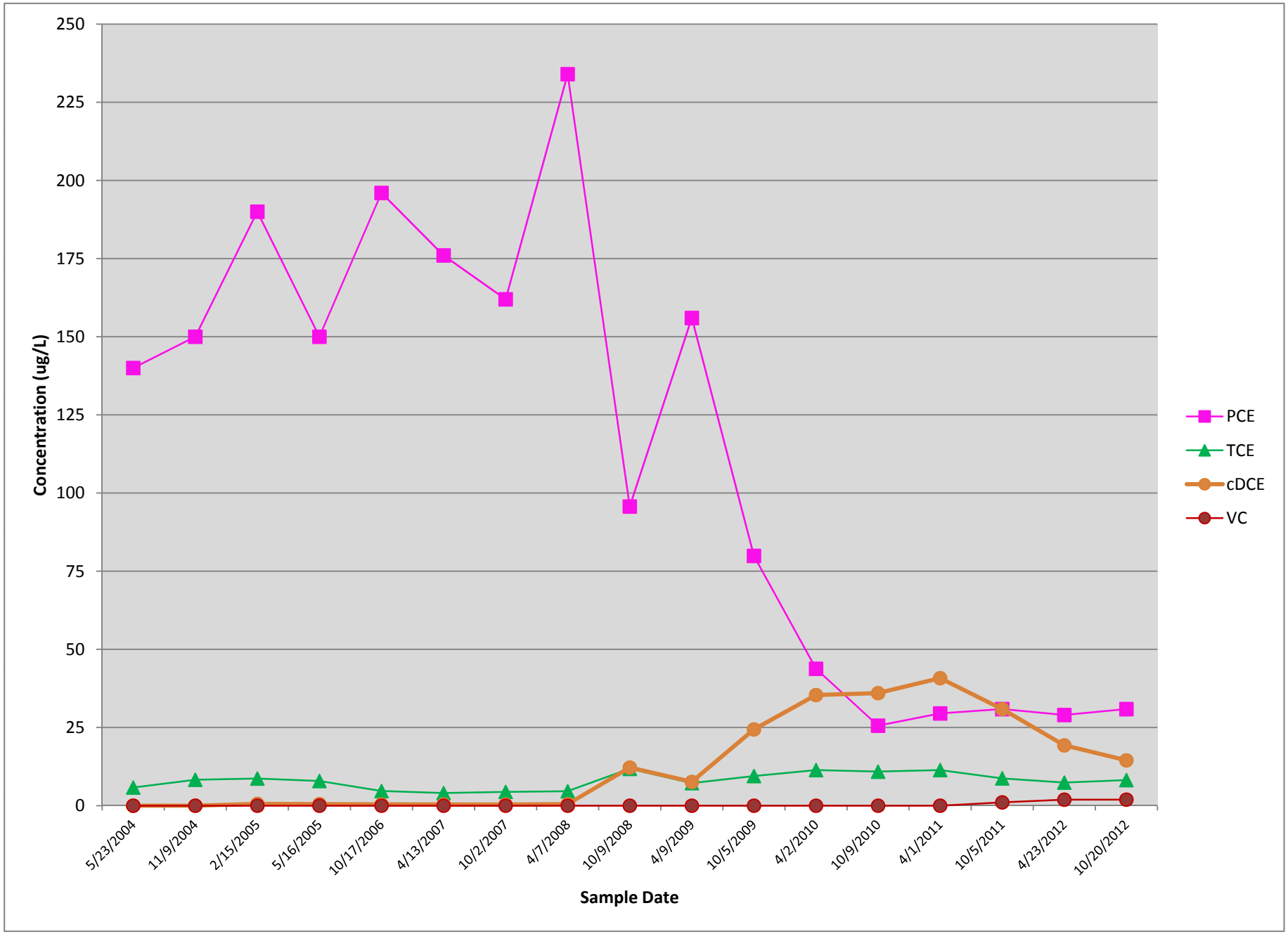
MW-26


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
11/9/1993
6/20/1997
9/26/1997
3/28/1998
10/20/1998
3/21/2002
7/24/2003
8/18/2003
4/2/2004
11/13/2004
2/22/2005
5/24/2005
10/2/2006
4/16/2007
10/1/2007
4/7/2008
10/8/2008
4/7/2009
10/8/2009
3/31/2010
10/7/2010
3/31/2011
10/3/2011
4/23/2012
10/21/2012
Sample Date
PCE
TCE
cDCE
CT
VC

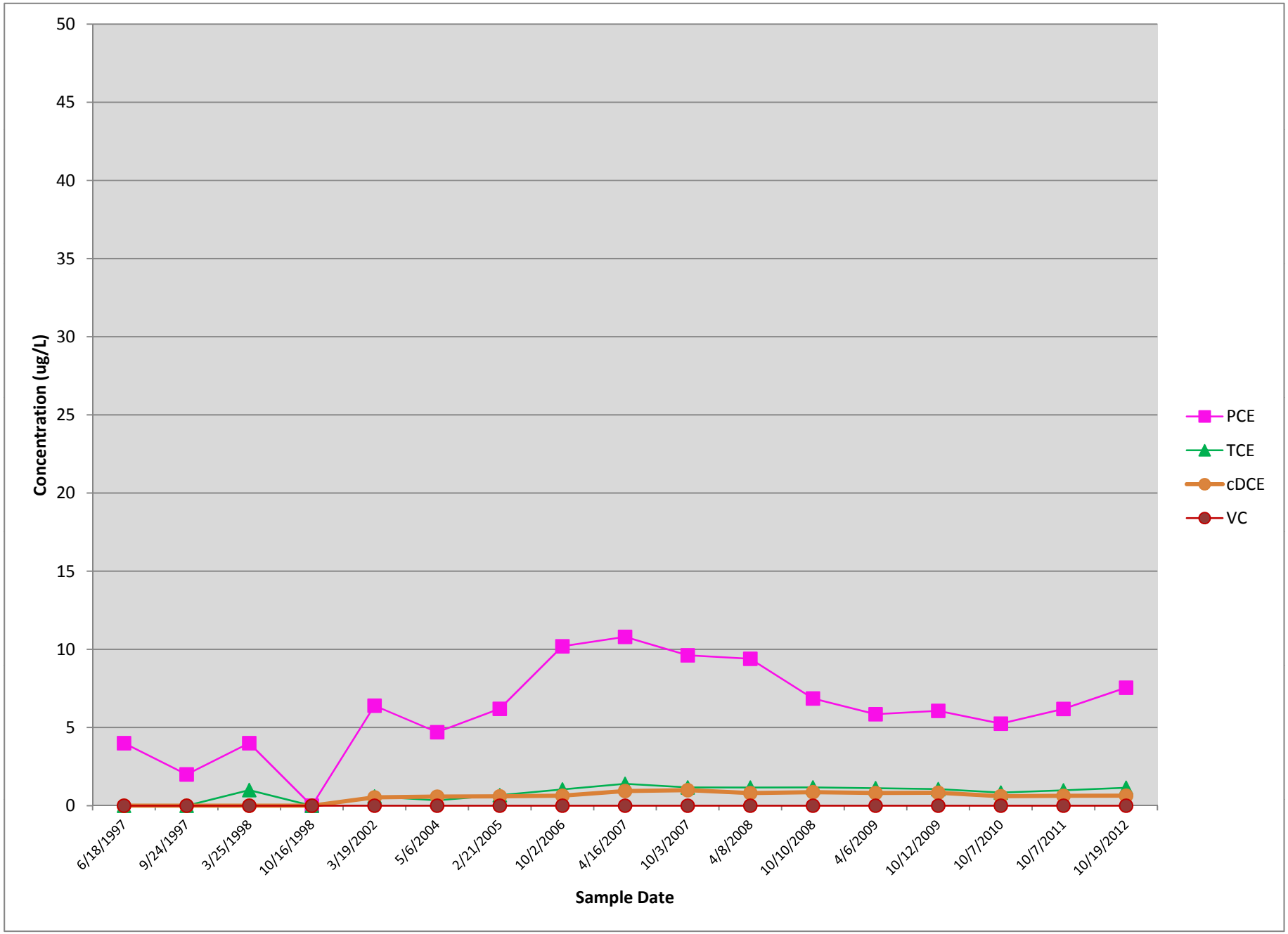
MW-39


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
11/15/1993
6/20/1997
9/26/1997
3/27/1998
10/19/1998
3/23/2000
3/18/2002
4/1/2004
5/23/2004
11/9/2004
2/15/2005
5/16/2005
10/17/2006
4/13/2007
10/1/2007
4/9/2008
10/9/2008
4/9/2009
10/10/2009
3/31/2010
10/9/2010
4/1/2011
10/6/2011
4/23/2012
10/20/2012
Sample Date
PCE
TCE
cDCE
VC

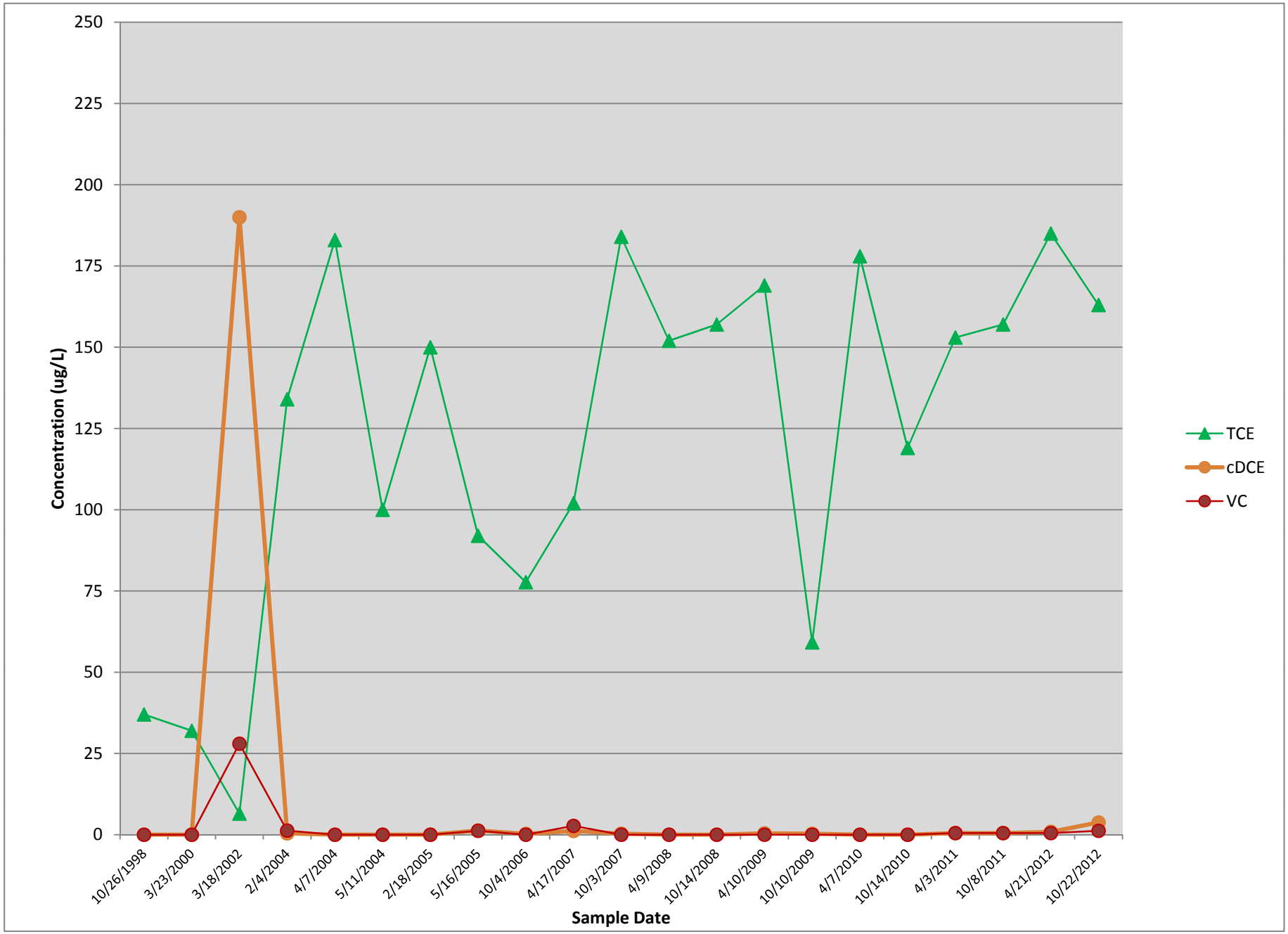
MW-39A


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
5/23/2004
11/9/2004
2/15/2005
5/16/2005
10/17/2006
4/13/2007
10/2/2007
4/7/2008
10/9/2008
4/9/2009
10/5/2009
4/2/2010
10/9/2010
4/1/2011
10/5/2011
4/23/2012
10/20/2012
Sample Date
PCE
TCE
cDCE
VC

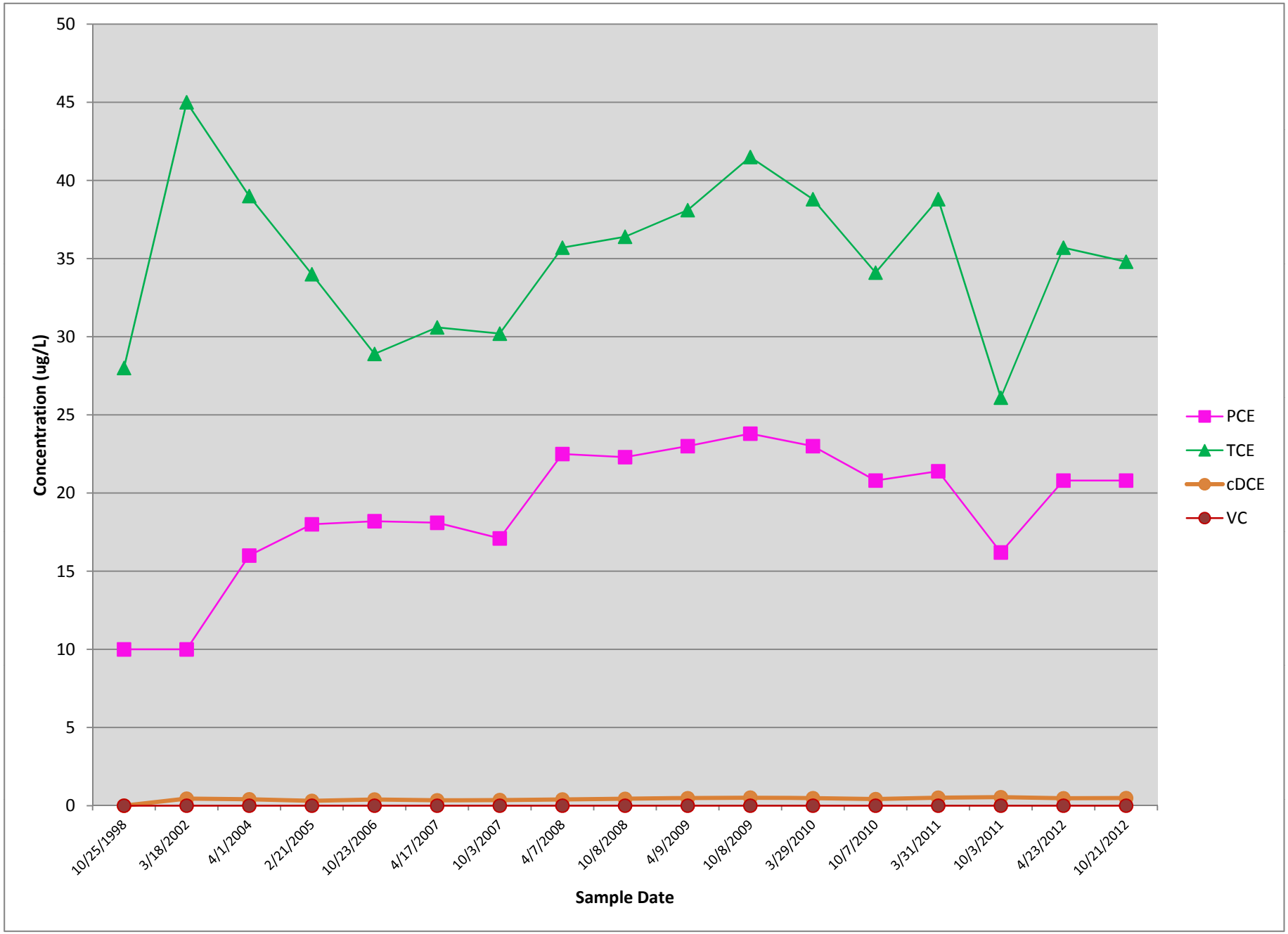
MW-52


50
45
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35
30
25
20
15
10
5
0
Concentration (ug/L)
6/18/1997
9/24/1997
3/25/1998
10/16/1998
3/19/2002
5/6/2004
2/21/2005
10/2/2006
4/16/2007
10/3/2007
4/8/2008
10/10/2008
4/6/2009
10/12/2009
10/7/2010
10/7/2011
10/19/2012
Sample Date
PCE
TCE
cDCE
VC

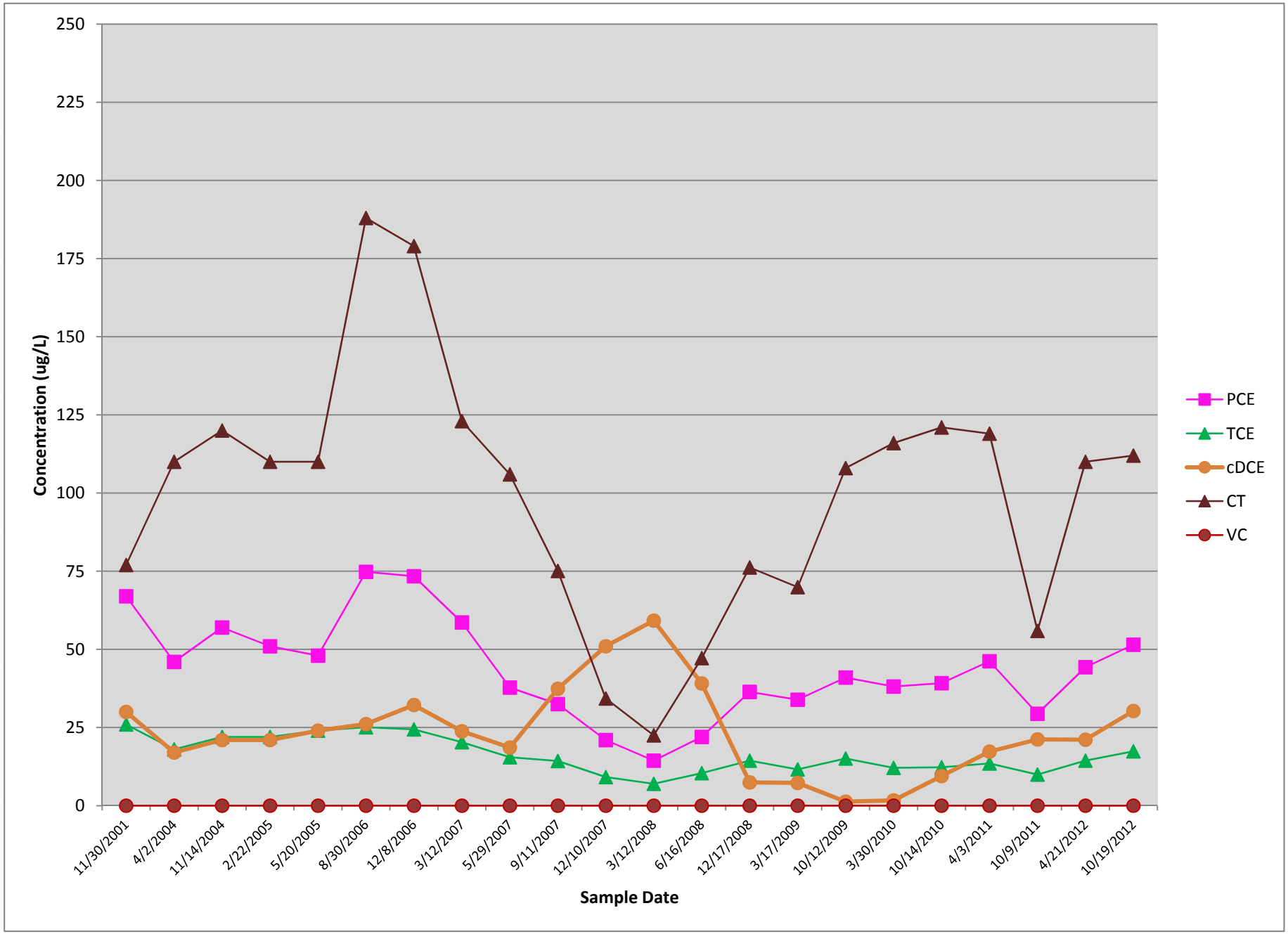
MW-62


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
10/26/1998
3/23/2000
3/18/2002
2/4/2004
4/7/2004
5/11/2004
2/18/2005
5/16/2005
10/4/2006
4/17/2007
10/3/2007
4/9/2008
10/14/2008
4/10/2009
10/10/2009
4/7/2010
10/14/2010
4/3/2011
10/8/2011
4/21/2012
10/22/2012
Sample Date
TCE
cDCE
VC

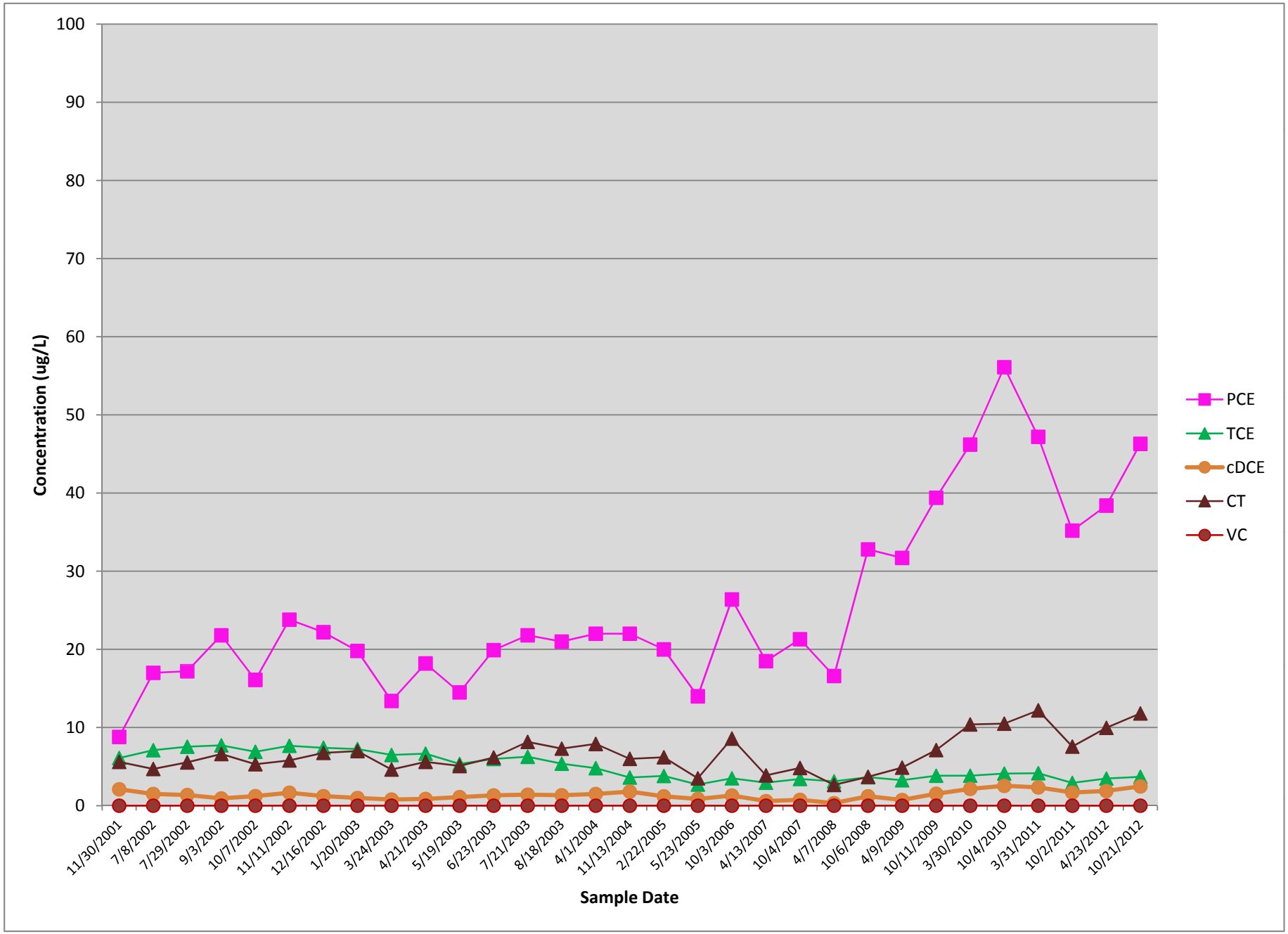
MW-64


50
45
40
35
30
25
20
15
10
5
0
Concentration (ug/L)
10/25/1998
3/18/2002
4/1/2004
2/21/2005
10/23/2006
4/17/2007
10/3/2007
4/7/2008
10/8/2008
4/9/2009
10/8/2009
3/29/2010
10/7/2010
3/31/2011
10/3/2011
4/23/2012
10/21/2012
Sample Date
PCE
TCE
cDCE
VC

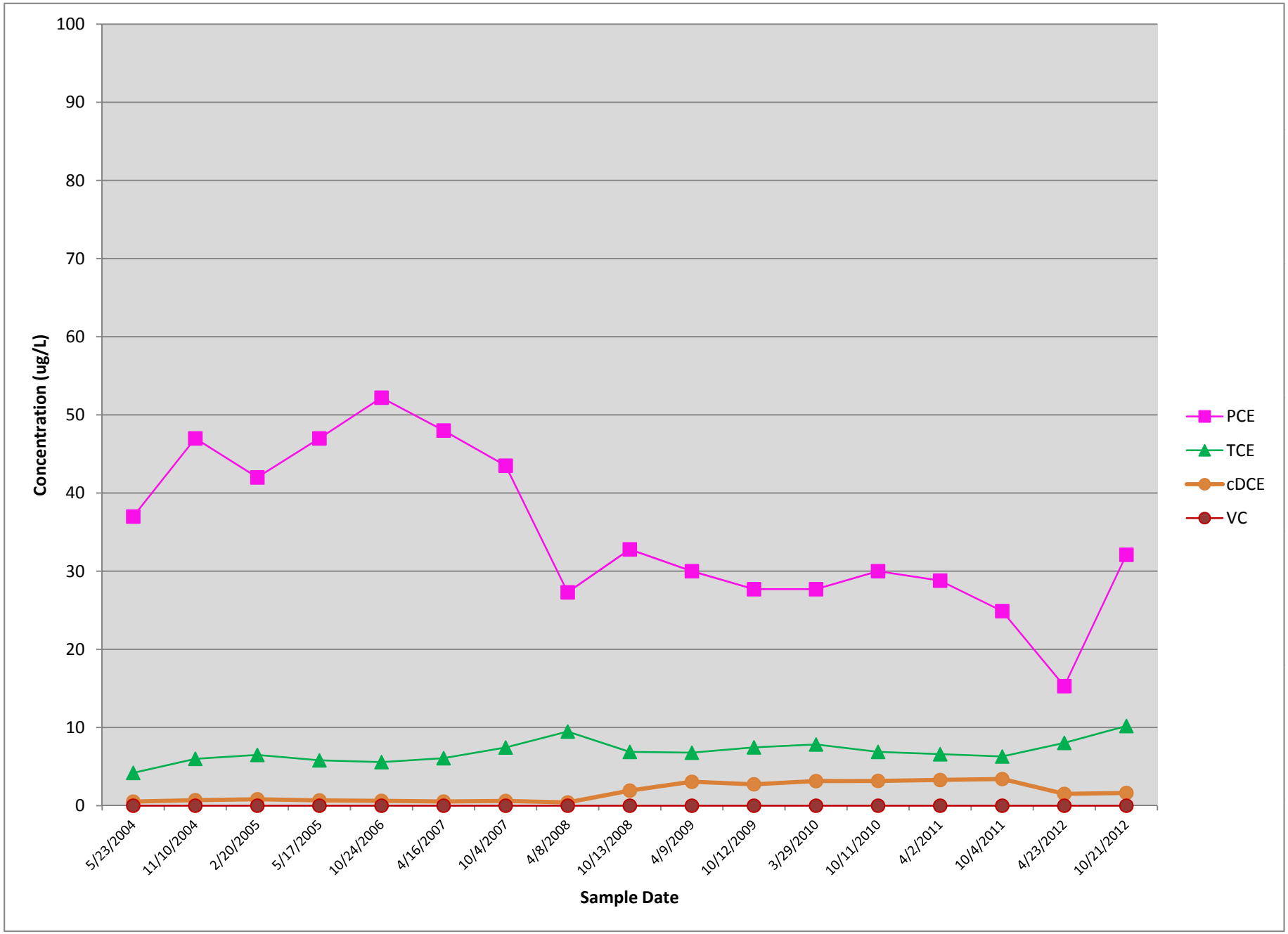
MW-85


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225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
11/30/2001
4/2/2004
11/14/2004
2/22/2005
5/20/2005
8/30/2006
12/8/2006
3/12/2007
5/29/2007
9/11/2007
12/10/2007
3/12/2008
6/16/2008
12/17/2008
3/17/2009
10/12/2009
3/30/2010
10/14/2010
4/3/2011
10/9/2011
4/21/2012
10/19/2012
Sample Date
PCE
TCE
cDCE
CT
VC

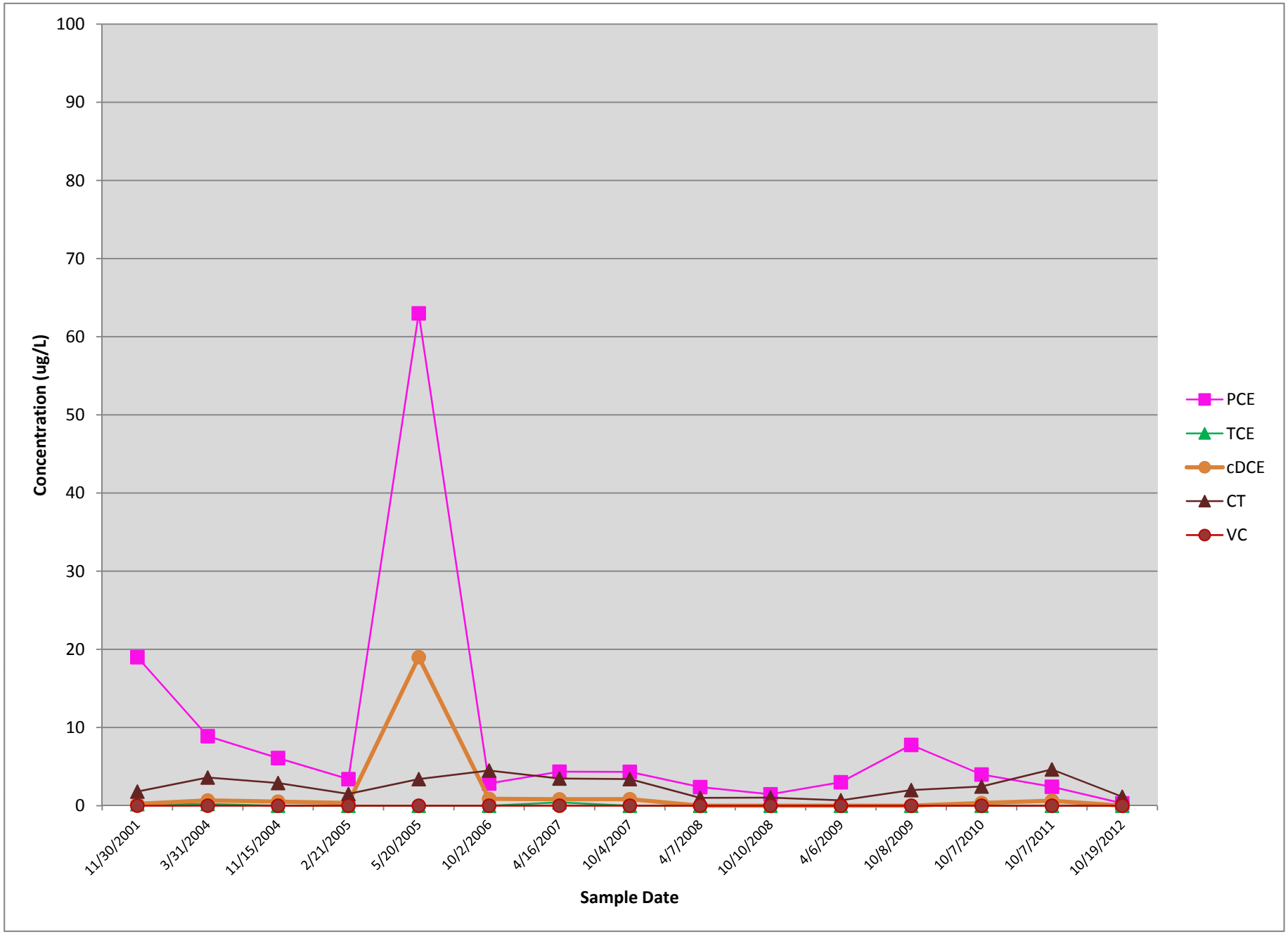
MW-88


100
90
80
70
60
50
40
30
20
10
0
Concentration (ug/L)
11/30/2001
7/8/2002
7/29/2002
9/3/2002
10/7/2002
11/11/2002
12/16/2002
1/20/2003
3/24/2003
4/21/2003
5/19/2003
6/23/2003
7/21/2003
8/18/2003
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10/11/2009
3/30/2010
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3/31/2011
10/2/2011
4/23/2012
10/21/2012
Sample Date
PCE
TCE
cDCE
CT
VC

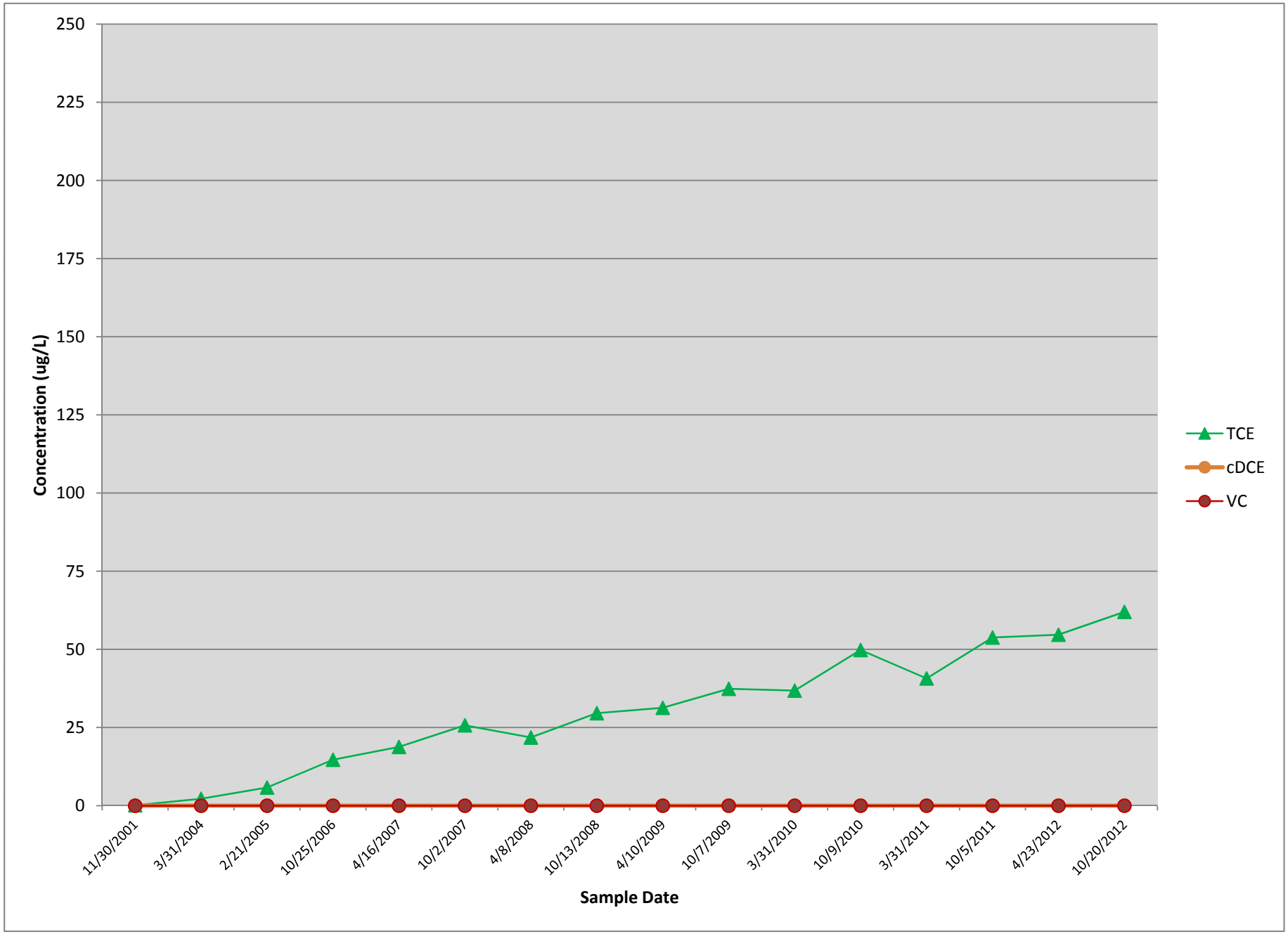
MW-94A


100
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70
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40
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20
10
0
Concentration (ug/L)
5/23/2004
11/10/2004
2/20/2005
5/17/2005
10/24/2006
4/16/2007
10/4/2007
4/8/2008
10/13/2008
4/9/2009
10/12/2009
3/29/2010
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4/2/2011
10/4/2011
4/23/2012
10/21/2012
Sample Date
PCE
TCE
cDCE
VC

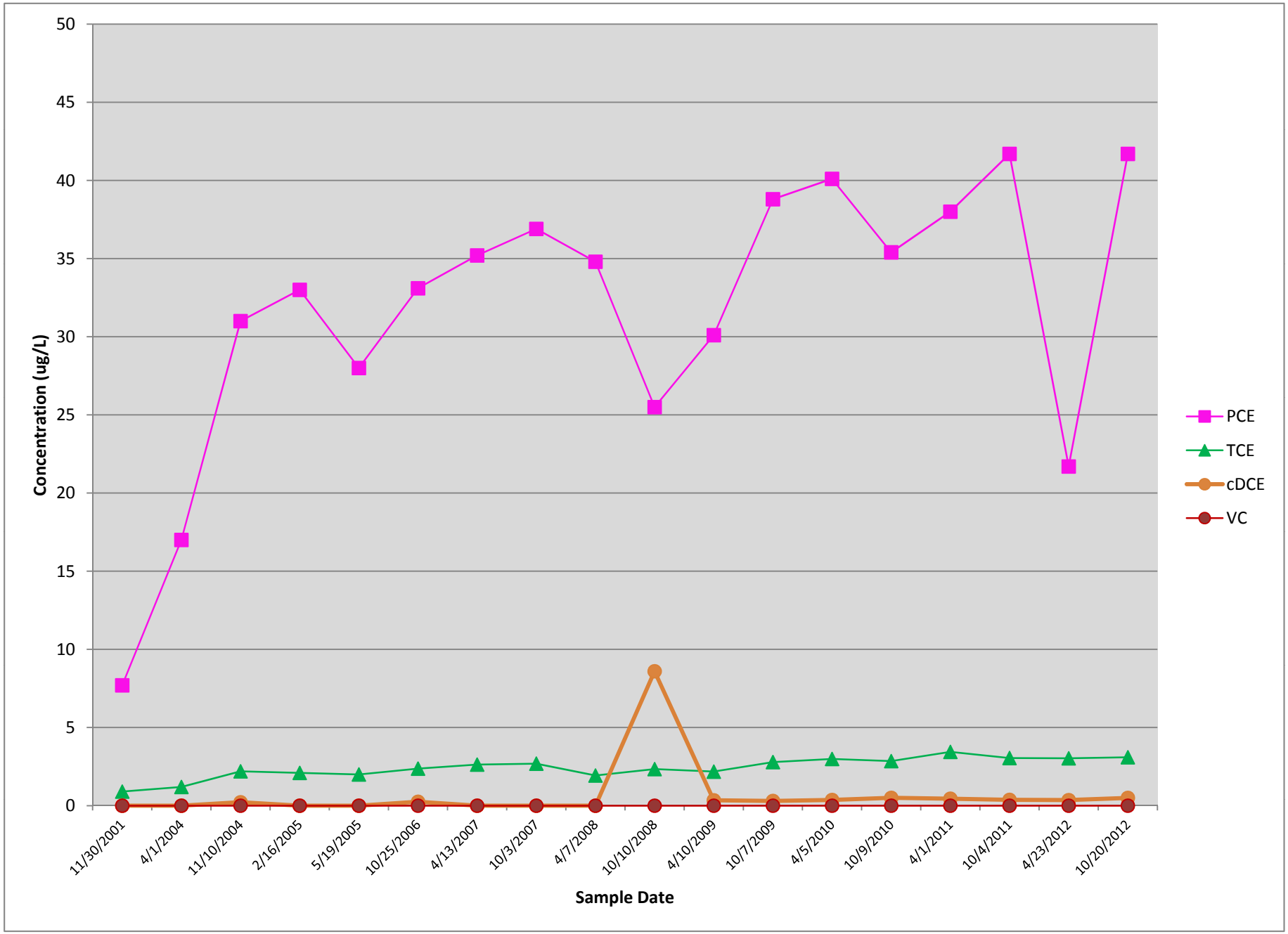
MW-96


100
90
80
70
60
50
40
30
20
10
0
Concentration (ug/L)
11/30/2001
3/31/2004
11/15/2004
2/21/2005
5/20/2005
10/2/2006
4/16/2007
10/4/2007
4/7/2008
10/10/2008
4/6/2009
10/8/2009
10/7/2010
10/7/2011
10/19/2012
Sample Date
PCE
TCE
cDCE
CT
VC

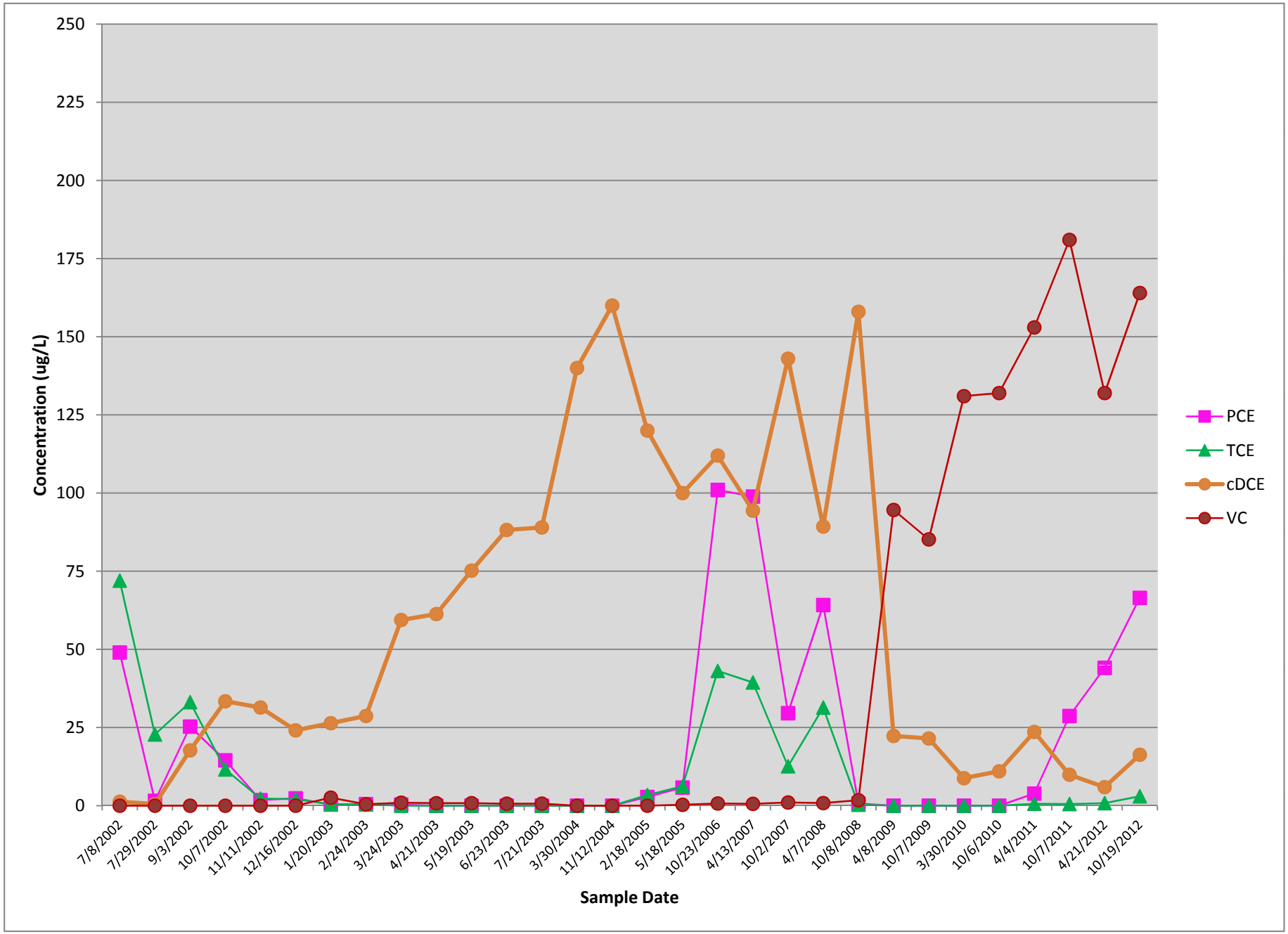
MW-97


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
11/30/2001
3/31/2004
2/21/2005
10/25/2006
4/16/2007
10/2/2007
4/8/2008
10/13/2008
4/10/2009
10/7/2009
3/31/2010
10/9/2010
3/31/2011
10/5/2011
4/23/2012
10/20/2012
Sample Date
TCE
cDCE
VC

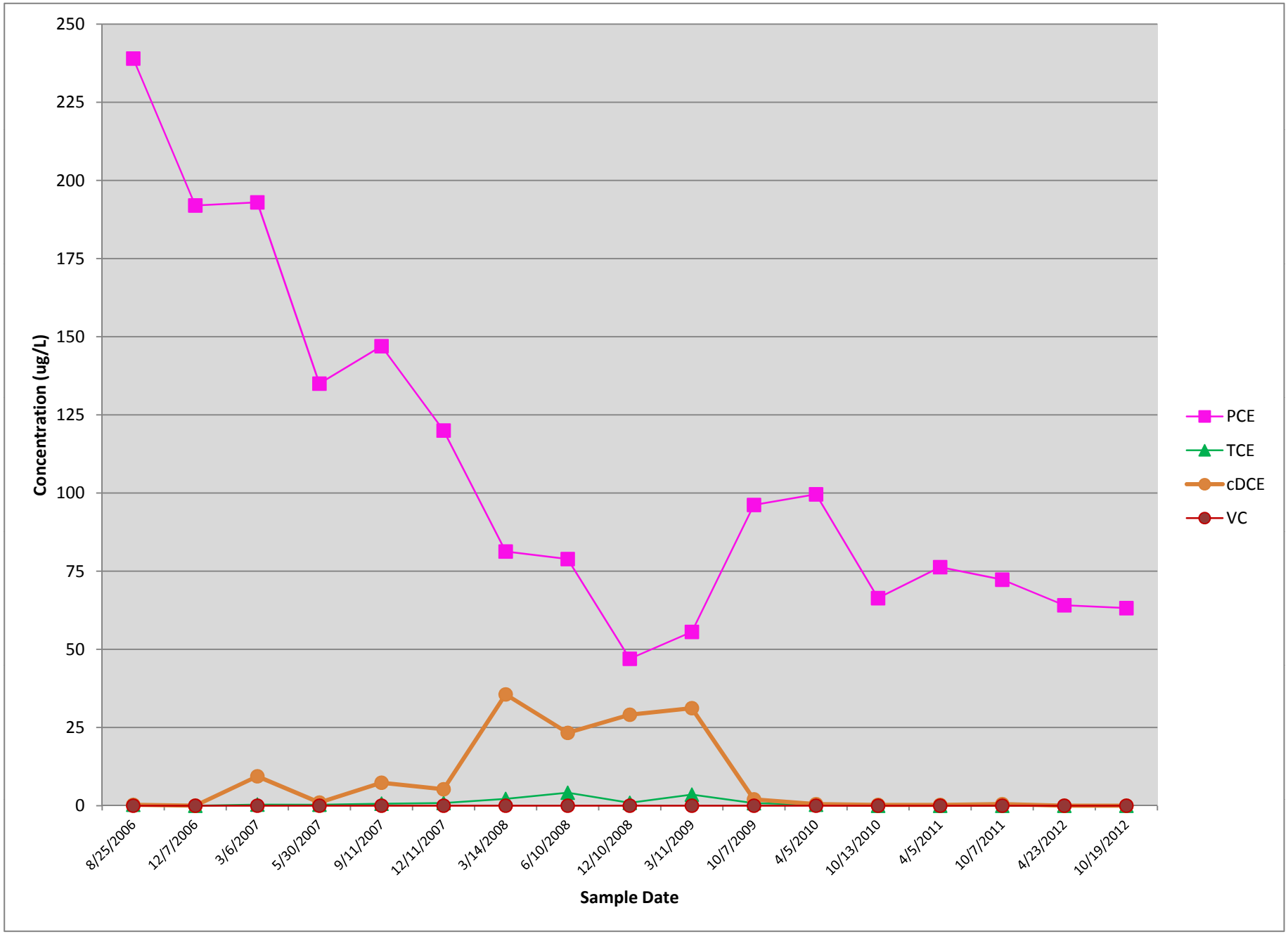
MW-98


50
45
40
35
30
25
20
15
10
5
0
Concentration (ug/L)
11/30/2001
4/1/2004
11/10/2004
2/16/2005
5/19/2005
10/25/2006
4/13/2007
10/3/2007
4/7/2008
10/10/2008
4/10/2009
10/7/2009
4/5/2010
10/9/2010
4/1/2011
10/4/2011
4/23/2012
10/20/2012
Sample Date
PCE
TCE
cDCE
VC

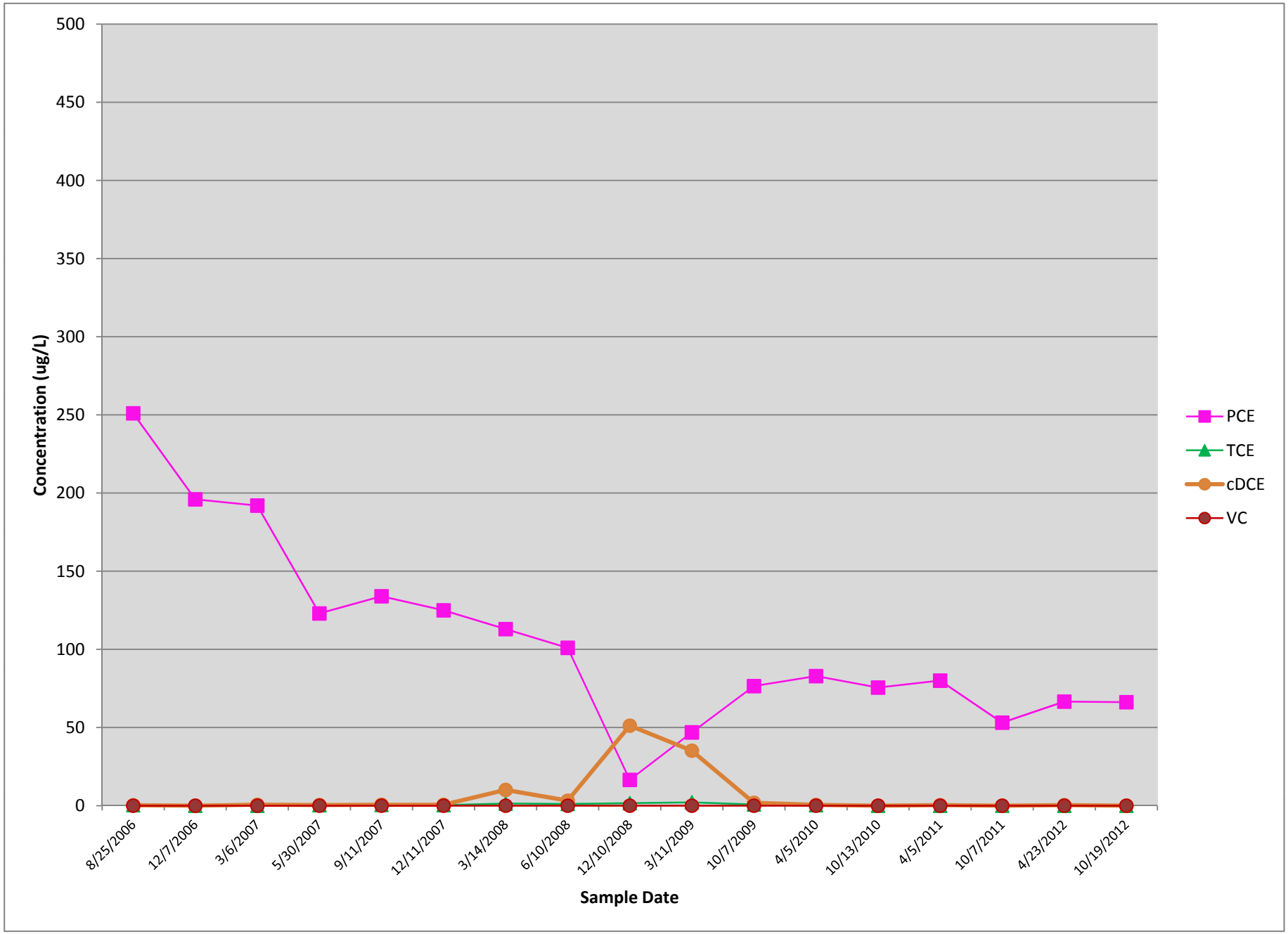
MW-100B


250
225
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125
100
75
50
25
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Concentration (ug/L)
7/8/2002
7/29/2002
9/3/2002
10/7/2002
11/11/2002
12/16/2002
1/20/2003
2/24/2003
3/24/2003
4/21/2003
5/19/2003
6/23/2003
7/21/2003
3/30/2004
11/12/2004
2/18/2005
5/18/2005
10/23/2006
4/13/2007
10/2/2007
4/7/2008
10/8/2008
4/8/2009
10/7/2009
3/30/2010
10/6/2010
4/4/2011
10/7/2011
4/21/2012
10/19/2012
Sample Date
PCE
TCE
cDCE
VC

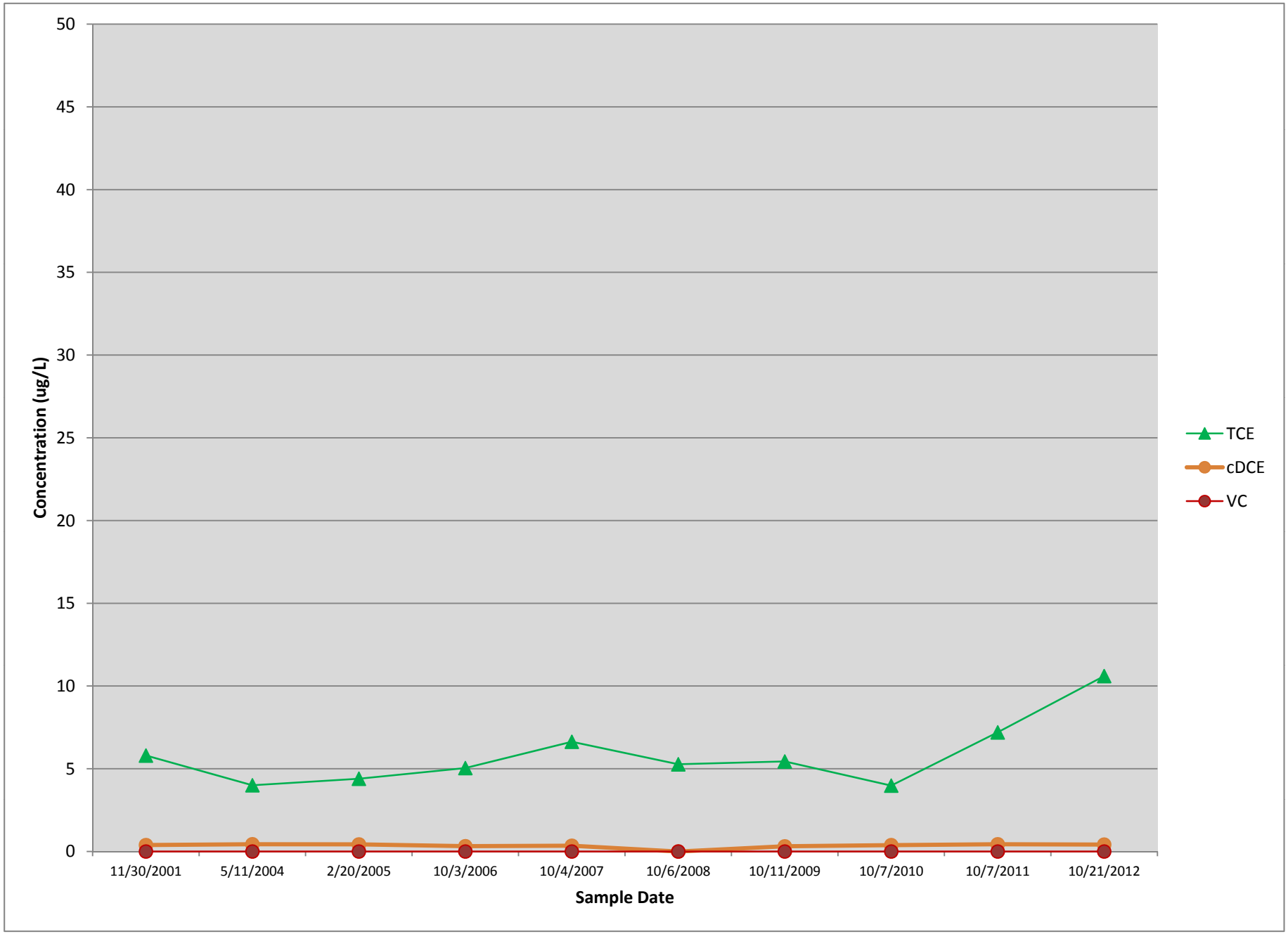
MW-101 BOTTOM



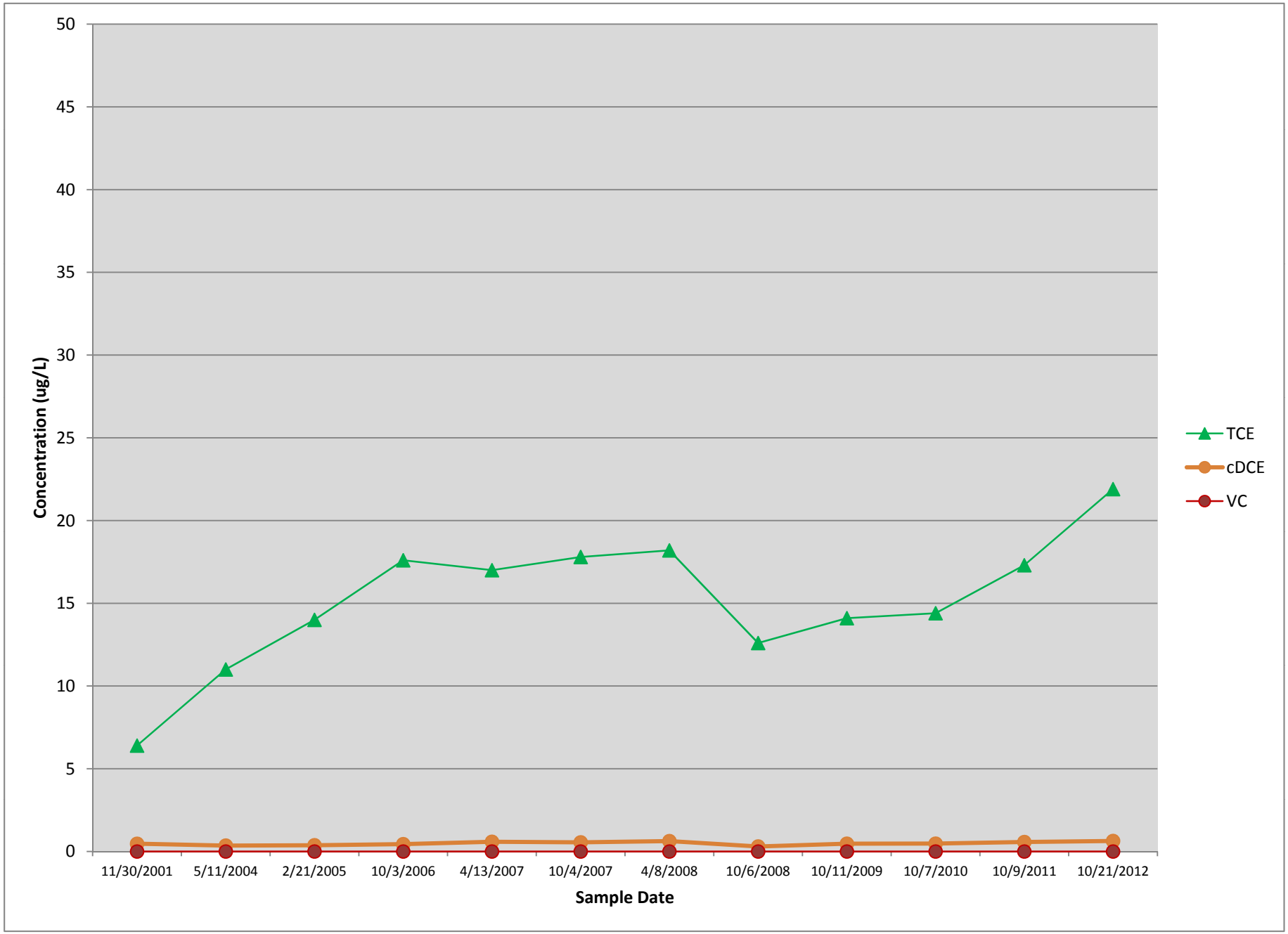
MW-101 TOP


500
450
400
350
300
250
200
150
100
50
0
Concentration (ug/L)
8/25/2006
12/7/2006
3/6/2007
5/30/2007
9/11/2007
12/11/2007
3/14/2008
6/10/2008
12/10/2008
3/11/2009
10/7/2009
4/5/2010
10/13/2010
4/5/2011
10/7/2011
4/23/2012
10/19/2012
Sample Date
PCE
TCE
cDCE
VC

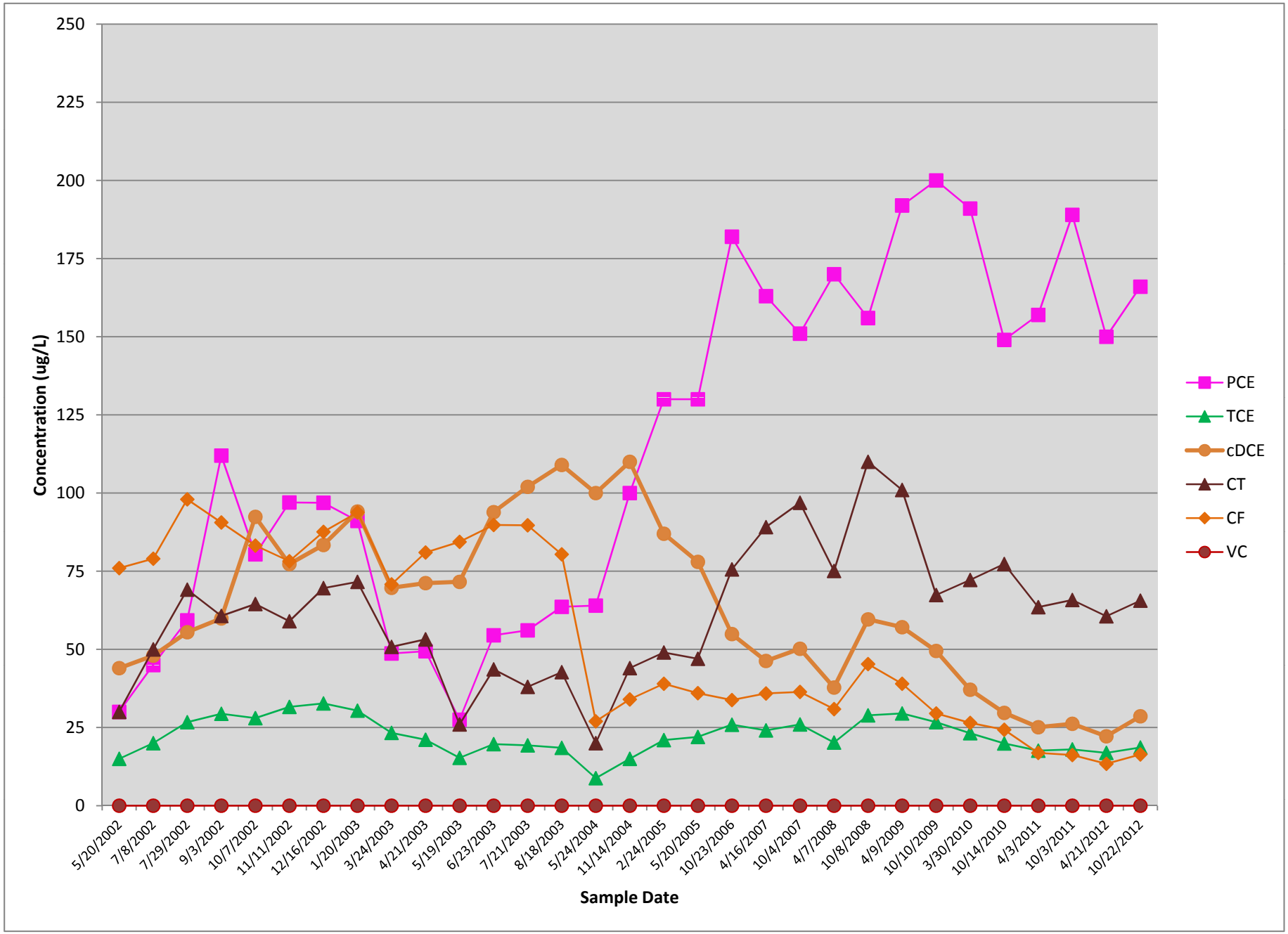
MW-103


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45
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35
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15
10
5
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Concentration (ug/L)
11/30/2001
5/11/2004
2/20/2005
10/3/2006
10/4/2007
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10/11/2009
10/7/2010
10/7/2011
10/21/2012
Sample Date
TCE
cDCE
VC

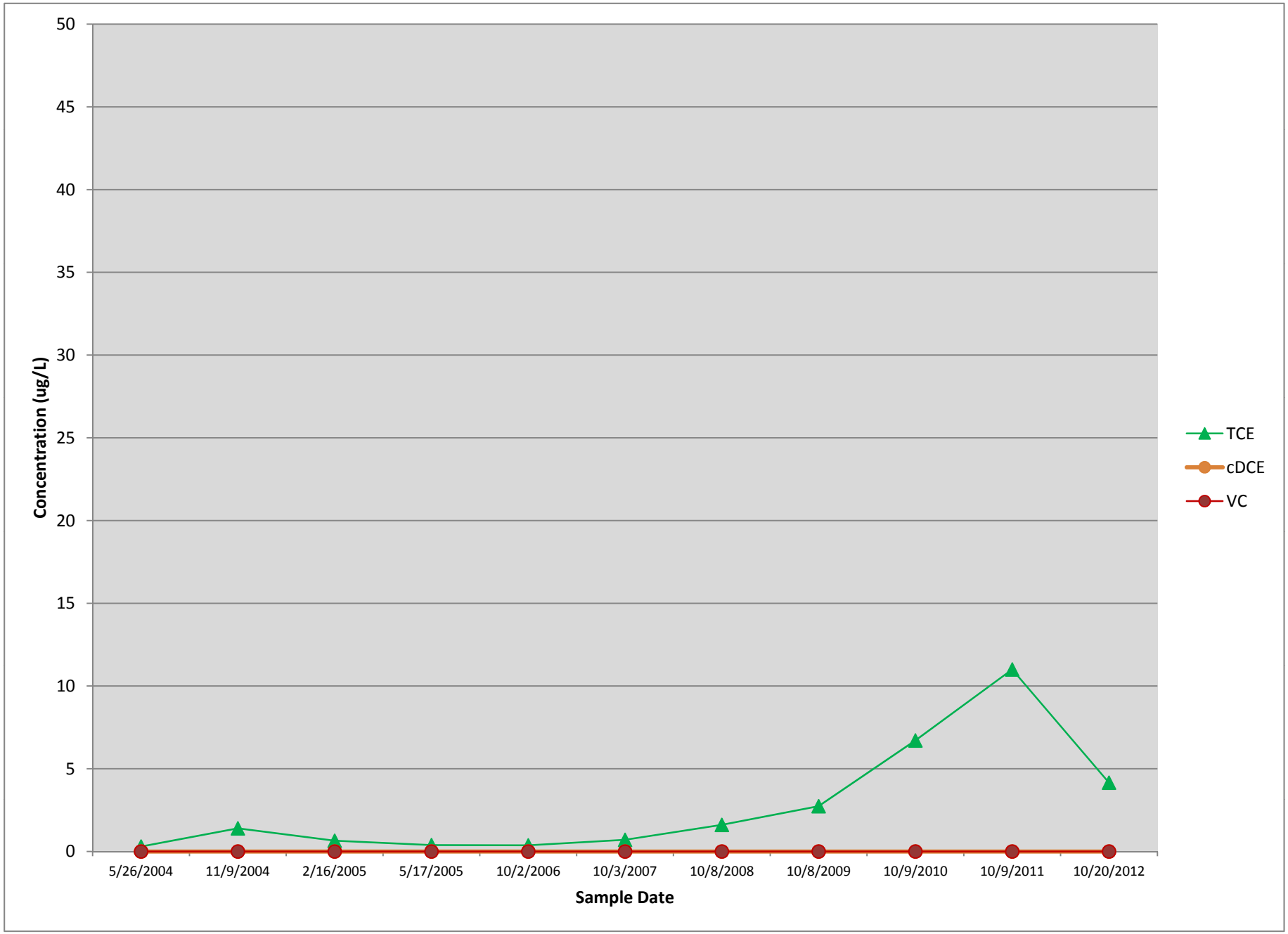
MW-104


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45
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35
30
25
20
15
10
5
0
Concentration (ug/L)
11/30/2001
5/11/2004
2/21/2005
10/3/2006
4/13/2007
10/4/2007
4/8/2008
10/6/2008
10/11/2009
10/7/2010
10/9/2011
10/21/2012
Sample Date
TCE
cDCE
VC

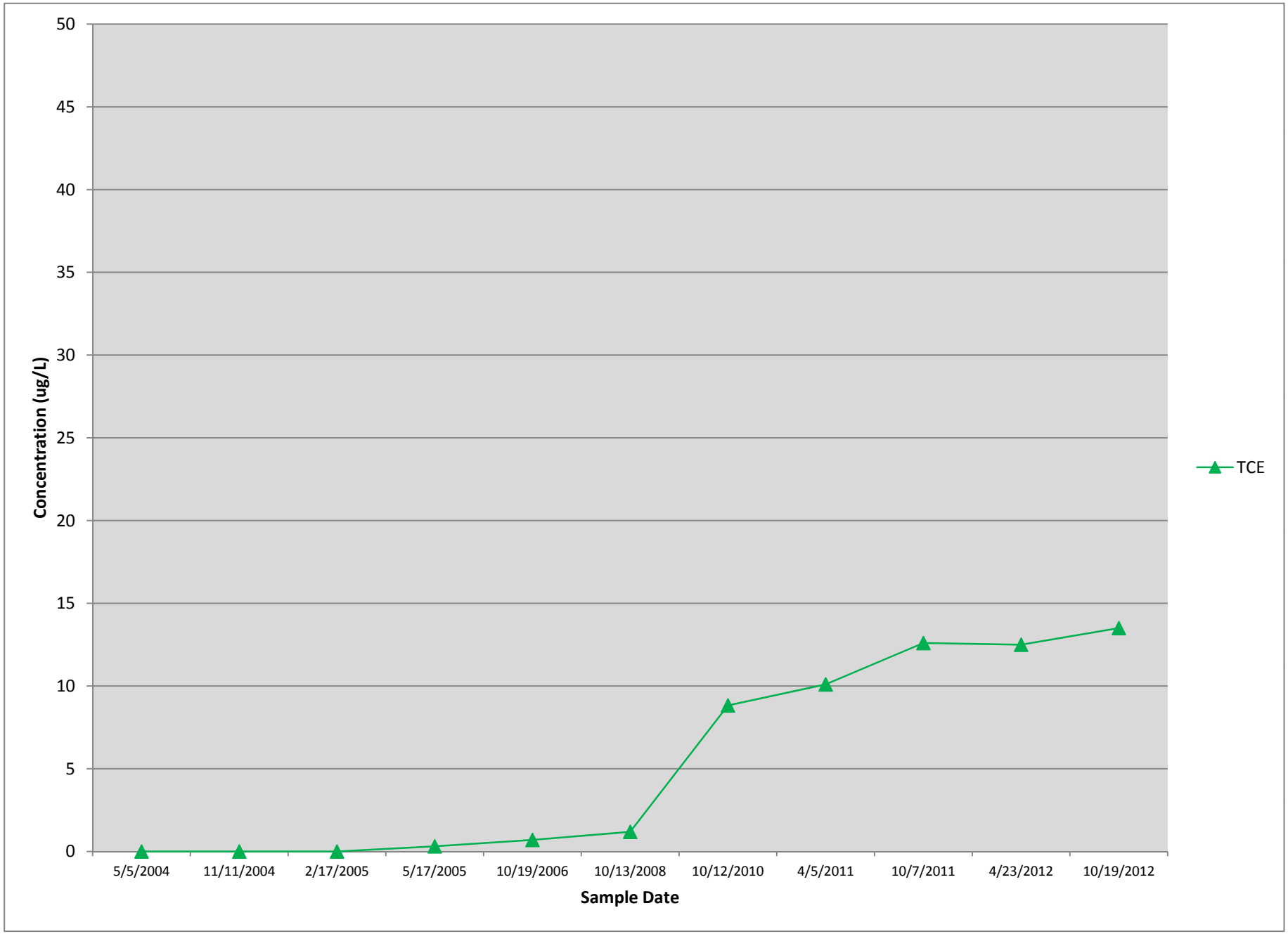
MW-113


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225
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175
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125
100
75
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25
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Concentration (ug/L)
5/20/2002
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9/3/2002
10/7/2002
11/11/2002
12/16/2002
1/20/2003
3/24/2003
4/21/2003
5/19/2003
6/23/2003
7/21/2003
8/18/2003
5/24/2004
11/14/2004
2/24/2005
5/20/2005
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4/7/2008
10/8/2008
4/9/2009
10/10/2009
3/30/2010
10/14/2010
4/3/2011
10/3/2011
4/21/2012
10/22/2012
Sample Date
PCE
TCE
cDCE
CT
CF
VC

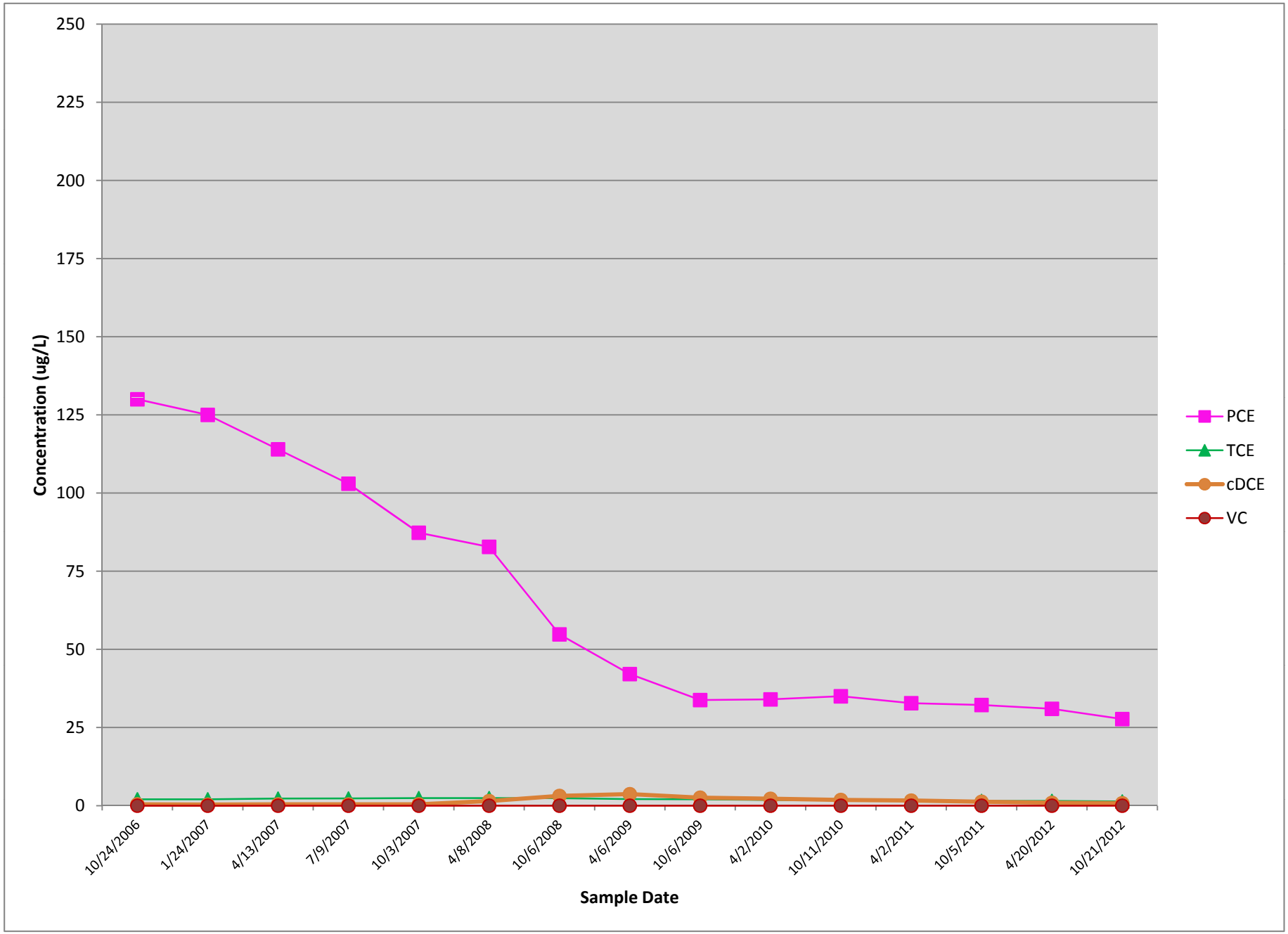
MW-142


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35
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20
15
10
5
0
Concentration (ug/L)
5/26/2004
11/9/2004
2/16/2005
5/17/2005
10/2/2006
10/3/2007
10/8/2008
10/8/2009
10/9/2010
10/9/2011
10/20/2012
Sample Date
TCE
cDCE
VC

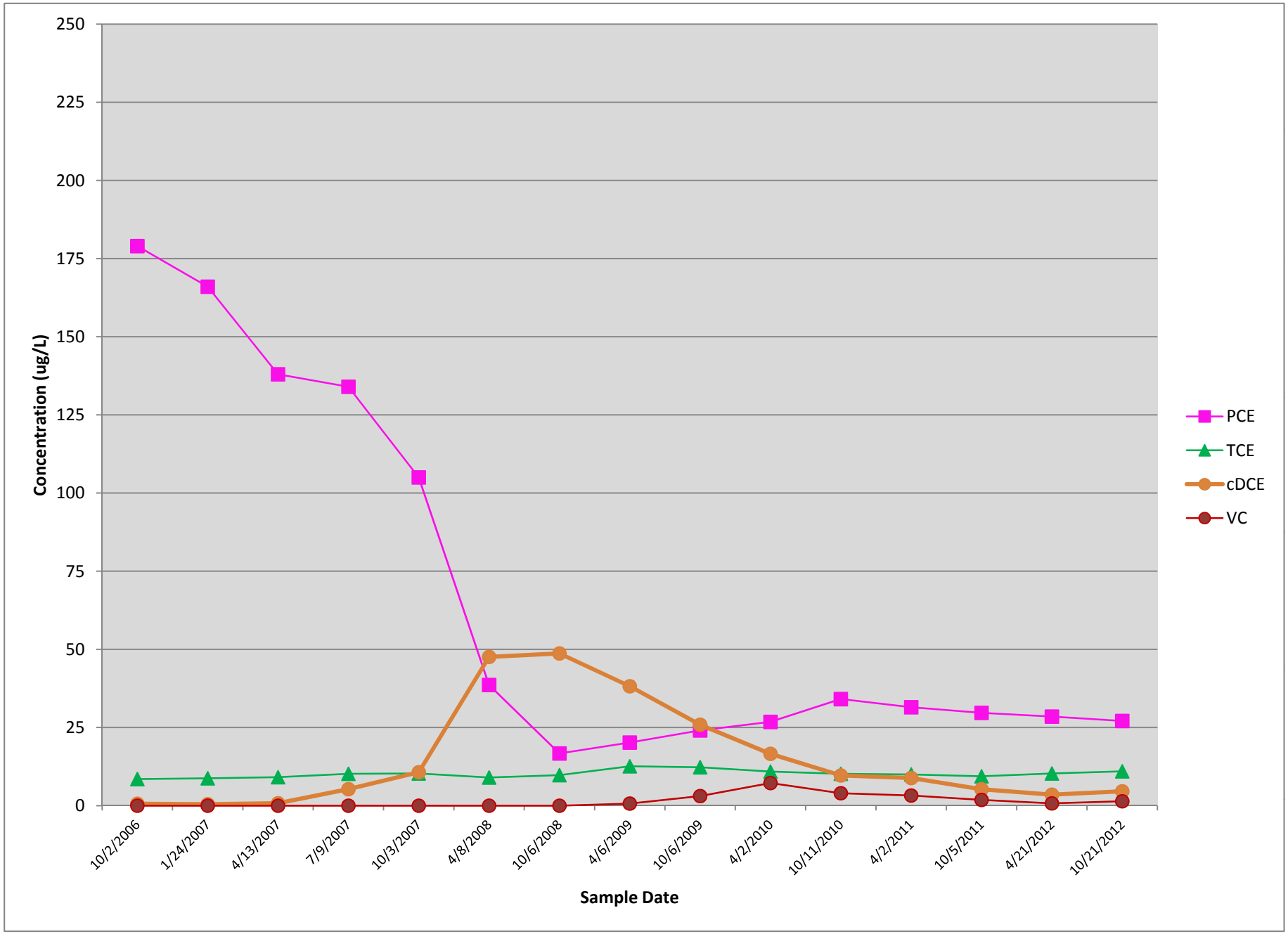
MW-143


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15
10
5
0
Concentration (ug/L)
5/5/2004
11/11/2004
2/17/2005
5/17/2005
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10/12/2010
4/5/2011
10/7/2011
4/23/2012
10/19/2012
Sample Date
TCE

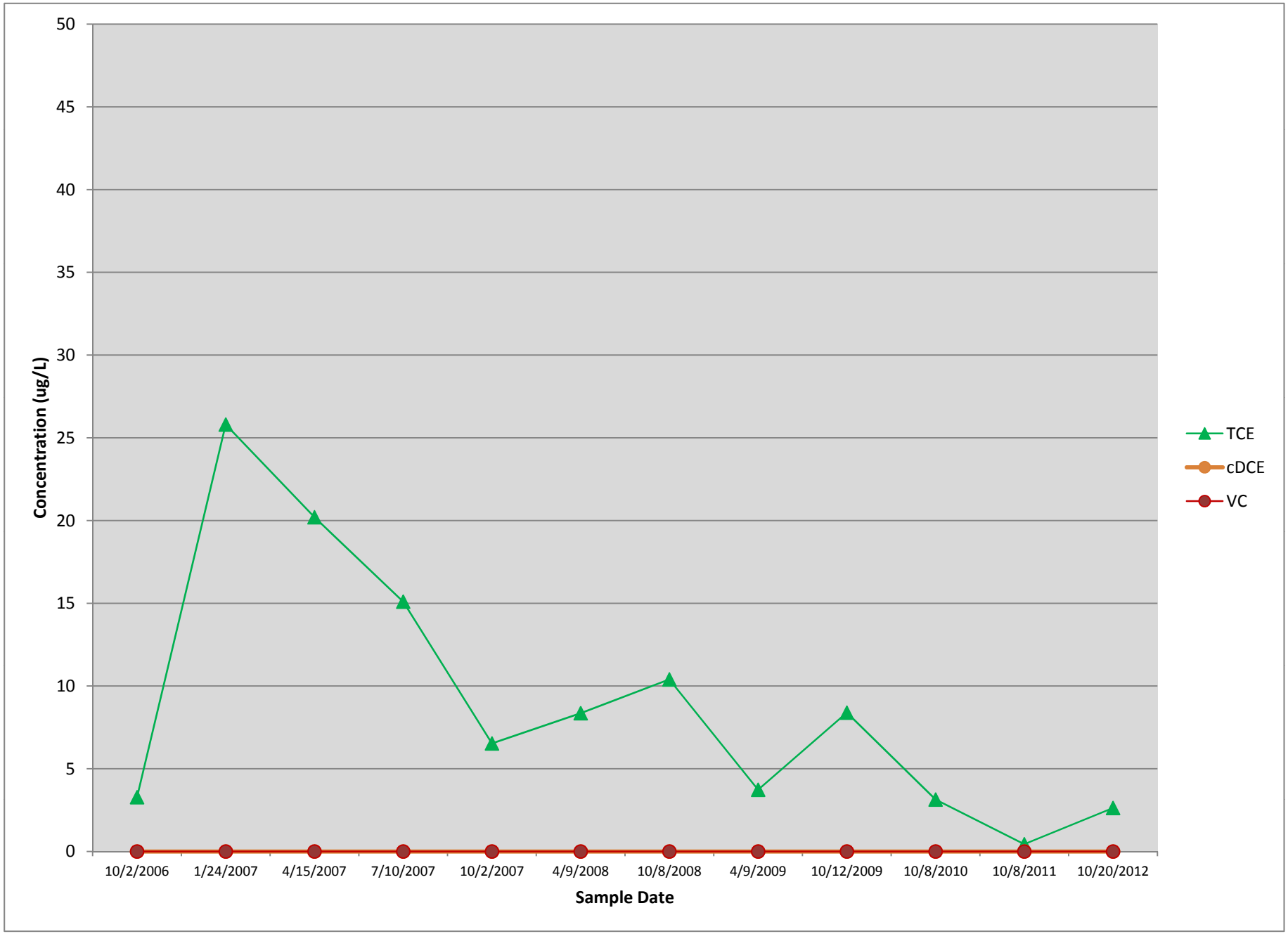
MW-197A


250
225
200
175
150
125
100
75
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25
0
Concentration (ug/L)
10/24/2006
1/24/2007
4/13/2007
7/9/2007
10/3/2007
4/8/2008
10/6/2008
4/6/2009
10/6/2009
4/2/2010
10/11/2010
4/2/2011
10/5/2011
4/20/2012
10/21/2012
Sample Date
PCE
TCE
cDCE
VC

