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ANNUAL LONG-TERM MONITORING REPORT – 2009
MAIN INSTALLATION

Defense Depot Memphis, Tennessee

Defense Logistics Agency

Air Force Center for Engineering and the Environment
Contract No. FA8903-08-D-8771
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Prepared for:

Air Force Center for Engineering and the Environment
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Prepared by:

HDR|e²M
184 Creekside Park
Suite 100
Spring Branch, Texas 78070

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LIST OF ACRONYMS AND ABBREVIATIONS

AFCEE	Air Force Center for Engineering and the Environment
bgs	Below Ground Surface
cDCE	cis-1,2-Dichloroethene
CF	chloroform or confidence factor
COV	coefficient of variation
CT	carbon tetrachloride
CVOC	Chlorinated Volatile Organic Compound
DDMT	Defense Depot Memphis, Tennessee
DQE	Data Quality Evaluation
DQO	Data Quality Objective
DRI	Design-related Investigation
e^2M	engineering-environmental Management, Inc.
EBT	Enhanced Bioremediation Treatment
FSVE	Fluvial Soil Vapor Extraction
IDW	Investigation-derived Waste
IRACR	Interim Remedial Action Completion Report
LCS	Laboratory Calibration Standard
LTM	Long-term Monitoring
LTOA	Long-Term Operational Area
LUC	Land Use Control
MACTEC	MACTEC Engineering and Consulting, Inc.
MAROS	Monitoring and Remediation Optimization System
MCL	Maximum Contaminant Level
µg/L	Micrograms per Liter
MI	Main Installation
msl	Mean Sea Level
MW	Monitoring Well
NTU	Nephelometric Turbidity Units
PCE	Tetrachloroethene
RA	Remedial Action
RAO	Remedial Action Objective
RA SAP	Remedial Action Sampling and Analysis Plan

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LIST OF ACRONYMS AND ABBREVIATIONS

(Continued)

RAWP	Remedial Action Work Plan
RD	Remedial Design or Reductive Dechlorination
RI	Remedial Investigation
ROD	Record of Decision
RL	Reporting Limit
TCA	1,1,1-Trichloroethane
TCE	Trichloroethene
TCL	Target Compound List
TDEC	Tennessee Department of Environment and Conservation
USEPA	U.S. Environmental Protection Agency
VC	Vinyl Chloride
VOC	Volatile Organic Compound

1.0 INTRODUCTION

HDR|e^{2}M has prepared this 2009 Annual Long-term Monitoring (LTM) Report for the Main Installation (MI) at Defense Depot Memphis, Tennessee (DDMT) under Contract FA8903-08-D-8771, Task Order 0019 to the Air Force Center for Engineering and the Environment (AFCEE). MI LTM is performed to document changes in plume concentrations and to detect potential plume migration to off-site areas or into deeper aquifers. This report documents the groundwater monitoring activities on the MI during 2009. The MI LTM was performed in accordance with the LTM Plan in Appendix B of the *Main Installation Final Remedial Design, Rev.1* (RD) (CH2M HILL, 2004) and the *Remedial Action Work Plan, Main Installation Rev. 1* (RAWP) (MACTEC, 2005a).

1.1 SITE LOCATION AND DESCRIPTION

DDMT is located in southeastern Memphis, Shelby County, Tennessee approximately 5 miles east of the Mississippi River and just northeast of Interstate 240 (Figure 1). DDMT originated as a military facility in the early 1940s; it received, warehoused, and distributed supplies common to all U.S. military services and some civil agencies located primarily in the southeastern United States, 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 642 acres and includes the MI and Dunn Field. The MI contains approximately 578 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 64 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). The lead agency for the environmental restoration activities at DDMT is the Defense Logistics Agency. The regulatory oversight agencies are U.S. 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 Dunn Field 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 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 feet thick. The lower layer is composed of interlayered sand, sandy gravel, and gravelly sand, and has an average thickness of approximately 40 feet. 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 feet (dry) to approximately 60 feet, and is controlled by the uppermost clay configuration in the Jackson formation/Upper Claiborne group. Groundwater flow in the fluvial aquifer is toward the gap in the uppermost clay in the northwest area of the MI. The flow is toward the low point on the gap's southeast side, and the fluvial aquifer is dewatered (or "pinches out") elsewhere on the gap's perimeter. Water level elevations in the fluvial aquifer at the MI range from a high of approximately 240 feet mean sea level (msl) in the northeast to a low of approximately 195 feet msl in the central area.

The intermediate aquifer 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 intermediate aquifer from the fluvial deposits. Water level elevations in the intermediate aquifer, away from areas of recharge from the fluvial aquifer, are approximately 160 feet msl with a general westward flow.

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 feet in thickness and begins at a depth below ground surface (bgs) of approximately 120 to 300 feet. The top of the Memphis Sand was identified at 255 feet bgs (elevation of 21 feet above msl) in MW-67, the only monitoring well completed in the Memphis Sand at DDMT. The Memphis aquifer 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 DDMT. The top of the Memphis aquifer potentiometric surface at MW-67 is approximately 160 feet msl.

1.3 REMEDIAL ACTION OBJECTIVES

Remedial action objectives (RAOs) for the MI were established in the *Main Installation Record of Decision* (ROD) (CH2MHILL, 2001). 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 ROD was enhanced bioremediation treatment (EBT) with LTM and land use controls (LUCs). EBT was conducted 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. LUCs were implemented through deed and lease restrictions, zoning and a recorded Notice of Land Use Restrictions.

1.4 PREVIOUS GROUNDWATER MONITORING

Historical groundwater monitoring results described in the MI RD were mainly associated with focused investigations; monitoring wells (MWs) had not been sampled consistently over extended periods. The LTM Plan summarized results for three groundwater sampling programs: Remedial Investigation (RI) sampling events conducted from January 1996 to November 1998, the long-term operational area (LTOA) investigation from September through December 2001, and a baseline sampling event conducted in March 2002. The RI identified six VOCs as commonly detected at the MI: tetrachloroethene (PCE); trichloroethene (TCE); total 1,2-dichloroethene; carbon tetrachloride (CT); chloroform (CF) and 1,1,1-trichloroethane (TCA). PCE and TCE were the most frequently detected VOCs during the RI and at that time had maximum concentrations of 120 and 58 micrograms per liter (µg/L), respectively. The LTOA and baseline sampling events were considered contemporaneous for the purpose of reviewing the analytical results. The review confirmed the presence of the VOCs identified in the RI, except TCA.

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The LTM Plan presented a decision tree for determining well sampling frequency based on the *Final Long-term Monitoring Optimization Guide, Version 1.1* (AFCEE, 1997). LTM wells were classified in four categories:

- 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 intermediate aquifer adjacent to or within the window to the intermediate aquifer.
- Performance – wells screened in the fluvial aquifer and within the limits of known groundwater plumes.

The LTM plan also established an initial sampling frequency (biennial, annual, semiannual, or quarterly) for the 47 existing wells and piezometers.

The LTM program was initiated by MACTEC Engineering and Consulting, Inc. (MACTEC) in 2004 to provide updated baseline groundwater data at the MI; water level measurements and groundwater samples were collected over four sampling events: March–June 2004, November 2004, February 2005, and May 2005. The monitoring results for these sample events were summarized in *Annual Long-Term Monitoring Report, Main Installation Rev.1* (MACTEC, 2006).

The initial phase of the LTM program was a Design-Related Investigation (DRI) to aid in completion of the RD and the RAWP. The DRI was conducted from March through June 2004 and consisted of multiple phases of groundwater sampling and monitoring well installation. Twenty-four monitoring wells were installed and 82 groundwater samples were collected from new and existing wells, with some wells sampled twice. The DRI provided additional information on the hydrogeologic conditions on the MI, and determined the extent of contamination and the aquifer thickness in the EBT target treatment areas, TTA-1 and TTA-2.

Upon completion of the DRI, there were 71 wells and piezometers in the LTM program. During the following sample events, groundwater samples were collected from 42 wells and piezometers in November 2004, 57 wells and piezometers in February 2005, and 43 wells and piezometers in May 2005. In addition to well installation and sampling activities, 10 MWs, 7 piezometers, and 1 pump test well were abandoned on the MI and Dunn Field in February 2005.

During the initial year of LTM, MCLs for PCE and TCE were exceeded in samples collected at wells located throughout the MI. The wells exceeding MCLs were grouped into six plumes in the fluvial aquifer. Sentinel wells in the intermediate aquifer and the transition zone between the fluvial and intermediate aquifers 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

The initial annual LTM report (MACTEC, 2006) included recommendations for additional MWs at six locations to further delineate plumes outside the EBT treatment areas and to provide suitable compliance well networks. The report also recommended changes in the monitoring frequency at specific wells and, based on the consistency of the field measurements and laboratory analyses for indicators of anaerobic degradation, recommended that laboratory analysis of LTM samples be limited to VOCs.

Further MI LTM was postponed until the MI Remedial Action (RA) was initiated by HDR|e²M in August 2006. LTM activities in 2006 and 2007 consisted of phased installation and development of 36 new monitoring wells, abandonment of 24 monitoring wells and quarterly monitoring of designated LTM wells during five sampling events in October 2006, January 2007, April 2007, July 2007, and October 2007. The LTM activities and findings were documented in *Annual Long-Term Monitoring Report - 2007, Main Installation Rev.0* (HDR|e²M, 2009a). The monitoring wells installed in 2006 and 2007 provided additional information on the top of clay and groundwater flow directions on the MI and the groundwater samples improved the delineation of the groundwater plumes.

LTM activities in 2008 consisted of water level measurements and groundwater sampling of designated LTM wells during three events in January, April and October 2008. The LTM activities and findings were documented in *Annual Long-Term Monitoring Report - 2008, Main Installation Rev.0* (HDR|e²M, 2009b). No changes were recommended for the 2008 LTM events.

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2.0 LTM ACTIVITIES

LTM activities during 2009 consisted of water level measurements and groundwater sampling of designated wells in April and October. The activities were performed in accordance with the *Remedial Action Sampling and Analysis Plan* (RA SAP) (MACTEC, 2005c). The LTM wells and 2009 sample frequency are listed on Table 1. The well locations are shown on Figure 2.

The 105 LTM wells are classified as boundary, background, performance or sentinel wells and assigned semiannual, annual or biennial sampling frequencies. Well classifications and sample frequencies were updated in March 2008. The wells currently have the following sample frequency: biennial (10 wells), annual (22 wells) and semiannual (73 wells). Eight LTM wells were included in EBT performance monitoring from September 2006 through the final EBT monitoring event in March 2009 and were omitted from LTM events. The wells, which are assigned semiannual sampling, were included in the October 2009 LTM event. The current well classification and sample frequency, and the recently completed and planned sampling events for all LTM wells are shown on Table 1.

2.1 GROUNDWATER MONITORING

Groundwater levels were measured in all LTM wells prior to sampling during each LTM sample event. 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 shown on Table 2.

Groundwater samples were collected from most monitoring wells using low-flow purging methods. Dedicated PVC and stainless steel bladder pumps were installed in most LTM wells to facilitate sampling. Other wells were sampled with stainless steel portable pumps. Teflon® bladders and Teflon®-lined polyethylene tubing were used for each well. The pumping rate at each well was monitored in order that the water levels would not decline more than 1.2 inches (0.1 foot). Following sampling, the bladders and tubing for each well without a dedicated pump were placed in separate, sealed plastic bags and stored for future sampling events. Piezometers and certain monitoring wells were sampled with bailers due to the small diameter casing in the piezometers and the slow recharge and thin saturated layer in the wells.

Water quality parameters were measured at approximately 5 to 10 minute intervals during purging using a flow-through cell with an YSI 6550 and a LaMotte 2020e turbidity meter. The units were calibrated each morning prior to sampling, and if abnormal readings were observed during the day, the instruments were recalibrated in the field. All measurements were recorded on the field sampling forms.

Purging continued at each well for up to two hours in order to meet the stabilization criteria: three successive readings within 0.1 for pH, 10 milliVolts for oxygen reduction potential, 3 percent for specific conductance, 10 percent for dissolved oxygen and <20 nephelometric turbidity units (NTU) for turbidity. Temperature was also measured and recorded but was not used as a stabilization parameter. Samples were collected when stabilization criteria were met or the field team leader approved the variance from the criteria. The final stabilization measurements for each event are shown on Tables 3 and 4.

Samples were sent to Microbac Laboratories in Marietta, Ohio, for laboratory analysis. The samples were analyzed for VOCs by method 8260B. The activities during each sampling event are summarized in the following sections.

2.1.1 April 2009

Semiannual groundwater sampling was conducted with samples collected from 63 of 65 designated wells on 6 to 10 April 2009. One well (MW-213) was dry, as it has been since installation. Monitoring well MW-104 was inaccessible because of construction activity by the DRC. Water levels were measured in LTM wells on 2 April 2009.

Groundwater samples were collected from 61 wells using low-flow purging methods. Two wells, MW-62 and MW-212, were sampled with bailers due to thin saturated layer and slow recharge. The final stabilization measurements are shown on Table 3. The samples were collected according to the procedures described above with the following exceptions:

- Samples were collected by bailer from MW-62 and MW-212 with turbidity of out of range of the turbidity meter. MW-62 and MW-212 were bailed for three well volumes and then sampled.
- Sample was collected from MW-217 with a turbidity value of 46 NTU. This well was purged for two hours and then sampled.

2.1.2 October 2009

Annual groundwater sampling was conducted with samples collected from 93 of 95 designated LTM wells. Samples could not be collected from well MW-213 and piezometer PZ-07; MW-213 was dry and the casing for PZ-07 is blocked by an obstruction. A total of 95 groundwater samples were collected. MW-101 has three screened intervals and samples were collected from the top and bottom intervals; samples were also collected from the two screened intervals in MW-107. Groundwater samples were collected 5 to 12 October 2009.

Water levels were measured in LTM wells on 2 October 2009. Water levels were not collected at MW-22, MW-52 and PZ-06 because the well locations were not accessible that day.

Groundwater samples were collected from 89 wells using low-flow purging methods. Wells MW-62 and MW-212 were sampled with bailers due to thin saturated layer and slow recharge. Piezometers PZ-03 and PZ-06, which were constructed with 0.75 inch diameter PVC casing, were sampled using a Teflon pencil bailer. The final stabilization measurements are shown on Table 4. The samples were collected according to the procedures described above with the following exceptions:

- Samples were collected from MW-62 and MW-212 with turbidity values of 77.4 NTU and 393 NTU, respectively. Both wells were bailed for three well volumes and then sampled.
- Samples were collected from PZ-03 and PZ-06 with turbidity values of 394 NTU and 149 NTU, respectively. Both piezometers were bailed for three well volumes and then sampled.
- Samples were collected from four wells (MW-102B, MW-218, IW-01, and IW-06) turbidity values of 29.5 to 208 NTUs. These wells were purged for two hours and then sampled.

2.2 WASTE DISPOSAL

The waste generated during groundwater sampling in 2009 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 wastewater from equipment decontamination and groundwater from purging prior to sampling.

Purge water and wastewater generated during sampling in April 2009 was added to the 21,000 gallon fractionation tank being used for fluvial soil vapor extraction (FSVE) system condensate collection. A grab sample was collected on 27 April 2009 when the tank neared capacity. The sample was collected from the midpoint of the tank using a disposable Teflon® bailer and submitted to Microbac for analysis of Target Compound List (TCL) VOCs, TCL semi-volatile organic compounds and Target Analyte List metals in accordance with City of Memphis Industrial Wastewater Discharge Permit No. S-NN3-097. The analytical data was provided to the City of Memphis with a request for one-time discharge. The discharge was approved and the wastewater was discharged to the sewer system via the discharge port at Dunn Field from 8 to 11 May 2009.

Purge water and wastewater generated during sampling in October 2009 was also added to the fractionation tank being used for FSVE system condensate collection. A grab sample was collected on 3 November 2009 when the tank neared capacity. The sample was collected and analyzed in the manner described above. The analytical data was provided to the City of Memphis with a request for one-time discharge. Following approval, the wastewater was discharged to the sewer system via the discharge port at Dunn Field on 16 and 17 November 2009.

3.0 SUMMARY OF MONITORING RESULTS

3.1 HYDROGEOLOGY

Water level measurements for the 2009 LTM events are shown on Table 2. Groundwater contour maps for each event are shown on Figures 3 and 4. The groundwater elevation contour maps are similar. 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 0.022 in April and October (DR2-1 to MW-26). The gradient in the 'window' is to the northwest with an approximate gradient of 0.23 in April and 0.027 in October (MW-90 to MW-140).

3.2 DATA QUALITY EVALUATION

Data collected during the two 2009 LTM sampling events April and October were reviewed based on guidelines in the RA SAP. The review process was performed by an independent data validation contractor, Diane Short and Associates, Inc. Based on the review and the project data quality objectives (DQOs), the data are acceptable and usable. No data were rejected. The complete analytical results with data quality evaluation (DQE) flags are presented in Appendix A.

There were qualifications of VOC data, with the primary causes of the qualified data described below.