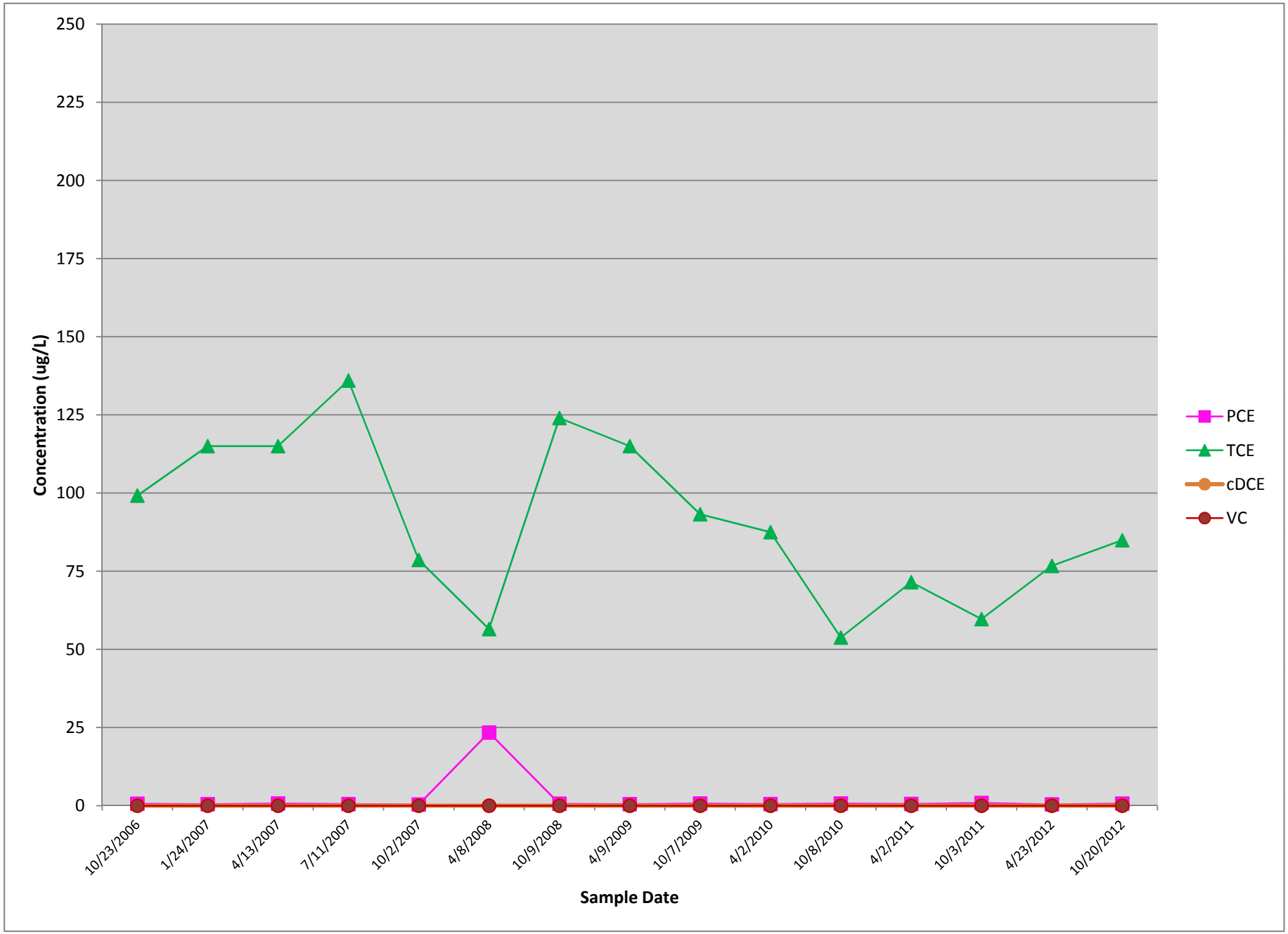
MW-197B


250
225
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175
150
125
100
75
50
25
0
Concentration (ug/L)
10/2/2006
1/24/2007
4/13/2007
7/9/2007
10/3/2007
4/8/2008
10/6/2008
4/6/2009
10/6/2009
4/2/2010
10/11/2010
4/2/2011
10/5/2011
4/21/2012
10/21/2012
Sample Date
PCE
TCE
cDCE
VC

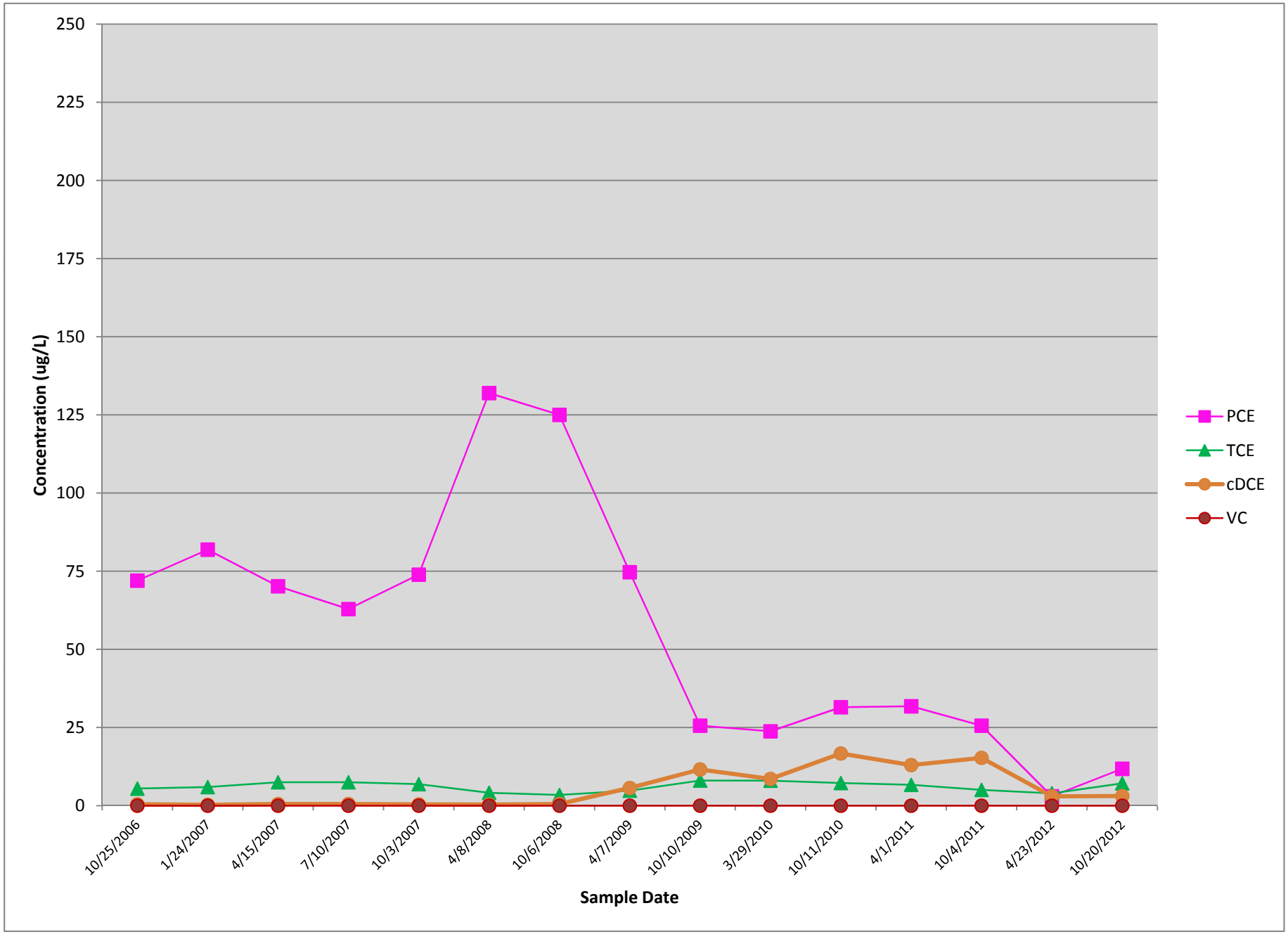
MW-198


50
45
40
35
30
25
20
15
10
5
0
Concentration (ug/L)
10/2/2006
1/24/2007
4/15/2007
7/10/2007
10/2/2007
4/9/2008
10/8/2008
4/9/2009
10/12/2009
10/8/2010
10/8/2011
10/20/2012
Sample Date
TCE
cDCE
VC

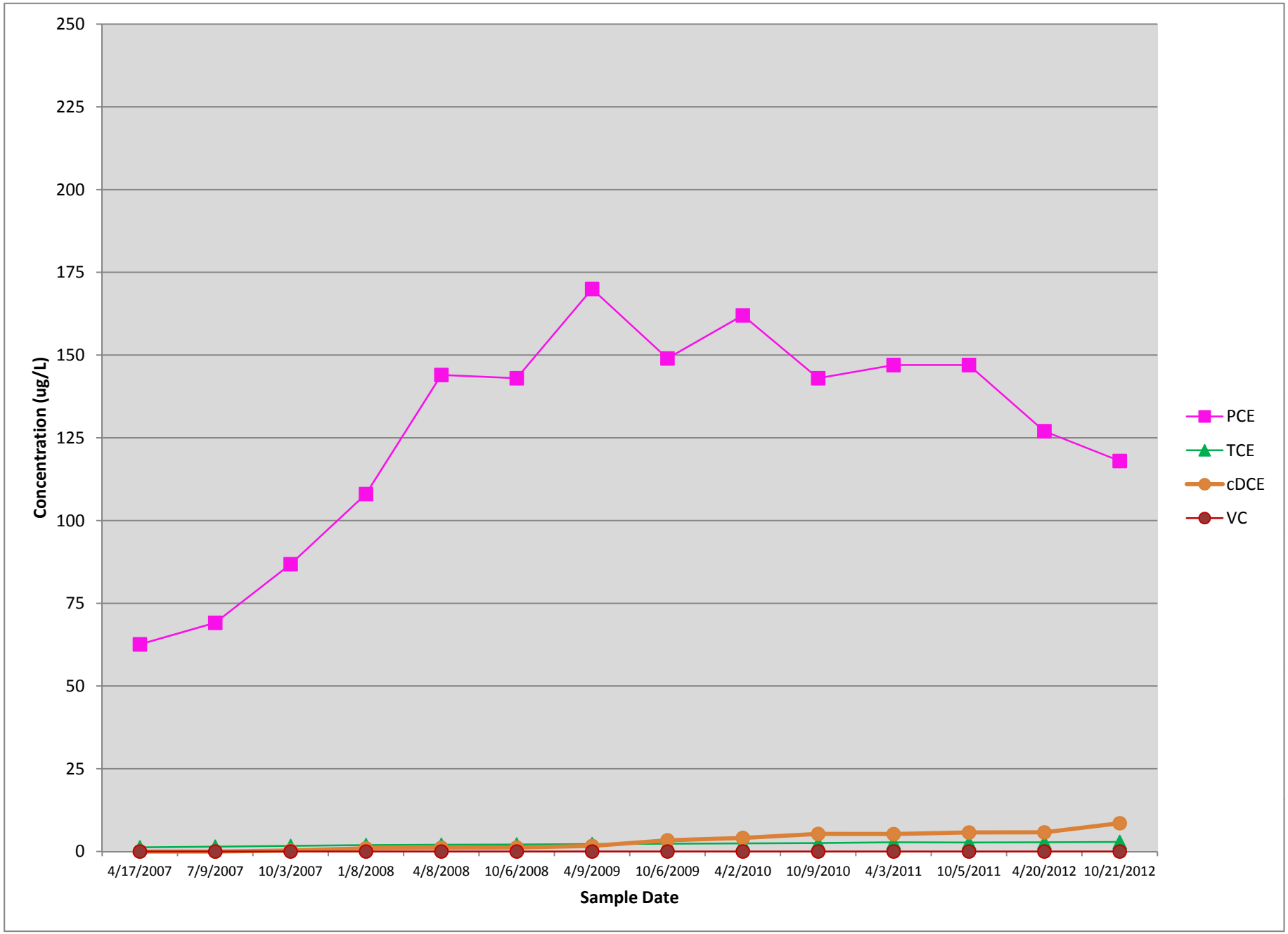
MW-199B


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
10/23/2006
1/24/2007
4/13/2007
7/11/2007
10/2/2007
4/8/2008
10/9/2008
4/9/2009
10/7/2009
4/2/2010
10/8/2010
4/2/2011
10/3/2011
4/23/2012
10/20/2012
Sample Date
PCE
TCE
cDCE
VC

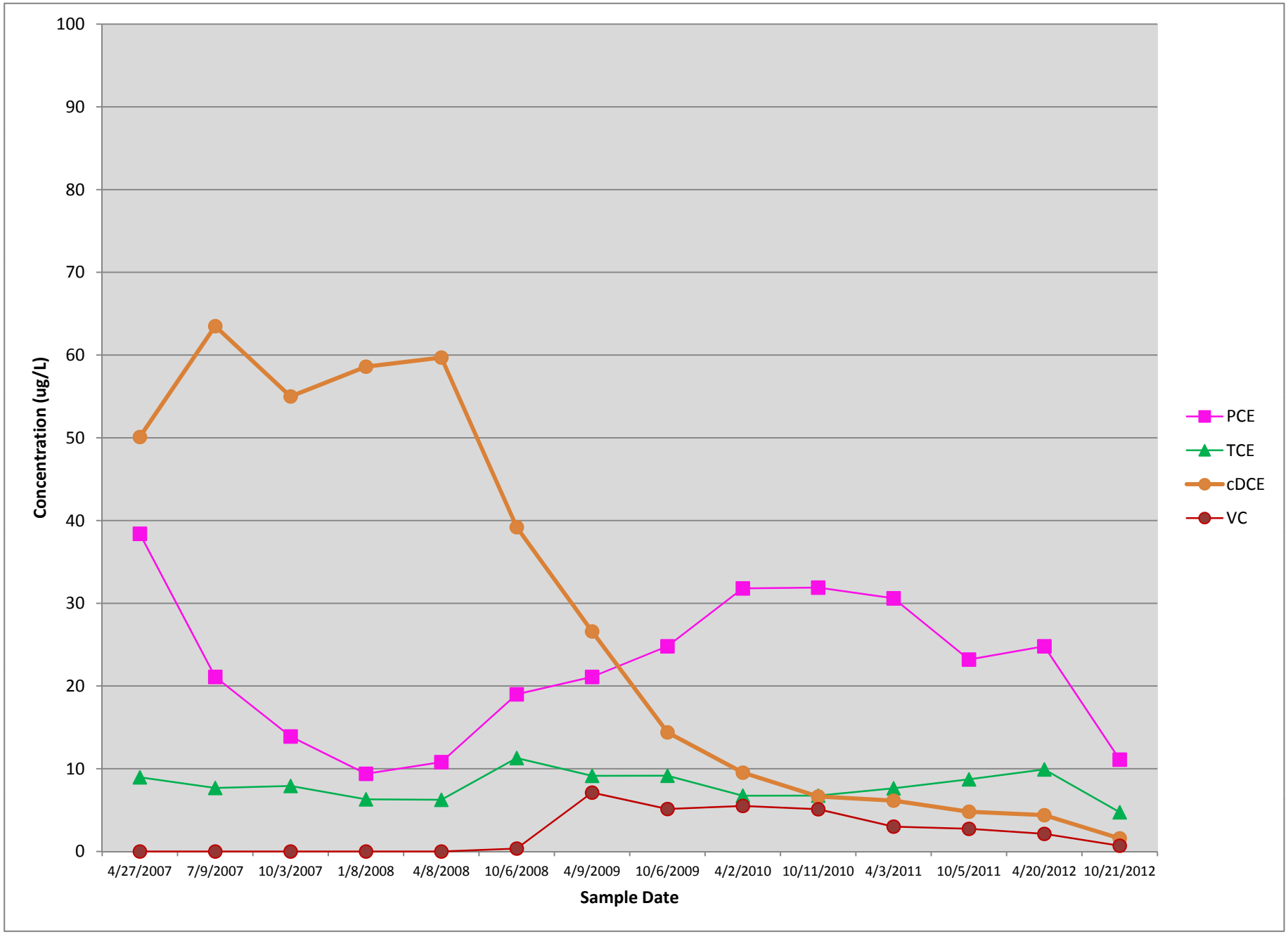
MW-200


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
10/25/2006
1/24/2007
4/15/2007
7/10/2007
10/3/2007
4/8/2008
10/6/2008
4/7/2009
10/10/2009
3/29/2010
10/11/2010
4/1/2011
10/4/2011
4/23/2012
10/20/2012
Sample Date
PCE
TCE
cDCE
VC

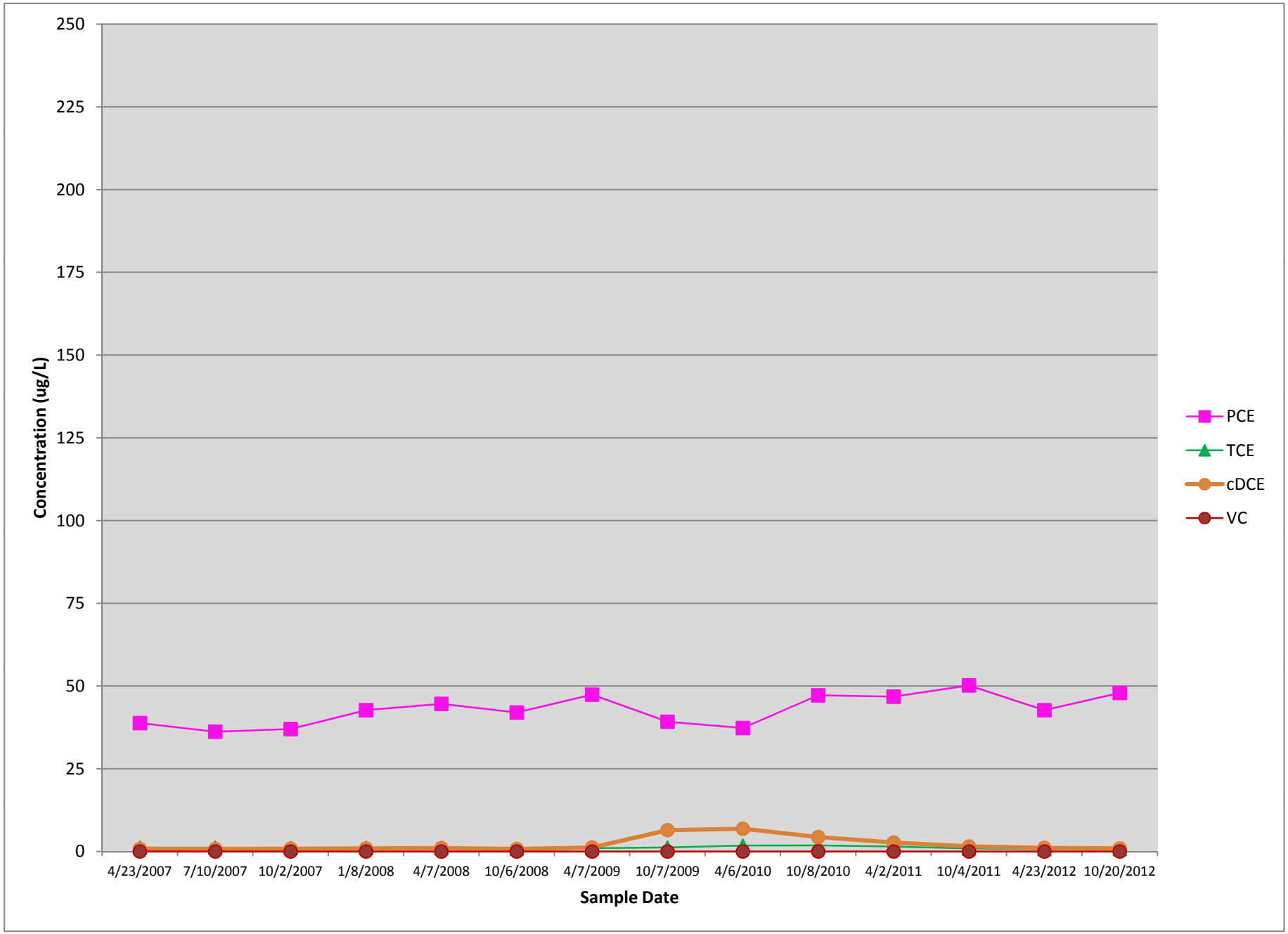
MW-203A


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
4/17/2007
7/9/2007
10/3/2007
1/8/2008
4/8/2008
10/6/2008
4/9/2009
10/6/2009
4/2/2010
10/9/2010
4/3/2011
10/5/2011
4/20/2012
10/21/2012
Sample Date
PCE
TCE
cDCE
VC

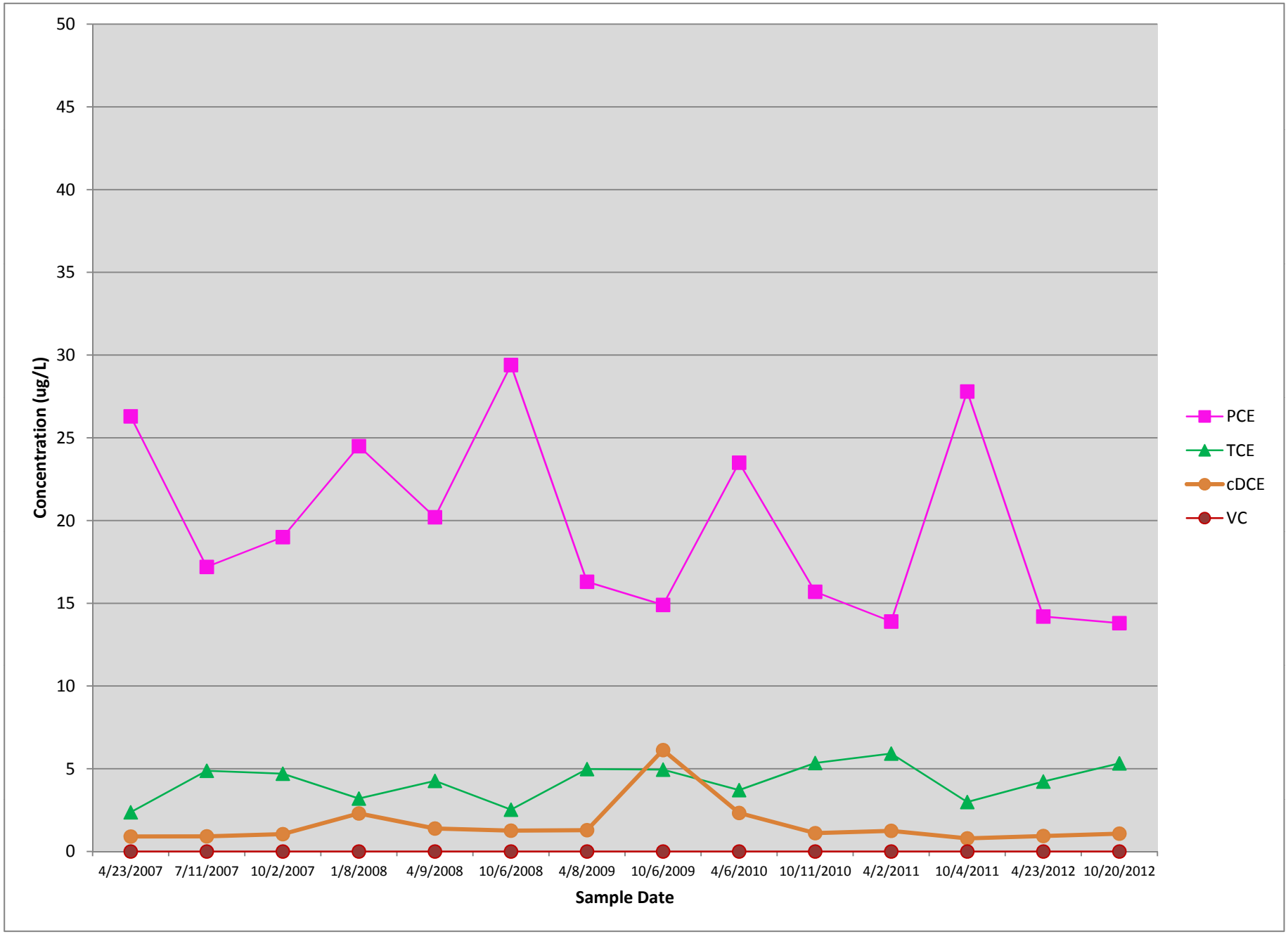
MW-203B


100
90
80
70
60
50
40
30
20
10
0
Concentration (ug/L)
4/27/2007
7/9/2007
10/3/2007
1/8/2008
4/8/2008
10/6/2008
4/9/2009
10/6/2009
4/2/2010
10/11/2010
4/3/2011
10/5/2011
4/20/2012
10/21/2012
Sample Date
PCE
TCE
cDCE
VC

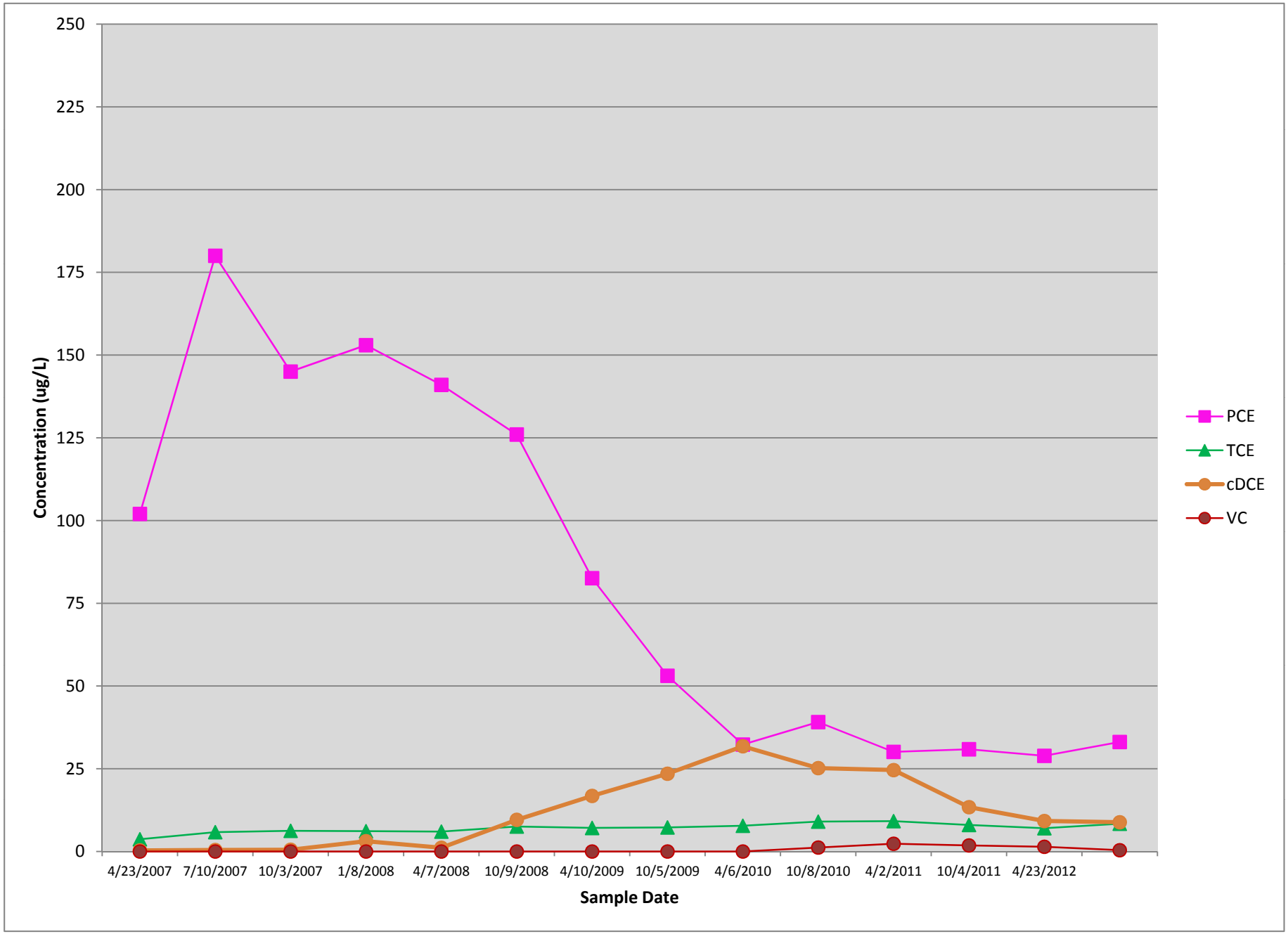
MW-204A


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
4/23/2007
7/10/2007
10/2/2007
1/8/2008
4/7/2008
10/6/2008
4/7/2009
10/7/2009
4/6/2010
10/8/2010
4/2/2011
10/4/2011
4/23/2012
10/20/2012
Sample Date
PCE
TCE
cDCE
VC

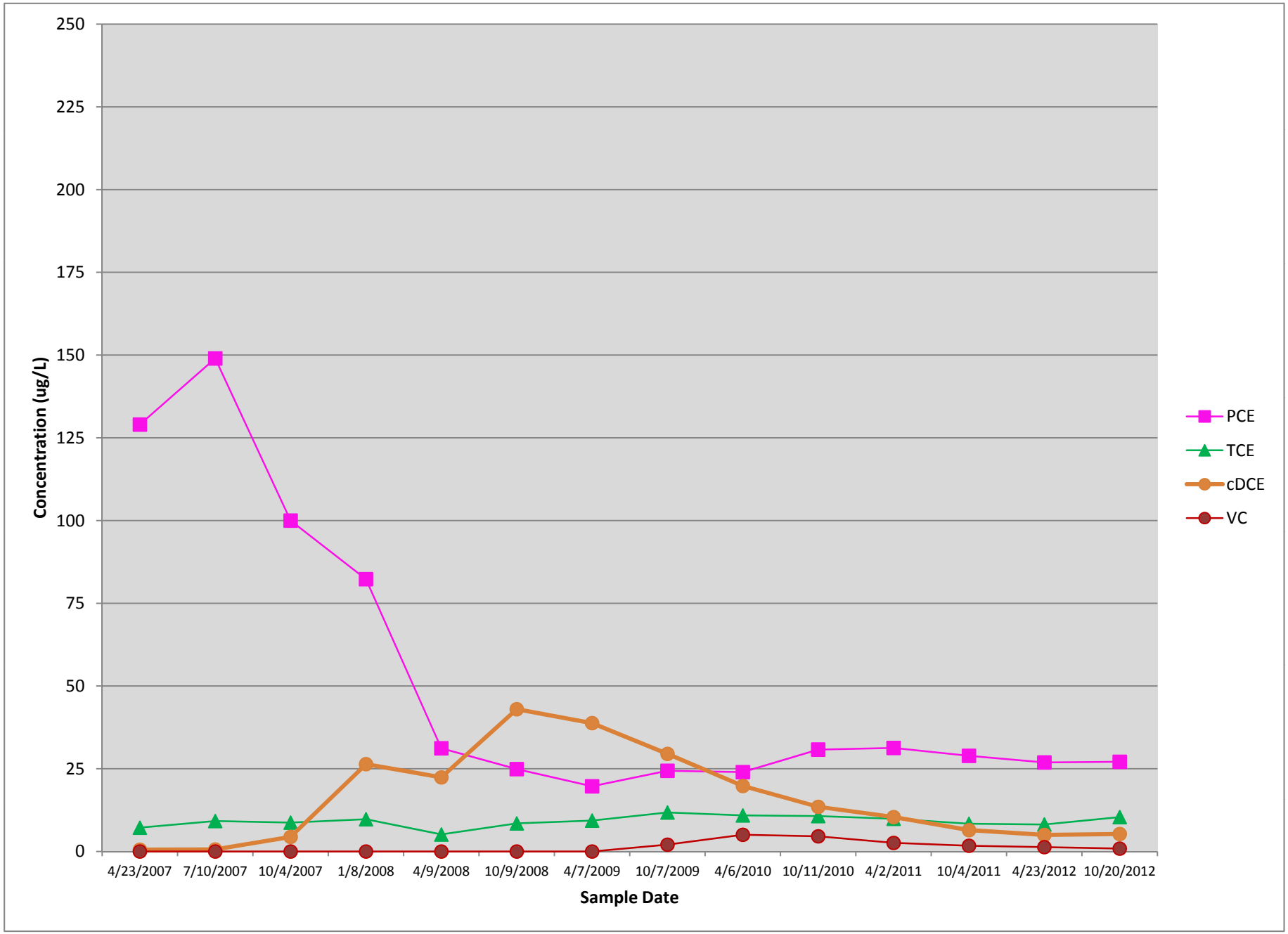
MW-204B


50
45
40
35
30
25
20
15
10
5
0
Concentration (ug/L)
4/23/2007
7/11/2007
10/2/2007
1/8/2008
4/9/2008
10/6/2008
4/8/2009
10/6/2009
4/6/2010
10/11/2010
4/2/2011
10/4/2011
4/23/2012
10/20/2012
Sample Date
PCE
TCE
cDCE
VC

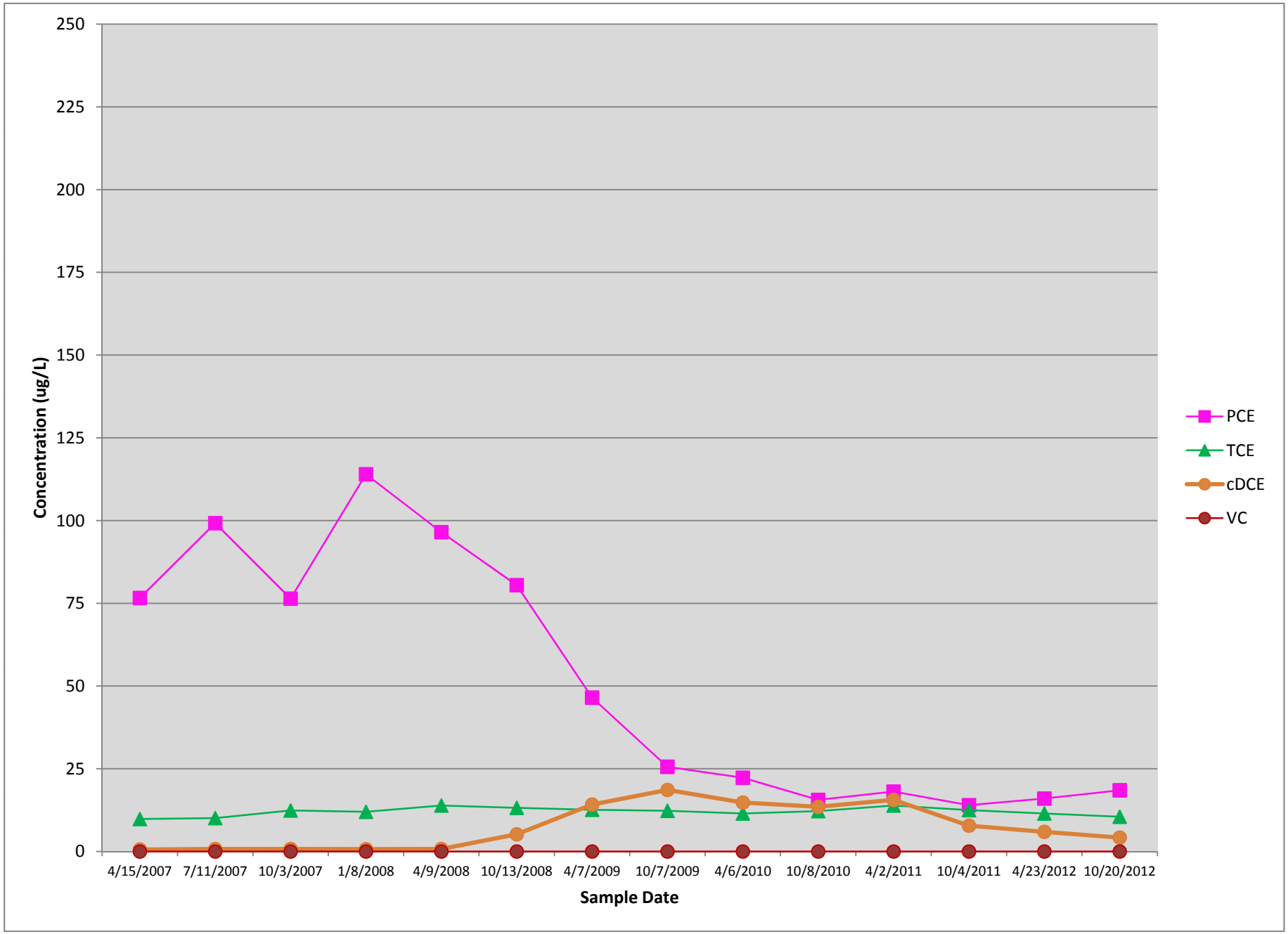
MW-205A


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
4/23/2007
7/10/2007
10/3/2007
1/8/2008
4/7/2008
10/9/2008
4/10/2009
10/5/2009
4/6/2010
10/8/2010
4/2/2011
10/4/2011
4/23/2012
Sample Date
PCE
TCE
cDCE
VC

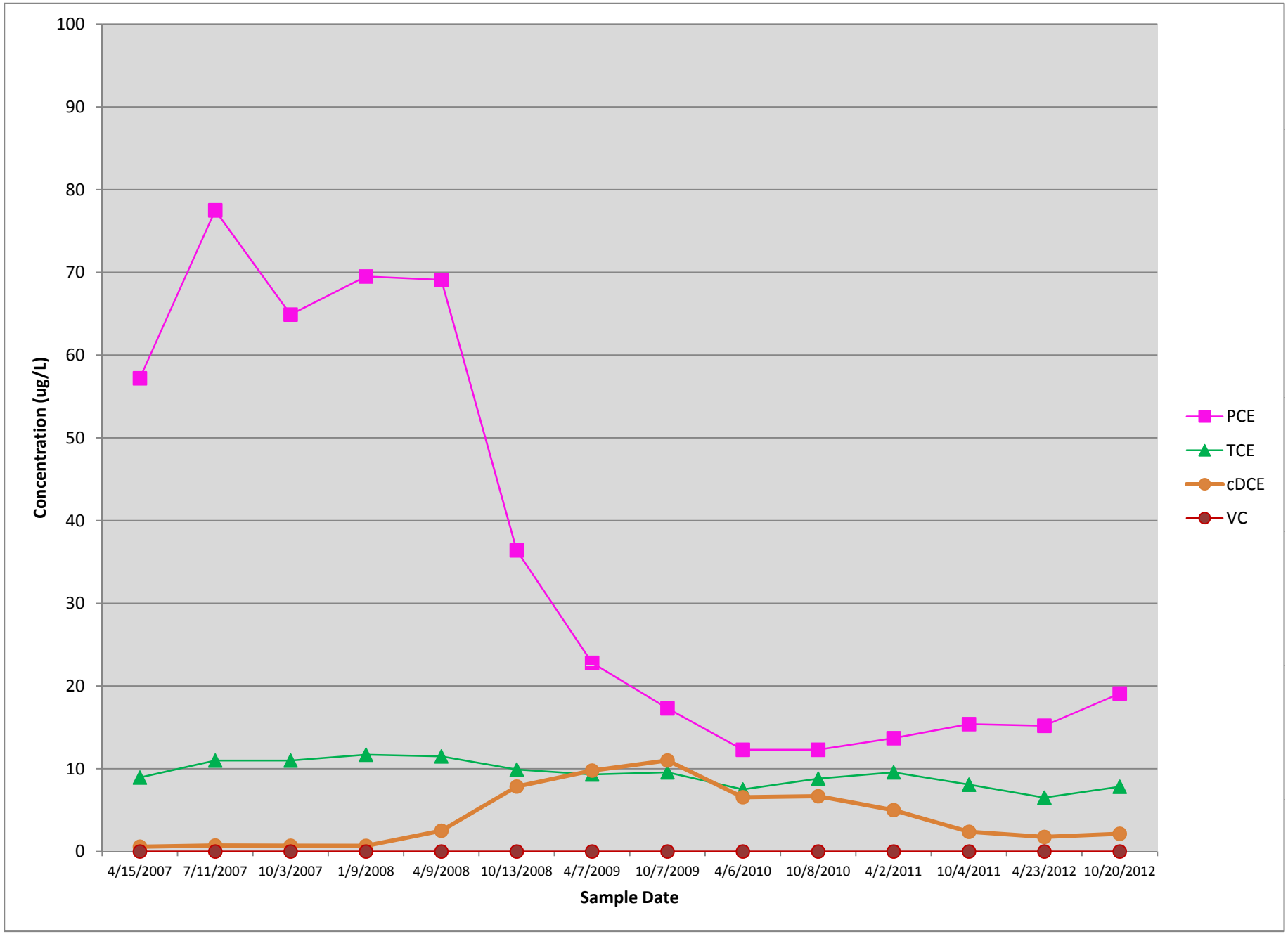
MW-205B


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
4/23/2007
7/10/2007
10/4/2007
1/8/2008
4/9/2008
10/9/2008
4/7/2009
10/7/2009
4/6/2010
10/11/2010
4/2/2011
10/4/2011
4/23/2012
10/20/2012
Sample Date
PCE
TCE
cDCE
VC

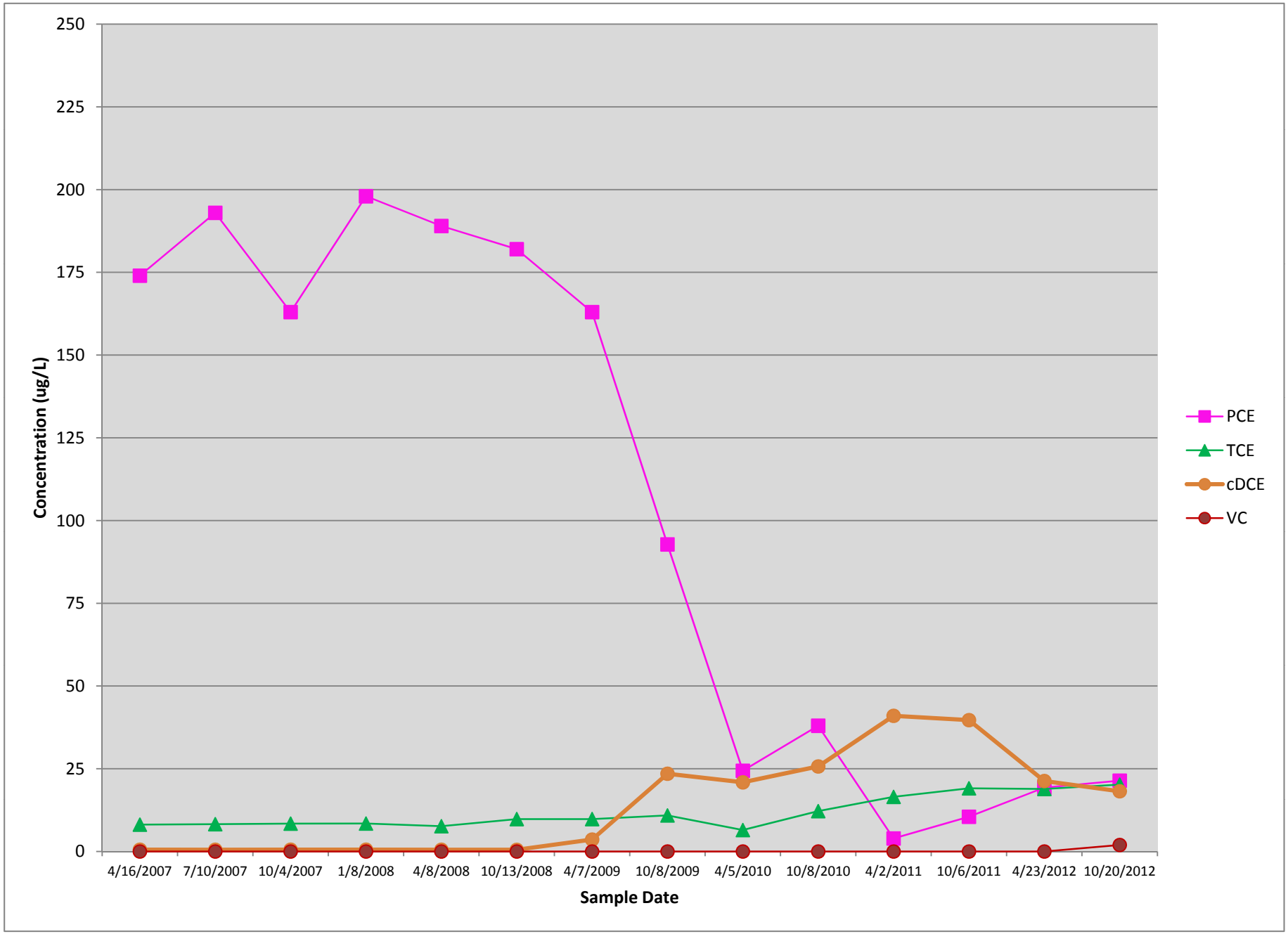
MW-206A


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
4/15/2007
7/11/2007
10/3/2007
1/8/2008
4/9/2008
10/13/2008
4/7/2009
10/7/2009
4/6/2010
10/8/2010
4/2/2011
10/4/2011
4/23/2012
10/20/2012
Sample Date
PCE
TCE
cDCE
VC

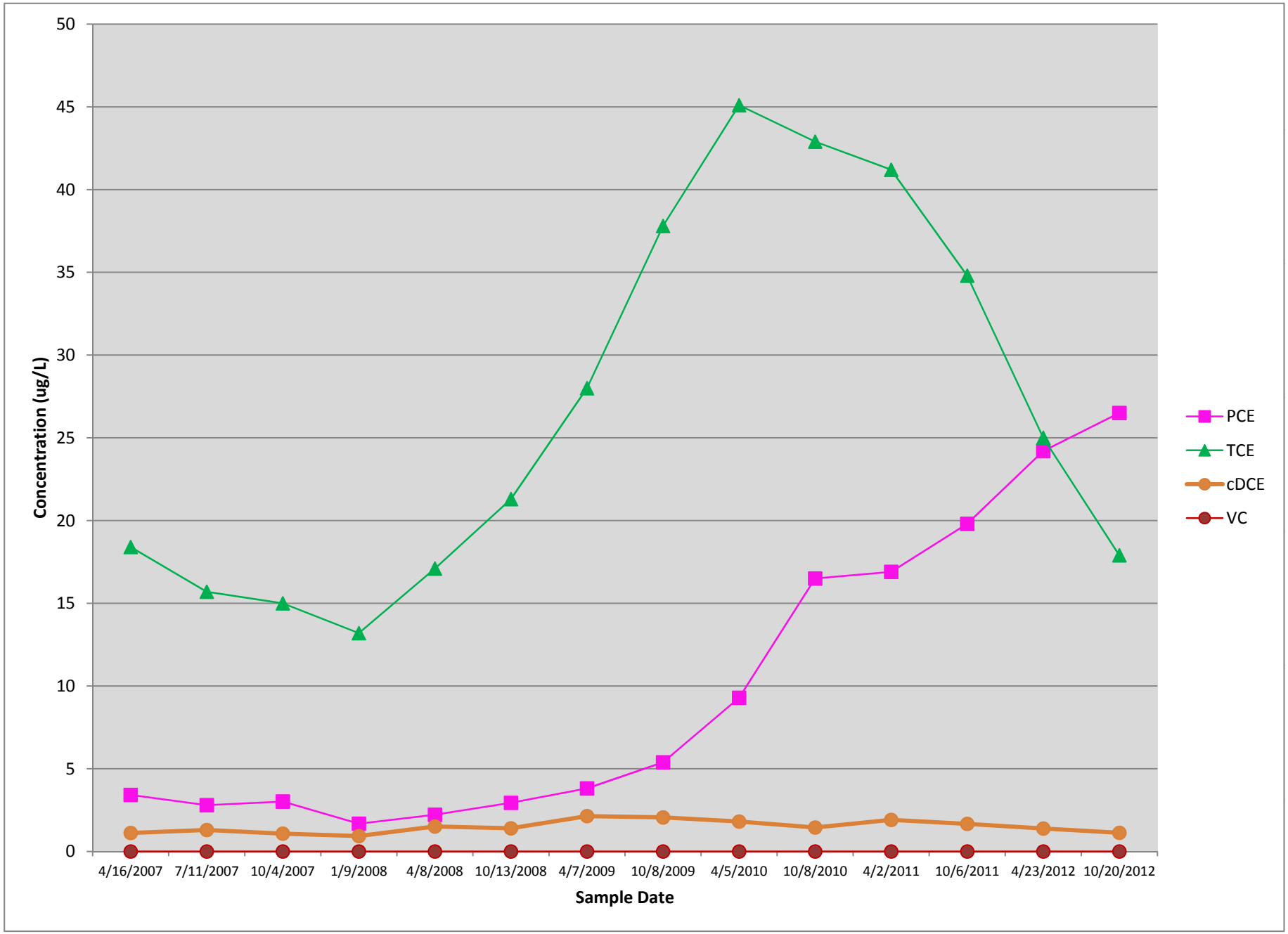
MW-206B


100
90
80
70
60
50
40
30
20
10
0
Concentration (ug/L)
4/15/2007
7/11/2007
10/3/2007
1/9/2008
4/9/2008
10/13/2008
4/7/2009
10/7/2009
4/6/2010
10/8/2010
4/2/2011
10/4/2011
4/23/2012
10/20/2012
Sample Date
PCE
TCE
cDCE
VC

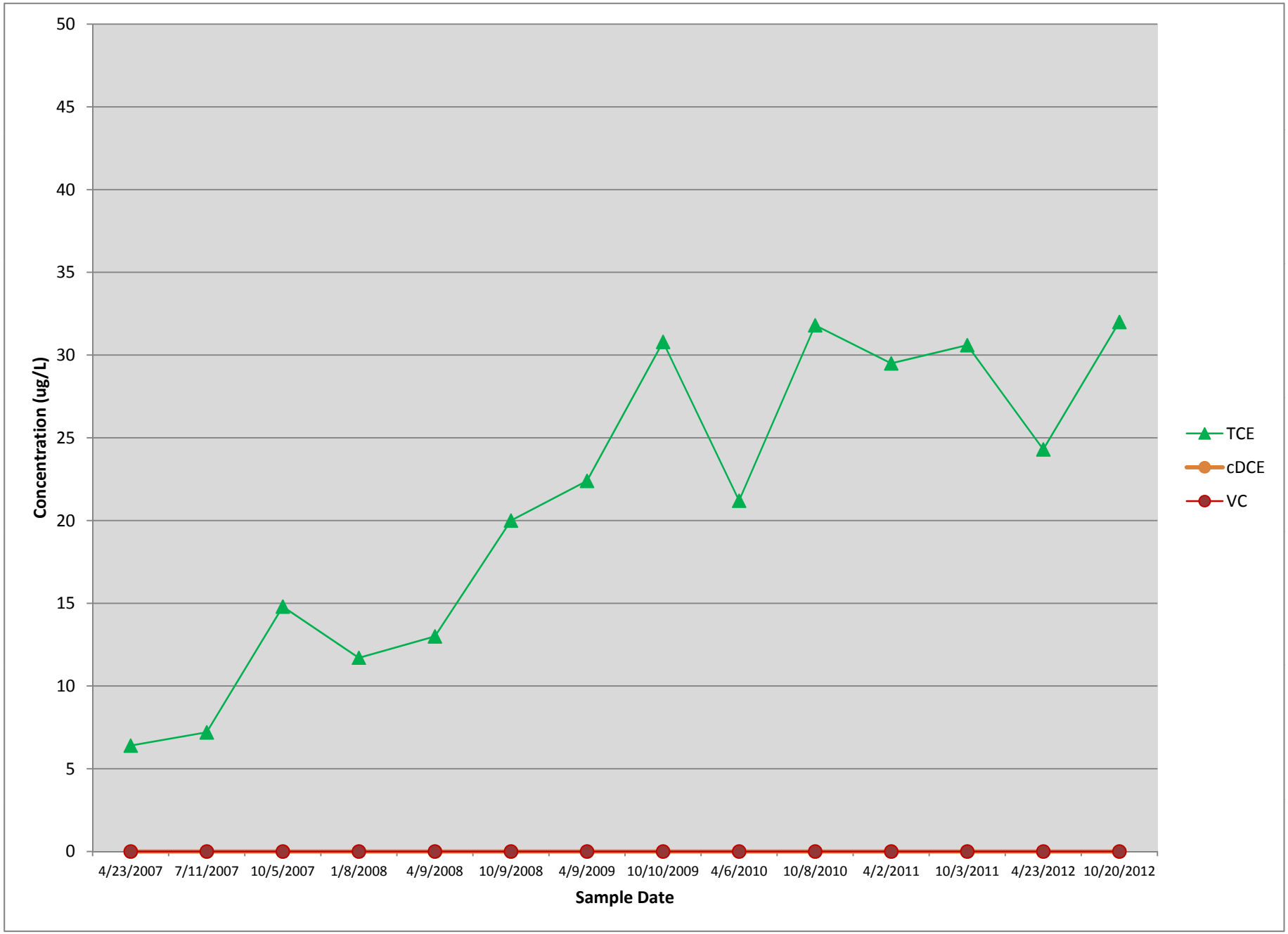
MW-208A


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
4/16/2007
7/10/2007
10/4/2007
1/8/2008
4/8/2008
10/13/2008
4/7/2009
10/8/2009
4/5/2010
10/8/2010
4/2/2011
10/6/2011
4/23/2012
10/20/2012
Sample Date
PCE
TCE
cDCE
VC

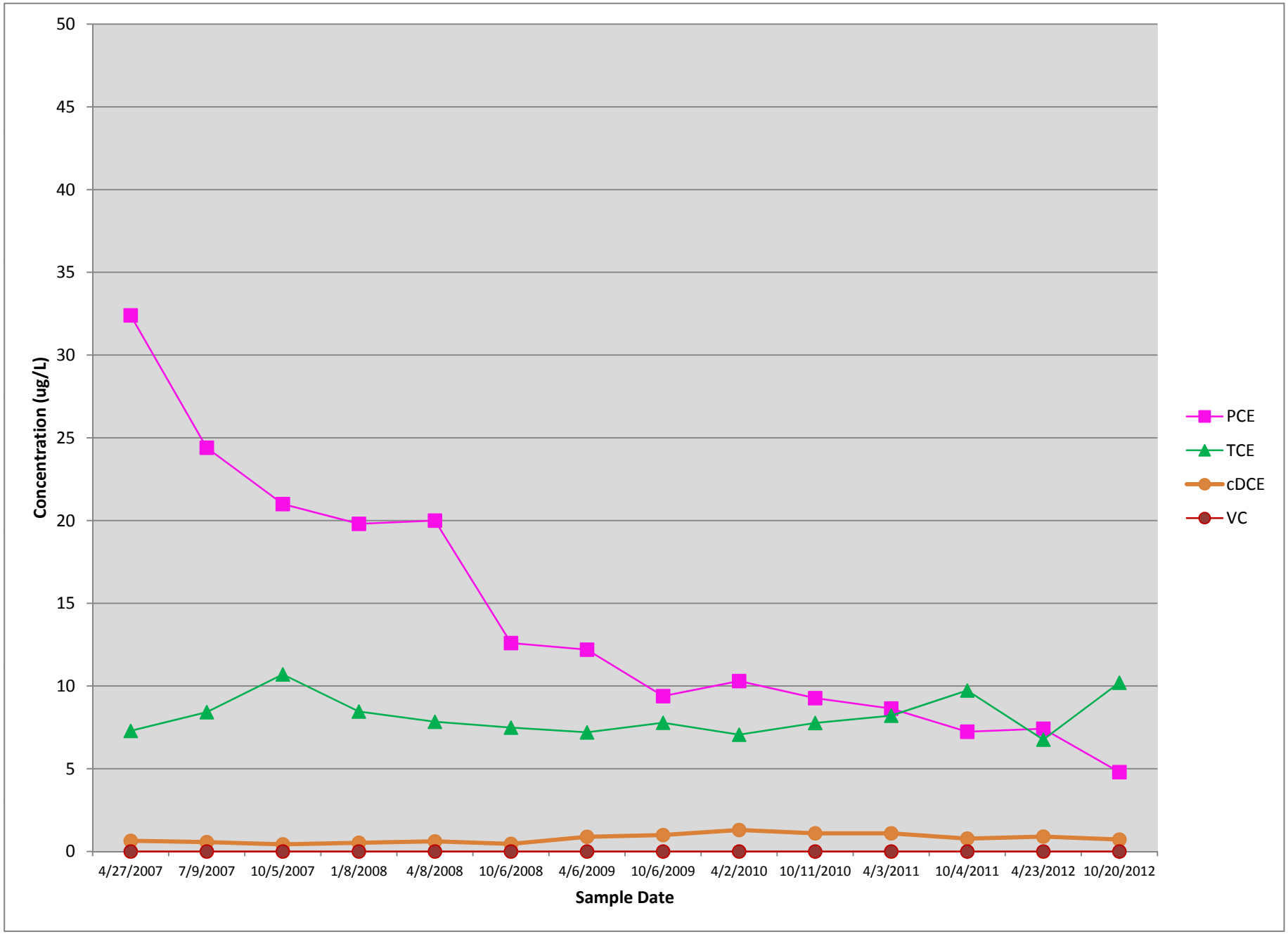
MW-208B


50
45
40
35
30
25
20
15
10
5
0
Concentration (ug/L)
4/16/2007
7/11/2007
10/4/2007
1/9/2008
4/8/2008
10/13/2008
4/7/2009
10/8/2009
4/5/2010
10/8/2010
4/2/2011
10/6/2011
4/23/2012
10/20/2012
Sample Date
PCE
TCE
cDCE
VC

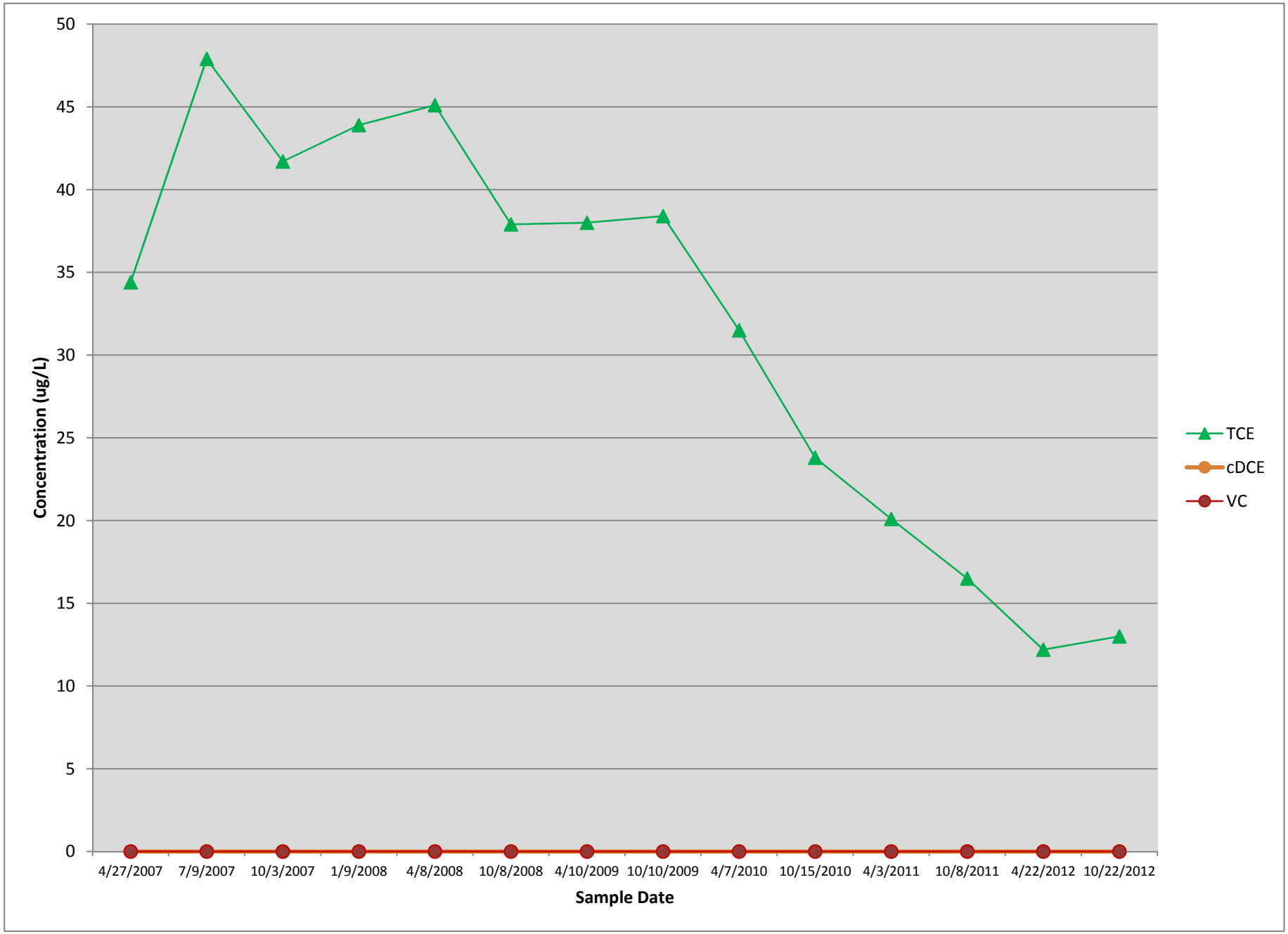
MW-209B


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45
40
35
30
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20
15
10
5
0
Concentration (ug/L)
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7/11/2007
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1/8/2008
4/9/2008
10/9/2008
4/9/2009
10/10/2009
4/6/2010
10/8/2010
4/2/2011
10/3/2011
4/23/2012
10/20/2012
Sample Date
TCE
cDCE
VC

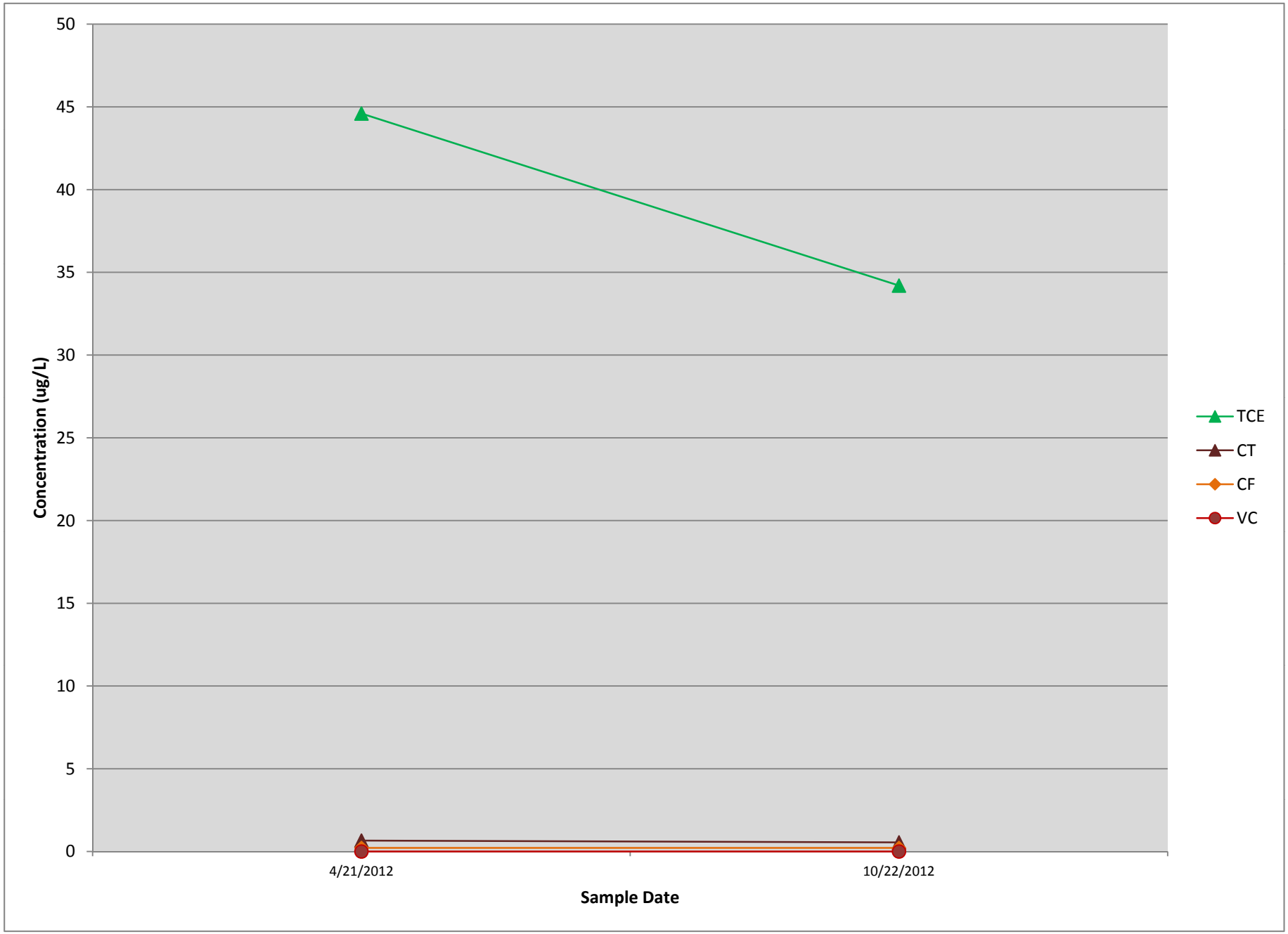
MW-210B


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45
40
35
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15
10
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0
Concentration (ug/L)
4/27/2007
7/9/2007
10/5/2007
1/8/2008
4/8/2008
10/6/2008
4/6/2009
10/6/2009
4/2/2010
10/11/2010
4/3/2011
10/4/2011
4/23/2012
10/20/2012
Sample Date
PCE
TCE
cDCE
VC

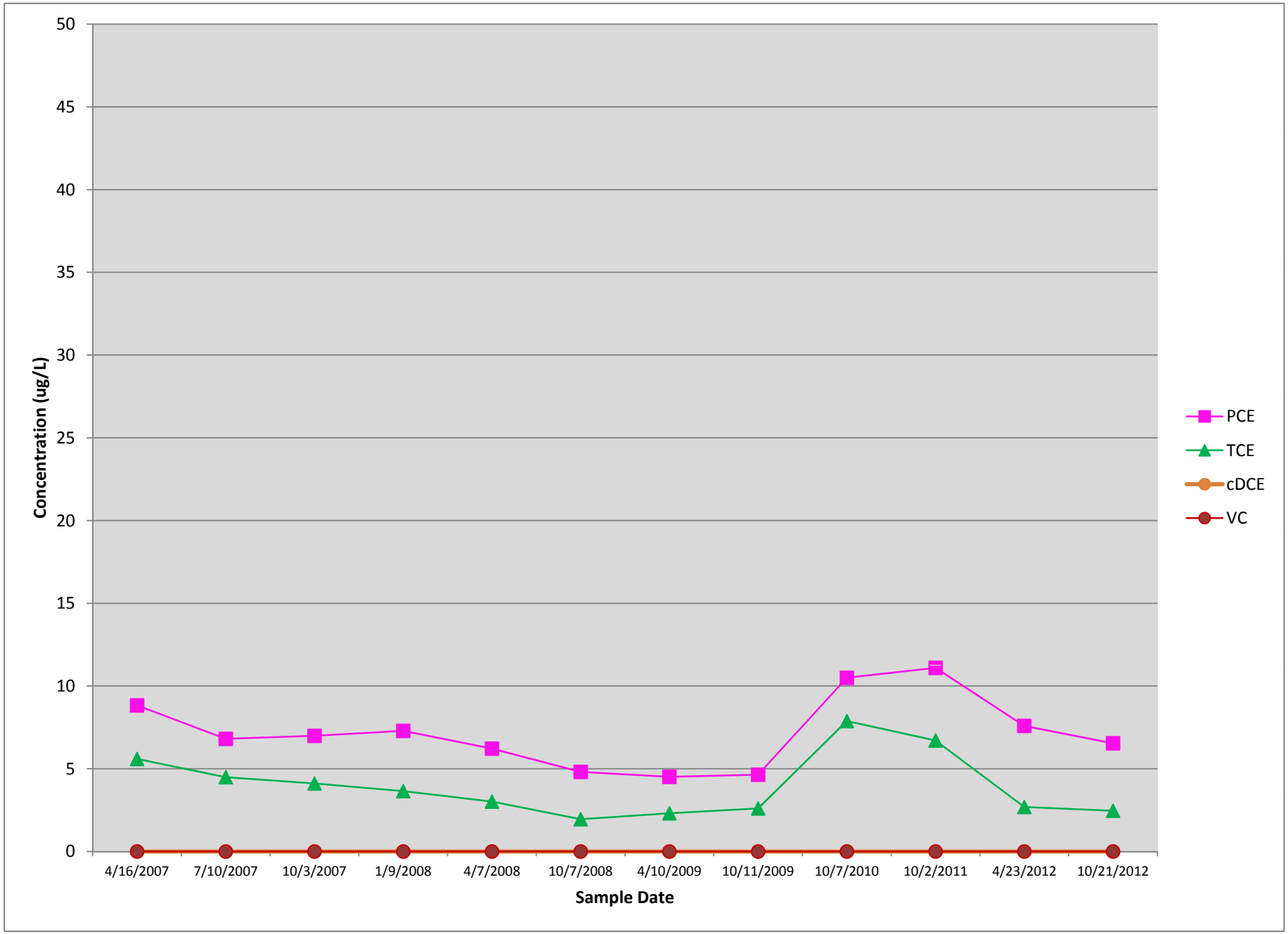
MW-212


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10
5
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Concentration (ug/L)
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10/3/2007
1/9/2008
4/8/2008
10/8/2008
4/10/2009
10/10/2009
4/7/2010
10/15/2010
4/3/2011
10/8/2011
4/22/2012
10/22/2012
Sample Date
TCE
cDCE
VC

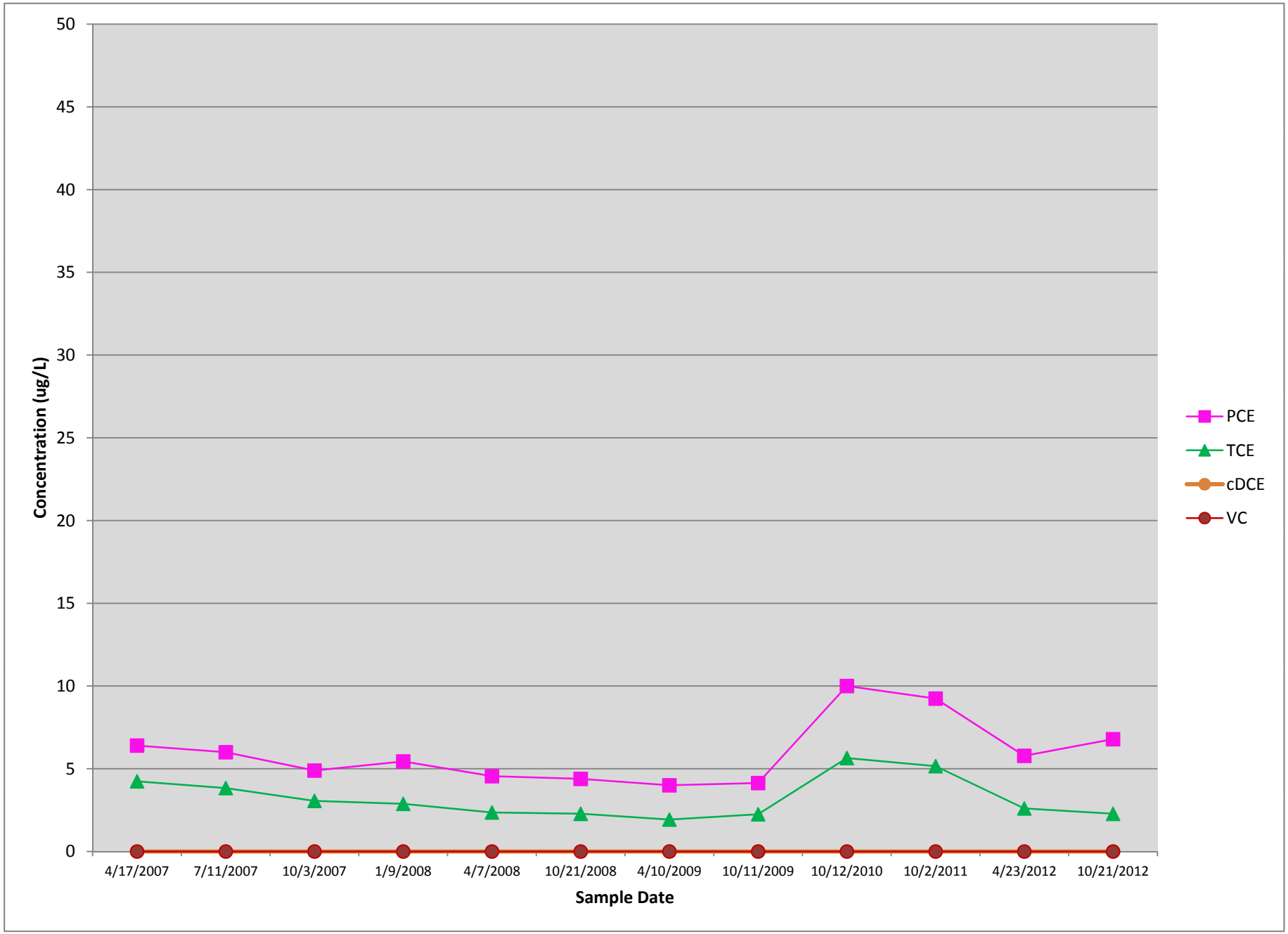
MW-213


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45
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35
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5
0
Concentration (ug/L)
4/21/2012
10/22/2012
Sample Date
TCE
CT
CF
VC

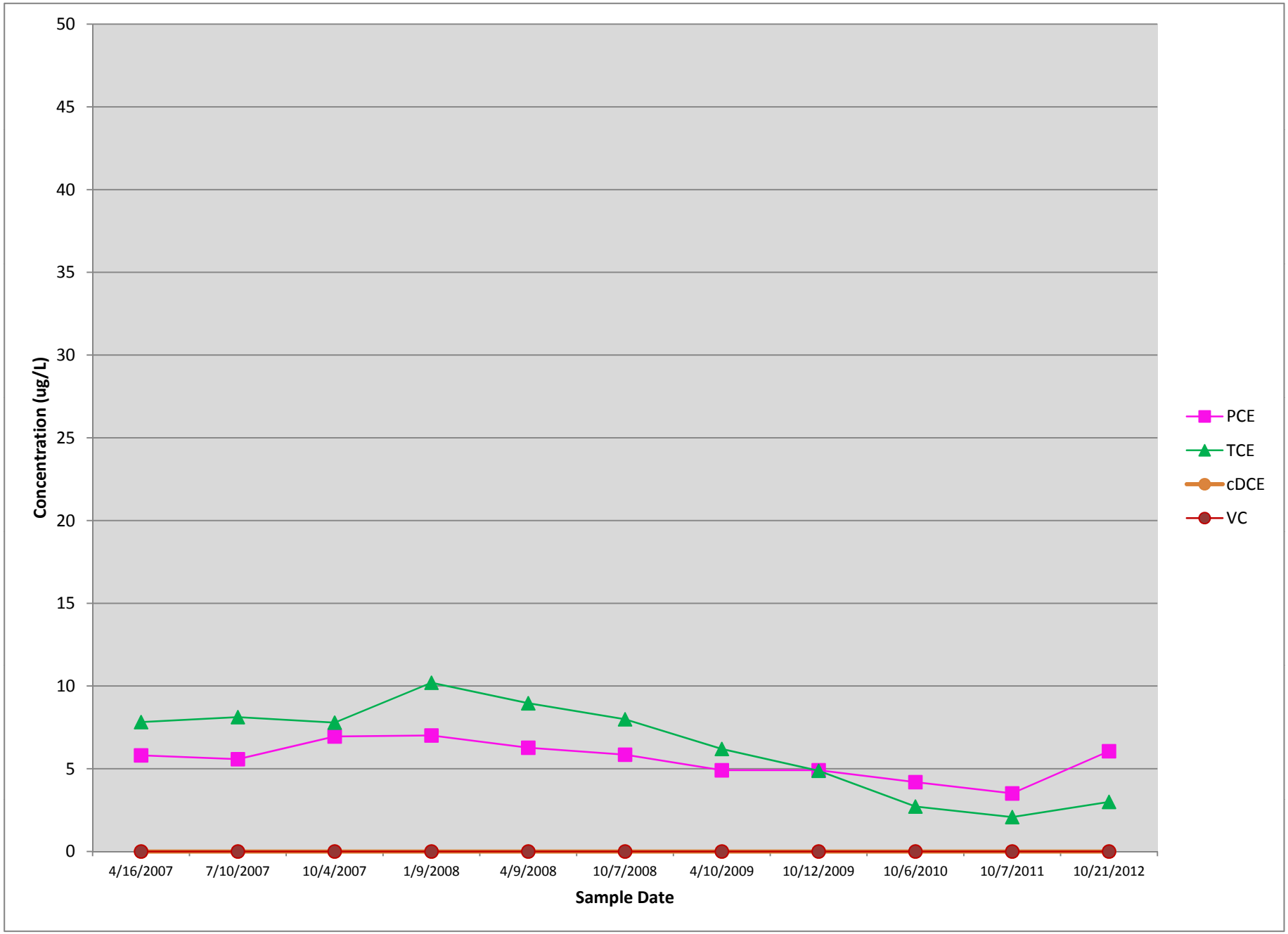
MW-214A


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25
20
15
10
5
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Concentration (ug/L)
4/16/2007
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10/3/2007
1/9/2008
4/7/2008
10/7/2008
4/10/2009
10/11/2009
10/7/2010
10/2/2011
4/23/2012
10/21/2012
Sample Date
PCE
TCE
cDCE
VC

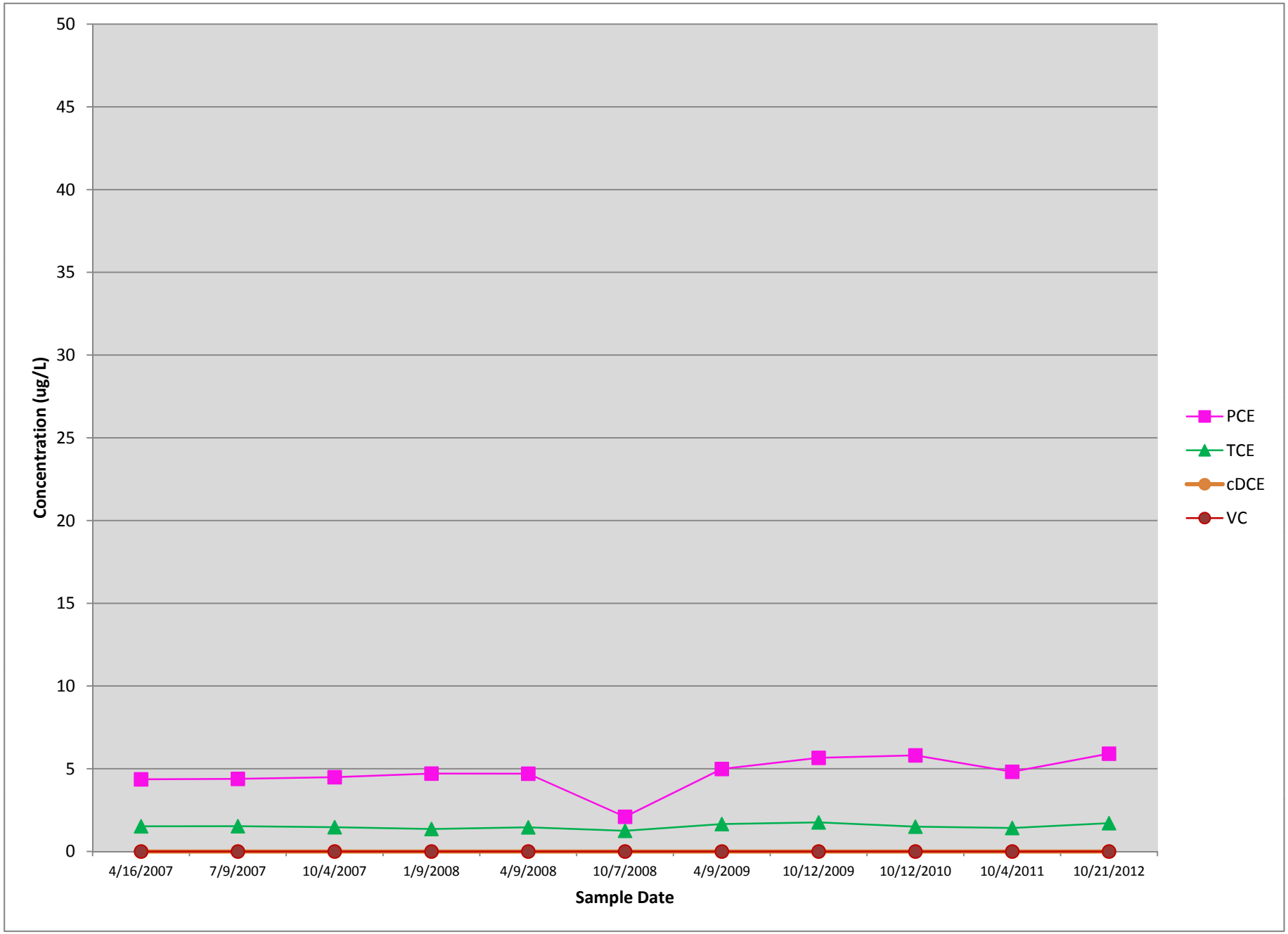
MW-214B


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Concentration (ug/L)
4/17/2007
7/11/2007
10/3/2007
1/9/2008
4/7/2008
10/21/2008
4/10/2009
10/11/2009
10/12/2010
10/2/2011
4/23/2012
10/21/2012
Sample Date
PCE
TCE
cDCE
VC

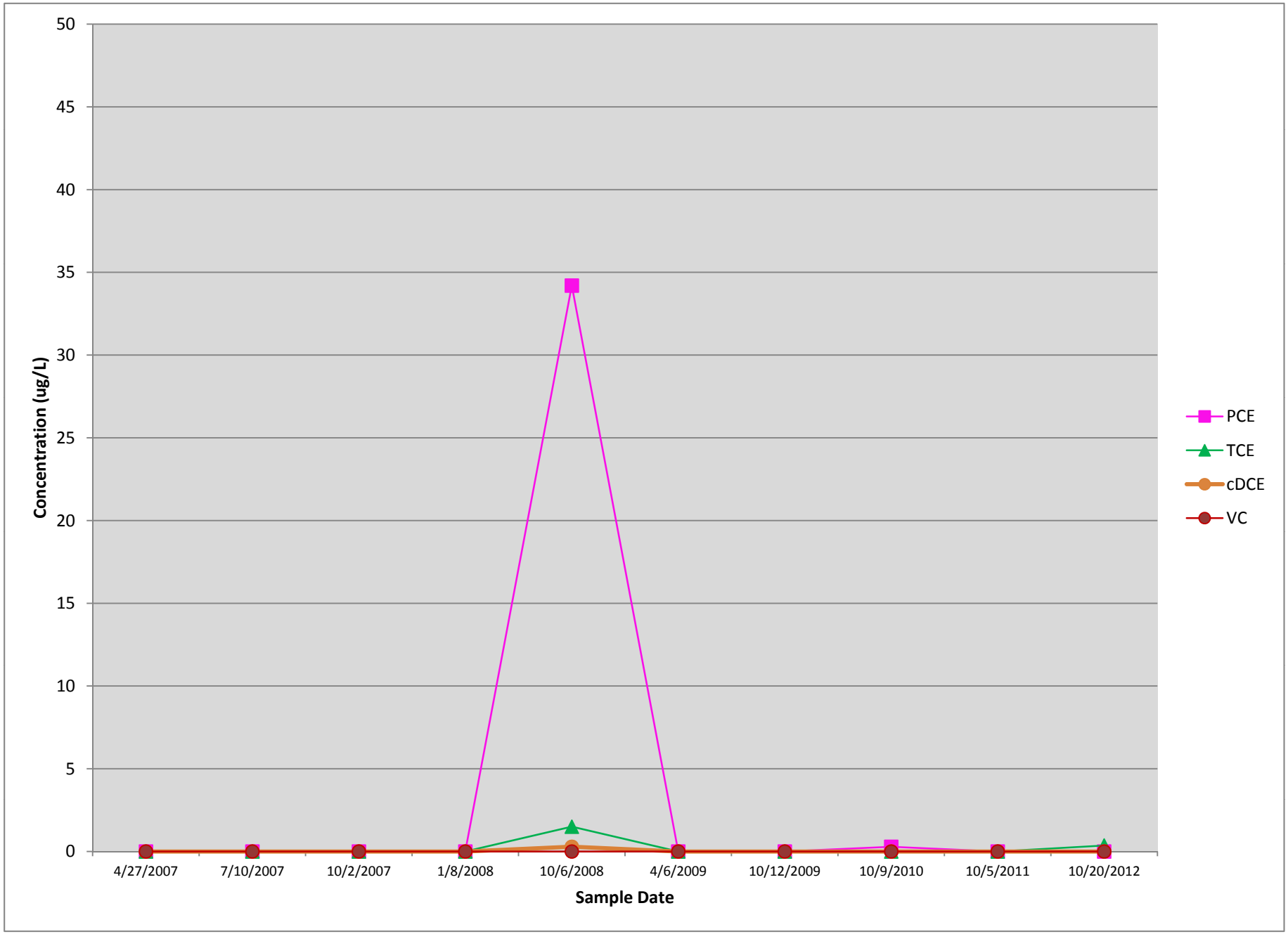
MW-215A


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15
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Concentration (ug/L)
4/16/2007
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10/4/2007
1/9/2008
4/9/2008
10/7/2008
4/10/2009
10/12/2009
10/6/2010
10/7/2011
10/21/2012
Sample Date
PCE
TCE
cDCE
VC

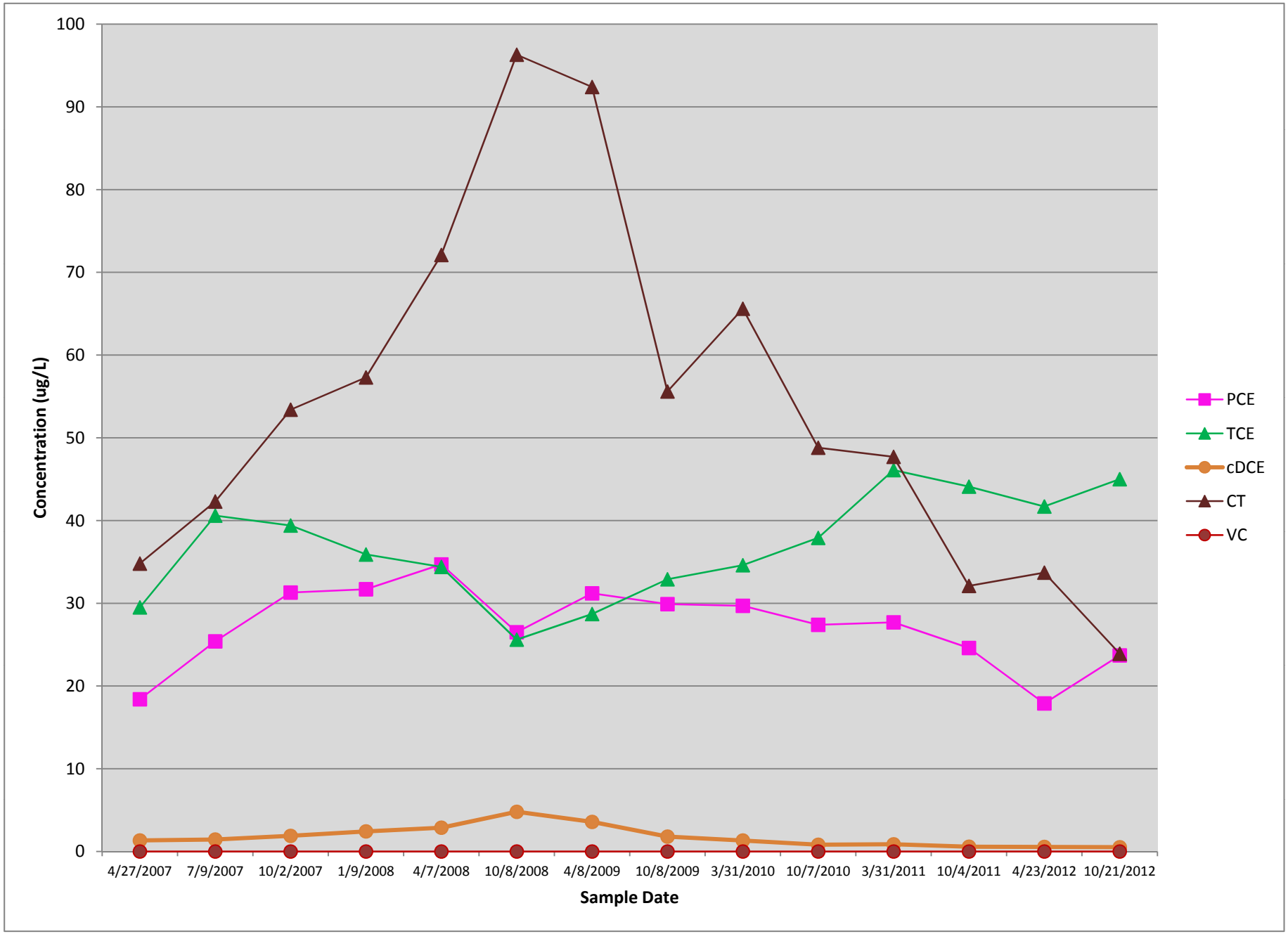
MW-215B


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45
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35
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25
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15
10
5
0
Concentration (ug/L)
4/16/2007
7/9/2007
10/4/2007
1/9/2008
4/9/2008
10/7/2008
4/9/2009
10/12/2009
10/12/2010
10/4/2011
10/21/2012
Sample Date
PCE
TCE
cDCE
VC