- Method blank contamination resulted in several B qualifications in the April and October events. The detections in associated samples were less than 10x the method blank (corrected for dilution), therefore the results were qualified as UB and usable as non-detects
- Several samples had elevated associated laboratory calibration standard (LCS) recoveries observed, and one sample had a low LCS recovery. When a high recovery is associated with a non-detect, no qualifier is added since the indicated bias is high. When the target is detected, the result is qualified as estimated J.
- PCE was qualified as estimated J in one sample (MW-36-LS-9) in April and one sample (MW-204A-LS-10) in October based on matrix spike/matrix spike duplicate recovery. The result could be biased low approximately proportional to the recovery.
- Any result reported below the reporting limit (RL) but above the method detection limit was flagged "J" and considered an estimated result (unless overridden by other QC flags).

Overall, the VOC data from the two LTM events met project DQOs and were determined to be sufficient to support the evaluation of remedial action. The complete DQE for 2009 LTM is provided in Appendix B.

3.3 ANALYTICAL RESULTS

The results for each sampling event are discussed in the following sections based on concentrations detected above the RL for the primary chlorinate volatile organic compounds (CVOCs): PCE, TCE, cis-1,2-Dichloroethene (cDCE), CT and CF. Results for vinyl chloride (VC) are also discussed when detected above RLs. The analytical results were compared to the MCLs: 5µg/L for PCE, TCE, and CT; 70µg/L for cDCE, and 2µg/L for VC. The MCL for total trihalomethanes, which includes CF, is 80µg/L.

3.3.1 April 2009

Groundwater samples were collected from 63 LTM wells for the semiannual event in April 2009. Table 5 lists the analytical results for the primary CVOCs and for other VOCs detected above the RL in one or more samples. Sixteen VOCs were detected above RLs. The analytical results for the primary CVOCs are summarized below:

- PCE was reported in 47 wells with a maximum concentration of 197 µg/L in DR1-6. The MCL (5 µg/L) was exceeded in 40 wells.
- TCE was reported in 52 wells with a maximum concentration of 169 µg/L in MW-62. The MCL (5 µg/L) was exceeded in 29 wells.
- cDCE was reported in 30 wells with a maximum concentration of 120 µg/L in MW-86. The MCL (70 µg/L) was exceeded in three wells.
- CT was reported in 10 wells with a maximum concentration of 101 µg/L in MW-113. The MCL (5 µg/L) was exceeded in seven wells.
- CF was reported in 27 wells with a maximum concentration of 39 µg/L in MW-113. The MCL (80 µg/L for total trihalomethanes) was not exceeded.
- VC was detected in four wells with a maximum concentration of 94.6 µg/L in MW-100B. The MCL (2 µg/L) was exceeded in three wells.

3.3.2 October 2009

Groundwater samples were collected from 93 LTM wells for the annual event in October 2009. A total of 95 groundwater samples were collected; samples were collected from two of three screened intervals in MW-101 and from both screened intervals in MW-107. Table 6 lists the analytical results for the primary

CVOCs and for other VOCs detected above the RL in one or more samples. Seventeen VOCs were detected above RLs. The analytical results for the primary CVOCs are summarized below:

- PCE was reported in 66 wells with a maximum concentration of 200 µg/L in MW-113. The MCL (5 µg/L) was exceeded in 54 wells.
- TCE was reported in 75 wells with a maximum concentration of 163 µg/L in DR1-6A. The MCL (5 µg/L) was exceeded in 34 wells.
- cDCE was reported in 40 wells with a maximum concentration of 120 µg/L in MW-92. The MCL (70 µg/L) was exceeded in three wells.
- CT was reported in 18 wells with a maximum concentration of 108 µg/L in MW-85. The MCL (5 µg/L) was exceeded in nine wells.
- CF was reported in 33 wells with a maximum concentration of 52 µg/L in DR2-5. The MCL (80 µg/L for total trihalomethanes) was not exceeded.
- VC was detected in five wells with a maximum concentration of 85.2 µg/L in MW-100B. The MCL 2 µg/L) was exceeded in all five wells.

3.4 PLUME MAPS

PCE and TCE isoconcentration maps for the April 2009 LTM semiannual samples are shown on Figures 5 and 6, respectively, and for the October 2009 LTM annual samples are shown on Figures 7 and 8, respectively. The isopleths, indicating plume extent, were based on reported PCE or TCE 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. In particular, the PCE and TCE isopleths for TTA-2 in the southeast MI indicate the plume has migrated west-northwest when the groundwater gradient is west-southwest. This interpretation is considered reasonable based on the reported concentrations and the limited groundwater elevation measurements in the eastern half of the MI, except in the immediate area of TTA-2. Additional wells to improve groundwater gradient data are not warranted based on the low concentrations and the trend in concentrations.

The isopleths are generally similar to those from previous sampling events. There are some differences in isopleths due to the number of LTM wells sampled in each event. The October 2009 concentrations in a number of wells outside the EBT areas have decreased. In April 2009, the highest PCE concentration in the west-central plume was 163 µg/L in MW-208A and the highest PCE concentration in the sentinel

wells was 80.8 µg/L in MW-90; the respective concentrations in October 2009 were 92.8 µg/L and 35 µg/L.

3.5 WELL CLASSIFICATION REVIEW

Currently, 105 wells are included in the MI LTM. The current well classifications are shown on Table 1; no classifications were changed in 2009. There are 7 background wells, 7 boundary wells, 72 performance wells and 19 sentinel wells. For the 104 LTM wells excluding MW-213, 72 wells are sampled semiannually, 22 wells are sampled annually and 10 wells are sampled biennially. No sample frequency is selected at MW-213 since it has been dry since installation.

Analytical results for the individual well classifications in the 2009 LTM events are summarized in the following sections.

3.5.1 Background Wells

There are seven 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, MW-99, and MW-143. One background well, MW-99, was sampled in October 2009.

Primary CVOCs were not detected above RLs in MW-99.

3.5.2 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. Three boundary wells (MW-93, MW-102B and MW-219) were sampled in 2009.

Primary CVOCs were not detected above RLs in MW-93 and MW-102B. Well MW-219, installed in April 2007 on the western MI boundary and immediately upgradient of TTA-1 North, contained several CVOCs in 2009 LTM samples. PCE was detected at the highest concentration, 39.4 µg/L in April 2009. These results indicate potential plume migration on to the MI at MW-219.

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3.5.3 Sentinel Wells

There are 19 LTM sentinel wells screened within either the fluvial or intermediate aquifer adjacent to or within the window to the intermediate aquifer. 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 and MW-229. Eleven sentinel wells were sampled in April and all sentinel wells were sampled in October.

Primary CVOCs were not detected above RLs in four sentinel wells (MW-38, MW-199A, MW-209A and MW-229). The remaining sentinel wells had CVOCs detected above the RLs and eight wells (MW-90, MW-107, MW-108, MW-141, MW-202B, MW-207A/B and MW-210A) had PCE and/or TCE at concentrations above the MCL.

3.5.4 Performance Wells

There are 72 LTM performance wells, including three piezometers and the eight LTM wells previously used for EBT monitoring, 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, MW-115, MW-125, IW-06
TTA-1 South	PCE, TCE	DR1-1, DR1-1A, DR1-3, DR1-4, DR1-5, DR1-5A, DR1-6, DR1-6A, MW-101
TTA-2	PCE, CT, CF	DR2-1, DR2-2, DR2-3, DR2-4, DR2-5, DR2-6, IW-01, MW-26, MW-64, MW-85, MW-86, MW-88, MW-92, MW-96, MW-113, MW-217, MW-218, PZ-07 (blocked)
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
Bldg 835	TCE	MW-62, MW-142, MW-198, MW199B, MW-209B, MW-212, MW-213 (dry)
North-Central	TCE	MW-103, MW-104, PZ-06

There are four isolated LTM performance wells outside the designated plumes (MW-25A, MW-52, MW-97 and MW-216). All except MW-216 had CVOC concentrations above MCLs in 2009 LTM samples;

the highest concentration was TCE at 37.4 µg/L in the October 2009 sample from MW-97. Further delineation of CVOC extent at these locations is not considered necessary due to the low concentrations.

MW-216, in the southwestern MI, did not have any VOCs above the RL in the April or October samples. The October 2008 sample had PCE at 34.1 µg/L. Earlier samples did not contain PCE above RLs, and the October 2008 result was apparently due to field or laboratory error.

3.5.4.1 TTA-1 North

The TTA-1 North plume is located near the central section of Building 1089 and north of former Buildings 1084 and 1085. The depth of water is approximately 90 feet bgs and the average saturated thickness is 26 feet.

Eight LTM performance wells are associated with the TTA-1 North plume: MW-21, MW-100B, MW-115, MW-125, DR1-2, DR1-7, DR1-8, and IW-06. The maximum PCE concentration in the October 2009 LTM event was 187 µg/L (MW-21).

3.5.4.2 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 feet bgs and the average saturated thickness is 36 feet.

Nine LTM performance wells are associated with the TTA-1 South plume: DR1-1, DR1-1A, DR1-3, DR1-4, DR1-5, DR1-5A, DR1-6, DR1-6A, and MW-101. The maximum concentrations of PCE and TCE in the October 2009 LTM event were 183 µg/L (DR1-6) and 163 µg/L (DR1-6A), respectively.

3.5.4.3 TTA-2

The TTA-2 plume is an irregularly shaped area with elevated concentrations of PCE, TCE, CT and CF. 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 feet bgs and the average saturated thickness is 9 feet.

Eighteen LTM performance wells are associated with the TTA-2 plume: IW-01, MW-26, MW-64, MW-85, MW-86, MW-88, MW-92, MW-96, MW-113, MW-217, MW-218, DR2-1, DR2-2, DR2-3, DR2-4, DR2-5, DR2-6 and PZ-07. The maximum PCE, CT and CF concentrations in the October 2009 LTM event were 200 µg/L (MW-113), 108 µg/L (MW-85) and 52 µg/L (DR2-5), respectively.

3.5.4.4 West Central

The West-Central plume is a broad area of elevated PCE concentrations in groundwater approximately 1500 feet 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 feet bgs and the saturated thickness ranges from 7 to 94 feet with an average of 48 feet.

Twenty-three LTM performance wells are associated with the West Central plume: MW-39, MW-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 and PZ-03. The maximum PCE concentration in the October 2009 LTM event was 149 µg/L in MW-203A.

3.5.4.5 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 elevated clay plateau that is present in the northwest corner of the MI. The depth of water is approximately 94 feet bgs and the average saturated thickness is 6 feet.

Seven LTM performance wells are associated with the Building 835 plume: MW-62, MW-142, MW-198, MW-199B, MW-209B, MW-212 and MW-213 (dry). The maximum TCE concentration in the October 2009 LTM event was 93.2 µg/L in MW-199B.

3.5.4.6 North Central

The North-central plume is located in the northeastern portion of the MI contains and contains slightly elevated concentrations of TCE. Additional plume delineation is not considered necessary because of the low concentrations. The depth of water is approximately 66 feet bgs and the average saturated thickness is 23 feet.

Three LTM performance wells are associated with the North Central (formerly SS-37) plume: MW-103, MW-104, and PZ-06. The maximum TCE concentration in the October 2009 LTM event was 14.1 µg/L in MW-104.

3.6 TREND ANALYSIS

Historical analytical results for the primary CVOCs in all LTM wells are provided in Appendix C. Time trend plots for primary CVOCs detected above MCLs in LTM wells are provided by area in Appendix D.

3.6.1 Mann-Kendall Analysis

Concentration trends were assessed for the available groundwater analytical results for the LTM wells from January 2004 through October 2009 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 the Monitoring and Remediation Optimization System (MAROS) software version 2.2 developed by AFCEE. 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 (CF).

The Mann-Kendall statistic (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 the Mann-Kendall Statistic (i.e., large magnitudes indicate a strong trend). Typically, the Mann-Kendall test results in No Trend, Increasing or Decreasing designations for the dataset. MAROS uses the CF to provide a finer resolution of outcomes.

The COV 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. The Confidence in Trend 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 in Trend	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

The Mann-Kendall analysis was run for PCE, TCE and cDCE on analytical results for 103 LTM wells, including both screened intervals in MW101 and MW-107. MW-213 (dry) and PZ-07 (blocked) were excluded. 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.

The results of the Mann-Kendall analysis are shown on Tables 7 through 11. 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 (7) 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 had PCE concentrations up to 50 µg/L and may represent a groundwater plume migrating on to the MI. The results for sentinel (19) and performance (70) wells are summarized below.

	Total Locations	Insufficient Data	Increasing/ Probably Increasing	Stable/ No Trend	Decreasing/ Probably Decreasing
PCE	91	8	18	38	27
TCE	91	2	31	42	16
cDCE	91	22	27	32	10

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

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	8	1	2	2	3
TTA-1 South	PCE	10	0	3	1	6
TTA-1 South	TCE	10	0	3	4	3
TTA-2	PCE	17	0	4	6	7
TTA-2	CT	17	0	4	6	7
TTA-2	CF	17	0	3	7	7
West-Central	PCE	23	0	4	9	10
Sentinel	PCE	20	1	5	13	1
Bldg 835	TCE	6	0	2	4	0
North-Central	TCE	3	1	1	1	0

The wells in TTA-1, TTA-2 and the West-central plume have a stable-decreasing trend for the parent compounds, except for TCE in TTA-1 South where there are an equal number of wells with increasing and decreasing trends. The sentinel wells and wells in the Building 835 and North-central plumes have a stable-increasing trend.

Five Sentinel wells have increasing trends for PCE: MW-90, MW-140, MW-202B, MW-207A and MW-211. PCE concentrations in wells MW-140 and MW-211 have not exceeded the RL of 1 µg/L. The maximum PCE concentrations in the remaining wells are 80.8 µg/L at MW-90, 21.3 µg/L at MW-202B and 13.7 µg/L at MW-207A. MW-207A is upgradient of the window, MW-90 is within the window and MW-202B is downgradient of MW-90. The deeper wells adjacent to MW-90 and MW-202B (MW-89 and MW-202A) have not exceeded the RL. The PCE concentration in the most recent sample from MW-90 was 35 µg/L.

Fourteen Sentinel wells are stable or have no trend for PCE; seven wells have not had concentrations above the RL and five wells have had maximum concentration below or just above the MCL. The two remaining wells have had maximum PCE concentrations of 31 µg/L at MW-141 and 63.1 µg/L at MW-207B. MW-207B is upgradient of the window at the downgradient end of the West-central plume and MW-141 is in the window, upgradient of MW-90.

One Sentinel well, MW-210A, has a decreasing trend for PCE. This well is located in the Intermediate aquifer north of the mid-point of the West-central plume where concentrations have been decreasing.

3.6.2 Rebound in EBT Areas

The eight LTM wells used for EBT performance monitoring were included in the October 2009 event: MW-21, MW-85, MW-101, MW-115, DR1-3, DR2-1, DR2-5 and IW-01. Two wells, MW-21 and DR2-5, on the upgradient edges of TTA-1N and TTA-2 respectively, showed little response during EBT. The other wells had demonstrated reductive dechlorination (RD) based on reductions in PCE and TCE concentrations and increases in cDCE concentrations. The latest results show rebound in PCE or TCE concentrations indicating continued low-level release from the soils and decreased cDCE concentrations indicating aerobic degradation or other natural attenuation. The concentrations are still relatively low, although above MCLs. Results from three wells are shown below.

	PCE (µg/L)		TCE (µg/L)		cDCE (µg/L)	
Well	Mar-09	Oct-09	Mar-09	Oct-09	Mar-09	Oct-09
MW-85 (TTA-2)	33.9	41	11.6	15.1	7.29	1.3
MW-101B (TTA-1S)	55.6	96.2	3.53	0.809	31.2	2.03
MW-115 (TTA-1N)	10.8	15.2	2.44	4.26	7.47	5.74

Similar results are seen at other LTM wells near the downgradient edge of the EBT injection areas.

3.6.3 Reductive Dechlorination

VC, the final CVOC in the reductive dechlorination sequence for PCE and TCE, was rarely detected above the RL in either EBT samples or LTM samples prior to 2009. VC was detected in injection wells IW101-8C and/or IW101-9B at concentrations up to 2.37 µg/L from June 2008 to March 2009, and in LTM wells MW-86 and MW-100B at concentrations up to 1.75 µg/L in October 2007 and October 2008.

In April 2009, VC was detected in four LTM wells: MW-86 at 8 µg/L, MW-92 at 1.64 µg/L, MW-100B at 94.6 µg/L and MW-203B at 7.12 µg/L. In October 2009, VC was detected at five LTM wells: MW-86 at 65.8 µg/L, MW-100B at 85.2 µg/L, MW-197B at 3.09 µg/L, MW-203B at 5.14 µg/L and MW-205B at 2.06 µg/L.

Wells MW-86 and MW-92 are near TTA-2, and MW-100B is near TTA-1N; these results demonstrate more complete RD at the end of EBT. The other wells, MW-203B, MW-197B and MW-205B are located in the West-central plume approximately 900 feet, 1250 feet and 1500 feet respectively downgradient of

MW-100B. Previous reductions in PCE concentrations at these wells were accompanied by increased cDCE concentrations, and the appearance of VC accompanies a corresponding drop in cDCE concentration (see Appendix C). In addition, the decreased PCE concentration at MW-208A in October 2009 was accompanied by increased cDCE concentration; MW-208A is located approximately 2100 feet from TTA-1. The results indicate 1) RD at these locations based on migration of injected nutrients from TTA-1, 2) migration of post-RD contaminants from TTA-1 and/or 3) aerobic degradation.

Concentrations of both cDCE and VC have decreased after reaching a peak concentration, indicating that these contaminants will not create a long-term impact to groundwater quality. Trend plots for all CVOCs detected above MCLs are shown in Appendix D.

3.6.4 Groundwater Velocity

The appearance of cDCE at the wells in the West-central plume indicates the groundwater flow velocity is higher than previously estimated. The groundwater flow velocity at TTA-1 based on the average hydraulic conductivity (33 feet/day) and the porosity (30%) stated in the MI RD and the measured groundwater gradient (0.003) is 0.3 feet/day. EBT injections began in September 2006. The appearance of cDCE (and/or a significant decrease in PCE concentration) at the wells in the West-central plume downgradient of MW-100B can be tracked from historical LTM results:

Well	cDCE Reported	Distance to MW-100B (Feet)	Groundwater Velocity (Feet/Day)
DR1-3	March 2007	570	3.1
MW-197 B	July 2007	1250	4.1
MW-205B	October 2007	1500	3.8
MW-39A	October 2008	1880	2.5
MW-39	April 2009	1880	2.0
MW-208A	October 2009	2100	1.9

3.7 ESTIMATED CVOC MASS IN GROUNDWATER

The dissolved CVOC mass within each plume was estimated based on the ground water results from the October 2009 LTM event. Total CVOCs were estimated for each well as the sum of the PCE, TCE, cDCE, CT, CF and VC concentrations and the results were contoured to provide concentrations throughout each plume. Contour maps for groundwater elevation and top of clay were used to determine the saturated thickness in each plume. The dissolved CVOC mass was estimated for each 10 by 10-foot

cell within each plume based on the estimated total CVOC concentration, volume of water for the saturated thickness at each cell and an assumed porosity of 30%.

The mass was previously calculated in the 2008 LTM report using the October 2008 LTM event and the December 2008 EBT performance monitoring event. Because EBT results are no longer available, the PCE and TCE isopleths and the 5 µg/L total CVOC isopleths were used to constrain the area for volume calculation. In order to provide a consistent basis of comparison, the dissolved CVOC mass was re-calculated for October 2008 using the same approach. The total CVOC isopleths, the total area in the mass calculation and the estimated dissolved mass in each plume are shown for 2008 and 2009 on Figures 9 and 10 respectively. The total dissolved CVOC mass in all the plumes is estimated at 100.9 pounds for 2008 and 87.8 pounds for 2009; the estimated mass for 2009 was 13% lower due to EBT and NA.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The effect of EBT in TTA-1 was observed throughout the West-central plume in 2009 LTM samples. PCE concentrations in the West-central plume decreased by roughly half in several wells from October 2008 to October 2009 (MW-39, MW-197A, MW-205A and MW-208A). The PCE concentration in Sentinel well MW-90 also decreased by half. The dissolved CVOC mass in the main Fluvial aquifer plumes was estimated at 88 pounds based on the October 2009 LTM event, a reduction of 14% from October 2008.

Some rebound in concentrations of parent compounds in TTA-1 (PCE and TCE) and TTA-2 (PCE, CT and CF) were observed in 2009 LTM samples. The concentrations remain below pre-treatment levels.

The 2008 LTM report included recommendations for monitoring wells in the Memphis aquifer to support the conclusion of the *MI Source Area Investigation Report* (HDR|e^{2}M, 2009c) that further active groundwater treatment was not necessary to meet the MI RAOs. The wells were planned to be installed in late 2009 but were delayed following a request from USEPA and TDEC for additional wells in the Intermediate aquifer. The new Intermediate aquifer wells are to determine the extent of CVOCs downgradient of MW-90; the request was based on review of the *MI Interim Remedial Action Completion Report* (IRACR) (HDR|e^{2}M, 2009d).

Proposed locations of the Intermediate aquifer wells were discussed at an IRACR comment-review meeting between HDR|e^{2}M, USEPA and TDEC in December 2009. The proposed locations of the additional Intermediate aquifer and Memphis aquifer wells are shown on Figure 11. The proposed locations of the Memphis aquifer wells are from the MI SAI report, although the location east of the window has been deleted based on discussion at the December meeting. The planned depths and screen intervals of the new wells are shown in the cross-section on Figure 12.

If MCLs are exceeded in one of the new Intermediate aquifer wells, a third well will be installed further downgradient near the property line. The proposed Memphis aquifer wells will not be installed until the Intermediate aquifer wells are installed and the hydrogeologic information and analytical results has been reviewed. The Memphis aquifer well locations will be re-evaluated based on that review. Following installation, the new wells will be incorporated into the LTM program.

Changes to LTM wells in TTA-1 and TTA-2 are recommended to improve distribution of sample locations. The replacement wells were selected based on well location and CVOC concentrations to

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monitor wells with high concentrations and potential rebound in parent CVOC concentrations. The recommended changes are shown on Figures 13 and 14 and listed below.

- In TTA-1N, IW-6, MW-115 and MW-125 will be abandoned, and PMW21-03 and PMW21-05 will be added to the LTM program.
- In TTA-1S, PMW101-04A/B will be added to the LTM program.
- In TTA-2, IW-01 and MW-86 will be abandoned, and PMW92-03 and PMW92-06 will be added to the LTM program.
- The replacement wells will be sampled semiannually in 2010.
- In addition, PZ-07 is blocked by an obstruction and will be abandoned.

Several changes to sample frequency are also recommended.

- Most of the background and boundary wells are sampled biennially, but MW-99, MW-102B and MW-93 have been samples annually because of limited sample results. All analytes have been below MCLs and these wells are recommended for biennial sampling.
- The following performance wells currently sampled semiannually have demonstrated consistent results below or slightly above MCLs: DR1-1A, DR1-4, MW-25A, MW-52, MW-96, MW-104, MW-198, MW-214A/B, MW-215A/B, MW-216, MW-202A, MW-209A, MW-211 and MW-229. These wells are recommended for annual sampling.

5.0 REFERENCES

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TABLES

TABLE 1
LTM SAMPLE SCHEDULE
ANNUAL LONG TERM MONITORING REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Well ID	Well Type	Current Sample Frequency	Biennial Oct-2008	SA Apr-2009	Annual Oct-2009	SA Apr-2010
MW-16	Background	Biennially	X	-	-	-
MW-19	Background	Biennially	X	-	-	-
MW-21	Performance	Semiannually	EBT	EBT	X	P
MW-22	Boundary	Biennially	X	-	-	-
MW-23	Boundary	Biennially	X	-	-	-
MW-24	Boundary	Biennially	X	-	-	-
MW-25A	Performance	Semiannually	X	X	X	P
MW-26	Performance	Semiannually	X	X	X	P
MW-34	Sentinel	Annually	X	-	X	-
MW-38	Sentinel	Annually	X	-	X	-
MW-39	Performance	Semiannually	X	X	X	P
MW-39A	Performance	Semiannually	X	X	X	P
MW-50	Boundary	Biennially	X	-	-	-
MW-52	Performance	Semiannually	X	X	X	P
MW-53	Background	Biennially	X	-	-	-
MW-55	Background	Biennially	X	-	-	-
MW-62	Performance	Semiannually	X	X	X	P
MW-63A	Sentinel	Annually	X	-	X	-
MW-63B	Sentinel	Annually	X	-	X	-
MW-64	Performance	Semiannually	X	X	X	P
MW-66A	Background	Biennially	X	-	-	-
MW-85	Performance	Semiannually	EBT	EBT	X	P
MW-86	Performance	Semiannually	X	X	X	P
MW-88	Performance	Semiannually	X	X	X	P
MW-89	Sentinel	Annually	X	-	X	-
MW-90	Sentinel	Semiannually	X	X	X	P
MW-92	Performance	Semiannually	X	X	X	P
MW-93	Boundary	Annually	X	-	X	-
MW-94A	Performance	Semiannually	X	X	X	P
MW-96	Performance	Semiannually	X	X	X	P
MW-97	Performance	Semiannually	X	X	X	P
MW-98	Performance	Semiannually	X	X	X	P
MW-99	Background	Annually	X	-	X	-
MW-100B	Performance	Semiannually	X	X	X	P
MW-101[1]	Performance	Semiannually	EBT	EBT	X	P
MW-102B	Boundary	Annually	X	-	X	-
MW-103	Performance	Annually	X	-	X	-
MW-104	Performance	Semiannually	X	NS	X	P
MW-107[1]	Sentinel	Annually	X	-	X	-
MW-108	Sentinel	Semiannually	X	X	X	P
MW-113	Performance	Semiannually	X	X	X	P
MW-115	Performance	Semiannually	EBT	EBT	X	P
MW-125	Performance	Semiannually	X	X	X	P
MW-140	Sentinel	Annually	X	-	X	-
MW-141	Sentinel	Semiannually	X	X	X	P
MW-142	Performance	Annually	X	-	X	-
MW-143	Background	Biennially	X	-	-	-
MW-197A	Performance	Semiannually	X	X	X	P
MW-197B	Performance	Semiannually	X	X	X	P
MW-198	Performance	Semiannually	X	X	X	P
MW-199A	Sentinel	Annually	X	-	X	-
MW-199B	Performance	Semiannually	X	X	X	P
MW-200	Performance	Semiannually	X	X	X	P
MW-202A	Sentinel	Semiannually	X	X	X	P
MW-202B	Sentinel	Semiannually	X	X	X	P
MW-203A	Performance	Semiannually	X	X	X	P

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ANNUAL LONG TERM MONITORING REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Well ID	Well Type	Current Sample Frequency	Biennial Oct-2008	SA Apr-2009	Annual Oct-2009	SA Apr-2010
MW-203B	Performance	Semiannually	X	X	X	P
MW-204A	Performance	Semiannually	X	X	X	P
MW-204B	Performance	Semiannually	X	X	X	P
MW-205A	Performance	Semiannually	X	X	X	P
MW-205B	Performance	Semiannually	X	X	X	P
MW-206A	Performance	Semiannually	X	X	X	P
MW-206B	Performance	Semiannually	X	X	X	P
MW-207A	Sentinel	Semiannually	X	X	X	P
MW-207B	Sentinel	Semiannually	X	X	X	P
MW-208A	Performance	Semiannually	X	X	X	P
MW-208B	Performance	Semiannually	X	X	X	P
MW-209A	Sentinel	Semiannually	X	X	X	P
MW-209B	Performance	Semiannually	X	X	X	P
MW-210A	Sentinel	Semiannually	X	X	X	P
MW-210B	Performance	Semiannually	X	X	X	P
MW-211	Sentinel	Semiannually	X	X	X	P
MW-212	Performance	Semiannually	X	X	X	P
MW-213	Performance	Semiannually	NS	NS	NS	P
MW-214A	Performance	Semiannually	X	X	X	P
MW-214B	Performance	Semiannually	X	X	X	P
MW-215A	Performance	Semiannually	X	X	X	P
MW-215B	Performance	Semiannually	X	X	X	P
MW-216	Performance	Semiannually	X	X	X	P
MW-217	Performance	Semiannually	X	X	X	P
MW-218	Performance	Semiannually	X	X	X	P
MW-219	Boundary	Semiannually	X	X	X	P
MW-229	Sentinel	Semiannually	X	X	X	P
DR1-1	Performance	Annually	X	-	X	-
DR1-1A	Performance	Semiannually	X	X	X	P
DR1-2	Performance	Annually	X	-	X	-
DR1-3	Performance	Semiannually	EBT	EBT	X	P
DR1-4	Performance	Semiannually	X	X	X	P
DR1-5	Performance	Semiannually	X	X	X	P
DR1-5A	Performance	Semiannually	X	X	X	P
DR1-6	Performance	Semiannually	X	X	X	P
DR1-6A	Performance	Semiannually	X	X	X	P
DR1-7	Performance	Annually	X	-	X	-
DR1-8	Performance	Annually	X	-	X	-
DR2-1	Performance	Semiannually	EBT	EBT	X	P
DR2-2	Performance	Semiannually	X	X	X	P
DR2-3	Performance	Semiannually	X	X	X	P
DR2-4	Performance	Annually	X	-	X	-
DR2-5	Performance	Semiannually	EBT	EBT	X	P
DR2-6	Performance	Semiannually	X	X	X	P
IW-01	Performance	Semiannually	EBT	EBT	X	P
IW-06	Performance	Annually	X	-	X	-
PZ-03	Performance	Annually	X	-	X	-
PZ-06	Performance	Annually	X	-	X	-
PZ-07	Performance	Annually	NS	-	NS	-

Notes:
1) Samples collected from two screened intervals in MW-101 and MW-107
X: Sample collected
P: Sample planned
-: Sample not planned or collected
EBT: Well included in EBT sampling program, not sampled during LTM
NS: Sample planned but not collected

TABLE 2
WATER LEVEL MEASUREMENTS
ANNUAL LONG-TERM MONITORING REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Well ID	Aquifer	Top of Casing Elevation (ft, msl)	Top of Screen Elevation (ft, msl)	Depth to Water 4/3/2009 (ft, btoc)	Groundwater Elevation 4/3/2009 (ft, msl)	Depth to Water 10/2/2009 (ft, btoc)	Groundwater Elevation 10/2/2009 (ft, msl)
MW-16	Fluvial	299.86	242.26	57.69	242.17	57 08	242.78
MW-19	Fluvial	290.57	207.47	87.01	203 56	86.64	203.93
MW-21	Fluvial	295.00	202.90	91.97	203.03	92.01	202.99
MW-22	Fluvial	298.04	202.64	94.87	203.17	NM	--
MW-23	Fluvial	298.99	197.79	97.26	201 73	97.15	201.84
MW-24	Fluvial	299.51	202.21	103.84	195.67	103.82	195.69
MW-25A	Fluvial	269 88	196.88	70.93	198.95	70.66	199.22
MW-26	Fluvial	303.69	206 09	99.07	204.62	98 77	204.92
MW-34	Intermediate	299.97	163.37	131.95	168.02	135.28	164.69
MW-38	Intermediate	307 45	167 55	129 45	178.00	130.50	176.95
MW-39	Fluvial	296 28	200.78	101.96	194.32	101.73	194.55
MW-39A	Fluvial	298.45	150.53	102.02	196 43	102.00	196.45
MW-50	Fluvial	298.82	183.82	85.22	213.60	85.10	213.72
MW-52	Fluvial	279.26	185.26	78.68	200.58	NM	--
MW-53	Fluvial	306.38	233.88	73.20	233.18	72.90	233.48
MW-55	Fluvial	292.08	228.08	70 28	221 80	70.26	221.82
MW-62	Fluvial	293.65	207.65	93.83	199.82	93.93	199.72
MW-63A	Fluvial/Intermediate	305.96	165.96	104.38	201.58	103 74	202.22
MW-63B	Fluvial/Intermediate	305.78	190.78	104.30	201.48	103.63	202.15
MW-64	Fluvial	304.21	202.21	106.21	198.00	106.34	197.87
MW-66A	Fluvial	284 22	209 60	78.38	205.84	78.04	206.18
MW-85	Fluvial	304 13	208 23	98.42	205.71	98.03	206.10
MW-86	Fluvial	304.35	206 85	95 76	208 59	95.56	208.79
MW-88	Fluvial	305.15	223.15	79.12	226.03	79.04	226.11
MW-89	Intermediate	303.98	156.98	113.75	190.23	114 38	189.60
MW-90	Intermediate	304.19	189.19	114.18	190 01	114 77	189.42
MW-92	Fluvial	304.41	211.41	94.75	209.66	94.65	209.76
MW-93	Fluvial	294 08	202 08	99.42	194.66	99 30	194.78
MW-94A	Fluvial	303 00	193.38	106.65	196 35	107.00	196.00
MW-96	Fluvial	289.02	213.52	81 49	207.53	81.23	207.79
MW-97	Fluvial	297.44	199.94	97 41	200.03	97.38	200.06
MW-98	Fluvial	294.43	157 43	97.60	196.83	97.56	196.87
MW-99	Fluvial	285.33	193.83	85.95	199.38	85 98	199.35
MW-100B	Fluvial	291 06	183 56	89.70	201 36	90.00	201.06
MW-101	Fluvial	291.70	202.70	89.92	201 78	89.82	201.88
MW-102B	Fluvial	311.40	190.90	107.50	203.90	107 50	203.90
MW-103	Fluvial	301 35	231.35	74.00	227.35	68 74	232.61
MW-104	Fluvial	295.76	225 26	58.78	236.98	58 51	237.25
MW-107	Fluvial/Intermediate	304 92	176.92	108 76	196.16	108.35	196.57
MW-108	Fluvial/Intermediate	303.07	143.07	107.53	195.54	107.74	195 33
MW-113	Fluvial	304.81	208.81	96.84	207 97	96.36	208.45
MW-115	Fluvial	291 67	202.17	89.91	201 76	89.78	201.89
MW-125	Fluvial	291 35	197.35	89 57	201 78	89 49	201 86
MW-140	Intermediate	298.12	73.52	134.05	164.07	138.93	159.19
MW-141	Intermediate	303 71	155.01	112 09	191 62	112 31	191 40
MW-142	Fluvial	291 18	206.18	92.50	198.68	92 46	198.72

TABLE 2
WATER LEVEL MEASUREMENTS
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Main Installation - Defense Depot Memphis, Tennessee