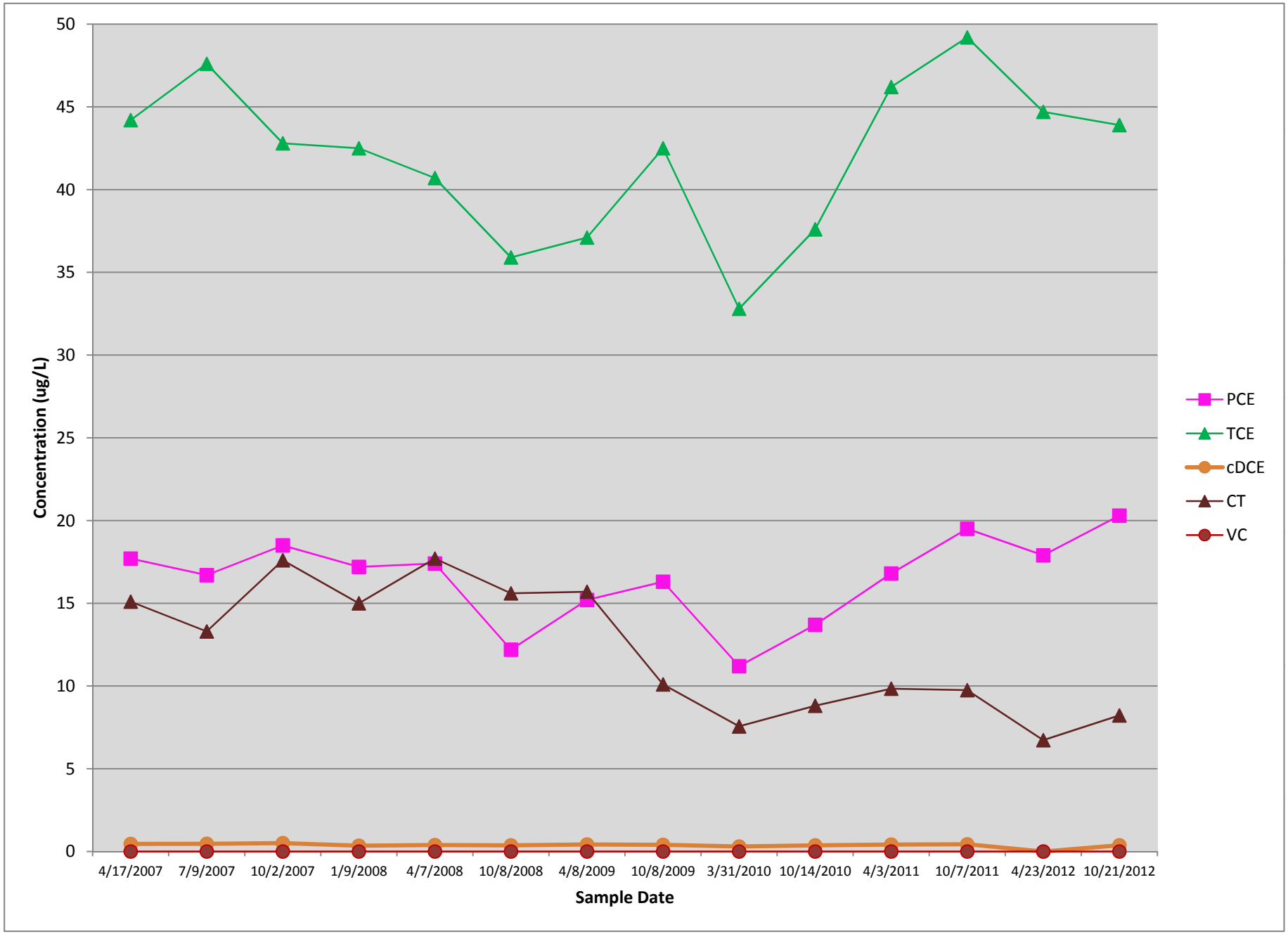
MW-216


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35
30
25
20
15
10
5
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Concentration (ug/L)
4/27/2007
7/10/2007
10/2/2007
1/8/2008
10/6/2008
4/6/2009
10/12/2009
10/9/2010
10/5/2011
10/20/2012
Sample Date
PCE
TCE
cDCE
VC

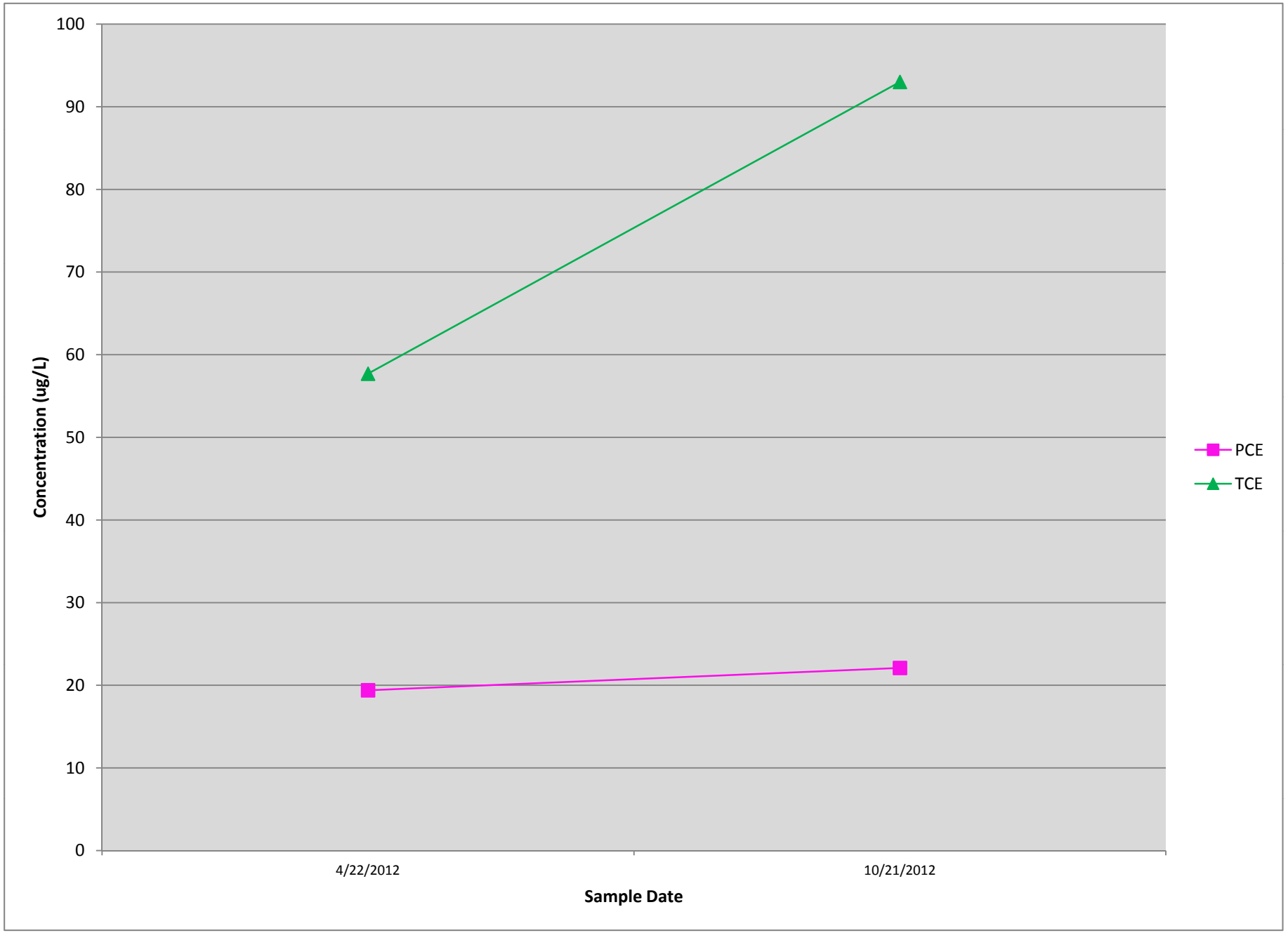
MW-217


100
90
80
70
60
50
40
30
20
10
0
Concentration (ug/L)
4/27/2007
7/9/2007
10/2/2007
1/9/2008
4/7/2008
10/8/2008
4/8/2009
10/8/2009
3/31/2010
10/7/2010
3/31/2011
10/4/2011
4/23/2012
10/21/2012
Sample Date
PCE
TCE
cDCE
CT
VC

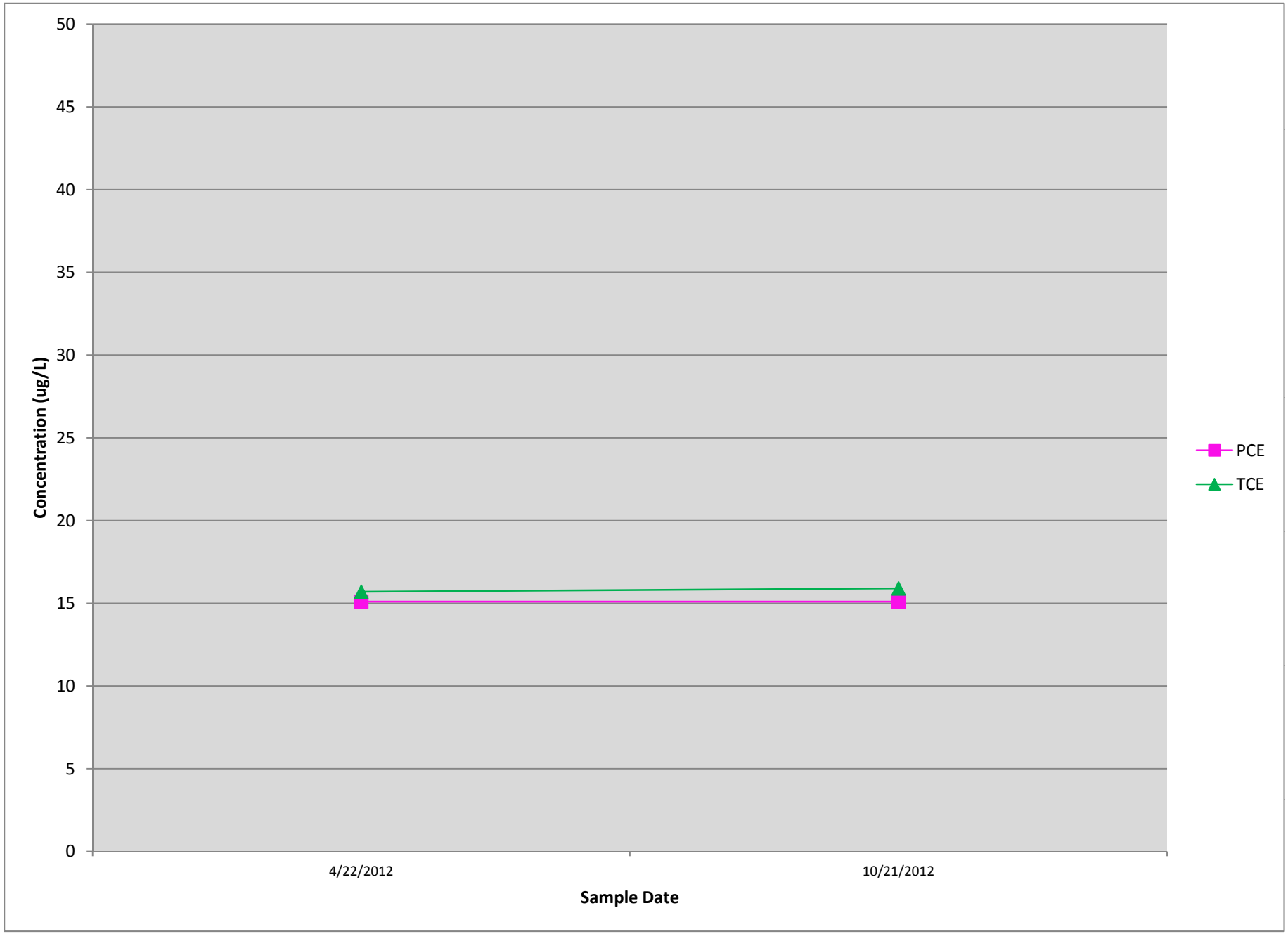
MW-218


50
45
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35
30
25
20
15
10
5
0
Concentration (ug/L)
4/17/2007
7/9/2007
10/2/2007
1/9/2008
4/7/2008
10/8/2008
4/8/2009
10/8/2009
3/31/2010
10/14/2010
4/3/2011
10/7/2011
4/23/2012
10/21/2012
Sample Date
PCE
TCE
cDCE
CT
VC

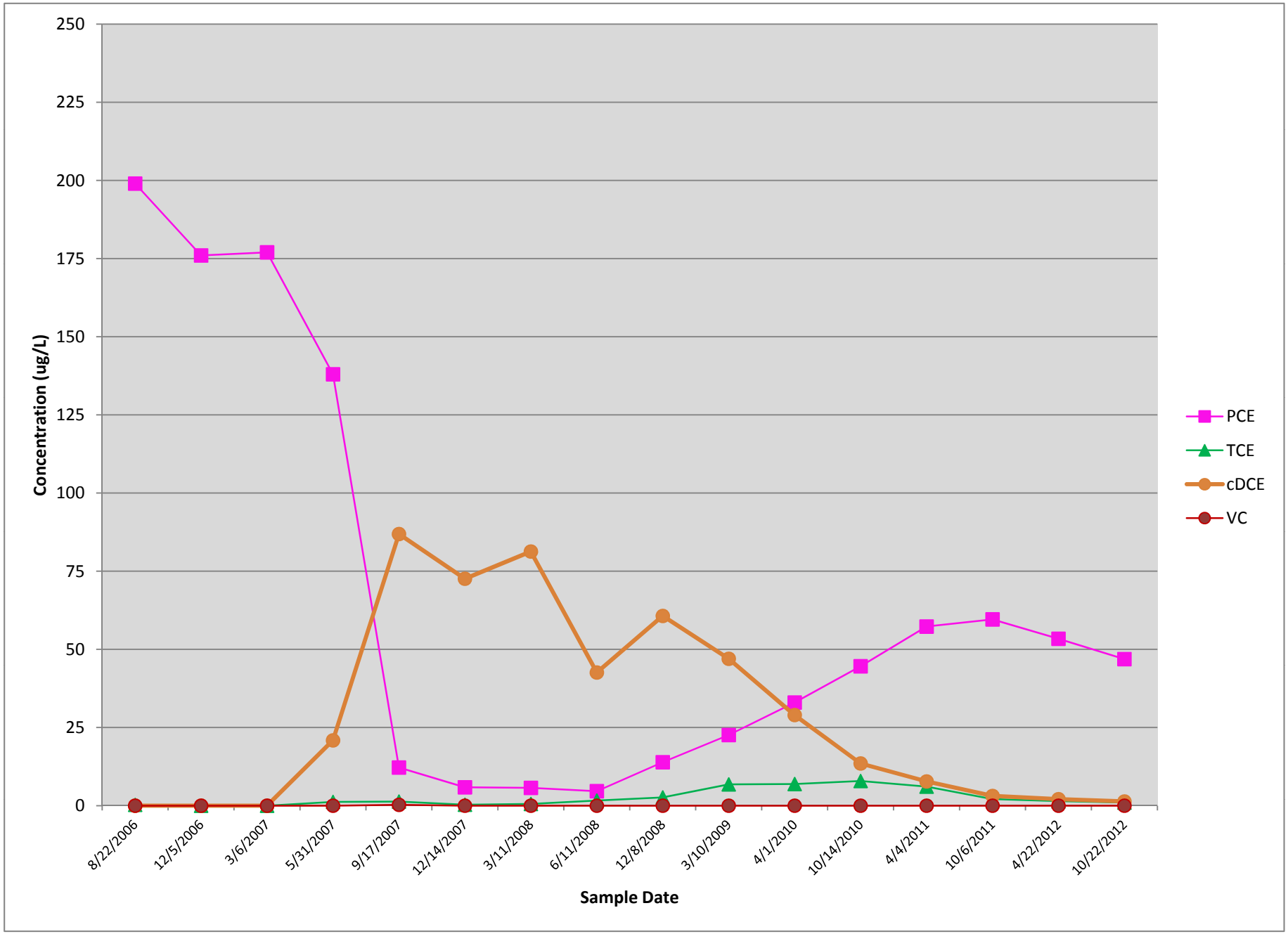
MW-258


100
90
80
70
60
50
40
30
20
10
0
Concentration (ug/L)
4/22/2012
10/21/2012
Sample Date
PCE
TCE

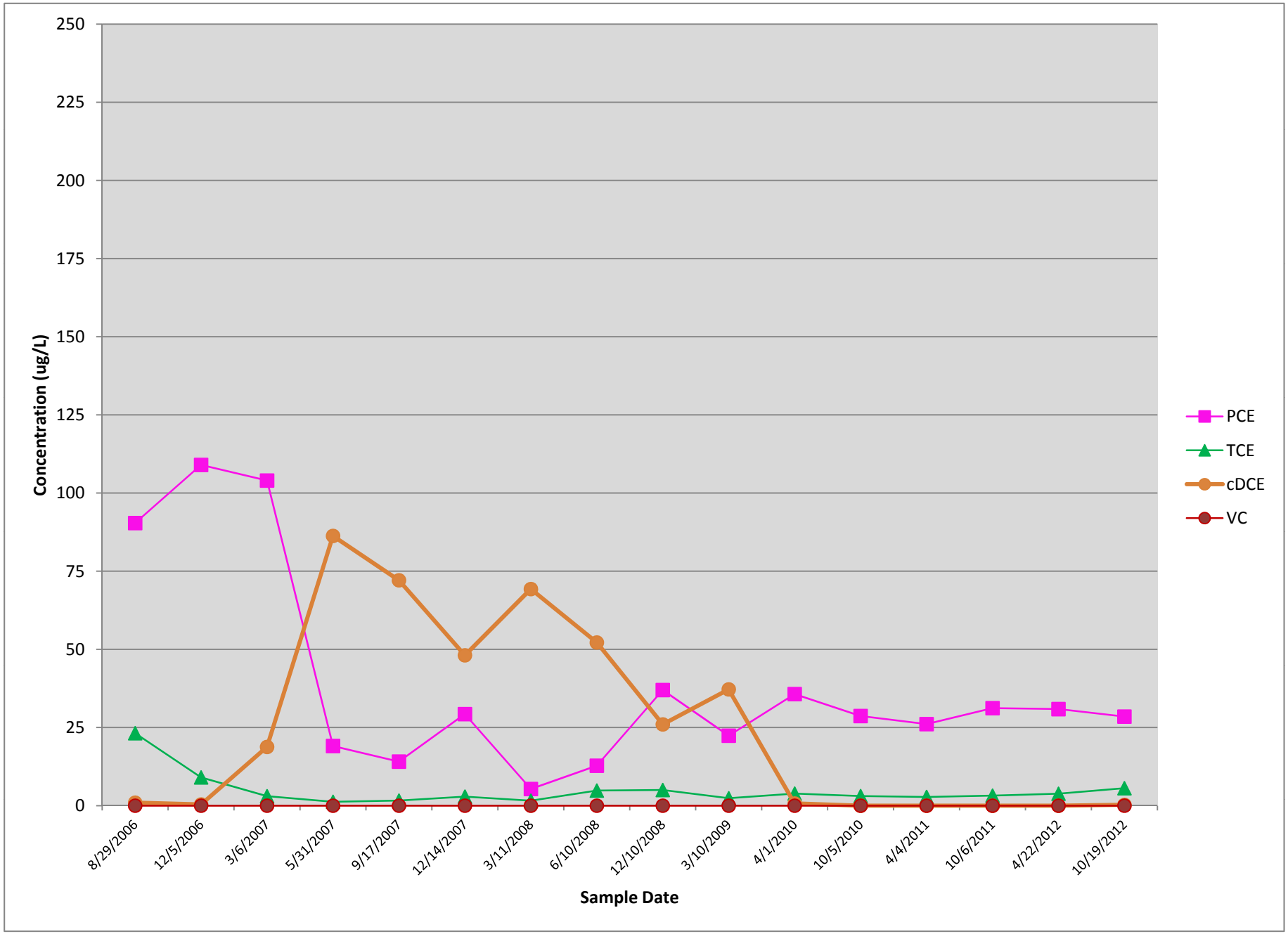
MW-259


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45
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35
30
25
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15
10
5
0
Concentration (ug/L)
4/22/2012
10/21/2012
Sample Date
PCE
TCE

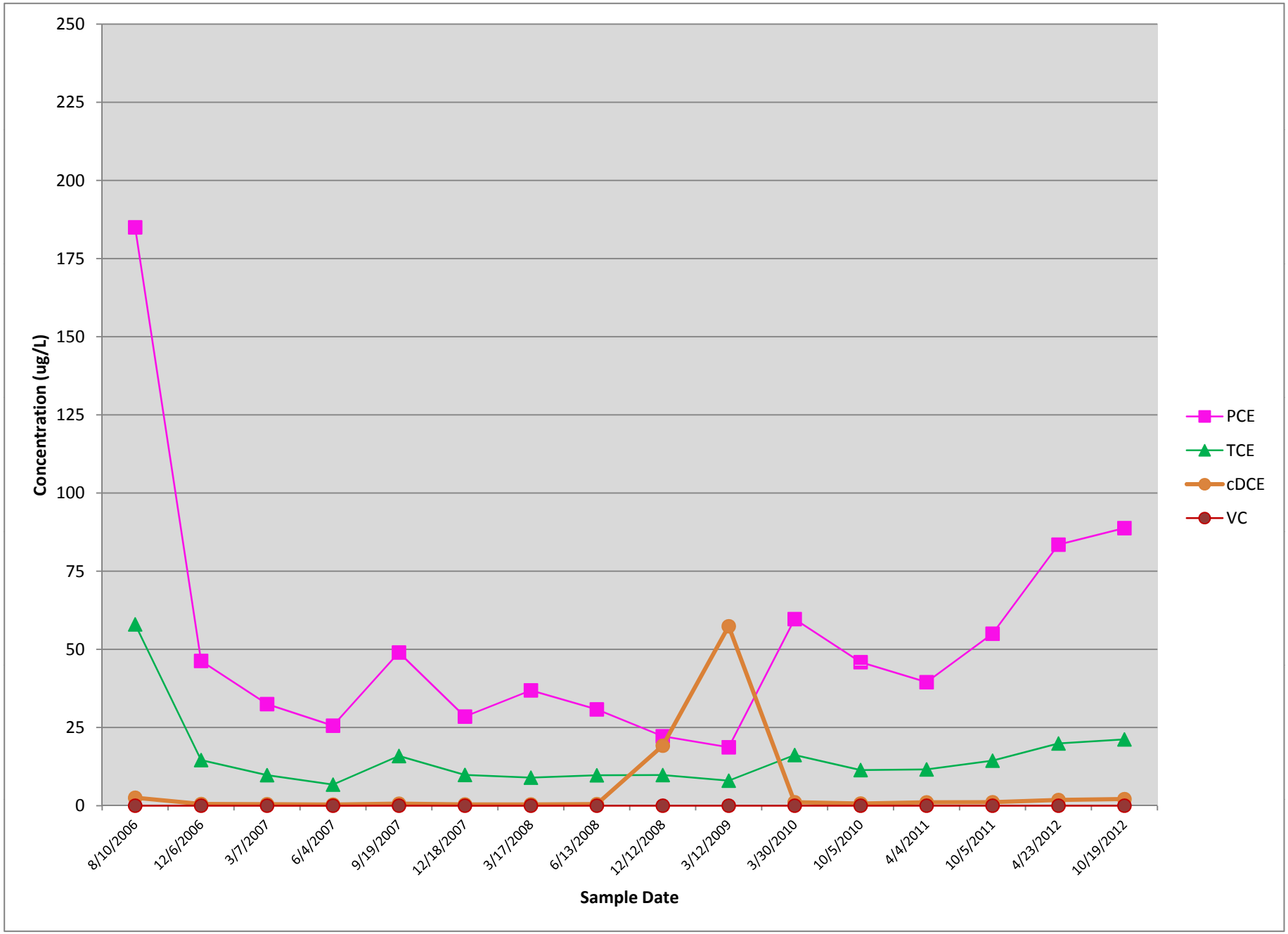
PMW101-04A


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
8/22/2006
12/5/2006
3/6/2007
5/31/2007
9/17/2007
12/14/2007
3/11/2008
6/11/2008
12/8/2008
3/10/2009
4/1/2010
10/14/2010
4/4/2011
10/6/2011
4/22/2012
10/22/2012
Sample Date
PCE
TCE
cDCE
VC

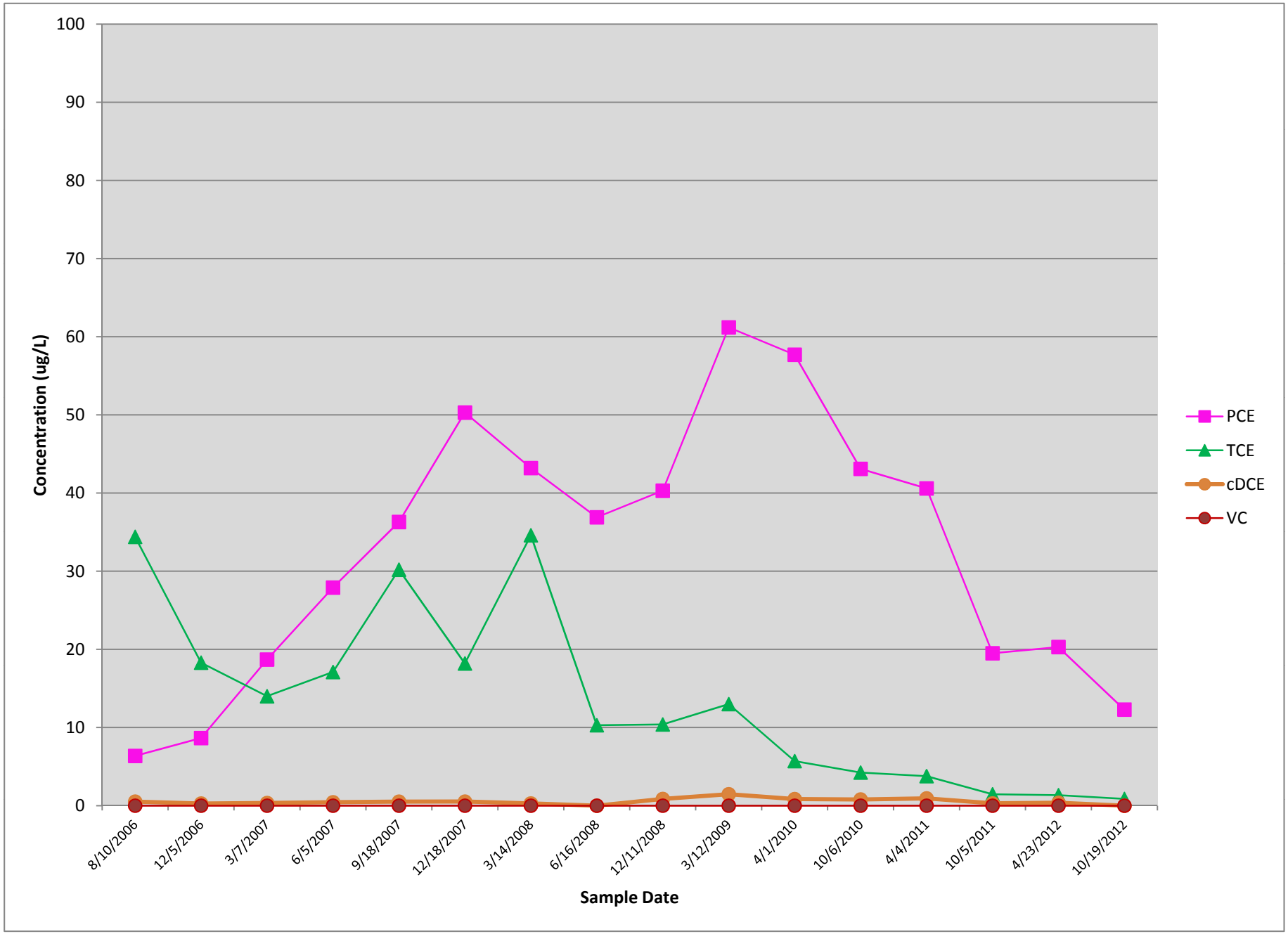
PMW101-04B


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
8/29/2006
12/5/2006
3/6/2007
5/31/2007
9/17/2007
12/14/2007
3/11/2008
6/10/2008
12/10/2008
3/10/2009
4/1/2010
10/5/2010
4/4/2011
10/6/2011
4/22/2012
10/19/2012
Sample Date
PCE
TCE
cDCE
VC

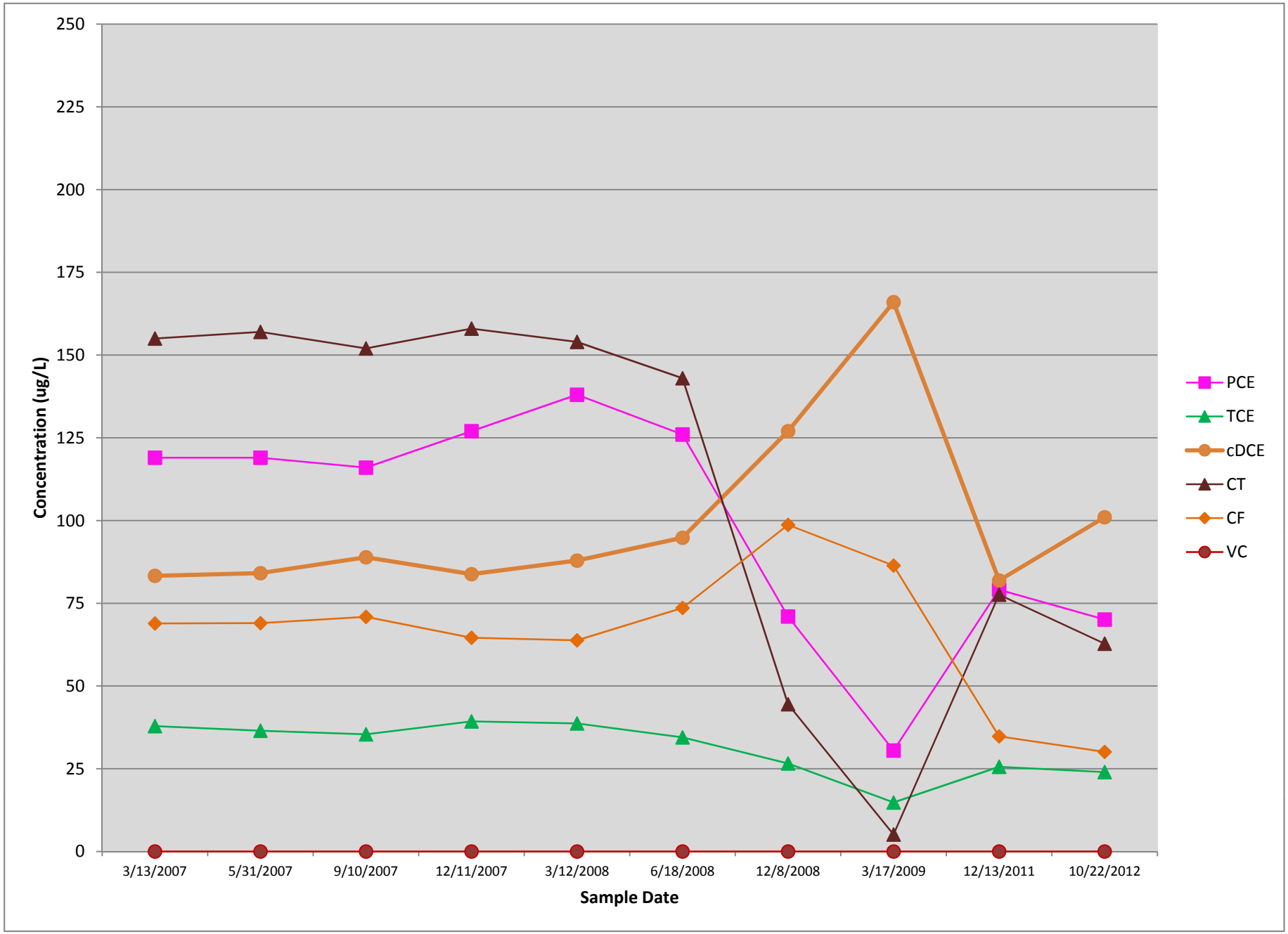
PMW21-03


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
8/10/2006
12/6/2006
3/7/2007
6/4/2007
9/19/2007
12/18/2007
3/17/2008
6/13/2008
12/12/2008
3/12/2009
3/30/2010
10/5/2010
4/4/2011
10/5/2011
4/23/2012
10/19/2012
Sample Date
PCE
TCE
cDCE
VC

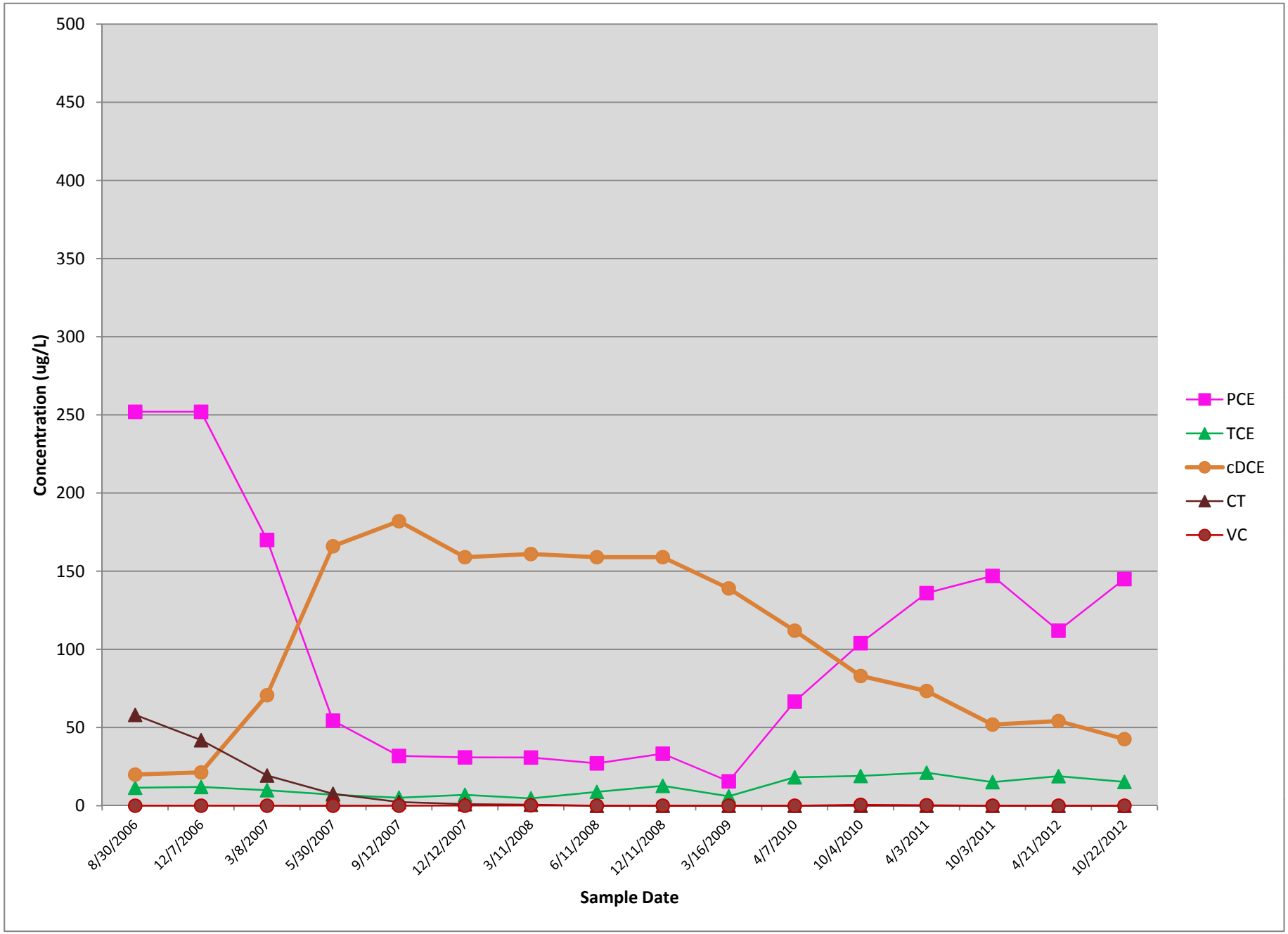
PMW21-05


100
90
80
70
60
50
40
30
20
10
0
Concentration (ug/L)
8/10/2006
12/5/2006
3/7/2007
6/5/2007
9/18/2007
12/18/2007
3/14/2008
6/16/2008
12/11/2008
3/12/2009
4/1/2010
10/6/2010
4/4/2011
10/5/2011
4/23/2012
10/19/2012
Sample Date
PCE
TCE
cDCE
VC

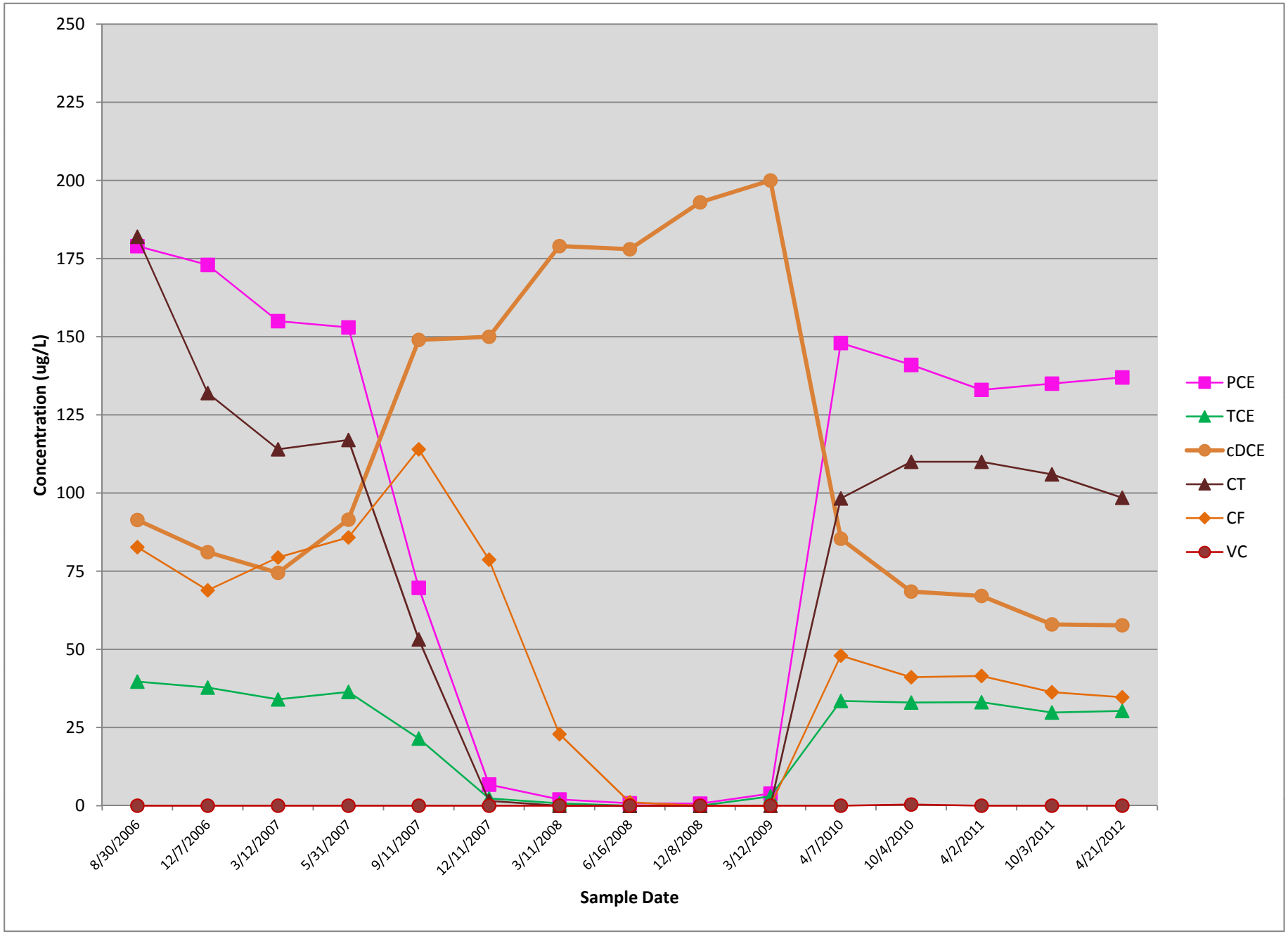
PMW85-05


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
3/13/2007
5/31/2007
9/10/2007
12/11/2007
3/12/2008
6/18/2008
12/8/2008
3/17/2009
12/13/2011
10/22/2012
Sample Date
PCE
TCE
cDCE
CT
CF
VC

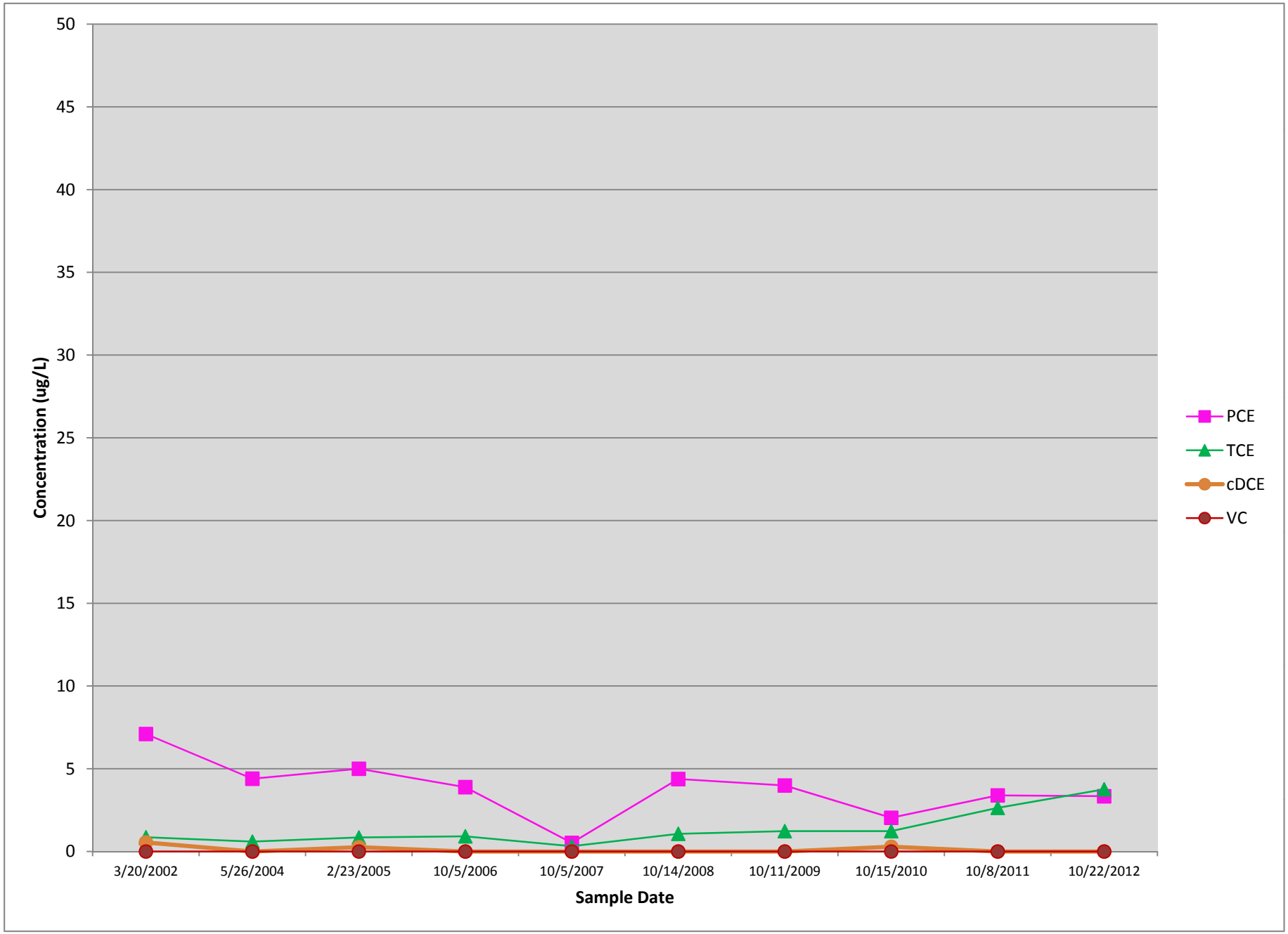
PMW92-03


500
450
400
350
300
250
200
150
100
50
0
Concentration (ug/L)
8/30/2006
12/7/2006
3/8/2007
5/30/2007
9/12/2007
12/12/2007
3/11/2008
6/11/2008
12/11/2008
3/16/2009
4/7/2010
10/4/2010
4/3/2011
10/3/2011
4/21/2012
10/22/2012
Sample Date
PCE
TCE
cDCE
CT
VC

PMW92-06


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
8/30/2006
12/7/2006
3/12/2007
5/31/2007
9/11/2007
12/11/2007
3/11/2008
6/16/2008
12/8/2008
3/12/2009
4/7/2010
10/4/2010
4/2/2011
10/3/2011
4/21/2012
Sample Date
PCE
TCE
cDCE
CT
CF
VC

PZ-03


50
45
40
35
30
25
20
15
10
5
0
Concentration (ug/L)
3/20/2002
5/26/2004
2/23/2005
10/5/2006
10/5/2007
10/14/2008
10/11/2009
10/15/2010
10/8/2011
10/22/2012
Sample Date
PCE
TCE
cDCE
VC

APPENDIX H

HISTORICAL CVOC RESULTS – DUNN FIELD

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-03

Analyte	Sample Name / Sample Date / Units	MW-03 11/12/1993	MW-03 6/21/1997	MW-03 9/27/1997	MW-03 3/27/1998	MW-03 10/15/1998	MW-03 10/28/2004	MW-03 11/21/2005
1,1,2,2-Tetrachloroethane	µg/L	ND	33	<10	<10	1 J	78.4 J	96.2
1,1,2-Trichloroethane	µg/L	ND	<10	<10	<10	<10	1.3 J	1.66
1,1-Dichloroethene	µg/L	38.5	15	17	25	10	34.5 J	9.47
Carbon tetrachloride	µg/L	ND	2 J	<10	<10	<10	0.53 J	1.56 J
Chloroform	µg/L	3.25	17	2 J	9 J	2 J	3.53 J	12.4
cis-1,2-Dichloroethene	µg/L	--	--	--	--	--	45 J	82.7
Tetrachloroethene	µg/L	192	33	40	38	29	12.3 J	8.19
Total 1,2-Dichloroethene	µg/L	--	12	<10	<10	<10	--	--
trans-1,2-Dichloroethene	µg/L	ND	--	--	--	--	10.4 J	19.4
Trichloroethene	µg/L	55.5	33	17	18	16	83.4 J	138
Vinyl chloride	µg/L	ND	<10	<10	<10	<10	<1	<1 UJ

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit
ND Not Detected, RL unavailable

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-03

Analyte	Sample Name / Sample Date / Units	MW-03 5/14/2007	MW-03 11/7/2007	MW-03 4/16/2008	MW-03 8/19/2008	MW-03 10/21/2008	MW-03 4/17/2009	MW-03 10/13/2009
1,1,2,2-Tetrachloroethane	µg/L	67	<1	<0.5	0.425	2.46	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	1.5	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	1.3	2.89	1.54	10.4	17.3	10.7	13.4
Carbon tetrachloride	µg/L	0.82	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	12	3.07	0.147 J	0.229	0.212 J	0.14 J	<0.3
cis-1,2-Dichloroethene	µg/L	59	<1	<1	0.348	<1	<1	0.47 J
Tetrachloroethene	µg/L	1.8	2.63	2.71	5.71	9.5	9.13	10.1
Total 1,2-Dichloroethene	µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	12	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	87	2.18	2.04	5.8	10.1	9.26	10.4
Vinyl chloride	µg/L	ND	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit
ND Not Detected, RL unavailable

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-03

Analyte	Sample Name / Sample Date / Units	MW-03 7/19/2011	MW-03 4/19/2012	MW-03 10/17/2012
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	0.524 J
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	1.2	0.871 J	1.06
Total 1,2-Dichloroethene	µg/L	--	--	--
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	1.44	1	1.28
Vinyl chloride	µg/L	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit
ND Not Detected, RL unavailable

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-04

	Sample Name	MW-04	MW-04-2	MW-04-3	MW-04-4	MW-04-5	MW-04-76	MW-04-78
	Sample Date	11/15/1993	6/20/1997	9/25/1997	3/28/1998	10/15/1998	11/21/2005	11/9/2007
Analyte	**Units**							
1,1,2,2-Tetrachloroethane	µg/L	ND	<10	<10	<10	<10	0.23 J	<1
1,1,2-Trichloroethane	µg/L	ND	<10	<10	<10	<10	<1	<1
1,1-Dichloroethene	µg/L	ND	<10	<10	<10	<10	<1	<1
Carbon tetrachloride	µg/L	ND	<10	<10	<10	<10	<1	<1
Chloroform	µg/L	ND	1 J	<10	<10	1 J	0.43 J	0.16
cis-1,2-Dichloroethene	µg/L	--	--	--	--	--	<1	<1
Tetrachloroethene	µg/L	32.6	74	78	72	120	33.4	23.4
Total 1,2-Dichloroethene	µg/L	--	<10	<10	<10	<10	--	--
trans-1,2-Dichloroethene	µg/L	ND	--	--	--	--	<1	<1
Trichloroethene	µg/L	ND	2 J	3 J	3 J	4 J	2.23	1.11
Vinyl chloride	µg/L	ND	<10	<10	<10	<10	<1 UJ	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit
ND Not Detected, RL unavailable

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-04

	Sample Name	MW-04-IS-6	MW-04-IS-7	MW-04	MW-04
	Sample Date	4/21/2009	10/14/2009	4/28/2011	4/19/2012
Analyte	**Units**				
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Chloroform	µg/L	0.328	0.294 J	0.278 B	0.162 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1
Total 1,2-Dichloroethene	µg/L	--	--	--	--
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit
ND Not Detected, RL unavailable

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-06

	Sample Name	MW-06	MW-06-2	MW-06-3	MW-06-4	MW-06-5	MW-06-RD67	MW06-67
	Sample Date	11/18/1993	6/21/1997	9/27/1997	3/30/1998	10/15/1998	10/27/2004	11/21/2005
Analyte	**Units**							
1,1,2,2-Tetrachloroethane	µg/L	219	110	220	130	220	613	237
1,1,2-Trichloroethane	µg/L	9.1	7 J	9 J	5 J	8 J	20.9 J	10.1
1,1-Dichloroethene	µg/L	ND	<20	<20	<10	<20	<1	<1
Carbon tetrachloride	µg/L	43.7	45	37	15	23	31.2 J	26.5
Chloroform	µg/L	14.3	16 J	14 J	6 J	10 J	15.4 J	10.2
cis-1,2-Dichloroethene	µg/L	--	--	--	--	--	436	295
Tetrachloroethene	µg/L	3.06	4 J	3 J	1 J	2 J	1.9 J	1.84
Total 1,2-Dichloroethene	µg/L	--	410	380	150	270	--	--
trans-1,2-Dichloroethene	µg/L	20.8	--	--	--	--	25.4 J	16.8
Trichloroethene	µg/L	198	260	240	94	160	236	171
Vinyl chloride	µg/L	ND	<20	<20	<10	<20	1.59 J	1.35 J

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit
ND Not Detected, RL unavailable

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-06

Analyte	Sample Name	MW-06-SARA-GW01	MW-06-69	MW-06-IS-4	MW-06-TSVE-GW	MW-06-IS-5	MW-06-IS-6	MW-06-IS-7
	Sample Date	5/16/2007	11/7/2007	4/15/2008	8/19/2008	10/17/2008	4/22/2009	10/13/2009
	Units							
1,1,2,2-Tetrachloroethane	µg/L	41	18.4	8.89	8.1	5.57	3.23	3.96
1,1,2-Trichloroethane	µg/L	3.9	2.32	1.02	0.972	0.674 J	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	16	13.8	3.78	1.35	0.793 J	0.463 J	<1
Chloroform	µg/L	6.2	8.55	84.7	29.4	21.2	6.17	5.48
cis-1,2-Dichloroethene	µg/L	200	150	36.2	23.1	15	4.91	3.78
Tetrachloroethene	µg/L	1.4	1.14	1.07	0.365	<1	0.254 J	<1
Total 1,2-Dichloroethene	µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	11	6.33	1.45	0.926	0.458 J	<1	<1
Trichloroethene	µg/L	120	78.1	32.5	14.2	8.6	2.53	2.44
Vinyl chloride	µg/L	0.68	0.484	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit
ND Not Detected, RL unavailable

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-06

Analyte	Sample Name / Sample Date / Units	MW-06-ODLA-1 3/26/2010	MW-06 4/26/2011	MW-06 7/19/2011	MW-06 4/19/2012	MW-06 10/17/2012
1,1,2,2-Tetrachloroethane	µg/L	2.67	0.807	0.614	0.497 J	0.486 J
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	5.4	8.73	4.88	2.9	2.72
cis-1,2-Dichloroethene	µg/L	1.62	0.637 J	0.41 J	0.311 J	0.569 J
Tetrachloroethene	µg/L	<1	0.304 J	<1	<1	<1
Total 1,2-Dichloroethene	µg/L	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	2.29	3.34	1.75	1.06	0.938 J
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit
ND Not Detected, RL unavailable

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-07

Analyte	Sample Name / Sample Date	Units	MW-07 11/17/1993	MW-07 11/15/1993	MW-07 2/12/1996	MW-07 6/21/1997	MW-07 9/27/1997	MW-07 4/2/1998	MW-07 10/14/1998
1,1,2,2-Tetrachloroethane		µg/L	ND	ND	ND	<10	<10	<10	<10
1,1,2-Trichloroethane		µg/L	ND	ND	ND	<10	<10	<10	<10
1,1-Dichloroethene		µg/L	34.4	36.5	54	26	50	47	25
Carbon tetrachloride		µg/L	ND	ND	ND	<10	<10	<10	<10
Chloroform		µg/L	ND	12.8	8 J	8 J	9 J	2 J	7 J
cis-1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
Tetrachloroethene		µg/L	35.2	35	51	32	82	78	47
Total 1,2-Dichloroethene		µg/L	--	--	ND	<10	<10	<10	<10
trans-1,2-Dichloroethene		µg/L	ND	ND	--	--	--	--	--
Trichloroethene		µg/L	15.3	13.7	26	16	32	31	21
Vinyl chloride		µg/L	ND	ND	ND	<10	<10	<10	<10

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit
ND Not Detected, RL unavailable

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-07

Analyte	Sample Name / Sample Date	Units	MW-07 7/28/2003	MW-07 10/28/2003	MW-07 4/28/2004	MW-07 10/20/2004	MW-07 6/14/2005	MW-07 11/18/2005	MW-07 4/12/2006
1,1,2,2-Tetrachloroethane		µg/L	<1	<1	<1.2	<1.4	<1	<1	<1
1,1,2-Trichloroethane		µg/L	<1	<1	<1.2	<1.4	<1	<1	<1
1,1-Dichloroethene		µg/L	4.06	40.9	32	17	15.3	18.1	27.4
Carbon tetrachloride		µg/L	2.99	1.23	0.29 J	<1.4	<1	<1	<1
Chloroform		µg/L	911	139	8	0.44 J	<1	1.07 B	0.501 B
cis-1,2-Dichloroethene		µg/L	2.98	<1	<1.2	<1.4	<1	<1	<1
Tetrachloroethene		µg/L	32.3	42.6	50	18	20.6	26.3	50.7
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	0.8 J	<1	<1.2 J	<1.4	<1	<1	<1
Trichloroethene		µg/L	46.3	27.6	32	14	14.9	15.4	26.5
Vinyl chloride		µg/L	<1	<1	<1.2	<1.4	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit
ND Not Detected, RL unavailable

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-07

Analyte	Sample Name / Sample Date	Units	MW-07 10/18/2006	MW-07 4/9/2007	MW-07 5/14/2007	MW-07 10/8/2007	MW-07 4/14/2008	MW-07 8/19/2008	MW-07 10/17/2008
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	ND	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	ND	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	18.5	22.8	20	12.8	24.8	26.8	32.7
Carbon tetrachloride		µg/L	0.273 J	0.641 J	ND	0.48 J	<1	<1	<1
Chloroform		µg/L	4.49	20	0.55	13.8	0.273 J	0.288	0.299 J
cis-1,2-Dichloroethene		µg/L	<1	0.326 J	0.26	<1	<1	0.282	0.367 J
Tetrachloroethene		µg/L	34.5	39.4	47	24.3	56.2	61.2	63.9
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	<1	<1	ND	<1	<1	<1	<1
Trichloroethene		µg/L	19.6	24.7	25	16	29.4	30.9	38.9
Vinyl chloride		µg/L	<1	<1	ND	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit
ND Not Detected, RL unavailable

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-07

Analyte	Sample Name / Sample Date / Units	MW-07 4/15/2009	MW-07 10/13/2009	MW-07 4/19/2012
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	35.6	24	16.2
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	0.357	0.263 J	0.192 J
cis-1,2-Dichloroethene	µg/L	0.472 J	0.441 J	0.29 J
Tetrachloroethene	µg/L	70.6	62.8	35.1
Total 1,2-Dichloroethene	µg/L	--	--	--
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	40.9	40.4	30.3
Vinyl chloride	µg/L	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit
ND Not Detected, RL unavailable

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
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MW-08

Analyte	Sample Name / Sample Date	Units	MW-08 11/17/1993	MW-08 2/13/1996	MW-08 6/21/1997	MW-08 9/26/1997	MW-08 3/30/1998	MW-08 10/13/1998	MW-08 7/28/2003
1,1,2,2-Tetrachloroethane		µg/L	ND	ND	<10	<10	2 J	<10	<1
1,1,2-Trichloroethane		µg/L	ND	ND	<10	<10	<10	<10	<1
1,1-Dichloroethene		µg/L	34.4	26	12	20	19	22	1.58
Carbon tetrachloride		µg/L	ND	ND	<10	<10	<10	<10	<1
Chloroform		µg/L	ND	ND	<10	<10	<10	<10	<1
cis-1,2-Dichloroethene		µg/L	--	--	--	--	--	--	<1
Tetrachloroethene		µg/L	35.2	26	16	27	24	33	1.6
Total 1,2-Dichloroethene		µg/L	--	ND	<10	<10	<10	<10	--
trans-1,2-Dichloroethene		µg/L	ND	--	--	--	--	--	<1
Trichloroethene		µg/L	15.3	14	9 J	13	12	16	1.51
Vinyl chloride		µg/L	ND	ND	<10	<10	<10	<10	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit
ND Not Detected, RL unavailable

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-08

Analyte	Sample Name / Sample Date	Units	MW-08 10/28/2003	MW-08 4/28/2004	MW-08 10/20/2004	MW-08 11/21/2005	MW-08 11/7/2007	MW-08 4/18/2012
1,1,2,2-Tetrachloroethane		µg/L	<1	<1	<1	0.26 J	<1	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	1.43	1.3	1.1	3.85	<1	2.99
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<1	<1	<1	<1	0.158	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	0.37 J	1.4	5.28	<1	5.25
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	0.85 J	1.3	5.68	<1	7
Vinyl chloride		µg/L	<1	<1	<1	<1 UJ	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit
ND Not Detected, RL unavailable

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-13

Analyte	Sample Name / Sample Date	Units	MW-13 11/15/1993	MW-13-2 6/20/1997	MW-13-3 9/26/1997	MW-13-4 3/26/1998	MW-13-5 10/15/1998	MW-13-79.5FT 1/8/2001	MW-13-ZVI-TS1 10/22/2003
1,1,2,2-Tetrachloroethane		µg/L	ND	<10	<10	<10	<10	<1	0.517
1,1,2-Trichloroethane		µg/L	ND	<10	<10	<10	<10	<1	<0.5
1,1-Dichloroethene		µg/L	ND	<10	<10	<10	<10	<1	<1
Carbon tetrachloride		µg/L	ND	<10	<10	<10	<10	<1	<1
Chloroform		µg/L	ND	<10	<10	<10	<10	<1	0.391 J
cis-1,2-Dichloroethene		µg/L	--	--	--	--	--	<1	<1
Tetrachloroethene		µg/L	2.01	7 J	8 J	2 J	3 J	<1	9.06
Total 1,2-Dichloroethene		µg/L	--	<10	<10	<10	<10	--	--
trans-1,2-Dichloroethene		µg/L	ND	--	--	--	--	<1	<1
Trichloroethene		µg/L	ND	<10	<10	<10	<10	<1 UJ	1.23
Vinyl chloride		µg/L	ND	<10	<10	<10	<10	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit
ND Not Detected, RL unavailable

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-13

	Sample Name	MW1-3-ZVI-TS2	MW-13-ZVI-TS3	MW-13-ZVI-TS4	MW-13-ZVI-TS5	MW-13RD-77	MW-13-77
	Sample Date	11/17/2003	12/17/2003	2/2/2004	4/5/2004	10/28/2004	11/21/2005
Analyte	**Units**						
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	2.64 J	0.66 J
1,1,2-Trichloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.402 J	0.352 J	0.409 J	0.397 J	0.345 J	0.27 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	6.33	6.97	4.69	4.53	3.5	2.15
Total 1,2-Dichloroethene	µg/L	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.325 J	0.308 J	0.262 J	0.638 J	<1	0.91 J
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1 UJ

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit
ND Not Detected, RL unavailable

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
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MW-13

	Sample Name	MW-13-75	MW-13-IS-6	MW-13-IS-7	MW-13
	Sample Date	11/7/2007	4/21/2009	10/14/2009	4/28/2011
Analyte	**Units**				
1,1,2,2-Tetrachloroethane	µg/L	<1	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Chloroform	µg/L	0.127	0.142 J	0.187 J	0.522 B
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Tetrachloroethene	µg/L	0.571	<1	<1	<1
Total 1,2-Dichloroethene	µg/L	--	--	--	--
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit
ND Not Detected, RL unavailable

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-15

Analyte	Sample Name / Sample Date / Units	MW-15 11/18/1993	MW-15-2 6/20/1997	MW-15-3 9/26/1997	MW-15-4 3/28/1998	MW-15-5 10/15/1998	MW-15-Y1Q1 2/3/1999	MW-15-Y1Q2 5/25/1999
1,1,2,2-Tetrachloroethane	µg/L	2.71	<20	<25	<10	<10	<1	28.2
1,1,2-Trichloroethane	µg/L	<1	<20	<25	<10	<10	<1	2.66
1,1-Dichloroethene	µg/L	<1	<20	<25	<10	<10	<1	<1
Carbon tetrachloride	µg/L	38.9	31	46	3 J	5 J	27.9	79.6
Chloroform	µg/L	59.2	300	380	13	31	308	1610
cis-1,2-Dichloroethene	µg/L	--	--	--	--	--	5.96	22.6
Tetrachloroethene	µg/L	4.29	7 J	12 J	<10	<10	4.75	18.8
Total 1,2-Dichloroethene	µg/L	--	8 J	12 J	<10	1 J	--	--
trans-1,2-Dichloroethene	µg/L	2.09	--	--	--	--	2.13	8.26
Trichloroethene	µg/L	46.4	99	140	6 J	13	115	518
Vinyl chloride	µg/L	ND	<20	<25	<10	<10	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit
ND Not Detected, RL unavailable

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-15

	Sample Name	MW-15-Y1Q3	MW-15-Y1Q4	MW-15-Y2Q1	MW-15-NA	MW-15	MW-15-Y2Q3	MW-15-Y2Q4
	Sample Date	8/27/1999	11/3/1999	2/15/2000	3/24/2000	5/17/2000	8/22/2000	11/7/2000
Analyte	**Units**							
1,1,2,2-Tetrachloroethane	µg/L	165	291	522	600	343	389	147
1,1,2-Trichloroethane	µg/L	4.18	5.72	10.2	11	4.69	5.7	2.6
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	39.2	35.2	29	27	16.3	24.7	12.8
Chloroform	µg/L	1270	1020	1060	1400	704	848	224
cis-1,2-Dichloroethene	µg/L	12.4	10.8	14.3	14	6.96	12	4.75
Tetrachloroethene	µg/L	10	8.46	6.91	12	3.96	7.18	2.84
Total 1,2-Dichloroethene	µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	4.29	4.08	4.54	5	2.29	4.17	1.73
Trichloroethene	µg/L	331	299	299	360	154	234	65.9
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit
ND Not Detected, RL unavailable

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-15

Analyte	Sample Name / Sample Date	Units	MW-15-RD74 10/27/2004	MW-15-77 11/21/2005	MW-15-SARA-GW01 5/15/2007	MW-15-75 11/7/2007	MW-15-IS-4 4/15/2008	MW-15-TSVE-GW 8/19/2008	MW-15-IS-5 10/16/2008
1,1,2,2-Tetrachloroethane		µg/L	273 J	273	78	2.47	2.15	0.988	4.61
1,1,2-Trichloroethane		µg/L	10.5	6.09	3.7	<1	<1	<1	0.593 J
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	58.2	13.4	31	25	16	6.35	2.51
Chloroform		µg/L	1530	489	810	186	106	33.4	29.9
cis-1,2-Dichloroethene		µg/L	46.3	15	27	10.6	5.99	3.07	2.54
Tetrachloroethene		µg/L	14.4	2.98	14	6.32	7.19	2.99	1.16
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	10.1	3.1	5.8	3.67	2.02	0.731	<1
Trichloroethene		µg/L	403	133	330	145	104	44.2	22.9
Vinyl chloride		µg/L	<1	2.81 J	<1	0.313	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit
ND Not Detected, RL unavailable

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-15

Analyte	Sample Name / Sample Date	Units	MW-15-IS-6 4/20/2009	MW-15-IS-7 10/13/2009	MW-015-ODLA-1 3/26/2010	MW-15 4/26/2011	MW-15 4/19/2012	MW-15 10/17/2012
1,1,2,2-Tetrachloroethane		µg/L	0.963	24.5 J	11.8	0.239 J	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	0.905 J	0.283 J	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	0.513 J	2.97	1.81	0.288 J	<1	<1
Chloroform		µg/L	0.524	31.1 J	14.7	3.21	1.34	2.29
cis-1,2-Dichloroethene		µg/L	<1	1.69	0.796 J	<1	<1	<1
Tetrachloroethene		µg/L	0.612 J	1.13	0.85 J	0.442 J	0.62 J	0.539 J
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	<1	0.332 J	<1	<1	<1	<1
Trichloroethene		µg/L	0.289 J	27	13.8	2.02	0.724 J	1.07
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit
ND Not Detected, RL unavailable

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-28

	Sample Name	MW-28	MW-28	MW-28	MW-28
	Sample Date	11/19/1993	2/7/1996	4/19/2012	10/16/2012
Analyte	**Units**				
1,1,2,2-Tetrachloroethane	µg/L	ND	ND	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	ND	ND	<1	<1
1,1-Dichloroethene	µg/L	ND	ND	<1	<1
Carbon tetrachloride	µg/L	ND	ND	<1	<1
Chloroform	µg/L	ND	ND	<0.3	0.154 J
cis-1,2-Dichloroethene	µg/L	--	--	<1	<1
Tetrachloroethene	µg/L	ND	ND	<1	<1
Total 1,2-Dichloroethene	µg/L	--	--	--	--
trans-1,2-Dichloroethene	µg/L	ND	ND	<1	<1
Trichloroethene	µg/L	ND	ND	<1	<1
Vinyl chloride	µg/L	ND	ND	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit
ND Not Detected, RL unavailable

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-31

	Sample Name	MW-31	MW-31-2	MW-31-3ADD	MW-31-4	MW-31-5	MW-31-Y1Q1	MW-31-Y1Q2
	Sample Date	11/19/1993	6/20/1997	9/24/1997	3/24/1998	10/15/1998	2/3/1999	5/25/1999
Analyte	**Units**							
1,1,2,2-Tetrachloroethane	µg/L	96	<10	10 J	97	33	3.22	<1
1,1,2-Trichloroethane	µg/L	6.48	<10	<20	4 J	<25	<1	<1
1,1-Dichloroethene	µg/L	52.4	29	47	26	14 J	7.86	33.3
Carbon tetrachloride	µg/L	4.81	1 J	8 J	3 J	<25	1.51	<1
Chloroform	µg/L	21.1	10	49	21 J	16 J	7.22	<1
cis-1,2-Dichloroethene	µg/L	--	--	--	--	--	58.9	4.78
Tetrachloroethene	µg/L	95.4	67	110	66	42	4.25	7.55
Total 1,2-Dichloroethene	µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	164	--	--	--	--	22.2	2.14
Trichloroethene	µg/L	1110	78	220	400	380	140	23.9
Vinyl chloride	µg/L	ND	<10	<20	<25	<25	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-31

Analyte	Sample Name / Sample Date	Units	MW-31-Y1Q3 8/27/1999	MW-31-Y1Q4 11/3/1999	MW-31-Y2Q1 2/15/2000	MW-31-NA 3/23/2000	MW-31 5/17/2000	MW-31-Y2Q3 8/23/2000	MW-31-Y2Q4 11/7/2000
1,1,2,2-Tetrachloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	7.9	5.98	9.89	8	22.3	<1	31.5
Carbon tetrachloride		µg/L	0.59 J	<1	<1	<1	<1	0.4 J	<1
Chloroform		µg/L	1.66	0.92 J	1.19	0.5 J	1.29	<1	<1
cis-1,2-Dichloroethene		µg/L	4.34	5.09	6.89	0.6 J	15.5	12.3	4.24
Tetrachloroethene		µg/L	1.31	0.9 J	0.64 J	1 J	1.16	2.08	0.92 J
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	4.66	2.52	3.37	0.3 J	7.78	<1	4.53
Trichloroethene		µg/L	33.7	18	25.6	4	49.5	68.1	18.5
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-31

Analyte	Sample Name / Sample Date	Units	MW-31_010214 2/14/2001	MW-31-Y3S2-B 10/3/2001	MW-31-2_020410 4/10/2002	MW-31-2_021002 10/2/2002	MW-31-2 4/8/2003	MW-31-2_031028 10/28/2003	MW-31 (77.5-79.5) 4/29/2004
1,1,2,2-Tetrachloroethane		µg/L	14.8	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane		µg/L	1.2	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	7.98	31.2	39.5	55.4	5.37	8.38	40
Carbon tetrachloride		µg/L	2.76	1.25	<1	0.88 J	<1	<1	0.24 J
Chloroform		µg/L	25.1	1.61	<1	1.08	<1	<1	0.32 J
cis-1,2-Dichloroethene		µg/L	148	5.53	6.78	17	2.06	<1	0.56 J
Tetrachloroethene		µg/L	5.02	4.19	1.24	1.32	0.92	<1	2.2
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	49.3	4.83	5.34	11.3	1.53	<1	0.47 J
Trichloroethene		µg/L	241	38.1	33.1	87.5	13.5	2.32	16
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-31

Analyte	Sample Name / Sample Date	Units	MW-31 8/12/2004	MW-31 77.5-79.5 10/20/2004	MW-31 6/17/2005	MW-31 11/18/2005	MW-31 4/12/2006	MW-31T 10/18/2006	MW-31-77.1-IS-2 4/9/2007
1,1,2,2-Tetrachloroethane		µg/L	<1.7	<1	<1	<1	<1	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1.7	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	26 B	17	24.9	27.8	29.6	30.6	12.5
Carbon tetrachloride		µg/L	<1.7	<1 J	<1	<1	<1	<1	0.451 J
Chloroform		µg/L	<1.7	<1	<1	<1	<1	0.131 J	0.458
cis-1,2-Dichloroethene		µg/L	<1.7	0.58 J	0.814 J	<1	1.56	<1	7.32
Tetrachloroethene		µg/L	0.59 J	0.42 J	0.547 J	0.755 J	1.35	7.58	1.45
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	<1.7	0.31 J	0.595 J	<1	1.4	<1	5.44
Trichloroethene		µg/L	5.5	4.7	8.48	8.86	4.99	3.85	30.2
Vinyl chloride		µg/L	<1.7 J	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-31

Analyte	Sample Name / Sample Date / Units	MW-31-77.1-IS-3 10/5/2007	MW-31-77.1-IS-4 4/11/2008	MW-31-76.95-IS-5 10/17/2008	MW-31-76.95-IS-6 4/14/2009	MW-31-IS-7 10/14/2009	MW-031-ODLA-1 3/26/2010	MW-31 4/26/2011
1,1,2,2-Tetrachloroethane	µg/L	0.262 J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7.73	7.17	7.36	35	28.8	30.9	1.17
Carbon tetrachloride	µg/L	0.48 J	0.368 J	<1	<1	<1	<1	<1
Chloroform	µg/L	0.398	0.802	0.219 J	0.186 J	0.161 J	0.16 J	<0.3
cis-1,2-Dichloroethene	µg/L	8.45	2.87	<1	0.26 J	0.273 J	<1	<1
Tetrachloroethene	µg/L	0.887 J	0.916 J	3.17	43.5	41.2	22.7	2.47
Total 1,2-Dichloroethene	µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	5.23	1.51	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5.87	3.21	4.34	33.4	29	20.4	2.15
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-31

	Sample Name	MW-31	MW-31
	Sample Date	4/19/2012	10/16/2012
Analyte	**Units**		
1,1,2,2-Tetrachloroethane	µg/L	<0.5	0.526
1,1,2-Trichloroethane	µg/L	<1	<1
1,1-Dichloroethene	µg/L	2.55	0.902 J
Carbon tetrachloride	µg/L	<1	<1
Chloroform	µg/L	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1
Tetrachloroethene	µg/L	4.75	2.71
Total 1,2-Dichloroethene	µg/L	--	--
trans-1,2-Dichloroethene	µg/L	<1	<1
Trichloroethene	µg/L	4.87	3.66
Vinyl chloride	µg/L	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-32

Analyte	Sample Name / Sample Date	Units	MW-32 11/18/1993	MW-32-2 6/21/1997	MW-32-3 9/29/1997	MW-32-4 3/27/1998	MW-32-Y1Q1 2/3/1999	MW-32-Y1Q2 5/25/1999	MW-32-Y1Q3 8/26/1999
1,1,2,2-Tetrachloroethane		µg/L	162	91	110	140	5.67	4.42	0.92 J
1,1,2-Trichloroethane		µg/L	7.69	5 J	5 J	6 J	1.54	<1	<1
1,1-Dichloroethene		µg/L	ND	<10	<10	<10	<1	<1	<1
Carbon tetrachloride		µg/L	33	25	16	20	25.2	14.2	17.3
Chloroform		µg/L	11.3	8 J	6 J	7 J	7.89	32.2	76.9
cis-1,2-Dichloroethene		µg/L	--	--	--	--	30.5	16.7	4.64
Tetrachloroethene		µg/L	2	2 J	1 J	1 J	1.16	1.28	2.22
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	10.4	--	--	--	3.82	1.76	0.99 J
Trichloroethene		µg/L	137	93	76	100	31.9	28.1	34.6
Vinyl chloride		µg/L	ND	<10	<10	<10	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-32

	Sample Name	MW-32-Y1Q4	MW-32-Y2Q1	MW-32	MW-32-Y2Q3	MW-32-Y2Q4	MW-32_010220
	Sample Date	11/3/1999	2/15/2000	5/16/2000	8/24/2000	11/9/2000	2/20/2001
Analyte	**Units**						
1,1,2,2-Tetrachloroethane	µg/L	<1	<1	<1	2.12	21.5	68.2
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	0.61 J	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	25.2	25.5	37	47.2	61.3	19.7
Chloroform	µg/L	73	77.2	117	171	372 J	434
cis-1,2-Dichloroethene	µg/L	4.59	5.07	6.61	5.66	8.55	9.44
Tetrachloroethene	µg/L	2.63	2.34	3.94	5.9	6.39 J	3.74
Total 1,2-Dichloroethene	µg/L	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	1.01	1.12	2	2.68	4.53	2.42
Trichloroethene	µg/L	36.8	41.8	58.2	89.2	94.8	71.9
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-32

Analyte	Sample Name / Sample Date	Units	MW-32-Y3S2 10/3/2001	MW-32-1_020410 4/10/2002	MW-32-1_021001 10/1/2002	MW-32-1 4/8/2003	MW-32-1_031028 10/28/2003	MW-32 (64.5-66.5) 4/29/2004	MW-32 8/13/2004
1,1,2,2-Tetrachloroethane		µg/L	216	24	14	11	7.82	8.1	21
1,1,2-Trichloroethane		µg/L	<1	0.59 J	<1	0.52	<1	<1	<2.5
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<2.5
Carbon tetrachloride		µg/L	42.7	12.1	12.3	1.18	<1	8.2	7.6
Chloroform		µg/L	828	102	91.5	50.2	50.9	37	68
cis-1,2-Dichloroethene		µg/L	12.6 J	4.21	3.49	9.16	7.97	2	2.8
Tetrachloroethene		µg/L	<1	0.82 J	1.41	<1	<1	0.37 J	0.97 J
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	5.82 J	1.26	0.72 J	<1	<1	0.36 J	<2.5
Trichloroethene		µg/L	238	37.9	34.8	13.5	13.4	14	24
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<2.5

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-32

Analyte	Sample Name / Sample Date	Units	MW-32 65.9-66.9 10/20/2004	MW-32-RD66 10/28/2004	MW-32 6/14/2005	MW-32 11/16/2005	MW-32 4/12/2006	MW-32B 10/19/2006	MW-32-65.6-IS-2 4/9/2007
1,1,2,2-Tetrachloroethane		µg/L	3.6	17.1 J	3.72	32.7	46	21.7	1.59
1,1,2-Trichloroethane		µg/L	<1	0.379 J	<1	1.06	1.28	0.594 J	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	2.3 J	9.56 J	2.83	12.3	17.4	12.3	3.95
Chloroform		µg/L	17	64.7 J	11.5	131	154	86	8.63
cis-1,2-Dichloroethene		µg/L	1.7	3.3 J	1.65	4.99	7.62	3.53	1.14
Tetrachloroethene		µg/L	<1	0.936 J	<1	1.55	2.58	1.63	0.82 J
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	0.23 J	0.490 J	<1	<1	1.25	0.613 J	<1
Trichloroethene		µg/L	7.3	22 J	4.1	55	70	38	6.47
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-32

Analyte	Sample Name / Sample Date	Units	MW-32-65.6-IS-3 10/8/2007	MW-32-65.6-IS-4 4/11/2008	MW-32-66.84-IS-5 10/17/2008	MW-32-66.84-IS-6 4/15/2009	MW-32-IS-7 10/14/2009	MW-032-ODLA-1 3/26/2010	MW-32 4/26/2011
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	16.2	9.16	3.39
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	0.873 J	0.434 J	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	20.2	6.71	1.21
Chloroform		µg/L	<0.3	4.07	0.2 J	0.593	176	60	10.9
cis-1,2-Dichloroethene		µg/L	<1	0.263 J	2.09	3.03	10.3	6.27	3.6
Tetrachloroethene		µg/L	<1	<1	<1	<1	5.41	2.43	0.45 J
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	1.97	0.926 J	<1
Trichloroethene		µg/L	<1	2.47	3.65	4.41	113	38.3	6.92
Vinyl chloride		µg/L	<1	<1	<1	0.495 J	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-33

Analyte	Sample Name / Sample Date	Units	MW-33 11/19/1993	MW-33-2 6/18/1997	MW-33-3 9/25/1997	MW-33-4 3/25/1998	MW-33-5 10/16/1998	MW-33-Y1Q1 2/2/1999	MW-33-Y1Q2 5/25/1999
1,1,2,2-Tetrachloroethane		µg/L	2.28	<10	<10	<10	<10	<1	<1
1,1,2-Trichloroethane		µg/L	ND	<10	<10	<10	<10	<1	<1
1,1-Dichloroethene		µg/L	ND	<10	<10	<10	<10	<1	<1
Carbon tetrachloride		µg/L	ND	<10	<10	<10	<10	<1	<1
Chloroform		µg/L	ND	<10	<10	<10	<10	<1	<1
cis-1,2-Dichloroethene		µg/L	--	--	--	--	--	<1	<1
Tetrachloroethene		µg/L	ND	<10	<10	<10	<10	<1	<1
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	ND	--	--	--	--	<1	<1
Trichloroethene		µg/L	ND	<10	<10	<10	<10	<1	<1
Vinyl chloride		µg/L	ND	<10	<10	<10	<10	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-33

	Sample Name	MW-33-Y1Q3	MW-33-Y1Q4	MW-33-Y2Q1	MW-33	MW-33-Y2Q3	MW-33-Y2Q4
	Sample Date	8/26/1999	11/2/1999	2/15/2000	5/16/2000	8/22/2000	11/8/2000
Analyte	**Units**						
1,1,2,2-Tetrachloroethane	µg/L	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1
Total 1,2-Dichloroethene	µg/L	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-33

Analyte	Sample Name / Sample Date	Units	MW-33-Y3S2 10/3/2001	MW-33-1_020410 4/10/2002	MW-33-1_021002 10/2/2002	MW-33-1 4/8/2003	MW-33-1_031028 10/28/2003	MW-33 (59.5-61.5) 4/29/2004	MW-33 59.33-61.33 10/20/2004
1,1,2,2-Tetrachloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1 J
Chloroform		µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-33

Analyte	Sample Name / Sample Date / Units	MW-33 6/14/2005	MW-33 11/16/2005	MW-33 4/12/2006	MW-33 10/20/2006	MW-33-58-IS-2 4/9/2007	MW-33-58-IS-3 10/8/2007	MW-33-58-IS-4 4/14/2008
1,1,2,2-Tetrachloroethane	µg/L	<1	<1	<1	<0.5	<0.5	<0.5	<0.5 J
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1 J
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1 J
Carbon tetrachloride	µg/L	<1	<1	0.562 J	0.278 J	0.457 J	1.5	<1 J
Chloroform	µg/L	<1	<1	<1	<0.3	<0.3	<0.3	<0.3 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1 J
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1 J
Total 1,2-Dichloroethene	µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1 J
Trichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1 J
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1 J

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-33

Analyte	Sample Name / Sample Date	Units	MW-33-59.15-IS-5 10/17/2008	MW-33-59.15-IS-6 4/15/2009	MW-33-IS-7 10/14/2009	MW-33 4/28/2011
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	0.474 J	<1	<1
Chloroform		µg/L	<0.3	0.184 J	<0.3	0.517 B
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	0.254 J
Total 1,2-Dichloroethene		µg/L	--	--	--	--
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1
Trichloroethene		µg/L	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-44

Analyte	Sample Name / Sample Date / Units	MW-44-2 6/20/1997	MW-44-3 9/25/1997	MW-44-4 3/27/1998	MW-44-5 10/17/1998	MW-44-Y1Q1 2/2/1999	MW-44-Y1Q2 5/25/1999	MW-44-Y1Q3 8/26/1999
1,1,2,2-Tetrachloroethane	µg/L	<10	<10	<10	<10	<1	<1	<10
1,1,2-Trichloroethane	µg/L	<10	<10	<10	<10	<1	<1	<10
1,1-Dichloroethene	µg/L	<10	<10	<10	<10	<1	<1	<10
Carbon tetrachloride	µg/L	6 J	6 J	4 J	<10	<1	<1	<10
Chloroform	µg/L	6 J	<10	4 J	<10	<1	<1	<10
cis-1,2-Dichloroethene	µg/L	--	--	--	--	<1	<1	<10
Tetrachloroethene	µg/L	<10	<10	<10	<10	<1	<1	<10
Total 1,2-Dichloroethene	µg/L	2 J	2 J	1 J	<10	--	--	--
trans-1,2-Dichloroethene	µg/L	--	--	--	--	<1	<1	<10
Trichloroethene	µg/L	4 J	5 J	3 J	<10	<1	<1	<10
Vinyl chloride	µg/L	<10	<10	<10	<10	<1	<1	<10

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-44

Analyte	Sample Name / Sample Date	Units	MW-44-Y1Q4 11/2/1999	MW-44-Y2Q1 2/15/2000	MW-44 5/16/2000	MW-44-Y2Q3 8/24/2000	MW-44-Y2Q4 11/8/2000	MW-44-Y3S2-C 10/3/2001	MW-44-3_020410 4/10/2002
1,1,2,2-Tetrachloroethane		µg/L	<1	<1	<1	<1	<1	1.29	<1
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	2.3	5.3	2.1	6.47	4.36
Chloroform		µg/L	<1	<1	1.88	3.62	1.23	5.04	2.81
cis-1,2-Dichloroethene		µg/L	<1	<1	0.65 J	1.35	0.622 J	<1	1.1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	<1	1.36	4.92	0.79 J	2.77	2.05
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-44

Analyte	Sample Name / Sample Date	Units	MW-44-3_021001 10/1/2002	MW-44-1 4/8/2003	MW-44-1_031028 10/28/2003	MW-44 (69-71) 4/29/2004	MW-44 8/14/2004	MW-44 69-71 10/21/2004	MW-44 6/16/2005
1,1,2,2-Tetrachloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	4.39	3.65	1.96	1.3	0.8 J	0.71 J	<1
Chloroform		µg/L	2.8	2.19	1.15	0.91 J	0.4 J	0.64 J	<1
cis-1,2-Dichloroethene		µg/L	1.01	0.84	<1	0.35 J	<1	0.27 J	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1 J	<1	<1	<1
Trichloroethene		µg/L	1.67	1.64	0.82 J	0.75 J	0.28 J	0.55 J	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-44

Analyte	Sample Name / Sample Date	Units	MW-44 11/17/2005	MW-44 4/13/2006	MW-44 10/19/2006	MW-44-69-IS-2 4/9/2007	MW-44-69-IS-3 10/5/2007	MW-44-69-IS-4 4/11/2008	MW-44-69.75-IS-5 10/20/2008
1,1,2,2-Tetrachloroethane		µg/L	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	1.01	<1	1.2	1.24	1.2	0.823 J	0.708 J
Chloroform		µg/L	<1	<1	0.467	0.694	0.63	0.567	0.366
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	<1	0.366 J	0.688 J	0.467 J	0.599 J	0.665 J
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-44

Analyte	Sample Name / Sample Date	Units	MW-44-69.75-IS-6 4/14/2009	MW-44-IS-7 10/15/2009	MW-044-ODLA-1 3/26/2010	MW-44 4/26/2011	MW-44 4/20/2012
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	0.5 J	0.822 J	<1	<1	<1
Chloroform		µg/L	0.266 J	0.213 J	<0.3	0.17 J	2.84
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.252 J	<1	0.426 J	0.579 J	2.03
Vinyl chloride		µg/L	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-54