Well ID	Aquifer	Top of Casing Elevation (ft, msl)	Top of Screen Elevation (ft, msl)	Depth to Water 4/3/2009 (ft, btoc)	Groundwater Elevation 4/3/2009 (ft, msl)	Depth to Water 10/2/2009 (ft, btoc)	Groundwater Elevation 10/2/2009 (ft, msl)
MW-143	Fluvial	290.56	212.06	89 97	200 59	89.74	200 82
MW-197A	Fluvial	291.26	129.30	93 91	197.35	93.78	197.48
MW-197B	Fluvial	291 03	196.88	93.81	197.22	93.79	197.24
MW-198	Fluvial	291.50	201.47	94.52	196.98	94.47	197.03
MW-199A	Intermediate	301.53	155.45	108.83	192 70	109.06	192 48
MW-199B	Fluvial	301.73	197.12	105 39	196 34	105.37	196.36
MW-200	Fluvial	300 18	196.98	104 27	195 91	104.16	196.02
MW-202A	Intermediate	299.23	122.73	121 28	177.95	123.00	176 23
MW-202B	Intermediate	299.51	180.42	121.74	177.77	122.38	177.13
MW-203A	Fluvial	290.59	147.65	92 51	198 08	92.36	198.23
MW-203B	Fluvial	290.51	197.68	92.40	198.11	92.25	198.26
MW-204A	Fluvial	292 21	158.95	94.97	197.24	94.89	197.32
MW-204B	Fluvial	292.32	197.83	94 99	197.33	94.88	197 44
MW-205A	Fluvial	291 93	150 96	94 98	196 95	95.20	196.73
MW-205B	Fluvial	291.82	194 82	94.69	197.13	94 99	196.83
MW-206A	Fluvial	299.92	172 58	104 14	195.78	104 03	195.89
MW-206B	Fluvial	299.90	203.18	104.06	195.84	103 93	195.97
MW-207A	Fluvial	303.78	154.13	108.16	195.62	108 40	195.38
MW-207B	Fluvial	303.83	195 58	108.00	195.83	108.13	195.70
MW-208A	Fluvial	301.50	118.05	106 00	195.50	105.90	195.60
MW-208B	Fluvial	301.79	195.13	106 05	195.74	105.90	195.89
MW-209A	Fluvial	298.05	109 07	103.84	194.21	104.22	193 83
MW-209B	Fluvial	298.49	196.17	102 09	196 40	102.12	196.37
MW-210A	Intermediate	289.66	112.60	99.19	190 47	99.10	190.56
MW-210B	Fluvial	289 29	192.33	92.22	197.07	92 18	197 11
MW-211	Intermediate	303.74	137.48	109.18	194.56	109 41	194 33
MW-212	Fluvial	295.34	209 69	98 46	196.88	98.23	197 11
MW-213	Fluvial	293.83	216.92	Dry	--	Dry	--
MW-214A	Fluvial	303.61	184.53	103 10	200.51	102.90	200.71
MW-214B	Fluvial	303 70	202.13	102 90	200.80	102 57	201 13
MW-215A	Fluvial	304 50	175 75	108.45	196.05	108.68	195.82
MW-215B	Fluvial	304.56	199 15	108 59	195 97	108.79	195.77
MW-216	Fluvial	297.34	197.41	97 22	200 12	97 04	200.30
MW-217	Fluvial	304.18	202.39	106 45	197.73	106.51	197.67
MW-218	Fluvial	305.60	206.69	103.00	202.60	102.88	202.72
MW-219	Fluvial	294 90	197.16	91 82	203 08	91.50	203.40
MW-229	Intermediate	311.77	123.34	146.80	164.97	151.79	159.98
DR1-1	Fluvial	293.09	171 42	91.27	201.82	91.23	201 86
DR1-1A	Fluvial	293 13	203.79	91.22	201.91	91.14	201.99
DR1-2	Fluvial	290 08	192.28	89 39	200.69	89 35	200.73
DR1-3	Fluvial	290.93	181 26	91.04	199.89	91 22	199.71
DR1-4	Fluvial	292.78	186.50	91 30	201 48	91.42	201.36
DR1-5	Fluvial	294 50	169.28	92 45	202 05	92.39	202.11
DR1-5A	Fluvial	294 61	204 88	92.55	202.06	92.45	202 16
DR1-6	Fluvial	292.98	177.14	91.17	201 81	91.10	201 88
DR1-6A	Fluvial	293 14	202 32	91 14	202.00	91.18	201.96

TABLE 2
WATER LEVEL MEASUREMENTS
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Well ID	Aquifer	Top of Casing Elevation (ft, msl)	Top of Screen Elevation (ft, msl)	Depth to Water 4/3/2009 (ft, btoc)	Groundwater Elevation 4/3/2009 (ft, msl)	Depth to Water 10/2/2009 (ft, btoc)	Groundwater Elevation 10/2/2009 (ft, msl)
DR1-7	Fluvial	289 15	180.86	89.54	199.61	89.74	199.41
DR1-8	Fluvial	290.02	197.37	88.65	201.37	88.55	201.47
DR2-1	Fluvial	304.90	231.00	87.30	217 60	86.89	218.01
DR2-2	Fluvial	304.37	225.37	81.42	222 95	81.61	222.76
DR2-3	Fluvial	303.44	210 44	96 73	206.71	96 54	206.90
DR2-4	Fluvial	303 47	215.47	93.89	209.58	93.80	209.67
DR2-5	Fluvial	305.44	220.44	95.62	209.82	95.26	210.18
DR2-6	Fluvial	304.70	210.10	100.86	203 84	100.68	204.02
PZ-03	Fluvial	298.51	189.61	102.15	196 36	102.21	196.30
PZ-06	Fluvial	302 74	213.34	NM	--	NM	--
IW-01	Fluvial	304 03	215.03	95 05	208.98	94.64	209.39
IW-06	Fluvial	291 94	192.94	90.25	201.69	90.12	201.82

Notes
NM: Not measured

TABLE 3
WELL STABILIZATION SUMMARY, APRIL 2009
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Main Installation - Defense Depot Memphis, Tennessee

Well ID	Sample Date	Sample Method	Time Sampled	Sample Pump Depth ft, btoc	Water Depth ft, btoc	Purge Rate mL/min	Volume Purged Liters	pH	Temp °C	Specific Conductivity mS/cm	Dissolved Oxygen mg/L	Oxidation Reduction Potential mV	Turbidity NTUs
MW-25A	4/6/2009	low flow	9.44	79 0	77.3	250	5.1	5 9	15.7	0.397	6.9	80.4	9
MW-26	4/7/2009	low flow	8:48	104.1	99.3	130	3.5	6.3	14.8	0.318	8.1	133.1	0
MW-39	4/9/2009	low flow	13:10	110.1	101.9	60	4 5	6.3	19 8	0 401	2.4	172.4	0
MW-39A	4/9/2009	low flow	14 41	161.6	102 2	350	7.1	5.9	19 0	0.361	5.8	126 3	2
MW-52	4/6/2009	low flow	10.22	97 4	79.0	250	5.1	6.0	16.4	1.039	6.8	112 9	9
MW-62	4/10/2009	bailer	9:36	bs	dry	n/a	5.7	6.3	18.9	0.141	7 4	107.3	
MW-64	4/9/2009	low flow	13 55	110 4	106.4	200	4.0	6.0	19.8	0.285	3.3	169.0	0
MW-86	4/9/2009	low flow	12 23	108.1	96 6	225	9 0	6.4	21 7	1.019	2.5	-67.1	3
MW-88	4/9/2009	low flow	10:20	87 0	82.1	140	3.6	5.8	20.5	0.325	5.4	120 3	7
MW-90	4/7/2009	low flow	8:03	130 6	115.3	440	8.8	5.8	17.1	0.683	7 3	9.1	2
MW-92	4/10/2009	low flow	13:20	102.1	94 8	130	8.1	7.1	20.9	2.592	1 6	-155.3	2
MW-94A	4/9/2009	low flow	9:55	117.5	107.1	280	7.2	6.2	19.0	0 340	2.2	154.6	0
MW-96	4/6/2009	low flow	9:08	89 2	82.0	250	5 0	6.2	16 4	0.394	4.6	-1.0	7
MW-97	4/10/2009	low flow	9:15	109.2	97.4	220	7.0	5.9	18.6	0.141	5 9	133 6	16
MW-98	4/10/2009	low flow	10:20	142.6	97 5	140	12.0	6.0	18.8	0.299	2.8	148.9	20
MW-100B	4/8/2009	low flow	13.25	118.5	91 0	320	9.5	6.5	19.3	4 282	7.1	-138.4	7
MW-104	-	na		Not accessible		-	-	-	-	-	-	-	-
MW-108	4/7/2009	low flow	13:35	167.9	108.4	380	11.3	5 6	17.6	0.536	5.1	-15.1	12
MW-113	4/9/2009	low flow	11:20	103.2	99.8	340	6.8	5.7	21.3	0.217	3.4	117.6	4
MW-125	4/8/2009	low flow	8.30	102.3	89 9	270	10 9	6.4	18.2	1.492	5.4	-102.0	1
MW-141	4/9/2009	low flow	9:15	161.0	112.3	380	9.5	5.6	18.1	0 558	3.4	115.0	1
MW-197A	4/6/2009	low flow	13:18	170.4	94.4	420	8 5	6 1	17 2	0 348	6.2	117.6	6
MW-197B	4/6/2009	low flow	13:49	102.6	94 3	220	4.4	6.3	16.6	0.440	3.6	92.2	1
MW-198	4/9/2009	low flow	11.15	100.5	94.7	120	3.2	6.0	19.9	0.153	6 6	153.6	7
MW-199B	4/9/2009	low flow	8:15	113 3	105.6	200	4 0	6.0	17 7	0.124	7 5	124.4	0
MW-200	4/7/2009	low flow	8:38	112.0	104 8	370	7.4	6.1	16 5	0 357	4.6	3 0	5
MW-202A	4/7/2009	low flow	14:19	185 0	122 0	360	7.2	5 7	17.8	0.274	4.9	-21 8	4
MW-202B	4/7/2009	low flow	10:55	129.9	120.4	75	3.0	6.3	16.4	0.545	0.0	115 3	0
MW-203A	4/9/2009	low flow	7:56	150.5	92 6	360	7 1	6.0	17.5	0.347	6 1	88.6	1
MW-203B	4/9/2009	low flow	8:35	100.3	92 6	280	5.6	6.4	17.6	0 564	3.0	86.8	3
MW-204A	4/7/2009	low flow	15:00	139.0	95 5	320	8.0	6.0	17.5	0 454	4.5	-17.7	1
MW-204B	4/8/2009	low flow	8:50	100.5	95.1	60	3.1	6.2	15.4	0.357	7.1	136.0	0
MW-205A	4/10/2009	low flow	10:18	147.0	95.3	300	6.0	6.0	18.1	0.348	1.7	114.2	8
MW-205B	4/7/2009	low flow	14:12	103.1	95.6	68	3.7	6.9	17.0	0.400	0.0	125.5	19
MW-206A	4/7/2009	low flow	9:22	134.8	104.7	340	10.1	5.9	17.7	0.344	5.0	-40.2	3
MW-206B	4/7/2009	low flow	11:00	107.9	104.6	270	12 2	6.0	17.1	0.333	4.4	-35.0	1
MW-207A	4/10/2009	low flow	13.47	157.2	108.7	270	5.3	5.6	18.6	0.513	2.5	143.6	6

1017 39

1017140

TABLE 3
WELL STABILIZATION SUMMARY, APRIL 2009
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Well ID	Sample Date	Sample Method	Time Sampled	Sample Pump Depth ft, btoc	Water Depth ft, btoc	Purge Rate mL/min	Volume Purged Liters	pH	Temp °C	Specific Conductivity mS/cm	Dissolved Oxygen mg/L	Oxidation Reduction Potential mV	Turbidity NTUs
MW-207B	4/10/2009	low flow	15:30	115.6	108 3	210	17 8	6.0	18.6	0.198	7.8	152.1	19
MW-208A	4/7/2009	low flow	12:00	191.0	106.6	350	7.1	5 9	17 7	0.344	8.0	-2.3	3
MW-208B	4/7/2009	low flow	12:51	114.2	106 6	250	5.1	5.9	17.0	0.212	7.6	22.6	5
MW-209A	4/9/2009	low flow	14 00	195.3	104.4	220	4.4	5.8	19.5	0.250	9.8	138.5	1
MW-209B	4/9/2009	low flow	13:27	108.3	102.3	180	7.5	5 7	19.8	0 130	8.1	123.9	4
MW-210A	4/6/2009	low flow	12:42	184.5	98 8	235	4 7	6.1	15.8	0.308	7.5	112.5	14
MW-210B	4/6/2009	low flow	12:11	104.5	92.8	210	7.5	6.1	15.3	0.261	7.9	99 2	1
MW-211	4/10/2009	low flow	10:50	174.0	109 6	350	7.0	5.8	18 6	0.608	3.1	136.2	8
MW-212	4/10/2009	bailer	9.25	bs	98 4	n/a	5.0	6.1	18.3	0 137	8.4	92 1	
MW-213	-	na	-	dry	-	-	-	-	-	-	-	-	-
MW-214A	4/10/2009	low flow	12:32	126.6	103 5	340	8 6	5.8	19.0	0.310	4.8	149.4	17
MW-214B	4/10/2009	low flow	13:16	109.6	103.7	240	7 3	5 8	19.5	0.320	4 8	145.1	19
MW-215A	4/10/2009	low flow	11:51	136.3	108.8	230	4.6	5 8	19 4	0.320	5.1	151.3	1
MW-215B	4/9/2009	low flow	9:10	114 4	109.0	150	3.4	6.0	19 3	0.317	5 9	149 8	6
MW-216	4/6/2009	low flow	14 25	107.4	97.8	170	3.5	6.1	15.2	0.548	8.3	110.0	17
MW-217	4/8/2009	low flow	9.45	111.0	106.7	90	3.2	5.8	18.0	0.207	4.5	144.4	1
MW-218	4/8/2009	low flow	13:35	108.2	103 1	100	8.7	6.0	22.6	0 241	8.2	122.5	46
MW-219	4/6/2009	low flow	8:17	105.2	92.3	380	7.6	6 0	16.9	0.303	7.1	8 5	1
MW-229	4/8/2009	low flow	14 43	200 0	151 9	190	4.7	6.8	19.0	0.241	3.2	5.6	5
DR1-1A	4/8/2009	low flow	9 48	101 3	91 6	260	14 2	6.0	18.8	0.370	7.8	82 9	1
DR1-4	4/8/2009	low flow	14:05	117.6	91.7	370	7.4	6.3	18 9	0.543	3.9	-75.1	1
DR1-5	4/8/2009	low flow	10:56	136.3	92.8	400	8.0	5.7	18 5	0 341	6.8	113 1	4
DR1-5A	4/8/2009	low flow	10 20	102.3	92 9	310	6 2	5.7	18.8	0.177	8.7	110.4	3
DR1-6	4/8/2009	low flow	12:04	126 6	91.4	280	5 6	5 9	19.5	0.448	7.0	100.6	4
DR1-6A	4/8/2009	low flow	11.33	102.8	91.6	280	5.7	5 7	19 5	0.161	4 0	95.2	1
DR2-2	4/10/2009	low flow	11.15	88.6	81.4	120	3.1	5.9	18.6	0.178	6.8	158.2	9
DR2-3	4/8/2009	low flow	14:30	102.6	96.8	110	3.6	5.8	21.5	0.363	4 7	160 2	0
DR2-6	4/7/2009	low flow	9:55	109.2	101.3	100	3.2	6.6	17 0	0.207	0.0	45 4	0