Analyte	Sample Name / Sample Date	Units	MW-54 6/20/1997	MW-54 9/25/1997	MW-54 3/28/1998	MW-54 10/16/1998	MW-54 2/3/1999	MW-54 5/25/1999	MW-54 8/26/1999
1,1,2,2-Tetrachloroethane		µg/L	<10	<10	<10	<10	<1	<1	<10
1,1,2-Trichloroethane		µg/L	<10	<10	<10	<10	<1	<1	<10
1,1-Dichloroethene		µg/L	<10	<10	<10	<10	<1	<1	<10
Carbon tetrachloride		µg/L	<10	1 J	2 J	<10	<1	3.53	12.8
Chloroform		µg/L	<10	<10	1 J	<10	<1	<1	5.04
cis-1,2-Dichloroethene		µg/L	--	--	--	--	3.6	3.9	10.3
Tetrachloroethene		µg/L	<10	2 J	2 J	<10	<1	<1	<10
Total 1,2-Dichloroethene		µg/L	4 J	10	12	4 J	--	--	--
trans-1,2-Dichloroethene		µg/L	--	--	--	--	<1	<1	<10
Trichloroethene		µg/L	58	150	180	79	60.6	61	50
Vinyl chloride		µg/L	<10	<10	<10	<10	<1	<1	<10

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-54

Analyte	Sample Name / Sample Date	Units	MW-54 11/3/1999	MW-54 2/15/2000	MW-54 3/23/2000	MW-54 5/17/2000	MW-54 8/22/2000	MW-54 11/7/2000	MW-54 10/3/2001
1,1,2,2-Tetrachloroethane		µg/L	40.1	23.6	19	<1	4.9	22.7	8.67
1,1,2-Trichloroethane		µg/L	1.15	0.9 J	1	<1	0.56 J	1.24	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	5.02	14.7	19	4.46	7.97	8.65	7.7
Chloroform		µg/L	2.54	12.4	18	5.54	13.8	19.8	6.87
cis-1,2-Dichloroethene		µg/L	24.1	22.5	30	7.08	14.9	34.6	31.4
Tetrachloroethene		µg/L	0.68 J	0.94 J	5	<1	0.74 J	0.91 J	1.89
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	1.4	2.01	4	<1	1.39	2.58	5.28
Trichloroethene		µg/L	30.6	43.3	50	11.6	28.1	29.2	259
Vinyl chloride		µg/L	<1	<1	0.1 J	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-54

Analyte	Sample Name / Sample Date	Units	MW-54 4/10/2002	MW-54 10/1/2002	MW-54 4/8/2003	MW-54 11/18/2003	MW-54 2/4/2004	MW-54 4/7/2004	MW-54 4/29/2004
1,1,2,2-Tetrachloroethane		µg/L	9.06	60.1	44.1	301	2180	1350	2000
1,1,2-Trichloroethane		µg/L	1.19	<10	<10	7.86	9.85	6.63	<67
1,1-Dichloroethene		µg/L	<1	<10	<10	<1	<1	<1	<67
Carbon tetrachloride		µg/L	2.96	5.58 J	7.48	3.35	5.79	3.94	<67
Chloroform		µg/L	8.84	11.6	1.82	3.68	5.4	3.93	<67
cis-1,2-Dichloroethene		µg/L	43.7	85.9	44.3	85.3	83.4	61.2	64 J
Tetrachloroethene		µg/L	2.06	<10	4.02	7.37	14.2	8.36	<67
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	9.95	16.2	8.76	4.16	20.4	13	54 J
Trichloroethene		µg/L	723	920	72.4	216	2230	1530 J	2000
Vinyl chloride		µg/L	<1	<10	<10	<1	0.441 J	<1	<67

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
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J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-54

Analyte	Sample Name / Sample Date	Units	MW-54 8/14/2004	MW-54 10/21/2004	MW-54 1/27/2005	MW-54 3/23/2005	MW-54 6/17/2005	MW-54 11/18/2005	MW-54 4/13/2006
1,1,2,2-Tetrachloroethane		µg/L	2300	4700	3000	2100	1220	853	605
1,1,2-Trichloroethane		µg/L	<100	<140	6 J	6.1 J	3.68	3.44	3.91
1,1-Dichloroethene		µg/L	<100	<140	<10	<8.3	<1	<1	<1
Carbon tetrachloride		µg/L	<100	<140	<10	<8.3	0.902 J	1.3	0.944 J
Chloroform		µg/L	<100	<140	<10	3 J	1.52 B	1.46 B	1.14 B
cis-1,2-Dichloroethene		µg/L	65 J	70 J	23	41	35.8	25.4	19.1
Tetrachloroethene		µg/L	<100	<140	<10	5.8 J	2.77	4.42	2.98
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	<100	<140	2.9 J	6.5 J	5.94	4.18	4.38
Trichloroethene		µg/L	2200	2700	300	1300	729	478 J	671
Vinyl chloride		µg/L	<100	<140	<10	<8.3	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-54

Analyte	Sample Name / Sample Date	Units	MW-54 4/26/2006	MW-54 10/19/2006	MW-54 4/9/2007	MW-54 10/8/2007	MW-54 4/11/2008	MW-54 10/20/2008	MW-54 6/8/2009
1,1,2,2-Tetrachloroethane		µg/L	572	572	160	80	171	53.9	842
1,1,2-Trichloroethane		µg/L	4.54	2.54	0.968 J	<5	0.885 J	0.621 J	4.15
1,1-Dichloroethene		µg/L	<1 U	<1	<2.5	<5	<1	<1	<2
Carbon tetrachloride		µg/L	1.08	1.9	2.34 J	5.74	6.76	4.37	0.745 J
Chloroform		µg/L	1.68 J	1.45	2	3.17	3.85	9.78	3.15
cis-1,2-Dichloroethene		µg/L	26.3	19.6	18.9	19.2	17.4	15.7	25.9
Tetrachloroethene		µg/L	1.63	2.78	3.58	5.06	3.88	2.46	5.01
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	5.65	3.88	4.2	4.48 J	4.42	3.13	4.1
Trichloroethene		µg/L	493	604	405	474	348	350	744
Vinyl chloride		µg/L	<1 UJ	<1	<2.5	<5	<1	<1	<2

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-54

Analyte	Sample Name / Sample Date	Units	MW-54 10/16/2009	MW-54 3/24/2010	MW-54 6/22/2010	MW-54 9/22/2010	MW-54 1/26/2011	MW-54 4/25/2011	MW-54 9/26/2011
1,1,2,2-Tetrachloroethane		µg/L	384	168	83.2	44.9 J	28.5	2.45	1.64
1,1,2-Trichloroethane		µg/L	1.49 J	0.599 J	0.312 J	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<2.5	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<2.5	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	1.25	0.663	0.366	0.286 J	0.422	0.304	0.692
cis-1,2-Dichloroethene		µg/L	10.7	4.7	2.5	2.65	1.11	<1	<1
Tetrachloroethene		µg/L	2.52	1.77	1.12	1.28	1.31	0.616 J	0.537 J
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	1.39 J	0.657 J	0.308 J	<1	<1	<1	<1
Trichloroethene		µg/L	381	170	93.6	60	55.6	8.73	4.4
Vinyl chloride		µg/L	<2.5	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-54

	Sample Name	MW-54	MW-54
	Sample Date	4/18/2012	10/17/2012
Analyte	**Units**		
1,1,2,2-Tetrachloroethane	µg/L	2.87	2.54
1,1,2-Trichloroethane	µg/L	<1	<1
1,1-Dichloroethene	µg/L	<1	<1
Carbon tetrachloride	µg/L	<1	<1
Chloroform	µg/L	0.521	0.354
cis-1,2-Dichloroethene	µg/L	<1	<1
Tetrachloroethene	µg/L	0.48 J	0.377 J
Total 1,2-Dichloroethene	µg/L	--	--
trans-1,2-Dichloroethene	µg/L	<1	<1
Trichloroethene	µg/L	8.74	7.74
Vinyl chloride	µg/L	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-57

Analyte	Sample Name / Sample Date	Units	MW-57 3/15/1999	MW-57-Y2Q1 2/16/2000	MW-57 5/17/2000	MW-57-Y2Q3 8/22/2000	MW-57-Y2Q4 11/7/2000	MW-57-Y3S2-B 10/3/2001	MW-57-2_020410 4/10/2002
1,1,2,2-Tetrachloroethane		µg/L	<10	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane		µg/L	<10	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<10	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	14	39.9	50.6	45.7	48.3	37.5	42.8
Chloroform		µg/L	6 J	13.2	10.3	11.3	8.93	28	15.1
cis-1,2-Dichloroethene		µg/L	--	<1	<1	0.53 J	0.411 J	0.97 J	0.55 J
Tetrachloroethene		µg/L	2 J	5.38	5.1	5.86	5.07	5.24	6.08
Total 1,2-Dichloroethene		µg/L	<10	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	--	1.55	1.51	1.83	1.5	1.73	1.88
Trichloroethene		µg/L	22	50.8	46.5	49.2	30.9	77.4	66.4
Vinyl chloride		µg/L	<10	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-57

Analyte	Sample Name	MW-57-2_021001	MW-57-2	MW-57-2_031028	MW-57 (67-69)	MW-57 66.8-68.8	MW-57-RD67	MW-57
	Sample Date	10/1/2002	4/8/2003	10/28/2003	4/29/2004	10/21/2004	10/28/2004	6/14/2005
	Units							
1,1,2,2-Tetrachloroethane	µg/L	<1	<1	<1	<3.3	<1	<1	<1
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<3.3	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<3.3	<1	<1	<1
Carbon tetrachloride	µg/L	43	42.4	33.3	33	19	23.7	20.6
Chloroform	µg/L	29.7	15.6	18.2	5.7	6.1	9.29	4.94 B
cis-1,2-Dichloroethene	µg/L	1.13	0.68	<1	<3.3	0.27 J	0.340 J	<1
Tetrachloroethene	µg/L	8.14	7.86	5.32	5	2.7	2.96	2.6
Total 1,2-Dichloroethene	µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	2.27	1.37	1.45	0.46 J	0.58 J	0.799 J	<1
Trichloroethene	µg/L	54.1	73.3	71.6	48	29	35.9	19
Vinyl chloride	µg/L	<1	<1	<1	<3.3	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-57

Analyte	Sample Name / Sample Date	Units	MW-57 11/18/2005	MW-57 4/12/2006	MW-57 10/20/2006	MW-57-66.6-IS-2 4/10/2007	MW-57-SARA-GW01 5/2007 9:35:00	MW-57-66.6-IS-3 10/5/2007	MW-57-66.6-IS-4 4/14/2008
1,1,2,2-Tetrachloroethane		µg/L	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	17.1	23	31	29.6	28	22.9	11.1
Chloroform		µg/L	4.75 B	3.25 B	5.67	6.6	5.8	6.29	3.32
cis-1,2-Dichloroethene		µg/L	<1	<1	0.294 J	0.325 J	0.33	0.371 J	<1
Tetrachloroethene		µg/L	2.3	2.81	4.02	5.06	4.3	4.48	3.03
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	<1	0.419 J	0.659 J	0.684 J	0.58	0.719 J	<1
Trichloroethene		µg/L	17.6	18	28.7	34.6	29	31.2	19.4
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-57

Analyte	Sample Name	MW-57-TSVE-GW	MW-57-68.32-IS-5	MW-57-68.32-IS-6	MW-57-IS-7	MW-057-ODLA-1	MW-57	MW-57	MW-57
	Sample Date	8/19/2008	10/17/2008	4/15/2009	10/13/2009	3/26/2010	4/26/2011	4/19/2012	10/17/2012
	Units								
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	0.538 J	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	6.04	4.23	1.82	0.9 J	<1	<1	<1	<1
Chloroform	µg/L	12.6	15.9	73	67.4	50.7 J	20.3	8.11	9.57
cis-1,2-Dichloroethene	µg/L	<1	<1	1.44	1.48	1.03	0.409 J	<1	<1
Tetrachloroethene	µg/L	2.18	1.82	1.17	0.841 J	0.27 J	<1	<1	<1
Total 1,2-Dichloroethene	µg/L	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	0.386	0.358 J	0.567 J	0.31 J	<1	<1	<1	<1
Trichloroethene	µg/L	29.2	30.4	28.7	20.3	7.57	1.84	0.961 J	1.1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-58

	Sample Name	MW-58	MW-58-Y2Q1	MW-58	MW-58-Y2Q3	MW-58-Y2Q4	MW-58_010219
	Sample Date	3/15/1999	2/16/2000	5/17/2000	8/22/2000	11/7/2000	2/19/2001
Analyte	**Units**						
1,1,2,2-Tetrachloroethane	µg/L	<10	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	µg/L	<10	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<10	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<10	<1	<1	0.26 J	<1	0.43 J
Chloroform	µg/L	<10	3.68	5.88	2.42	1.91	2.05
cis-1,2-Dichloroethene	µg/L	--	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<10	<1	<1	0.41 J	<1	0.4 J
Total 1,2-Dichloroethene	µg/L	<10	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	--	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<10	4.36	4.22	1.44	2.72	2.47
Vinyl chloride	µg/L	<10	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
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MW-58

Analyte	Sample Name / Sample Date	Units	MW-58-Y3S2 10/3/2001	MW-58-1_020410 4/10/2002	MW-58-1_021001 10/1/2002	MW-58-1 4/8/2003	MW-58-1_031028 10/28/2003	MW-58 (64.5-66.5) 4/28/2004	MW-58-66 11/21/2005
1,1,2,2-Tetrachloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	1.85	2.75	3.36	1.47	<1	1.1	1.99
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	0.57	<1	<1	<1
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1.78	2.46	1.82	1.06	<1	0.41 J	0.67 J
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1J

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-58

	Sample Name	MW-58-66.5	MW-58-IS-7	MW-58
	Sample Date	11/8/2007	10/15/2009	4/28/2011
Analyte	**Units**			
1,1,2,2-Tetrachloroethane	µg/L	<1	<0.5	0.213 J
1,1,2-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1
Carbon tetrachloride	µg/L	<1	0.81 J	0.946 J
Chloroform	µg/L	8.89	0.149 J	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	<1	0.309 J	<1
Total 1,2-Dichloroethene	µg/L	--	--	--
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	0.321	<1	0.26 J
Vinyl chloride	µg/L	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-67

Analyte	Sample Name / Sample Date	Units	MW-67 2/16/2000	MW-67 10/3/2001	MW-67 4/10/2002	MW-67 10/1/2002	MW-67 4/8/2003	MW-67 10/28/2003	MW-67 4/29/2004
1,1,2,2-Tetrachloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1 J
Trichloroethene		µg/L	1.26	<1	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-67

Analyte	Sample Name / Sample Date	Units	MW-67 10/21/2004	MW-67 6/17/2005	MW-67 12/8/2005	MW-67 4/12/2006	MW-67 10/19/2006	MW-67 4/10/2007	MW-67 10/5/2007
1,1,2,2-Tetrachloroethane		µg/L	<1	<1	<1	<1	<0.5 J	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1 J	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<1	<1	<1	<1	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-67

	Sample Name	MW-67	MW-67	MW-67	MW-67
	Sample Date	4/11/2008	10/20/2008	4/14/2009	10/15/2009
Analyte	**Units**				
1,1,2,2-Tetrachloroethane	µg/L	<0.5	0.251 J	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	<1	0.292 J	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-68

Analyte	Sample Name / Sample Date	Units	MW-68 5/18/2000	MW-68 8/23/2000	MW-68 11/8/2000	MW-68 2/14/2001	MW-68 10/3/2001	MW-68 4/10/2002	MW-68 10/1/2002
1,1,2,2-Tetrachloroethane		µg/L	<1	6.55	<1	<1	4.15	1.01	<1
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	9.01	<1	9.01
Carbon tetrachloride		µg/L	0.89 J	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	6.44	<1	<1	<1	3.5	<1	7.88
cis-1,2-Dichloroethene		µg/L	13.7	31	1.9	4.38	3.12	<1	<1
Tetrachloroethene		µg/L	2.07	8.35	0.4 J	0.92 J	4.3	<1	4.3
trans-1,2-Dichloroethene		µg/L	13.1	9.36	1.4	4.14	0.78 J	<1	<1
Trichloroethene		µg/L	44.5	48.9	3.21	9.67	6.56	<1	3.85
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-68

Analyte	Sample Name / Sample Date	Units	MW-68 4/8/2003	MW-68 10/28/2003	MW-68 4/29/2004	MW-68 10/21/2004	MW-68 6/15/2005	MW-68 11/17/2005	MW-68 4/12/2006
1,1,2,2-Tetrachloroethane		µg/L	<1	<1	0.85 J	81	1.52 B	<1	<1
1,1,2-Trichloroethane		µg/L	<1	<1	<2.5	<33	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	1.5	<33	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	0.21 J	<33 J	<1	<1	<1
Chloroform		µg/L	<1	<1	0.78 J	<33	<1	<1	0.564 B
cis-1,2-Dichloroethene		µg/L	<1	<1	<2.5	<33	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	2.1	<33	<1 J	<1	0.696 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<2.5	<33	<1	<1	<1
Trichloroethene		µg/L	<1	<1	1.4	20 J	0.512 J	<1	0.608 J
Vinyl chloride		µg/L	<1	<1	<2.5	<33	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-68

Analyte	Sample Name / Sample Date	Units	MW-68 10/19/2006	MW-68 4/11/2007	MW-68 5/17/2007	MW-68 10/8/2007	MW-68 4/14/2008	MW-68 8/20/2008	MW-68 10/17/2008
1,1,2,2-Tetrachloroethane		µg/L	5.67	1.45	5.5	1.51	0.24 B	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<	<1	<1	<1	0.727 J
Carbon tetrachloride		µg/L	0.951 J	<1	<	<1	<1	<1	<1
Chloroform		µg/L	1.57	0.263 J	0.43	0.775	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	1.06	0.473 J	4.2	2.36	<1	<1	<1
Tetrachloroethene		µg/L	1.63	0.506 J	0.69	0.738 J	<1	<1	0.482 J
trans-1,2-Dichloroethene		µg/L	0.544 J	0.261 J	1.3	0.585 J	<1	<1	<1
Trichloroethene		µg/L	5.76	2.58	14	4.73	0.36 J	<1	0.573 J
Vinyl chloride		µg/L	<1	<1	<	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-68

Analyte	Sample Name / Sample Date / Units	MW-68 4/14/2009	MW-68 10/14/2009	MW-68 4/19/2012
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	1.82	1.16	<1
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	0.147 J	0.159 J	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	1.75	1.55	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	1.41	1.16	<1
Vinyl chloride	µg/L	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-69

	Sample Name	MW-69-Y2Q1	MW-69	MW-69-Y2Q3	MW-69-Y2Q4	MW69-94.2FT	MW-69-Y3S2-B
	Sample Date	2/16/2000	5/18/2000	8/24/2000	11/9/2000	1/8/2001	10/3/2001
Analyte	**Units**						
1,1,2,2-Tetrachloroethane	µg/L	<1	<1	4.36	<1	0.6 J	<1
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	0.73 J	<1	<1	0.3 J	<1
Chloroform	µg/L	<1	3.56	<1	2.12	1	<1
cis-1,2-Dichloroethene	µg/L	4.11	31.2	2.26	23.1	11	<1
Tetrachloroethene	µg/L	1.76	4.87	0.68 J	6.39 J	4	<1
trans-1,2-Dichloroethene	µg/L	2.26	19.1	0.86 J	12.3	5	<1
Trichloroethene	µg/L	99.2	642	50.4	464	350	1.01
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
R Unusable

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-69

Analyte	Sample Name / Sample Date	Units	MW-69-2_020410 4/10/2002	MW-69-2_021002 10/2/2002	MW-69-2 4/8/2003	MW-69-2_031028 10/28/2003	MW-69 (91-93) 4/29/2004	MW-69 91.4-93.4 10/21/2004	MW-69 6/15/2005
1,1,2,2-Tetrachloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1 J	<1
Chloroform		µg/L	1.52	<1	<1	<1	<1	0.17 J	<1
cis-1,2-Dichloroethene		µg/L	7.92	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	1.84	0.98 J	1.94	<1	0.55 J	1.5	0.951 J
trans-1,2-Dichloroethene		µg/L	4.14	<1	<1	<1	<1	<1 R	<1
Trichloroethene		µg/L	128	8.12	2.18	<1	0.47 J	3.7	2.47
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
R Unusable

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-69

Analyte	Sample Name / Sample Date	Units	MW-69 11/16/2005	MW-69 4/12/2006	MW-69T 10/20/2006	MW-69-88.2-IS-2 4/11/2007	MW-69-88.2-IS-3 10/8/2007	MW-69-88.2-IS-4 4/14/2008	MW-69-89.64-IS-5 10/17/2008
1,1,2,2-Tetrachloroethane		µg/L	<1	5.51	<0.5	<0.5	<0.5	<0.5	0.229 J
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<1	<1	0.261 J	0.144 J	0.136 J	<0.3	0.147 J
cis-1,2-Dichloroethene		µg/L	<1	<1	0.348 J	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	4.72	2.03	0.898 J	1.03	0.658 J	0.67 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	3.85	9.84	0.879 J	<1	<1	0.88 J
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
R Unusable

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
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Defense Depot Memphis, Tennessee

MW-69

Analyte	Sample Name / Sample Date	Units	MW-69-89.64-IS-6 4/15/2009	MW-69-IS-7 10/14/2009	MW-069-ODLA-1 3/26/2010	MW-69 4/26/2011	MW-69 4/20/2012
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1
Chloroform		µg/L	0.206 J	<0.3	0.161 J	0.203 J	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	0.308 J	0.271 J	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1.74	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
R Unusable

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-70

Analyte	Sample Name / Sample Date / Units	MW-70 2/15/2000	MW-70 3/24/2000	MW-70 5/18/2000	MW-70 8/24/2000	MW-70 11/10/2000	MW-70 1/8/2001	MW-70 10/3/2001
1,1,2,2-Tetrachloroethane	µg/L	4830	310	342	930	3370	390	766
1,1,2-Trichloroethane	µg/L	39.4	4	3.93	15.2	16	2	<1
1,1-Dichloroethene	µg/L	0.61 J	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	3.48	0.4 J	0.64 J	2.46	1.81	0.4 J	<1
Chloroform	µg/L	18.2	2	5.18	8.46	9.37	1 J	<1
cis-1,2-Dichloroethene	µg/L	522	46	54.8	211	292	9	92.8 J
Tetrachloroethene	µg/L	89.7	13	5.35	35.8	32.5 J	2	<1
trans-1,2-Dichloroethene	µg/L	149	14	12	50.4	57.3	5	<1
Trichloroethene	µg/L	11700	1100	720	4240	4040	590	2340
Vinyl chloride	µg/L	1.88	0.2 J	<1	0.62 J	1.69	8	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-70

Analyte	Sample Name / Sample Date	Units	MW-70 4/10/2002	MW-70 10/2/2002	MW-70 4/8/2003	MW-70 10/28/2003	MW-70 4/29/2004	MW-70 8/14/2004	MW-70 10/21/2004
1,1,2,2-Tetrachloroethane		µg/L	2540	7980	3060	8270	8500	3500	4200
1,1,2-Trichloroethane		µg/L	7.35	<50	<50	6.92	<250	<120	<170
1,1-Dichloroethene		µg/L	0.98 J	<50	<50	<1	<250	<120	<170
Carbon tetrachloride		µg/L	<1	<50	<50	0.64 J	<250	<120	<170 J
Chloroform		µg/L	3.99	<50	<50	2.5	<250	<120	<170
cis-1,2-Dichloroethene		µg/L	69.2	72.4	31.6	50	120 J	<120	<170
Tetrachloroethene		µg/L	3.27	<50	<50	3.85	<250	<120	<170
trans-1,2-Dichloroethene		µg/L	27.3	<50	<50	3.91	<250	<120	<170
Trichloroethene		µg/L	2940	1980	824	2530	3700	970	1100
Vinyl chloride		µg/L	17	<50	<50	10.3	<250	<120	<170

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-70

Analyte	Sample Name / Sample Date	Units	MW-70 10/22/2004	MW-70 6/14/2005	MW-70 11/19/2005	MW-70 4/12/2006	MW-70 10/20/2006	MW-70 4/11/2007	MW-70 10/8/2007
1,1,2,2-Tetrachloroethane		µg/L	5800	6410	2990	7670	9200	627	455
1,1,2-Trichloroethane		µg/L	<140	8.88	6.65 J	6.15	25.7	2.17	14.7
1,1-Dichloroethene		µg/L	<140	<5	1.07	3.36	1.89	1.75	2.48
Carbon tetrachloride		µg/L	<140	<5	<10	<1	0.575 J	<1	<2
Chloroform		µg/L	<140	<5	2.12 B	1.52 B	3.79	1.08	0.461 J
cis-1,2-Dichloroethene		µg/L	41 J	67.8	70.5	48.1	122	58.5	8.01
Tetrachloroethene		µg/L	<140	6.3 J	4.84	16.5	29.5	8.16	4.44
trans-1,2-Dichloroethene		µg/L	<140	6.31	15.8	16.6	19.7	5.48	11.5
Trichloroethene		µg/L	2100	361	2420	2130	3390	750	308
Vinyl chloride		µg/L	<140	18.1	29.5	94.2	64.2	94.3	42.3

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-70

Analyte	Sample Name / Sample Date	Units	MW-70 4/14/2008	MW-70 10/17/2008	MW-70 4/15/2009	MW-70 7/30/2009	MW-70 10/15/2009	MW-70 3/25/2010	MW-70 6/22/2010
1,1,2,2-Tetrachloroethane		µg/L	270	0.883	1.98	0.594	0.971	<0.5	1.03
1,1,2-Trichloroethane		µg/L	1.11 J	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	1.71 J	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<2.5	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.75	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	14.2	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	1.53 J	0.876 J	0.58 J	0.582 J	0.71 J	1.04	1.3
trans-1,2-Dichloroethene		µg/L	4.74	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	86	1.96	4.95	2.66	1.93	0.581 J	4.11
Vinyl chloride		µg/L	13.5	<1	<1	<1	<1 UJ	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-70

Analyte	Sample Name / Sample Date	Units	MW-70 9/22/2010	MW-70 1/26/2011	MW-70 4/25/2011	MW-70 9/27/2011	MW-70 4/19/2012
1,1,2,2-Tetrachloroethane		µg/L	1.07 J	1.05	0.415 J	0.669	0.505
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	0.174 J	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	1.25	1.21	0.716 J	1.03	0.768 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Trichloroethene		µg/L	3.78	3.09	2	1.64	1.34
Vinyl chloride		µg/L	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
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MW-71

	Sample Name	MW-71-Y2Q1	MW-71NA	MW-71	MW-71-Y2Q3	MW-71-Y2Q4	MW-71-Y3S2-B	MW-71-2_020410
	Sample Date	2/15/2000	3/24/2000	5/18/2000	8/23/2000	11/9/2000	10/3/2001	4/10/2002
Analyte	**Units**							
1,1,2,2-Tetrachloroethane	µg/L	97.7	180	181	168	78.4	268	68.1
1,1,2-Trichloroethane	µg/L	3.21	5 J	4.54	4.04	2.99	5.17 J	6
1,1-Dichloroethene	µg/L	<1	<10	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	53.9	47	34	32.9	26.5	22.6	20.3
Chloroform	µg/L	996	1600	1080	989	605 J	857	828
cis-1,2-Dichloroethene	µg/L	11.5	14	9.98	8.94	6.49	9.09 J	9.64
Tetrachloroethene	µg/L	10	15	7.35	7.02	4.09 J	<1	1.96
trans-1,2-Dichloroethene	µg/L	4.7	5 J	3.72	2.94	2.29	2.91 J	3.36
Trichloroethene	µg/L	330	390	239	247	95.6	186	70.9
Vinyl chloride	µg/L	<1	<10	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-71

Analyte	Sample Name / Sample Date	Units	MW-71-2_021002 10/2/2002	MW-71-2 4/8/2003	MW-71-2_031028 10/28/2003	MW71 (74.4-76.4) 4/29/2004	MW-71 73.86-75.86 10/21/2004	MW-71-RD73 10/28/2004	MW-71 6/14/2005
1,1,2,2-Tetrachloroethane		µg/L	9.49	7.62	27	3.8	6	4.27	25.8
1,1,2-Trichloroethane		µg/L	<1	0.66	<1	<2	<1	<1	0.634 J
1,1-Dichloroethene		µg/L	<1	<1	<1	<2	<1	<1	<1
Carbon tetrachloride		µg/L	11.2	17.6	6.87	8.2	5.6 J	9.9	12.8
Chloroform		µg/L	8.89	35.4	88.8	56	28	17.5	103
cis-1,2-Dichloroethene		µg/L	1.12	1.59	1.59	0.98 J	0.7 J	0.59 J	1.86
Tetrachloroethene		µg/L	<1	1.31	<1	0.54 J	0.4 J	0.61 J	1.58
trans-1,2-Dichloroethene		µg/L	<1	0.52	<1	<2	<1	<1	0.532 J
Trichloroethene		µg/L	27	44.5	17.4	6.9	12	6.95	34.9
Vinyl chloride		µg/L	<1	<1	<1	<2	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
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MW-71

Analyte	Sample Name / Sample Date	Units	MW-71 11/16/2005	MW-71 4/12/2006	MW-71 10/20/2006	MW-71-72.3-IS-2 4/11/2007	MW-71-72.3-IS-3 10/8/2007	MW-71-72.3-IS-4 4/14/2008	MW-71-74.28-IS-5 10/17/2008
1,1,2,2-Tetrachloroethane		µg/L	27.6	26.3	22.9	4.66	2.21	1.72	5.32
1,1,2-Trichloroethane		µg/L	0.924 J	0.766 J	1.16	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	14	16.3	37.8	16.5	12.6	7.66	5.94
Chloroform		µg/L	94.2	73.5	303	59.2	32.6	17.3	27.2
cis-1,2-Dichloroethene		µg/L	10.6	10.6	11.7	1.89	1.65	0.523 J	0.717 J
Tetrachloroethene		µg/L	2.1	2.65	7.34	3.03	1.52	0.715 J	0.856 J
trans-1,2-Dichloroethene		µg/L	<1	0.977 J	3.07	0.59 J	0.36 J	<1	<1
Trichloroethene		µg/L	47.9	54	158 J	36.2	21	9.37	12.7
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-71

Analyte	Sample Name / Sample Date / Units	MW-71-74.28-IS-6 4/15/2009	MW-71-IS-7 10/14/2009	MW-071-ODLA-1 3/26/2010	MW-71 4/26/2011	MW-71 4/19/2012
1,1,2,2-Tetrachloroethane	µg/L	4.42	7.97	8.26	0.892	0.953
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	0.683 J	0.301 J	<1	<1	0.53 J
Chloroform	µg/L	8.79	3.79	1.47	29.3	10.6
cis-1,2-Dichloroethene	µg/L	0.262 J	<1	<1	0.531 J	<1
Tetrachloroethene	µg/L	0.265 J	<1	<1	<1	0.264 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	3.93	2.23	0.612 J	4.48	3.02
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
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Defense Depot Memphis, Tennessee

MW-76

Analyte	Sample Name / Sample Date	Units	MW-76 1/8/2001	MW-76 2/14/2001	MW-76 10/3/2001	MW-76 4/10/2002	MW-76 10/1/2002	MW-76 4/8/2003	MW-76 10/28/2003
1,1,2,2-Tetrachloroethane		µg/L	2300	694	332	15.5	54.7	8.92	8.08
1,1,2-Trichloroethane		µg/L	2	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	1	<1	<1	1.22	<1	1.44	<1
cis-1,2-Dichloroethene		µg/L	58	17.8	4.67 J	13.5	2.94	5.98	4.16
Tetrachloroethene		µg/L	5	3.98	<1	1.81	1.8	7.43	2.29
trans-1,2-Dichloroethene		µg/L	19	6.84	7.57 J	7.71	1.17	4.74	1.93
Trichloroethene		µg/L	840	276	72.2	90.7	37.2	78.9	33.8
Vinyl chloride		µg/L	0.3 J	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-76

Analyte	Sample Name / Sample Date	Units	MW-76 4/29/2004	MW-76 8/16/2004	MW-76 10/21/2004	MW-76 6/15/2005	MW-76 11/17/2005	MW-76 4/12/2006	MW-76 10/20/2006
1,1,2,2-Tetrachloroethane		µg/L	3.6	2.9	4.3	4.98 B	<1	18.3	2.58
1,1,2-Trichloroethane		µg/L	<1	<2	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<2	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<2	<1 J	<1	<1	<1	<1
Chloroform		µg/L	0.23 J	0.47 J	0.18 J	<1	<1	<1	0.208 J
cis-1,2-Dichloroethene		µg/L	0.95 J	6.9	0.69 J	<1	<1	<1	0.263 J
Tetrachloroethene		µg/L	1.4	1.8 J	0.27 J	0.854 J	1.14	2.36	1.84
trans-1,2-Dichloroethene		µg/L	0.44 J	3.5	0.24 J	<1	<1	<1	<1
Trichloroethene		µg/L	4	34	8.9	3.88	5.16 B	7.71	4.9
Vinyl chloride		µg/L	<1	<2	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-76

Analyte	Sample Name / Sample Date	Units	MW-76 4/10/2007	MW-76 10/8/2007	MW-76 4/14/2008	MW-76 10/17/2008	MW-76 4/14/2009	MW-76 7/30/2009	MW-76 10/15/2009
1,1,2,2-Tetrachloroethane		µg/L	3.82	18.4	77	9.41	0.864	1.11	1.38
1,1,2-Trichloroethane		µg/L	<1	<1	0.303 J	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.359	0.978	0.915	0.167 J	0.152 J	0.146 J	<0.3
cis-1,2-Dichloroethene		µg/L	3.08	11.8	13.2	0.406 J	<1	<1	<1
Tetrachloroethene		µg/L	2.74	4.82	4.44	1.35	0.444 J	0.444 J	0.35 J
trans-1,2-Dichloroethene		µg/L	1.41	5.79	3.59	<1	<1	<1	<1
Trichloroethene		µg/L	26.4	132	336 J	15	2.74	3.26	2.27
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1 UJ

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-76

Analyte	Sample Name / Sample Date	Units	MW-76 3/25/2010	MW-76 6/22/2010	MW-76 9/22/2010	MW-76 1/26/2011	MW-76 4/25/2011	MW-76 9/27/2011	MW-76 4/19/2012
1,1,2,2-Tetrachloroethane		µg/L	0.525	0.378 J	1.07	0.853	0.294 J	0.276 J	0.398 J
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1 UJ	<1	<1	<1	<1	<1
Chloroform		µg/L	0.134 J	<0.3	0.139 J	0.138 J	<0.3	0.15 J	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	0.361 J	0.376 J	0.322 J	<1	0.3 J	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1.35	1.41	2.51	1.79	0.833 J	0.717 J	0.923 J
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-77

Analyte	Sample Name / Sample Date	Units	MW-77 1/8/2001	MW-77 10/3/2001	MW-77 4/10/2002	MW-77 10/1/2002	MW-77 4/8/2003	MW-77 11/18/2003	MW-77 4/29/2004	MW-77 8/15/2004
1,1,2,2-Tetrachloroethane		µg/L	2900	1820	4330	18200	30000	12800	15000	11000
1,1,2-Trichloroethane		µg/L	8	<1	9.46	<50	<50	8.53	<620	<330
1,1-Dichloroethene		µg/L	<10	<1	<1	<50	<50	<1	<620	<330
Carbon tetrachloride		µg/L	0.6 J	<1	<1	<50	<50	0.86 J	<620	<330
Chloroform		µg/L	4 J	<1	5.39	<50	<50	4.96	<620	<330
cis-1,2-Dichloroethene		µg/L	130	76.4 J	176	237	230	189	170 J	94 J
Tetrachloroethene		µg/L	6	<1	7.18	<50	<50	14.8	<620	<330
trans-1,2-Dichloroethene		µg/L	33	20.1 J	42.2	42.9 J	42.2	37.8	<620	<330
Trichloroethene		µg/L	2500	1620	3170	5040	5320	4550	5400	3200
Vinyl chloride		µg/L	0.4 J	<1	<1	<50	<50	<1	<620	<330

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
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MW-77

Analyte	Sample Name / Sample Date	Units	MW-77 10/21/2004	MW-77 6/15/2005	MW-77 11/16/2005	MW-77 4/12/2006	MW-77 4/26/2006	MW-77 10/20/2006	MW-77 4/10/2007
1,1,2,2-Tetrachloroethane		µg/L	4700	2290 J	14000	21700	16700	14300	8800
1,1,2-Trichloroethane		µg/L	<250	<20	18.7	15.7	14.6	17.4	<50
1,1-Dichloroethene		µg/L	<250	<20	<1	<1	<1 U	<1	<50
Carbon tetrachloride		µg/L	<250 J	<20	0.961 J	1.12	1.05	0.922 J	<50
Chloroform		µg/L	<250	<20	2.58 B	4.32 B	5.05 J	4.77	<15
cis-1,2-Dichloroethene		µg/L	64 J	100	107	154	154	151	67.5
Tetrachloroethene		µg/L	<250	16.8 J	21.1	48	22.2	46.9	21 J
trans-1,2-Dichloroethene		µg/L	<250	24.1	15.5	38.5	36.3	19.1	<50
Trichloroethene		µg/L	1700	2100	5300	5520	5170	6500	3330
Vinyl chloride		µg/L	<250	<20	<1	<1	<1 UJ	<1	<50

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

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HISTORICAL CVOC RESULTS - DUNN FIELD LTM
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Defense Depot Memphis, Tennessee

MW-77

Analyte	Sample Name / Sample Date	Units	MW-77 10/8/2007	MW-77 4/14/2008	MW-77 10/17/2008	MW-77 4/15/2009	MW-77 7/30/2009	MW-77 10/15/2009	MW-77 3/25/2010
1,1,2,2-Tetrachloroethane		µg/L	1980	566	2010	28.3	27.2	47.5	5.34
1,1,2-Trichloroethane		µg/L	2.59	<20	2.3	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<20	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<20	<1	<1	<1	<1	<1
Chloroform		µg/L	0.822	<6	0.573	0.13 J	0.153 J	0.175 J	0.179 J
cis-1,2-Dichloroethene		µg/L	22.1	7.13 J	13.2	0.447 J	0.52 J	0.94 J	<1
Tetrachloroethene		µg/L	17	<20	4.62	1.49	0.619 J	0.685 J	0.4 J
trans-1,2-Dichloroethene		µg/L	2.16	<20	0.709 J	<1	<1	<1	<1
Trichloroethene		µg/L	1290	309	796	21.9	23.6	36.7	5.68
Vinyl chloride		µg/L	<1	<20	<1	<1	<1	<1 UJ	<1

Notes:
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µg/L micrograms per liter
RL reporting limit

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J Estimated based on QC data or reported below RL
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HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
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MW-77

Analyte	Sample Name / Sample Date	Units	MW-77 6/22/2010	MW-77 9/22/2010	MW-77 1/26/2011	MW-77 4/25/2011	MW-77 9/27/2011	MW-77 4/19/2012	MW-77 10/17/2012
1,1,2,2-Tetrachloroethane		µg/L	19.6	20.4	25	22	16.9	6.01	6.48
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1 UJ	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.181 J	0.238 J	0.234 J	0.325	0.425	0.509	0.62
cis-1,2-Dichloroethene		µg/L	0.558 J	0.592 J	0.516 J	0.746 J	0.442 J	<1	0.264 J
Tetrachloroethene		µg/L	0.585 J	0.405 J	0.452 J	0.353 J	0.369 J	0.478 J	0.411 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	22.8	23.6	23.7	31.1	21.2	8.48	13
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
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HISTORICAL CVOC RESULTS - DUNN FIELD LTM
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MW-78

Analyte	Sample Name / Sample Date	Units	MW-78 2/14/2001	MW-78-Y3S2-C 10/3/2001	MW-78-3_020410 4/10/2002	MW-78-3_021001 10/1/2002	MW-78-1 4/8/2003	MW-78-1_031028 10/28/2003	MW-78 (62-64) 4/29/2004
1,1,2,2-Tetrachloroethane		µg/L	<1	<1	<1	<1	<1	<1	5.2
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	0.7 J
Trichloroethene		µg/L	<1	<1	<1	<1	<1	<1	0.36 J
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

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UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
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MW-78

Analyte	Sample Name / Sample Date	Units	MW-78 61.8-63.8 10/21/2004	MW-78-58 11/17/2005	MW-78-59 11/8/2007	MW-78-IS-6 4/21/2009	MW-78-ODLA-1 3/29/2010	MW-78 4/28/2011
1,1,2,2-Tetrachloroethane		µg/L	0.74 J	<1	<1	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1 J	<1	<1	<1	<1	<1
Chloroform		µg/L	<1	<1	<1	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.59 J	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1 UJ	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

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HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-79

Analyte	Sample Name / Sample Date / Units	MW-79 2/15/2001	MW-79 2/19/2001	MW-79 10/3/2001	MW-79 4/10/2002	MW-79 10/1/2002	MW-79 4/8/2003	MW-79 10/28/2003
1,1,2,2-Tetrachloroethane	µg/L	<1	3.34	<1	<1	<10	<1	<1
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<10	<1	<1
1,1-Dichloroethene	µg/L	48	30.1	37.6	18.8	23.8	35.8	23.9
Carbon tetrachloride	µg/L	0.1 J	<1	<1	<1	<10	<1	<1
Chloroform	µg/L	1.7	<1	<1	<1	<10	<1	<1
cis-1,2-Dichloroethene	µg/L	6.1	2.52	0.88 J	0.68 J	8.67 J	0.86	2.07
Tetrachloroethene	µg/L	34	14	6.85	6.96	3.26 J	5.64	2.1
trans-1,2-Dichloroethene	µg/L	2.2	<1	0.96 J	1.09	9	1.31	1.61
Trichloroethene	µg/L	26	9.6	8.8	9	68.4	15.2	12.4
Vinyl chloride	µg/L	<1	<1	<1	<1	<10	<1	<1

Notes:
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µg/L micrograms per liter
RL reporting limit

DQE Flags:
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HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-79

Analyte	Sample Name / Sample Date	Units	MW-79 4/29/2004	MW-79 8/13/2004	MW-79 10/22/2004	MW-79 1/26/2005	MW-79 3/22/2005	MW-79 6/16/2005	MW-79 11/18/2005
1,1,2,2-Tetrachloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	9.4	7.6 B	7.8	9.1	10	13.1	16.6
Carbon tetrachloride		µg/L	<1	0.77 J	0.42 J	0.22 J	0.3 J	<1	<1
Chloroform		µg/L	0.21 J	<1	0.29 J	<1	0.28 B	<1	<1
cis-1,2-Dichloroethene		µg/L	1.7	1.9	3	1	2.4	1.59	<1
Tetrachloroethene		µg/L	2.1	1.7	1.8	1.2	1.2	1.17	1.01
trans-1,2-Dichloroethene		µg/L	2 J	1.6	3	1.1	2.3	1.28	<1
Trichloroethene		µg/L	8.3	14	9.5	7.5	16	9.99	3.69
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
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µg/L micrograms per liter
RL reporting limit

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HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-79

Analyte	Sample Name / Sample Date	Units	MW-79 4/13/2006	MW-79 10/18/2006	MW-79 4/10/2007	MW-79 10/8/2007	MW-79 4/11/2008	MW-79 10/20/2008	MW-79 6/8/2009
1,1,2,2-Tetrachloroethane		µg/L	<1	<0.5	<0.5	<0.5	30.4	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	11.4	10.6	11.2	13.7	10	4.17	1.17
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<1	<0.3	<0.3	<0.3	<0.3	0.127 J	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	0.47 J	1.06	1.14	0.917 J	0.914 J	0.536 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1.94	1.63	1.9	3.27	7.5	0.948 J	0.501 J
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
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HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-79

Analyte	Sample Name / Sample Date	Units	MW-79 10/16/2009	MW-79 3/25/2010	MW-79 6/22/2010	MW-79 9/23/2010	MW-79 1/25/2011	MW-79 4/25/2011	MW-79 9/27/2011
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	3.99	17.9	26.4	35.7	28.7	25.3	25.3
Carbon tetrachloride		µg/L	<1	<1	<1 UJ	<1	<1	<1	<1
Chloroform		µg/L	<0.3	0.152 J	0.228 J	0.17 J	0.211 J	0.155 J	1.31
cis-1,2-Dichloroethene		µg/L	<1	<1	0.438 J	<1	<1	<1	<1
Tetrachloroethene		µg/L	1.38	26.6	50.8	25	18.1	12.2	15.4
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1.25	16.9	39	20.2	17.3	14.7	19.7
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
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HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-79

	Sample Name	MW-79	MW-79
	Sample Date	4/18/2012	10/17/2012
Analyte	**Units**		
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1
1,1-Dichloroethene	µg/L	10.1	2.71
Carbon tetrachloride	µg/L	<1	<1
Chloroform	µg/L	0.233 J	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1
Tetrachloroethene	µg/L	12.1	4.06
trans-1,2-Dichloroethene	µg/L	<1	<1
Trichloroethene	µg/L	10.3	3.12
Vinyl chloride	µg/L	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
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J Estimated based on QC data or reported below RL
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HISTORICAL CVOC RESULTS - DUNN FIELD LTM
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MW-80

Analyte	Sample Name / Sample Date / Units	MW-80 2/15/2001	MW-80 2/19/2001	MW-80 10/3/2001	MW-80 4/10/2002	MW-80 10/1/2002	MW-80 4/8/2003	MW-80 10/28/2003
1,1,2,2-Tetrachloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	1.07	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
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J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-80

Analyte	Sample Name / Sample Date / Units	MW-80 4/29/2004	MW-80 8/17/2004	MW-80 10/22/2004	MW-80 11/17/2005	MW-80 11/8/2007	MW-80 4/20/2012
1,1,2,2-Tetrachloroethane	µg/L	<1 J	<1	<1	<1	<1	<0.5
1,1,2-Trichloroethane	µg/L	<1 J	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1 J	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1 J	<1	<1	<1	<1	<1
Chloroform	µg/L	<1 J	<1	<1	<1	<1	<0.3
cis-1,2-Dichloroethene	µg/L	<1 J	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1 J	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1 J	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1 J	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1 J	<1	<1	<1 UJ	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
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HISTORICAL CVOC RESULTS - DUNN FIELD LTM
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Defense Depot Memphis, Tennessee

MW-87

	Sample Name	MW-87-80.3FT	MW-87-RD74	MW-87-77	MW-87-68	MW-87-IS-6	MW-87-IS-7
	Sample Date	1/8/2001	10/27/2004	11/21/2005	11/9/2007	4/23/2009	10/13/2009
Analyte	**Units**						
1,1,2,2-Tetrachloroethane	µg/L	140	10.2 J	86.6	180	0.939	7.09
1,1,2-Trichloroethane	µg/L	6	0.799 J	3.59	6.67	<1	<1
1,1-Dichloroethene	µg/L	0.2 J	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	32	18.7 J	8.18	7.16	<1	<1
Chloroform	µg/L	6	6.03 J	3.88	6.25	0.148 J	0.471
cis-1,2-Dichloroethene	µg/L	210	49.5 J	65.4	91.2	<1	0.391 J
Tetrachloroethene	µg/L	2	1.45 J	0.95 J	0.676	<1	<1
trans-1,2-Dichloroethene	µg/L	17	5.40 J	3.49	4.6	<1	<1
Trichloroethene	µg/L	150	105 J	64.2	91.4	<1	0.778 J
Vinyl chloride	µg/L	0.9 J	<1	<1 UJ	0.272	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

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HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-87

Analyte	Sample Name / Sample Date	Units	MW-087-ODLA-1 3/26/2010	MW-87 4/26/2011	MW-87 7/19/2011	MW-87 4/19/2012	MW-87 10/17/2012
1,1,2,2-Tetrachloroethane		µg/L	12	1.49	1.54	0.207 J	<0.5
1,1,2-Trichloroethane		µg/L	0.653 J	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1
Chloroform		µg/L	1.04	3.04	3.05	0.53	0.377
cis-1,2-Dichloroethene		µg/L	1.38	0.398 J	0.547 J	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2	0.985 J	0.897 J	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-91

	Sample Name	MW-91-RD68	MW-91-68	MW-91-69	MW-91-IS-6	MW-91-IS-7	MW-91	MW-91
	Sample Date	10/27/2004	11/21/2005	11/7/2007	4/22/2009	10/14/2009	4/28/2011	4/19/2012
Analyte	**Units**							
1,1,2,2-Tetrachloroethane	µg/L	<1	0.26 J	<1	0.92	0.678	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	9.35 J	4.8 J	3.29	0.449 J	0.479 J	0.391 J	<1
Chloroform	µg/L	13.4 J	4.72	25.6	0.538	1.83	2.86	0.633
cis-1,2-Dichloroethene	µg/L	1.19 J	0.46 J	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	1.18 J	0.72 J	0.594	0.677 J	0.494 J	0.305 J	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	12.7 J	6.01	13.8	<1	0.567 J	1.41	<1
Vinyl chloride	µg/L	<1	<1 UJ	<1	<1 UJ	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-126

Analyte	Sample Name / Sample Date	Units	MW-126 10/1/2002	MW-126 4/8/2003	MW-126 10/28/2003	MW-126 4/29/2004	MW-126 10/22/2004	MW-126 11/17/2005	MW-126 11/7/2007	MW-126 4/18/2012
1,1,2,2-Tetrachloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<1	<1	<1	<1	<1	0.12 J	<1	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1 UJ	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-129

Analyte	Sample Name / Sample Date	Units	MW-129 7/28/2003	MW-129 10/28/2003	MW-129 4/29/2004	MW-129 10/22/2004	MW-129 11/22/2005	MW-129 11/8/2007	MW-129 4/19/2012
1,1,2,2-Tetrachloroethane		µg/L	<1	<1	<1	<2.5	0.19 J	<1	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<2.5	<1	<1	<1
1,1-Dichloroethene		µg/L	41	42	27	32	36	32.7	13.7
Carbon tetrachloride		µg/L	<1	<1	<1	<2.5	<1	<1	<1
Chloroform		µg/L	<1	<1	<1	<2.5	<1	<1	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	0.27 J	<2.5	0.33 J	0.36	<1
Tetrachloroethene		µg/L	8.85	26.1	9.6	9.2	25.4	30.2	15
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<2.5	<1	<1	<1
Trichloroethene		µg/L	9.71	13.4	12	14	19.3	19.1	13.4
Vinyl chloride		µg/L	<1	<1	<1	<2.5	<1 UJ	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-130

Analyte	Sample Name / Sample Date	Units	MW-130 7/28/2003	MW-130 10/28/2003	MW-130 4/29/2004	MW-130 10/22/2004	MW-130 6/15/2005	MW-130 11/17/2005	MW-130 4/12/2006	MW-130 10/20/2006
1,1,2,2-Tetrachloroethane		µg/L	<1	<1	<5	<3.3	<1	<1	<1	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<5	<3.3	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	41.1	42.2	57	35	22.6	28.3	52.8	61.6
Carbon tetrachloride		µg/L	<1	<1	<5	<3.3	<1	<1	<1	<1
Chloroform		µg/L	<1	<1	<5	<3.3	<1	<1	<1	0.256 J
cis-1,2-Dichloroethene		µg/L	0.54 J	0.67 J	<5	0.63 J	<1	<1	<1	0.766 J
Tetrachloroethene		µg/L	71.6	80.3	88	63	48.8	57.4	114	112
trans-1,2-Dichloroethene		µg/L	<1	<1	<5 J	<3.3	<1	<1	<1	<1
Trichloroethene		µg/L	54	64	76	50	37.9	43.5	57.7	60.5
Vinyl chloride		µg/L	<1	<1	<5	<3.3	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-130

Analyte	Sample Name / Sample Date	Units	MW-130 4/10/2007	MW-130 10/5/2007	MW-130 4/11/2008	MW-130 10/20/2008	MW-130 4/15/2009	MW-130 10/15/2009	MW-130 4/19/2012
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	70	74	73.4	80.2	60.3	29 J	25.7
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.315	0.291 J	0.27 J	0.296 J	0.237 J	0.206 J	0.227 J
cis-1,2-Dichloroethene		µg/L	0.818 J	0.82 J	0.789 J	0.799 J	0.925 J	0.856 J	0.766 J
Tetrachloroethene		µg/L	154	147	196	140	127	68.5 J	72.5
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	71.2	67.4	71	71.8	75.1	61.7 J	62.6
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-134

Analyte	Sample Name / Sample Date	Units	MW-134 10/23/2003	MW-134 11/18/2003	MW-134 12/18/2003	MW-134 2/3/2004	MW-134 4/6/2004	MW-134 10/28/2004	MW-134 11/20/2005
1,1,2,2-Tetrachloroethane		µg/L	5.45	859	46.5	44.4	16.4	160	98
1,1,2-Trichloroethane		µg/L	<0.5	1.53	<0.5	4.02	0.354 J	11.30 J	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene		µg/L	0.329 J	13	1.62	1.52	0.261 J	5.39 J	0.84 J
Tetrachloroethene		µg/L	0.458 J	<0.5	<0.5	0.394 J	0.756	1.51 J	1.83
trans-1,2-Dichloroethene		µg/L	0.413 J	3.24	0.647 J	0.644 J	<1	1.95 J	0.41 J
Trichloroethene		µg/L	4.14	104	32.1	17.7	7.64	169 J	113
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1 UJ

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-134

Analyte	Sample Name / Sample Date	Units	MW-134 5/17/2007	MW-134 11/8/2007	MW-134 4/16/2008	MW-134 8/19/2008	MW-134 10/20/2008	MW-134 4/17/2009	MW-134 10/15/2009
1,1,2,2-Tetrachloroethane		µg/L	240	4.47	0.717	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.29	<1	<0.3	<0.3	<0.3	<0.3	0.128 J
cis-1,2-Dichloroethene		µg/L	7.1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	3.1	0.42	0.488 J	0.535	0.801 J	0.328 J	0.501 J
trans-1,2-Dichloroethene		µg/L	1.8	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	150	1.03	1.08	<1	<1	2.13	0.262 J
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-134

	Sample Name	MW-134	MW-134	MW-134
	Sample Date	7/19/2011	4/20/2012	10/17/2012
Analyte	**Units**			
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	0.668	0.17 J	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	0.603 J	0.531 J	0.889 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-144

	Sample Name	MW-144	MW-144	MW-144-RD75	MW-144	MW-144	MW-144	MW-144
	Sample Date	6/9/2004	8/12/2004	10/27/2004	1/27/2005	3/23/2005	6/15/2005	11/14/2005
Analyte	**Units**							
1,1,2,2-Tetrachloroethane	µg/L	13000	7700	6230 J	4600	7700	5810 J	4970
1,1,2-Trichloroethane	µg/L	--	<250	7.05 J	10 J	14 J	9.64 J	14.1 J
1,1-Dichloroethene	µg/L	<420	<250	<1	<12	<25	<10	<20
Carbon tetrachloride	µg/L	<420	<250	1.47 J	<12	<25	<10	<20
Chloroform	µg/L	<420	<250	2.76 J	3.2 J	4.3 J	<10	<20
cis-1,2-Dichloroethene	µg/L	<420	68 J	74.1 J	69	72	70.2	54.3
Tetrachloroethene	µg/L	<420	<250	7.69 J	10 J	13 J	8.78 J	10.2
Total 1,2-Dichloroethene	µg/L	<830	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	<420	<250	17.5 J	15	14 J	14.1	<20
Trichloroethene	µg/L	3200	2800	2060	2100	4500	2610	2280
Vinyl chloride	µg/L	<420	<250 J	<1	<12	<25	<10	<20

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-144

Analyte	Sample Name / Sample Date	Units	MW-144 4/12/2006	MW-144-75_060427 4/27/2006	MW-144 10/19/2006	MW-144-74.9-IS-2 4/10/2007	MW-144-74.9-IS-3 10/8/2007	MW-144-74.9-IS-4 4/11/2008
1,1,2,2-Tetrachloroethane		µg/L	5040	4080	2520	1350	841	79.4
1,1,2-Trichloroethane		µg/L	9.04	8.94	60.4	20.4	8.75	0.461 J
1,1-Dichloroethene		µg/L	<1	<1	<10	<10	<1	<1
Carbon tetrachloride		µg/L	1.03	0.9 J	<10	<10	1.59	<1
Chloroform		µg/L	2.72 B	3.13	1.45 J	<3	1.7	1.77
cis-1,2-Dichloroethene		µg/L	83.9	88.9	98.2	33.5	26.3	2.31
Tetrachloroethene		µg/L	19.9 J	16.9	11.4	4.11 J	3.49	<1
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	7.28 J	7.04	19.2	3.39 J	2.24	<1
Trichloroethene		µg/L	2650	2790	1890	694	464	37.6
Vinyl chloride		µg/L	<1	<1 UJ	<10	<10	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-144

Analyte	Sample Name / Sample Date / Units	MW-144-75.68-IS-6 4/15/2009	MW-144-IS-7 10/14/2009	MW-144-ODLA-1 3/26/2010	MW-144 4/26/2011	MW-144 4/19/2012	MW-144 10/17/2012
1,1,2,2-Tetrachloroethane	µg/L	403	301	150	24.1	16.6	14.7
1,1,2-Trichloroethane	µg/L	1.06	0.661 J	0.321 J	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	1.19	0.501	0.316	0.28 J	0.519	0.377
cis-1,2-Dichloroethene	µg/L	12.9	6.81	3.26	1.01	1.05	0.942 J
Tetrachloroethene	µg/L	1.56	1.4	0.918 J	0.851 J	0.829 J	0.798 J
Total 1,2-Dichloroethene	µg/L	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	2.61	0.676 J	0.445 J	<1	<1	<1
Trichloroethene	µg/L	179	173	109	43.2	49.6	38.5
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-145

	Sample Name	MW-145	MW-145	MW-145	MW-145	MW-145	MW-145	MW-145
	Sample Date	6/8/2004	8/16/2004	1/27/2005	3/23/2005	6/17/2005	11/17/2005	4/13/2006
Analyte	**Units**							
1,1,2,2-Tetrachloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	µg/L	--	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Total 1,2-Dichloroethene	µg/L	<2	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-145

Analyte	Sample Name / Sample Date	Units	MW-145T 10/19/2006	MW-145-86.6-IS-2 4/9/2007	MW-145-86.6-IS-3 10/8/2007	MW-145-86.6-IS-4 4/14/2008	MW-145 10/20/2008	MW-145 4/14/2009	MW-145-IS-7 10/15/2009
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5 J	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1 J	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1 J	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1 J	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3 J	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1 J	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1 J	<1	<1	<1
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1 J	<1	<1	<1
Trichloroethene		µg/L	<1	<1	<1	<1 J	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1 J	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-145

Analyte	Sample Name / Sample Date / Units	MW-145-ODLA-1 3/26/2010	MW-145 4/26/2011	MW-145 4/19/2012
1,1,2,2-Tetrachloroethane	µg/L	0.274 J	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1
Carbon tetrachloride	µg/L	<1	0.682 J	0.886 J
Chloroform	µg/L	<0.3	0.585	0.927
cis-1,2-Dichloroethene	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1
Total 1,2-Dichloroethene	µg/L	--	--	--
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	<1	0.425 J	0.639 J
Vinyl chloride	µg/L	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-147

	Sample Name	MW-147	MW-147	MW-147-RD74	MW-147	MW-147	MW-147	MW-147
	Sample Date	6/10/2004	8/17/2004	10/26/2004	1/27/2005	3/22/2005	6/17/2005	11/18/2005
Analyte	**Units**							
1,1,2,2-Tetrachloroethane	µg/L	97	56	61.8 J	140	180	251 J	185
1,1,2-Trichloroethane	µg/L	--	<5.6	0.742 J	1.8	2.2	2.62	3.9
1,1-Dichloroethene	µg/L	<5.7	2.2 B	1.23	1.2	2.7	2.07	3.32
Carbon tetrachloride	µg/L	1.8 J	4.3 J	1.5	0.36 J	0.45 J	0.729 J	1.27
Chloroform	µg/L	7.5	12	13.4	3.4	3	5.94 B	5.1 B
cis-1,2-Dichloroethene	µg/L	70	57	60.6	48	39	65.1	95
Tetrachloroethene	µg/L	7.5	5.3 J	5.94	3.4	3.4	4.44	4.83
Total 1,2-Dichloroethene	µg/L	94	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	24	20	23.3	12	15	15.9	20.5
Trichloroethene	µg/L	160	120	130	77	73	124	121
Vinyl chloride	µg/L	<5.7	<5.6	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-147

Analyte	Sample Name / Sample Date / Units	MW-147 4/12/2006	MW-147 10/18/2006	MW-147-73.7-IS-2 4/10/2007	MW-147-73.7-IS-3 10/5/2007	MW-147-73.7-IS-4 4/11/2008	MW-147-77-IS-5 10/17/2008	MW-147-78.81-IS-6 4/14/2009
1,1,2,2-Tetrachloroethane	µg/L	311	87.9	634	198	22	0.373 J	<0.5
1,1,2-Trichloroethane	µg/L	4.36	1.39	9.28	4.47	<1	<1	<1
1,1-Dichloroethene	µg/L	1.76	0.657 J	1.49	5.65	<1	<1	<1
Carbon tetrachloride	µg/L	0.565 J	0.364 J	0.83 J	2.3	<1	<1	<1
Chloroform	µg/L	5.53 B	2.66	7.24	4.6	0.509	0.147 J	<0.3
cis-1,2-Dichloroethene	µg/L	74.8	41.2	155	120 J	6.15	0.401 J	<1
Tetrachloroethene	µg/L	3.61	3.92	12.2	8.97	7.92	2.95	<1
Total 1,2-Dichloroethene	µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	14.4	10.3	39.6	28.9	1	<1	<1
Trichloroethene	µg/L	106	81.3	278	169	53.9	3.1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-147

Analyte	Sample Name / Sample Date	Units	MW-147-IS-7 10/14/2009	MW-147-ODLA-1 3/26/2010	MW-147-ODLS-2 9/23/2010	MW-147 4/26/2011	MW-147 4/19/2012
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	0.199 J	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.313 J	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-148

Analyte	Sample Name / Sample Date	Units	MW-148 6/10/2004	MW-148 8/17/2004	MW-148 10/26/2004	MW-148 1/27/2005	MW-148 3/22/2005	MW-148 6/17/2005	MW-148 11/18/2005	MW-148 4/12/2006
1,1,2,2-Tetrachloroethane		µg/L	3.1	0.72 J	5.55	0.63 J	0.37 J	15.4	2.87	2.47
1,1,2-Trichloroethane		µg/L	--	<1	0.424 J	<1	<1	1.03	<1	<1
1,1-Dichloroethene		µg/L	<2.5	<1	<1	<1	<1	0.426 J	<1	<1
Carbon tetrachloride		µg/L	0.45 J	0.73 J	0.577 J	0.19 J	<1	0.583 J	<1	<1
Chloroform		µg/L	1.5 J	0.6 J	2.25	0.88 J	0.58 B	3.07 B	1.3 B	0.861 B
cis-1,2-Dichloroethene		µg/L	29	13	52.3	12	4.8	95.2	23.2	10.4
Tetrachloroethene		µg/L	6.4	3.7	7.83	4.5	3.3	6.44	3.93	2.88
Total 1,2-Dichloroethene		µg/L	40	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	11	4.9	21.3	3.8	1.9	26.8	6.4	3.18
Trichloroethene		µg/L	77	31	136	27	13	160	42	21.1
Vinyl chloride		µg/L	<2.5	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-148

Analyte	Sample Name / Sample Date	Units	MW-148 10/18/2006	MW-148 4/10/2007	MW-148 10/5/2007	MW-148 4/11/2008	MW-148 10/17/2008	MW-148 6/8/2009	MW-148 10/15/2009
1,1,2,2-Tetrachloroethane		µg/L	3.72	1.75	3.43	6.92	9.66	0.263 J	0.63
1,1,2-Trichloroethane		µg/L	0.316 J	<1	<1	0.252 J	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	0.267 J	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	1.74	0.473	1.09	1.16	0.665	0.137 J	<0.3
cis-1,2-Dichloroethene		µg/L	34.3	5.04	4.58	7.33	6.63	<1	<1
Tetrachloroethene		µg/L	7.53	4.18	3.78	3.59	2.42	0.36 J	<1
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	10.7	1.82	6.68	2.74	1.73	<1	<1
Trichloroethene		µg/L	74.1	7.7	22.7	62.9	107	1.78	0.613 J
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1 UJ

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-148

Analyte	Sample Name / Sample Date	Units	MW-148 3/24/2010	MW-148 6/22/2010	MW-148 9/22/2010	MW-148 1/26/2011	MW-148 3/28/2011	MW-148 9/27/2011	MW-148 4/19/2012
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	0.186 J	0.185 J	0.164 J	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	0.254 J	<1
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.932 J	<1	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-149

Analyte	Sample Name / Sample Date	Units	MW-149 6/11/2004	MW-149 8/18/2004	MW-149 1/27/2005	MW-149 4/12/2005	MW-149 6/17/2005	MW-149 11/19/2005	MW-149 4/13/2006	MW-149 10/19/2006
1,1,2,2-Tetrachloroethane		µg/L	42	27 J	37	27	50.4	38.3	30.3	23.1
1,1,2-Trichloroethane		µg/L	--	<5	0.87 J	0.64 J	1.66	1.62	1.23	0.686 J
1,1-Dichloroethene		µg/L	<6.7	<5	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	17	12	14	16	15.7	22	12.6	12.9
Chloroform		µg/L	200	110	140	79	64	159	50	95.5
cis-1,2-Dichloroethene		µg/L	4.9 J	3.8 J	4	3.1	20.4	4.36	3.42	7.81
Tetrachloroethene		µg/L	2.7 J	1.6 J	1.8	1.6	1.01	2.13	1.3	1.44
Total 1,2-Dichloroethene		µg/L	6 J	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	<6.7	<5	0.81 J	0.63 J	2.37	2.21	1.48	1.13
Trichloroethene		µg/L	68	38	45	35	68.1	75.4	57.1	45.4
Vinyl chloride		µg/L	<6.7	<5	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
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J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-149

Analyte	Sample Name / Sample Date	Units	MW-149 4/9/2007	MW-149 10/5/2007	MW-149 4/11/2008	MW-149 10/20/2008	MW-149 6/8/2009	MW-149 10/16/2009	MW-149 3/24/2010
1,1,2,2-Tetrachloroethane		µg/L	37.2	9.78	4.1	1.71	8.51	9.93	5.47
1,1,2-Trichloroethane		µg/L	1.29	0.346 J	<1	<1	0.355 J	0.387 J	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	19.8	8.05	6.7	8.17	4.46	6.36	1.78
Chloroform		µg/L	155	54	29.6	25.6	31.7	70	12.9
cis-1,2-Dichloroethene		µg/L	9.02	3.1	2.43	1.63	2.24	4.64	4.52
Tetrachloroethene		µg/L	3.81	1.84	1	0.717 J	0.776 J	1.16	0.718 J
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	1.59	0.536 J	0.675 J	0.378 J	0.382 J	0.662 J	0.679 J
Trichloroethene		µg/L	80.9	30.1	19.1	19.8	24.9	38.6	54.7
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-149

Analyte	Sample Name / Sample Date	Units	MW-149 6/23/2010	MW-149 9/23/2010	MW-149 1/26/2011	MW-149 3/28/2011	MW-149 9/27/2011	MW-149 4/20/2012	MW-149 10/17/2012
1,1,2,2-Tetrachloroethane		µg/L	15	29.8	24.8	15	12.1	4.89	4.56
1,1,2-Trichloroethane		µg/L	0.69 J	1.3	1.07	0.764 J	0.42 J	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	2.02	6.98	7.91	4.35	2.26	1.07	0.517 J
Chloroform		µg/L	41.6	92.3	94.3	75.2	34.5	13.4	7.37
cis-1,2-Dichloroethene		µg/L	7.22	17.7	13.2	6.21	3.14	1.74	1.6
Tetrachloroethene		µg/L	0.651 J	1.92	2.16	1.55	0.838 J	0.522 J	0.296 J
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	0.595 J	1.54	1.33	0.722 J	0.27 J	<1	<1
Trichloroethene		µg/L	35	87.9	66.6	38.9	18.4	7.47	4.3
Vinyl chloride		µg/L	<1	<1 J	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-150

Analyte	Sample Name / Sample Date	UNIT	MW-150 6/24/2004	MW-150 8/18/2004	MW-150 10/25/2004	MW-150 1/27/2005	MW-150 3/23/2005	MW-150 6/17/2005	MW-150 11/19/2005
1,1,2,2-Tetrachloroethane		µg/L	7600	8000 J	10900 J	6700	6600	4790	3080
1,1,2-Trichloroethane		µg/L	--	<250	5.73 J	6.9 J	5.1 J	9.2 J	16.3
1,1-Dichloroethene		µg/L	<200	<250	<1	<20	<20	<10	<10
Carbon tetrachloride		µg/L	<200	<250	1.54 J	<20	<20	<10	<10
Chloroform		µg/L	<200	<250	3.35 J	<20	3.3 J	<10	1.36 B
cis-1,2-Dichloroethene		µg/L	76 J	74 J	81.9 J	84	48	57	64.3
Tetrachloroethene		µg/L	<200	<250	13.6 J	<20	6.4 J	6.77 J	2.47
Total 1,2-Dichloroethene		µg/L	76 J	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	<200	<250	21.1 J	22	9.1 J	8.83 J	5.78
Trichloroethene		µg/L	3000	3000	2330 J	690	2000	983	639
Vinyl chloride		µg/L	<200	<250	<1	<20	<20	<10	<10

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-150

Analyte	Sample Name / Sample Date	UNIT	MW-150 4/12/2006	MW-150 4/26/2006	MW-150 10/19/2006	MW-150 4/9/2007	MW-150 10/8/2007	MW-150 4/11/2008	MW-150 10/20/2008
1,1,2,2-Tetrachloroethane		µg/L	2940	2590	8480	4620	3960	1960	1750
1,1,2-Trichloroethane		µg/L	5.7	6	5.31 J	27	87.2	9.85 J	12.4
1,1-Dichloroethene		µg/L	<1	<1	0.619 J	0.687 J	<25	<20	0.992 J
Carbon tetrachloride		µg/L	0.413 J	0.31 J	<10	<25	<25	<20	<1
Chloroform		µg/L	2.09 B	2 J	2.22	1.92	<7.5	1.43 J	5
cis-1,2-Dichloroethene		µg/L	74.2	54	77.1	56.2	81.3	37.3	22.4
Tetrachloroethene		µg/L	4.09	4.02	7.13 J	6.54 J	18.9 J	8.1 J	5.22
Total 1,2-Dichloroethene		µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene		µg/L	8.66	10.3	9.79 J	24.3	11.6 J	<20	1.28
Trichloroethene		µg/L	747	1120	2910	3060	2470	80.6 J	636
Vinyl chloride		µg/L	<1	0.37 J	<10	0.83 J	<25	<20	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-150

Analyte	Sample Name / Sample Date / UNIT	MW-150 6/8/2009	MW-150 10/16/2009	MW-150 3/24/2010	MW-150 6/22/2010	MW-150 9/22/2010	MW-150 1/26/2011	MW-150 3/28/2011
1,1,2,2-Tetrachloroethane	µg/L	618	406	34.7	4.98	0.917	11.4	9.89
1,1,2-Trichloroethane	µg/L	3.21 J	0.716 J	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<5	<2.5	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<5	<2.5	<1	<1	<1	<1	<1
Chloroform	µg/L	<1.5	0.913	0.246 J	0.222 J	0.16 J	0.178 J	0.16 J
cis-1,2-Dichloroethene	µg/L	6.26	1.27 J	0.453 J	<1	<1	<1	0.304 J
Tetrachloroethene	µg/L	3.36 J	1.1 J	0.711 J	0.888 J	0.976 J	0.678 J	0.836 J
Total 1,2-Dichloroethene	µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	<5	<2.5	<1	<1	<1	<1	<1
Trichloroethene	µg/L	311	49.4	16.1	2.44	0.515 J	13.5	15.6
Vinyl chloride	µg/L	<5	<2.5	0.416 J	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-150

	Sample Name	MW-150	MW-150	MW-150
	Sample Date	9/26/2011	4/19/2012	10/17/2012
Analyte	**UNIT**			
1,1,2,2-Tetrachloroethane	µg/L	15.5	3.4	2.64
1,1,2-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	0.878	1.55	0.746
cis-1,2-Dichloroethene	µg/L	0.757 J	0.263 J	<1
Tetrachloroethene	µg/L	<1	<1	<1
Total 1,2-Dichloroethene	µg/L	--	--	--
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	28.1	13.9	6.94
Vinyl chloride	µg/L	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-151

Analyte	Sample Name / Sample Date	Units	MW-151 8/16/2004	MW-151 10/26/2004	MW-151 1/25/2005	MW-151 3/22/2005	MW-151 6/17/2005	MW-151 11/17/2005	MW-151 11/19/2005
1,1,2,2-Tetrachloroethane		µg/L	<1	<1	0.23 J	0.28 J	<1	<1	<1
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	25.5	<1
Carbon tetrachloride		µg/L	2.7	3.44	4.7	5.3	0.939 J	<1 U	4.78
Chloroform		µg/L	3.3	6.72	10	11	2.69 B	0.15 J	8.04
cis-1,2-Dichloroethene		µg/L	0.22 J	0.446 J	0.92 J	0.96 J	<1	<1	1
Tetrachloroethene		µg/L	<1	<1	0.4 J	0.48 J	<1	1.69	0.415 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	0.25 J	<1	<1	<1
Trichloroethene		µg/L	2.2	3.67	6.3	7.2	1.31	7.31	4.67 B
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1 UJ	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-151

Analyte	Sample Name / Sample Date	Units	MW-151 4/13/2006	MW-151 10/18/2006	MW-151 4/9/2007	MW-151 10/5/2007	MW-151 4/14/2008	MW-151 10/20/2008	MW-151 6/8/2009
1,1,2,2-Tetrachloroethane		µg/L	<1	1.42	0.68	0.408 J	0.468 J	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	4.47	6.19	5.53	3.9	4.77	0.564 J	0.774 J
Chloroform		µg/L	11.4	16.9	12.5	12.4	15.5	1.34	1.81
cis-1,2-Dichloroethene		µg/L	1.22	1.45	1.24	1.29	1.42	<1	<1
Tetrachloroethene		µg/L	<1	0.621 J	0.588 J	0.859 J	0.639	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	0.282 J	0.274 J	0.304 J	0.613 J	<1	<1
Trichloroethene		µg/L	8.75	10.5	11.1	16.8	20.1	2.62	5.1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-151

Analyte	Sample Name / Sample Date	Units	MW-151 10/16/2009	MW-151 3/23/2010	MW-151 6/23/2010	MW-151 9/23/2010	MW-151 1/25/2011	MW-151 3/28/2011	MW-151 9/27/2011
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	0.315 J	0.846	1.92	2.45
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	1.43	0.967 J	0.765 J	0.735 J	0.766 J	1.29	1.18
Chloroform		µg/L	2.92	2.93	2.67	2.36	4.65	12.3	16.3
cis-1,2-Dichloroethene		µg/L	0.416 J	0.369 J	0.309 J	0.309 J	0.61 J	1.24	0.998 J
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	0.286 J	0.3 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	8.06	9.9	8.21	7.24	7.69	10.8	10.5
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-151

	Sample Name	MW-151	MW-151
	Sample Date	4/19/2012	10/17/2012
Analyte	**Units**		
1,1,2,2-Tetrachloroethane	µg/L	4.26	3.61
1,1,2-Trichloroethane	µg/L	<1	<1
1,1-Dichloroethene	µg/L	<1	<1
Carbon tetrachloride	µg/L	2.67	1.42
Chloroform	µg/L	37.4	23.9
cis-1,2-Dichloroethene	µg/L	1.93	1.17
Tetrachloroethene	µg/L	0.793 J	0.507 J
trans-1,2-Dichloroethene	µg/L	0.262 J	<1
Trichloroethene	µg/L	19.1	11.4
Vinyl chloride	µg/L	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-152

Analyte	Sample Name / Sample Date	Units	MW-152 8/15/2004	MW-152 10/10/2004	MW-152 10/11/2004	MW-152 10/13/2004	MW-152 10/14/2004	MW-152 1/26/2005	MW-152 3/22/2005
1,1,2,2-Tetrachloroethane		µg/L	11	<5	15	1500	12	9.3 J	6.5
1,1,2-Trichloroethane		µg/L	<3.3	<5	<5	<100	<5	<1	<1
1,1-Dichloroethene		µg/L	<3.3	<5	<5	<100	<5	<1	<1
Carbon tetrachloride		µg/L	2.1 J	<5	<5	<100	<5	0.39 J	0.24 J
Chloroform		µg/L	0.97 J	<5	<5	<100	<5	1.5	0.98 B
cis-1,2-Dichloroethene		µg/L	9.2	6.9	7.7	35 J	9	14	10
Tetrachloroethene		µg/L	5.4	4 J	3.1 J	<100	5.9	7.8	5.8
trans-1,2-Dichloroethene		µg/L	4.1	3.4 J	4.6 J	<100	4.1 J	6.6	5.1
Trichloroethene		µg/L	76	70	78	950	92	110	59
Vinyl chloride		µg/L	<3.3	<5	<5	<100	<5	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-152

Analyte	Sample Name / Sample Date	Units	MW-152 6/16/2005	MW-152 11/18/2005	MW-152 4/13/2006	MW-152 10/18/2006	MW-152 4/10/2007	MW-152 10/8/2007	MW-152 4/11/2008
1,1,2,2-Tetrachloroethane		µg/L	5.32	4.95	8.16	4.87	8.67	4.85	3.05
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	1	<1	<1	<1	<1	<1
Chloroform		µg/L	<1	2.19 B	1.76 B	1.2	1.84	1.03	0.601
cis-1,2-Dichloroethene		µg/L	4.22	29	18.7	12.7	21.8	7.71	5.65
Tetrachloroethene		µg/L	1.74	5.27	11.3	13.4	9.65	7.69	8.53
trans-1,2-Dichloroethene		µg/L	1.87	4.43	9.62	5.96	9.23	5.18	2.42
Trichloroethene		µg/L	19.3	71	161	125	185	95	72.7
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-152

Analyte	Sample Name / Sample Date	Units	MW-152 10/20/2008	MW-152 6/8/2009	MW-152 10/16/2009	MW-152 3/25/2010	MW-152 6/22/2010	MW-152 9/23/2010	MW-152 1/25/2011
1,1,2,2-Tetrachloroethane		µg/L	11.7	3.33	9.85	77.8	63.9	5.35	2.01
1,1,2-Trichloroethane		µg/L	<1	<2	0.336 J	0.492 J	0.311 J	<1	<1
1,1-Dichloroethene		µg/L	0.758 J	<2	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	0.459 J	<2	<1	<1	<1	<1	<1
Chloroform		µg/L	2.59	2.03	0.962	0.711	0.446	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	40.2	39.9	18.3	4.2	1.14	<1	<1
Tetrachloroethene		µg/L	15.7	7.4	2.89	0.681 J	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	13.4	13.1	1.39	<1	<1	<1	<1
Trichloroethene		µg/L	260	241	183	40.8	14.5	1.55	1.07
Vinyl chloride		µg/L	<1	<2	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-152

	Sample Name	MW-152	MW-152	MW-152
	Sample Date	3/28/2011	9/27/2011	4/18/2012
Analyte	**Units**			
1,1,2,2-Tetrachloroethane	µg/L	1.1	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	0.727 J	0.478 J	0.277 J
Vinyl chloride	µg/L	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-153

Analyte	Sample Name / Sample Date / Units	MW-153 8/19/2004	MW-153 6/16/2005	MW-153 11/18/2005	MW-153 4/13/2006	MW-153T 10/18/2006	MW-153-87.1-IS-2 4/10/2007	MW-153-87.1-IS-3 10/8/2007
1,1,2,2-Tetrachloroethane	µg/L	<1 J	<1	<1	<1	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	9.1	3.73	4.56	5.4	4.87	5.91	5.61
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<1	<1	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	0.368 J	0.334 J	0.302 J
Tetrachloroethene	µg/L	0.24 J	<1	<1	<1	<1	0.332 J	0.714 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1	0.251 B	0.272 J
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-153

Analyte	Sample Name / Sample Date / Units	MW-153-87.1-IS-4 4/14/2008	MW-153-86.75-IS-5 10/20/2008	MW-153-86.75-IS-6 4/14/2009	MW-153-IS-7 10/14/2009	MW-153 4/28/2011
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	6.37	5.31	5.16	2.99	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	0.341 J	<1	<1	<1	0.351 J
Tetrachloroethene	µg/L	0.445 J	0.272 J	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.469 J	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-154

Analyte	Sample Name / Sample Date	Units	MW-154 8/17/2004	MW-154 6/17/2005	MW-154 11/17/2005	MW-154 4/12/2006	MW-154 10/19/2006	MW-154 4/10/2007	MW-154 10/5/2007
1,1,2,2-Tetrachloroethane		µg/L	<1	<1	<1	<1	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<1	<1	<1	<1	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	0.437 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-154

Analyte	Sample Name / Sample Date	Units	MW-154 4/14/2008	MW-154 10/20/2008	MW-154 4/14/2009	MW-154 10/15/2009
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1
Trichloroethene		µg/L	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-155

Analyte	Sample Name / Sample Date	Units	MW-155 8/16/2004	MW-155 10/13/2004	MW-155 11/8/2004	MW-155 1/26/2005	MW-155 3/23/2005	MW-155 6/17/2005	MW-155 11/19/2005	MW-155 4/13/2006
1,1,2,2-Tetrachloroethane		µg/L	2100	2000	800	470 J	660	2220	3530	581
1,1,2-Trichloroethane		µg/L	<77	<100	<50	0.59 J	1.7 J	4.54	9.95 J	7.5
1,1-Dichloroethene		µg/L	<77	<100	<50	<1	<2.2	<1	<10	<1
Carbon tetrachloride		µg/L	<77	<100	<50	<1	<2.2	<1	<10	<1
Chloroform		µg/L	<77	<100	<50	<1	0.68 B	1.5 B	1.64 B	1.51 B
cis-1,2-Dichloroethene		µg/L	48 J	55 J	46 J	1.8	27	67.5	53.9	35.1
Tetrachloroethene		µg/L	<77	<100	7.4 J	<1	0.6 J	3.04	8.11	5.93
trans-1,2-Dichloroethene		µg/L	<77	<100	6.4 J	0.29 J	4.5	15.1	9.91	8.66
Trichloroethene		µg/L	1000	1000	820	32	530	1750	1560	865
Vinyl chloride		µg/L	<77	<100	<50	<1	<2.2	<1	<10	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-155

Analyte	Sample Name / Sample Date	Units	MW-155 10/18/2006	MW-155 4/10/2007	MW-155 10/8/2007	MW-155 4/11/2008	MW-155 10/20/2008	MW-155 6/8/2009	MW-155 10/15/2009
1,1,2,2-Tetrachloroethane		µg/L	4090	3180	3400	3770	2040	1610	263
1,1,2-Trichloroethane		µg/L	77.4	147	80.3	53.8	7.58	5.28 J	<2
1,1-Dichloroethene		µg/L	0.559 J	0.966 J	2.84	<25	1.04	<10	<2
Carbon tetrachloride		µg/L	<1	<1	<1	<25	<1	<10	<2
Chloroform		µg/L	2.1	1.69 J	1.65	<7.5	1.17	<3	0.256 J
cis-1,2-Dichloroethene		µg/L	72.2	86 J	64.1	73.8	46.8	16	1.59 J
Tetrachloroethene		µg/L	13.8	12.4 J	4.3	8.34 J	10.4	7.03 J	1.48 J
trans-1,2-Dichloroethene		µg/L	20.4	35.3	23.6	9.93 J	3.58	<10	<2
Trichloroethene		µg/L	1810	1650	794	1600	1210	643	94.2
Vinyl chloride		µg/L	<1	1.15	0.971 J	<25	<1	<10	<2

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-155

Analyte	Sample Name / Sample Date	Units	MW-155 3/24/2010	MW-155 6/23/2010	MW-155 9/22/2010	MW-155 1/25/2011	MW-155 3/28/2011	MW-155 9/26/2011	MW-155 4/19/2012
1,1,2,2-Tetrachloroethane		µg/L	16.7	24	4.58	3.75	2.61	1.68	0.983
1,1,2-Trichloroethane		µg/L	<1	0.498 J	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	0.303 J	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	3.17	1.57	0.408 J	1.07	0.585 J	0.709 J	1.15
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-157

	Sample Name	MW-157	MW-157	MW-157	MW-157	MW-157	MW-157	MW-157
	Sample Date	8/18/2004	10/27/2004	1/27/2005	3/23/2005	6/15/2005	11/17/2005	4/12/2006
Analyte	**Units**							
1,1,2,2-Tetrachloroethane	µg/L	5.7 J	6.74 J	3.8	3.6	3.18 B	2.22	2.28
1,1,2-Trichloroethane	µg/L	<6.7	0.351 J	0.33 J	0.26 J	<1	<1	<1
1,1-Dichloroethene	µg/L	<6.7	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	9.4	10.5 J	9.9	5.2	4.75	4.56	5.61
Chloroform	µg/L	14	14 J	12	7.5	10.2	8.18	10.8
cis-1,2-Dichloroethene	µg/L	11	13.2 J	13	11	10.9	9.35	9.75
Tetrachloroethene	µg/L	1.9 J	1.51 J	2	1.6	1.32	1.49	1.59
trans-1,2-Dichloroethene	µg/L	1.9 J	2.7 J	2.4	1.9	2.58	1.3	2.2
Trichloroethene	µg/L	120	143 J	160	200	157	117	132
Vinyl chloride	µg/L	<6.7	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
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J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-157

Analyte	Sample Name / Sample Date	Units	MW-157 10/19/2006	MW-157 4/10/2007	MW-157 10/8/2007	MW-157 4/14/2008	MW-157 10/17/2008	MW-157 4/14/2009	MW-157 7/30/2009
1,1,2,2-Tetrachloroethane		µg/L	2.64	25.2	27	10.1	7.19	9.47	5.06
1,1,2-Trichloroethane		µg/L	<1	1.04	1.22	<2	0.39 J	0.288 J	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<2	<1	<1	<1
Carbon tetrachloride		µg/L	9.25	17.2	26	<2	12	6.25	3.35
Chloroform		µg/L	30.1	153	235	9	89.6	17.1	9.88
cis-1,2-Dichloroethene		µg/L	13.3	16.8	12.5	0.671 J	3.29	14.8	12
Tetrachloroethene		µg/L	2.19	4.1	7.43	<2	1.15	2.68	2.05
trans-1,2-Dichloroethene		µg/L	2.7	3	3.06	<2	0.589 J	2.75	2.64
Trichloroethene		µg/L	148 J	162	151	5.48	38.3	286	205
Vinyl chloride		µg/L	<1	<1	<1	<2	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
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J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-157

Analyte	Sample Name / Sample Date	Units	MW-157 10/15/2009	MW-157 3/25/2010	MW-157 6/22/2010	MW-157 9/22/2010	MW-157 1/26/2011	MW-157 3/28/2011	MW-157 9/27/2011
1,1,2,2-Tetrachloroethane		µg/L	3.88	5.71	8.15	3.55	1.29	2.46	1.34
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	4.66	4.14	2.9	2.25	0.644 J	0.783 J	0.314 J
Chloroform		µg/L	8	7.72	6.41	5.85	4.43	7.1	3.46
cis-1,2-Dichloroethene		µg/L	11.6	9.3	7.73	5.44	1.8	1.69	0.659 J
Tetrachloroethene		µg/L	2.1	1.81	1.34	1.03	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	2.69	2.11	1.55	1.03	<1	<1	<1
Trichloroethene		µg/L	202	175	141	88.3	13.3	9.04	4.18
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-157

	Sample Name	MW-157	MW-157
	Sample Date	4/19/2012	10/17/2012
Analyte	**Units**		
1,1,2,2-Tetrachloroethane	µg/L	0.533	0.616
1,1,2-Trichloroethane	µg/L	<1	<1
1,1-Dichloroethene	µg/L	<1	<1
Carbon tetrachloride	µg/L	0.346 J	<1
Chloroform	µg/L	3.24	2.46
cis-1,2-Dichloroethene	µg/L	0.476 J	<1
Tetrachloroethene	µg/L	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1
Trichloroethene	µg/L	3.26	2.03
Vinyl chloride	µg/L	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
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J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-158