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

TABLE 4
WELL STABILIZATION SUMMARY, OCTOBER 2009
ANNUAL LONG TERM MONITORING REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Well ID	Sample Date	Sample Method	Time Sampled	Sample Pump Depth ft, btoc	Water Depth ft, btoc	Purge Rate mL/min	Volume Purged Liters	pH	Temp °C	Specific Conductivity mS/cm	Dissolved Oxygen mg/L	Oxidation Reduction Potential mV	Turbidity NTUs
MW-21	10/5/2009	low flow	8:40	92 2	92.2	220	3.3	5 8	18.2	0 268	4.7	84.5	5
MW-25A	10/8/2009	low flow	10:30	79 0	70.7	200	4.0	5 7	18.2	0.375	5.3	143 0	5
MW-26	10/8/2009	low flow	16:50	104 1	98.7	100	3.2	5.7	21.8	0.371	5.7	135.4	0
MW-34	10/8/2009	low flow	8:08	148.9	135.2	100	3.0	5.7	18.6	0 194	3.4	133 2	0
MW-38	10/5/2009	low flow	16.18	147.0	134.7	120	3 0	6.8	19 2	0.194	11 3	226.5	9
MW-39	10/10/2009	low flow	10:10	110 1	103.1	120	4 2	6 1	18.0	0.371	2.1	127.9	2
MW-39A	10/5/2009	low flow	10:35	161 6	102.2	260	7.6	5.9	18.6	0.356	4.9	176 2	1
MW-52	10/12/2009	low flow	9:52	97.4	78 4	240	4 8	5.8	18.1	1.110	4 7	160.2	1
MW-62	10/10/2009	bailer	8:30	-	94.0	-	4 3	6.3	17.0	0.130	9.8	107.4	77
MW-63A	10/10/2009	low flow	15:29	136.1	104 0	200	4 0	5.7	19.8	0 654	3.2	173.3	1
MW-63B	10/10/2009	low flow	14 47	120.8	104.1	280	7.0	5.8	19.8	0 740	3.1	173.1	4
MW-64	10/8/2009	low flow	14.25	110.4	106.3	180	3.5	5.7	22.0	0.361	4.4	131.7	8
MW-85	10/12/2009	low flow	8 27	105.1	98.2	120	5.8	5.8	20.9	0.276	1.5	101 9	6
MW-86	10/11/2009	low flow	13 21	108.1	96.2	150	7.5	6 5	22 8	0 934	0.7	-9.3	4
MW-88	10/11/2009	low flow	14 27	87.0	82 1	60	4.9	5.8	23.8	0.345	4.4	76 5	4
MW-89	10/5/2009	low flow	15:13	164.3	114.4	375	7.5	5.7	18.6	0.250	6.9	183 1	7
MW-90	10/10/2009	low flow	13 56	130.6	115.1	200	4.0	6 6	18.2	0.201	7 0	137.1	3
MW-92	10/10/2009	low flow	16 08	102.1	94.9	56	3.9	6 9	18.7	1 344	0.6	-116.4	10
MW-93	10/11/2009	low flow	11:50	103.0	99.4	110	3.5	5.9	18.6	0 347	6.5	136.6	12
MW-94A	10/12/2009	low flow	8.03	117.5	107.2	200	7.0	6.0	19.2	0.354	2.8	114.3	17
MW-96	10/8/2009	low flow	11.25	89.2	81.2	280	7.0	6.1	19.4	0.456	4.7	150.6	1
MW-97	10/7/2009	low flow	14:00	109.2	97 8	450	8.0	5 5	18.8	0 148	5.0	161 9	8
MW-98	10/7/2009	low flow	13:23	142.6	98 1	400	12.0	5.6	19.4	0 302	2.4	157.3	16
MW-99	10/7/2009	low flow	15.10	102.0	86.3	110	8.3	5.8	20.8	0.347	7.2	114.6	19
MW-100B	10/7/2009	low flow	9:45	118.5	90 9	220	19.6	6 8	20.1	3.916	1.7	-106.0	15
MW101T	10/7/2009	low flow	12:45	98.5	90.1	150	8 8	6.1	21.5	0.449	7.9	86.5	2
MW101B	10/7/2009	low flow	11.40	127 6	90.1	170	7.8	6.1	20 8	0.457	3.1	-0.8	0
MW-102B	10/8/2009	low flow	8:45	131.0	107.5	110	11.7	6.1	19 5	0.526	6.9	120.8	40
MW-103	10/11/2009	low flow	13:50	80 0	69.0	240	18.4	5.8	19.6	0.902	1.0	158.7	19
MW-104	10/11/2009	low flow	16:53	77.2	58 8	200	20.0	5.8	19 9	0.768	0 9	156.7	19
MW-107T	10/7/2009	low flow	9:40	136.0	108 7	280	5.6	5.7	17.9	0.235	5.1	155.2	4
MW-107B	10/7/2009	low flow	8.51	153.0	108.7	300	6.0	5.7	18.3	0 241	6.1	137.5	2
MW-108	10/5/2009	low flow	8 12	167.9	107.9	240	9.4	5.6	17 8	0.539	3.5	145.9	8
MW-113	10/10/2009	low flow	13 15	103.2	98 3	70	6.8	5.7	21.2	0.247	2.4	73.6	2
MW115	10/5/2009	low flow	11:18	103.2	89.8	190	5.4	6 0	19.1	0.369	0.8	21.8	7
MW-125	10/5/2009	low flow	10:30	102.3	89.6	140	6.2	6.3	18.8	0.590	0.7	-33.7	1
MW-140	10/12/2009	low flow	12:35	238.5	139.1	80	3.2	5.7	19.8	0.260	5.8	11.9	2
MW-141	10/5/2009	low flow	14:35	161.0	112.4	300	6.0	5.6	18.4	0 563	2.2	193.1	1

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TABLE 4
WELL STABILIZATION SUMMARY, OCTOBER 2009
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Main Installation - Defense Depot Memphis, Tennessee

Well ID	Sample Date	Sample Method	Time Sampled	Sample Pump Depth ft, btoc	Water Depth ft, btoc	Purge Rate mL/min	Volume Purged Liters	pH	Temp °C	Specific Conductivity mS/cm	Dissolved Oxygen mg/L	Oxidation Reduction Potential mV	Turbidity NTUs
MW-142	10/8/2009	low flow	15:13	. 96 9	92.5	290	8.7	5 7	20.8	0.205	8.0	151 3	0
MW-197A	10/6/2009	low flow	9:45	170.4	93.7	240	6.0	6.1	18.3	0.348	3 0	114 1	7
MW-197B	10/6/2009	low flow	10.42	102.6	93.6	80	3.2	6 3	18.9	0 474	0 0	98 3	0
MW-198	10/12/2009	low flow	11.21	100.5	94.7	120	4.8	5.7	20.7	0 156	8 4	140.9	18
MW-199A	10/5/2009	low flow	13:42	154.6	109.2	240	7.2	5.8	18.8	0.221	7.8	175.2	17
MW-199B	10/7/2009	low flow	16:31	113.3	105.5	320	6.4	5.6	19.5	0.134	6.8	156.0	1
MW-200	10/10/2009	low flow	10 56	112.0	104 6	400	10.0	6.0	17.8	0.352	0.3	136.0	1
MW-202A	10/6/2009	low flow	16:01	185.0	122 8	300	7.5	5.7	18 9	0.251	2.1	177.9	5
MW-202B	10/6/2009	low flow	16:31	129.9	122.8	300	6.0	5.7	19.1	0.569	.1 3	189.3	19
MW-203A	10/6/2009	low flow	7:59	150.5	92.2	250	6.3	5.9	18.1	0.331	2.8	123.5	0
MW-203B	10/6/2009	low flow	8.55	100 3	92 2	200	7 0	6 4	18.3	0.499	0.0	41.0	1
MW-204A	10/7/2009	low flow	14:57	139.0	95.1	200	6.0	6 0	19.0	0.444	2 0	179 2	1
MW-204B	10/6/2009	low flow	15:10	100 5	94 8	120	4 8	6 1	19.7	0 389	3 0	187 5	4
MW-205A	10/5/2009	low flow	11.21	147.0	95.4	240	6.0	6.0	18.4	0.360	1.2	178.8	4
MW-205B	10/7/2009	low flow	15:51	103.1	95.2	160	4.0	6.1	21 1	0.438	0.6	170.2	12
MW-206A	10/7/2009	low flow	11 21	134.8	104.2	160	3 2	5.9	19.6	0.334	0.0	165.2	4
MW-206B	10/7/2009	low flow	12:31	107.9	104 2	200	6.0	5.9	19 6	0.318	0.0	124.9	8
MW-207A	10/5/2009	low flow	9:42	157.2	108.7	200	7.0	5.6	18.9	0.522	3.2	167.6	5
MW-207B	10/6/2009	low flow	13.36	115.6	108.1	120	3.0	5.8	20.9	0 258	6.6	159.2	5
MW-208A	10/8/2009	low flow	13:06	191 0	105.9	90	3.6	5.9	22.0	0 341	2 0	142 6	0
MW-208B	10/8/2009	low flow	14.09	114 2	105 9	200	6.0	5.9	20.3	0.225	4.6	160.0	0
MW-209A	10/5/2009	low flow	12.41	195.3	104.6	200	4.0	5.9	19.6	0.232	10.9	171.5	4
MW-209B	10/10/2009	low flow	13.00	108.3	102.5	120	3.0	5.9	18.7	0.097	8.7	139.9	15
MW-210A	10/6/2009	low flow	11:35	184.5	99 0	200	4.0	6.1	18.8	0.309	4 7	134.9	3
MW-210B	10/6/2009	low flow	12:16	104.5	92.2	360	9.0	6.0	18.9	0.256	5.9	152.2	3
MW-211	10/7/2009	low flow	10:35	174 0	109.7	320	6.4	5.7	19 1	0 570	1.6	172.6	4
MW-212	10/10/2009	bailer	9:10	-	98.4	-	4.7	6.0	17.7	0.131	9.4	122.6	393
MW-213	10/10/2009	na	-	dry	-	-	-	-	-	-	-	-	-
MW-214A	10/11/2009	low flow	9:00	126 6	103 2	40	3 2	5 8	19.1	0.365	4.7	109 7	4
MW-214B	10/11/2009	low flow	10:09	109 6	103 0	76	3.1	5 8	20 2	0 372	4.2	119 6	4
MW-215A	10/12/2009	low flow	11:35	136 3	108.7	60	3.0	5.8	23.7	0.368	4.8	145 5	2
MW-215B	10/12/2009	low flow	12.55	114.4	108.8	80	3.0	5.8	22.9	0.387	5.7	153 0	4
MW-216	10/12/2009	low flow	9:52	107 4	97 1	40	3 1	6.1	18.1	0.596	6 8	134.6	16
MW-217	10/8/2009	low flow	15:09	111.0	106.5	130	3.3	5.7	22.5	0.279	5.3	132.2	10
MW-218	10/8/2009	low flow	13:50	108.2	102.8	70	8.2	5.8	24 3	0.313	5.6	125.3	53
MW-219	10/8/2009	low flow	9:40	105.2	91.6	150	3.5	5.9	19.1	0.358	5.3	126 1	6
MW-229	10/8/2009	low flow	9 21	200.0	156 8	100	4.5	6.7	19 5	0 295	0 1	136.9	0
DR1-1	10/6/2009	low flow	16:10	133 8	91 1	52	3.1	6.0	23.2	0.427	4 8	149.6	2

TABLE 4
WELL STABILIZATION SUMMARY, OCTOBER 2009
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Main Installation - Defense Depot Memphis, Tennessee

Well ID	Sample Date	Sample Method	Time Sampled	Sample Pump Depth ft, btoc	Water Depth ft, btoc	Purge Rate mL/min	Volume Purged Liters	pH	Temp °C	Specific Conductivity mS/cm	Dissolved Oxygen mg/L	Oxidation Reduction Potential mV	Turbidity NTUs
DR1-1A	10/6/2009	low flow	14:20	101.3	91.1	100	3 0	6.1	21.7	0.421	6.1	152.7	2
DR1-2	10/6/2009	low flow	11:20	109.1	89.3	240	7 2	6.0	19.7	0.409	5 1	84.1	1
DR1-3	10/6/2009	low flow	9:10	121.6	91.1	60	3.0	6.3	19 0	0.463	1.3	-8.0	1
DR1-4	10/6/2009	low flow	10.25	117.6	91.3	200	8.3	6.2	18 9	0.519	1.0	1 4	1
DR1-5	10/5/2009	low flow	16.20	136.3	92.4	175	3.7	5.7	19.9	0.403	4.2	139.5	0
DR1-5A	10/5/2009	low flow	15:30	102.3	92.5	165	10.8	5.7	19.9	0.231	6 5	113.8	0
DR1-6	10/6/2009	low flow	12:10	126.6	91 0	180	3 8	6.0	20.5	0.464	5.2	121.3	1
DR1-6A	10/6/2009	low flow	13:00	102 8	91 1	190	7.3	5.8	20.5	0.198	4.4	129 0	1
DR1-7	10/6/2009	low flow	7.45	120 3	89 7	220	3.8	6.0	18.7	0.387	5.3	112.1	11
DR1-8	10/5/2009	low flow	9:35	103.5	88 7	156	3.5	5.9	19.2	0.380	6.0	112.6	0
DR2-1	10/10/2009	low flow	7:54	92 3	87.8	70	1.6	6.2	16.4	0.335	7 8	92.3	5
DR2-2	10/11/2009	low flow	15:27	88 6	83.2	86	3.1	5.7	22.0	0.276	6.1	130.9	6
DR2-3	10/10/2009	low flow	8:55	102 6	96 7	110	3.6	5.8	18.7	0.432	5.5	126.3	1
DR2-4	10/11/2009	low flow	16:22	102 0	93 8	120	3.3	5.7	21.1	0.396	5 0	143.6	6
DR2-5	10/10/2009	low flow	14:27	98.6	95.9	120	4.3	5 9	21.1	0.284	1.9	91 4	0
DR2-6	10/8/2009	low flow	16:00	109.2	100 7	150	5.2	5.9	21.9	0.291	1.4	124.7	10
PZ-03	10/11/2009	bailer	9:19	-	102.5	-	0 8	6.2	17.1	0 328	9.5	120 2	394
PZ-06	10/11/2009	bailer	11:06	-	78.6	-	1.2	6 5	19.8	0 258	7 0	129 5	149
IW-01	10/10/2009	low flow	11 18	97.8	96.4	40	8.7	6.9	19 6	4 270	1.2	61.3	30
IW-06	10/5/2009	low flow	13 40	105.6	90 2	180	9.8	6.4	18.6	20.930	0.7	-65.7	208

Notes
na not available
ft, btoc: feet below top of casing
mL/min: milliliters per minute
L : liters
°C : degrees Celsius

DO : Dissolved Oxygen
mS/cm : milliSiemens per centimeter
mg/L . milligrams per liter
mV :millivolts
NTUs: nephelometric turbidity units

ORP : Oxidation Reduction Potential

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TABLE 5
ANALYTICAL RESULTS SUMMARY - APRIL 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID Lab ID Date	Maximum Contaminant Levels	DR1-1A L09040270-25 4/8/2009	DR1-4 L09040270-26 4/8/2009	DR1-5A L09040270-28 4/8/2009	DR1-5 L09040270-27 4/8/2009	DR1-6A L09040270-30 4/8/2009	DR1-6 L09040270-29 4/8/2009	DR2-2 L09040275-05 4/10/2009
Primary VOCs	**Units**								
Carbon tetrachloride	µg/L	5	<1	<1	<1	<1	<1	<1	**16.2**
Chloroform	µg/L	80	**0.424**	<0.3	0.217 J	<0.3	0.214 J	<0 3	**4.23**
cis-1,2-Dichloroethene	µg/L	70	0 295 J	0.755 J	**3.19**	<1	**4.33**	**1.31**	**7.39**
Tetrachloroethene	µg/L	5	0.838 J	0.947 J	**56.3**	**53.2**	**32.5**	**197**	**159**
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**3.85**	0.393 J	**95.7**	<1	**125**	**1.44**	**3.82**
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
1,2-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
1,2-Dichloropropane	µg/L	5	<1	<1	0 264 J	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	--	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Acetone	µg/L	--	<10	4.07 JB	<10	<10	<10	<10	<10
MEK (2-Butanone)	µg/L	--	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	**19**	1.08 J	<5	<5	<5
Toluene	µg/L	--	<1	<1	<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
Results detected at or above reporting limits shown in bold
DQE FLAGS:
J Estimated, based on QC data or reported below RL
B: Possibly biased high or false positive based on blank data

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TABLE 5
ANALYTICAL RESULTS SUMMARY - APRIL 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID Lab ID Date Units	Maximum Contaminant Levels	DR2-3 L09040270-36 4/8/2009	DR2-6 L09040213-17 4/7/2009	MW-25A L09040213-18 4/6/2009	MW-26 L09040213-14 4/7/2009	MW-39A L09040270-01 4/9/2009	MW-39 L09040270-14 4/9/2009	MW-52 L09040213-19 4/6/2009
Primary VOCs									
Carbon tetrachloride	µg/L	5	**6.66**	**12.9**	**1.54**	**5.91**	<1	<1	<1
Chloroform	µg/L	80	**1.19**	**7.83**	**0.449**	**1.16**	0 145 J	<0.3	**0.891**
cis-1,2-Dichloroethene	µg/L	70	**1.41**	**29**	<1	0.332 J	**7.61**	**17.5**	0.81 J
Tetrachloroethene	µg/L	5	**38.9**	**24.5**	**7.84**	**25.3**	**156**	**62.9 J**	**5.85**
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**2.47**	**5.33**	0.644 J	**1.33**	**7.21**	**11.6**	**1.12**
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
1,2-Dichloroethane	µg/L	5	<0 5	**0.715**	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-Trichloropropane	µg/L	--	<1	**14.9**	<1	<1	<1	<1	<1
1,2-Dichloropropane	µg/L	5	<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
Acetone	µg/L	--	<10	<10	<10	3.36 J	<10	<10	<10
MEK (2-Butanone)	µg/L	--	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	0.569 J	<5	<5	<5	<5
Toluene	µg/L	--	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using method 8260B
µg/L - micrograms per liter
<: Not detected at sample reporting limit
Results detected at or above reporting limits shown in bold
DQE FLAGS:
J Estimated, based on QC data or reported below RL
B: Possibly biased high or false positive based on blank data

TABLE 5
ANALYTICAL RESULTS SUMMARY - APRIL 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

Primary VOCs	Well ID Lab ID Date Units	Maximum Contaminant Levels	MW-62 L09040275-07 4/10/2009	MW-64 L09040270-17 4/9/2009	MW-86 L09040270-02 4/9/2009	MW-88 L09040270-03 4/9/2009	MW-90 L09040213-01 4/7/2009	MW-92 L09040275-01 4/10/2009	MW-94A L09040270-18 4/9/2009
Carbon tetrachloride	µg/L	5	0 369 J	**3.37**	0 499 J	**4.87**	0.268 J	<1	<1
Chloroform	µg/L	80	**0.361**	**1.08**	**0.906**	**0.825**	**4.91**	<0 3	<0.3
cis-1,2-Dichloroethene	µg/L	70	0.424 J	0.481 J	**120**	0.732 J	0.481 J	**119**	**3.06**
Tetrachloroethene	µg/L	5	0 33 J	**23**	**15.2**	**31.7**	**80.8**	<1	**30**
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**169**	**38.1**	**2.98**	**3.26**	**8.47**	<1	**6.78**
Vinyl chloride	µg/L	2	<1	<1	**8**	<1	<1	**1.64**	<1
Additional VOCs*									
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	**1.12**	<0.5	<0.5	<0.5	<0.5	<0 5
1,1-Dichloroethane	µg/L	--	<1	<1	<1	<1	**1.09**	<1	<1
1,2-Dichloroethane	µg/L	5	<0.5	0.479 J	**0.782**	<0.5	<0 5	<0.5	<0.5
1,2,3-Trichloropropane	µg/L	--	<1	<1	0 98 J	<1	<1	<1	<1
1,2-Dichloropropane	µg/L	5	<1	<1	**1.08**	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	--	<0.4	<0.4	**0.533**	<0.4	<0.4	<0.4	<0 4
Acetone	µg/L	--	<10	4.54 JB	<10	2.67 JB	3.29 J	**31.7 B**	<10
MEK (2-Butanone)	µg/L	--	<10	<10	<10	<10	<10	**133**	<10
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	<5	<5	<5	<5	<5
Toluene	µg/L	--	<1	<1	<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L : micrograms per liter
< Not detected at sample reporting limit
Results detected at or above reporting limits shown in bold
DQE FLAGS.
J: Estimated, based on QC data or reported below RL
B. Possibly biased high or false positive based on blank data

N0472146

TABLE 5
ANALYTICAL RESULTS SUMMARY - APRIL 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID Lab ID Date	Maximum Contaminant Levels	MW-96 L09040213-20 4/6/2009	MW-97 L09040275-02 4/10/2009	MW-98 L09040275-03 4/10/2009	MW-100B L09040270-23 4/8/2009	MW-108 L09040213-02 4/7/2009	MW-113 L09040270-04 4/9/2009	MW-125 L09040270-24 4/8/2009
Primary VOCs	**Units**								
Carbon tetrachloride	µg/L	5	0.69 J	<1	<1	<1	<1	**101**	<1
Chloroform	µg/L	80	**0.73**	**0.316**	<0.3	<0.3	**10.1**	**39**	<0.3
cis-1,2-Dichloroethene	µg/L	70	<1	<1	0.346 J	**22.3**	0.674 J	**57.1**	**76**
Tetrachloroethene	µg/L	5	**3**	<1	**30.1**	<1	**4.49**	**192**	0.399 J
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	0.33 J
Trichloroethene	µg/L	5	<1	**31.3**	**2.18**	<1	**28.1**	**29.5**	<1
Vinyl chloride	µg/L	2	<1	<1	<1	**94.6**	<1	<1	0.509 J
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	0.228 J	<1	<1
1,2-Dichloroethane	µg/L	5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.667**	0 313 J
1,2,3-Trichloropropane	µg/L	--	<1	<1	<1	<1	<1	**16.8**	<1
1,2-Dichloropropane	µg/L	5	<1	<1	<1	<1	<1	0.622 J	<1
1,3-Dichloropropane	µg/L	--	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Acetone	µg/L	--	<10	<10	4.94 JB	**35.1**	<10	<10	9.32 J
MEK (2-Butanone)	µg/L	--	<10	<10	<10	**142**	<10	<10	**26.1**
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	<5	**55.4**	<5	<5	**37.1**
Toluene	µg/L	--	<1	<1	<1	**1.04**	<1	<1	<1

Notes:
VOC samples analyzed using method 8260B
µg/L micrograms per liter
<. Not detected at sample reporting limit
Results detected at or above reporting limits shown in bold
DQE FLAGS
J. Estimated, based on QC data or reported below RL
B Possibly biased high or false positive based on blank data

TABLE 5
ANALYTICAL RESULTS SUMMARY - APRIL 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

Primary VOCs	Well ID Lab ID Date Units	Maximum Contaminant Levels	MW-141 L09040270-05 4/9/2009	MW-197A L09040213-21 4/6/2009	MW-197B L09040213-22 4/6/2009	MW-198 L09040270-19 4/9/2009	MW-199B L09040270-20 4/9/2009	MW-200 L09040213-05 4/7/2009	MW-202A L09040213-06 4/7/2009
Carbon tetrachloride	µg/L	5	<1	<1	<1	<1	0.476 J	<1	<1
Chloroform	µg/L	80	**1.85**	0 13 J	<0 3	<0.3	0.217 J	<0 3	0.171 J
cis-1,2-Dichloroethene	µg/L	70	<1	**3.69**	**38.2**	<1	<1	**5.68**	<1
Tetrachloroethene	µg/L	5	**15.7**	**42.1**	**20.2**	<1	0 494 J	**74.7**	0 399 J
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**2.48**	**2.09**	**12.6**	**3.73**	**115**	**4.82**	**1.35**
Vinyl chloride	µg/L	2	<1	<1	0.684 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
1,2-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
1,2-Dichloropropane	µg/L	5	<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
Acetone	µg/L	--	<10	<10	<10	3.19 JB	4.24 JB	<10	3 15 J
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
Toluene	µg/L	--	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using method 8260B
µg/L micrograms per liter
<: Not detected at sample reporting limit
Results detected at or above reporting limits shown in bold
DQE FLAGS:
J: Estimated, based on QC data or reported below RL
B Possibly biased high or false positive based on blank data

1017148

TABLE 5
ANALYTICAL RESULTS SUMMARY - APRIL 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID Lab ID Date	Maximum Contaminant Levels	MW-202B L09040213-15 4/7/2009	MW-203A L09040270-06 4/9/2009	MW-203B L09040270-07 4/9/2009	MW-204A L09040213-07 4/7/2009	MW-204B L09040270-33 4/8/2009	MW-205A L09040275-08 4/10/2009	MW-205B L09040213-16 4/7/2009
Primary VOCs	**Units**								
Carbon tetrachloride	µg/L	5	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	80	**1.96**	0.203 J	<0.3	<0.3	<0.3	0 132 J	<0 3
cis-1,2-Dichloroethene	µg/L	70	<1	**1.68**	**26.6**	**1.21**	**1.29**	**16.8**	**38.8**
Tetrachloroethene	µg/L	5	**19.5**	**170**	**21.1**	**47.4**	**16.3**	**82.6**	**19.7**
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**3.3**	**2.23**	**9.15**	0.981 J	**4.98**	**7.12**	**9.36**
Vinyl chloride	µg/L	2	<1	<1	**7.12**	<1	<1	<1	<1
Additional VOCs*									
1,1,2,2-Tetrachloroethane	µg/L	--	<0 5	<0 5	<0.5	<0.5	**1.31**	<0.5	<0 5
1,1-Dichloroethane	µg/L	--	0.53 J	<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
1,2-Dichloropropane	µg/L	5	<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
Acetone	µg/L	--	3.38 J	<10	6.97 JB	<10	<10	4 52 JB	4.21 J
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
Toluene	µg/L	--	<1	<1	<1	<1	<1	<1	<1

Notes.
VOC samples analyzed using method 8260B
µg/L micrograms per liter
<: Not detected at sample reporting limit
Results detected at or above reporting limits shown in bold
DQE FLAGS
J Estimated, based on QC data or reported below RL
B: Possibly biased high or false positive based on blank data

TABLE 5
ANALYTICAL RESULTS SUMMARY - APRIL 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

Primary VOCs	Well ID Lab ID Date Units	Maximum Contaminant Levels	MW-206A L09040213-08 4/7/2009	MW-206B L09040213-09 4/7/2009	MW-207A L09040275-09 4/10/2009	MW-207B L09040275-04 4/10/2009	MW-208A L09040213-10 4/7/2009	MW-208B L09040213-11 4/7/2009	MW-209A L09040270-08 4/9/2009
Carbon tetrachloride	µg/L	5	<1	<1	<1	0.851 J	<1	<1	<1
Chloroform	µg/L	80	<0 3	<0.3	**10.3**	**1.6**	0.18 J	0.165 J	<0.3
cis-1,2-Dichloroethene	µg/L	70	**14.2**	**9.78**	0.561 J	<1	**3.61**	**2.14**	<1
Tetrachloroethene	µg/L	5	**46.5**	**22.8**	**9.75**	**25.5**	**163**	**3.81**	0.323 J
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**12.6**	**9.31**	**47.4**	**102**	**9.8**	**28**	0.495 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	0.393 J	<0.5
1,1-Dichloroethane	µg/L	--	<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
1,2-Dichloropropane	µg/L	5	<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
Acetone	µg/L	--	<10	<10	4 92 JB	4.38 JB	<10	2.67 J	<10
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	2 35 J
Toluene	µg/L	--	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using method 8260B
µg/L : micrograms per liter
<. Not detected at sample reporting limit
Results detected at or above reporting limits shown in bold
DQE FLAGS.
J: Estimated, based on QC data or reported below RL
B. Possibly biased high or false positive based on blank data

1017,50

TABLE 5
ANALYTICAL RESULTS SUMMARY - APRIL 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID Lab ID Date	Maximum Contaminant Levels	MW-209B L09040270-11 4/9/2009	MW-210A L09040213-23 4/6/2009	MW-210B L09040213-24 4/6/2009	MW-211 L09040275-10 4/10/2009	MW-212 L09040275-11 4/10/2009	MW-214A L09040275-12 4/10/2009	MW-214B L09040275-13 4/10/2009
Primary VOCs	**Units**								
Carbon tetrachlonde	µg/L	5	0.668 J	<1	<1	<1	0.29 J	0.752 J	0.797 J
Chloroform	µg/L	80	0.272 J	<0.3	<0.3	**2.71**	<0.3	**2.22**	**1.47**
cis-1,2-Dichloroethene	µg/L	70	<1	**1.47**	0.889 J	<1	<1	<1	<1
Tetrachloroethene	µg/L	5	0.278 J	**16.9**	**12.2**	0.469 J	<1	**4.51**	**4**
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**22.4**	**6.28**	**7.2**	**1.38**	**38**	**2.31**	**1.93**
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	0.238 J	0 316 J
1,1-Dichloroethane	µg/L	--	<1	<1	<1	0.553 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
1,2-Dichloropropane	µg/L	5	<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
Acetone	µg/L	--	3 07 J	<10	<10	<10	<10	<10	<10
MEK (2-Butanone)	µg/L	--	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	--	<5	0 692 J	<5	<5	<5	1.13 J	0 715 J
Toluene	µg/L	--	<1	<1	<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L · micrograms per liter
<: Not detected at sample reporting limit
Results detected at or above reporting limits shown in bold
DQE FLAGS·
J: Estimated, based on QC data or reported below RL
B: Possibly biased high or false positive based on blank data

TABLE 5
ANALYTICAL RESULTS SUMMARY - APRIL 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID Lab ID Date	Maximum Contaminant Levels	MW-215A L09040275-14 4/10/2009	MW-215B L09040270-21 4/9/2009	MW-216 L09040213-25 4/6/2009	MW-217 L09040270-34 4/8/2009	MW-218 L09040270-35 4/8/2009	MW-219 L09040213-26 4/6/2009	MW-229 L09040270-39 4/8/2009
Primary VOCs	**Units**								
Carbon tetrachloride	µg/L	5	0.591 J	0.97 J	<1	**92.4**	**15.7**	<1	<1
Chloroform	µg/L	80	**1.52**	**0.767**	<0 3	**9.43**	**2.75**	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	70	<1	<1	<1	**3.58**	0.426 J	**1.15**	<1
Tetrachloroethene	µg/L	5	**4.91**	**4.99**	<1	**31.2**	**15.2**	**39.4**	<1
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**6.2**	**1.66**	<1	**28.7**	**37.1**	**2.84**	<1
Vinyl chloride	µg/L	2	<1	<1	<1	<1	<1	<1	<1
Additional VOCs*									
1,1,2,2-Tetrachloroethane	µg/L	--	0.289 J	<0 5	<0.5	**0.524**	**0.976**	<0.5	<0.5
1,1-Dichloroethane	µg/L	--	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	5	<0 5	<0 5	<0.5	<0.5	0.475 J	**1.03**	<0.5
1,2,3-Trichloropropane	µg/L	--	<1	<1	<1	**2.1**	<1	<1	<1
1,2-Dichloropropane	µg/L	5	<1	<1	<1	<1	0.426 J	<1	<1
1,3-Dichloropropane	µg/L	--	<0.4	<0.4	<0 4	<0.4	<0.4	<0.4	<0.4
Acetone	µg/L	--	<10	2.83 JB	<10	<10	4.53 JB	<10	<10
MEK (2-Butanone)	µg/L	--	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	--	1.13 J	0.567 J	<5	<5	<5	<5	<5
Toluene	µg/L	--	<1	<1	<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L . micrograms per liter
< Not detected at sample reporting limit
Results detected at or above reporting limits shown in bold
DQE FLAGS.
J. Estimated, based on QC data or reported below RL
B: Possibly biased high or false positive based on blank data

1017 52

TABLE 6
ANALYTICAL RESULTS SUMMARY - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

Primary VOCs	Well ID Lab ID Date Units	Maximum Contaminant Levels	DR1-1A L09100165-13 10/6/2009	DR1-1 L09100165-12 10/6/2009	DR1-2 L09100165-14 10/6/2009	DR1-3 L09100165-15 10/6/2009	DR1-4 L09100165-16 10/6/2009	DR1-5A L09100165-35 10/5/2009	DR1-5 L09100165-34 10/5/2009
Carbon tetrachloride	µg/L	5	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	80	**0.518**	<0.3	0.17 J	<0.3	<0.3	0.204 J	<0.3
cis-1,2-Dichloroethene	µg/L	70	<1	**1.08**	0 607 J	**1.5**	<1	**3.39**	<1
Tetrachloroethene	µg/L	5	0.749 J	**2.12**	**1.47**	**10**	0.844 J	**54.9**	**37.3**
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**2.33**	0.328 J	<1	**2.15**	0.64 J	**92.8**	<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
1,2,3-Trichloropropane	µg/L	5	<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	5	<1	<1	<1	<1	<1	0 367 J	<1
1,3-Dichloropropane	µg/L	--	<0.4	<0.4	<0 4	<0 4	<0 4	<0.4	<0 4
2-Hexanone	µg/L	--	<10	<10	<10	<10	<10	<10	<10
Acetone	µg/L	--	<10	<10	<10	<10	<10	<10	<10
MEK (2-Butanone)	µg/L	--	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	<5	<5	<5	**10.8**	1 98 J

Notes:
VOC samples analyzed using method 8260B
µg/L . micrograms per liter
<: Not detected at sample reporting limit
Results detected at or above reporting limits shown in bold
MW-101 and MW-107 sampled at two intervals
DQE FLAGS:
J Estimated, based on QC data or reported below RL
B: Possibly biased high or false positive based on blank data

10177.53

TABLE 6
ANALYTICAL RESULTS SUMMARY - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID Lab ID Date	Maximum Contaminant Levels	DR1-6A L09100165-18 10/6/2009	DR1-6 L09100165-17 10/6/2009	DR1-7 L09100165-19 10/6/2009	DR1-8 L09100165-36 10/5/2009	DR2-1 L09100300-03 10/10/2009	DR2-2 L09100300-32 10/11/2009	DR2-3 L09100300-04 10/10/2009
Primary VOCs	**Units**								
Carbon tetrachloride	µg/L	5	<1	<1	<1	<1	**7.39**	**7.75**	**4.62**
Chloroform	µg/L	80	0.245 J	<0.3	<0.3	<0.3	**3.76**	**1.91**	**0.861**
cis-1,2-Dichloroethene	µg/L	70	**4.89**	**1.49**	0.449 J	<1	**4.89**	**4.79**	0.816 J
Tetrachloroethene	µg/L	5	**43**	**183**	**4.75**	<1	**66.2**	**97.3**	**33.3**
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**163**	**1.59**	0.622 J	<1	**2.61**	**4.02**	**2.09**
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
1,2,3-Trichloropropane	µg/L	5	<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	5	0.411 J	<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
2-Hexanone	µg/L	--	<10	<10	<10	<10	<10	<10	<10
Acetone	µg/L	--	<10	<10	<10	<10	<10	<10	<10
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

Notes
VOC samples analyzed using method 8260B
µg/L - micrograms per liter
<: Not detected at sample reporting limit
Results detected at or above reporting limits shown in bold
MW-101 and MW-107 sampled at two intervals
DQE FLAGS
J Estimated, based on QC data or reported below RL
B: Possibly biased high or false positive based on blank data