Analyte	Sample Name / Sample Date	Units	MW-158 10/9/2004	MW-158 10/13/2004	MW-158 11/8/2004	MW-158 1/25/2005	MW-158 3/21/2005	MW-158 6/16/2005	MW-158 11/18/2005	MW-158 4/13/2006
1,1,2,2-Tetrachloroethane		µg/L	15	21	53	24	11	4.39	5.54	6.36
1,1,2-Trichloroethane		µg/L	<1	<1	<2.5	<1.4	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<2.5	<1.4	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<2.5	<1.4	<1	<1	<1	<1
Chloroform		µg/L	0.47 B	0.29 J	0.63 J	0.38 J	0.41 B	<1	1.07 B	1 B
cis-1,2-Dichloroethene		µg/L	2.2	3	7.2	3.1	3.3	5.16	9.31	7.74
Tetrachloroethene		µg/L	1.2	1.8	3.5	2.3	3.3	3.67	6.05	9.28
trans-1,2-Dichloroethene		µg/L	1.1	1.3	3	1.3 J	1.6	2.52	3.38	3.62
Trichloroethene		µg/L	20	30	74	33	30	32	77.8	76.3
Vinyl chloride		µg/L	<1	<1	<2.5	<1.4	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-158

	Sample Name	MW-158	MW-158	MW-158	MW-158	MW-158	MW-158	MW-158
	Sample Date	10/19/2006	4/10/2007	10/8/2007	4/11/2008	10/20/2008	6/8/2009	10/16/2009
Analyte	**Units**							
1,1,2,2-Tetrachloroethane	µg/L	4.41	1.86	1.26	3.03	27.4	5.84	8.22
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.691	0.404	0.194 J	0.288 J	0.682	0.758	0.294 J
cis-1,2-Dichloroethene	µg/L	5.96	2.9	1.4	2.9	7.79	11.6	1.45
Tetrachloroethene	µg/L	8.49	8.13	3.87	4.98	6.92	3.88	2.66
trans-1,2-Dichloroethene	µg/L	3.13	1.56	0.697 J	1.25	2.74	2.76	<1
Trichloroethene	µg/L	77.4	54	20.6	37.1	162	141	26.4
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-158

Analyte	Sample Name / Sample Date	Units	MW-158 3/24/2010	MW-158 6/22/2010	MW-158 9/23/2010	MW-158 1/25/2011	MW-158 3/28/2011	MW-158 9/27/2011	MW-158 4/18/2012
1,1,2,2-Tetrachloroethane		µg/L	4.59	0.802	1.82	0.677	0.49 J	1.15	0.528
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3 J	0.156 J	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	1.04	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	0.697 J	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	0.35 J	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	16.7	3.37	6.04	1.17	0.681 J	2	1.37
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-158A

Analyte	Sample Name / Sample Date	Units	MW-158A 10/10/2004	MW-158A 10/12/2004	MW-158A 11/8/2004	MW-158A 1/24/2005	MW-158A 3/21/2005	MW-158A 6/16/2005	MW-158A 11/18/2005	MW-158A 4/13/2006
1,1,2,2-Tetrachloroethane		µg/L	560	270	83	77	96	736	844	681
1,1,2-Trichloroethane		µg/L	<20	<15	<7.7	<2	0.24 J	2.5	4.5 J	6.08
1,1-Dichloroethene		µg/L	<20	<15	<7.7	<2	<1	0.392 J	<10	<1
Carbon tetrachloride		µg/L	<20	<15	<7.7	<2	0.55 J	<1	<10	<1
Chloroform		µg/L	<20	<15	2.1 J	0.88 J	2.4	1.28 B	3.47 B	2.62 B
cis-1,2-Dichloroethene		µg/L	27	43	40	11	33	37.1	45.5	49.7
Tetrachloroethene		µg/L	<20	5.7 J	8.1	3.2	12	5.63	17.8	4.69
trans-1,2-Dichloroethene		µg/L	9 J	17	7.1 J	4.3	15	9.54	13.6	14
Trichloroethene		µg/L	340	360	530	58	200	470	492	689
Vinyl chloride		µg/L	<20	<15	<7.7	<2	<1	<1	<10	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-158A

Analyte	Sample Name / Sample Date	Units	MW-158A 10/19/2006	MW-158A 4/10/2007	MW-158A 10/8/2007	MW-158A 4/11/2008	MW-158A 10/20/2008	MW-158A 6/8/2009	MW-158A 10/16/2009
1,1,2,2-Tetrachloroethane		µg/L	410	50.3	3.7	26.9	29.4	255	156
1,1,2-Trichloroethane		µg/L	14.9	3.49	2.65	7.88 J	<1	5.1	2.52
1,1-Dichloroethene		µg/L	0.818 J	0.592 J	<1	<1	1.65	<2	<1
Carbon tetrachloride		µg/L	0.754 J	<2	1.54	<1	0.825 J	<2	<1
Chloroform		µg/L	3.64	1.44	1.36	1.01	3.94	0.876	0.67
cis-1,2-Dichloroethene		µg/L	60.7	95.3 J	14.6	8.05 J	54.4 J	64.2	8.93
Tetrachloroethene		µg/L	6.64	3.77 J	13.7	10.7	15	2.92	1.96
trans-1,2-Dichloroethene		µg/L	22.8	7.78	6.22	4.06	18	3.6	0.456 J
Trichloroethene		µg/L	678	514	42	97.3 J	408	304	69.9
Vinyl chloride		µg/L	<1	0.663 J	<1	<1	<1	2.82	1.15

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
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J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-158A

Analyte	Sample Name / Sample Date	Units	MW-158A 3/24/2010	MW-158A 6/22/2010	MW-158A 9/23/2010	MW-158A 1/25/2011	MW-158A 3/28/2011	MW-158A 9/27/2011	MW-158A 4/18/2012
1,1,2,2-Tetrachloroethane		µg/L	27.8	27.2	5.03	0.771	0.663	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.155 J	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	0.295 J	0.302 J	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	3.87	3.01	1.3	0.426 J	0.37 J	0.302 J	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-159

Analyte	Sample Name / Sample Date	Units	MW-159 10/11/2004	MW-159 11/8/2004	MW-159 1/26/2005	MW-159 3/24/2005	MW-159 6/17/2005	MW-159 11/19/2005	MW-159 12/8/2005
1,1,2,2-Tetrachloroethane		µg/L	3500	580	2000 J	2200	659	421	1.25
1,1,2-Trichloroethane		µg/L	<150	<33	6.3	7.8	3.27	2.25	<1
1,1-Dichloroethene		µg/L	<150	<33	<6.2	<7.1	<1	<1	<1
Carbon tetrachloride		µg/L	<150	<33	<6.2	<7.1	0.961 J	0.927 J	4.13
Chloroform		µg/L	<150	<33	2.9 J	4.2 J	1.27 B	1.6 B	12.1
cis-1,2-Dichloroethene		µg/L	100 J	98	62	80	39.4	46.7	10.5
Tetrachloroethene		µg/L	<150	<33	4 J	7.1	1.82	2.33	0.935 J
trans-1,2-Dichloroethene		µg/L	<150	58	12	15	9.78	5.76	1.73
Trichloroethene		µg/L	1700	790	830	1700	691	552	120
Vinyl chloride		µg/L	<150	<33	<6.2	<7.1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-159

Analyte	Sample Name / Sample Date	Units	MW-159 4/13/2006	MW-159 10/18/2006	MW-159 4/9/2007	MW-159 10/8/2007	MW-159 4/11/2008	MW-159 10/20/2008	MW-159 6/8/2009
1,1,2,2-Tetrachloroethane		µg/L	847	357	272	501	312	271	366
1,1,2-Trichloroethane		µg/L	2.5	19.6	37.4	66.4	99.8	92.8	92.2
1,1-Dichloroethene		µg/L	<1	<1	1.16	1.98	<10	7.33	<10
Carbon tetrachloride		µg/L	<1	0.493 J	<1	<1	<10	<1	<10
Chloroform		µg/L	1.22 B	1.02	1.03	1.72	<3	1.66	<3
cis-1,2-Dichloroethene		µg/L	36.4	55.4	156	392	1220	959	248
Tetrachloroethene		µg/L	1.71	2.63	3.81	9.33	6.28 J	5.48	6.24 J
trans-1,2-Dichloroethene		µg/L	7.64	6.37	17.9	28	26.6	46.2	17.5
Trichloroethene		µg/L	594	935	1660	2700	1410	1320	1280
Vinyl chloride		µg/L	<1	<1	0.514 J	1.14	7.79 J	17.7	3.83 J

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
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J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-159

Analyte	Sample Name / Sample Date	Units	MW-159 10/16/2009	MW-159 3/24/2010	MW-159 6/23/2010	MW-159 9/22/2010	MW-159 1/25/2011	MW-159 3/28/2011	MW-159 9/27/2011
1,1,2,2-Tetrachloroethane		µg/L	483	133	69.9	75	37.8	40.6	32.5
1,1,2-Trichloroethane		µg/L	33.7	16.8	10.2	12.4	6.14	7.05	6.44
1,1-Dichloroethene		µg/L	2.96 J	3.26 J	4.81	8.51	5.86	5	4.42
Carbon tetrachloride		µg/L	<5	<5	<2	<1	<2	<1	<1
Chloroform		µg/L	0.923 J	<1.5	<0.6	0.568	0.285 J	0.301	0.289 J
cis-1,2-Dichloroethene		µg/L	82.2	54	55.4	62	45.6	50.7	49.9
Tetrachloroethene		µg/L	4.11 J	2.5 J	1.29 J	1.49	1.15 J	1.21	1.11
trans-1,2-Dichloroethene		µg/L	8.94	7.07	5.57	6.69	4.82	4.87	6.55
Trichloroethene		µg/L	983	505	280	293	200	232	193
Vinyl chloride		µg/L	<5	4.42 J	4.99	40.3	25.7	22.5	16.7

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-159

	Sample Name	MW-159	MW-159
	Sample Date	4/20/2012	10/17/2012
Analyte	**Units**		
1,1,2,2-Tetrachloroethane	µg/L	37.9	24.2
1,1,2-Trichloroethane	µg/L	6.14	4.82
1,1-Dichloroethene	µg/L	3.49	3.2
Carbon tetrachloride	µg/L	<1	<1
Chloroform	µg/L	0.34	0.242 J
cis-1,2-Dichloroethene	µg/L	42.8	35.3
Tetrachloroethene	µg/L	1.17	1.06
trans-1,2-Dichloroethene	µg/L	4.36	4.93
Trichloroethene	µg/L	275	247
Vinyl chloride	µg/L	17.3	14.6

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-160

Analyte	Sample Name / Sample Date	Units	MW-160 10/13/2004	MW-160 1/28/2005	MW-160 3/22/2005	MW-160 6/17/2005	MW-160 11/18/2005	MW-160 4/12/2006	MW-160 10/18/2006
1,1,2,2-Tetrachloroethane		µg/L	30	53	29	35.4	13.4	23.1	9.08
1,1,2-Trichloroethane		µg/L	<10	0.23 J	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<10	<1	<1	<1	<1	0.538 J	<1
Carbon tetrachloride		µg/L	<10	0.79 J	0.48 J	0.581 J	1.01	0.729 J	0.575 J
Chloroform		µg/L	<10	2.7	1.7	2.33 B	2.26 B	3.29 B	3.35
cis-1,2-Dichloroethene		µg/L	31	38	21	35.7	30.8	45	42.5
Tetrachloroethene		µg/L	12	21	15	14.7	14.7	13	19.8
trans-1,2-Dichloroethene		µg/L	17	18	10	16.3	12.2	18.1	17.8
Trichloroethene		µg/L	240	290	190	448	161	278	307
Vinyl chloride		µg/L	<10	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-160

Analyte	Sample Name / Sample Date	Units	MW-160 4/10/2007	MW-160 10/8/2007	MW-160 4/11/2008	MW-160 6/18/2008	MW-160 10/20/2008	MW-160 6/8/2009	MW-160 10/15/2009
1,1,2,2-Tetrachloroethane		µg/L	24.9	175	3560	3090	2340	118	125
1,1,2-Trichloroethane		µg/L	<1	0.555 J	2.97 J	2.69	3.84 J	0.49 J	0.332 J
1,1-Dichloroethene		µg/L	0.708 J	1.05	<5	<1	<1	<1	<1
Carbon tetrachloride		µg/L	0.781 J	1.91	<5	1.14	0.388 J	<1	<1
Chloroform		µg/L	1.68	3.53	2.14	1.62	1.75 J	0.811	0.56
cis-1,2-Dichloroethene		µg/L	22.6	56.1	49.8	40.9	40.6 J	1.23	0.375 J
Tetrachloroethene		µg/L	14.5	18.8	10.6	9.43	9.87 J	1.34	0.251 J
trans-1,2-Dichloroethene		µg/L	8.63	15.6	9.32	7.36	5.81 J	<1	<1
Trichloroethene		µg/L	191	695	1130	1120	1050	21.8	8.39
Vinyl chloride		µg/L	<1	<1	<5	<1	<1	<1	<1 UJ

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-160

Analyte	Sample Name / Sample Date	Units	MW-160 3/24/2010	MW-160 6/23/2010	MW-160 9/23/2010	MW-160 1/26/2011	MW-160 3/28/2011	MW-160 9/27/2011	MW-160 4/20/2012
1,1,2,2-Tetrachloroethane		µg/L	5.63	4.79	0.764	0.254 J	0.39 J	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.948 J	<1	0.323 J	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
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J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-163

Analyte	Sample Name / Sample Date	Units	MW-163 10/14/2004	MW-163 6/15/2005	MW-163 11/17/2005	MW-163 4/13/2006	MW-163 4/27/2006	MW-163 10/19/2006	MW-163 4/10/2007
1,1,2,2-Tetrachloroethane		µg/L	4800	3420 J	2080	1980	2420	538	642
1,1,2-Trichloroethane		µg/L	<100	7.43 J	4.95	4.77	6.6	17.3	61.2
1,1-Dichloroethene		µg/L	<100	<10	<1	<1	<1	<1	<5
Carbon tetrachloride		µg/L	<100	<10	0.882 J	<1	0.83 J	<1	<5
Chloroform		µg/L	<100	<10	0.88 B	1.28 B	2.14	0.446	0.883 J
cis-1,2-Dichloroethene		µg/L	41 J	39.6	24	39.7	61.6	98.6	113
Tetrachloroethene		µg/L	<100	5.09 J	4.3	8.68	12.6	4.35	3.5 J
trans-1,2-Dichloroethene		µg/L	<100	9.22 J	2.68	3.55	5.15	17.2	14.8
Trichloroethene		µg/L	1700	1740	1300	1860	2030	527	485
Vinyl chloride		µg/L	<100	<10	<1	<1	<1 UJ	3.63	3.91 J

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
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UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-163

Analyte	Sample Name / Sample Date	Units	MW-163 10/8/2007	MW-163 4/14/2008	MW-163 10/17/2008	MW-163 4/14/2009	MW-163 7/30/2009	MW-163 10/16/2009	MW-163 3/25/2010
1,1,2,2-Tetrachloroethane		µg/L	860	488	1710	233	131	143	11.8
1,1,2-Trichloroethane		µg/L	23.8	3.37 J	6.96	<2	0.369 J	0.261 J	<1
1,1-Dichloroethene		µg/L	<1	<5	<5	<2	<1	<1	<1
Carbon tetrachloride		µg/L	0.683 J	<5	<5	<2	<1	<1	<1
Chloroform		µg/L	1.59	11.9	7.67	0.769	0.4	0.974	<0.3
cis-1,2-Dichloroethene		µg/L	59	9.07	29.9	2.15	3.22	2.45	0.303 J
Tetrachloroethene		µg/L	4.93	<5	<5	0.802 J	1.23	0.93 J	0.487 J
trans-1,2-Dichloroethene		µg/L	10.9	1.84 J	3.81 J	<2	0.327 J	0.321 J	<1
Trichloroethene		µg/L	699	80.3	615	85.7	87.1	65.8	11.1
Vinyl chloride		µg/L	2.15	<5	<5	<2	<1	<1	<1

Notes:
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RL reporting limit

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HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-163

Analyte	Sample Name / Sample Date	Units	MW-163 6/22/2010	MW-163 9/22/2010	MW-163 1/26/2011	MW-163 3/28/2011	MW-163 9/27/2011	MW-163 4/19/2012	MW-163 10/17/2012
1,1,2,2-Tetrachloroethane		µg/L	11.3	5.32	1.78	4.66	5.74	3.83	3.18
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.142 J	0.181 J	0.165 J	0.19 J	<0.3	0.187 J	0.215 J
cis-1,2-Dichloroethene		µg/L	0.272 J	<1	<1	0.359 J	<1	<1	<1
Tetrachloroethene		µg/L	0.623 J	0.634 J	0.553 J	0.698 J	0.884 J	0.914 J	0.832 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	11.8	6.53	3.4	7.43	10.7	9.02	9.26
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
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µg/L micrograms per liter
RL reporting limit

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HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-164

Analyte	Sample Name / Sample Date	Units	MW-164 10/15/2004	MW-164 6/15/2005	MW-164 11/14/2005	MW-164 4/12/2006	MW-164 10/19/2006	MW-164 4/10/2007	MW-164 10/8/2007
1,1,2,2-Tetrachloroethane		µg/L	<2.5	4.65 B	2.14	2.6	3.05	45	17.7
1,1,2-Trichloroethane		µg/L	<2.5	<1	<1	<1	<1	1.75	0.719 J
1,1-Dichloroethene		µg/L	<2.5	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	4	3.66	5.44	2.99	16.8	24.8	9.87
Chloroform		µg/L	9.1	8.82	8.44 B	9.56	52.6	247	126
cis-1,2-Dichloroethene		µg/L	6.3	7.86	8.05	6.87	8.79	18.1	4.38
Tetrachloroethene		µg/L	<2.5	<1	0.576	0.637 J	2.03	3.62	2.13
trans-1,2-Dichloroethene		µg/L	0.97 J	1.22	0.599 J	0.974 J	1.49	2.66	1.39
Trichloroethene		µg/L	60	53.3	75.5	62.9 J	92.6	136 J	61.1
Vinyl chloride		µg/L	<2.5	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

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HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-164

Analyte	Sample Name / Sample Date	Units	MW-164 4/14/2008	MW-164 10/17/2008	MW-164 4/14/2009	MW-164 7/30/2009	MW-164 10/15/2009	MW-164 3/25/2010	MW-164 6/22/2010
1,1,2,2-Tetrachloroethane		µg/L	13.4	6.83	20.8	26.3	32	21.3	21
1,1,2-Trichloroethane		µg/L	0.517 J	0.403 J	1.07	1.27	1.41	1.07	0.909 J
1,1-Dichloroethene		µg/L	<1 J	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	3.42 J	4.43	10.4	8.71	7.78	6.74	6.26
Chloroform		µg/L	37.1	32.2	76.1	79.5	79.3	56.5	52.7
cis-1,2-Dichloroethene		µg/L	2.71	2.91	17.4	20.2	18.6	15	13.2
Tetrachloroethene		µg/L	0.894	0.728 J	1.89	1.52	1.33	1.49	1.15
trans-1,2-Dichloroethene		µg/L	0.57 J	0.41 J	1.61	1.99	1.91	1.57	1.25
Trichloroethene		µg/L	24.9 J	27	93.3	98.2	89.1	75.5	58.5
Vinyl chloride		µg/L	<1	<1	<1	<1	<1 UJ	<1	<1

Notes:
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µg/L micrograms per liter
RL reporting limit

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J Estimated based on QC data or reported below RL
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HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-164

Analyte	Sample Name / Sample Date	Units	MW-164 9/22/2010	MW-164 1/26/2011	MW-164 3/28/2011	MW-164 9/27/2011	MW-164 4/19/2012	MW-164 10/17/2012
1,1,2,2-Tetrachloroethane		µg/L	11.9	5.48	4.08	2.64	1.47	0.826
1,1,2-Trichloroethane		µg/L	0.524 J	0.284 J	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	4.32	2.53	2.06	1.62	0.957 J	1.03
Chloroform		µg/L	29.5	15.6	13.9	9	5.3	5.15
cis-1,2-Dichloroethene		µg/L	8.57	4.74	3.8	2.25	1.36	0.925 J
Tetrachloroethene		µg/L	0.962 J	0.637 J	0.383 J	0.385 J	0.284 J	<1
trans-1,2-Dichloroethene		µg/L	0.703 J	0.381 J	0.357 J	<1	<1	<1
Trichloroethene		µg/L	39.7	23.5	17.8	12.1	6.97	5.86
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1

Notes:
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µg/L micrograms per liter
RL reporting limit

DQE Flags:
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J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
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HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-165

	Sample Name	MW-165	MW-165	MW-165	MW-165	MW-165	MW-165	MW-165
	Sample Date	11/21/2004	1/25/2005	3/21/2005	6/16/2005	11/18/2005	4/13/2006	10/18/2006
Analyte	**Units**							
1,1,2,2-Tetrachloroethane	µg/L	24	8.9	12	21.8	21.8	8	3.5
1,1,2-Trichloroethane	µg/L	<9.1	0.74 J	0.55 J	1.16	1.58	1.51	0.655 J
1,1-Dichloroethene	µg/L	<9.1	<2	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	11	8	7.8	1.67	2.68	<1	3.85
Chloroform	µg/L	140	64	58	77	65.4	<1	7.48
cis-1,2-Dichloroethene	µg/L	7.1 J	10	11	7.64	8.06	8.65	14.6
Tetrachloroethene	µg/L	2.3 J	1.8 J	2.1	<1	1.04	1.27	1.23
trans-1,2-Dichloroethene	µg/L	<9.1	1.3 J	2.2	2.49	1.64 J	2.07	2.84
Trichloroethene	µg/L	64	48	53	37.2	46.5	60.4	187
Vinyl chloride	µg/L	<9.1	<2	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-165

Analyte	Sample Name / Sample Date	Units	MW-165 4/10/2007	MW-165 10/8/2007	MW-165 4/11/2008	MW-165 10/20/2008	MW-165 6/8/2009	MW-165 10/16/2009	MW-165 3/24/2010
1,1,2,2-Tetrachloroethane		µg/L	1.9	2.31	3.04	4.94	5.28	3.92	25.1
1,1,2-Trichloroethane		µg/L	0.3 J	0.3 J	0.343 J	0.491 J	0.652 J	1.62	2.26
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	3.9	8.5	9.32	4.59	2.93	<1	<1
Chloroform		µg/L	7.6	8.57	61.4	34.3	13.5	1.04	2.74
cis-1,2-Dichloroethene		µg/L	9.31	7.25	9.59	9.28	13.8	18.7	7.7
Tetrachloroethene		µg/L	1.36	1.42	1.64	1.3	1.93	1.39	1.43
trans-1,2-Dichloroethene		µg/L	2.44	2.03	1.99	1.62	2.2	3.26	1.74
Trichloroethene		µg/L	153	82.8 J	87.1	94.1	111	194	187
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-165

Analyte	Sample Name / Sample Date	Units	MW-165 6/22/2010	MW-165 9/23/2010	MW-165 1/25/2011	MW-165 3/28/2011	MW-165 9/27/2011	MW-165 4/18/2012	MW-165 10/16/2012
1,1,2,2-Tetrachloroethane		µg/L	38.8	34.7	14.5	14.3	10.6	5.28	1.79
1,1,2-Trichloroethane		µg/L	1.96	1.93	1.46	1.52	1.18	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	1.19	0.927	0.618	0.245 J	0.502	0.394	0.281 J
cis-1,2-Dichloroethene		µg/L	3.6	1.15	0.456 J	0.459 J	0.546 J	<1	<1
Tetrachloroethene		µg/L	0.807 J	0.418 J	0.327 J	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	0.699 J	0.324 J	<1	<1	<1	<1	<1
Trichloroethene		µg/L	67.7	35.4	19.8	11	8.33	7.48	3.9
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-165A

Analyte	Sample Name / Sample Date	Units	MW-165A 11/18/2004	MW-165A 1/24/2005	MW-165A 3/21/2005	MW-165A 6/16/2005	MW-165A 11/18/2005	MW-165A 4/13/2006	MW-165A 10/18/2006
1,1,2,2-Tetrachloroethane		µg/L	7.8	5.4	5.5	12	4.42	1.14	1.65
1,1,2-Trichloroethane		µg/L	<2	<2	0.37 J	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<2	<2	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	6.4	6.9	9.8	4.63	6.69	1.93	4.91
Chloroform		µg/L	24	15	24	48.5	3.52 B	5.72 B	7.98
cis-1,2-Dichloroethene		µg/L	13	9.3	10	6.05	2.41	6.05	5.06
Tetrachloroethene		µg/L	1.3 J	1.1 J	1.4	<1	0.955 J	0.608 J	1.35
trans-1,2-Dichloroethene		µg/L	1.7 J	1.3 J	1.8	0.986 J	1.31	1.15	2.22
Trichloroethene		µg/L	69	53	64	46.7	88.7	69.8	86.7
Vinyl chloride		µg/L	<2	<2	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
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HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-165A

Analyte	Sample Name / Sample Date	Units	MW-165A 4/10/2007	MW-165A 10/8/2007	MW-165A 4/11/2008	MW-165A 10/20/2008	MW-165A 6/8/2009	MW-165A 10/16/2009	MW-165A 3/24/2010
1,1,2,2-Tetrachloroethane		µg/L	2	2.98	2.77	10.5	1.1	12.5	45.7
1,1,2-Trichloroethane		µg/L	<1	<1	<1	0.496 J	0.388 J	1.18	0.973 J
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	6.23	2.62	11.3	10.8	<1	<1	<1
Chloroform		µg/L	18	66.9	49.8	82.7	1.94	1.21	1.39
cis-1,2-Dichloroethene		µg/L	9.46	7.63	7.3	10.2	5.3	1.99	0.421 J
Tetrachloroethene		µg/L	1.57	2.49	2.44	2.32	0.906 J	0.252 J	<1
trans-1,2-Dichloroethene		µg/L	1.96	1.57	1.4	1.38	0.964 J	<1	<1
Trichloroethene		µg/L	49.6	53.1	32.6	112	91.5	35.5	6.29
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-165A

Analyte	Sample Name / Sample Date	Units	MW-165A 6/22/2010	MW-165A 9/23/2010	MW-165A 1/25/2011	MW-165A 3/28/2011	MW-165A 9/27/2011	MW-165A 4/18/2012	MW-165A 10/16/2012
1,1,2,2-Tetrachloroethane		µg/L	104	44.7	35.6	79	33.9	6	1.16
1,1,2-Trichloroethane		µg/L	0.457 J	0.28 J	<1	0.461 J	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.918	<0.3	0.15 J	0.793	0.41	0.337	0.433
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	0.414 J	0.251 J	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	4.6	2.3	3.64	13.1	6.67	2.54	0.493 J
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-166

Analyte	Sample Name / Sample Date	Units	MW-166 11/18/2004	MW-166 11/19/2004	MW-166 1/27/2005	MW-166 3/23/2005	MW-166 6/17/2005	MW-166 11/19/2005	MW-166 4/13/2006	MW-166 10/20/2006
1,1,2,2-Tetrachloroethane		µg/L	4.2	4.2	3.7	3.5	1.2	1.48	13.4	9.59
1,1,2-Trichloroethane		µg/L	0.32	0.32 J	<1	<1	<1	<1	<1	0.422 J
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	0.83	0.83 J	2.9	1.9	1.68	1.17	8.54	16.5
Chloroform		µg/L	30	30	24	11	9.01	7.54	79.3	68.5
cis-1,2-Dichloroethene		µg/L	4.3	4.3	3.4	2.6	1.51	3.43	5.21	5.41
Tetrachloroethene		µg/L	0.79	0.79 J	0.68 J	0.87 J	<1	0.561 J	1.24	1.68
trans-1,2-Dichloroethene		µg/L	0.49	0.49 J	0.41 J	0.63 J	<1	0.438 J	1.17	0.937 J
Trichloroethene		µg/L	12	12	10	11	6.27	6.92	38	43.7
Vinyl chloride		µg/L	--	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-166

	Sample Name	MW-166	MW-166	MW-166	MW-166	MW-166	MW-166	MW-166
	Sample Date	4/9/2007	10/5/2007	4/11/2008	10/20/2008	6/8/2009	10/16/2009	3/23/2010
Analyte	**Units**							
1,1,2,2-Tetrachloroethane	µg/L	5.47	28.5	8.39	0.519	17.9	15.3	10.1
1,1,2-Trichloroethane	µg/L	<1	0.946 J	<1	<1	0.729 J	0.525 J	0.756 J
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	8	8.81	8.3	5.38	12.3	11.3	6.1
Chloroform	µg/L	33.1	140	52.2	14.1	95.8	80.9	65
cis-1,2-Dichloroethene	µg/L	2.69	5.44	2.49	1.2	5.57	4.42	5.03
Tetrachloroethene	µg/L	1.28	2.47	1.65	0.621 J	2.07	2.03	1.38
trans-1,2-Dichloroethene	µg/L	0.685 J	1.15	0.955 J	0.354 J	1.17	0.866 J	0.919 J
Trichloroethene	µg/L	25.6	63.9	25.7	15	63.3	48	37.8
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-166

Analyte	Sample Name / Sample Date	Units	MW-166 6/23/2010	MW-166 9/23/2010	MW-166 1/25/2011	MW-166 3/28/2011	MW-166 9/27/2011	MW-166 4/18/2012	MW-166 10/17/2012
1,1,2,2-Tetrachloroethane		µg/L	8.91	11.4	9.34	9.82	14.3	6.08	2.56
1,1,2-Trichloroethane		µg/L	0.518 J	0.458 J	0.435 J	0.445 J	0.716 J	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	2.95	6.16	6.04	5.09	5.5	2.99	0.692 J
Chloroform		µg/L	34.7	22.8	17.9	21.8	67.5	32.5	10
cis-1,2-Dichloroethene		µg/L	6.6	15.4	13.4	13.5	6.33	2.63	1.29
Tetrachloroethene		µg/L	1.22	1.99	2.03	1.36	1.49	1.02	0.521 J
trans-1,2-Dichloroethene		µg/L	1.08	2.97	2.06	1.64	0.864 J	0.293 J	<1
Trichloroethene		µg/L	59.6	223	154	129	50.2	19.5	9.01
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-167

Analyte	Sample Name / Sample Date	Units	MW-167 11/21/2004	MW-167 1/25/2005	MW-167 3/22/2005	MW-167 6/16/2005	MW-167 11/18/2005	MW-167 4/13/2006	MW-167 10/18/2006
1,1,2,2-Tetrachloroethane		µg/L	<1	<1	<1	<1	2.67	<1	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	2.1 B	0.47 J	0.82 B	<1	<1	<1	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	<1	<1	<1	0.961 J	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-167

Analyte	Sample Name / Sample Date	Units	MW-167 4/9/2007	MW-167 10/5/2007	MW-167 4/11/2008	MW-167 10/20/2008	MW-167 4/14/2009	MW-167 10/15/2009
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	<1	0.34 J	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-169

Analyte	Sample Name / Sample Date	Units	MW-169 12/12/2004	MW-169 6/15/2005	MW-169 11/18/2005	MW-169 4/13/2006	MW-169T 10/19/2006	MW-169-81.8-IS-2 4/9/2007	MW-169-81-8-IS-3 10/8/2007
1,1,2,2-Tetrachloroethane		µg/L	<1	<1	<1	<1	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.8 B	<1	<1	<1	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	0.26 J	<1	<1	<1	0.282 J	<1	<1
Tetrachloroethene		µg/L	<1	<1 J	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	<1 J	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-169

Analyte	Sample Name / Sample Date / Units	MW-169-81.8-IS-4 4/11/2008	MW-169-86.06-IS-5 10/20/2008	MW-169-87.06-B1 6/8/2009	MW-169-IS-7 10/14/2009	MW-169 4/28/2011
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	0.4	0.547 J	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-170

Analyte	Sample Name / Sample Date / Units	MW-170 12/12/2004	MW-170 6/16/2005	MW-170 11/18/2005	MW-170 4/13/2006	MW-170T 10/19/2006	MW-170-77.7-IS-2 4/9/2007	MW-170-77.7-IS-3 10/8/2007
1,1,2,2-Tetrachloroethane	µg/L	<1	<1	<1	<1	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	1.3	4.06	4.37	2.84	3.52	3.67	3.06
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.42 B	<1	<1	<1	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	0.485 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1 J	<1 J	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-170

Analyte	Sample Name / Sample Date / Units	MW-170-77.7-IS-4 4/11/2008	MW-170-70.91-IS-5 10/20/2008	MW-170-70.91-IS-6 4/14/2009	MW-170-IS-7 10/14/2009	MW-170 4/28/2011
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	1.43	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-171

Analyte	Sample Name / Sample Date	Units	MW-171 12/13/2004	MW-171 6/16/2005	MW-171 11/18/2005	MW-171 4/13/2006	MW-171T 10/19/2006	MW-171-62.4-IS-2 4/9/2007	MW-171-IS-3 10/8/2007
1,1,2,2-Tetrachloroethane		µg/L	<1	<1	<1	<1	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	0.544 J	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<1	<1	<1	<1	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	<1 J	<1 J	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-171

Analyte	Sample Name / Sample Date / Units	MW-171-62.4-IS-4 4/11/2008	MW-171-63.75-IS-5 10/20/2008	MW-171-63.75-IS-6 4/14/2009	MW-171-IS-7 10/14/2009	MW-171 4/28/2011
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-174

	Sample Name	MW-174-75	MW-174-75B	MW-174-SARA-GW01	MW-174-76-SB	MW-174-IS-4	MW-174-TSVE-G	MW-174-IS-5
	Sample Date	11/16/2005	11/19/2005	5/14/2007	11/9/2007	4/15/2008	8/18/2008	10/16/2008
Analyte	**Units**							
1,1,2,2-Tetrachloroethane	µg/L	<1	<1	0.37	<1	0.7	1.4	0.629
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	3.06 J	2.93	5.9	2.93	<1	<1	<1
Chloroform	µg/L	37.4	31.4	68	30.6	0.666	0.345	0.154 J
cis-1,2-Dichloroethene	µg/L	0.28 J	<1	0.63	<1	<1	<1	<1
Tetrachloroethene	µg/L	0.99 J	1.05	1.9	0.55	0.297 J	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	0.28	<1	<1	<1	<1
Trichloroethene	µg/L	16.9	14.2	33	11.8	<1	<1	<1
Vinyl chloride	µg/L	<1	<1 UJ	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-174

Analyte	Sample Name / Sample Date	Units	MW-174-IS-6 4/16/2009	MW-174-IS-7 10/13/2009	MW-174-ODLA-1 3/26/2010	MW-174 4/26/2011	MW-174 7/19/2011	MW-174 4/19/2012	MW-174 10/17/2012
1,1,2,2-Tetrachloroethane		µg/L	2.08	0.315 J	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	0.607 J	0.988 J	1.2	0.805 J	0.966 J	0.442 J	<1
Chloroform		µg/L	1.47	1.54	0.337	0.243 J	0.282 J	0.22 J	0.212 J
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	0.347 J	0.591 J	0.651 J	0.413 J	0.51 J	0.311 J	0.263 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.658 J	0.485 J	<1	0.392 J	0.418 J	0.324 J	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-176

Analyte	Sample Name / Sample Date	Units	MW-176-81 11/18/2005	MW-176-85 11/8/2007	MW-176-IS-6 4/23/2009	MW-176-IS-7 10/13/2009	MW-176-ODLA-1 3/26/2010	MW-176 4/26/2011	MW-176 4/18/2012
1,1,2,2-Tetrachloroethane		µg/L	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	0.415	<1	<1	<1	<1	<1
Chloroform		µg/L	0.21 J	0.246	0.166 J	<0.3	0.147 J	0.208 J	0.187 J
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	0.44 J	0.287	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.73 J	3.07	0.579 J	<1	<1	<1	<1
Vinyl chloride		µg/L	<1 UJ	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-180

	Sample Name	MW-180-77	MW-180 SARA GW01	MW-180-81	MW-180-IS-4	MW-180-TSVE-G	MW-180-IS-5	MW-180-IS-6
	Sample Date	11/20/2005	5/21/2007	11/8/2007	4/16/2008	8/20/2008	10/21/2008	4/15/2009
Analyte	**Units**							
1,1,2,2-Tetrachloroethane	µg/L	44.2 J	21	<1	0.763	1.35	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	0.558	2.04	0.766 J
Carbon tetrachloride	µg/L	0.72 J	0.26	<1	<1	<1	<1	<1
Chloroform	µg/L	2.04	1.6	<1	<0.3	<0.3	<0.3	0.136 J
cis-1,2-Dichloroethene	µg/L	2.51	23	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	5.02	2.8	<1	<1	0.766	1.88	0.948 J
trans-1,2-Dichloroethene	µg/L	1.7	9.6	<1	<1	<1	<1	<1
Trichloroethene	µg/L	24.4	78	<1	<1	0.978	1.8	0.893 J
Vinyl chloride	µg/L	<1 UJ	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-180

	Sample Name	MW-180-IS-7	MW-180-ODLA-1	MW-180	MW-180
	Sample Date	10/13/2009	3/26/2010	4/26/2011	4/19/2012
Analyte	**Units**				
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Chloroform	µg/L	0.154 J	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-182

	Sample Name	MW-182-69	MW-182-70	MW-182-IS-6	MW-182-IS-7	MW-182	MW-182
	Sample Date	11/19/2005	11/8/2007	4/20/2009	10/15/2009	4/28/2011	4/19/2012
Analyte	**Units**						
1,1,2,2-Tetrachloroethane	µg/L	<1	<1	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.77 J	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1 UJ	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-184

	Sample Name	MW-184-67	MW-184-68	MW-184-IS-6	MW-184-IS-7	MW-184	MW-184
	Sample Date	11/18/2005	11/9/2007	4/23/2009	10/14/2009	4/28/2011	4/19/2012
Analyte	**Units**						
1,1,2,2-Tetrachloroethane	µg/L	1.74	<1	<0.5	5.06	2.36	0.716
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	8.08	4.19	4.52	13.4	2.23	1.31
Chloroform	µg/L	32.6	7.79	2.94	117	13.3	4.67
cis-1,2-Dichloroethene	µg/L	1.43	1.2	0.424 J	5.61	1.06	0.642 J
Tetrachloroethene	µg/L	0.69 J	<1	0.393 J	4.98	0.729 J	0.397 J
trans-1,2-Dichloroethene	µg/L	0.33 J	0.27	<1	1.63	<1	<1
Trichloroethene	µg/L	12.6	9.47	2.27	84	7.77	2.83
Vinyl chloride	µg/L	<1 UJ	<1	<1 UJ	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-187

Analyte	Sample Name	MW-187-84_060425	MW-187-SARA-GW01	MW-187-81	MW-187-IS-4	MW-187-TSVE-G	MW-187-IS-5	MW-187-IS-6
	Sample Date	4/25/2006	5/16/2007	11/8/2007	4/16/2008	8/20/2008	10/16/2008	4/21/2009
	Units							
1,1,2,2-Tetrachloroethane	µg/L	<1	<0.5	0.141	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	0.8	<1	<1	<1	<1	<1
Chloroform	µg/L	0.13 J	0.29	<1	<0.3	0.139	0.183 J	<0.3
cis-1,2-Dichloroethene	µg/L	<1	0.4	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	0.36	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.26 J	3.7	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1 UJ	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-187

	Sample Name	MW-187-IS-7	MW-187-ODLA-1	MW-187
	Sample Date	10/15/2009	3/26/2010	4/28/2011
Analyte	**Units**			
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	0.162 J	0.149 J	0.265 B
cis-1,2-Dichloroethene	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	0.253 J	<1	0.312 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-190

Analyte	Sample Name / Sample Date	Units	MW-190-86_060426 4/26/2006	MW-190-86 11/9/2007	MW-190-IS-6 4/23/2009	MW-190-IS-7 10/14/2009	MW-190-ODLA-1 3/26/2010	MW-190 4/26/2011	MW-190 4/19/2012
1,1,2,2-Tetrachloroethane		µg/L	4410	1040	276	28.1	23.5	10.4	12.1
1,1,2-Trichloroethane		µg/L	8.84	3.38	0.45 J	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	0.63 J	1.17	<1	<1	<1	<1	<1
Chloroform		µg/L	2.73	1.32	0.562	0.135 J	0.186 J	0.247 J	0.291 J
cis-1,2-Dichloroethene		µg/L	80.5 J	33.3	3.4	0.547 J	0.747 J	0.405 J	0.459 J
Tetrachloroethene		µg/L	12.5	6.01	1.37	0.588 J	0.707 J	0.642 J	0.893 J
trans-1,2-Dichloroethene		µg/L	6.48	1.56	0.416 J	<1	<1	<1	<1
Trichloroethene		µg/L	2720	705	109	27.6	31.9	19.4	20.4
Vinyl chloride		µg/L	<1 UJ	<1	<1 UJ	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-190

	Sample Name	MW-190
	Sample Date	10/17/2012
Analyte	**Units**	
1,1,2,2-Tetrachloroethane	µg/L	10.6
1,1,2-Trichloroethane	µg/L	<1
1,1-Dichloroethene	µg/L	<1
Carbon tetrachloride	µg/L	<1
Chloroform	µg/L	0.186 J
cis-1,2-Dichloroethene	µg/L	0.373 J
Tetrachloroethene	µg/L	1.05
trans-1,2-Dichloroethene	µg/L	<1
Trichloroethene	µg/L	23.1
Vinyl chloride	µg/L	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-220

	Sample Name	MW-220	MW-220	MW-220	MW-220	MW-220	MW-220	MW-220
	Sample Date	5/18/2007	11/9/2007	4/15/2008	8/20/2008	10/21/2008	4/23/2009	10/13/2009
Analyte	**Units**							
1,1,2,2-Tetrachloroethane	µg/L	780	<1	<0.5	<0.5	0.267 J	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	9.3	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	18	7.93	4.54	37	44.3	45.9	33.1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	2.5	<1	<0.3	0.201	0.217 J	0.238 J	0.184 J
cis-1,2-Dichloroethene	µg/L	420	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	16	7.67	8.14	16.4	13.7	19.8	19
trans-1,2-Dichloroethene	µg/L	76	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	530	6.73	4.61	14.6	15.2	20.2	18.7
Vinyl chloride	µg/L	0.63	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-220

	Sample Name	MW-220	MW-220	MW-220
	Sample Date	7/19/2011	4/19/2012	10/17/2012
Analyte	**Units**			
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	2.66	3.08	2.47
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	1.95	4.61	3.78
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	4.94	6.56	6.65
Vinyl chloride	µg/L	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-221

	Sample Name	MW-221			MW-221-			
	Sample Date	SARA GW01 5/21/2007	MW-221-85 11/9/2007	MW-221-IS-4 4/16/2008	TSVE-G 8/20/2008	MW-221-IS-5 10/21/2008	MW-221-IS-6 4/16/2009	MW-221-IS-7 10/13/2009
Analyte	**Units**							
1,1,2,2-Tetrachloroethane	µg/L	110	0.692	<0.5	0.147	0.329 J	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	1.9	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	1.4	0.368	0.167 J	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	52	0.268	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	6.9	1.09	0.893 J	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	10	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	140	2.33	<1	1.19	0.501 J	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-221

Analyte	Sample Name / Sample Date / Units	MW-221-ODLA-1 3/26/2010	MW-221 4/26/2011	MW-221 7/19/2011	MW-221 4/20/2012	MW-221 10/17/2012
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	0.134 J	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-222

Analyte	Sample Name / Sample Date	Units	MW-222-SARA-GW01 5/16/2007	MW-222-84 11/9/2007	MW-222-IS-4 4/15/2008	MW-222-TSVE-G 8/19/2008	MW-222-IS-5 10/20/2008	MW-222-IS-6 4/16/2009	MW-222-IS-7 10/14/2009
1,1,2,2-Tetrachloroethane		µg/L	340	1130	12.7	1.36	47.1	1.19	<0.5
1,1,2-Trichloroethane		µg/L	<5	8.97	7.57	0.492	0.648 J	<1	<1
1,1-Dichloroethene		µg/L	<5	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<5	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<1.5	0.358	0.156 J	<0.3	<0.3	<0.3	0.269 J
cis-1,2-Dichloroethene		µg/L	150	25.4	10.4	4.12	4.51	<1	<1
Tetrachloroethene		µg/L	5.7	1.23	0.312 J	0.337	0.484 J	0.377 J	<1
trans-1,2-Dichloroethene		µg/L	66	5.2	0.301 J	<1	0.376 J	<1	<1
Trichloroethene		µg/L	1100	351	5.34	1.18	5.81	1.87	1.04
Vinyl chloride		µg/L	<5	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-222

	Sample Name	MW-222-ODLA-1	MW-222	MW-222	MW-222	MW-222
	Sample Date	3/26/2010	4/26/2011	7/19/2011	4/20/2012	10/16/2012
Analyte	**Units**					
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	0.396	0.523	0.281 J	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	0.313 J	<1	<1	<1	0.291 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	2.54	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-223

	Sample Name	MW-223-SARA-GW01	MW-223-84	MW-223-IS-4	MW-223-TSVE-G	MW-223-IS-5	MW-223-IS-6	MW-223-IS-7
	Sample Date	5/16/2007	11/9/2007	4/15/2008	8/18/2008	10/17/2008	4/17/2009	10/14/2009
Analyte	**Units**							
1,1,2,2-Tetrachloroethane	µg/L	14	30.3	0.323 J	0.366	0.913	0.778	0.227 J
1,1,2-Trichloroethane	µg/L	3.1	2.81	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<2	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	0.39	0.283	<1	<1	<1	<1	<1
Chloroform	µg/L	0.95	0.838	0.439	0.252	0.249 J	0.177 J	0.551
cis-1,2-Dichloroethene	µg/L	15	5.56	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	3.7	0.944	0.343 J	0.262	0.457 J	0.813 J	0.319 J
trans-1,2-Dichloroethene	µg/L	3.7	1.21	<1	<1	<1	<1	<1
Trichloroethene	µg/L	500	144	4.55	2.32	3.56	7.38	4.01
Vinyl chloride	µg/L	<2	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-223

	Sample Name	MW-223-ODLA-1	MW-223	MW-223	MW-223	MW-223
	Sample Date	3/26/2010	40659	7/19/2011	4/20/2012	10/16/2012
Analyte	**Units**					
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	0.75	2	1.19	0.391	0.207 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	0.447 J	<1	0.294 J	0.503 J	0.476 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	1.49	0.25 J	0.392 J	0.275 J	0.352 J
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-224

Analyte	Sample Name / Sample Date	Units	MW-224-SARA-GW01 5/16/2007	MW-224-84.5 11/10/2007	MW-224-IS-4 4/16/2008	MW-224-TSVE-G 8/18/2008	MW-224-IS-5 10/20/2008	MW-224-IS-6 4/15/2009	MW-224-IS-7 10/14/2009
1,1,2,2-Tetrachloroethane		µg/L	140	<1	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.18	0.17	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	4.8	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	1.7	2.23	1.33	0.771	0.628 J	0.436 J	0.451 J
trans-1,2-Dichloroethene		µg/L	1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	92	13.4	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-224

Analyte	Sample Name / Sample Date / Units	MW-224-ODLA-1 3/26/2010	MW-224 40659	MW-224 7/19/2011	MW-224 4/20/2012	MW-224 10/16/2012
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	0.186 J	1.01	1.03	0.563	0.286 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	0.305 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-225

Analyte	Sample Name / Sample Date / Units	MW-225-SARA-GW01 5/15/2007	MW-225-88-SB 11/9/2007	MW-225-IS-4 4/16/2008	MW-225-TSVE-G 8/20/2008	MW-225-IS-5 10/17/2008	MW-225-IS-6 4/20/2009
1,1,2,2-Tetrachloroethane	µg/L	15	75.9	21.3	13.9	22.8	4.03
1,1,2-Trichloroethane	µg/L	0.62	2.34	0.544 J	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.78	0.517	0.275 J	0.155	0.149 J	<0.3
cis-1,2-Dichloroethene	µg/L	8.6	11.2	1.71	0.889	0.321 J	<1
Tetrachloroethene	µg/L	2.3	1.19	0.616 J	0.644	0.652 J	0.727 J
trans-1,2-Dichloroethene	µg/L	2.2	1.21	<1	<1	<1	<1
Trichloroethene	µg/L	320	140	39.6	19.6	8.66	9.46
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-225

	Sample Name	MW-225-IS-7	MW-225-ODLA-1	MW-225	MW-225	MW-225	MW-225
	Sample Date	10/13/2009	3/26/2010	4/26/2011	7/19/2011	4/20/2012	10/16/2012
Analyte	**Units**						
1,1,2,2-Tetrachloroethane	µg/L	2.47	0.926	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.198 J	0.212 J	0.667	0.803	0.221 J	0.214 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	0.566 J	0.679 J	0.252 J	0.494 J	0.538 J	0.464 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	11	8.58	2	1.75	0.653 J	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-226

Analyte	Sample Name / Sample Date	Units	MW-226-SARA-GW01 5/15/2007	MW-226-83 11/9/2007	MW-226-IS-4 4/15/2008	MW-226-TSVE-G 8/20/2008	MW-226-IS-5 10/20/2008	MW-226-IS-6 4/17/2009	MW-226-IS-7 10/14/2009
1,1,2,2-Tetrachloroethane		µg/L	220	9.56	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	1.4	1.09	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<2	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<2	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.72	0.156	0.155 J	0.157	0.155 J	0.133 J	0.184 J
cis-1,2-Dichloroethene		µg/L	19	2.57	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	7.1	0.559	<1	0.417	0.533 J	0.794 J	0.75 J
trans-1,2-Dichloroethene		µg/L	4.5	0.486	<1	<1	<1	<1	<1
Trichloroethene		µg/L	740	24.7	0.855 J	<1	<1	<1	<1
Vinyl chloride		µg/L	<2	1.24	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-226

	Sample Name	MW-226-ODLA-1	MW-226	MW-226	MW-226	MW-226
	Sample Date	3/26/2010	4/26/2011	7/19/2011	4/19/2012	10/16/2012
Analyte	**Units**					
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	1.52	0.463	0.195 J	0.242 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	0.751 J	<1	<1	0.376 J	0.393 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-227

Analyte	Sample Name / Sample Date / Units	MW-227-SARA-GW01 5/14/2007	MW-227-78 11/10/2007	MW-227-IS-4 4/16/2008	MW-227-TSVE-G 8/18/2008	MW-227-IS-5 10/17/2008	MW-227-IS-6 4/21/2009	MW-227-IS-7 10/13/2009
1,1,2,2-Tetrachloroethane	µg/L	120	118	28.1	5.14	10.7	15.1	<0.5
1,1,2-Trichloroethane	µg/L	6.1	7.33	1.02	0.538	0.982 J	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	43	33.7	4.02	3.52	7.26	0.524 J	<1
Chloroform	µg/L	1100	1080	110	30.9	134	7.5	0.322
cis-1,2-Dichloroethene	µg/L	40	58.5	6.33	2.89	6.4	0.328 J	<1
Tetrachloroethene	µg/L	22	13.5	2.25	1.81	2.7	0.345 J	0.267 J
trans-1,2-Dichloroethene	µg/L	8.5	10.9	1	0.37	1.04	<1	<1
Trichloroethene	µg/L	420	387	40.8	28.4	61.8	3.56	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-227

Analyte	Sample Name / Sample Date	Units	MW-227-ODLA-1 3/26/2010	MW-227 4/26/2011	MW-227 7/19/2011	MW-227 4/19/2012	MW-227 10/17/2012
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	0.682 J	0.614 J	0.567 J	0.348 J	<1
Chloroform		µg/L	<0.3	0.361	0.838	0.865	0.42
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	0.543 J	0.551 J	0.614 J	0.463 J	0.392 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	<1	0.378 J	0.893 J	0.37 J
Vinyl chloride		µg/L	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-228

Analyte	Sample Name / Sample Date	Units	MW-228-SARA-GW01 5/14/2007	MW-228-78 11/10/2007	MW-228-IS-4 4/16/2008	MW-228-TSVE-G 8/18/2008	MW-228-IS-5 10/17/2008	MW-228-IS-6 4/16/2009	MW-228-IS-7 10/14/2009
1,1,2,2-Tetrachloroethane		µg/L	46	5.07	0.509	0.22	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	0.99	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	3.4	<1	<1	<1	<1	<1	0.627 J
Chloroform		µg/L	120	4.51	0.387	2.81	0.155 J	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	1.6	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	1.8	<1	<1	<1	<1	<1	0.399 J
trans-1,2-Dichloroethene		µg/L	0.38	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	42	0.974	<1	0.911	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-228

Analyte	Sample Name / Sample Date / Units	MW-228-ODLA-1 3/29/2010	MW-228 4/28/2011	MW-228 7/19/2011	MW-228 4/19/2012	MW-228 10/17/2012
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	0.756 J	0.545 J	0.327 J	<1	<1
Chloroform	µg/L	<0.3	0.299 B	0.265 J	0.186 J	0.199 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	0.445 J	0.614 J	0.451 J	0.264 J	0.46 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-230

Analyte	Sample Name / Sample Date	Units	MW-230 10/18/2007	MW-230 4/15/2008	MW-230 10/22/2008	MW-230 4/15/2009	MW-230 10/14/2009	MW-230 4/19/2012
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	27.1	18.2	32.7	30.3	28.1	13.2
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.199 J	0.192 J	0.276 J	0.236 J	0.188 J	0.225 J
cis-1,2-Dichloroethene		µg/L	1.29	0.834 J	1.27	1.09	0.886 J	0.499 J
Tetrachloroethene		µg/L	87.2	76.1	100	89.9	88.4	35.9
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	83.3	74.6	98.4	98.2	83.5	54.3
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-235

	Sample Name	MW-235-IS-4	MW-235-IS-5	MW-235-IS-6	MW-235-IS-7	MW-235	MW-235
	Sample Date	4/15/2008	10/22/2008	4/17/2009	10/15/2009	4/28/2011	4/19/2012
Analyte	**Units**						
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-237

	Sample Name	MW-237-IS-4	MW-237-IS-5	MW-237-IS-6	MW-237-IS-7	MW-237	MW-237
	Sample Date	4/11/2008	10/22/2008	4/16/2009	10/15/2009	4/28/2011	4/18/2012
Analyte	**Units**						
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	2.2	2.02	2.17	1.77	1.62	3.03
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.181 J	0.162 J	0.129 J	<0.3	0.164 B	0.172 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	0.294 J	<1
Tetrachloroethene	µg/L	0.256 J	0.261 J	0.286 J	<1	<1	0.259 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
B Possibly bias high or false positive based on blank data

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-241

Analyte	Sample Name / Sample Date	Units	MW-241 7/28/2009	MW-241 10/15/2009	MW-241 3/24/2010	MW-241 6/22/2010	MW-241 9/22/2010	MW-241 1/26/2011	MW-241 3/28/2011
1,1,2,2-Tetrachloroethane		µg/L	16.8	0.744	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.227 J	<0.3	<0.3	<0.3	<0.3	<0.3	0.175 J
cis-1,2-Dichloroethene		µg/L	0.262 J	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	3.23	2.75	1.03	0.593 J	0.573 J	0.741 J	0.362 J
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-241

	Sample Name	MW-241	MW-241
	Sample Date	9/27/2011	4/17/2012
Analyte	**Units**		
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1
1,1-Dichloroethene	µg/L	<1	<1
Carbon tetrachloride	µg/L	<1	<1
Chloroform	µg/L	0.132 J	0.136 J
cis-1,2-Dichloroethene	µg/L	<1	<1
Tetrachloroethene	µg/L	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1
Trichloroethene	µg/L	0.736 J	0.667 J
Vinyl chloride	µg/L	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-242

Analyte	Sample Name / Sample Date	Units	MW-242 7/29/2009	MW-242 10/16/2009	MW-242 3/24/2010	MW-242 6/22/2010	MW-242 9/22/2010	MW-242 1/26/2011	MW-242 3/28/2011
1,1,2,2-Tetrachloroethane		µg/L	1040	229	63.3	29.8	15.7	2.83	4.46
1,1,2-Trichloroethane		µg/L	8	3.34	0.75 J	0.328 J	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<2	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<2	<1	<1	<1	<1	<1
Chloroform		µg/L	0.897	0.578 J	0.188 J	0.173 J	0.198 J	0.165 J	<0.3
cis-1,2-Dichloroethene		µg/L	21.6	15.1	5.08	1.94	0.804 J	<1	<1
Tetrachloroethene		µg/L	4.54	<2	0.373 J	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	3.99	1.75 J	1.01	0.429 J	<1	<1	<1
Trichloroethene		µg/L	308	26.9	24.1	10.9	7.16	3.57	2.09
Vinyl chloride		µg/L	<1	<2	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-242

	Sample Name	MW-242	MW-242	MW-242
	Sample Date	9/26/2011	4/17/2012	10/17/2012
Analyte	**Units**			
1,1,2,2-Tetrachloroethane	µg/L	0.937	0.325 J	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	0.384	0.197 J	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	1.32	0.779 J	0.498 J
Vinyl chloride	µg/L	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-243

Analyte	Sample Name / Sample Date	Units	MW-243 7/28/2009	MW-243 10/15/2009	MW-243 3/24/2010	MW-243 6/22/2010	MW-243 9/22/2010	MW-243 1/26/2011	MW-243 3/28/2011
1,1,2,2-Tetrachloroethane		µg/L	90	89.5	26.1	15.6	12.2	4.53	4.87
1,1,2-Trichloroethane		µg/L	3.04	0.806 J	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.315	0.233 J	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	11.4	10.3	3.34	0.796 J	<1	<1	<1
Tetrachloroethene		µg/L	2.77	2.48	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	3.75	3.08	0.33 J	<1	<1	<1	<1
Trichloroethene		µg/L	146	138	16	4.92	1.76	1.89	2.63
Vinyl chloride		µg/L	<1	<1 UJ	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-243

	Sample Name	MW-243	MW-243	MW-243
	Sample Date	9/27/2011	4/17/2012	10/16/2012
Analyte	**Units**			
1,1,2,2-Tetrachloroethane	µg/L	4.42	2.6	2.31
1,1,2-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	1.56	1.95	1.55
Vinyl chloride	µg/L	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL
UJ Undetected, RL is inaccurate or imprecise

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-244

Analyte	Sample Name / Sample Date	Units	MW-244 7/30/2009	MW-244 10/15/2009	MW-244 3/24/2010	MW-244 6/23/2010	MW-244 9/22/2010	MW-244 1/26/2011	MW-244 3/28/2011
1,1,2,2-Tetrachloroethane		µg/L	1620	953	52.7	13.7	2.88	1.48	1.49
1,1,2-Trichloroethane		µg/L	14.5	7.89	0.894 J	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	6.73	<5	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<5	<1	<1	<1	<1	<1
Chloroform		µg/L	1.55	1.26 J	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	53.3	17	1.06	0.549 J	<1	<1	<1
Tetrachloroethene		µg/L	3.17	<5	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	5.4	1.79 J	<1	<1	<1	<1	<1
Trichloroethene		µg/L	346	131	4.56	2.78	0.389 J	0.753 J	0.723 J
Vinyl chloride		µg/L	5.45	6.23	2.37	0.651 J	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-244

	Sample Name	MW-244	MW-244	MW-244
	Sample Date	9/27/2011	4/18/2012	10/17/2012
Analyte	**Units**			
1,1,2,2-Tetrachloroethane	µg/L	2.59	1.28	2.25
1,1,2-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	<0.3	0.161 J	0.246 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	0.389 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	0.624 J	1.84	4.05
Vinyl chloride	µg/L	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-245

Analyte	Sample Name / Sample Date	Units	MW-245 7/28/2009	MW-245 10/16/2009	MW-245 3/24/2010	MW-245 6/22/2010	MW-245 9/22/2010	MW-245 1/25/2011	MW-245 3/28/2011
1,1,2,2-Tetrachloroethane		µg/L	312	383	70.7	27.9	10.7	3.81	2.14
1,1,2-Trichloroethane		µg/L	8.03	3.83	0.823 J	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	2.03	1.85 J	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<2	<1	<1	<1	<1	<1
Chloroform		µg/L	0.438	0.338 J	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	46.1	25.8	1.95	0.55 J	<1	<1	<1
Tetrachloroethene		µg/L	6.38	4.55	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	14.1	5.99	0.41 J	<1	<1	<1	<1
Trichloroethene		µg/L	473	359	21.5	5.46	2.31	1.59	1.26
Vinyl chloride		µg/L	0.503 J	<2	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-245

	Sample Name	MW-245	MW-245	MW-245
	Sample Date	9/27/2011	4/17/2012	10/16/2012
Analyte	**Units**			
1,1,2,2-Tetrachloroethane	µg/L	1.42	0.715	0.615
1,1,2-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	0.824 J	0.554 J	0.643 J
Vinyl chloride	µg/L	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-246

Analyte	Sample Name / Sample Date	Units	MW-246 7/27/2009	MW-246 10/16/2009	MW-246 3/24/2010	MW-246 6/22/2010	MW-246 9/23/2010	MW-246 1/25/2011	MW-246 3/28/2011
1,1,2,2-Tetrachloroethane		µg/L	1140	2290	74.6	24.1	11.1	9.79	10.8
1,1,2-Trichloroethane		µg/L	29.4	57.7	3.28	2.91	0.936 J	1.27	0.689 J
1,1-Dichloroethene		µg/L	36.2	18.2	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<10	<1	<1	<1	<1	<1
Chloroform		µg/L	0.829	<3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	375	401	5.72	1.25	0.359 J	1.52	0.582 J
Tetrachloroethene		µg/L	5.3	5.47 J	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	18.1	24.3	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1000	1800	14.7	3.75	1.17	1.75	1.41
Vinyl chloride		µg/L	19.1	10.3	<1	<1	<1 J	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-246

	Sample Name	MW-246	MW-246	MW-246
	Sample Date	9/27/2011	4/17/2012	10/16/2012
Analyte	**Units**			
1,1,2,2-Tetrachloroethane	µg/L	14.8	9.94	13.1
1,1,2-Trichloroethane	µg/L	0.294 J	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	0.472	0.44 J	<1
Tetrachloroethene	µg/L	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	1.74	1.75	1.59
Vinyl chloride	µg/L	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-247

Analyte	Sample Name / Sample Date	Units	MW-247 7/30/2009	MW-247 10/16/2009	MW-247 3/24/2010	MW-247 6/23/2010	MW-247 9/23/2010	MW-247 1/25/2011	MW-247 3/28/2011
1,1,2,2-Tetrachloroethane		µg/L	27.3	18.6	<0.5	11.4	20.4	44.8	24.7
1,1,2-Trichloroethane		µg/L	1.67	1.09	<1	<1	<1	0.272 J	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	5.85	3.04	0.378 J	<1	<1	<1	<1
Chloroform		µg/L	193	120	0.248 J	3.45	0.229 J	2.39	0.525
cis-1,2-Dichloroethene		µg/L	14.3	15.7	<1	0.421 J	<1	0.826 J	<1
Tetrachloroethene		µg/L	3.81	3.38	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	2.38	2.12	<1	<1	<1	<1	<1
Trichloroethene		µg/L	134	123	0.431 J	2.95	2.21	12.1	7.82
Vinyl chloride		µg/L	<1	<1	<1	<1	<1 J	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-247

	Sample Name	MW-247	MW-247	MW-247
	Sample Date	9/27/2011	4/18/2012	10/17/2012
Analyte	**Units**			
1,1,2,2-Tetrachloroethane	µg/L	5.59	1.09	0.738
1,1,2-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	1.84	0.661	2.17
cis-1,2-Dichloroethene	µg/L	0.847 J	<1	0.42 J
Tetrachloroethene	µg/L	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	2.53	0.864 J	1.7
Vinyl chloride	µg/L	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-248

Analyte	Sample Name / Sample Date	Units	MW-248 7/27/2009	MW-248 10/16/2009	MW-248 3/26/2010	MW-248 6/22/2010	MW-248 9/23/2010	MW-248 1/26/2011	MW-248 3/28/2011
1,1,2,2-Tetrachloroethane		µg/L	<0.5	0.589	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1 J	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-248

	Sample Name	MW-248	MW-248
	Sample Date	9/27/2011	4/18/2012
Analyte	**Units**		
1,1,2,2-Tetrachloroethane	µg/L	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	<1	<1
1,1-Dichloroethene	µg/L	<1	<1
Carbon tetrachloride	µg/L	<1	<1
Chloroform	µg/L	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1
Tetrachloroethene	µg/L	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1
Trichloroethene	µg/L	<1	<1
Vinyl chloride	µg/L	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL

MW-249HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-249

Analyte	Sample Name / Sample Date	Units	MW-249 7/29/2009	MW-249 10/16/2009	MW-249 3/24/2010	MW-249 6/22/2010	MW-249 9/23/2010	MW-249 1/26/2011	MW-249 3/28/2011
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	5.03	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	0.577 J	0.437 J	1.19	1.46
Chloroform		µg/L	<0.3	<0.3	0.427	0.452	0.399	2.23	2.59
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	0.263 J	0.29 J
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	<1	0.703 J	0.693 J	0.519 J	1.88	1.83
Vinyl chloride		µg/L	<1	<1	<1	<1	<1 J	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

MW-249HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-249

	Sample Name	MW-249	MW-249	MW-249
	Sample Date	9/27/2011	4/18/2012	10/17/2012
Analyte	**Units**			
1,1,2,2-Tetrachloroethane	µg/L	0.6	2.27	1.62
1,1,2-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1
Carbon tetrachloride	µg/L	3.47	3.55	2.52
Chloroform	µg/L	19.9	20.3	13
cis-1,2-Dichloroethene	µg/L	0.892 J	1.15	0.515 J
Tetrachloroethene	µg/L	0.51 J	1.02	0.744 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	12.4	14.9	8.7
Vinyl chloride	µg/L	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-250

Analyte	Sample Name / Sample Date	Units	MW-250 7/29/2009	MW-250 10/16/2009	MW-250 3/24/2010	MW-250 6/23/2010	MW-250 9/23/2010	MW-250 4/25/2011	MW-250 9/27/2011	MW-250 4/18/2012
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1 J	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

HISTORICAL CVOC RESULTS - DUNN FIELD LTM
ANNUAL LONG-TERM MONITORING REPORT - 2012
Defense Depot Memphis, Tennessee

MW-251

Analyte	Sample Name / Sample Date	Units	MW-251 7/29/2009	MW-251 10/16/2009	MW-251 3/24/2010	MW-251 6/23/2010	MW-251 9/22/2010	MW-251 4/25/2011	MW-251 9/26/2011	MW-251 4/18/2012
1,1,2,2-Tetrachloroethane		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	3.33	3.8	3.15	2.9	3.77	3.56	4.12	4.05
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.313	0.311	0.197 J	0.254 J	0.306	0.276 J	0.322	0.328
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	0.572 J	0.697 J	0.644 J	0.621 J	0.699 J	0.716 J	0.626 J	0.613 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.707 J	0.396 J	0.34 J	0.256 J	0.366 J	0.335 J	<1	0.253 J
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1

Notes:
-- not analyzed
µg/L micrograms per liter
RL reporting limit

DQE Flags:
< Not detected at sample RL
J Estimated based on QC data or reported below RL

APPENDIX I

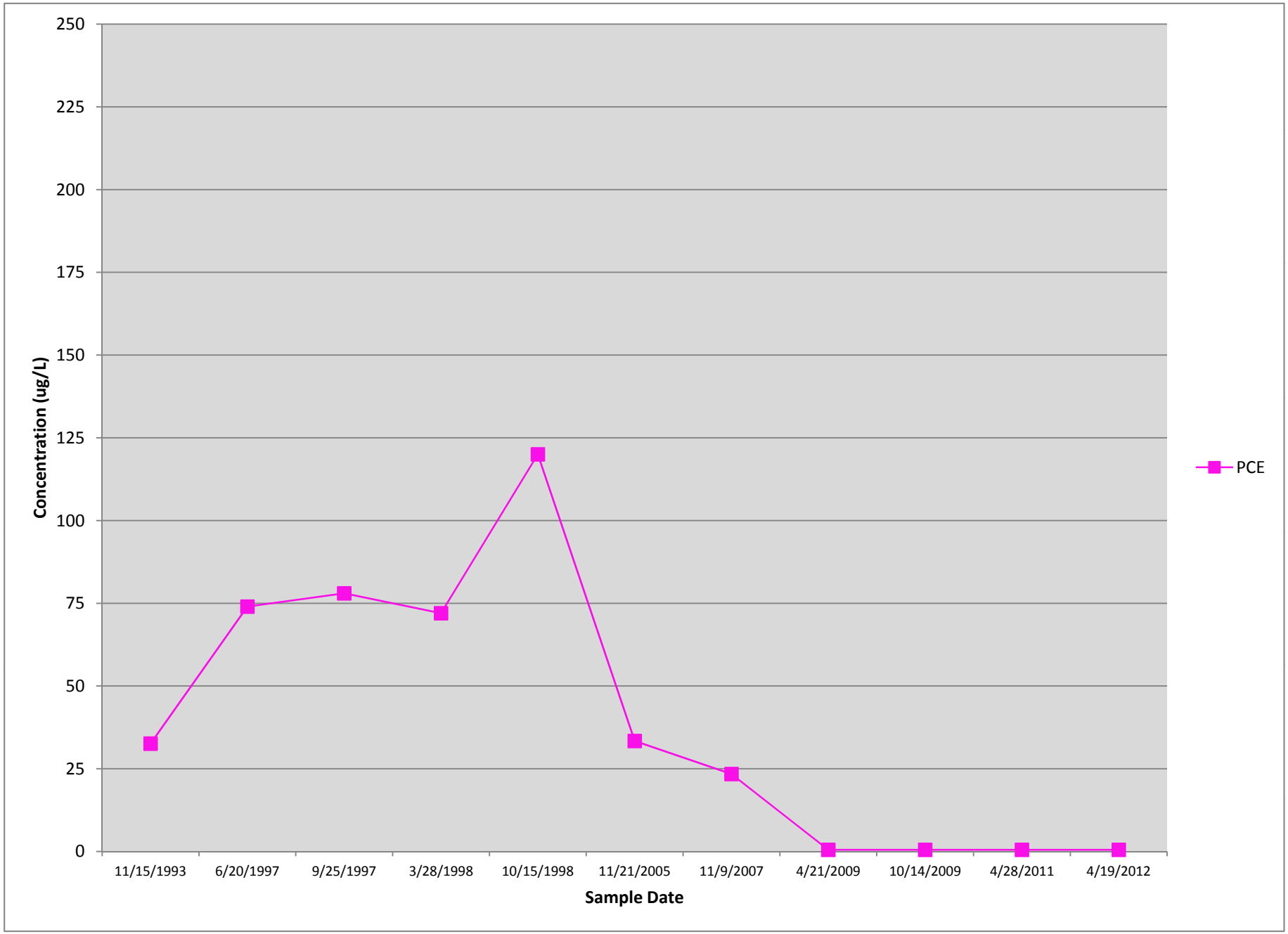
CVOC TIME-TREND PLOTS – DUNN FIELD

APPENDIX I-1

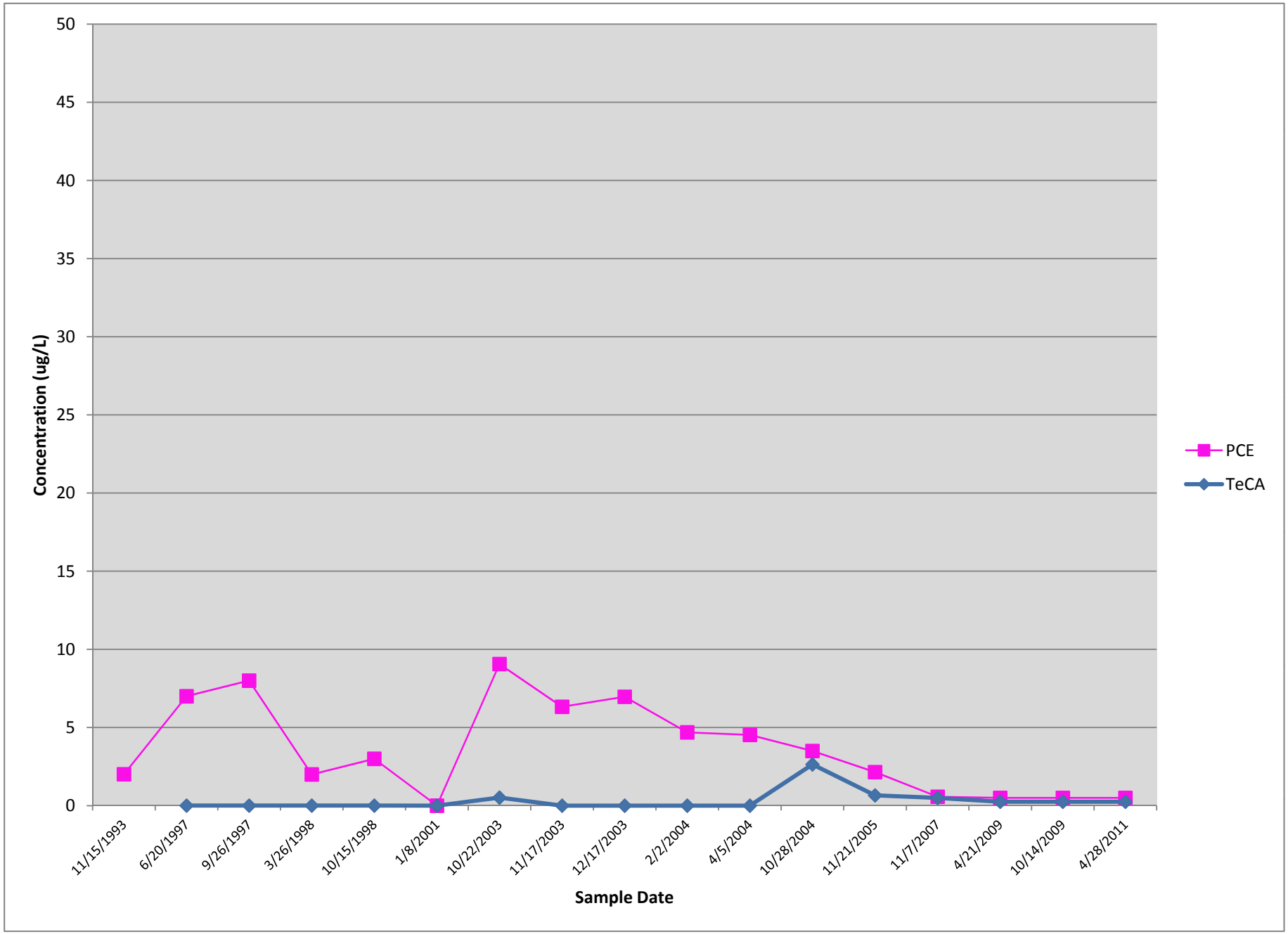
CVOC TIME-TREND PLOTS – DUNN FIELD

BACKGROUND WELLS

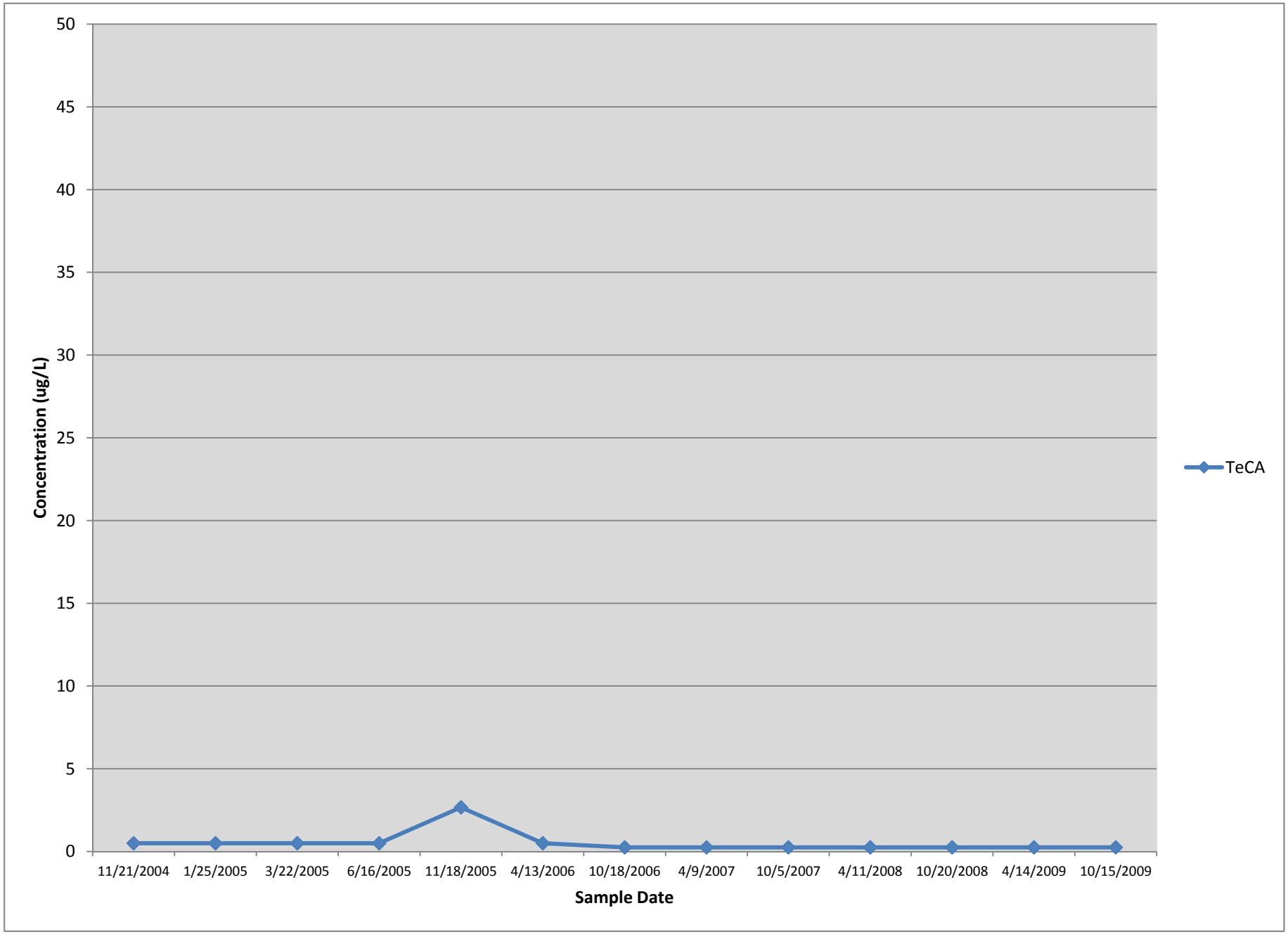
MW-04


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
11/15/1993
6/20/1997
9/25/1997
3/28/1998
10/15/1998
11/21/2005
11/9/2007
4/21/2009
10/14/2009
4/28/2011
4/19/2012
Sample Date
PCE

MW-13


50
45
40
35
30
25
20
15
10
5
0
Concentration (ug/L)
11/15/1993
6/20/1997
9/26/1997
3/26/1998
10/15/1998
1/8/2001
10/22/2003
11/17/2003
12/17/2003
2/2/2004
4/5/2004
10/28/2004
11/21/2005
11/7/2007
4/21/2009
10/14/2009
4/28/2011
Sample Date
PCE
TeCA

MW-167

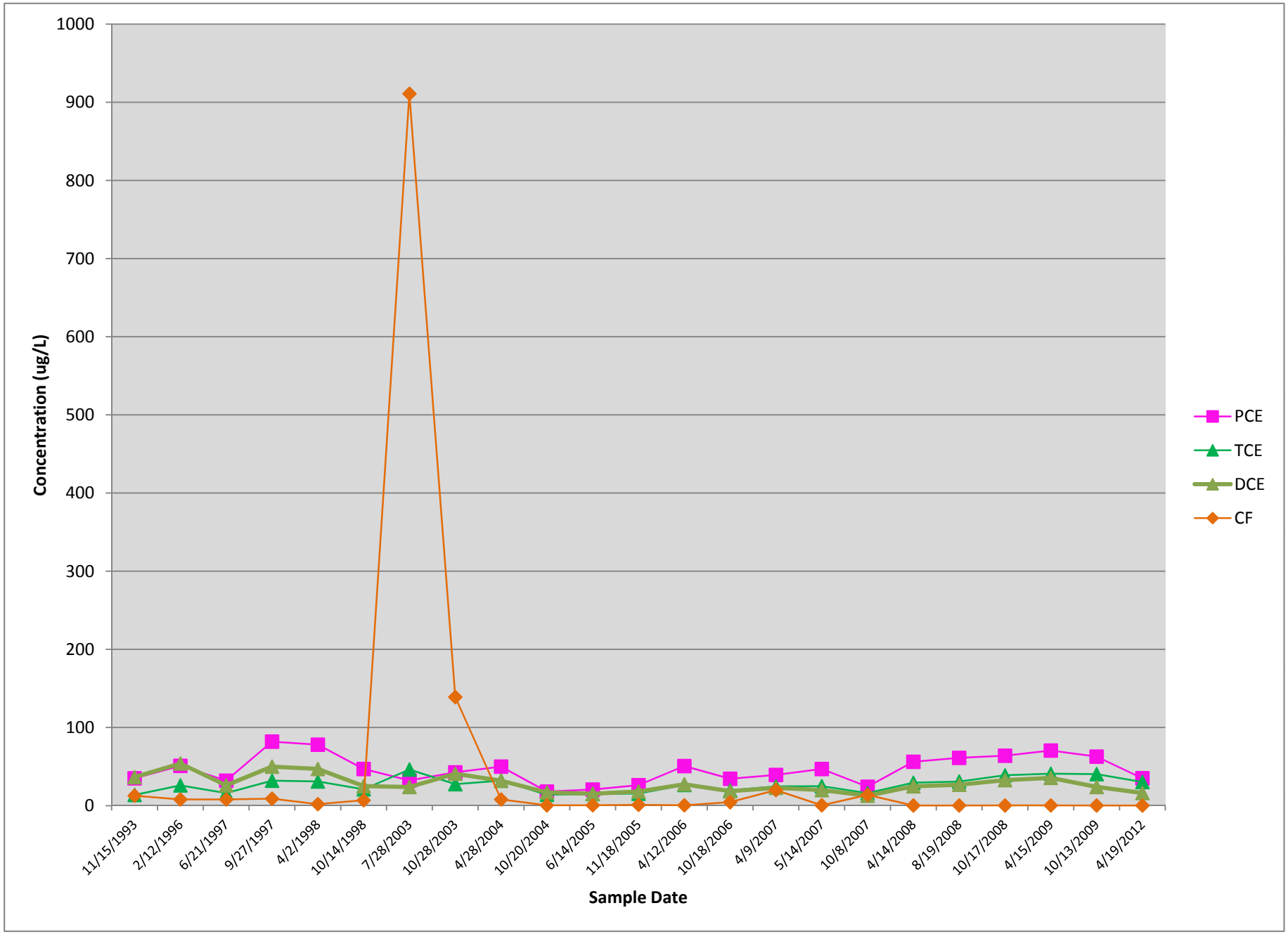

50
45
40
35
30
25
20
15
10
5
0
Concentration (ug/L)
11/21/2004
1/25/2005
3/22/2005
6/16/2005
11/18/2005
4/13/2006
10/18/2006
4/9/2007
10/5/2007
4/11/2008
10/20/2008
4/14/2009
10/15/2009
Sample Date
TeCA

APPENDIX I-2

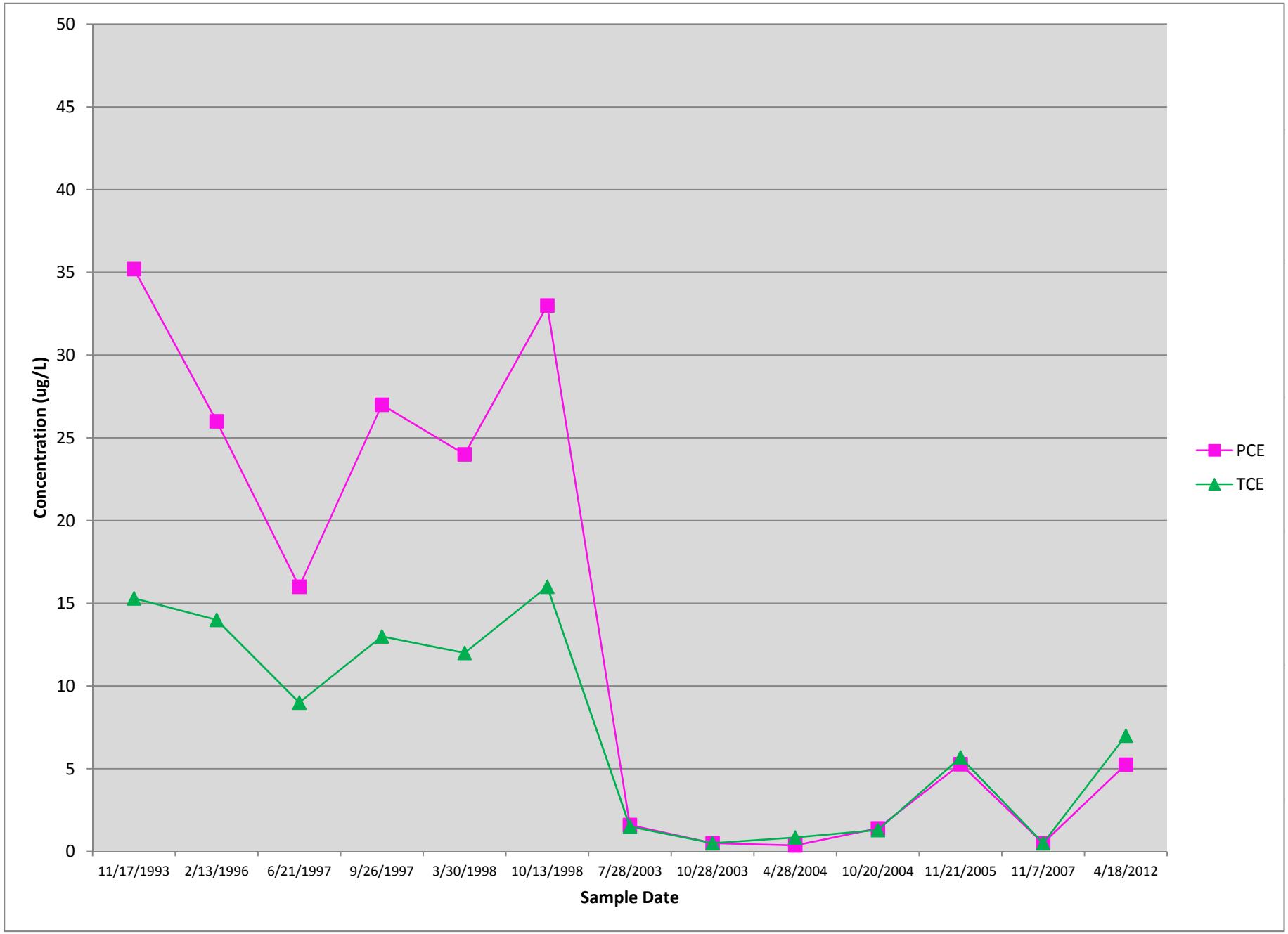
CVOC TIME-TREND PLOTS – DUNN FIELD

BACKGROUND-NE WELLS

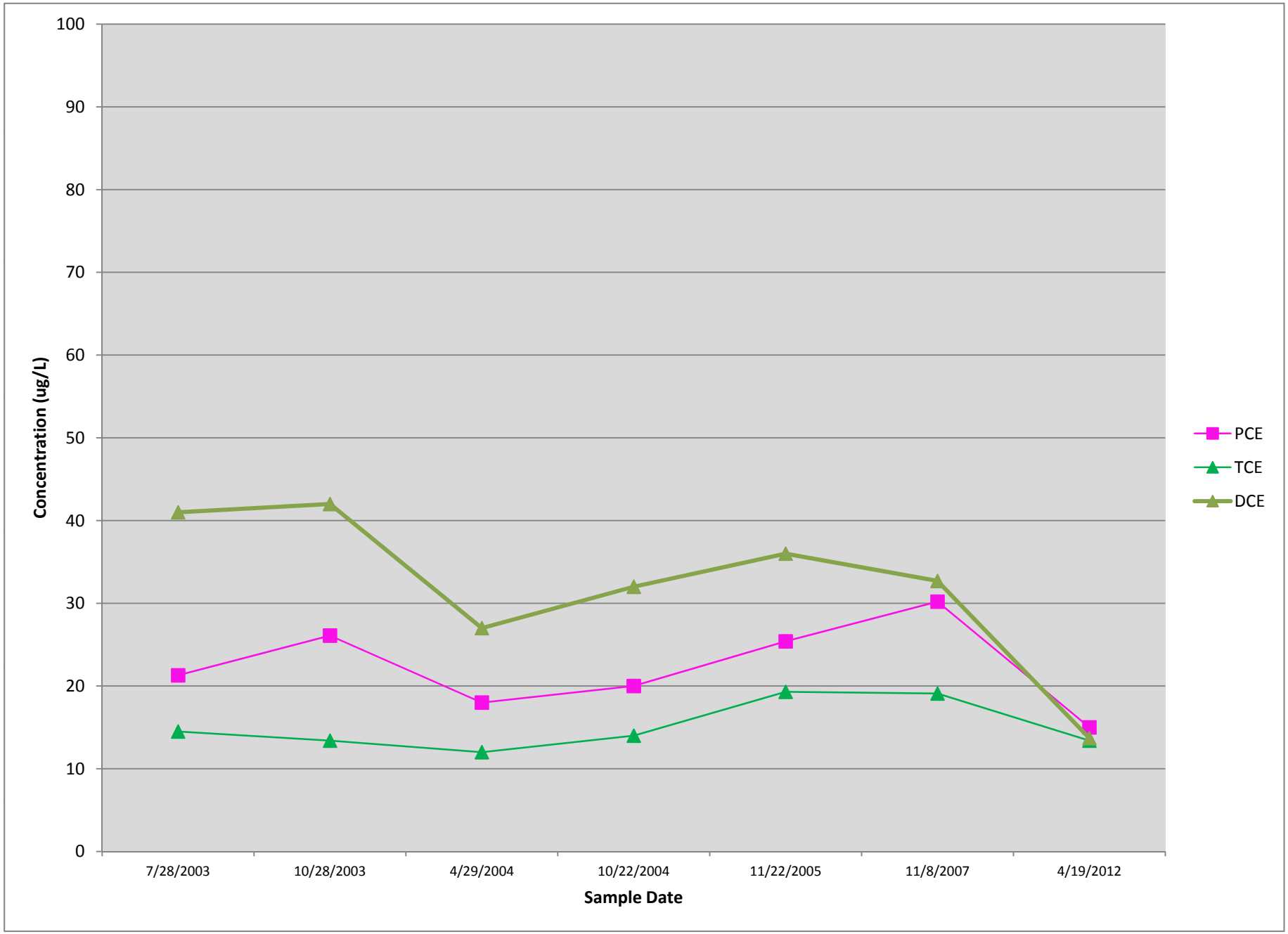
MW-07


1000
900
800
700
600
500
400
300
200
100
0
Concentration (ug/L)
11/15/1993
2/12/1996
6/21/1997
9/27/1997
4/2/1998
10/14/1998
7/28/2003
10/28/2003
4/28/2004
10/20/2004
6/14/2005
11/18/2005
4/12/2006
10/18/2006
4/9/2007
5/14/2007
10/8/2007
4/14/2008
8/19/2008
10/17/2008
4/15/2009
10/13/2009
4/19/2012
Sample Date
PCE
TCE
DCE
CF