TABLE 6
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	Well ID Lab ID Date	Maximum Contaminant Levels	DR2-4 L09100300-33 10/11/2009	DR2-5 L09100300-05 10/10/2009	DR2-6 L09100256-26 10/8/2009	IW-01 L09100300-06 10/10/2009	IW-06 L09100165-37 10/5/2009	MW-21 L09100165-31 10/5/2009	MW-25 L09100256-27 10/8/2009
Primary VOCs	**Units**								
Carbon tetrachloride	µg/L	5	**3.34**	**94.4**	**26.4**	0 361 J	<1	<1	**2.34**
Chloroform	µg/L	80	**0.575**	**52**	**10.3**	**0.97**	<0.3	<0.3	**0.373**
cis-1,2-Dichloroethene	µg/L	70	0.414 J	**47.2**	**23.8**	**93.6**	**4.14**	**2.3**	<1
Tetrachloroethene	µg/L	5	**18**	**47.7**	**44.5**	**5.79**	<1	**187**	**10.7**
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**1.7**	**20.7**	**8.79**	**1.75**	**2.08**	**12.9**	0.369 J
Vinyl chloride	µg/L	2	<1	<1	<1	<1	0.33 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	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	5	<1	**27.3**	**8.18**	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	--	<0 5	0.441 J	0.342 J	<0.5	<0.5	<0 5	<0.5
1,2-Dichloropropane	µg/L	5	<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
2-Hexanone	µg/L	--	<10	<10	<10	<10	**48.3**	<10	<10
Acetone	µg/L	--	<10	<10	<10	**25.5**	**159**	<10	<10
MEK (2-Butanone)	µg/L	--	<10	<10	<10	**199 J**	**663**	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	<5	<5	**16.2**	**21.1**	<5

Notes:
VOC samples analyzed using method 8260B
µg/L : micrograms per liter
<: Not detected at sample reporting limit
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MW-101 and MW-107 sampled at two intervals
DQE FLAGS:
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B. Possibly biased high or false positive based on blank data

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TABLE 6
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	Well ID Lab ID Date	Maximum Contaminant Levels	MW-26 L09100256-20 10/8/2009	MW-34 L09100256-28 10/8/2009	MW-38 L09100165-20 10/5/2009	MW-39A L09100165-21 10/5/2009	MW-39 L09100300-10 10/10/2009	MW-52 L09100300-35 10/12/2009	MW-62 L09100300-11 10/10/2009
Primary VOCs	**Units**								
Carbon tetrachloride	µg/L	5	**4.81**	0 978 J	<1	<1	<1	<1	<1
Chloroform	µg/L	80	**0.871**	0.236 J	<0.3	<0.3	<0.3	**0.842**	0.154 J
cis-1,2-Dichloroethene	µg/L	70	0 411 J	<1	<1	**24.4**	**21.3**	0 831 J	0.308 J
Tetrachloroethene	µg/L	5	**27.3**	0 358 J	<1	**79.9**	**50.9**	**6.07**	<1
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**1.59**	**1.11**	<1	**9.49**	**13.9**	**1.06**	**59.2**
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
1,2,3-Trichloropropane	µg/L	5	<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	5	<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
2-Hexanone	µg/L	--	<10	<10	<10	<10	<10	<10	<10
Acetone	µg/L	--	<10	<10	<10	<10	<10	<10	<10
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

Notes:
VOC samples analyzed using method 8260B
µg/L . micrograms per liter
< Not detected at sample reporting limit
Results detected at or above reporting limits shown in bold
MW-101 and MW-107 sampled at two intervals
DQE FLAGS:
J Estimated, based on QC data or reported below RL
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	Well ID Lab ID Date	Maximum Contaminant Levels	MW-63A L09100300-12 10/10/2009	MW-63B L09100300-13 10/10/2009	MW-64 L09100256-21 10/8/2009	MW-85 L09100300-42 10/12/2009	MW-86 L09100300-27 10/11/2009	MW-88 L09100300-28 10/11/2009	MW-89 L09100165-22 10/5/2009
Primary VOCs	**Units**								
Carbon tetrachloride	µg/L	5	<1	<1	**2.78**	**108**	**1.79**	**7.12**	<1
Chloroform	µg/L	80	0 194 J	**1.23**	**0.926**	**10.4**	**1.23**	**1.32**	0.145 J
cis-1,2-Dichloroethene	µg/L	70	<1	0 253 J	0 519 J	**1.3**	**85.7**	**1.53**	<1
Tetrachloroethene	µg/L	5	0.674 J	**1.58**	**23.8**	**41**	**27**	**39.4**	0.251 J
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**1.81**	**3.1**	**41.5**	**15.1**	**5.7**	**3.83**	**1.27**
Vinyl chloride	µg/L	2	<1	<1	<1	<1	**65.8**	<1	<1
Additional VOCs*									
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	<0.5	**1.4**	0.237 J	<0.5	<0.5	<0.5
1,1-Dichloroethane	µg/L	--	<1	0.625 J	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	<1	<1	0.527 J	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	5	<1	<1	<1	<1	**1.39**	<1	<1
1,2-Dichloroethane	µg/L	--	<0 5	<0 5	0.354 J	<0.5	**0.738**	<0.5	<0.5
1,2-Dichloropropane	µg/L	5	<1	<1	<1	<1	**1.19**	<1	<1
1,3-Dichloropropane	µg/L	--	<0.4	<0.4	<0.4	<0.4	**0.554**	<0.4	<0.4
2-Hexanone	µg/L	--	<10	<10	<10	<10	<10	<10	<10
Acetone	µg/L	--	<10	<10	<10	**13.4**	<10	<10	<10
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

Notes.
VOC samples analyzed using method 8260B
µg/L . micrograms per liter
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	Well ID Lab ID Date	Maximum Contaminant Levels	MW-90 L09100300-14 10/10/2009	MW-92 L09100300-01 10/10/2009	MW-93 L09100300-29 10/11/2009	MW-94A L09100300-38 10/12/2009	MW-96 L09100256-29 10/8/2009	MW-97 L09100256-01 10/7/2009	MW-98 L09100256-02 10/7/2009
Primary VOCs	**Units**								
Carbon tetrachloride	µg/L	5	<1	<1	<1	<1	**2**	<1	<1
Chloroform	µg/L	80	**0.817**	<0.3	<0.3	<0.3	**0.58**	0.277 J	<0.3
cis-1,2-Dichloroethene	µg/L	70	<1	**120**	<1	**2.74**	<1	<1	0.304 J
Tetrachloroethene	µg/L	5	**35**	**1.3**	<1	**27.7**	**7.78**	<1	**38.8**
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**2.41**	**1.72**	<1	**7.46**	<1	**37.4**	**2.79**
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	0.322 J	<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
1,2,3-Trichloropropane	µg/L	5	<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	5	<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
2-Hexanone	µg/L	--	<10	<10	<10	<10	<10	<10	<10
Acetone	µg/L	--	<10	**35.2**	<10	<10	<10	<10	<10
MEK (2-Butanone)	µg/L	--	<10	**56.4**	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	<5	<5	<5	<5	<5

Notes
VOC samples analyzed using method 8260B
µg/L : micrograms per liter
<: Not detected at sample reporting limit
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	Well ID	Maximum	MW-99	MW-100B	MW-101B	MW-101-TOP	MW-102B	MW-103	MW-104
	Lab ID	Contaminant	L09100256-14	L09100256-15	L09100256-16	L09100256-36	L09100256-22	L09100300-21	L09100300-22
	Date	Levels	10/7/2009	10/7/2009	10/7/2009	10/7/2009	10/8/2009	10/11/2009	10/11/2009
Primary VOCs	**Units**								
Carbon tetrachloride	µg/L	5	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	80	0.238 J	<0.3	<0.3	<0 3	<0.3	**8.02**	**8.45**
cis-1,2-Dichloroethene	µg/L	70	<1	**21.5**	**2.03**	**1.85**	<1	0.314 J	0.473 J
Tetrachloroethene	µg/L	5	<1	<1	**96.2**	**76.5**	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	<1	<1	0.809 J	0.746 J	<1	**5.44**	**14.1**
Vinyl chloride	µg/L	2	<1	**85.2 J**	<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	**2.05**	0.974 J
1,1-Dichloroethene	µg/L	7	<1	<1	<1	<1	<1	**1.56**	**1.54**
1,2,3-Trichloropropane	µg/L	5	<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	5	<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
2-Hexanone	µg/L	--	<10	<10	<10	<10	<10	<10	<10
Acetone	µg/L	--	<10	**28.3**	<10	<10	<10	<10	<10
MEK (2-Butanone)	µg/L	--	<10	**118**	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	--	<5	**47**	1.06 J	1.37 J	<5	<5	<5

Notes:
VOC samples analyzed using method 8260B
µg/L micrograms per liter
<. Not detected at sample reporting limit
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ANALYTICAL RESULTS SUMMARY - OCTOBER 2009
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	Well ID Lab ID Date	Maximum Contaminant Levels	MW-107B L09100256-04 10/7/2009	MW-107T L09100256-03 10/7/2009	MW-108 L09100165-23 10/5/2009	MW-113 L09100300-02 10/10/2009	MW-115 L09100165-32 10/5/2009	MW-125 L09100165-33 10/5/2009	MW-140 L09100300-39 10/12/2009
Primary VOCs	**Units**								
Carbon tetrachloride	µg/L	5	0.773 J	0.787 J	<1	**67.4**	<1	<1	0 558 J
Chloroform	µg/L	80	0.238 J	0 239 J	**9.44**	**29.5**	<0.3	<0.3	0.205 J
cis-1,2-Dichloroethene	µg/L	70	<1	0 257 J	0.584 J	**49.5**	**5.74**	**33.8**	<1
Tetrachloroethene	µg/L	5	**3.36**	**5.05**	**4.39**	**200**	**15.2**	**4.88**	0.806 J
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**2.12**	**2.51**	**29.1**	**26.7**	**4.26**	**3.33**	**1.25**
Vinyl chloride	µg/L	2	<1	<1	<1	<1	<1	0.265 J	<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
1,2,3-Trichloropropane	µg/L	5	<1	<1	<1	**11.2**	<1	<1	<1
1,2-Dichloroethane	µg/L	--	<0.5	<0.5	<0.5	0.383 J	<0.5	0 323 J	<0 5
1,2-Dichloropropane	µg/L	5	<1	<1	<1	0.486 J	<1	<1	<1
1,3-Dichloropropane	µg/L	--	<0 4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
2-Hexanone	µg/L	--	<10	<10	<10	<10	<10	<10	<10
Acetone	µg/L	--	<10	<10	<10	<10	<10	<10	<10
MEK (2-Butanone)	µg/L	--	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	<5	<5	**7.8**	**26**	<5

Notes:
VOC samples analyzed using method 8260B
µg/L micrograms per liter
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ANALYTICAL RESULTS SUMMARY - OCTOBER 2009
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Primary VOCs	Well ID Lab ID Date Units	Maximum Contaminant Levels	MW-141 L09100165-24 10/5/2009	MW-142 L09100256-30 10/8/2009	MW-197A L09100165-01 10/6/2009	MW-197B L09100165-02 10/6/2009	MW-198 L09100300-40 10/12/2009	MW-199A L09100165-25 10/5/2009	MW-199B L09100256-05 10/7/2009
Carbon tetrachloride	µg/L	5	<1	<1	<1	<1	<1	<1	0.324 J
Chloroform	µg/L	80	**1.78**	0.128 J	0 187 J	<0.3	<0.3	<0 3	0 158 J
cis-1,2-Dichloroethene	µg/L	70	<1	<1	**2.57**	**25.9**	<1	<1	<1
Tetrachloroethene	µg/L	5	**17.1**	<1	**33.8**	**24.1**	<1	<1	0.694 J
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**3.02**	**2.74**	**2.04**	**12.3**	**8.39**	0 419 J	**93.2**
Vinyl chloride	µg/L	2	<1	<1	<1	**3.09**	<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
1,2,3-Trichloropropane	µg/L	5	<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	5	<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
2-Hexanone	µg/L	--	<10	<10	<10	<10	<10	<10	<10
Acetone	µg/L	--	<10	<10	<10	<10	<10	<10	<10
MEK (2-Butanone)	µg/L	--	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	--	<5	4.47 J	<5	<5	<5	2 79 J	<5

Notes.
VOC samples analyzed using method 8260B
µg/L : micrograms per liter
<. Not detected at sample reporting limit
Results detected at or above reporting limits shown in bold
MW-101 and MW-107 sampled at two intervals
DQE FLAGS:
J· Estimated, based on QC data or reported below RL
B: Possibly biased high or false positive based on blank data

1017161

TABLE 6
ANALYTICAL RESULTS SUMMARY - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

Well ID Lab ID Date Units	Maximum Contaminant Levels	MW-200 L09100300-15 10/10/2009	MW-202A L09100165-03 10/6/2009	MW-202B L09100165-04 10/6/2009	MW-203A L09100165-05 10/6/2009	MW-203B L09100165-06 10/6/2009	MW-204A L09100256-06 10/7/2009	MW-204B L09100165-07 10/6/2009
Primary VOCs								
Carbon tetrachloride µg/L	5	<1	0.466 J	0 506 J	<1	<1	<1	<1
Chloroform µg/L	80	<0.3	<0.3	**1.92**	0.158 J	<0.3	<0.3	0.177 J
cis-1,2-Dichloroethene µg/L	70	**11.6**	<1	<1	**3.38**	**14.4**	**6.45**	**6.13**
Tetrachloroethene µg/L	5	**25.6**	0.294 J	**18.6**	**149**	**24.8**	**39.2 J**	**14.9**
trans-1,2-Dichloroethene µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene µg/L	5	**8.04**	**1.45**	**3.79**	**2.34**	**9.16**	**1.21**	**4.95**
Vinyl chloride µg/L	2	<1	<1	<1	<1	**5.14**	<1	<1
Additional VOCs*								
1,1,2,2-Tetrachloroethane µg/L	--	<0.5	<0 5	<0.5	<0 5	<0.5	<0.5	0 614
1,1-Dichloroethane µg/L	--	<1	<1	0.457 J	<1	<1	<1	<1
1,1-Dichloroethene µg/L	7	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane µg/L	5	<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	5	<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
2-Hexanone µg/L	--	<10	<10	<10	<10	<10	<10	<10
Acetone µg/L	--	<10	<10	<10	<10	<10	<10	<10
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

Notes
VOC samples analyzed using method 8260B
µg/L : micrograms per liter
<: Not detected at sample reporting limit
Results detected at or above reporting limits shown in bold
MW-101 and MW-107 sampled at two intervals
DQE FLAGS
J. Estimated, based on QC data or reported below RL
B: Possibly biased high or false positive based on blank data

TABLE 6
ANALYTICAL RESULTS SUMMARY - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	Maximum	MW-205A	MW-205B	MW-206A	MW-206B	MW-207A	MW-207B	MW-208A
	Lab ID	Contaminant	L09100165-26	L09100256-09	L09100256-10	L09100256-11	L09100165-27	L09100165-08	L09100256-31
	Date	Levels	10/5/2009	10/7/2009	10/7/2009	10/7/2009	10/5/2009	10/6/2009	10/8/2009
Primary VOCs	Units								
Carbon tetrachloride	µg/L	5	<1	<1	<1	<1	<1	**1.23**	<1
Chloroform	µg/L	80	<0.3	<0 3	<0.3	<0.3	**9.72**	**3.64**	<0.3
cis-1,2-Dichloroethene	µg/L	70	**23.5**	**29.5**	**18.6**	**11**	0 974 J	0 558 J	**23.5**
Tetrachloroethene	µg/L	5	**53.1**	**24.4**	**25.6**	**17.3**	**11**	**63.1**	**92.8**
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**7.28**	**11.8**	**12.3**	**9.57**	**52.7**	**67.5**	**10.9**
Vinyl chloride	µg/L	2	<1	**2.06 J**	<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
1,2,3-Trichloropropane	µg/L	5	<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	5	<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
2-Hexanone	µg/L	--	<10	<10	<10	<10	<10	<10	<10
Acetone	µg/L	--	<10	<10	<10	<10	<10	<10	<10
MEK (2-Butanone)	µg/L	--	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	<5	<5	0.805 J	0.992 J	<5

Notes:
VOC samples analyzed using method 8260B
µg/L : micrograms per liter
<: Not detected at sample reporting limit
Results detected at or above reporting limits shown in bold
MW-101 and MW-107 sampled at two intervals
DQE FLAGS.
J: Estimated, based on QC data or reported below RL
B Possibly biased high or false positive based on blank data

1017.63

TABLE 6
ANALYTICAL RESULTS SUMMARY - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID Lab ID Date	Maximum Contaminant Levels	MW-208B L09100256-32 10/8/2009	MW-209A L09100165-28 10/5/2009	MW-209B L09100300-16 10/10/2009	MW-210A L09100165-09 10/6/2009	MW-210B L09100165-10 10/6/2009	MW-211 L09100256-12 10/7/2009	MW-212 L09100300-17 10/10/2009
Primary VOCs	**Units**								
Carbon tetrachloride	µg/L	5	<1	<1	0.725 J	<1	<1	<1	0 271 J
Chloroform	µg/L	80	0.136 J	0.132 J	0.194 J	<0.3	<0.3	**1.24**	<0.3
cis-1,2-Dichloroethene	µg/L	70	**2.06**	<1	<1	**1.63**	0.995 J	<1	<1
Tetrachloroethene	µg/L	5	**5.39**	<1	0.278 J	**8.48**	**9.39**	0 811 J	<1
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**37.8**	0 568 J	**30.8**	**4.92**	**7.78**	**1.2**	**38.4**
Vinyl chloride	µg/L	2	<1	<1	<1	<1	<1	<1	<1
Additional VOCs*									
1,1,2,2-Tetrachloroethane	µg/L	--	**0.678**	<0.5	<0 5	<0.5	<0 5	<0.5	<0 5
1,1-Dichloroethane	µg/L	--	<1	<1	<1	<1	<1	0.263 J	<1
1,1-Dichloroethene	µg/L	7	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	5	<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	5	<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
2-Hexanone	µg/L	--	<10	<10	<10	<10	<10	<10	<10
Acetone	µg/L	--	<10	<10	<10	<10	<10	<10	<10
MEK (2-Butanone)	µg/L	--	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	--	<5	2.49 J	<5	0.731 J	<5	0 565 J	<5