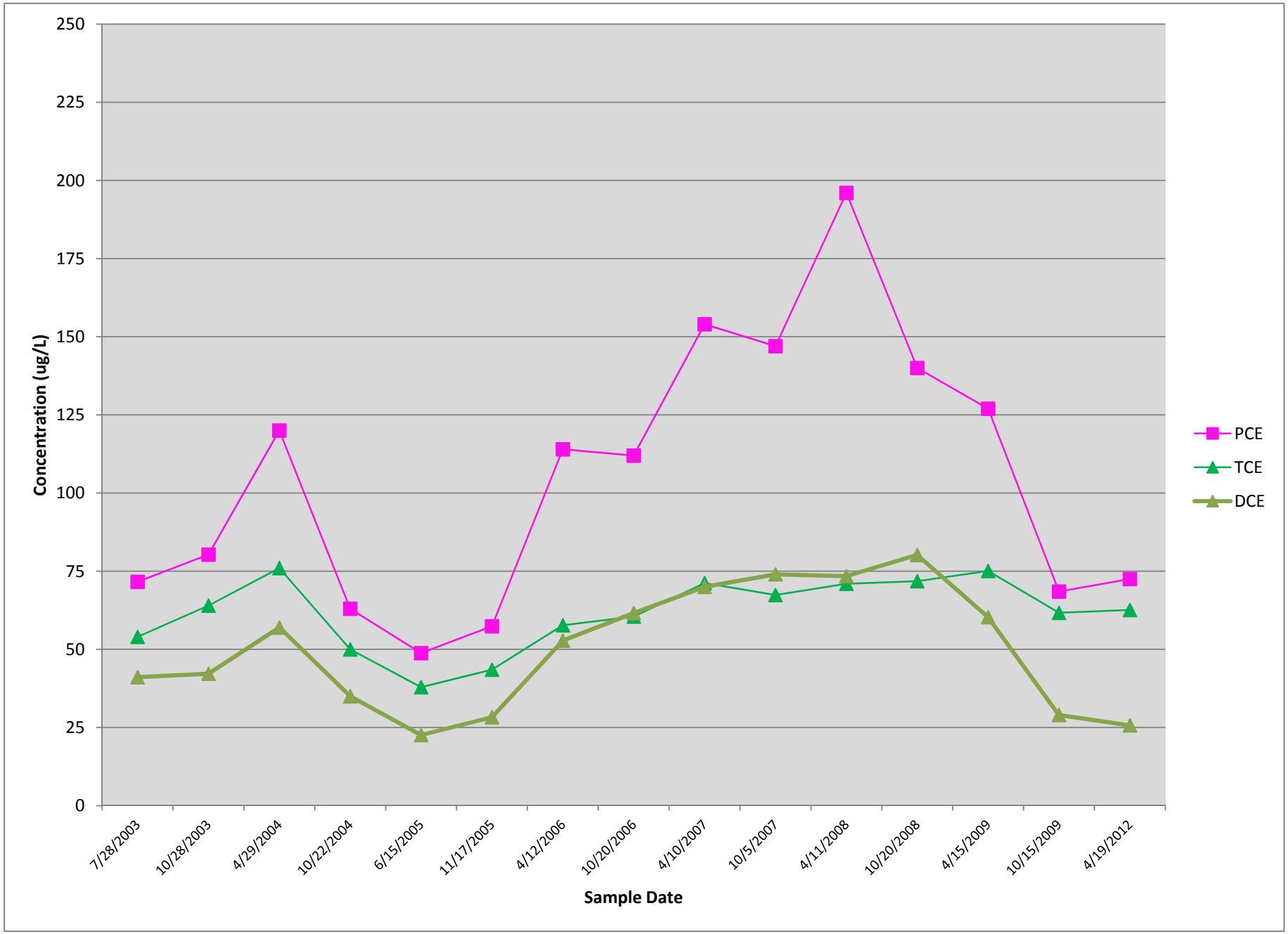
MW-08


50
45
40
35
30
25
20
15
10
5
0
Concentration (ug/L)
11/17/1993
2/13/1996
6/21/1997
9/26/1997
3/30/1998
10/13/1998
7/28/2003
10/28/2003
4/28/2004
10/20/2004
11/21/2005
11/7/2007
4/18/2012
Sample Date
PCE
TCE

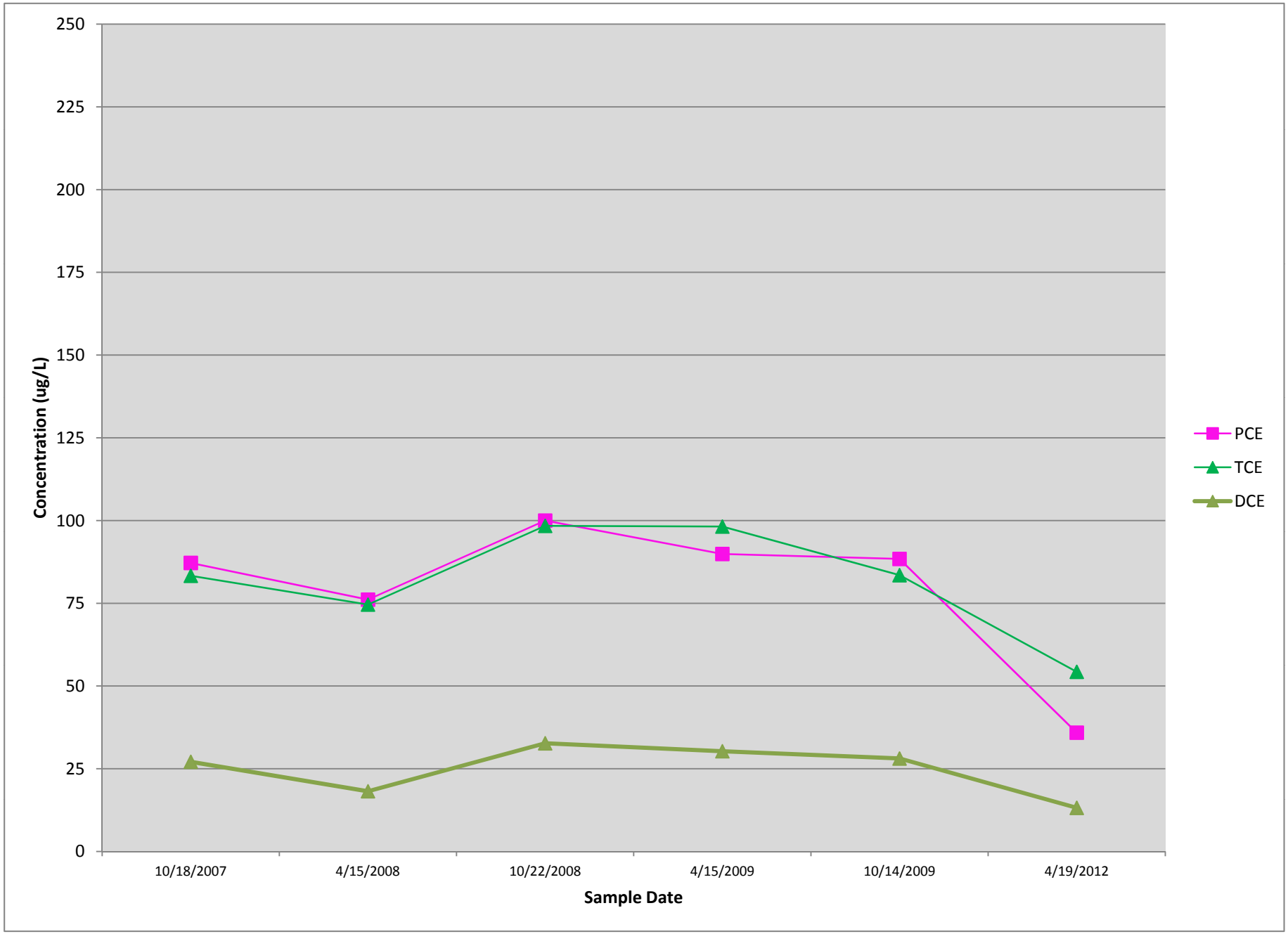
MW-129


100
90
80
70
60
50
40
30
20
10
0
Concentration (ug/L)
7/28/2003
10/28/2003
4/29/2004
10/22/2004
11/22/2005
11/8/2007
4/19/2012
Sample Date
PCE
TCE
DCE

MW-130


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
7/28/2003
10/28/2003
4/29/2004
10/22/2004
6/15/2005
11/17/2005
4/12/2006
10/20/2006
4/10/2007
10/5/2007
4/11/2008
10/20/2008
4/15/2009
10/15/2009
4/19/2012
Sample Date
PCE
TCE
DCE

MW-230

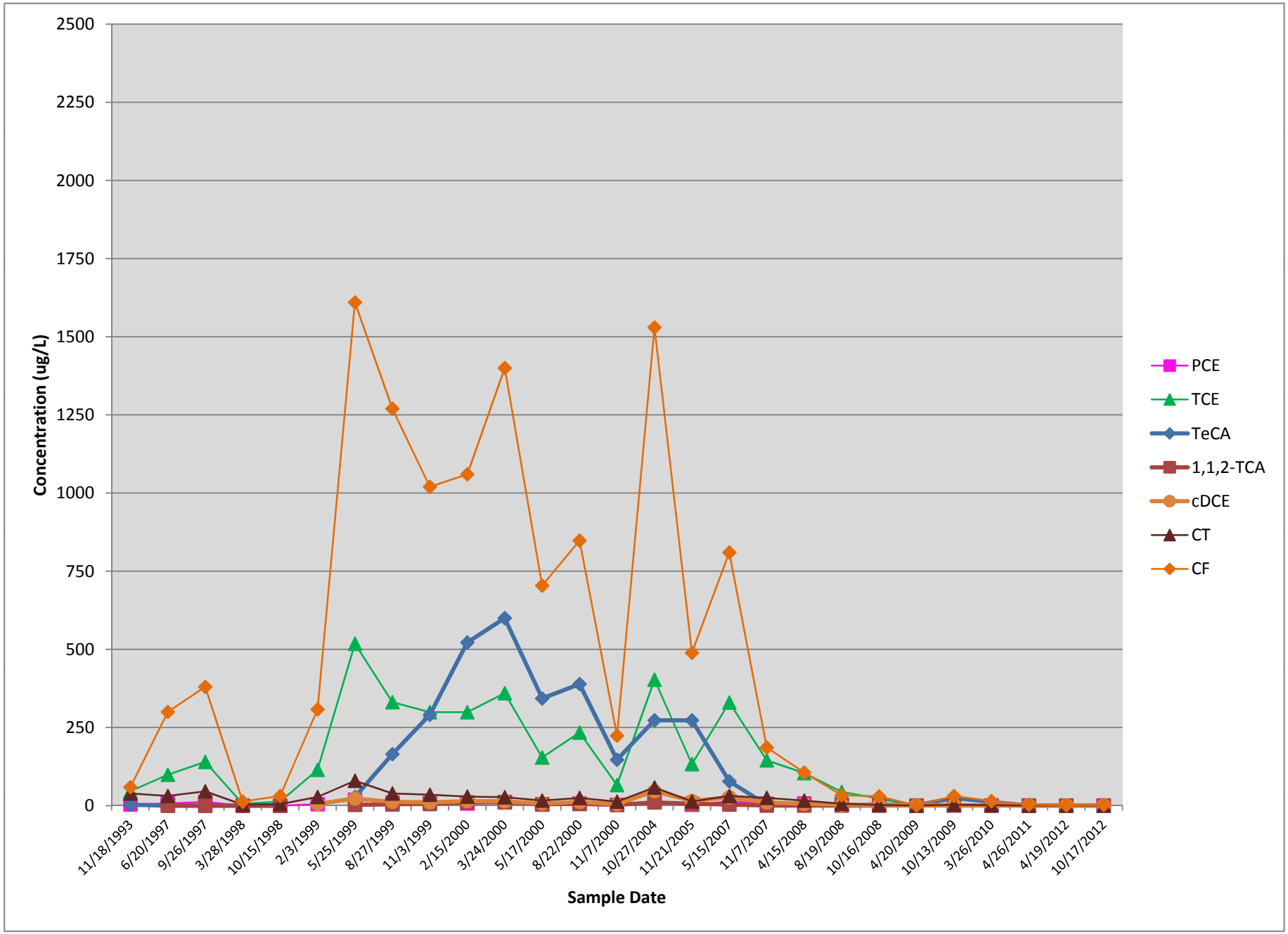

250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
10/18/2007
4/15/2008
10/22/2008
4/15/2009
10/14/2009
4/19/2012
Sample Date
PCE
TCE
DCE

APPENDIX I-3

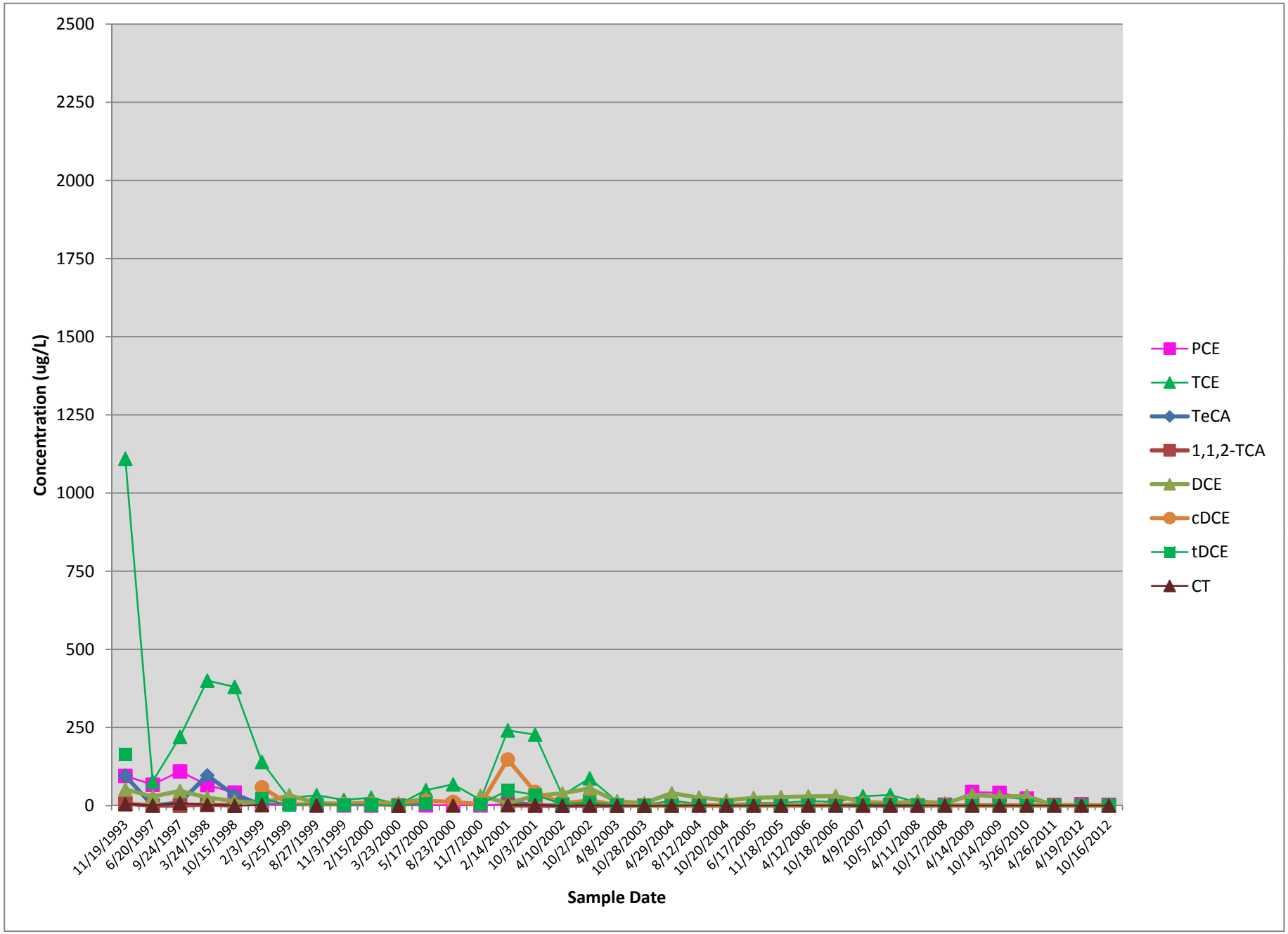
CVOC TIME-TREND PLOTS – DUNN FIELD

PERFORMANCE WELLS

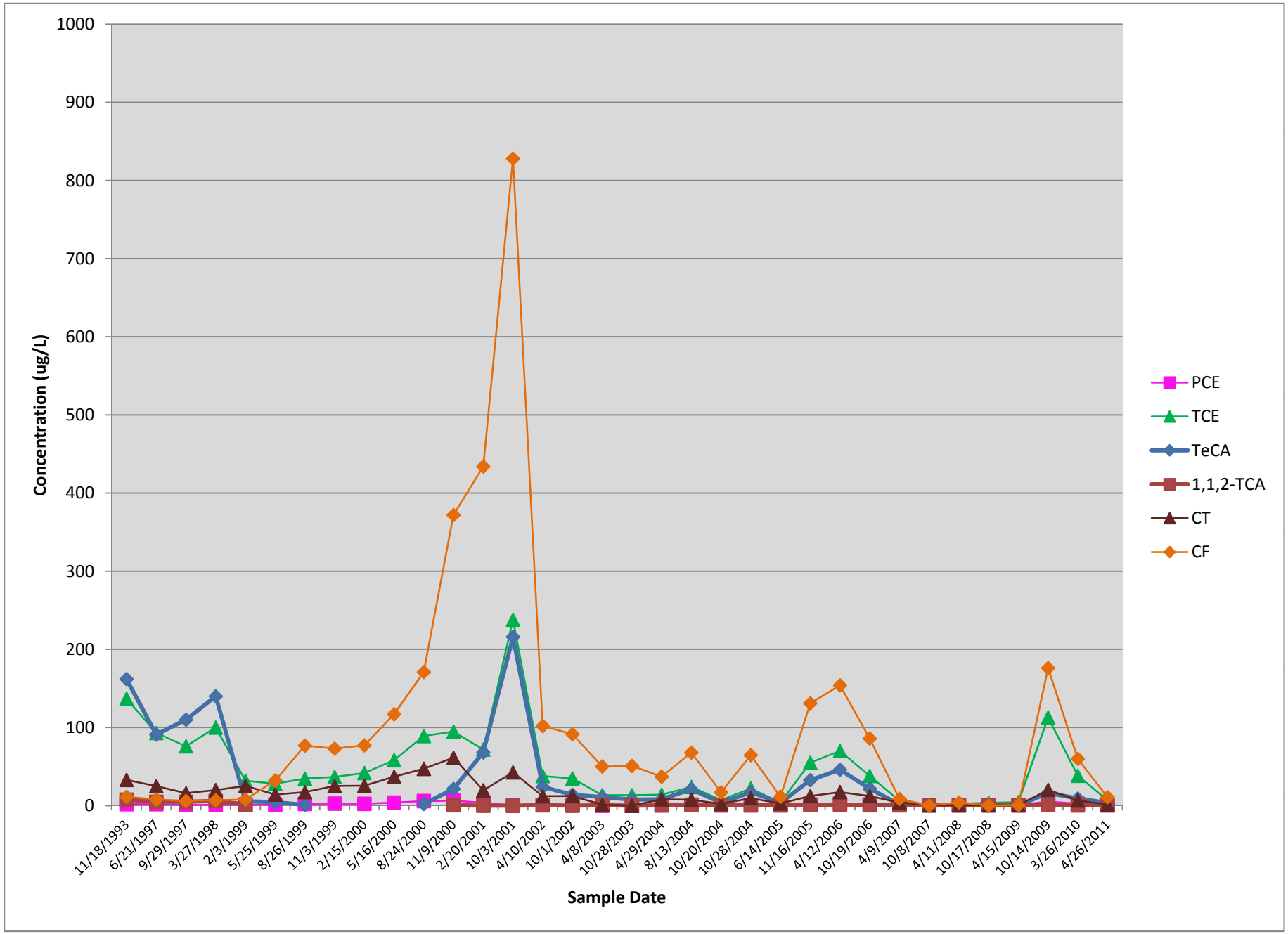
MW-15


2500
2250
2000
1750
1500
1250
1000
750
500
250
0
Concentration (ug/L)
11/18/1993
6/20/1997
9/26/1997
3/28/1998
10/15/1998
2/3/1999
5/25/1999
8/27/1999
11/3/1999
2/15/2000
3/24/2000
5/17/2000
8/22/2000
11/7/2000
10/27/2004
11/21/2005
5/15/2007
11/7/2007
4/15/2008
8/19/2008
10/16/2008
4/20/2009
10/13/2009
3/26/2010
4/26/2011
4/19/2012
10/17/2012
Sample Date
PCE
TCE
TeCA
1,1,2-TCA
cDCE
CT
CF

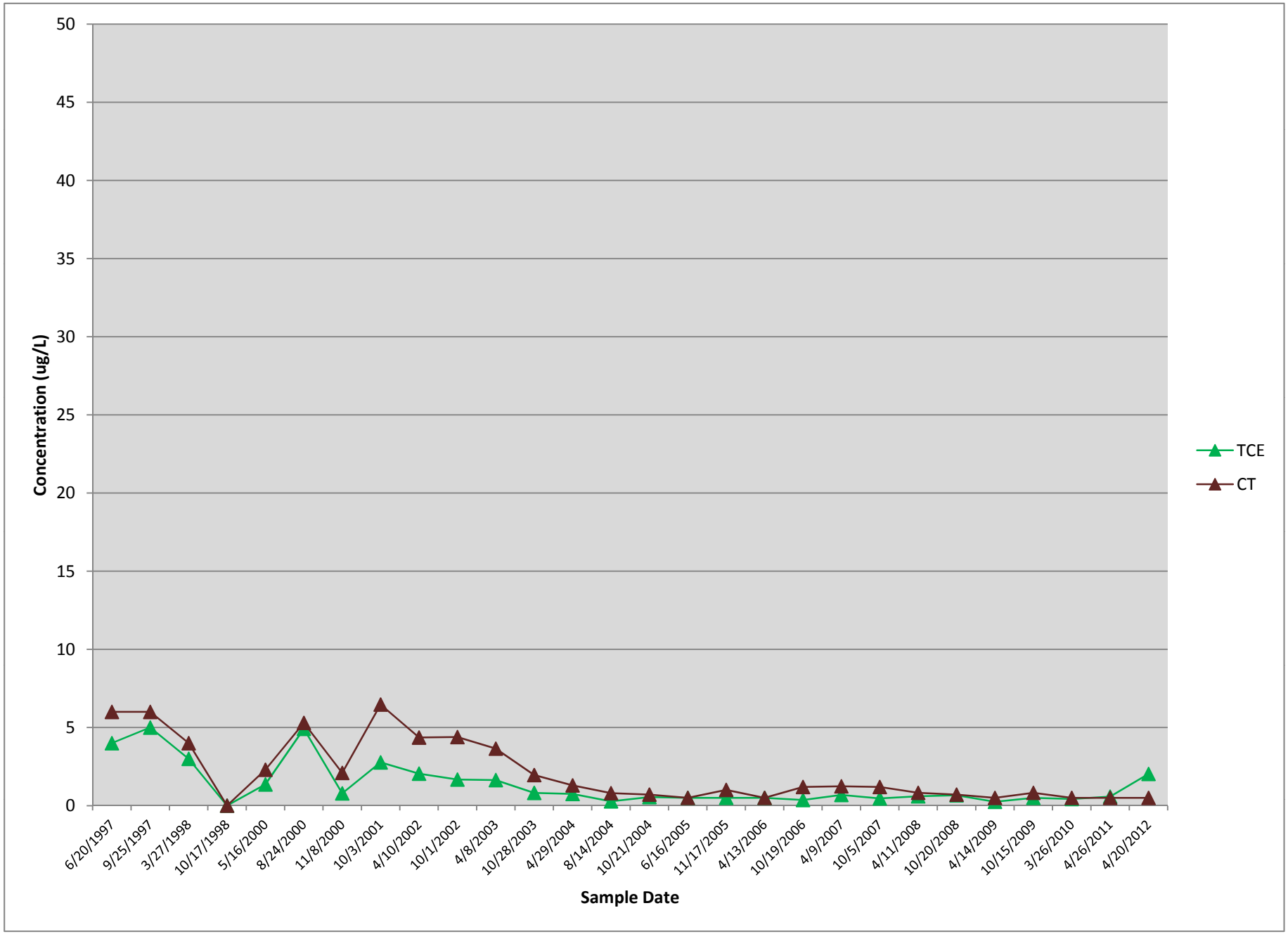
MW-31


2500
2250
2000
1750
1500
1250
1000
750
500
250
0
Concentration (ug/L)
11/19/1993
6/20/1997
9/24/1997
3/24/1998
10/15/1998
2/3/1999
5/25/1999
8/27/1999
11/3/1999
2/15/2000
3/23/2000
5/17/2000
8/23/2000
11/7/2000
2/14/2001
10/3/2001
4/10/2002
10/2/2002
4/8/2003
10/28/2003
4/29/2004
8/12/2004
10/20/2004
6/17/2005
11/18/2005
4/12/2006
10/18/2006
4/9/2007
10/5/2007
4/11/2008
10/17/2008
4/14/2009
10/14/2009
3/26/2010
4/26/2011
4/19/2012
10/16/2012
Sample Date
PCE
TCE
TeCA
1,1,2-TCA
DCE
cDCE
tDCE
CT

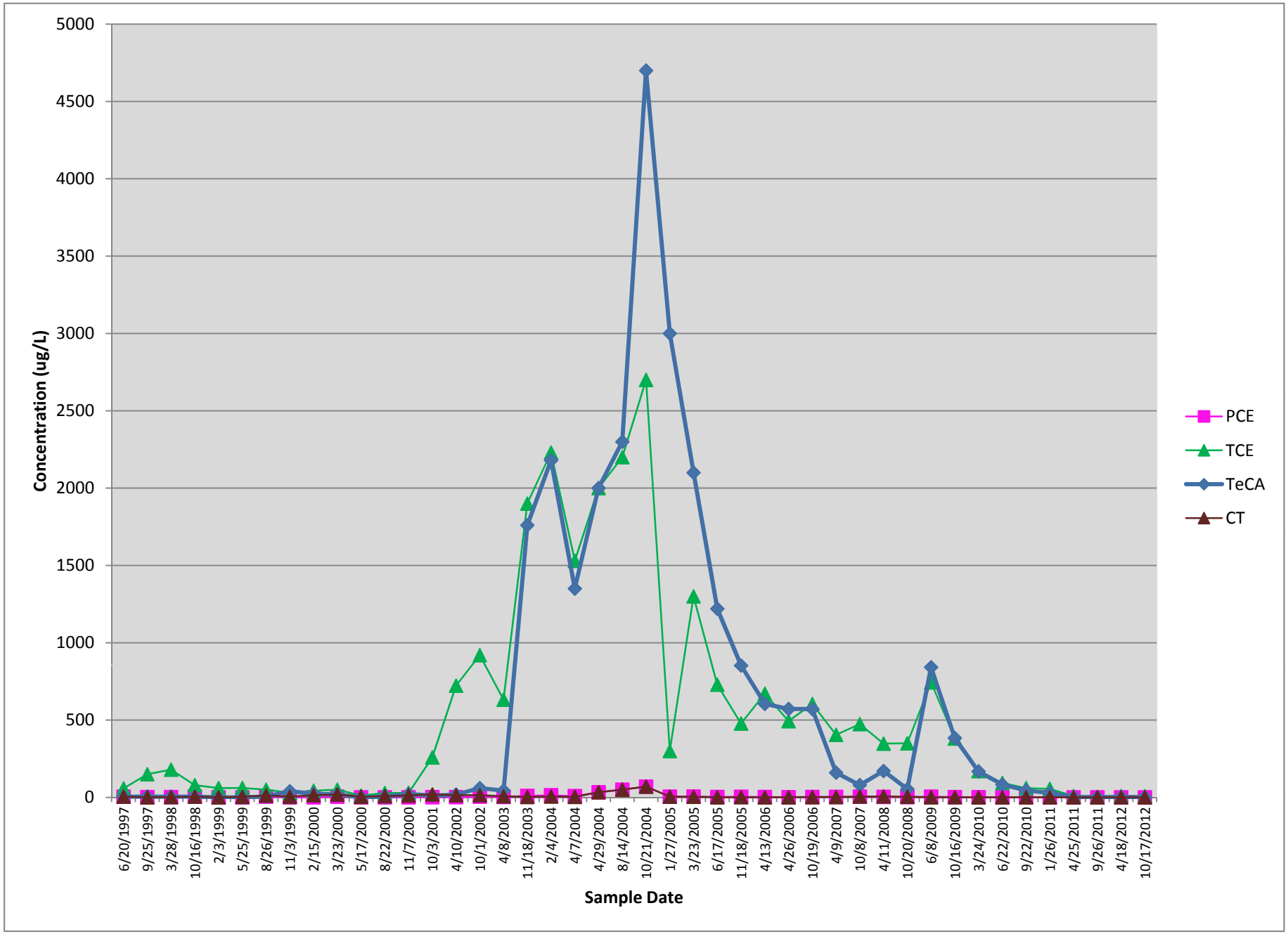
MW-32


1000
900
800
700
600
500
400
300
200
100
0
Concentration (ug/L)
11/18/1993
6/21/1997
9/29/1997
3/27/1998
2/3/1999
5/25/1999
8/26/1999
11/3/1999
2/15/2000
5/16/2000
8/24/2000
11/9/2000
2/20/2001
10/3/2001
4/10/2002
10/1/2002
4/8/2003
10/28/2003
4/29/2004
8/13/2004
10/20/2004
10/28/2004
6/14/2005
11/16/2005
4/12/2006
10/19/2006
4/9/2007
10/8/2007
4/11/2008
10/17/2008
4/15/2009
10/14/2009
3/26/2010
4/26/2011
Sample Date
PCE
TCE
TeCA
1,1,2-TCA
CT
CF

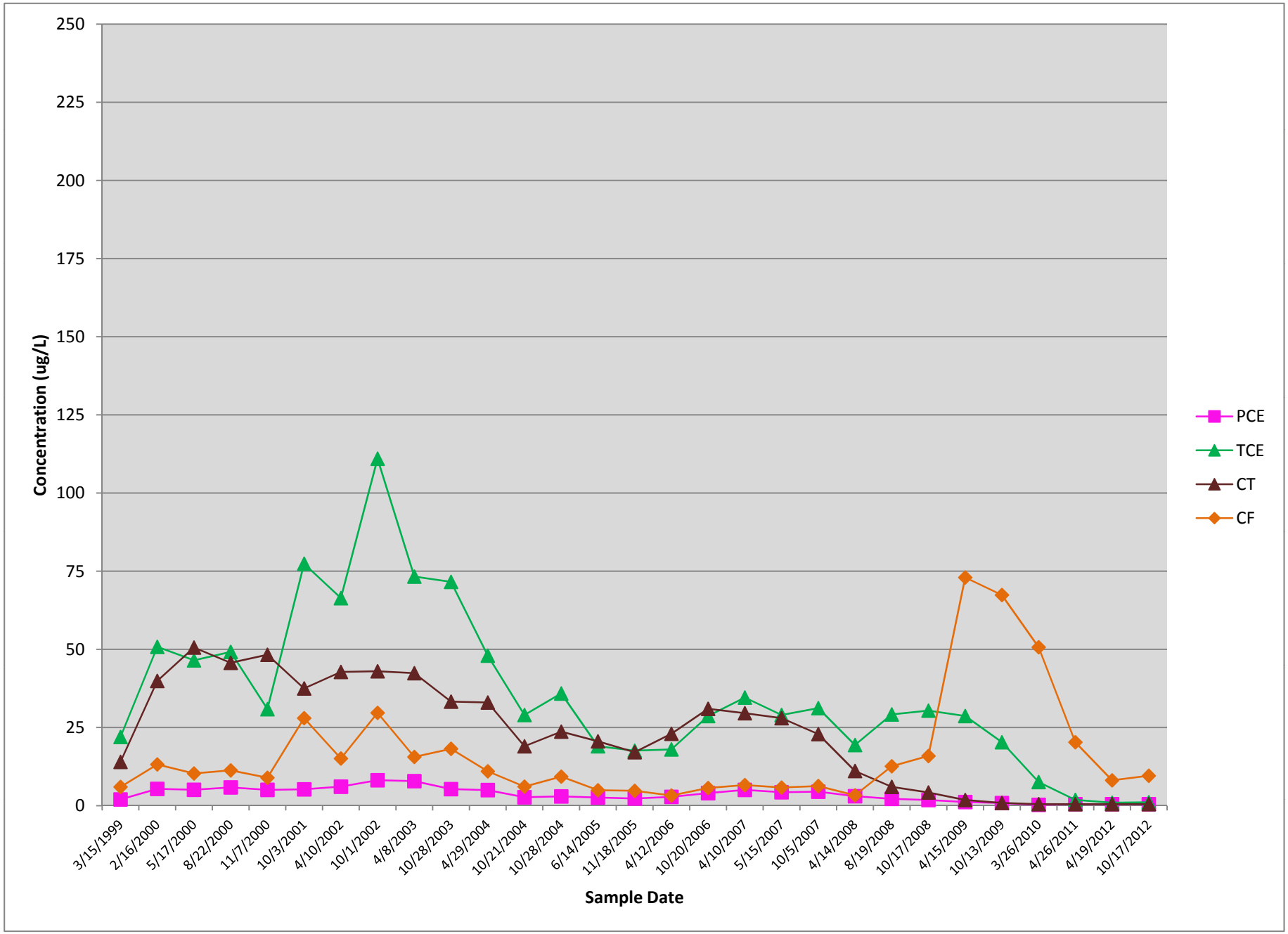
MW-44


50
45
40
35
30
25
20
15
10
5
0
Concentration (ug/L)
6/20/1997
9/25/1997
3/27/1998
10/17/1998
5/16/2000
8/24/2000
11/8/2000
10/3/2001
4/10/2002
10/1/2002
4/8/2003
10/28/2003
4/29/2004
8/14/2004
10/21/2004
6/16/2005
11/17/2005
4/13/2006
10/19/2006
4/9/2007
10/5/2007
4/11/2008
10/20/2008
4/14/2009
10/15/2009
3/26/2010
4/26/2011
4/20/2012
Sample Date
TCE
CT

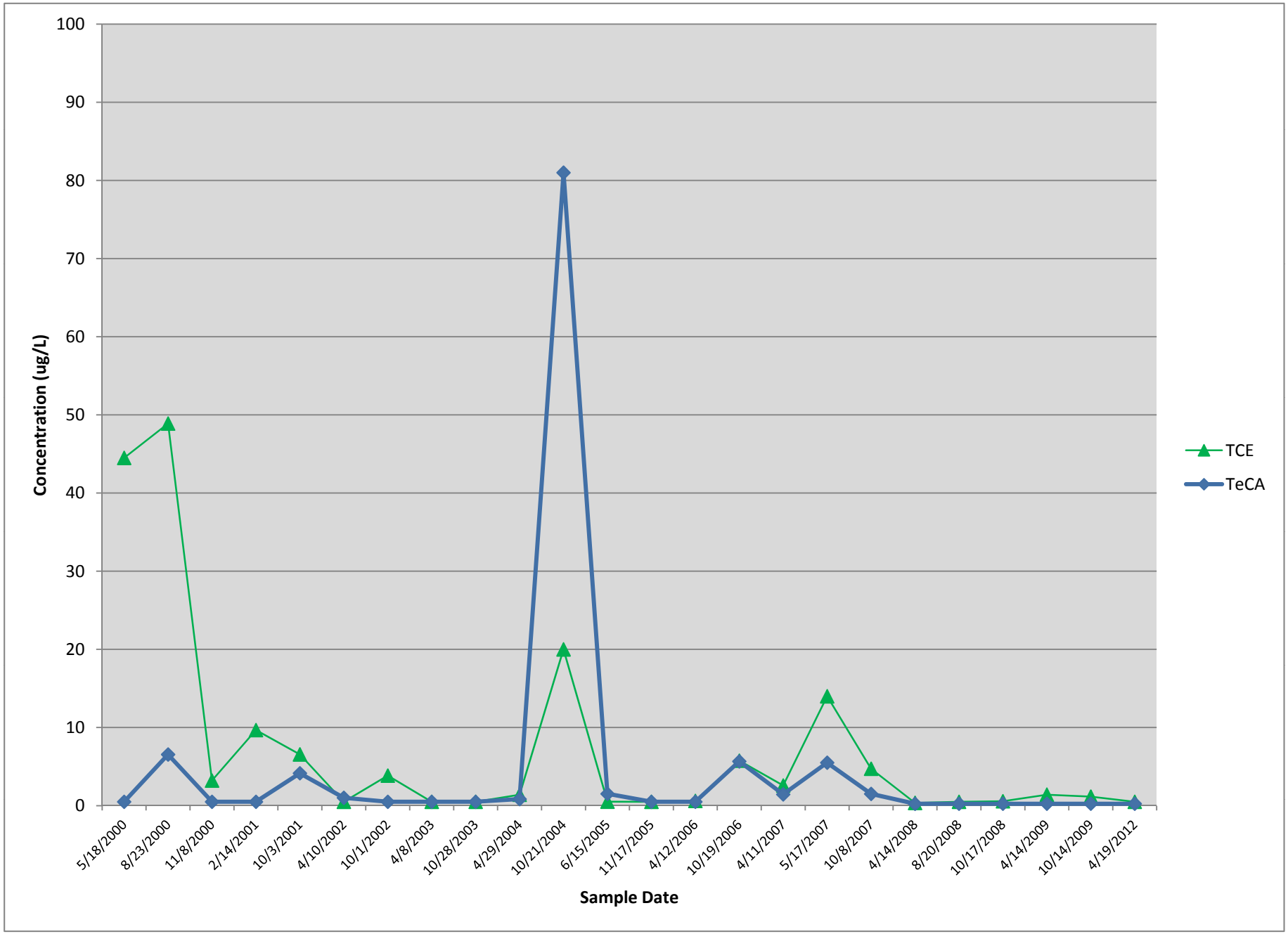
MW-54


5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Concentration (ug/L)
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
4/26/2006
10/19/2006
4/9/2007
10/8/2007
4/11/2008
10/20/2008
6/8/2009
10/16/2009
3/24/2010
6/22/2010
9/22/2010
1/26/2011
4/25/2011
9/26/2011
4/18/2012
10/17/2012
Sample Date
PCE
TCE
TeCA
CT

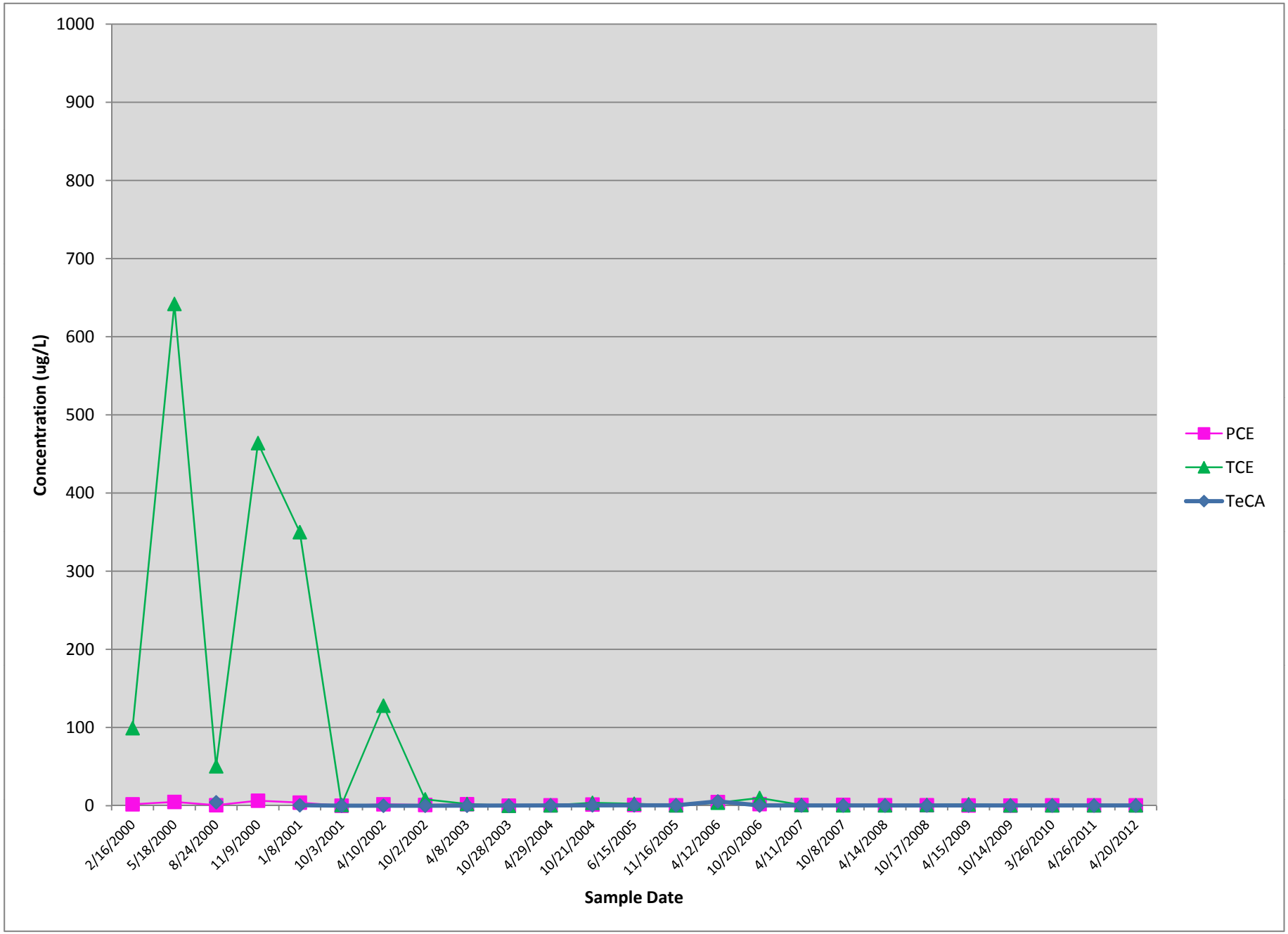
MW-57


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
3/15/1999
2/16/2000
5/17/2000
8/22/2000
11/7/2000
10/3/2001
4/10/2002
10/1/2002
4/8/2003
10/28/2003
4/29/2004
10/21/2004
10/28/2004
6/14/2005
11/18/2005
4/12/2006
10/20/2006
4/10/2007
5/15/2007
10/5/2007
4/14/2008
8/19/2008
10/17/2008
4/15/2009
10/13/2009
3/26/2010
4/26/2011
4/19/2012
10/17/2012
Sample Date
PCE
TCE
CT
CF

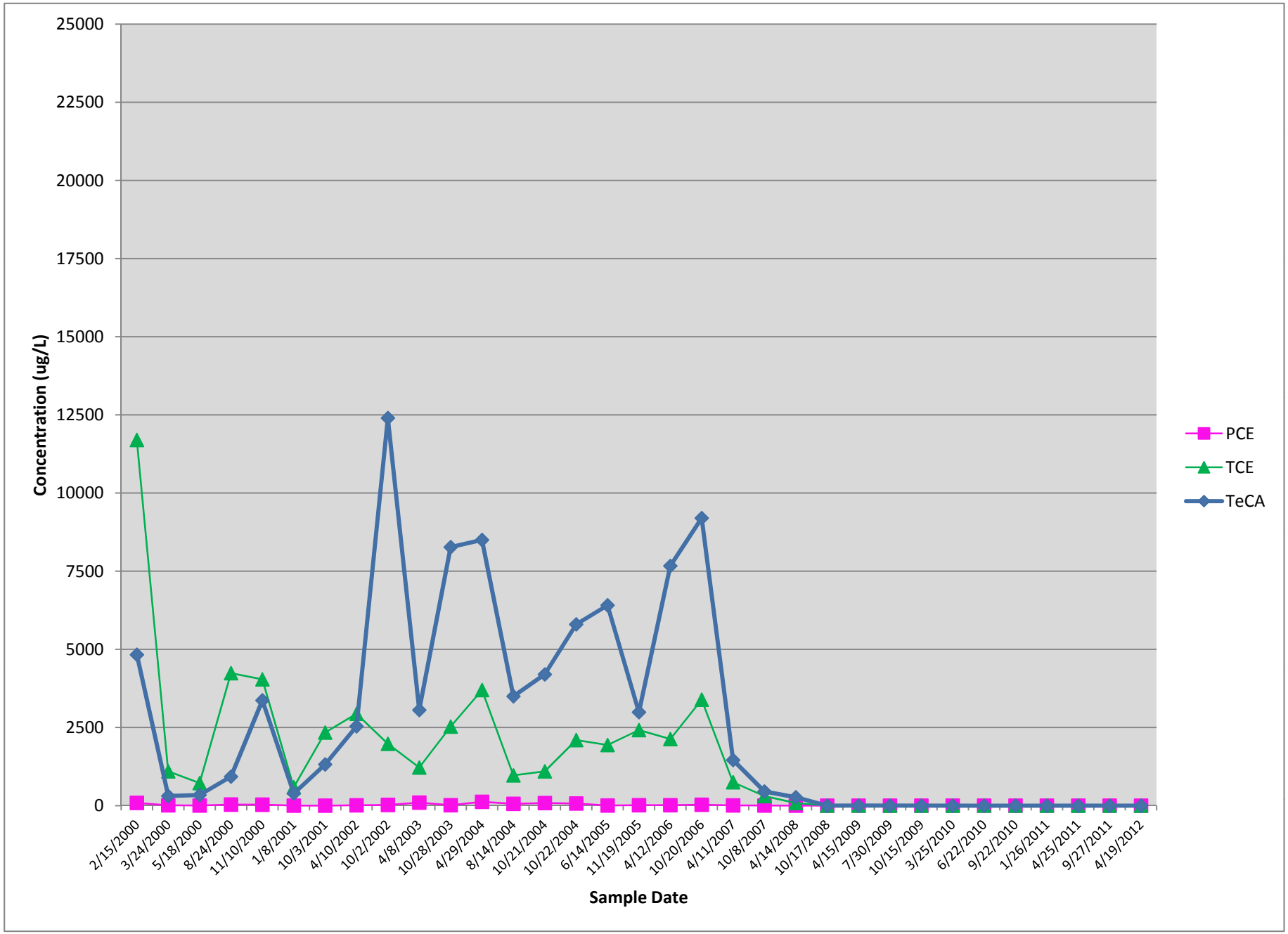
MW-68


100
90
80
70
60
50
40
30
20
10
0
Concentration (ug/L)
5/18/2000
8/23/2000
11/8/2000
2/14/2001
10/3/2001
4/10/2002
10/1/2002
4/8/2003
10/28/2003
4/29/2004
10/21/2004
6/15/2005
11/17/2005
4/12/2006
10/19/2006
4/11/2007
5/17/2007
10/8/2007
4/14/2008
8/20/2008
10/17/2008
4/14/2009
10/14/2009
4/19/2012
Sample Date
TCE
TeCA

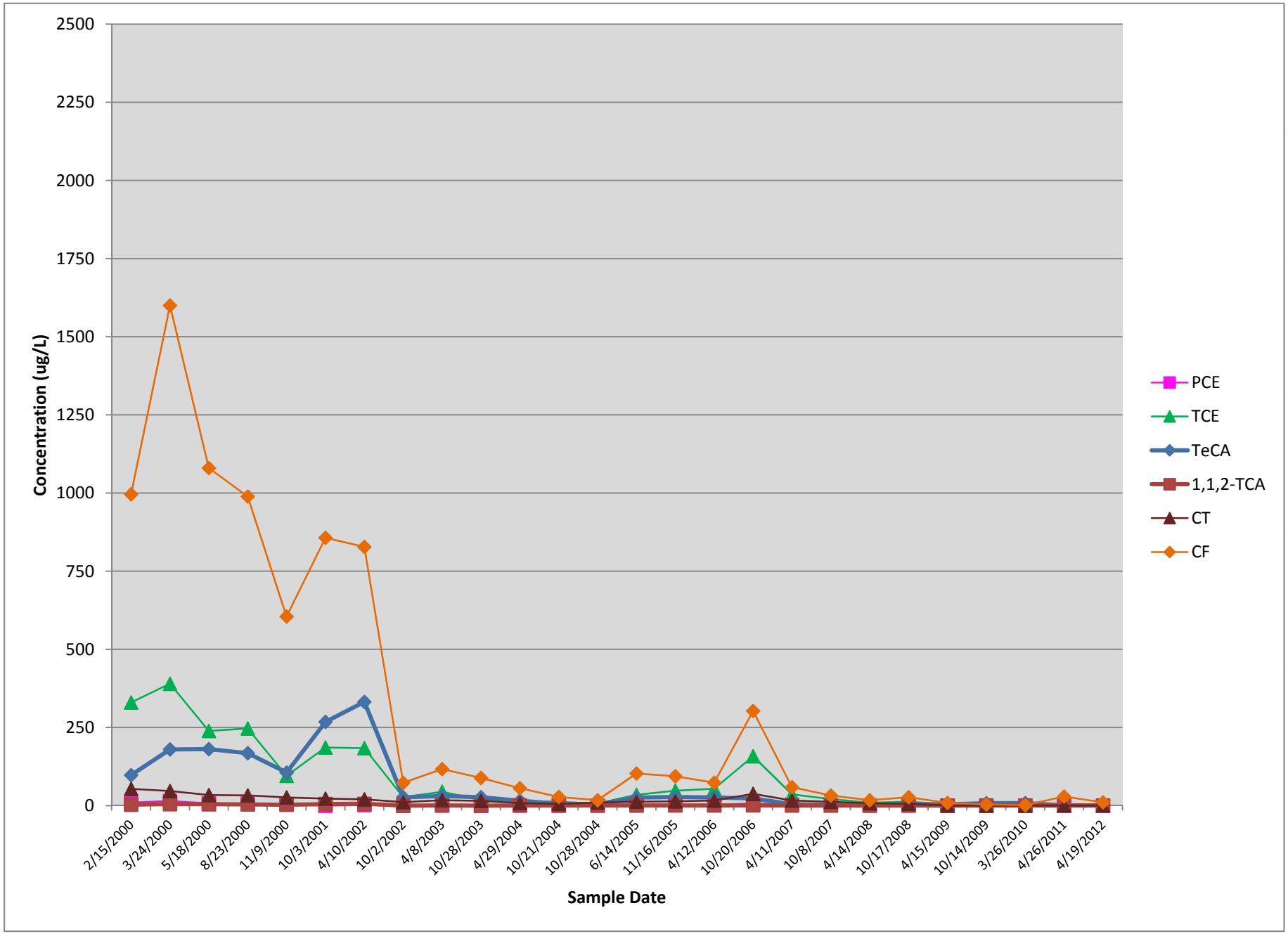
MW-69


1000
900
800
700
600
500
400
300
200
100
0
Concentration (ug/L)
2/16/2000
5/18/2000
8/24/2000
11/9/2000
1/8/2001
10/3/2001
4/10/2002
10/2/2002
4/8/2003
10/28/2003
4/29/2004
10/21/2004
6/15/2005
11/16/2005
4/12/2006
10/20/2006
4/11/2007
10/8/2007
4/14/2008
10/17/2008
4/15/2009
10/14/2009
3/26/2010
4/26/2011
4/20/2012
Sample Date
PCE
TCE
TeCA

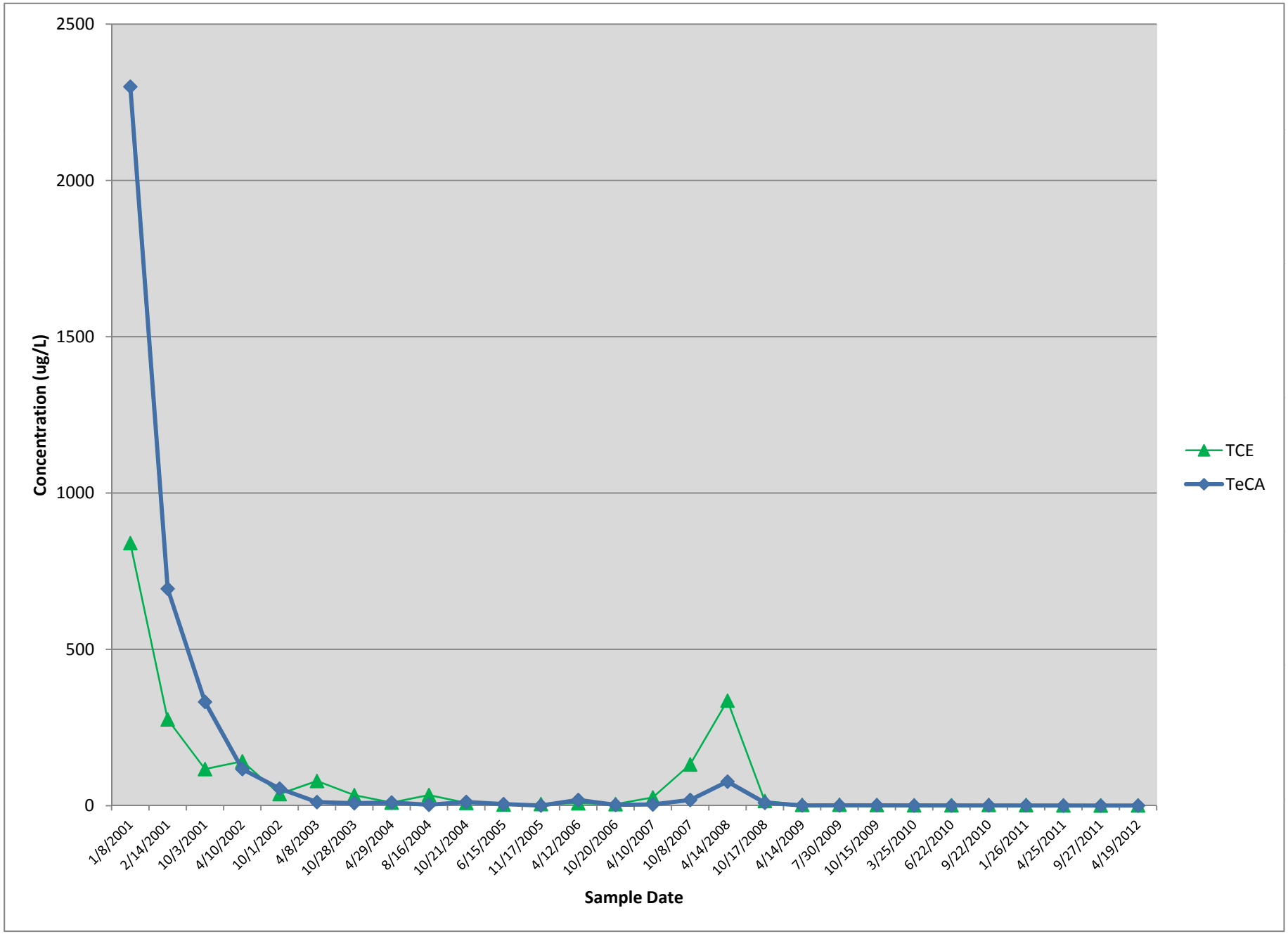
MW-70


25000
22500
20000
17500
15000
12500
10000
7500
5000
2500
0
Concentration (ug/L)
2/15/2000
3/24/2000
5/18/2000
8/24/2000
11/10/2000
1/8/2001
10/3/2001
4/10/2002
10/2/2002
4/8/2003
10/28/2003
4/29/2004
8/14/2004
10/21/2004
10/22/2004
6/14/2005
11/19/2005
4/12/2006
10/20/2006
4/11/2007
10/8/2007
4/14/2008
10/17/2008
4/15/2009
7/30/2009
10/15/2009
3/25/2010
6/22/2010
9/22/2010
1/26/2011
4/25/2011
9/27/2011
4/19/2012
Sample Date
PCE
TCE
TeCA

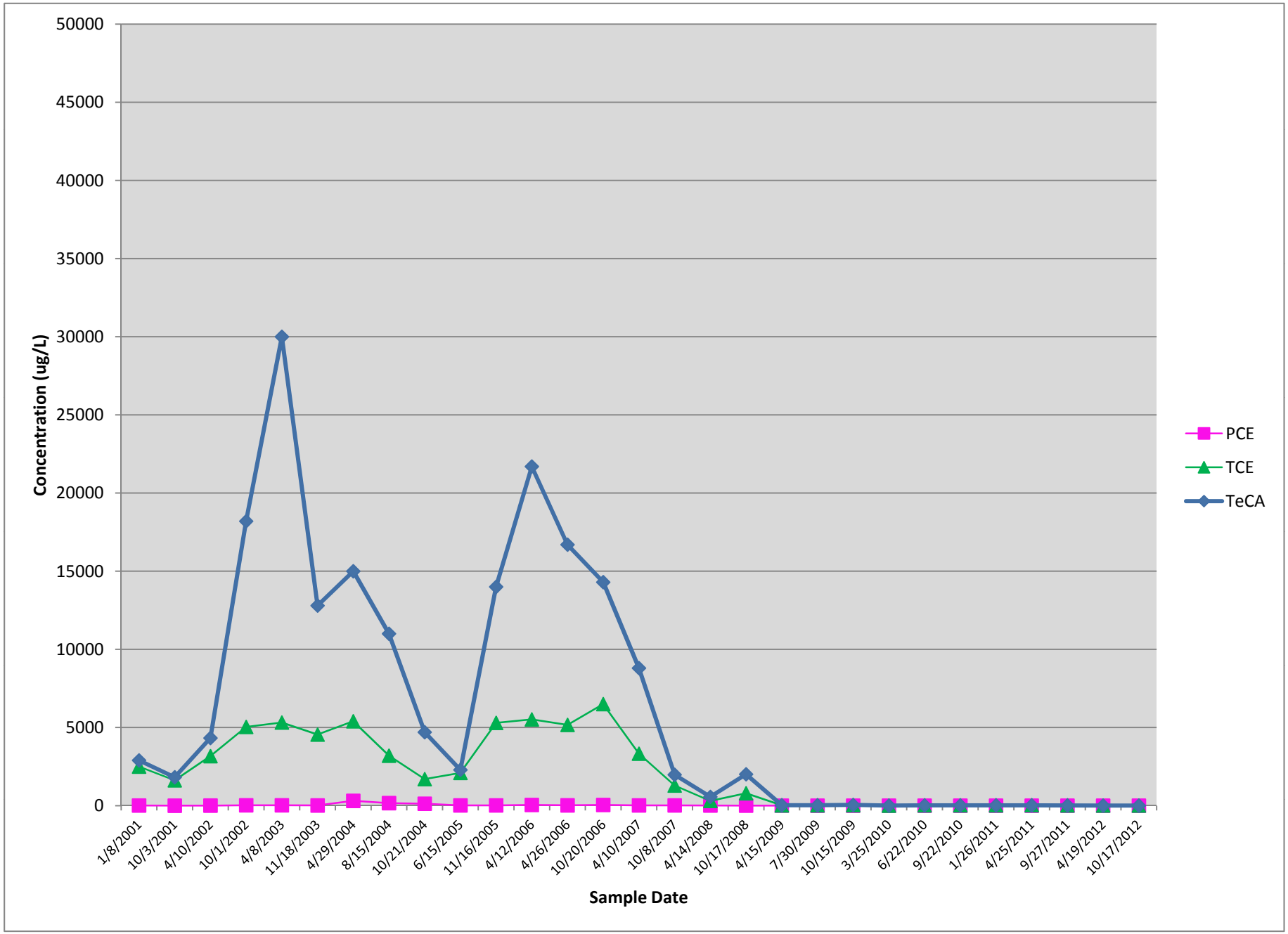
MW-71


2500
2250
2000
1750
1500
1250
1000
750
500
250
0
Concentration (ug/L)
2/15/2000
3/24/2000
5/18/2000
8/23/2000
11/9/2000
10/3/2001
4/10/2002
10/2/2002
4/8/2003
10/28/2003
4/29/2004
10/21/2004
10/28/2004
6/14/2005
11/16/2005
4/12/2006
10/20/2006
4/11/2007
10/8/2007
4/14/2008
10/17/2008
4/15/2009
10/14/2009
3/26/2010
4/26/2011
4/19/2012
Sample Date
PCE
TCE
TeCA
1,1,2-TCA
CT
CF

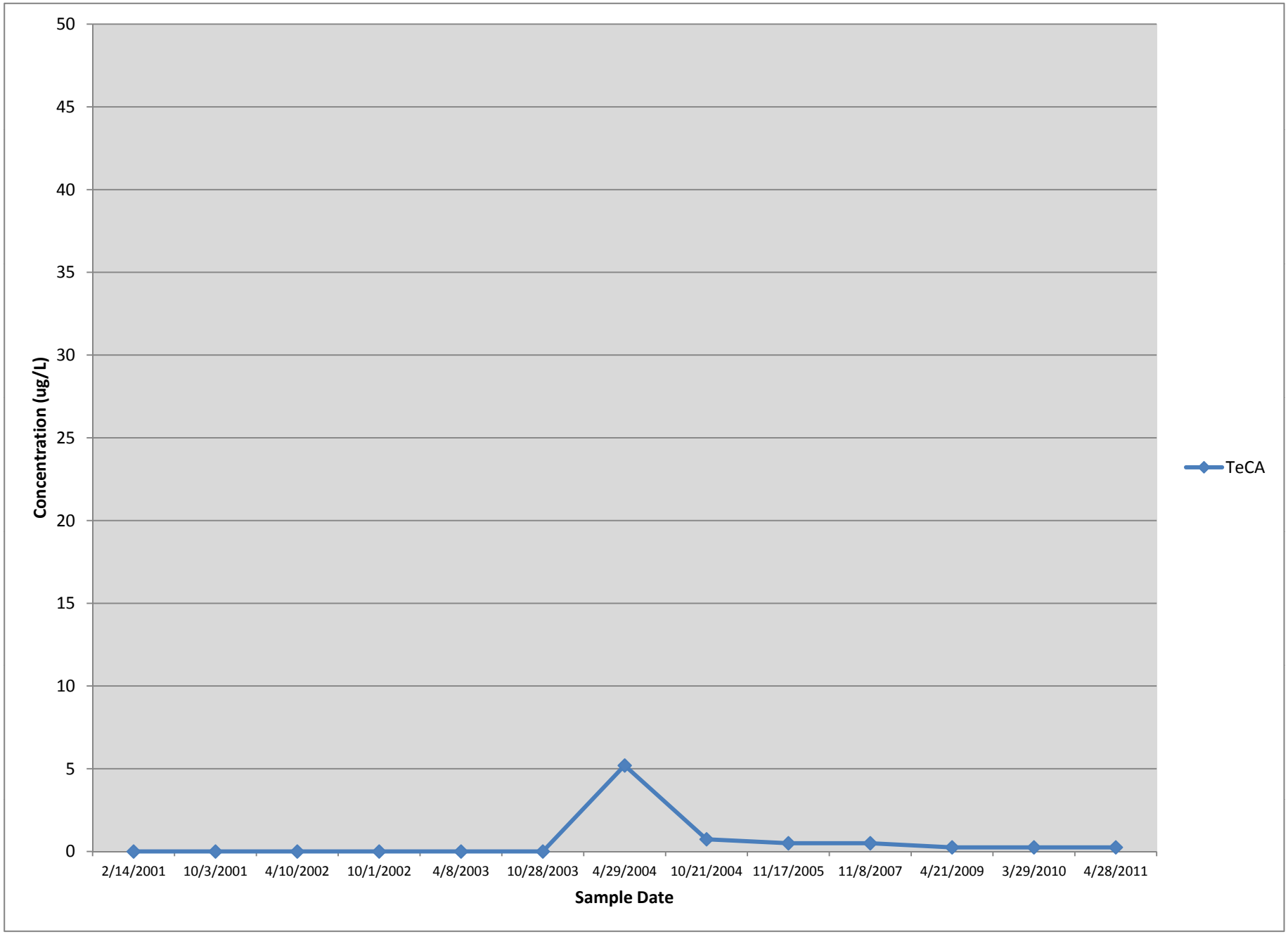
MW-76


2500
2000
1500
1000
500
0
Concentration (ug/L)
1/8/2001
2/14/2001
10/3/2001
4/10/2002
10/1/2002
4/8/2003
10/28/2003
4/29/2004
8/16/2004
10/21/2004
6/15/2005
11/17/2005
4/12/2006
10/20/2006
4/10/2007
10/8/2007
4/14/2008
10/17/2008
4/14/2009
7/30/2009
10/15/2009
3/25/2010
6/22/2010
9/22/2010
1/26/2011
4/25/2011
9/27/2011
4/19/2012
Sample Date
TCE
TeCA

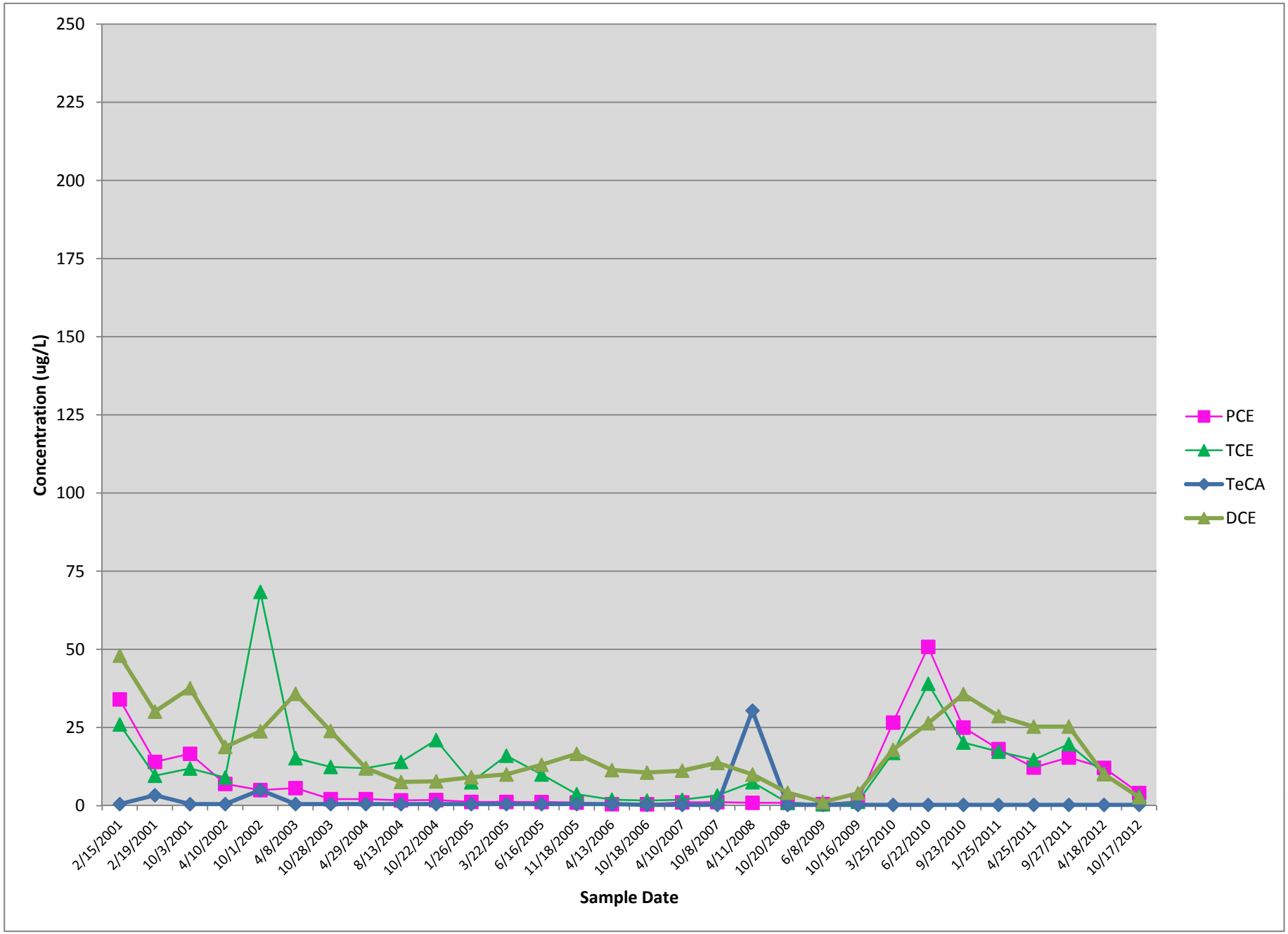
MW-77


50000
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
Concentration (ug/L)
1/8/2001
10/3/2001
4/10/2002
10/1/2002
4/8/2003
11/18/2003
4/29/2004
8/15/2004
10/21/2004
6/15/2005
11/16/2005
4/12/2006
4/26/2006
10/20/2006
4/10/2007
10/8/2007
4/14/2008
10/17/2008
4/15/2009
7/30/2009
10/15/2009
3/25/2010
6/22/2010
9/22/2010
1/26/2011
4/25/2011
9/27/2011
4/19/2012
10/17/2012
Sample Date
PCE
TCE
TeCA

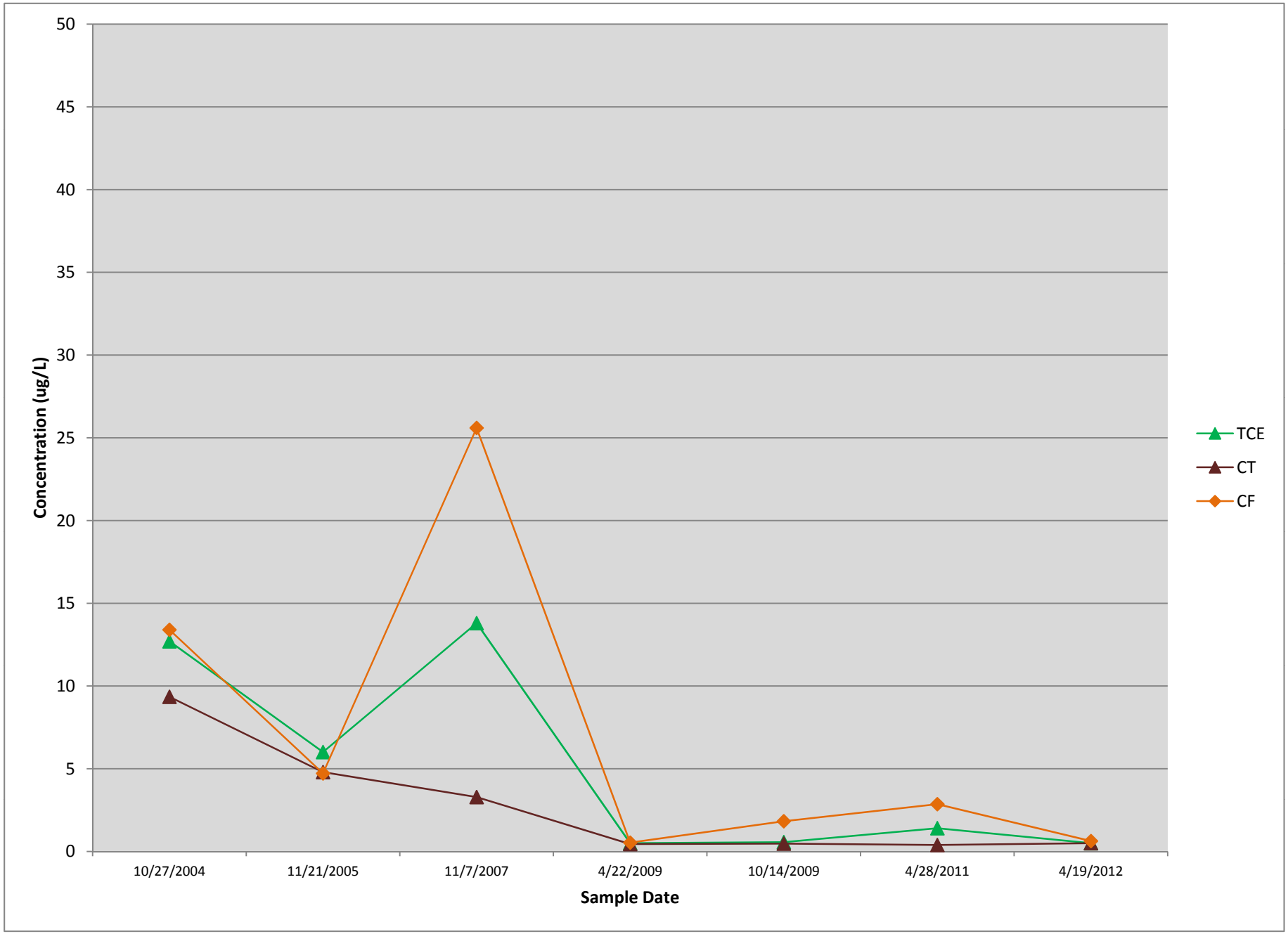
MW-78


50
45
40
35
30
25
20
15
10
5
0
Concentration (ug/L)
2/14/2001
10/3/2001
4/10/2002
10/1/2002
4/8/2003
10/28/2003
4/29/2004
10/21/2004
11/17/2005
11/8/2007
4/21/2009
3/29/2010
4/28/2011
Sample Date
TeCA

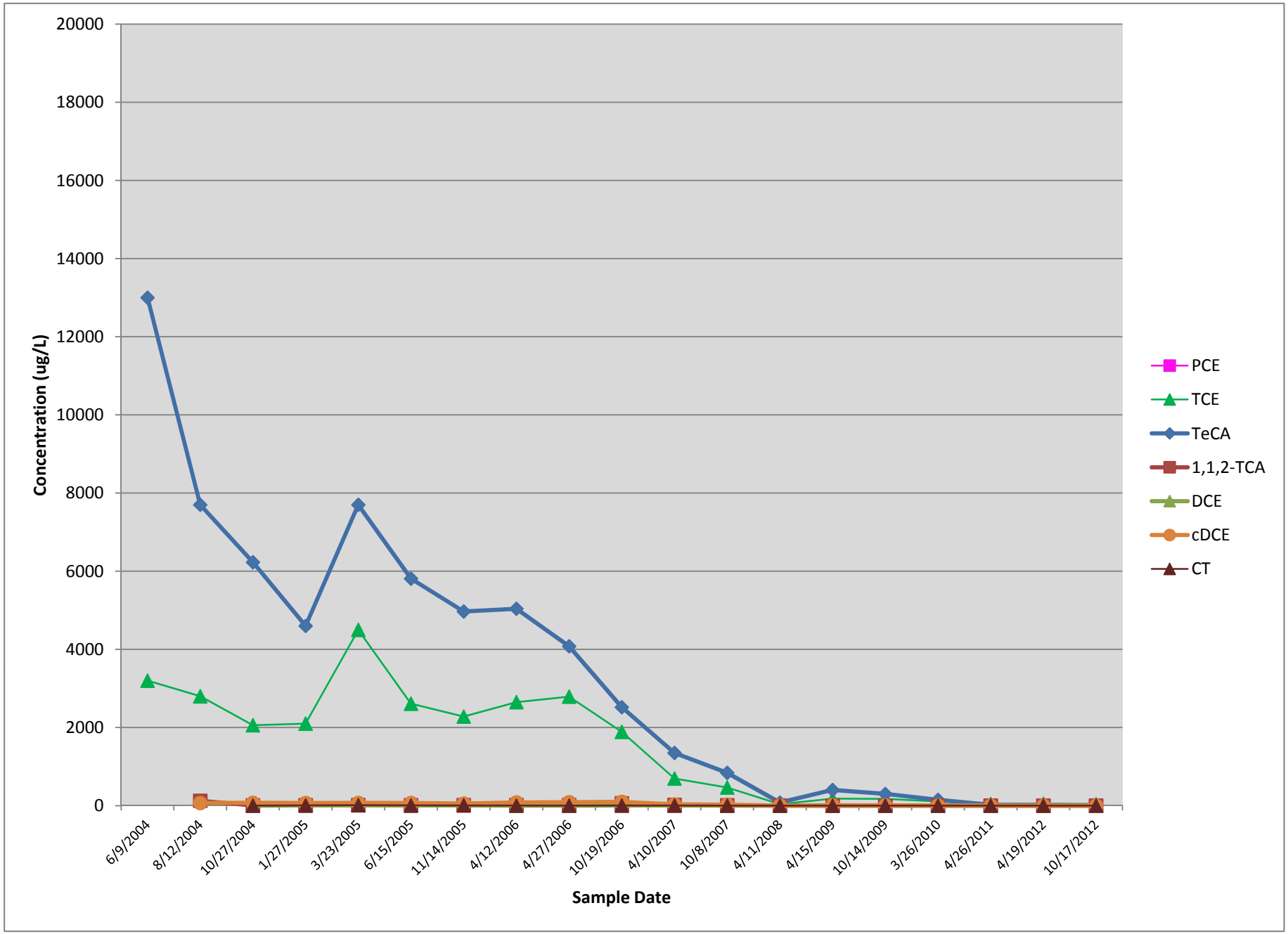
MW-79


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
2/15/2001
2/19/2001
10/3/2001
4/10/2002
10/1/2002
4/8/2003
10/28/2003
4/29/2004
8/13/2004
10/22/2004
1/26/2005
3/22/2005
6/16/2005
11/18/2005
4/13/2006
10/18/2006
4/10/2007
10/8/2007
4/11/2008
10/20/2008
6/8/2009
10/16/2009
3/25/2010
6/22/2010
9/23/2010
1/25/2011
4/25/2011
9/27/2011
4/18/2012
10/17/2012
Sample Date
PCE
TCE
TeCA
DCE

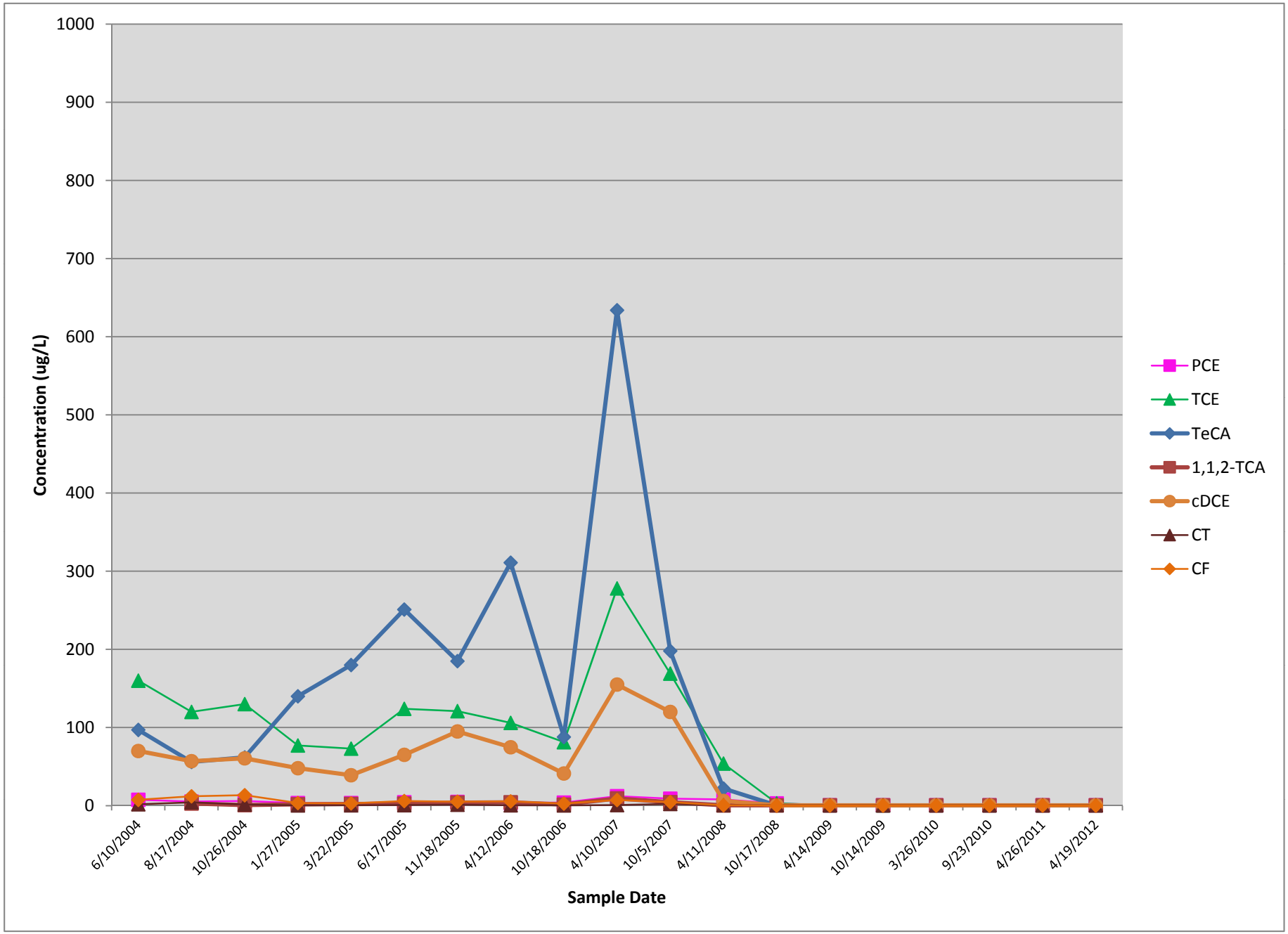
MW-91


50
45
40
35
30
25
20
15
10
5
0
Concentration (ug/L)
10/27/2004
11/21/2005
11/7/2007
4/22/2009
10/14/2009
4/28/2011
4/19/2012
Sample Date
TCE
CT
CF

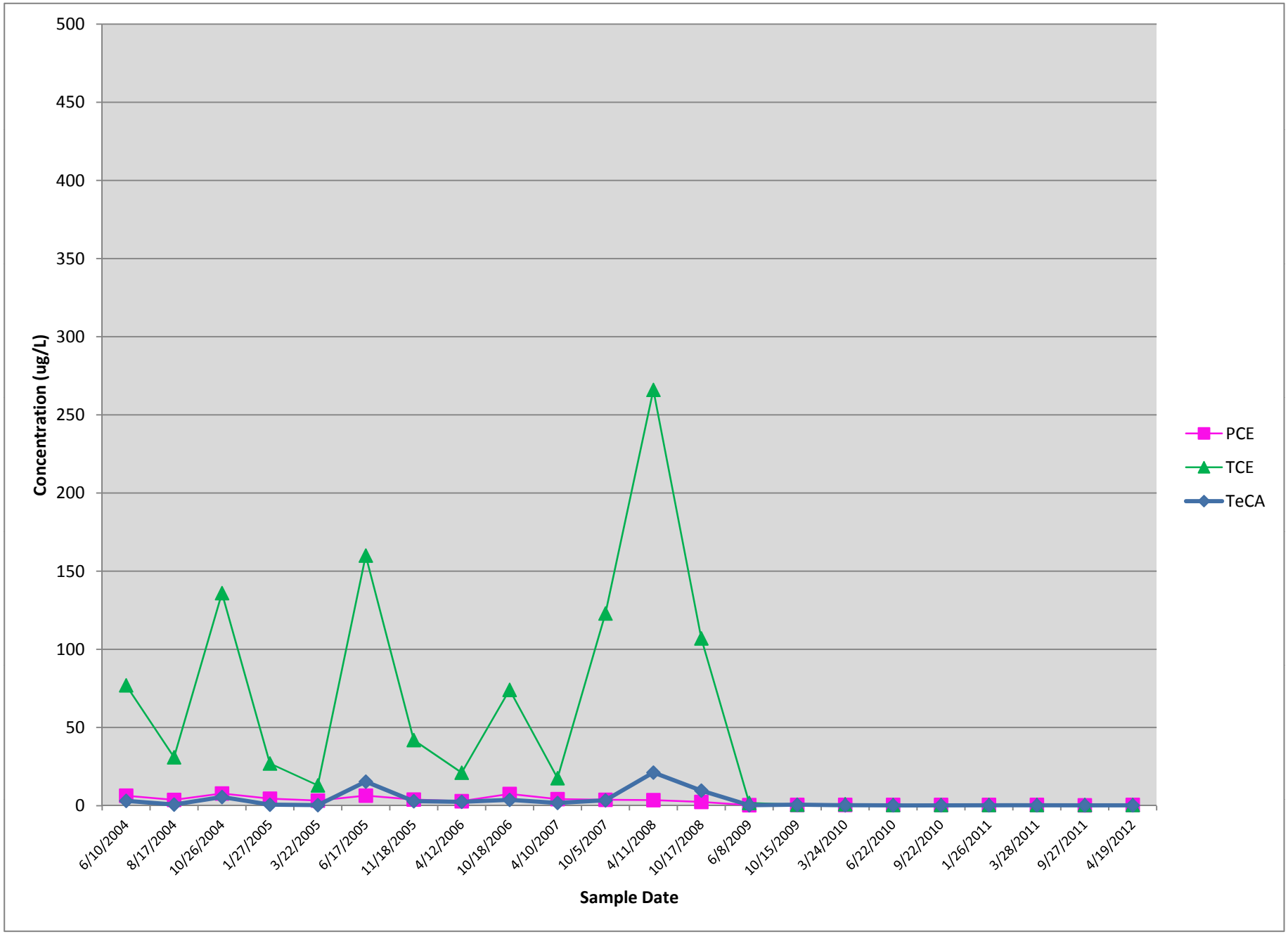
MW-144


20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
Concentration (ug/L)
6/9/2004
8/12/2004
10/27/2004
1/27/2005
3/23/2005
6/15/2005
11/14/2005
4/12/2006
4/27/2006
10/19/2006
4/10/2007
10/8/2007
4/11/2008
4/15/2009
10/14/2009
3/26/2010
4/26/2011
4/19/2012
10/17/2012
Sample Date
PCE
TCE
TeCA
1,1,2-TCA
DCE
cDCE
CT

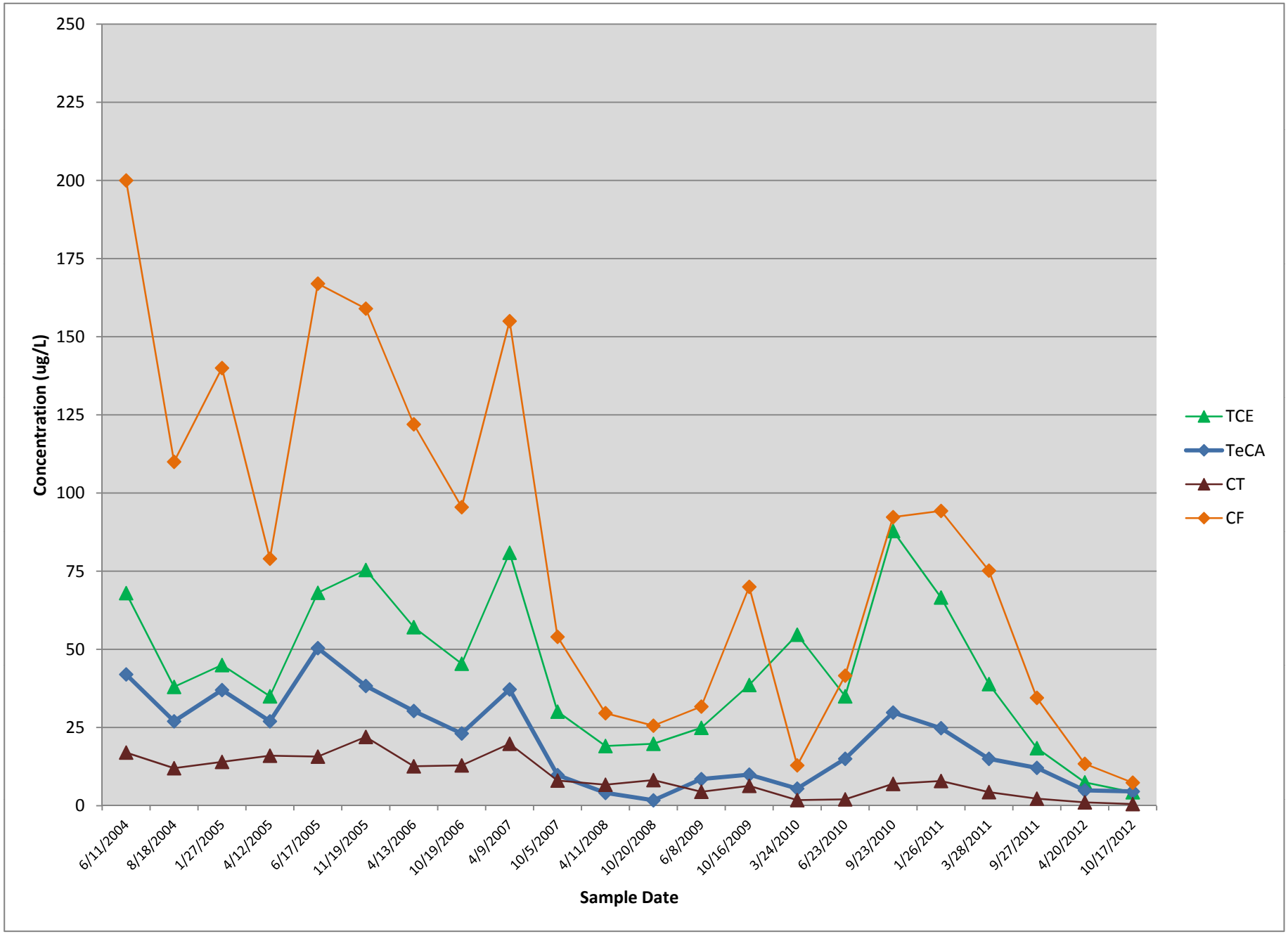
MW-147


1000
900
800
700
600
500
400
300
200
100
0
Concentration (ug/L)
6/10/2004
8/17/2004
10/26/2004
1/27/2005
3/22/2005
6/17/2005
11/18/2005
4/12/2006
10/18/2006
4/10/2007
10/5/2007
4/11/2008
10/17/2008
4/14/2009
10/14/2009
3/26/2010
9/23/2010
4/26/2011
4/19/2012
Sample Date
PCE
TCE
TeCA
1,1,2-TCA
cDCE
CT
CF

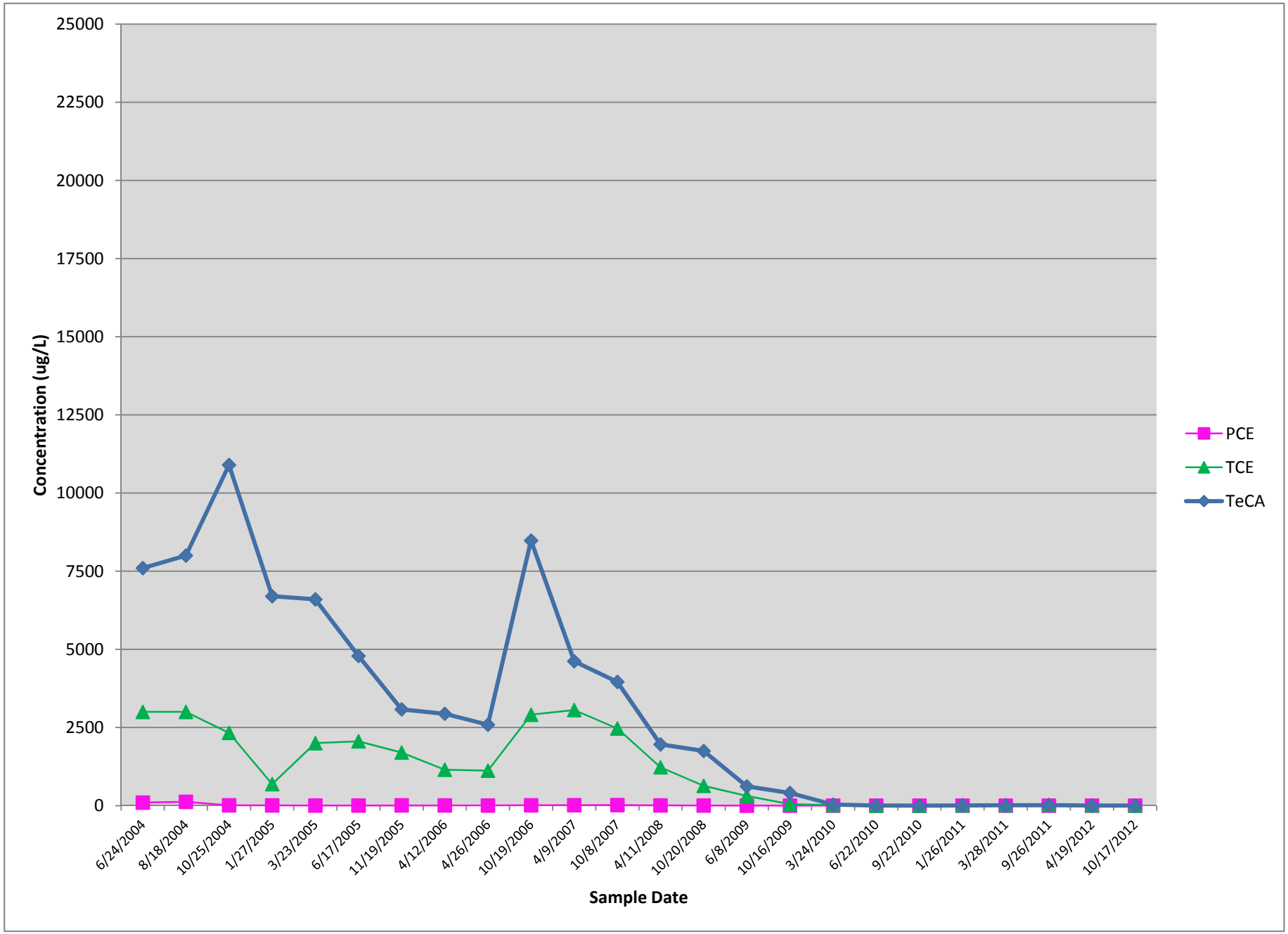
MW-148


500
450
400
350
300
250
200
150
100
50
0
Concentration (ug/L)
6/10/2004
8/17/2004
10/26/2004
1/27/2005
3/22/2005
6/17/2005
11/18/2005
4/12/2006
10/18/2006
4/10/2007
10/5/2007
4/11/2008
10/17/2008
6/8/2009
10/15/2009
3/24/2010
6/22/2010
9/22/2010
1/26/2011
3/28/2011
9/27/2011
4/19/2012
Sample Date
PCE
TCE
TeCA

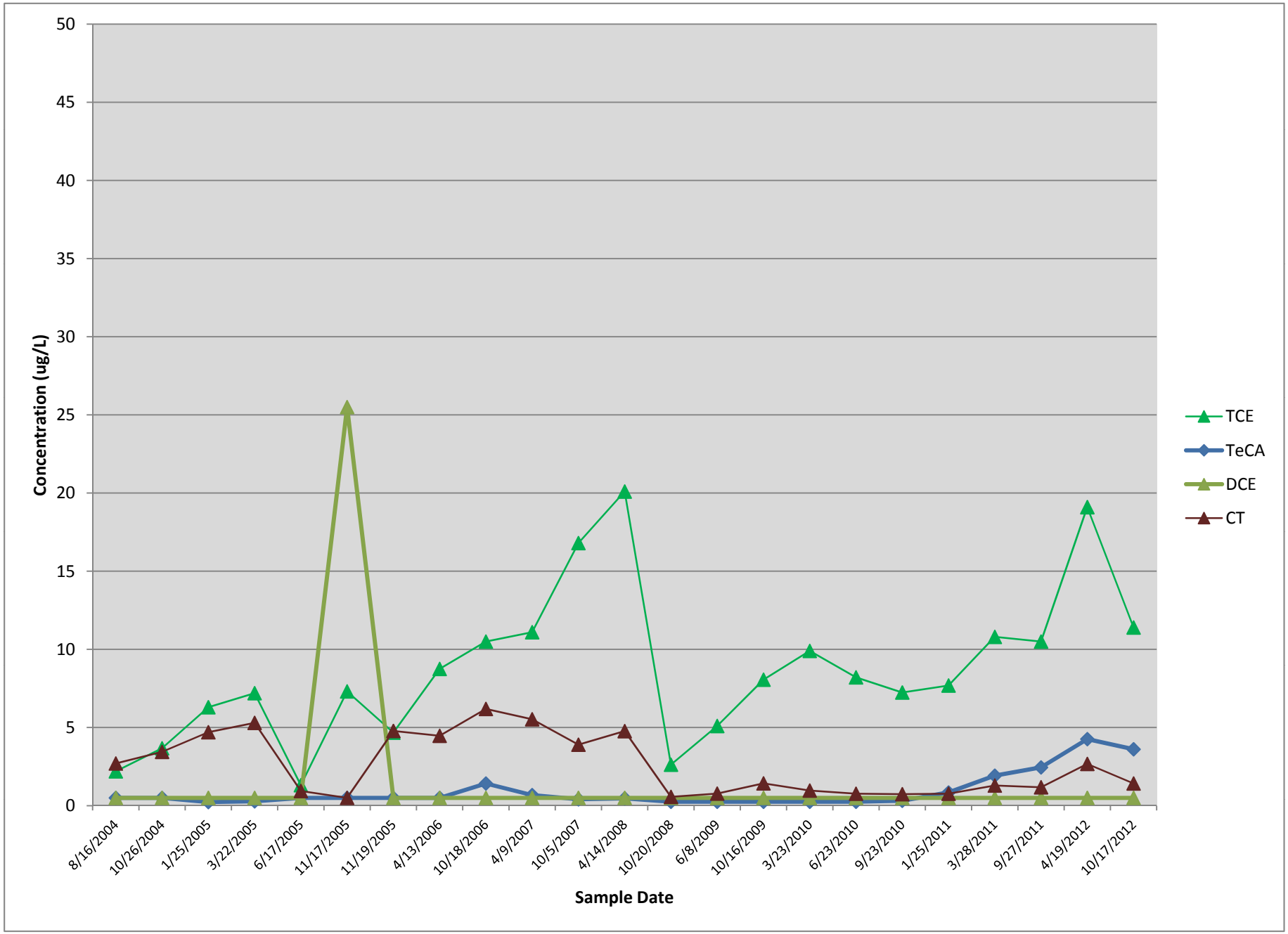
MW-149


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
6/11/2004
8/18/2004
1/27/2005
4/12/2005
6/17/2005
11/19/2005
4/13/2006
10/19/2006
4/9/2007
10/5/2007
4/11/2008
10/20/2008
6/8/2009
10/16/2009
3/24/2010
6/23/2010
9/23/2010
1/26/2011
3/28/2011
9/27/2011
4/20/2012
10/17/2012
Sample Date
TCE
TeCA
CT
CF

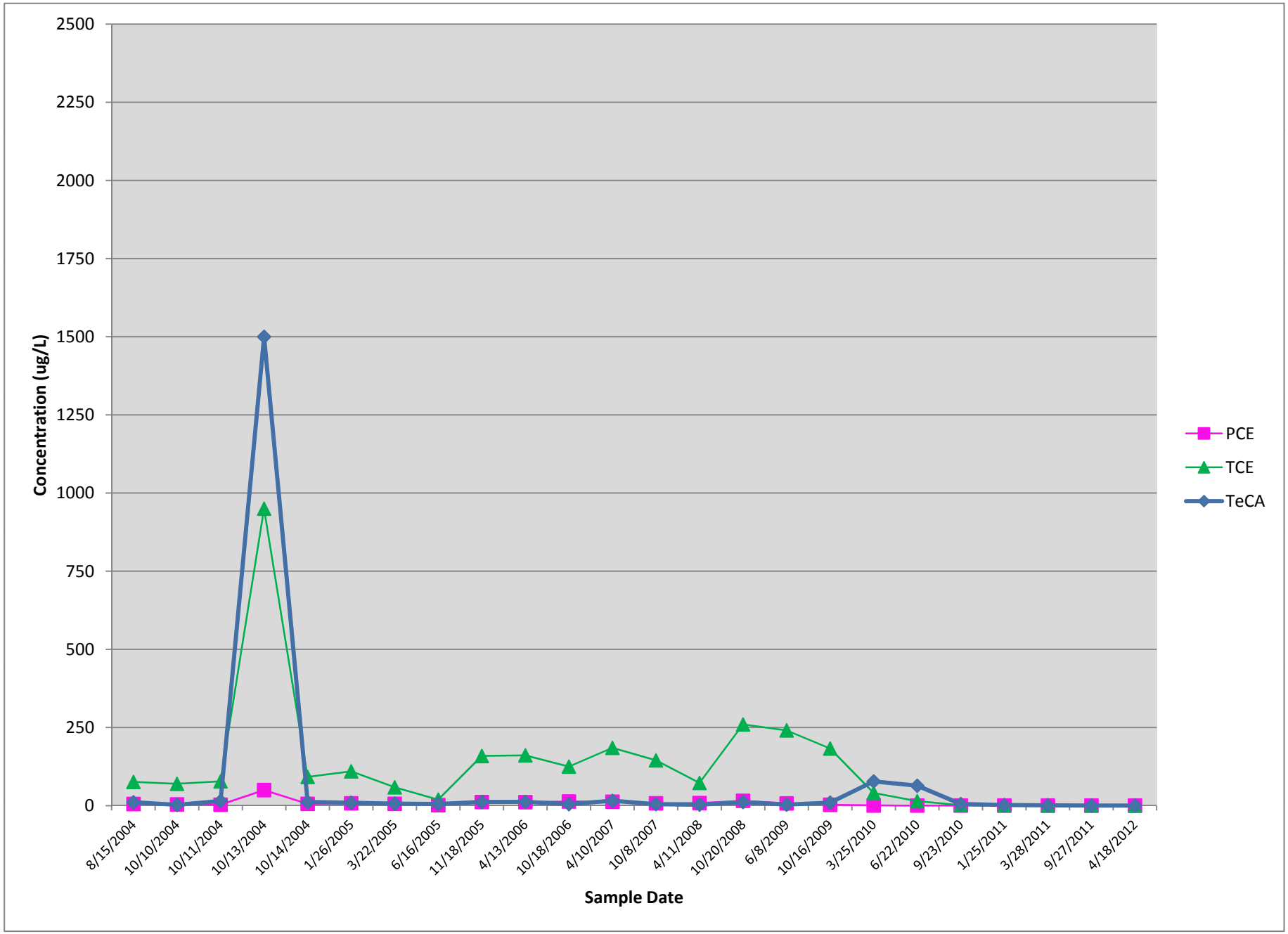
MW-150


25000
22500
20000
17500
15000
12500
10000
7500
5000
2500
0
Concentration (ug/L)
6/24/2004
8/18/2004
10/25/2004
1/27/2005
3/23/2005
6/17/2005
11/19/2005
4/12/2006
4/26/2006
10/19/2006
4/9/2007
10/8/2007
4/11/2008
10/20/2008
6/8/2009
10/16/2009
3/24/2010
6/22/2010
9/22/2010
1/26/2011
3/28/2011
9/26/2011
4/19/2012
10/17/2012
Sample Date
PCE
TCE
TeCA

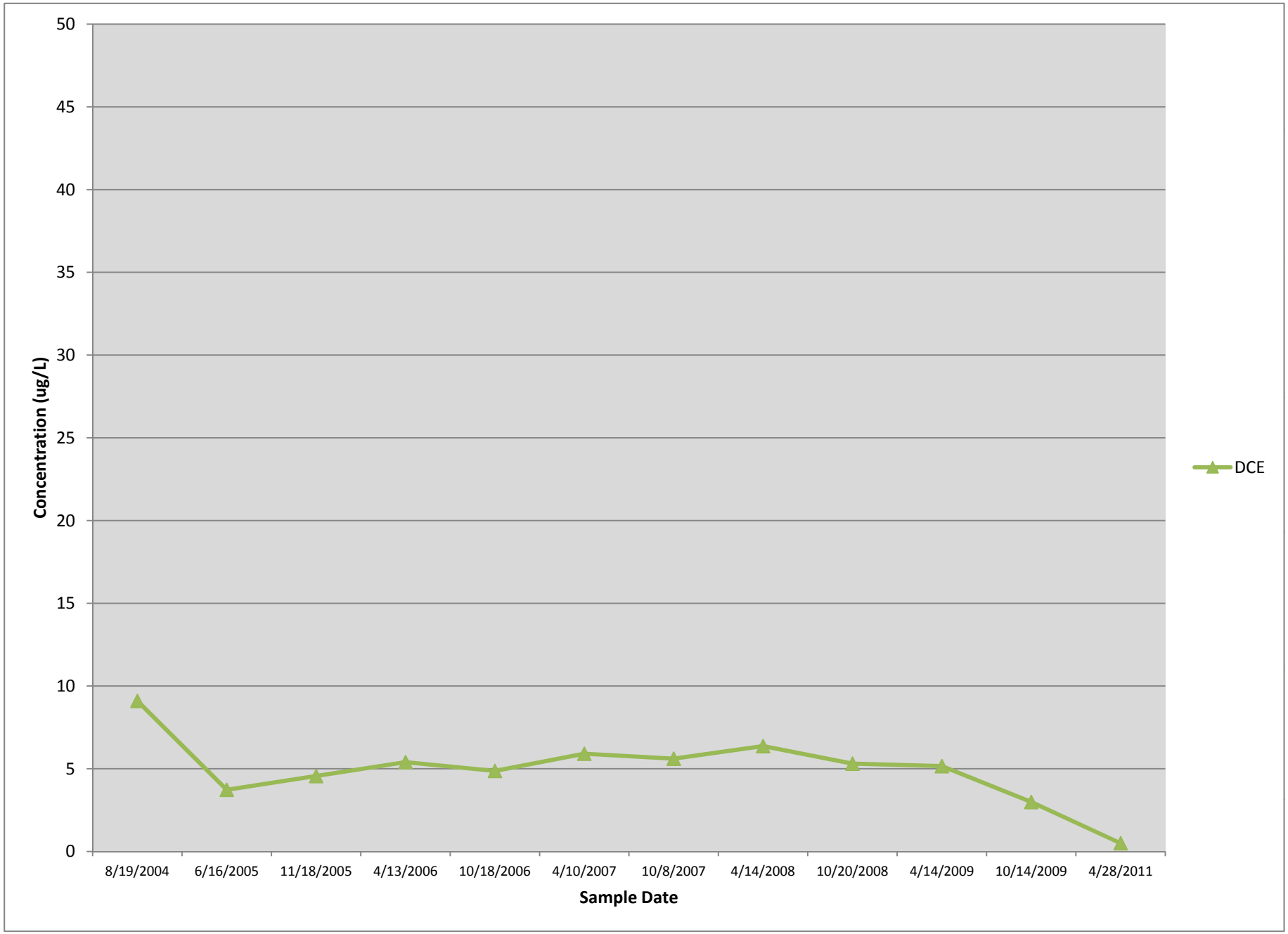
MW-151


50
45
40
35
30
25
20
15
10
5
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Concentration (ug/L)
8/16/2004
10/26/2004
1/25/2005
3/22/2005
6/17/2005
11/17/2005
11/19/2005
4/13/2006
10/18/2006
4/9/2007
10/5/2007
4/14/2008
10/20/2008
6/8/2009
10/16/2009
3/23/2010
6/23/2010
9/23/2010
1/25/2011
3/28/2011
9/27/2011
4/19/2012
10/17/2012
Sample Date
TCE
TeCA
DCE
CT

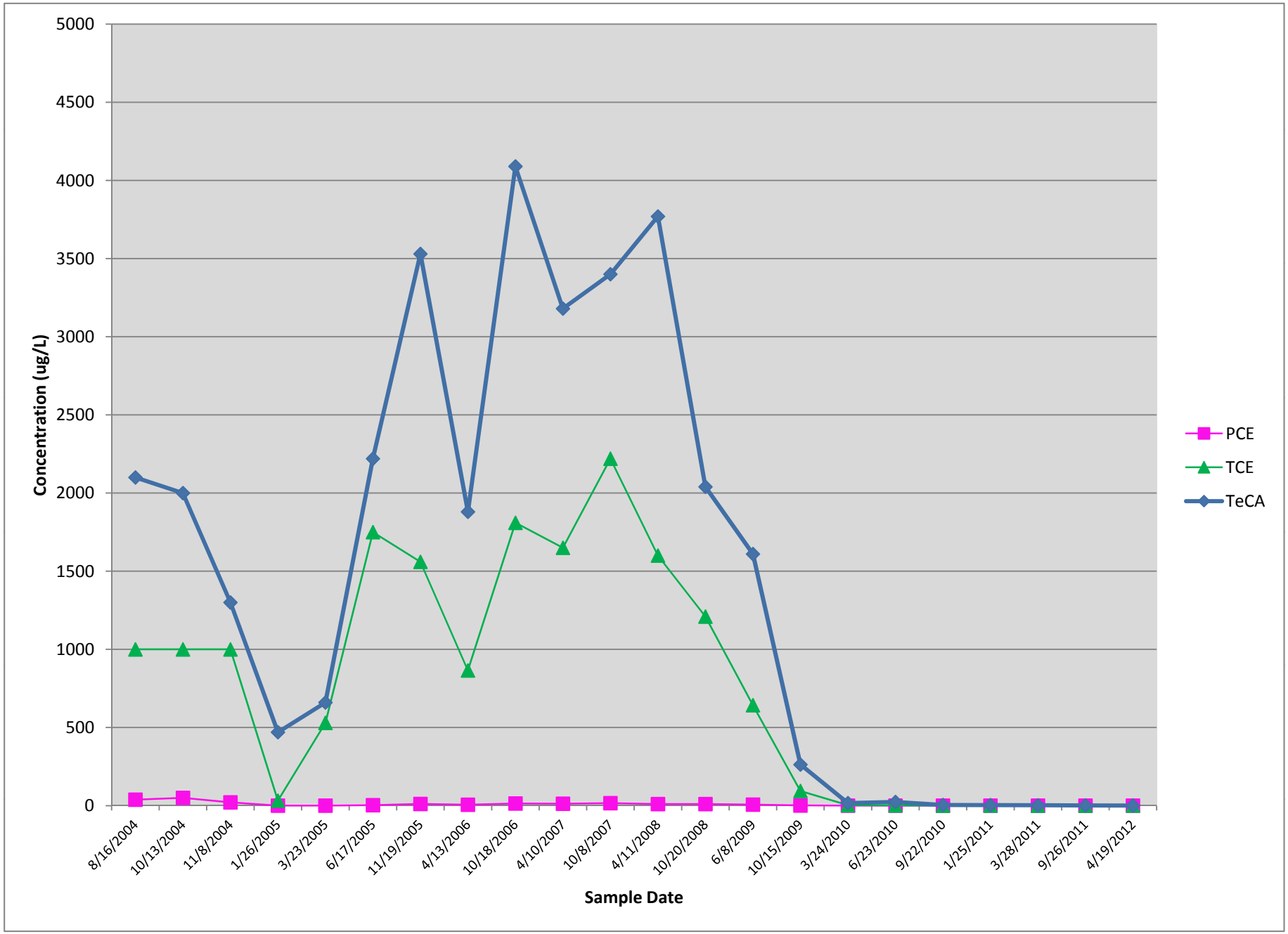
MW-152


2500
2250
2000
1750
1500
1250
1000
750
500
250
0
Concentration (ug/L)
8/15/2004
10/10/2004
10/11/2004
10/13/2004
10/14/2004
1/26/2005
3/22/2005
6/16/2005
11/18/2005
4/13/2006
10/18/2006
4/10/2007
10/8/2007
4/11/2008
10/20/2008
6/8/2009
10/16/2009
3/25/2010
6/22/2010
9/23/2010
1/25/2011
3/28/2011
9/27/2011
4/18/2012
Sample Date
PCE
TCE
TeCA

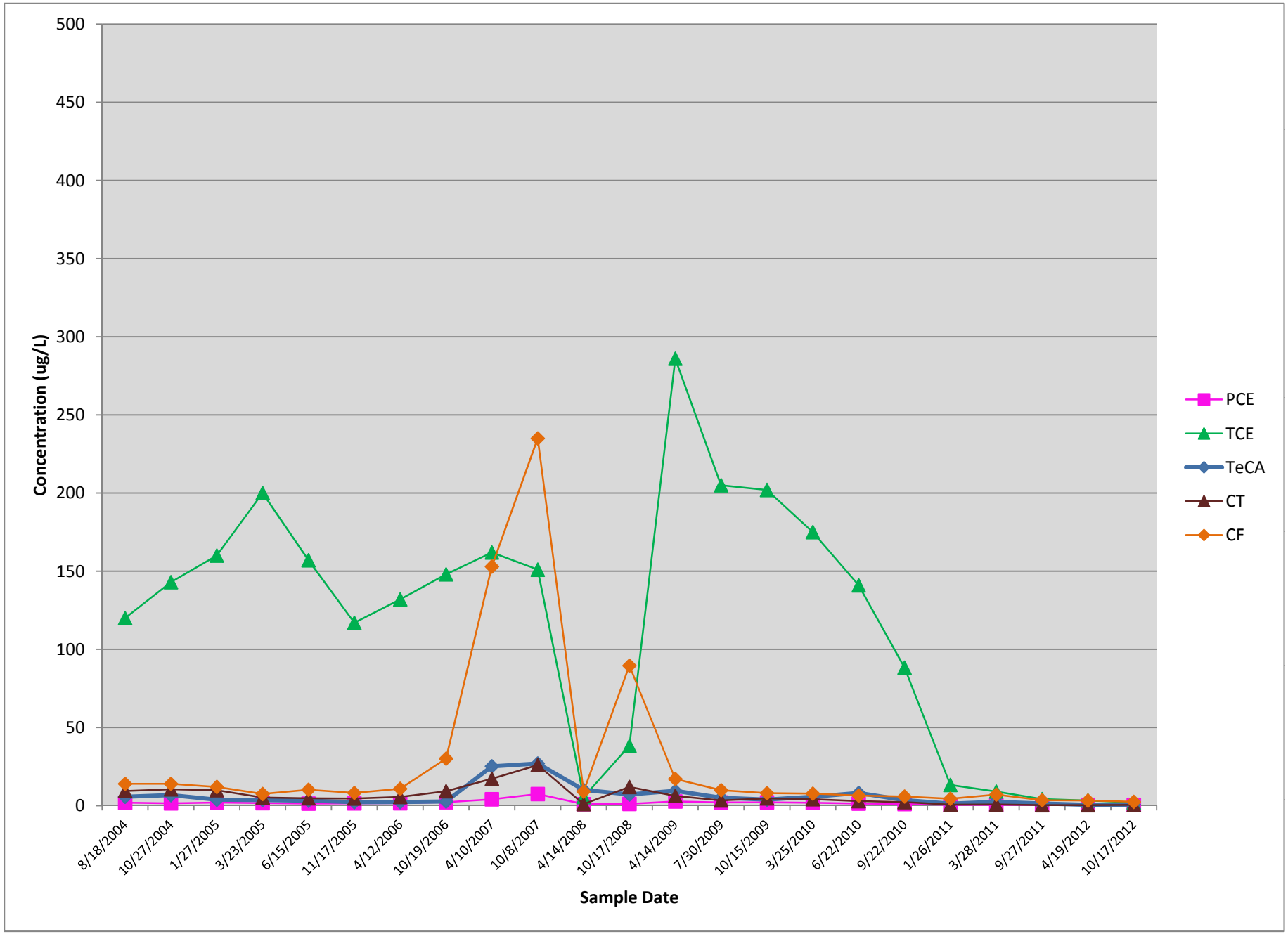
MW-153


50
45
40
35
30
25
20
15
10
5
0
Concentration (ug/L)
8/19/2004
6/16/2005
11/18/2005
4/13/2006
10/18/2006
4/10/2007
10/8/2007
4/14/2008
10/20/2008
4/14/2009
10/14/2009
4/28/2011
Sample Date
DCE

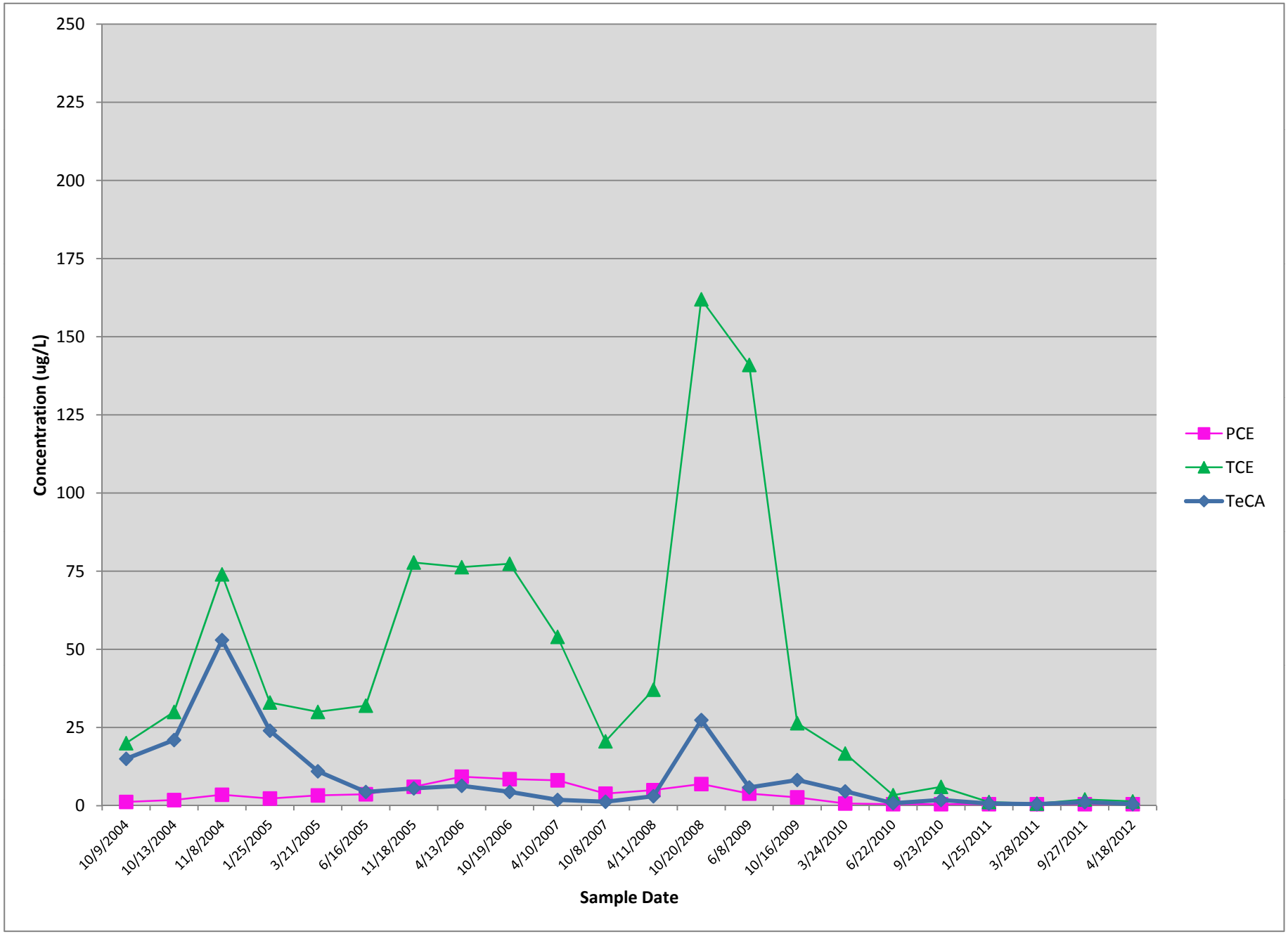
MW-155


5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Concentration (ug/L)
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
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6/8/2009
10/15/2009
3/24/2010
6/23/2010
9/22/2010
1/25/2011
3/28/2011
9/26/2011
4/19/2012
Sample Date
PCE
TCE
TeCA

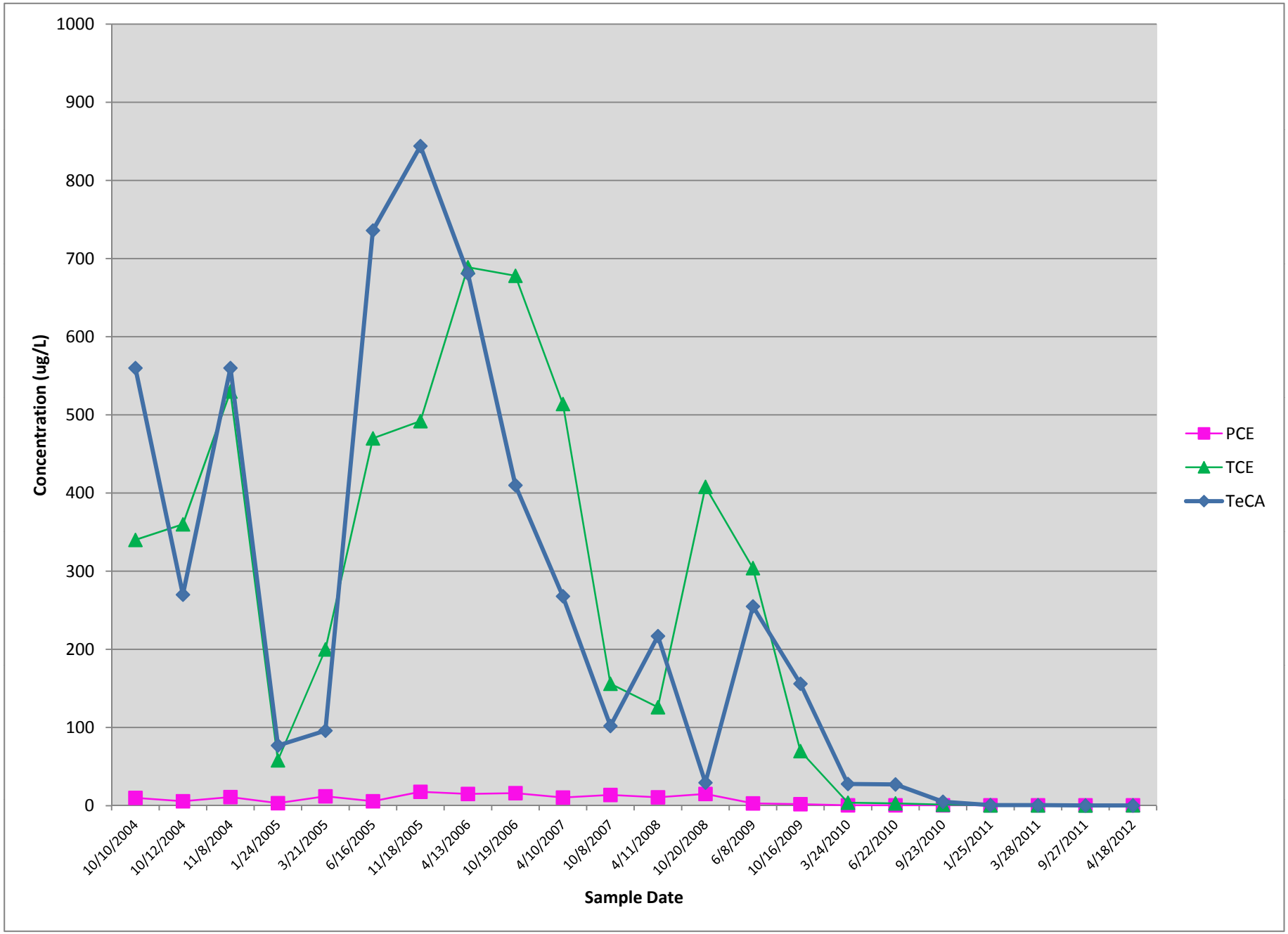
MW-157


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450
400
350
300
250
200
150
100
50
0
Concentration (ug/L)
8/18/2004
10/27/2004
1/27/2005
3/23/2005
6/15/2005
11/17/2005
4/12/2006
10/19/2006
4/10/2007
10/8/2007
4/14/2008
10/17/2008
4/14/2009
7/30/2009
10/15/2009
3/25/2010
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9/22/2010
1/26/2011
3/28/2011
9/27/2011
4/19/2012
10/17/2012
Sample Date
PCE
TCE
TeCA
CT
CF

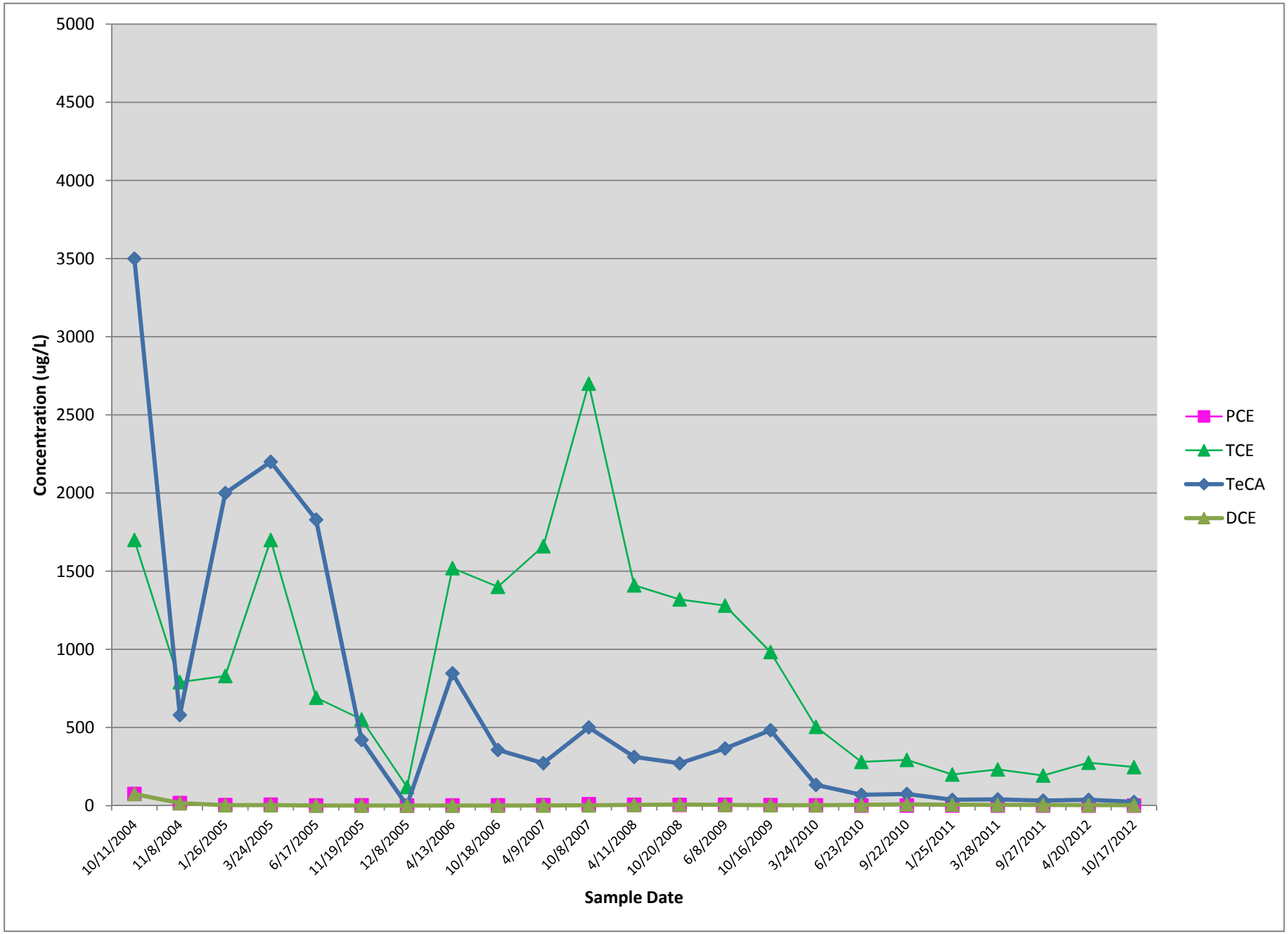
MW-158


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
10/9/2004
10/13/2004
11/8/2004
1/25/2005
3/21/2005
6/16/2005
11/18/2005
4/13/2006
10/19/2006
4/10/2007
10/8/2007
4/11/2008
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6/8/2009
10/16/2009
3/24/2010
6/22/2010
9/23/2010
1/25/2011
3/28/2011
9/27/2011
4/18/2012
Sample Date
PCE
TCE
TeCA

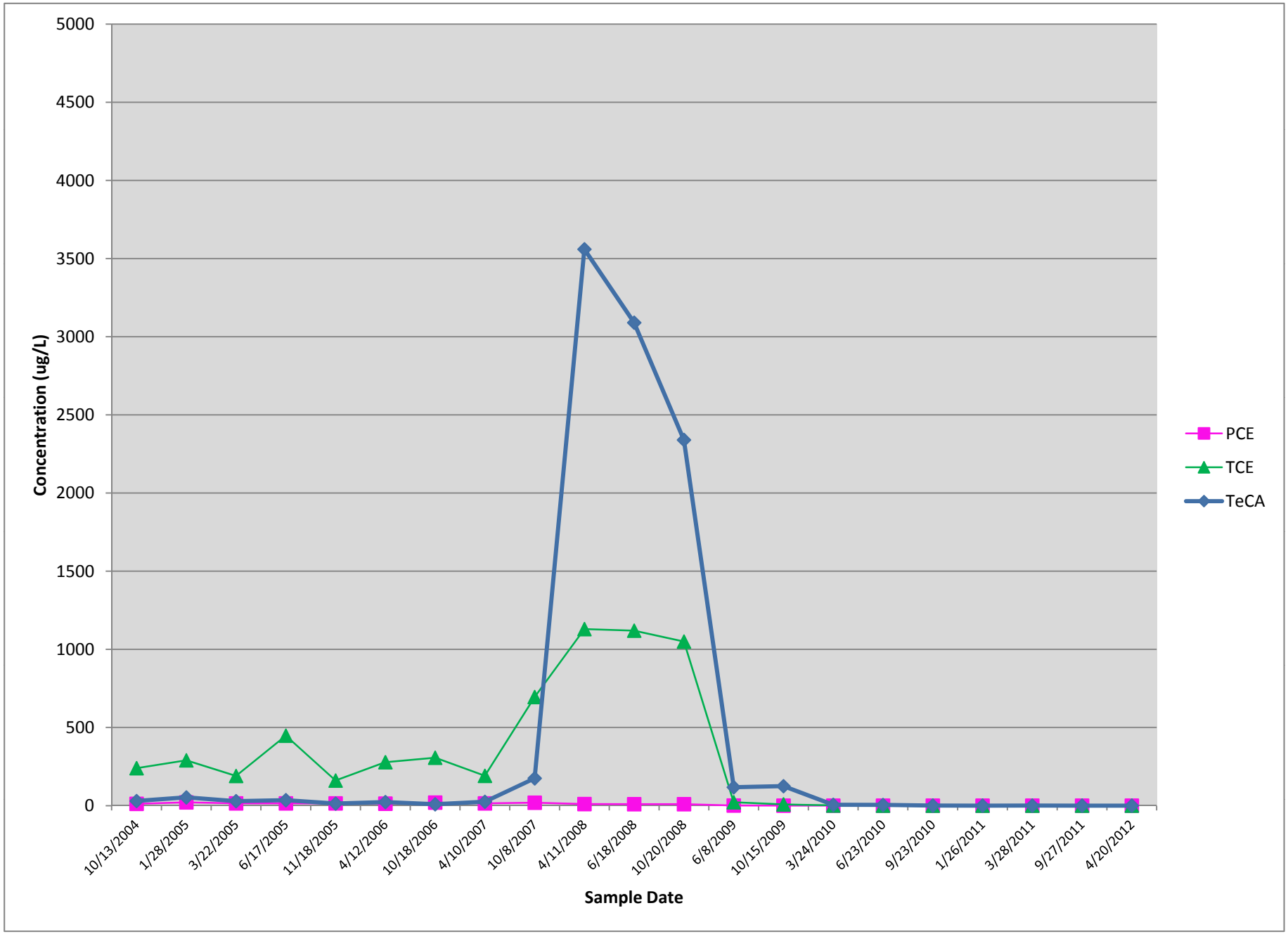
MW-158A


1000
900
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700
600
500
400
300
200
100
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Concentration (ug/L)
10/10/2004
10/12/2004
11/8/2004
1/24/2005
3/21/2005
6/16/2005
11/18/2005
4/13/2006
10/19/2006
4/10/2007
10/8/2007
4/11/2008
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6/8/2009
10/16/2009
3/24/2010
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1/25/2011
3/28/2011
9/27/2011
4/18/2012
Sample Date
PCE
TCE
TeCA

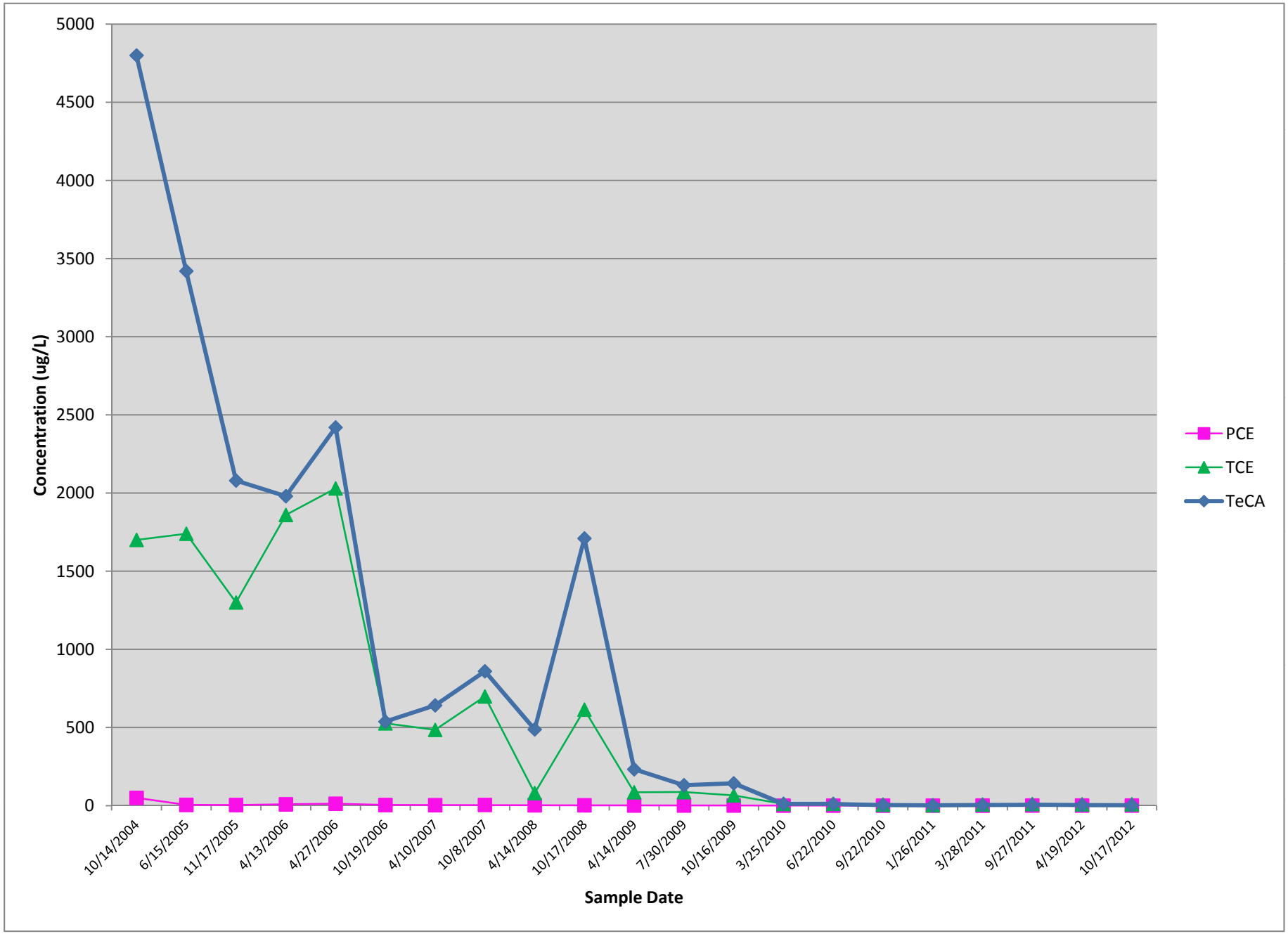
MW-159


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4500
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3500
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2500
2000
1500
1000
500
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Concentration (ug/L)
10/11/2004
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1/26/2005
3/24/2005
6/17/2005
11/19/2005
12/8/2005
4/13/2006
10/18/2006
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3/24/2010
6/23/2010
9/22/2010
1/25/2011
3/28/2011
9/27/2011
4/20/2012
10/17/2012
Sample Date
PCE
TCE
TeCA
DCE

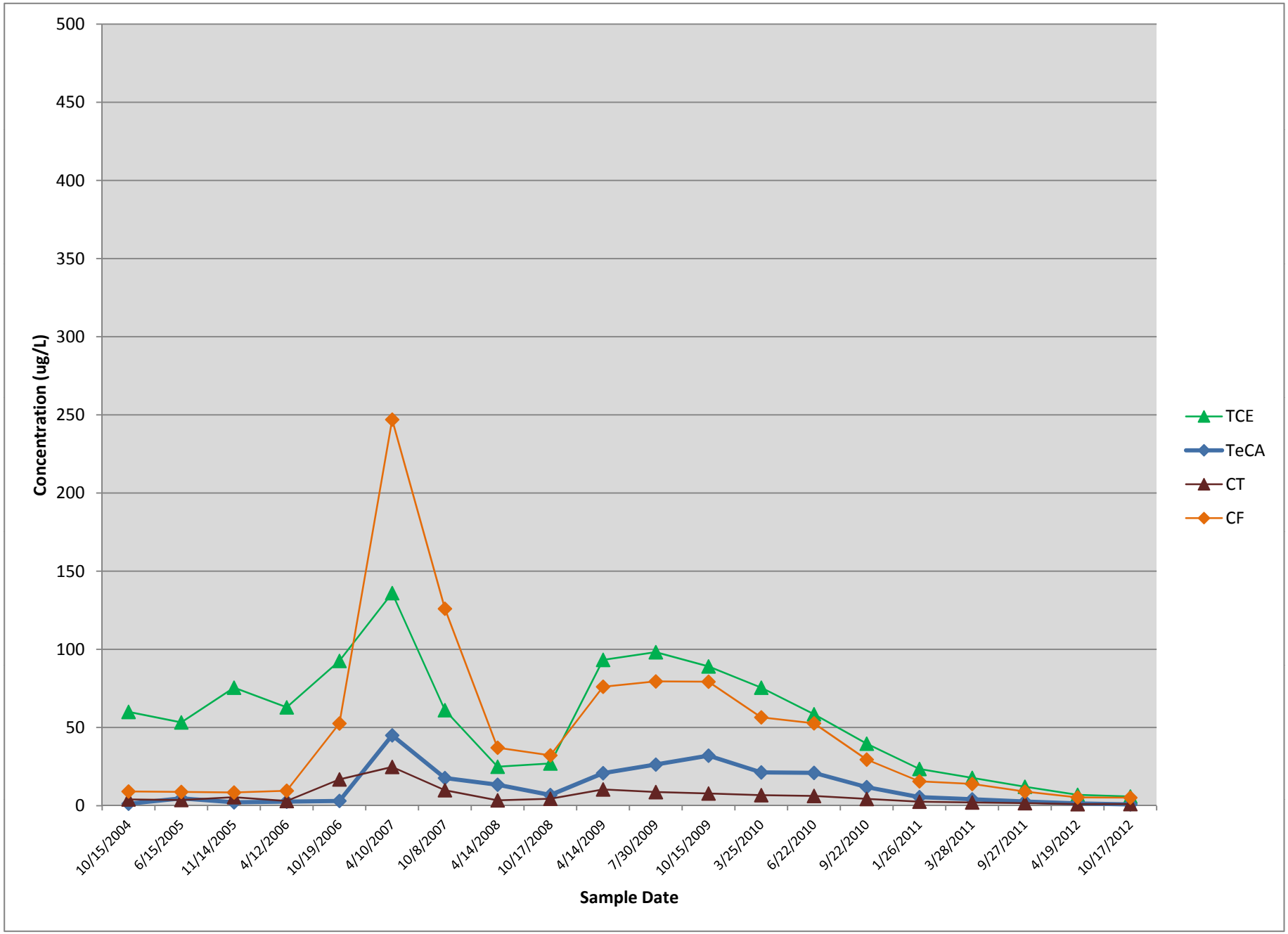
MW-160


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4500
4000
3500
3000
2500
2000
1500
1000
500
0
Concentration (ug/L)
10/13/2004
1/28/2005
3/22/2005
6/17/2005
11/18/2005
4/12/2006
10/18/2006
4/10/2007
10/8/2007
4/11/2008
6/18/2008
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6/8/2009
10/15/2009
3/24/2010
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9/23/2010
1/26/2011
3/28/2011
9/27/2011
4/20/2012
Sample Date
PCE
TCE
TeCA

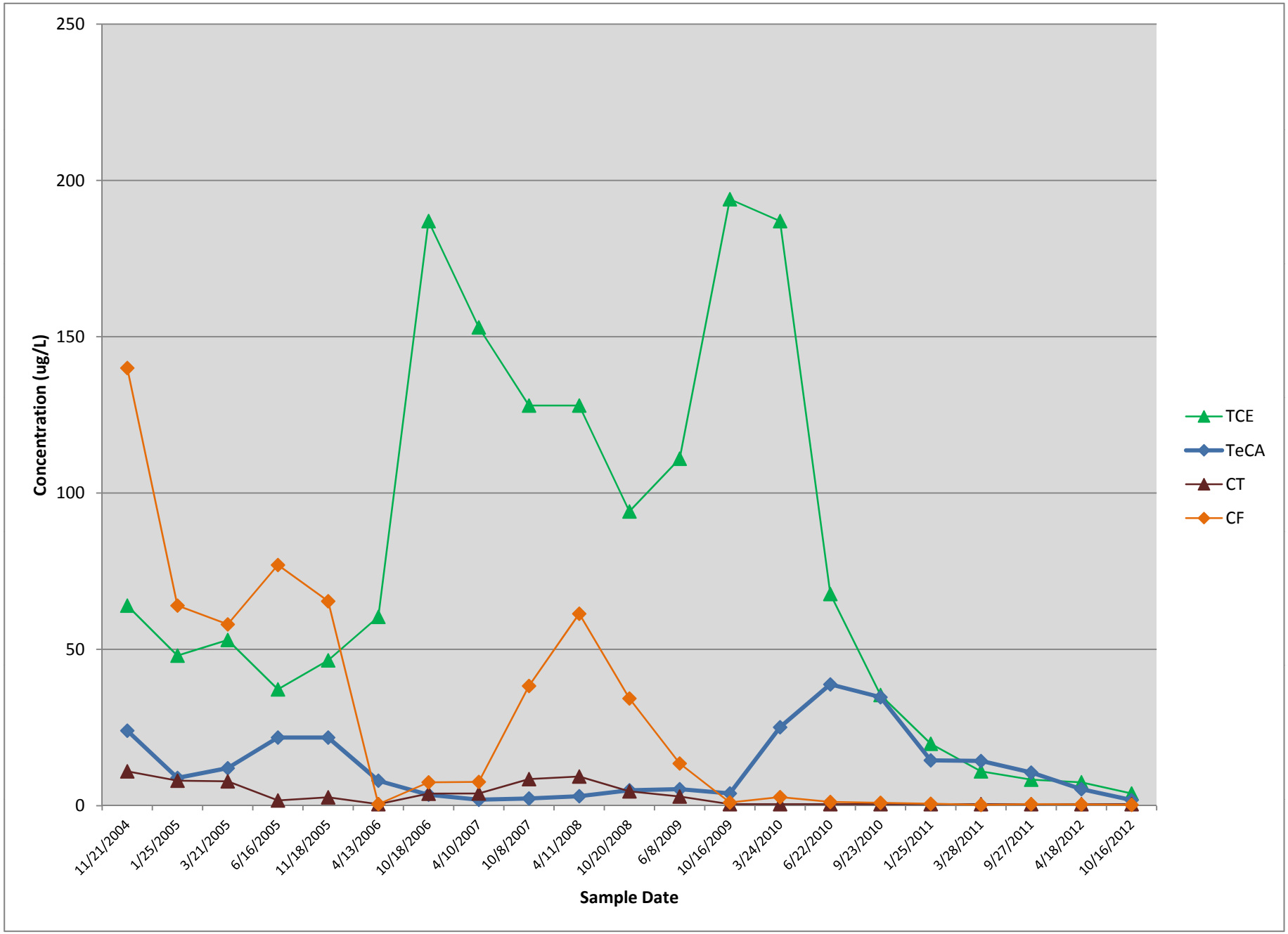
MW-163


5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Concentration (ug/L)
10/14/2004
6/15/2005
11/17/2005
4/13/2006
4/27/2006
10/19/2006
4/10/2007
10/8/2007
4/14/2008
10/17/2008
4/14/2009
7/30/2009
10/16/2009
3/25/2010
6/22/2010
9/22/2010
1/26/2011
3/28/2011
9/27/2011
4/19/2012
10/17/2012
Sample Date
PCE
TCE
TeCA

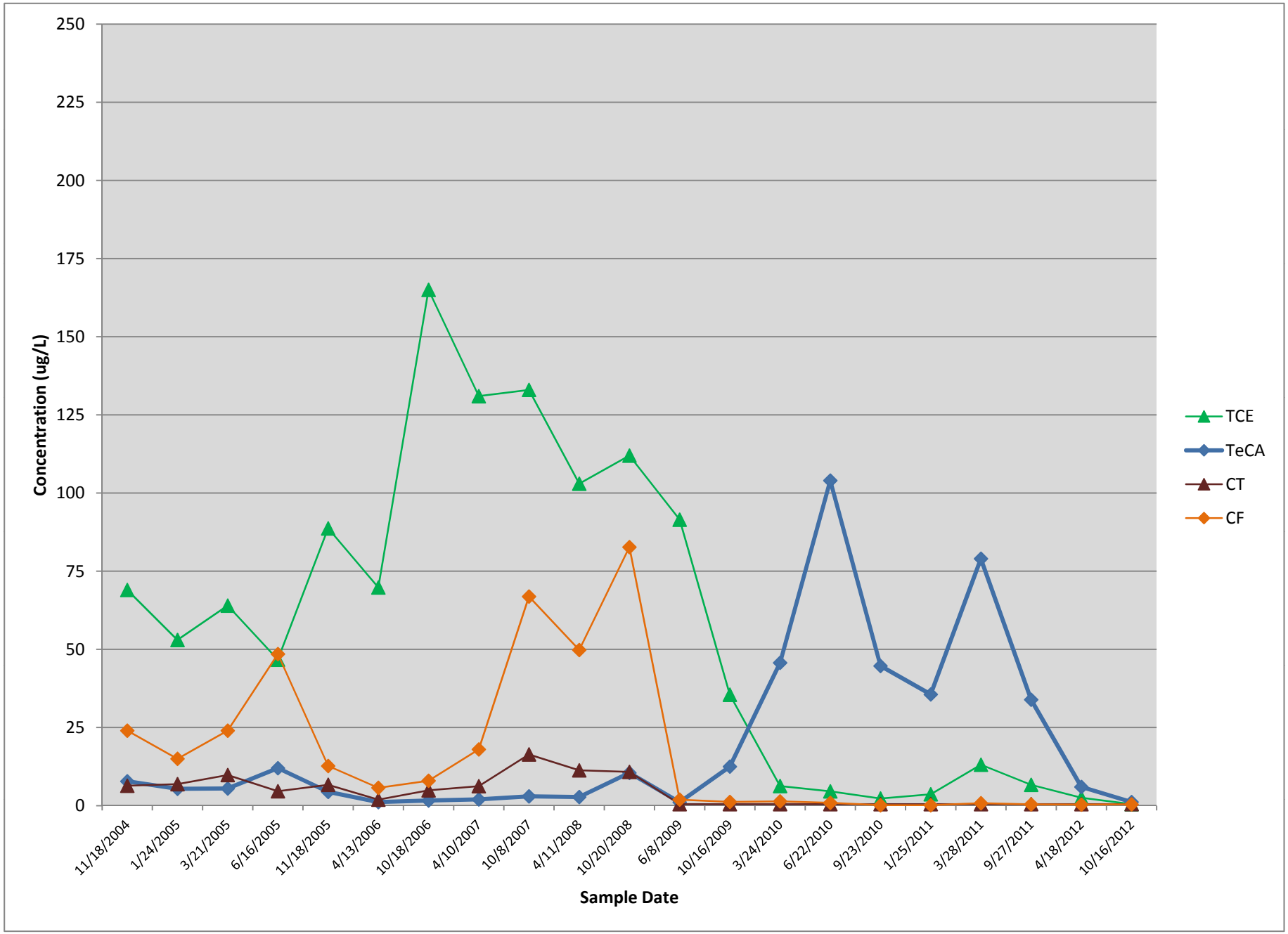
MW-164


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450
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350
300
250
200
150
100
50
0
Concentration (ug/L)
10/15/2004
6/15/2005
11/14/2005
4/12/2006
10/19/2006
4/10/2007
10/8/2007
4/14/2008
10/17/2008
4/14/2009
7/30/2009
10/15/2009
3/25/2010
6/22/2010
9/22/2010
1/26/2011
3/28/2011
9/27/2011
4/19/2012
10/17/2012
Sample Date
TCE
TeCA
CT
CF

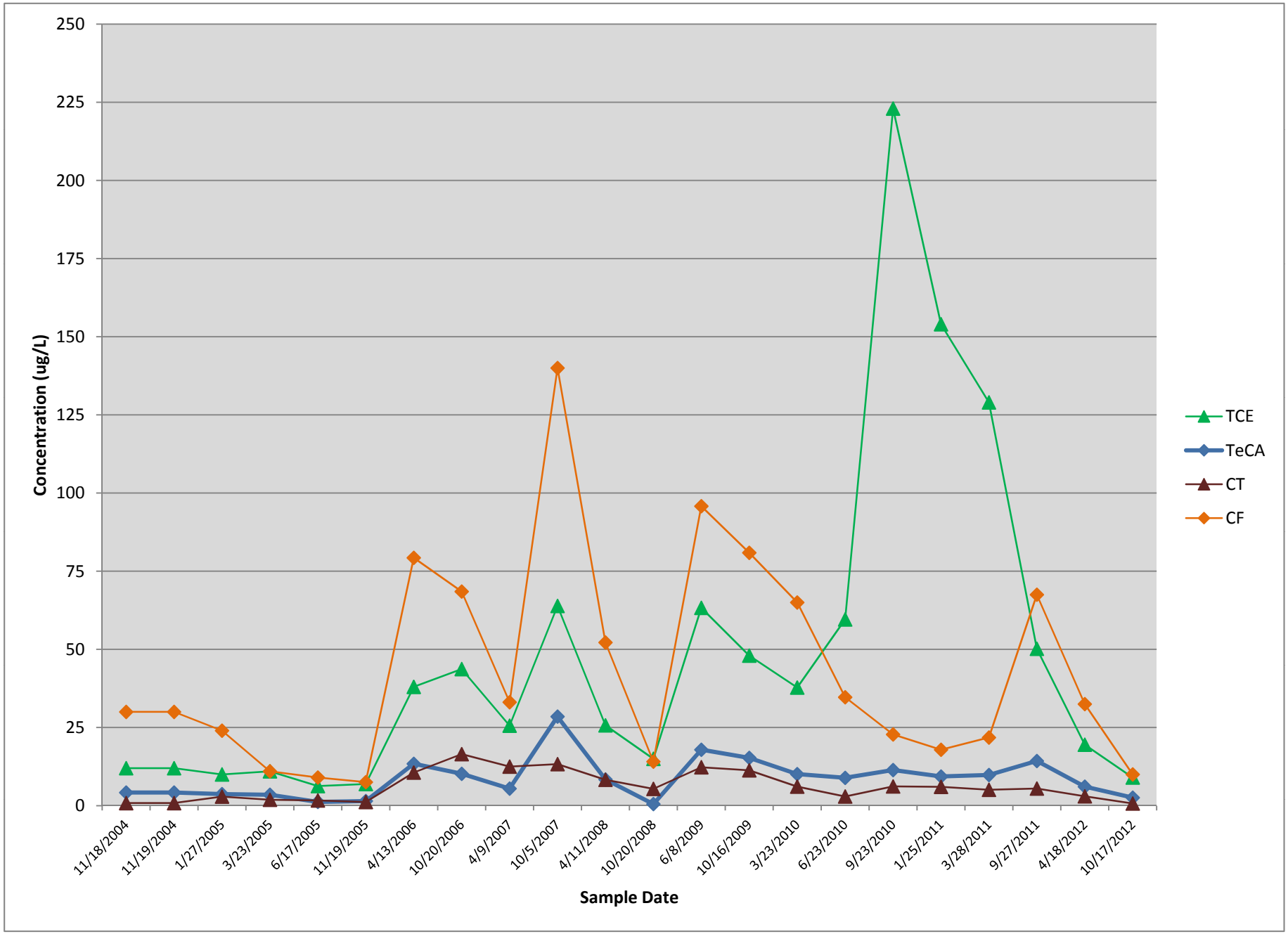
MW-165


250
200
150
100
50
0
Concentration (ug/L)
11/21/2004
1/25/2005
3/21/2005
6/16/2005
11/18/2005
4/13/2006
10/18/2006
4/10/2007
10/8/2007
4/11/2008
10/20/2008
6/8/2009
10/16/2009
3/24/2010
6/22/2010
9/23/2010
1/25/2011
3/28/2011
9/27/2011
4/18/2012
10/16/2012
Sample Date
TCE
TeCA
CT
CF

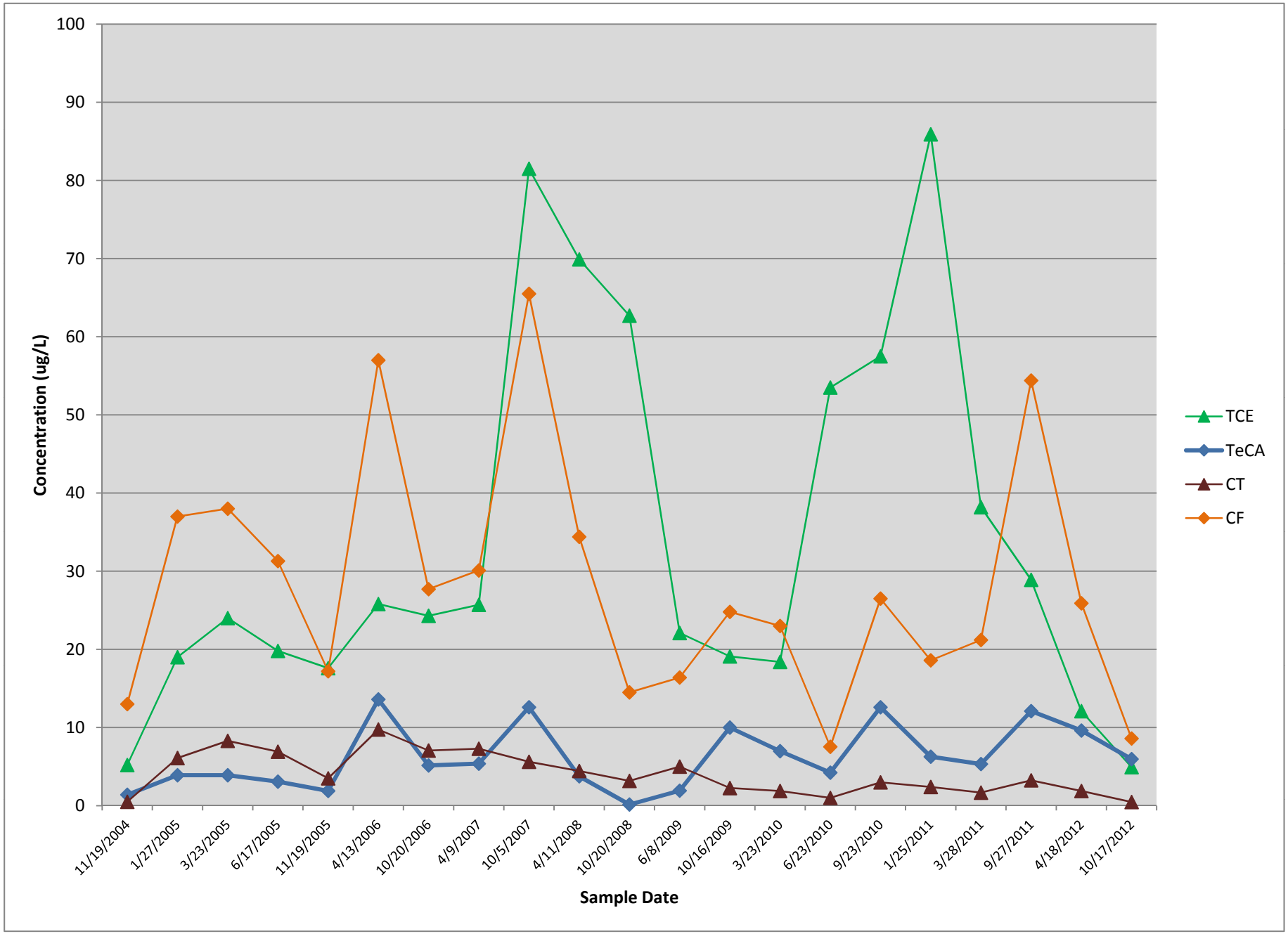
MW-165A


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
11/18/2004
1/24/2005
3/21/2005
6/16/2005
11/18/2005
4/13/2006
10/18/2006
4/10/2007
10/8/2007
4/11/2008
10/20/2008
6/8/2009
10/16/2009
3/24/2010
6/22/2010
9/23/2010
1/25/2011
3/28/2011
9/27/2011
4/18/2012
10/16/2012
Sample Date
TCE
TeCA
CT
CF

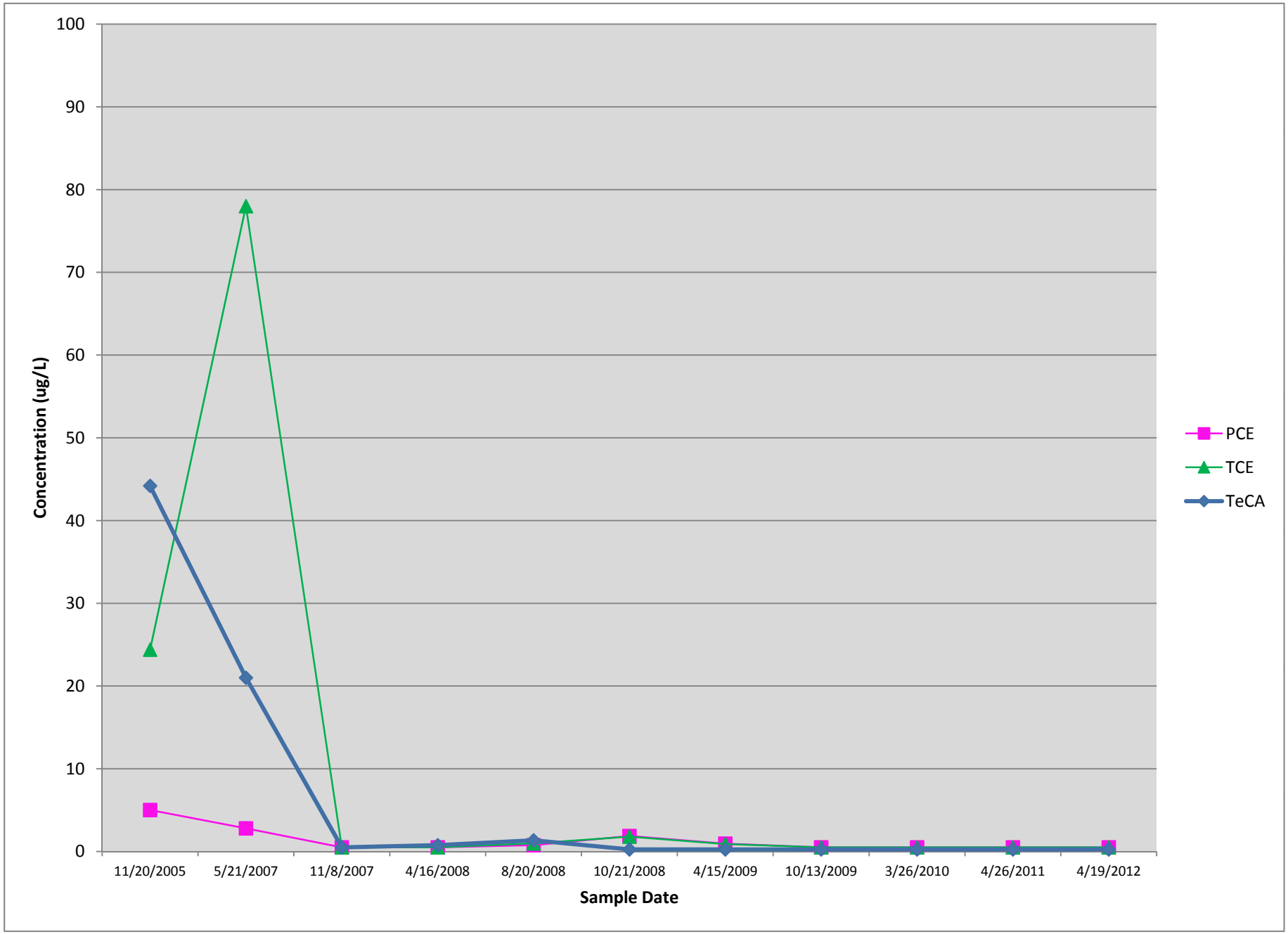
MW-166


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
11/18/2004
11/19/2004
1/27/2005
3/23/2005
6/17/2005
11/19/2005
4/13/2006
10/20/2006
4/9/2007
10/5/2007
4/11/2008
10/20/2008
6/8/2009
10/16/2009
3/23/2010
6/23/2010
9/23/2010
1/25/2011
3/28/2011
9/27/2011
4/18/2012
10/17/2012
Sample Date
TCE
TeCA
CT
CF

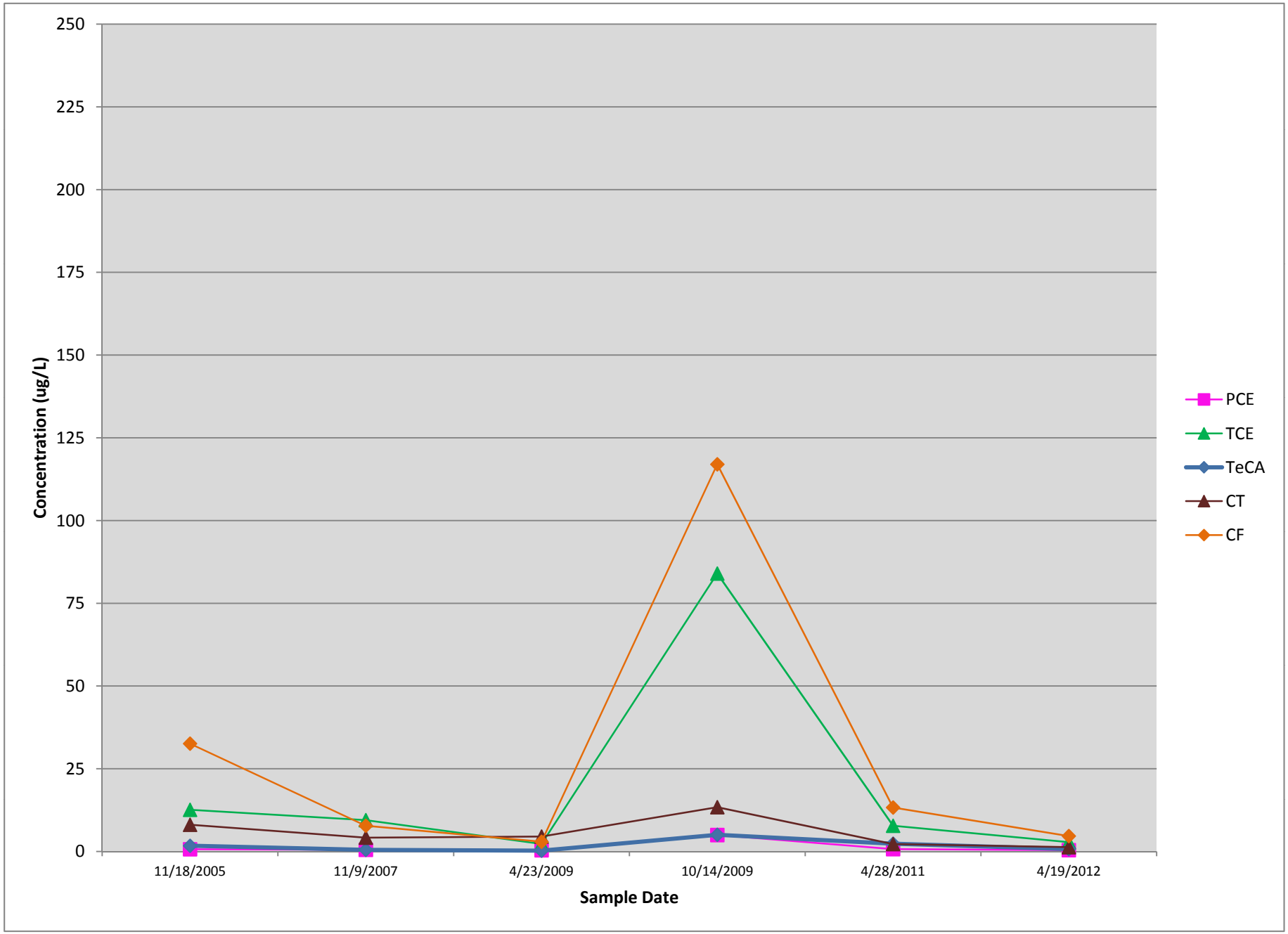
MW-166A


100
90
80
70
60
50
40
30
20
10
0
Concentration (ug/L)
11/19/2004
1/27/2005
3/23/2005
6/17/2005
11/19/2005
4/13/2006
10/20/2006
4/9/2007
10/5/2007
4/11/2008
10/20/2008
6/8/2009
10/16/2009
3/23/2010
6/23/2010
9/23/2010
1/25/2011
3/28/2011
9/27/2011
4/18/2012
10/17/2012
Sample Date
TCE
TeCA
CT
CF

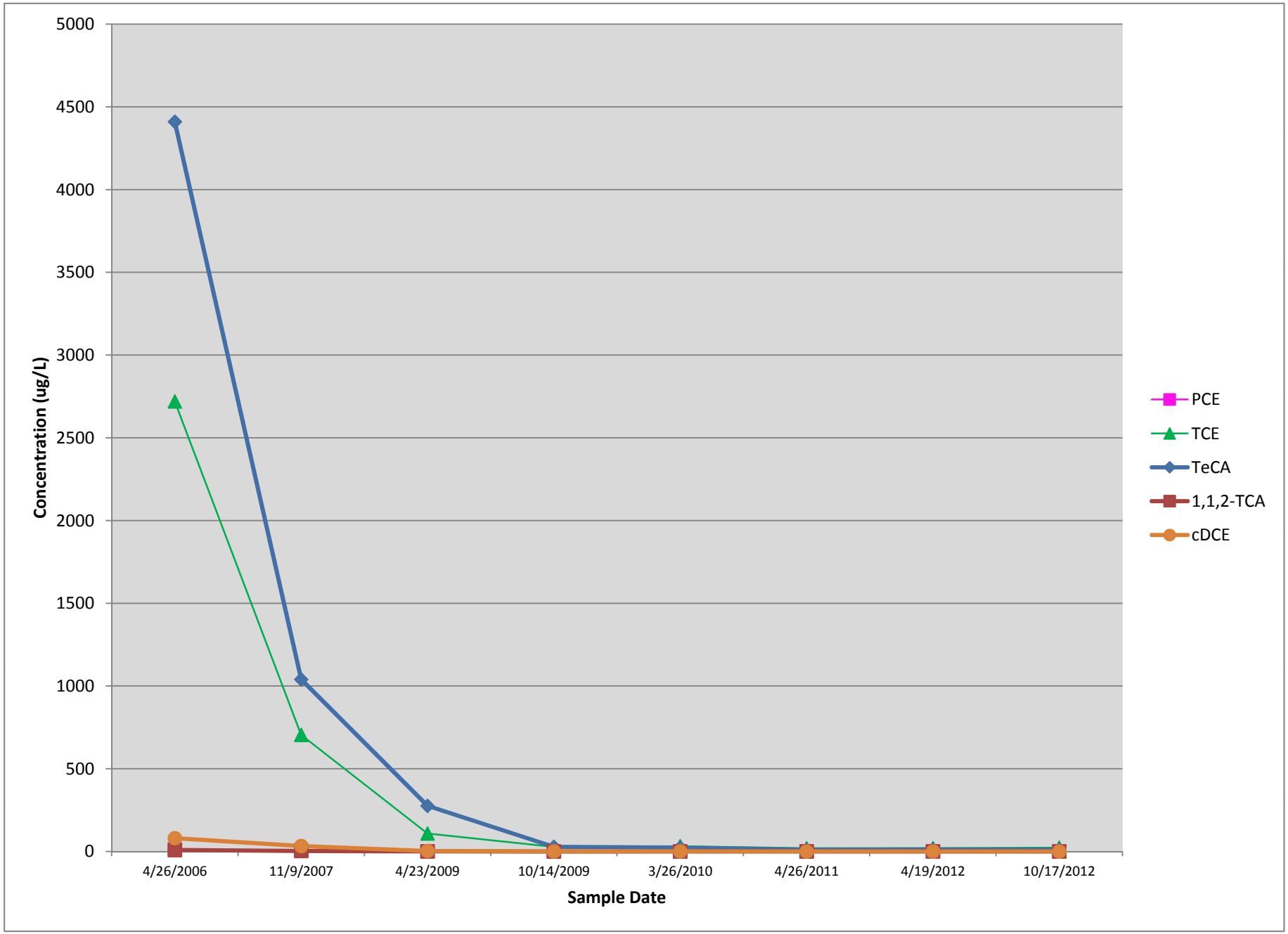
MW-180


100
90
80
70
60
50
40
30
20
10
0
Concentration (ug/L)
11/20/2005
5/21/2007
11/8/2007
4/16/2008
8/20/2008
10/21/2008
4/15/2009
10/13/2009
3/26/2010
4/26/2011
4/19/2012
Sample Date
PCE
TCE
TeCA

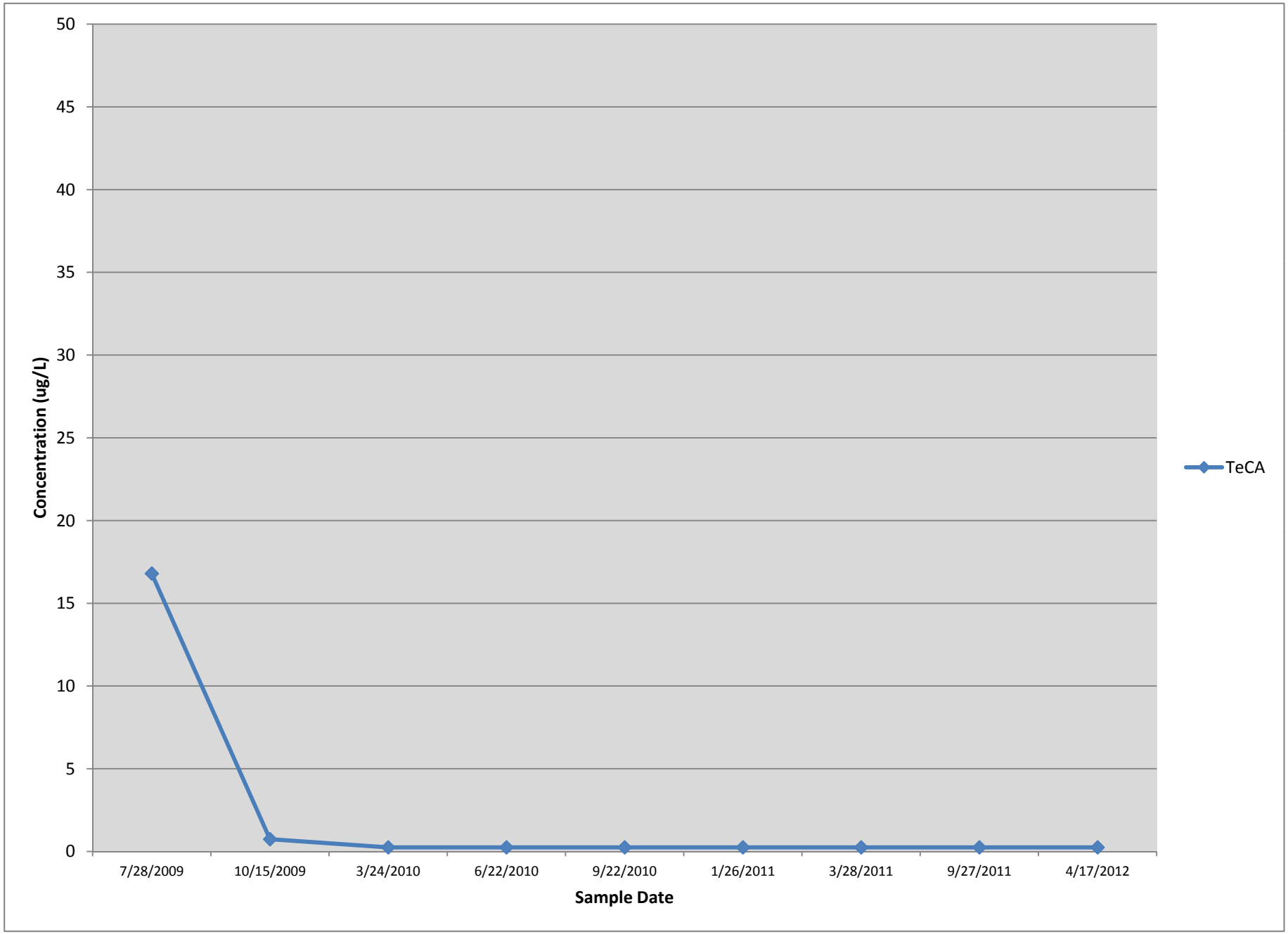
MW-184


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
11/18/2005
11/9/2007
4/23/2009
10/14/2009
4/28/2011
4/19/2012
Sample Date
PCE
TCE
TeCA
CT
CF

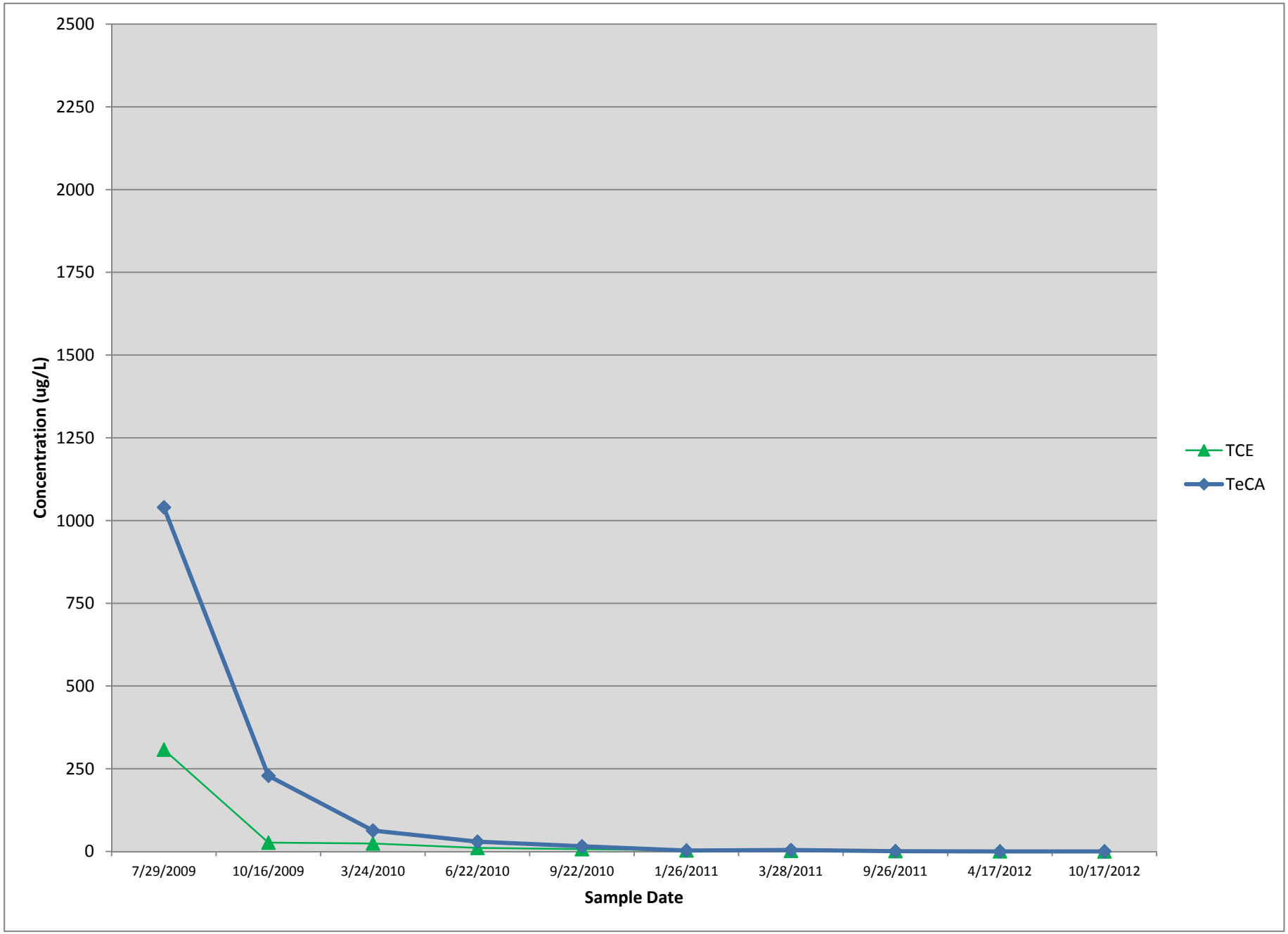
MW-190


5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Concentration (ug/L)
4/26/2006
11/9/2007
4/23/2009
10/14/2009
3/26/2010
4/26/2011
4/19/2012
10/17/2012
Sample Date
PCE
TCE
TeCA
1,1,2-TCA
cDCE

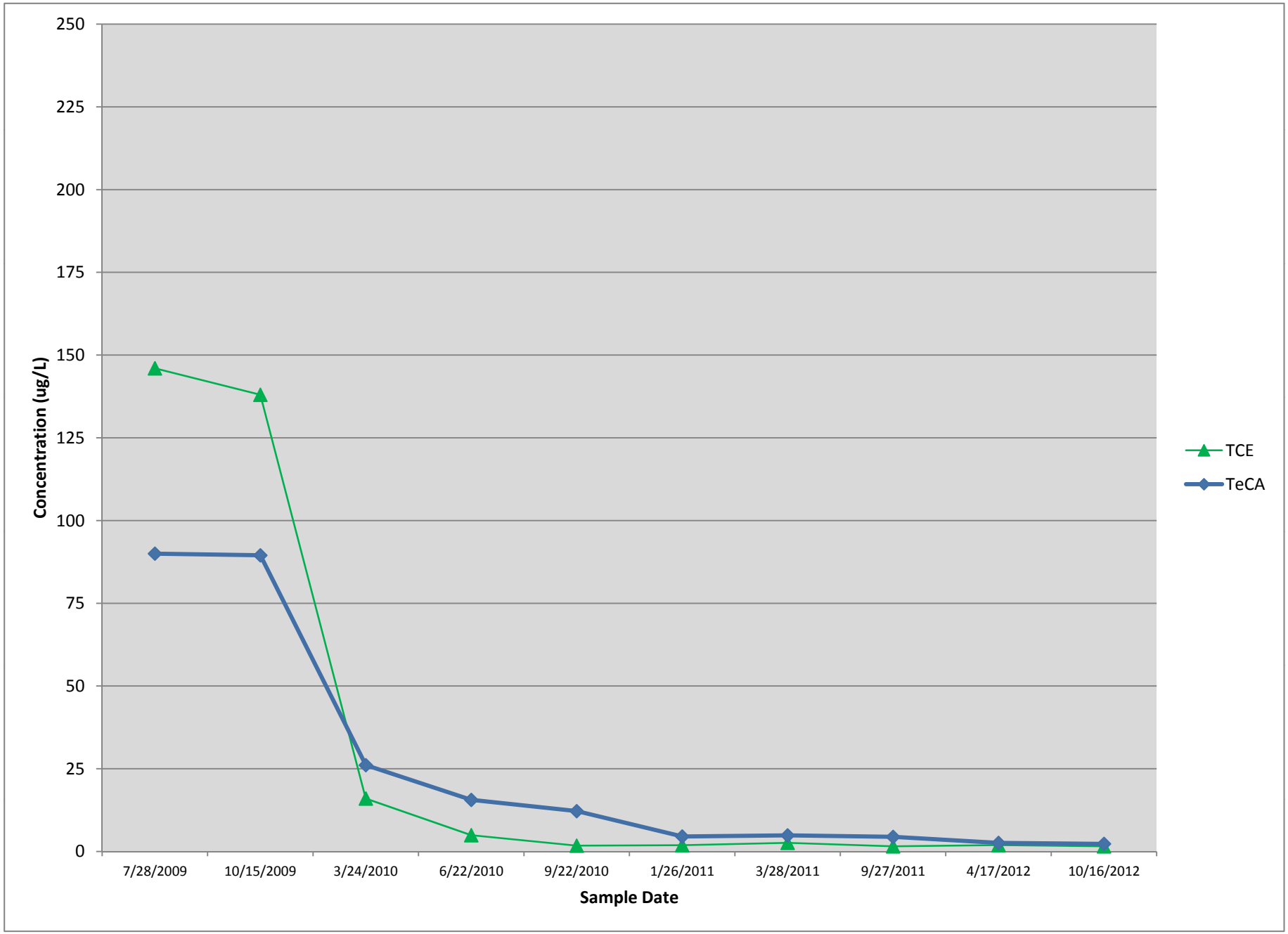
MW-241


50
45
40
35
30
25
20
15
10
5
0
Concentration (ug/L)
7/28/2009
10/15/2009
3/24/2010
6/22/2010
9/22/2010
1/26/2011
3/28/2011
9/27/2011
4/17/2012
Sample Date
TeCA

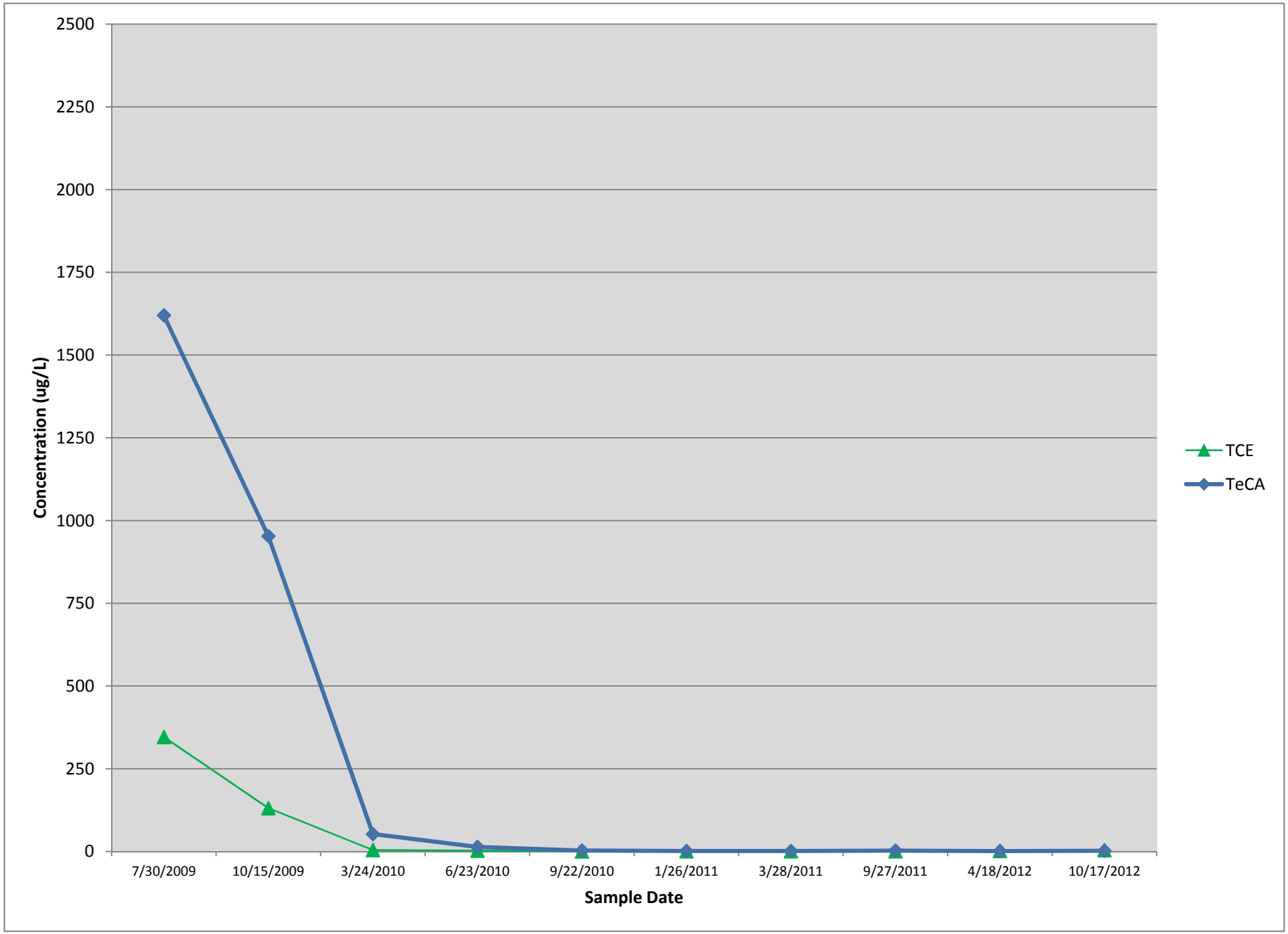
MW-242


2500
2250
2000
1750
1500
1250
1000
750
500
250
0
Concentration (ug/L)
7/29/2009
10/16/2009
3/24/2010
6/22/2010
9/22/2010
1/26/2011
3/28/2011
9/26/2011
4/17/2012
10/17/2012
Sample Date
TCE
TeCA

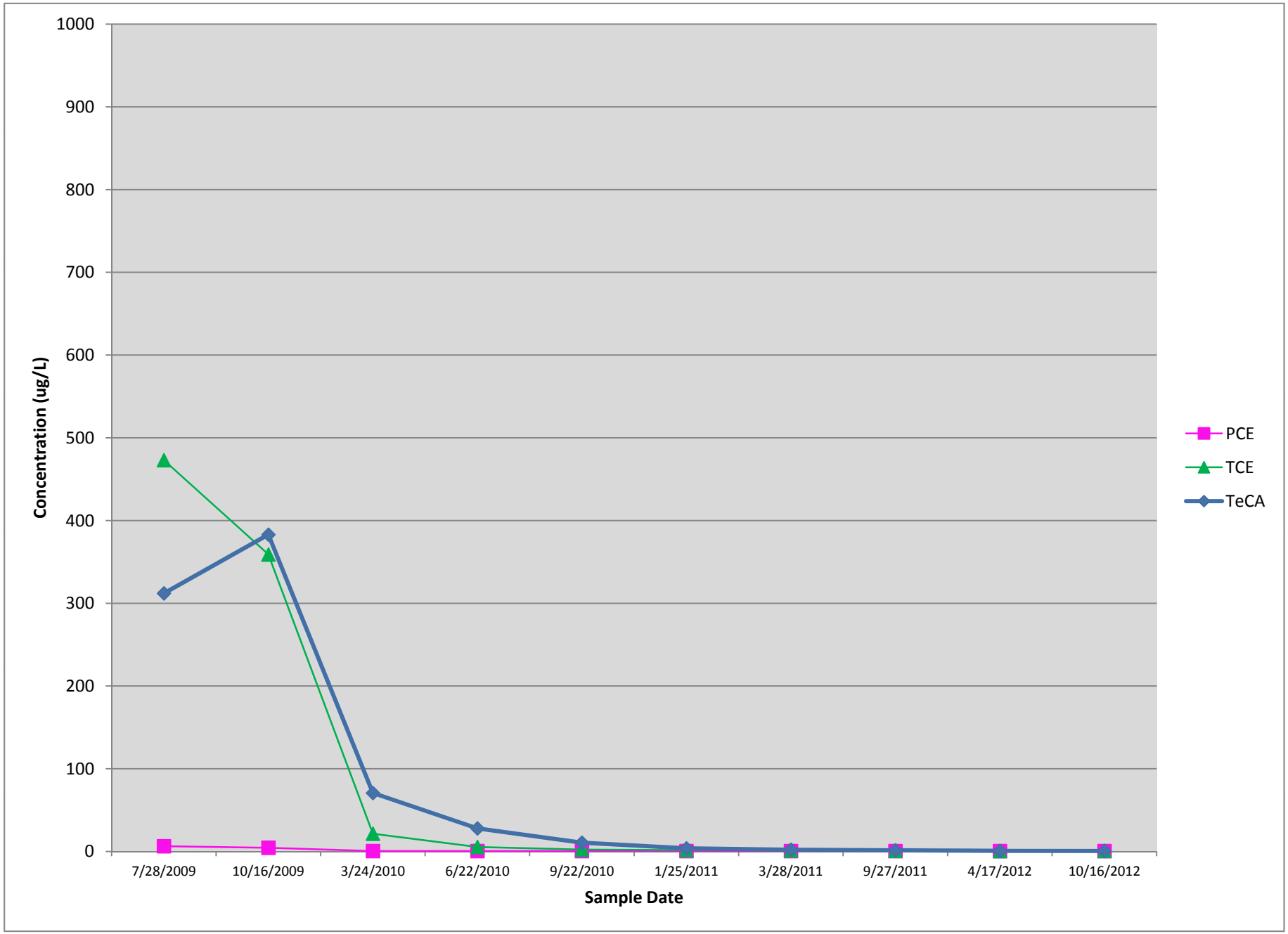
MW-243


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
7/28/2009
10/15/2009
3/24/2010
6/22/2010
9/22/2010
1/26/2011
3/28/2011
9/27/2011
4/17/2012
10/16/2012
Sample Date
TCE
TeCA

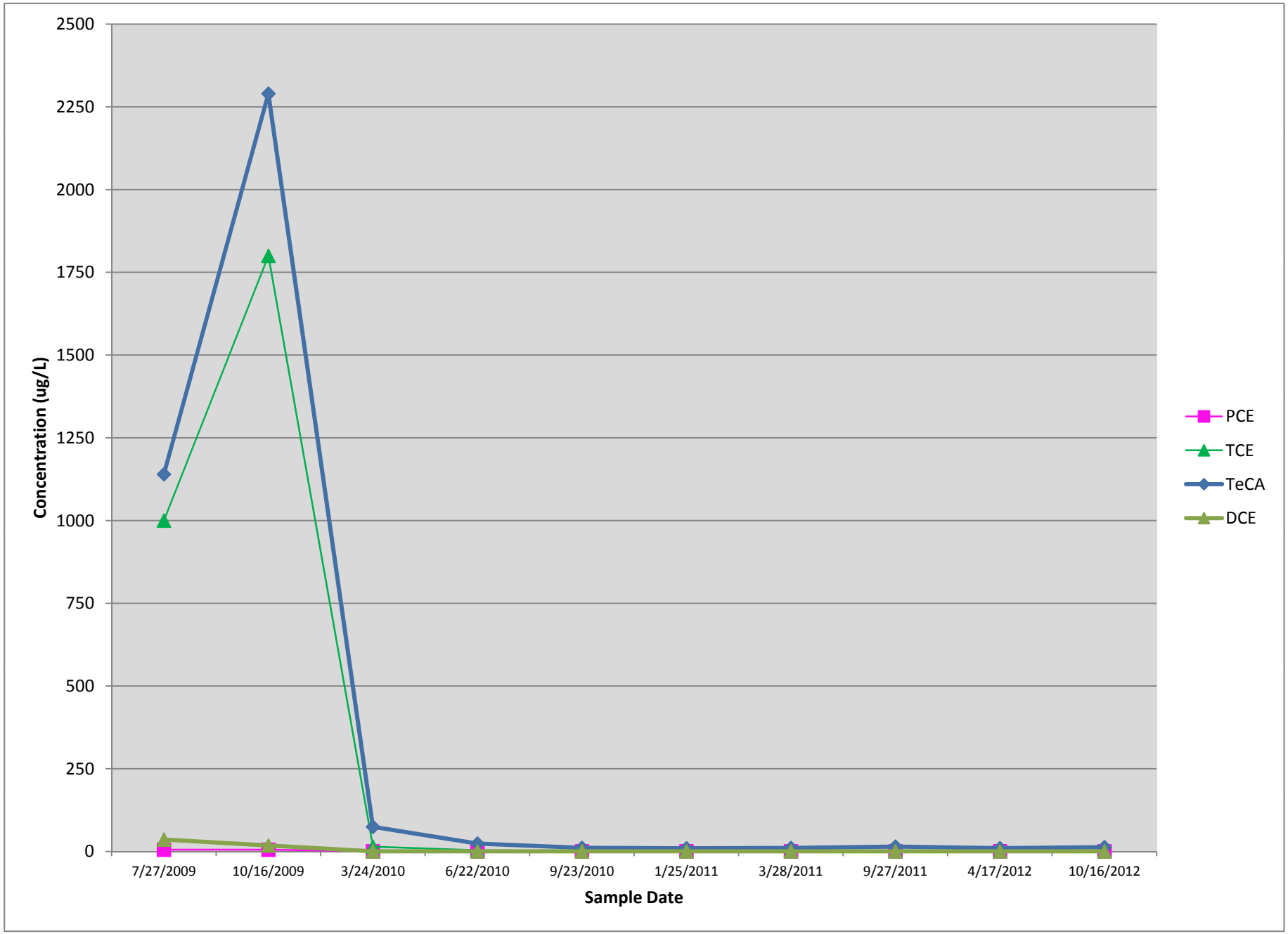
MW-244


2500
2250
2000
1750
1500
1250
1000
750
500
250
0
Concentration (ug/L)
7/30/2009
10/15/2009
3/24/2010
6/23/2010
9/22/2010
1/26/2011
3/28/2011
9/27/2011
4/18/2012
10/17/2012
Sample Date
TCE
TeCA

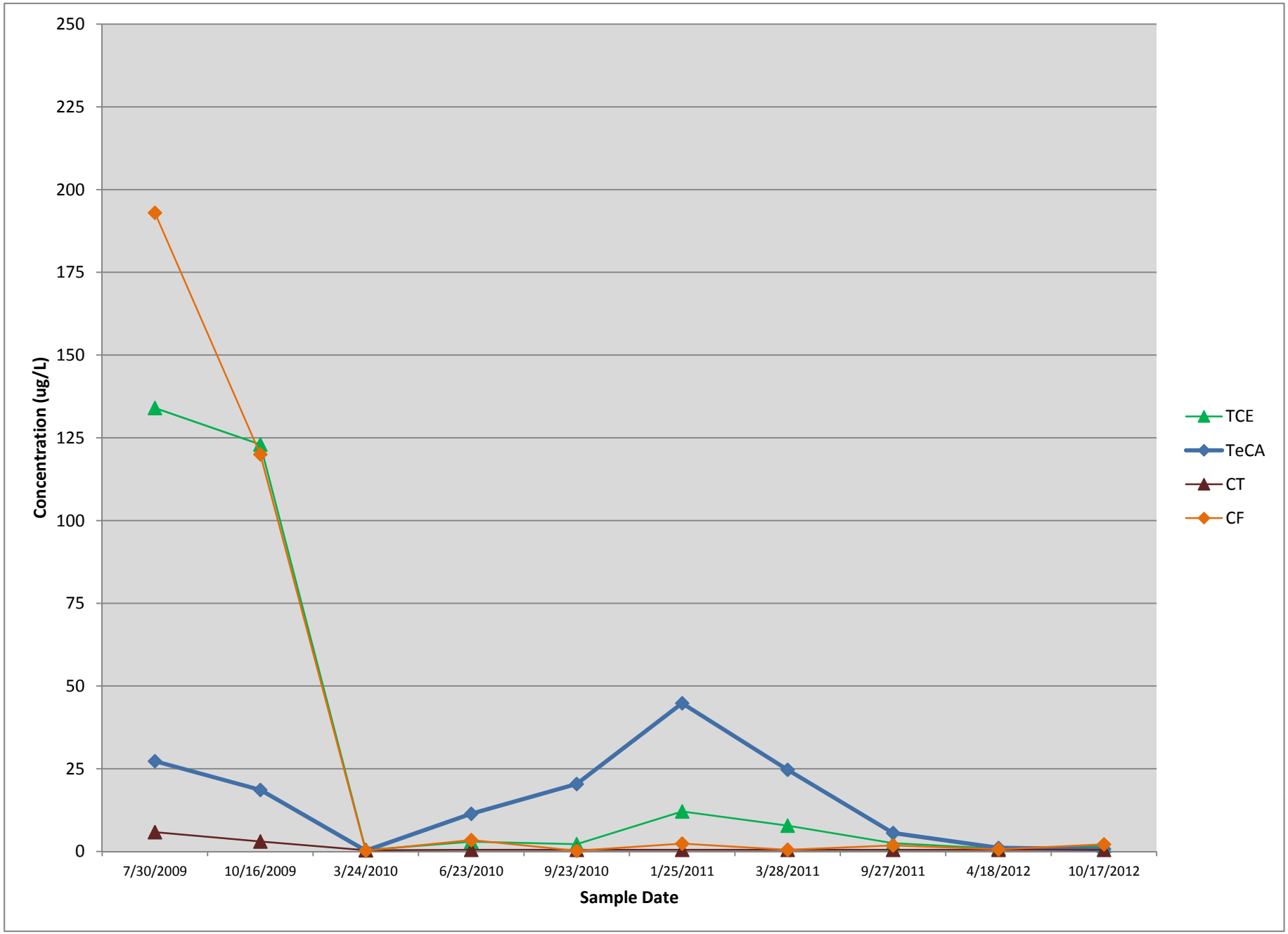
MW-245


1000
900
800
700
600
500
400
300
200
100
0
Concentration (ug/L)
7/28/2009
10/16/2009
3/24/2010
6/22/2010
9/22/2010
1/25/2011
3/28/2011
9/27/2011
4/17/2012
10/16/2012
Sample Date
PCE
TCE
TeCA

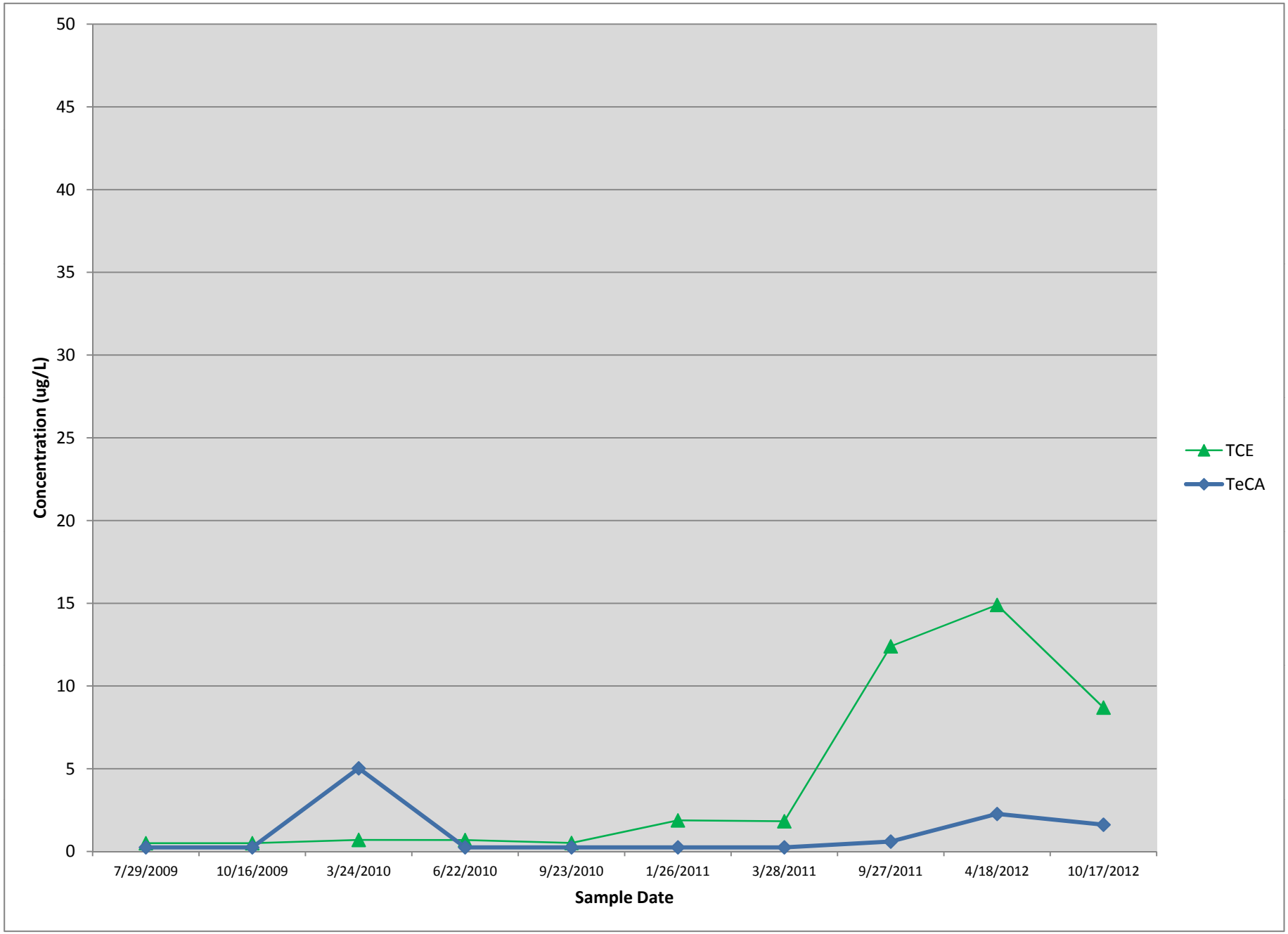
MW-246


2500
2250
2000
1750
1500
1250
1000
750
500
250
0
Concentration (ug/L)
7/27/2009
10/16/2009
3/24/2010
6/22/2010
9/23/2010
1/25/2011
3/28/2011
9/27/2011
4/17/2012
10/16/2012
Sample Date
PCE
TCE
TeCA
DCE

MW-247


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
7/30/2009
10/16/2009
3/24/2010
6/23/2010
9/23/2010
1/25/2011
3/28/2011
9/27/2011
4/18/2012
10/17/2012
Sample Date
TCE
TeCA
CT
CF

MW-249

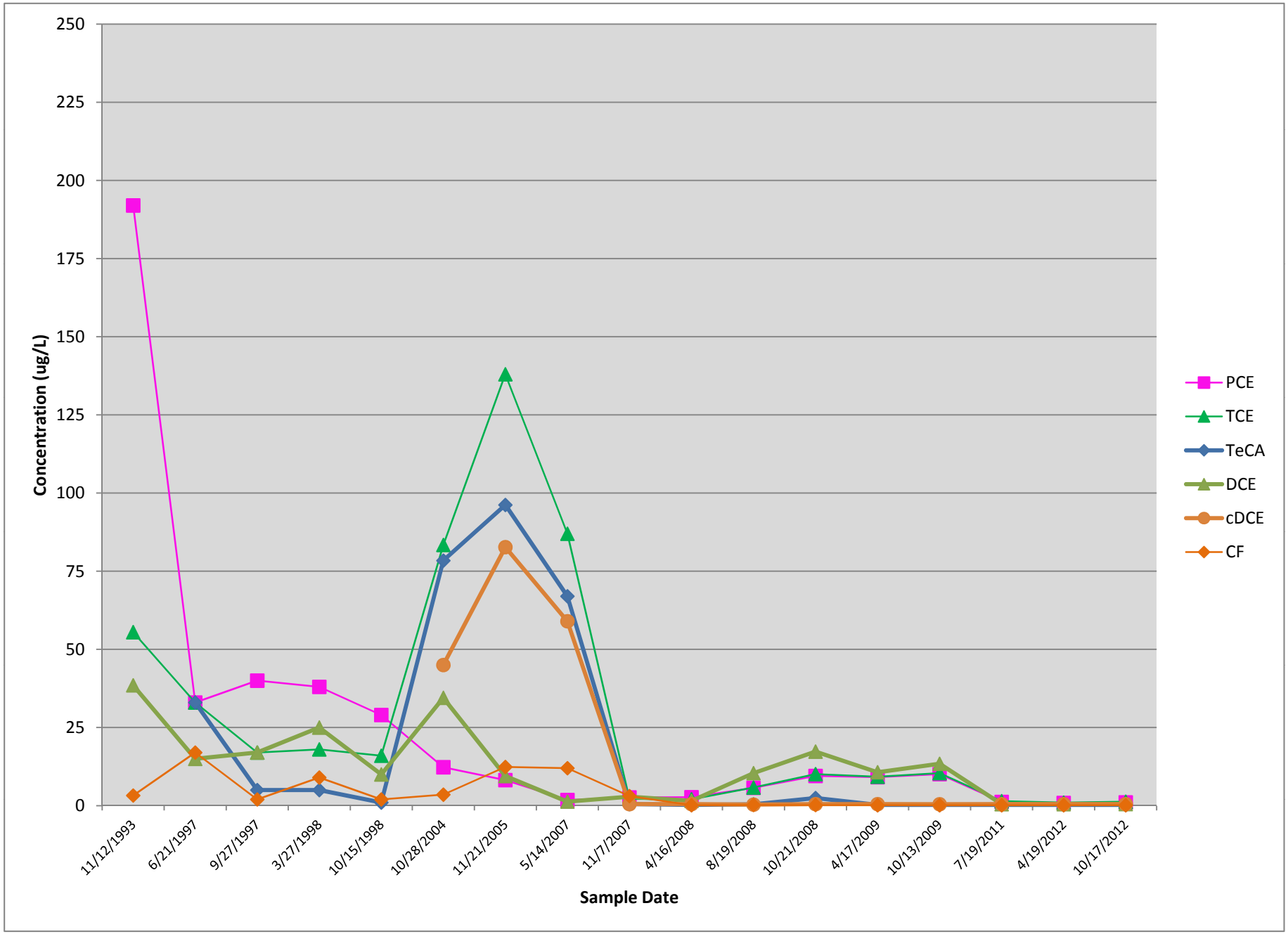

50
45
40
35
30
25
20
15
10
5
0
Concentration (ug/L)
7/29/2009
10/16/2009
3/24/2010
6/22/2010
9/23/2010
1/26/2011
3/28/2011
9/27/2011
4/18/2012
10/17/2012
Sample Date
TCE
TeCA

APPENDIX I-4

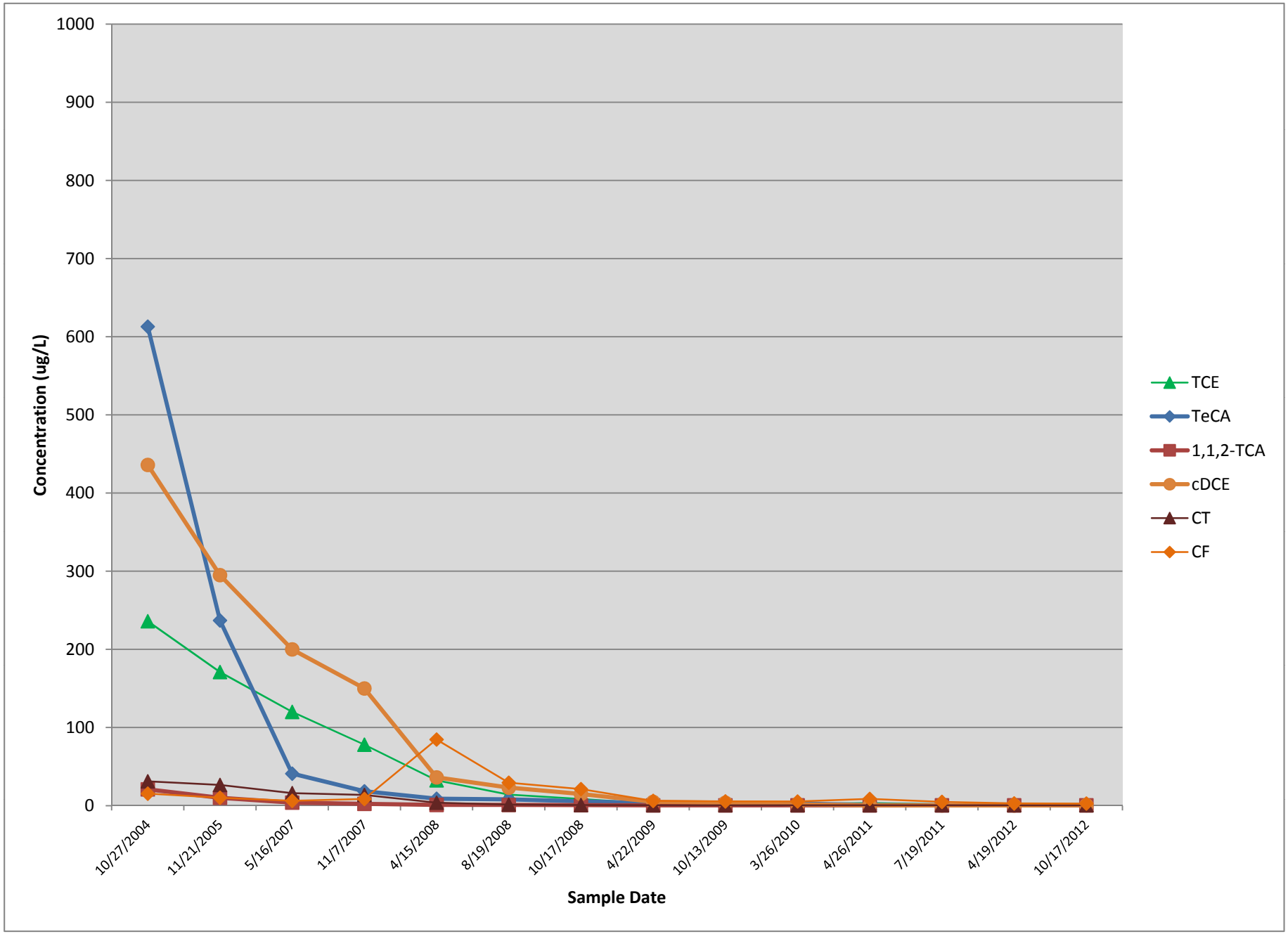
CVOC TIME-TREND PLOTS –
DUNN FIELD

PERFORMANCE-FSVE WELLS

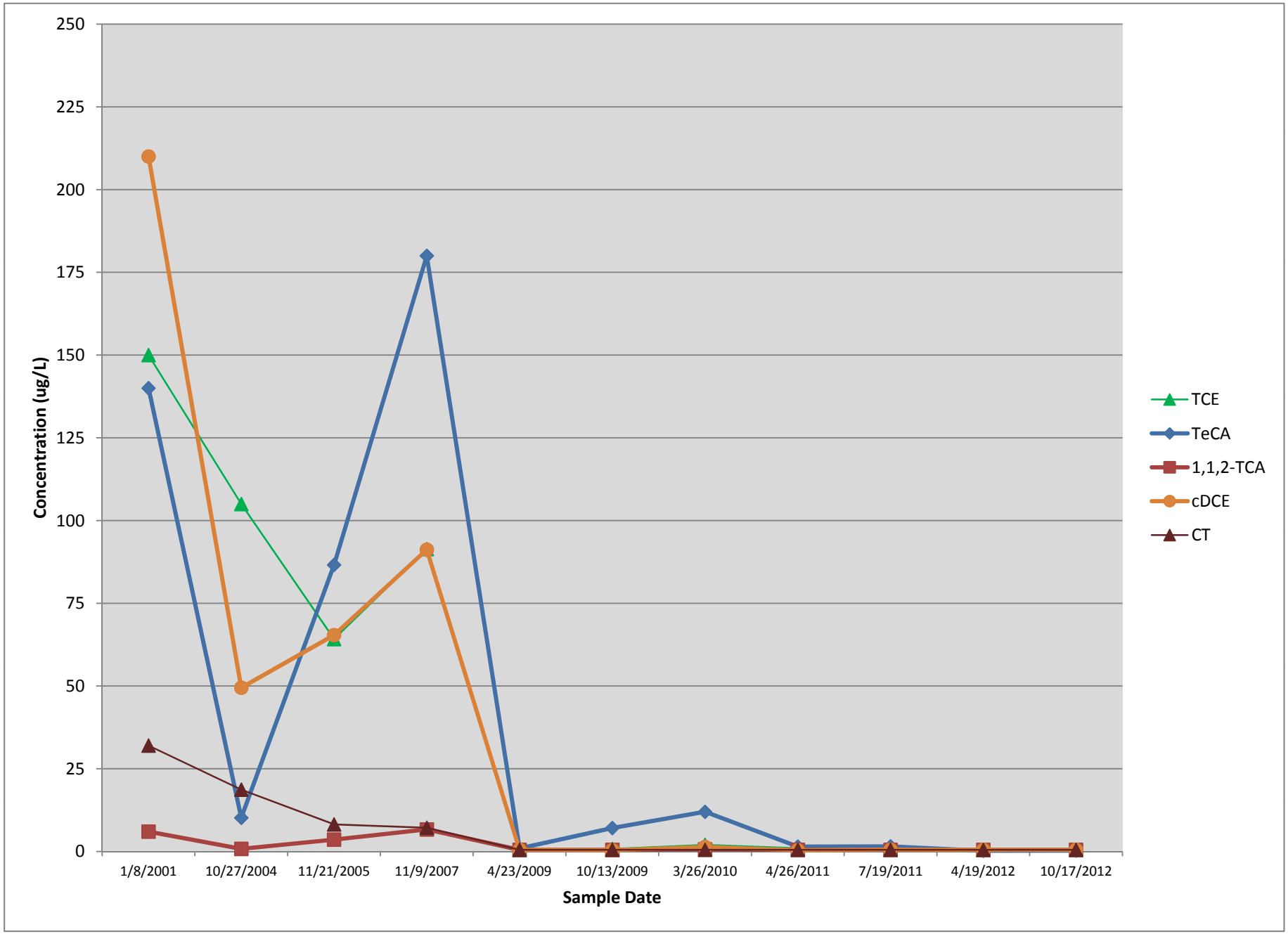
MW-03


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
11/12/1993
6/21/1997
9/27/1997
3/27/1998
10/15/1998
10/28/2004
11/21/2005
5/14/2007
11/7/2007
4/16/2008
8/19/2008
10/21/2008
4/17/2009
10/13/2009
7/19/2011
4/19/2012
10/17/2012
Sample Date
PCE
TCE
TeCA
DCE
cDCE
CF

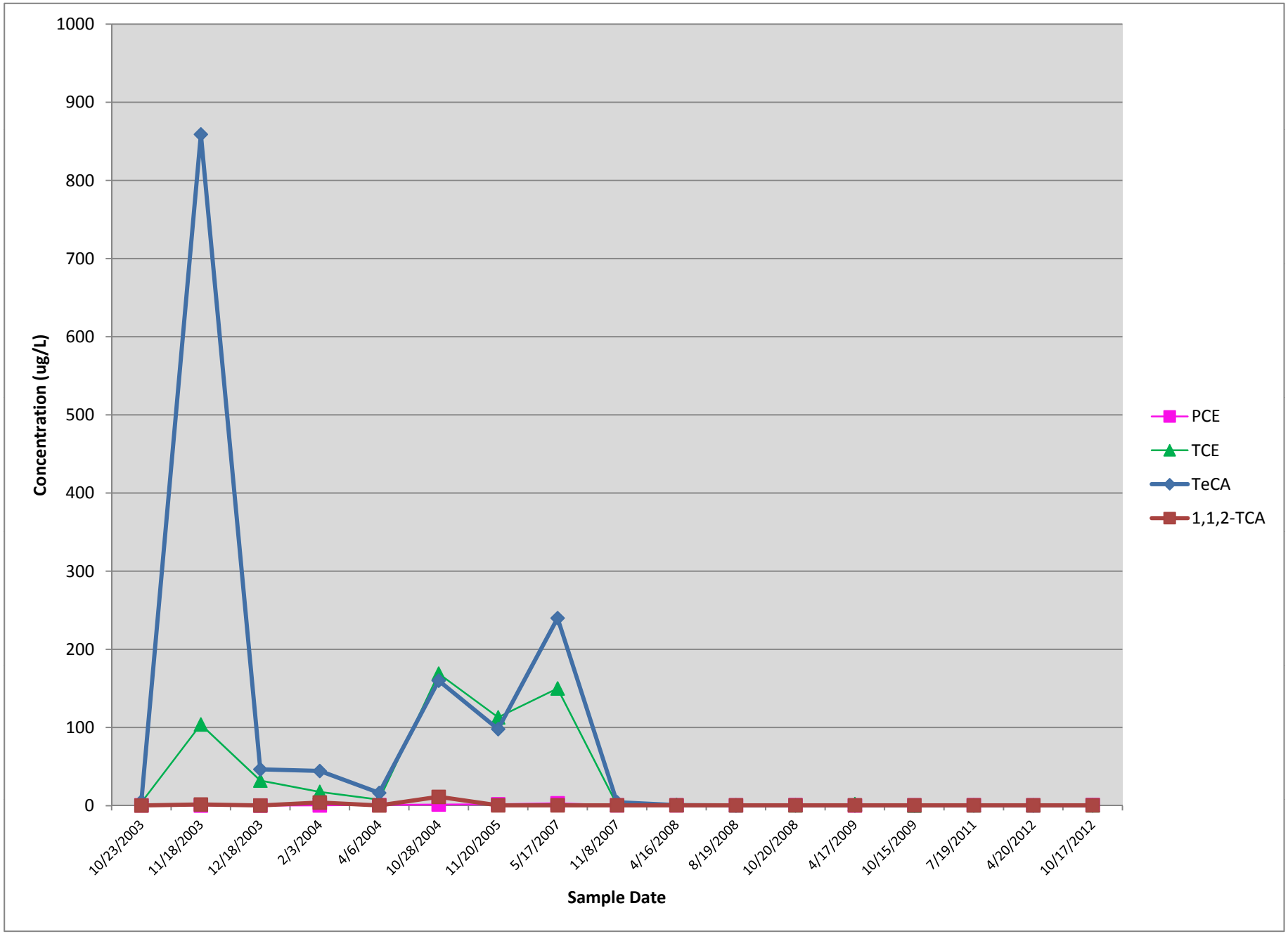
MW-06


1000
900
800
700
600
500
400
300
200
100
0
Concentration (ug/L)
10/27/2004
11/21/2005
5/16/2007
11/7/2007
4/15/2008
8/19/2008
10/17/2008
4/22/2009
10/13/2009
3/26/2010
4/26/2011
7/19/2011
4/19/2012
10/17/2012
Sample Date
TCE
TeCA
1,1,2-TCA
cDCE
CT
CF

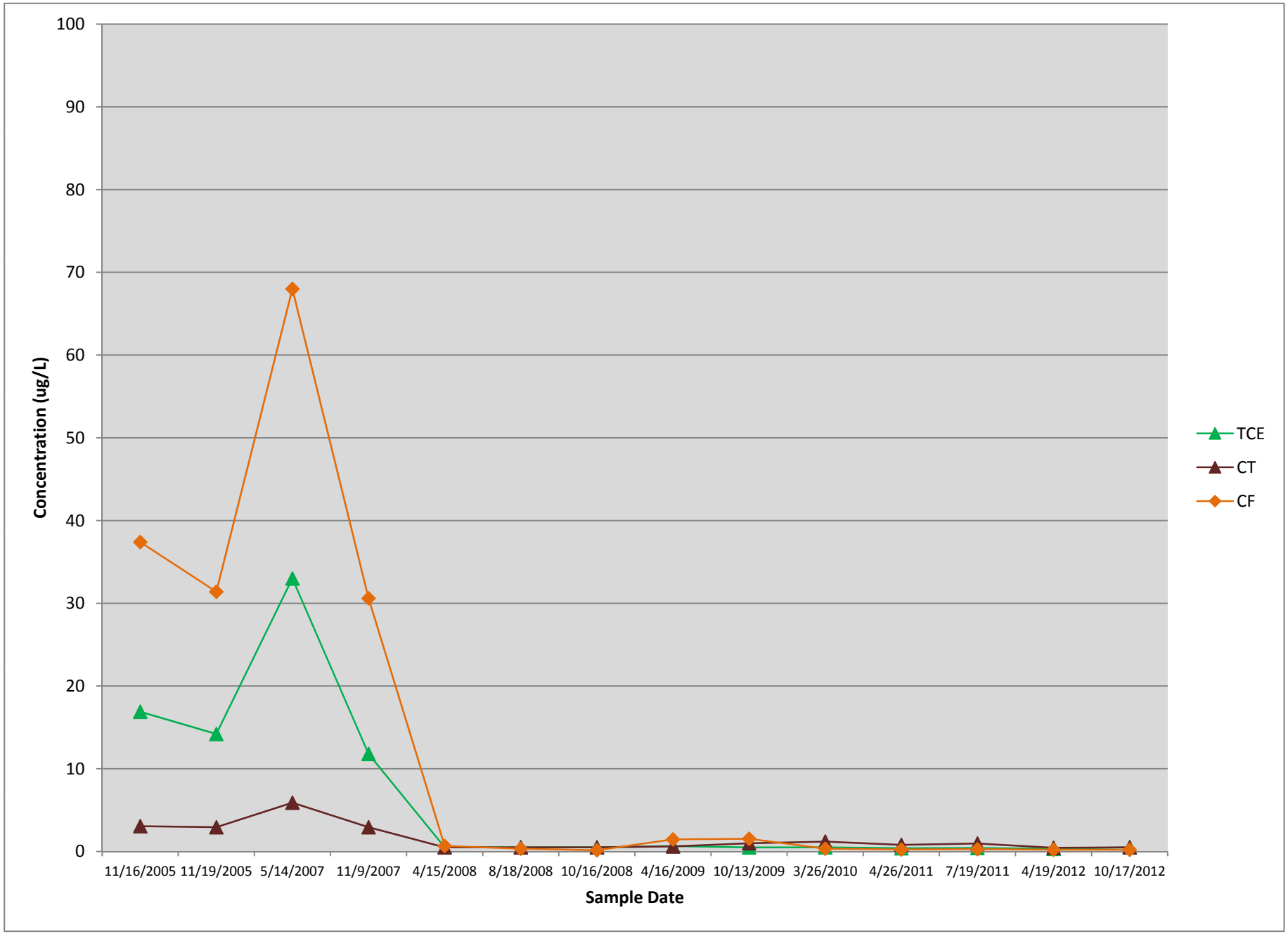
MW-87


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
1/8/2001
10/27/2004
11/21/2005
11/9/2007
4/23/2009
10/13/2009
3/26/2010
4/26/2011
7/19/2011
4/19/2012
10/17/2012
Sample Date
TCE
TeCA
1,1,2-TCA
cDCE
CT

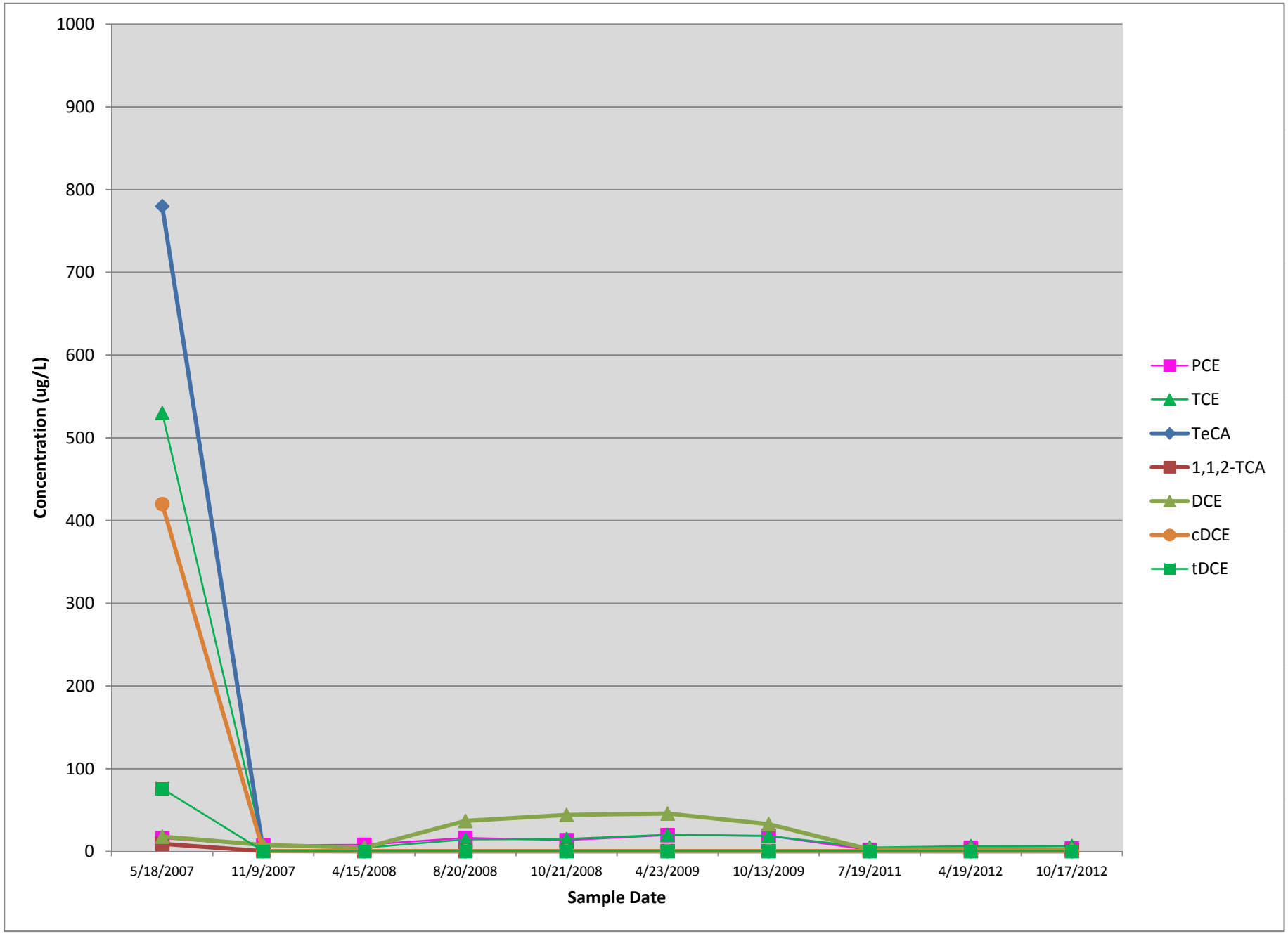
MW-134


1000
900
800
700
600
500
400
300
200
100
0
Concentration (ug/L)
10/23/2003
11/18/2003
12/18/2003
2/3/2004
4/6/2004
10/28/2004
11/20/2005
5/17/2007
11/8/2007
4/16/2008
8/19/2008
10/20/2008
4/17/2009
10/15/2009
7/19/2011
4/20/2012
10/17/2012
Sample Date
PCE
TCE
TeCA
1,1,2-TCA

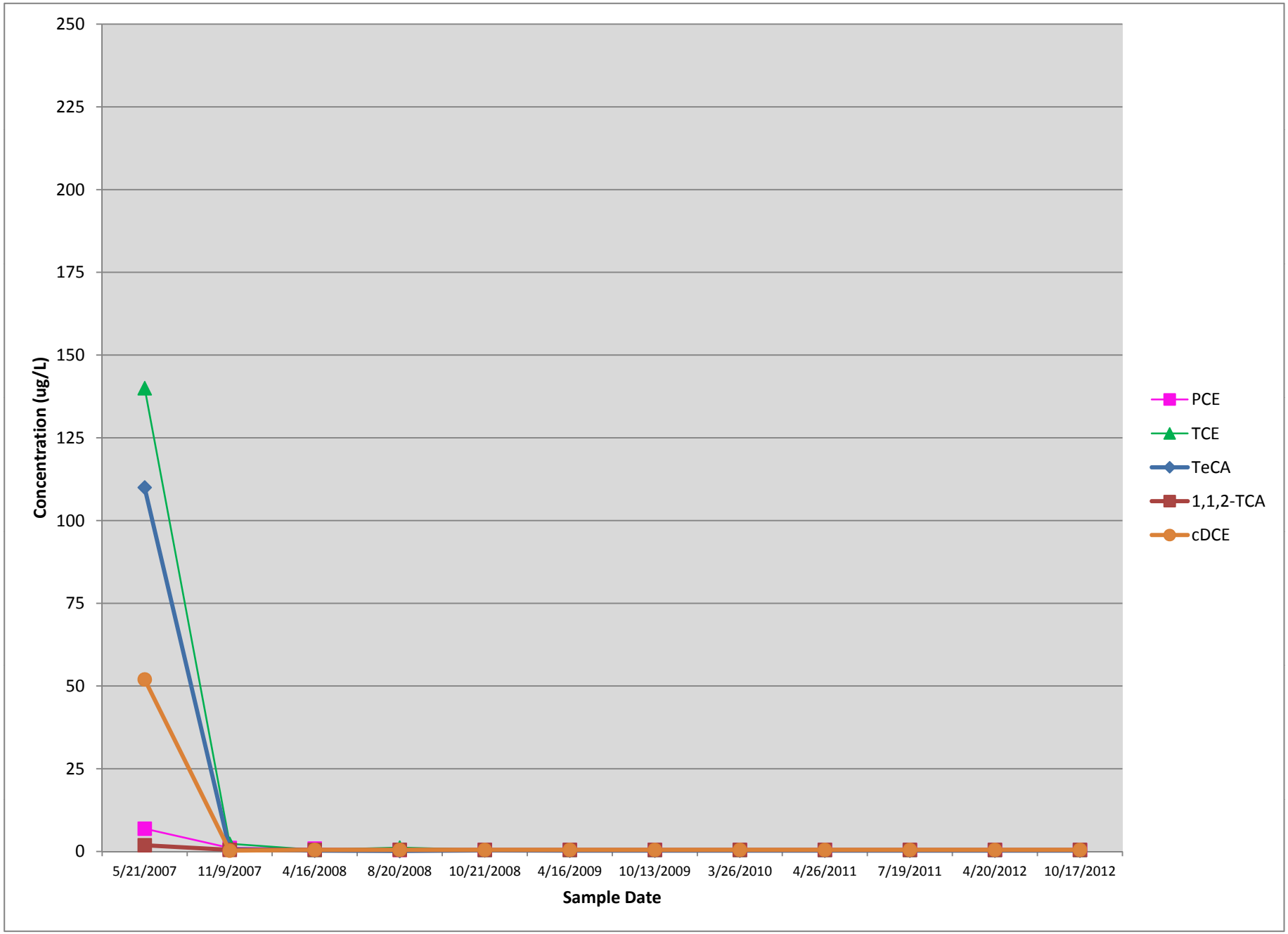
MW-174


100
90
80
70
60
50
40
30
20
10
0
Concentration (ug/L)
11/16/2005
11/19/2005
5/14/2007
11/9/2007
4/15/2008
8/18/2008
10/16/2008
4/16/2009
10/13/2009
3/26/2010
4/26/2011
7/19/2011
4/19/2012
10/17/2012
Sample Date
TCE
CT
CF

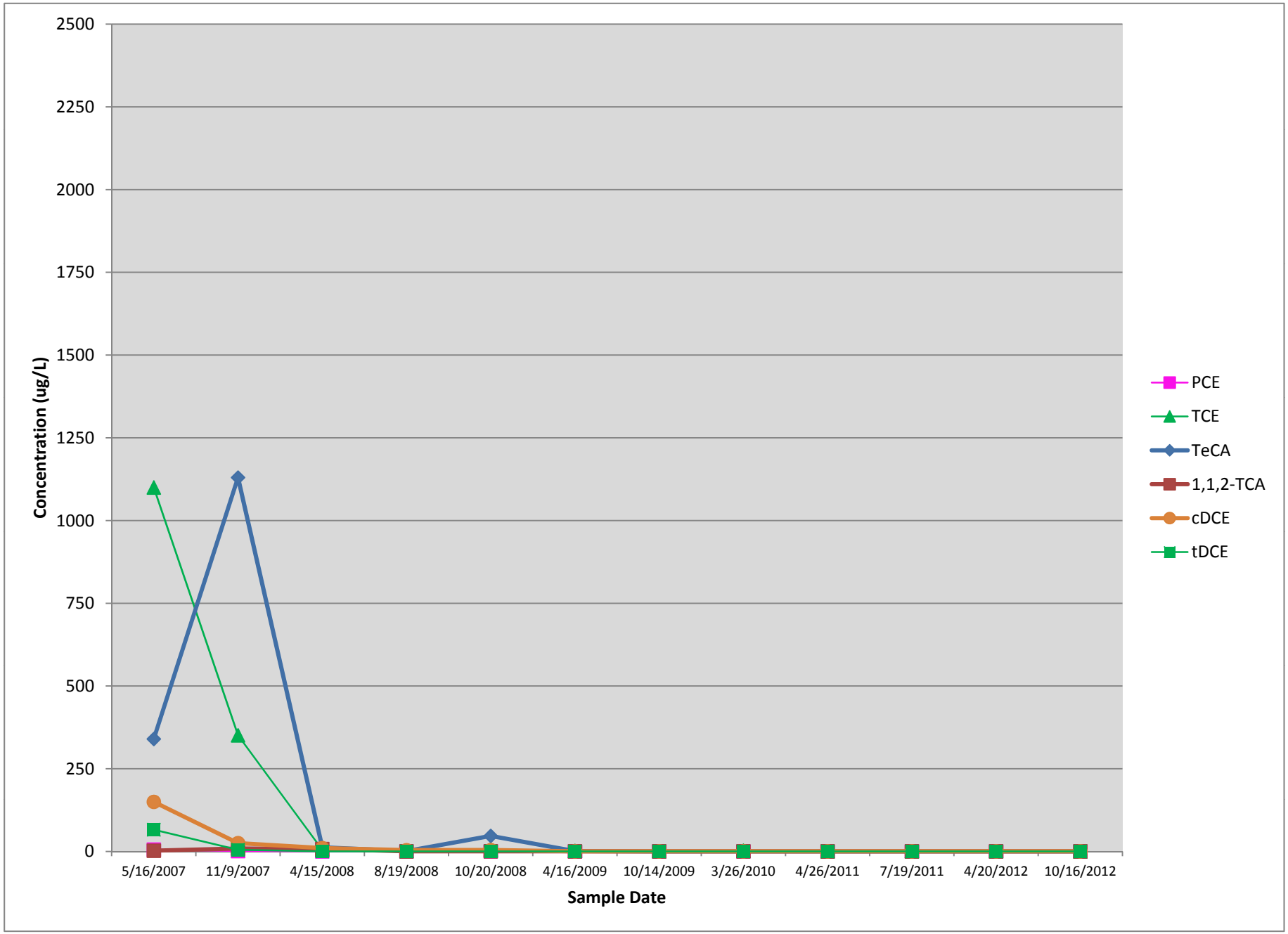
MW-220


1000
900
800
700
600
500
400
300
200
100
0
Concentration (ug/L)
5/18/2007
11/9/2007
4/15/2008
8/20/2008
10/21/2008
4/23/2009
10/13/2009
7/19/2011
4/19/2012
10/17/2012
Sample Date
PCE
TCE
TeCA
1,1,2-TCA
DCE
cDCE
tDCE

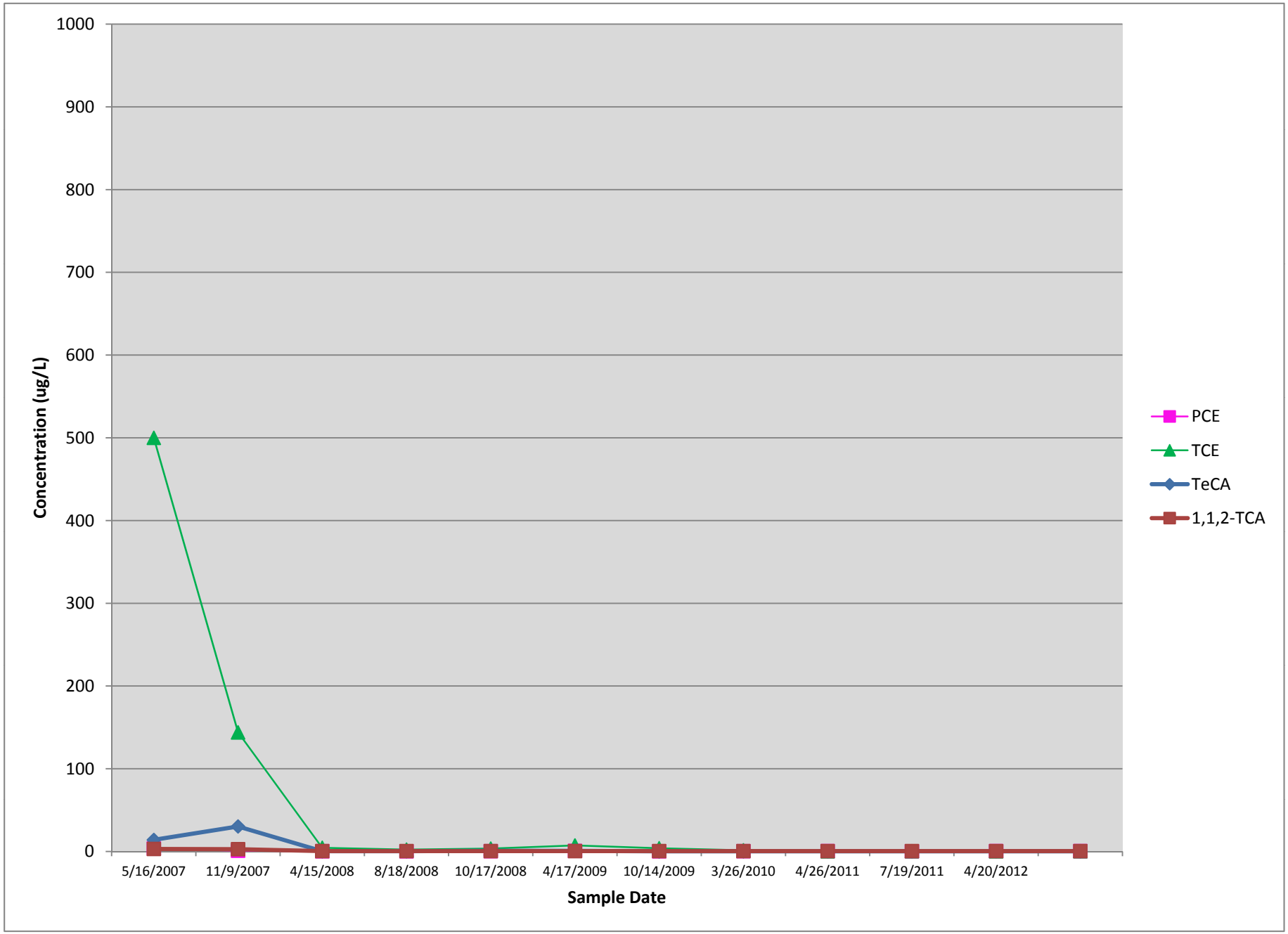
MW-221


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
5/21/2007
11/9/2007
4/16/2008
8/20/2008
10/21/2008
4/16/2009
10/13/2009
3/26/2010
4/26/2011
7/19/2011
4/20/2012
10/17/2012
Sample Date
PCE
TCE
TeCA
1,1,2-TCA
cDCE

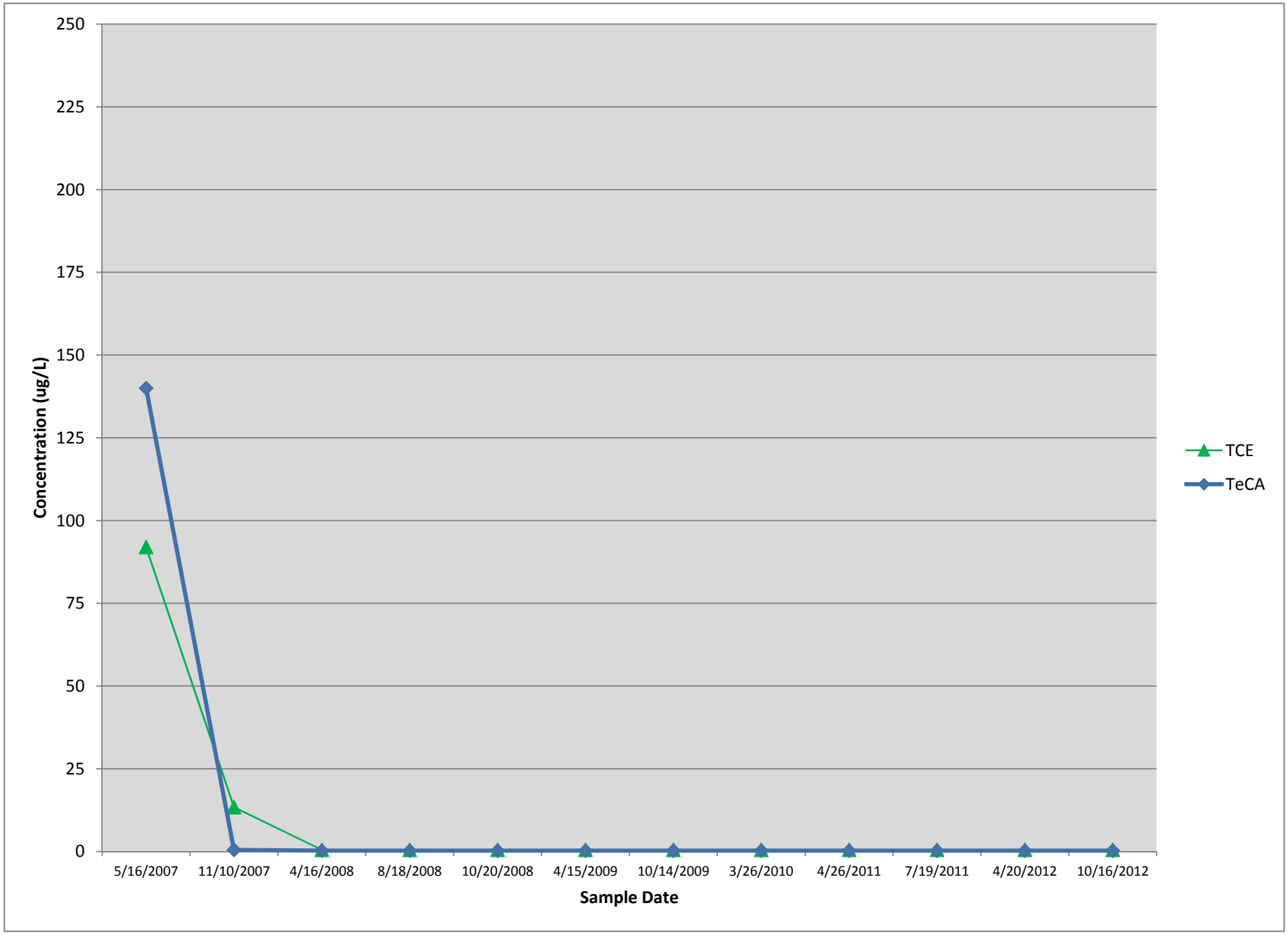
MW-222


2500
2250
2000
1750
1500
1250
1000
750
500
250
0
Concentration (ug/L)
5/16/2007
11/9/2007
4/15/2008
8/19/2008
10/20/2008
4/16/2009
10/14/2009
3/26/2010
4/26/2011
7/19/2011
4/20/2012
10/16/2012
Sample Date
PCE
TCE
TeCA
1,1,2-TCA
cDCE
tDCE

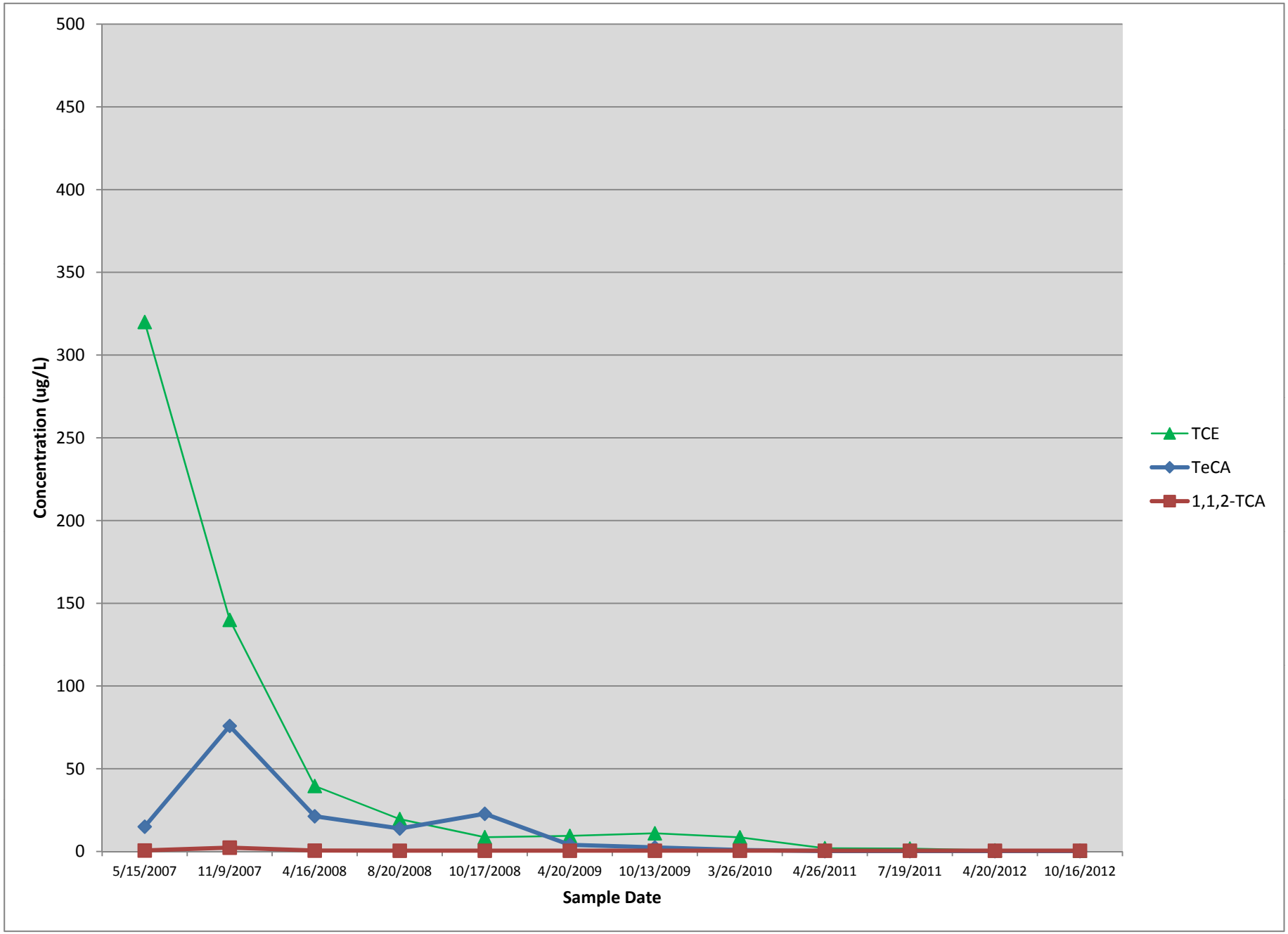
MW-223


1000
900
800
700
600
500
400
300
200
100
0
Concentration (ug/L)
5/16/2007
11/9/2007
4/15/2008
8/18/2008
10/17/2008
4/17/2009
10/14/2009
3/26/2010
4/26/2011
7/19/2011
4/20/2012
Sample Date
PCE
TCE
TeCA
1,1,2-TCA

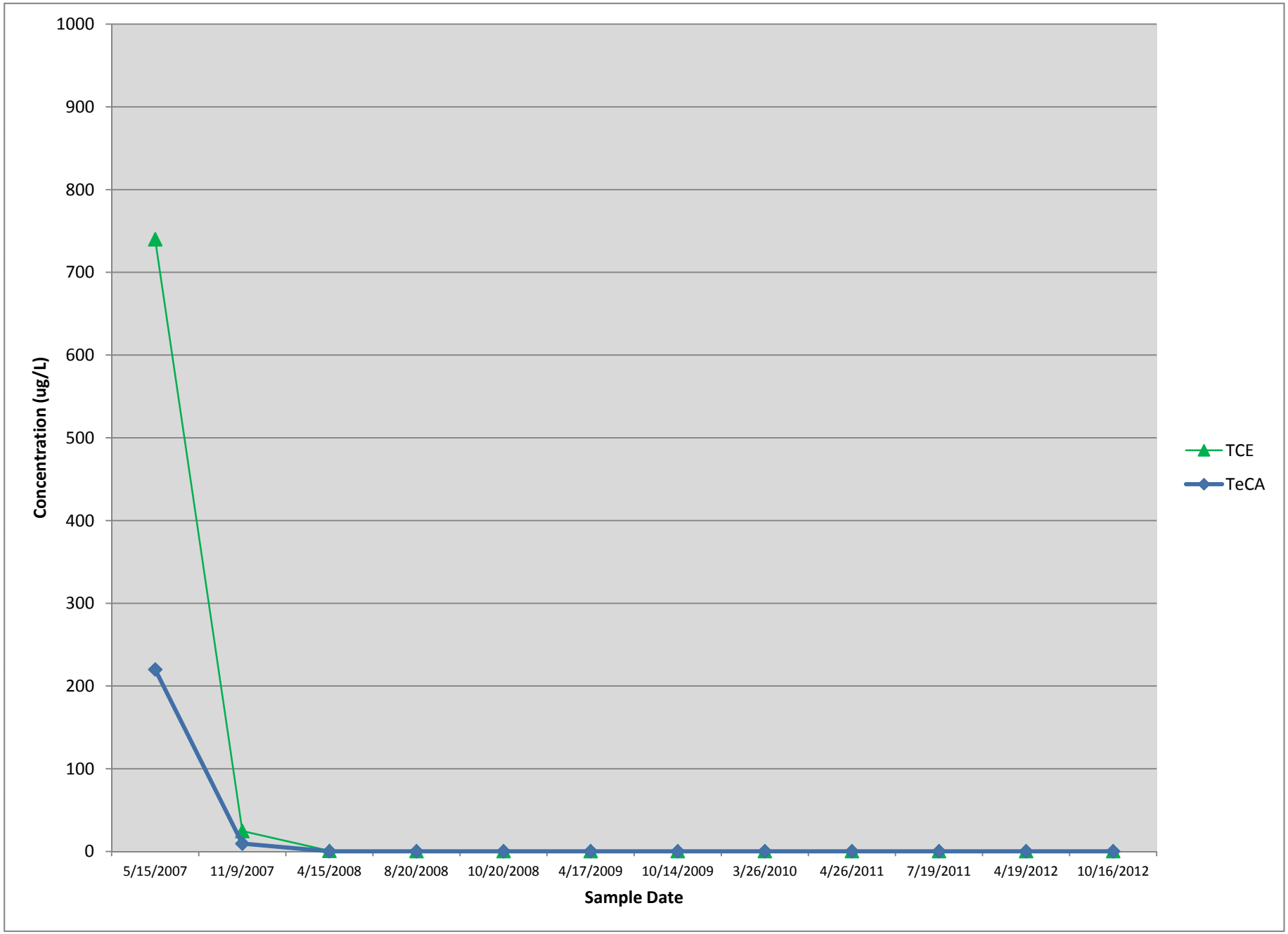
MW-224


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
5/16/2007
11/10/2007
4/16/2008
8/18/2008
10/20/2008
4/15/2009
10/14/2009
3/26/2010
4/26/2011
7/19/2011
4/20/2012
10/16/2012
Sample Date
TCE
TeCA

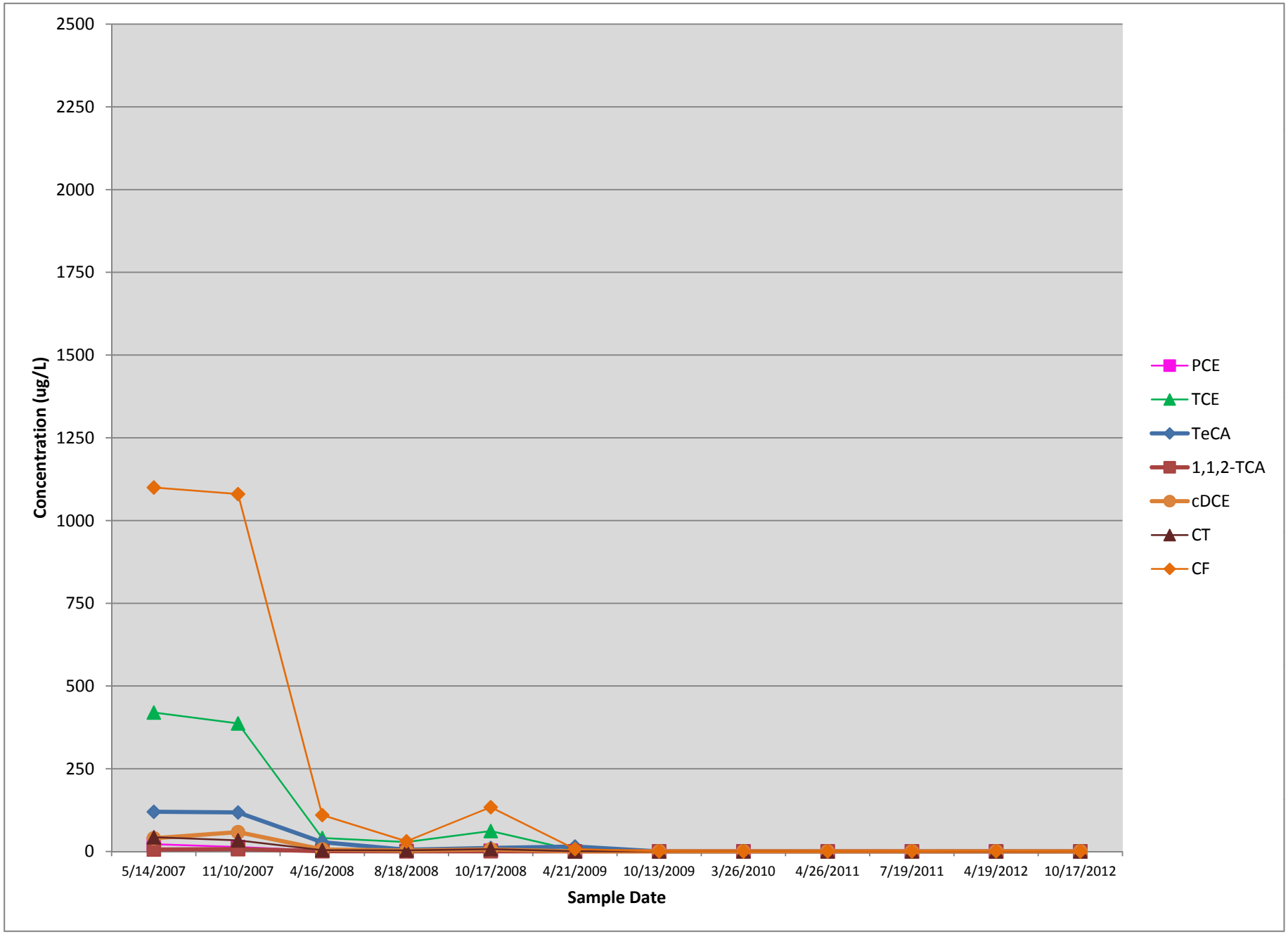
MW-225


500
450
400
350
300
250
200
150
100
50
0
Concentration (ug/L)
5/15/2007
11/9/2007
4/16/2008
8/20/2008
10/17/2008
4/20/2009
10/13/2009
3/26/2010
4/26/2011
7/19/2011
4/20/2012
10/16/2012
Sample Date
TCE
TeCA
1,1,2-TCA

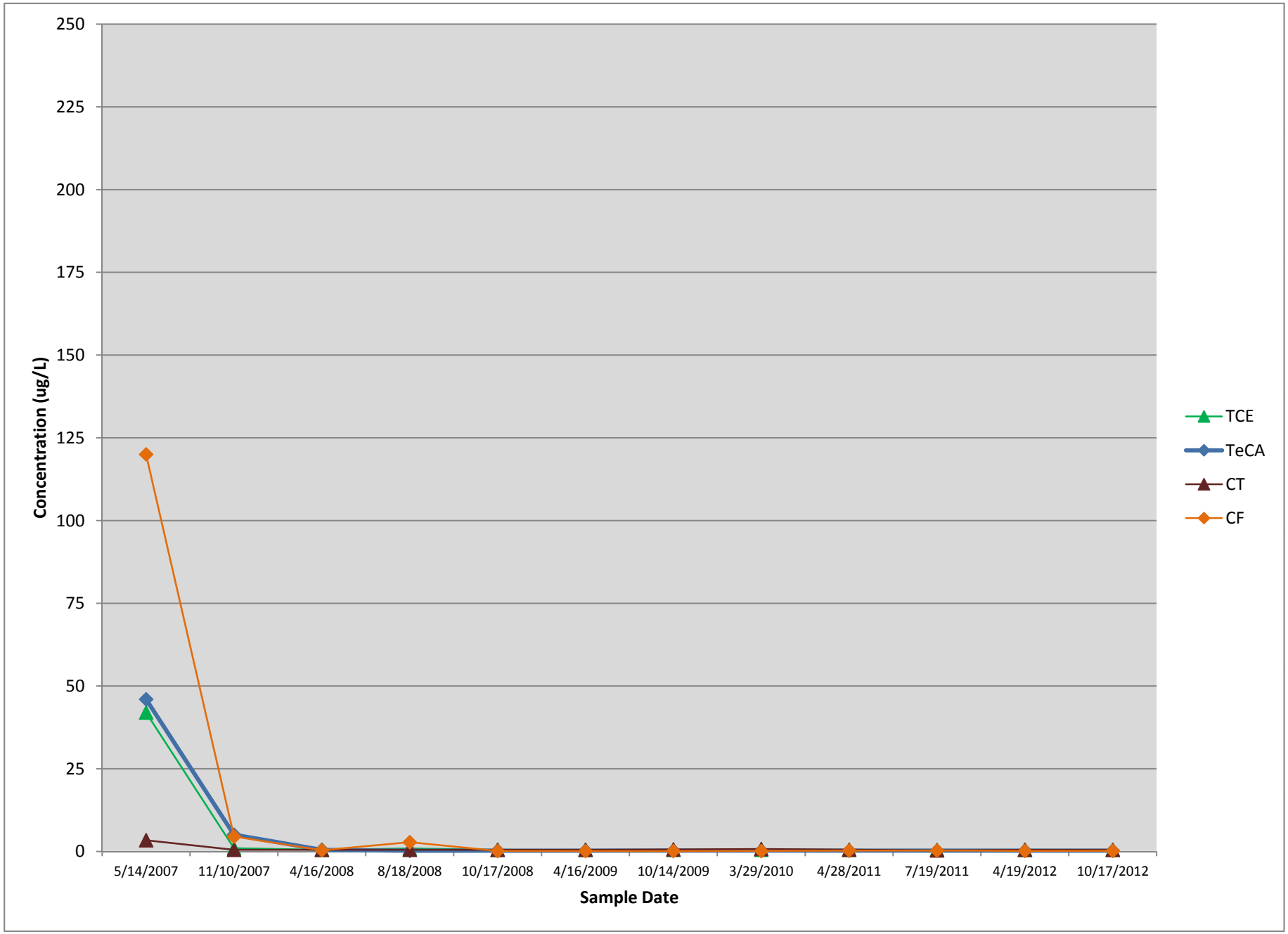
MW-226


1000
900
800
700
600
500
400
300
200
100
0
Concentration (ug/L)
5/15/2007
11/9/2007
4/15/2008
8/20/2008
10/20/2008
4/17/2009
10/14/2009
3/26/2010
4/26/2011
7/19/2011
4/19/2012
10/16/2012
Sample Date
TCE
TeCA

MW-227


2500
2250
2000
1750
1500
1250
1000
750
500
250
0
Concentration (ug/L)
5/14/2007
11/10/2007
4/16/2008
8/18/2008
10/17/2008
4/21/2009
10/13/2009
3/26/2010
4/26/2011
7/19/2011
4/19/2012
10/17/2012
Sample Date
PCE
TCE
TeCA
1,1,2-TCA
cDCE
CT
CF

MW-228


250
225
200
175
150
125
100
75
50
25
0
Concentration (ug/L)
5/14/2007
11/10/2007
4/16/2008
8/18/2008
10/17/2008
4/16/2009
10/14/2009
3/29/2010
4/28/2011
7/19/2011
4/19/2012
10/17/2012
Sample Date
TCE
TeCA
CT
CF