Notes:
VOC samples analyzed using method 8260B
µg/L - micrograms per liter
<. Not detected at sample reporting limit
Results detected at or above reporting limits shown in bold
MW-101 and MW-107 sampled at two intervals
DQE FLAGS.
J Estimated, based on QC data or reported below RL
B Possibly biased high or false positive based on blank data

TABLE 6
ANALYTICAL RESULTS SUMMARY - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

Primary VOCs	Well ID Lab ID Date Units	Maximum Contaminant Levels	MW-214A L09100300-30 10/11/2009	MW-214B L09100300-31 10/11/2009	MW-215A L09100300-43 10/12/2009	MW-215B L09100300-46 10/12/2009	MW-216 L09100300-47 10/12/2009	MW-217 L09100256-23 10/8/2009	MW-218 L09100256-24 10/8/2009
Carbon tetrachloride	µg/L	5	0 891 J	0 92 J	0.579 J	**1.17**	<1	**55.6**	**10.1**
Chloroform	µg/L	80	**2.21**	**1.8**	**1.43**	**0.686**	<0.3	**5.24**	**2.49**
cis-1,2-Dichloroethene	µg/L	70	<1	<1	<1	<1	<1	**1.8**	0.404 J
Tetrachloroethene	µg/L	5	**4.64**	**4.14**	**4.91**	**5.66**	<1	**29.9**	**16.3**
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5	**2.6**	**2.25**	**4.88**	**1.76**	<1	**32.9**	**42.5**
Vinyl chloride	µg/L	2	<1	<1	<1	<1	<1	<1	<1
Additional VOCs*									
1,1,2,2-Tetrachloroethane	µg/L	--	0.247 J	0 353 J	0 305 J	0 199 J	<0.5	**0.52**	**0.987**
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
1,2,3-Trichloropropane	µg/L	5	<1	<1	<1	<1	<1	0.705 J	<1
1,2-Dichloroethane	µg/L	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.344 J
1,2-Dichloropropane	µg/L	5	<1	<1	<1	<1	<1	<1	0 507 J
1,3-Dichloropropane	µg/L	--	<0 4	<0 4	<0.4	<0.4	<0.4	<0.4	<0.4
2-Hexanone	µg/L	--	<10	<10	<10	<10	<10	<10	<10
Acetone	µg/L	--	<10	<10	<10	<10	<10	<10	<10
MEK (2-Butanone)	µg/L	--	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	--	1.54 J	1 21 J	1.52 J	0 578 J	<5	<5	<5

Notes:
VOC samples analyzed using method 8260B
µg/L - micrograms per liter
< Not detected at sample reporting limit
Results detected at or above reporting limits shown in bold
MW-101 and MW-107 sampled at two intervals
DQE FLAGS:
J Estimated, based on QC data or reported below RL
B. Possibly biased high or false positive based on blank data

1017165

TABLE 6
ANALYTICAL RESULTS SUMMARY - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID Lab ID Date Units	Maximum Contaminant Levels	MW-219 L09100256-25 10/8/2009	MW-229 L09100256-33 10/8/2009	PZ-03 L09100300-25 10/11/2009	PZ-06 L09100300-26 10/11/2009
Primary VOCs						
Carbon tetrachloride	µg/L	5	<1	<1	<1	<1
Chloroform	µg/L	80	<0.3	<0.3	0.192 J	<0.3
cis-1,2-Dichloroethene	µg/L	70	0 935 J	<1	<1	<1
Tetrachloroethene	µg/L	5	**26.9**	<1	**3.99**	<1
trans-1,2-Dichloroethene	µg/L	100	<1	<1	<1	<1
Trichloroethene	µg/L	5	**2.09**	<1	**1.23**	<1
Vinyl chloride	µg/L	2	<1	<1	<1	<1
Additional VOCs*						
1,1,2,2-Tetrachloroethane	µg/L	--	<0.5	<0.5	<0 5	<0.5
1,1-Dichloroethane	µg/L	--	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	7	<1	<1	<1	<1
1,2,3-Trichloropropane	µg/L	5	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	--	**0.875**	<0 5	<0 5	<0.5
1,2-Dichloropropane	µg/L	5	<1	<1	<1	<1
1,3-Dichloropropane	µg/L	--	<0.4	<0 4	<0.4	<0 4
2-Hexanone	µg/L	--	<10	<10	<10	<10
Acetone	µg/L	--	<10	<10	<10	<10
MEK (2-Butanone)	µg/L	--	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	--	<5	<5	<5	<5

Notes
VOC samples analyzed using method 8260B
µg/L - micrograms per liter
<. Not detected at sample reporting limit
Results detected at or above reporting limits shown in bold
MW-101 and MW-107 sampled at two intervals
DQE FLAGS.
J: Estimated, based on QC data or reported below RL
B. Possibly biased high or false positive based on blank data

1017966

TABLE 7
MANN-KENDALL TREND ANALYSIS - PCE
ANNUAL LONG-TERM MONITORING REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Well	Type/Plume	COC	Coefficient of Variation	MK (S)	Confidence Factor (CF)	Concentration Trend	Number of Sample Rounds	Detects	Max	Min
MW-16	Background	PCE	0.00	0	0 0%	N/A	3	0		
MW-19	Background	PCE	0.00	0	0 0%	N/A	3	0		
MW-53	Background	PCE	0.00	0	0 0%	N/A	3	3	2.26	0 59
MW-55	Background	PCE	0 00	0	0 0%	N/A	3	0		
MW-66A	Background	PCE	0 10	-3	64.0%	S	6	6	2 2	1.7
MW-99	Background	PCE	0 00	0	40 8%	ND	5	0		
MW-143	Background	PCE	0 00	0	42 3%	ND	8	0		
MW-22	Boundary	PCE	0 00	0	0 0%	N/A	3	1	0.79	0 79
MW-23	Boundary	PCE	0 00	0	0.0%	N/A	3	0		
MW-24	Boundary	PCE	0.00	0	0 0%	N/A	3	0		
MW-50	Boundary	PCE	0.00	0	0.0%	N/A	3	2	0 335	0 263
MW-93	Boundary	PCE	0 12	-4	75.8%	S	5	1	0.16	0 16
MW-102B	Boundary	PCE	0.51	0	40.8%	S	5	1	0.308	0.308
MW-219	Boundary	PCE	0 31	6	72 6%	NT	9	9	48	16 3
MW-34	Sentinel	PCE	0 45	4	59 0%	NT	16	9	0 753	0.336
MW-38	Sentinel	PCE	0.76	0	40 8%	S	5	1	0 446	0 446
MW-63A	Sentinel	PCE	0 65	1	50 0%	NT	6	5	1.24	0 32
MW-63B	Sentinel	PCE	0 35	3	64 0%	NT	6	6	4.6	1 58
MW-89	Sentinel	PCE	0 53	-3	64 0%	S	6	5	0.644	0.251
MW-90	Sentinel	PCE	0 58	26	99 7%	I	10	10	80 8	19
MW-107B	Sentinel	PCE	1 18	6	88 3%	NT	5	5	3 36	0.291
MW-107T	Sentinel	PCE	1 08	4	83 3%	NT	4	4	5 05	0.411
MW-108	Sentinel	PCE	0 22	3	58.0%	NT	9	9	6 03	3.3
MW-140	Sentinel	PCE	0.49	25	100 0%	I	10	8	0.933	0 38
MW-141	Sentinel	PCE	0.34	-13	82.1%	S	12	11	31	5.9
MW-199A	Sentinel	PCE	0.56	0	43.7%	S	7	1	0.361	0 361
MW-202A	Sentinel	PCE	0.35	6	69 4%	NT	9	9	0.672	0.257
MW-202B	Sentinel	PCE	0 54	18	96 2%	I	9	9	21.3	3 82
MW-207A	Sentinel	PCE	0 18	16	96 9%	I	9	9	13.7	7.92
MW-207B	Sentinel	PCE	0 58	0	45 2%	S	8	8	63 1	13
MW-209A	Sentinel	PCE	0 53	-3	59.4%	S	8	2	0 326	0.323
MW-210A	Sentinel	PCE	0.40	-26	100 0%	D	9	9	38.2	8 48
MW-211	Sentinel	PCE	0 70	14	97 5%	I	7	4	0 811	0.431
MW-229	Sentinel	PCE	0 00	0	40 8%	ND	6	0		
MW-25A	-	PCE	0.21	-10	86 2%	S	8	8	10.3	4 91
MW-52	-	PCE	0 29	-6	69.4%	S	9	9	10.8	4 7
MW-97	-	PCE	0 00	0	46 0%	ND	9	0		
MW-216	-	PCE	2 58	2	55 7%	NT	7	1	34.2	34.2
DR1-2	TTA-1 North	PCE	0 21	-20	99 3%	D	8	8	2.5	1 47
DR1-7	TTA-1 North	PCE	0 74	-21	99 6%	D	8	8	30	4.35
DR1-8	TTA-1 North	PCE	0.00	0	45.2%	ND	8	0		
IW-06	TTA-1 North	PCE	2 58	5	68 3%	NT	8	1	0 29	0.29
MW-21	TTA-1 North	PCE	0 37	81	100 0%	I	16	16	192	53
MW-100B	TTA-1 North	PCE	1 47	-1	50.0%	NT	13	8	101	0 706
MW-115	TTA-1 North	PCE	0 24	53	99 6%	I	15	15	15 2	5.7
MW-125	TTA-1 North	PCE	0.58	-25	97 0%	D	11	11	52	0.399
DR1-1	TTA-1 South	PCE	0 15	-15	95 8%	D	8	8	3 3	2 12
DR1-1A	TTA-1 South	PCE	0 37	-40	100 0%	D	11	11	1 8	0.747
DR1-3	TTA-1 South	PCE	1.07	-33	94 3%	PD	15	15	54 7	0 45
DR1-4	TTA-1 South	PCE	0.98	-20	92 9%	PD	11	9	12.4	0 844
DR1-5	TTA-1 South	PCE	0.67	26	97 5%	I	11	11	95.8	4.3
DR1-5A	TTA-1 South	PCE	0 22	16	87 5%	NT	11	11	59 7	24
DR1-6	TTA-1 South	PCE	0.68	35	99 7%	I	11	11	197	13
DR1-6A	TTA-1 South	PCE	0.34	45	100 0%	I	12	12	43	1 1
MW-101B	TTA-1 South	PCE	0 49	-41	100 0%	D	11	11	239	47

TABLE 7
MANN-KENDALL TREND ANALYSIS - PCE
ANNUAL LONG-TERM MONITORING REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Well	Type/Plume	COC	Coefficient of Variation	MK (S)	Confidence Factor (CF)	Concentration Trend	Number of Sample Rounds	Detects	Max	Min
MW-101T	TTA-1 South	PCE	0 55	-45	100 0%	D	11	11	251	16 5
DR2-1	TTA-2	PCE	0 43	-53	99 6%	D	16	16	280	33 7
DR2-2	TTA-2	PCE	0 74	41	100 0%	I	11	11	159	10
DR2-3	TTA-2	PCE	0 28	-16	87 5%	S	11	11	47	20.6
DR2-4	TTA-2	PCE	0.28	3	59 4%	NT	8	8	18	7 15
DR2-5	TTA-2	PCE	0.35	-28	90.8%	PD	15	15	114	41 1
DR2-6	TTA-2	PCE	0.42	-3	56 0%	S	11	11	115	24.5
IW-01	TTA-2	PCE	0 89	-20	92 9%	PD	12	11	148	2 49
MW-26	TTA-2	PCE	0 30	-16	87 5%	S	11	11	40	13 7
MW-64	TTA-2	PCE	0 15	26	99 7%	I	9	9	23.8	16
MW-85	TTA-2	PCE	0.41	-41	97 7%	D	15	15	74 8	14 4
MW-86	TTA-2	PCE	1.21	40	100 0%	I	11	8	27	0 388
MW-88	TTA-2	PCE	0.31	16	87 5%	NT	12	12	39 4	14
MW-92	TTA-2	PCE	0 77	-35	99 7%	D	11	10	193	0.499
MW-96	TTA-2	PCE	1.31	-19	91 8%	PD	12	12	63	1.46
MW-113	TTA-2	PCE	0.27	40	100 0%	I	11	11	200	64
MW-217	TTA-2	PCE	0 18	8	80 1%	NT	8	8	34.7	18 4
MW-218	TTA-2	PCE	0.12	-12	91 1%	PD	8	8	18 5	12 2
MW-39	West Central	PCE	0.30	-14	81 0%	S	12	12	158	50 9
MW-39A	West Central	PCE	0 28	-4	59 0%	S	11	11	234	79 9
MW-94A	West Central	PCE	0 23	-20	92 9%	PD	11	11	52 2	27 3
MW-98	West Central	PCE	0 20	21	94 0%	PI	11	11	38 8	17
MW-197A	West Central	PCE	0 42	-36	100 0%	D	10	10	130	33 8
MW-197B	West Central	PCE	0 73	-30	100 0%	D	9	9	179	16 7
MW-200	West Central	PCE	0 40	0	46 0%	S	10	10	132	24.5
MW-203A	West Central	PCE	0 35	24	99 9%	I	8	8	170	62 6
MW-203B	West Central	PCE	0.47	1	50 0%	NT	9	9	38 4	9 39
MW-204A	West Central	PCE	0 09	12	91 1%	PI	8	8	47.4	36 2
MW-204B	West Central	PCE	0 25	-8	80 1%	S	8	8	29.4	14 9
MW-205A	West Central	PCE	0 34	-16	96 9%	D	9	9	180	53 1
MW-205B	West Central	PCE	0 74	-24	99 9%	D	8	8	149	19.7
MW-206A	West Central	PCE	0.38	-12	91 1%	PD	8	8	114	25.6
MW-206B	West Central	PCE	0 45	-16	96 9%	D	8	8	77 5	17 3
MW-208A	West Central	PCE	0 20	-11	88 7%	S	8	8	198	92 8
MW-208B	West Central	PCE	0 35	8	80 1%	NT	8	8	5 39	1 68
MW-210B	West Central	PCE	0 40	-26	100 0%	D	8	8	32 4	9 39
MW-214A	West Central	PCE	0 24	-20	99 3%	D	8	8	8 83	4 51
MW-214B	West Central	PCE	0 18	-24	99 9%	D	8	8	6 4	4
MW-215A	West Central	PCE	0.14	-9	83 2%	S	8	8	7 01	4 91
MW-215B	West Central	PCE	0 23	16	96 9%	I	8	8	5 66	2 1
PZ-03	West Central	PCE	0 43	-5	76 5%	S	6	6	5	0 523
MW-62	Building 835	PCE	0 71	-7	65 6%	S	12	9	1 1	0 318
MW-142	Building 835	PCE	0 00	0	45 2%	ND	10	1	0	0
MW-198	Building 835	PCE	0.00	0	46 0%	ND	9	0		
MW-199B	Building 835	PCE	2 45	0	46 0%	NT	9	9	23 4	0 393
MW-209B	Building 835	PCE	0 47	9	83 2%	NT	8	4	0.357	0 278
MW-212	Building 835	PCE	0 79	-3	59 4%	S	9	2	0 516	0.477
MW-103	North Central	PCE	0.00	0	42 3%	ND	6	0		
MW-104	North Central	PCE	0 00	0	45 2%	ND	8	0		
PZ-06	North Central	PCE	0 00	0	42 3%	ND	6	0		

TABLE 8
MANN-KENDALL TREND ANALYSIS - TCE
ANNUAL LONG-TERM MONITORING REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Well	Plume	COC	Coefficient of Variation	MK (S)	Confidence Factor (CF)	Concentration Trend	Number of Sample Rounds	Detects	Max	Min
MW-16	Background	TCE	0.00	0	0 0%	N/A	3	0		
MW-19	Background	TCE	0 00	0	0 0%	N/A	3	0		
MW-53	Background	TCE	0 00	0	0.0%	N/A	3	0		
MW-55	Background	TCE	0 00	0	0 0%	N/A	3	0		
MW-66A	Background	TCE	0 00	0	42.3%	ND	6	0		
MW-99	Background	TCE	0 44	-4	75 8%	S	5	1	0 28	0.28
MW-143	Background	TCE	1 01	12	98 2%	I	8	3	1.19	0 31
MW-22	Boundary	TCE	0.00	0	0 0%	N/A	3	2	0.531	0.329
MW-23	Boundary	TCE	0 00	0	0.0%	N/A	3	0		
MW-24	Boundary	TCE	0 00	0	0 0%	N/A	3	0		
MW-50	Boundary	TCE	0 00	0	0 0%	N/A	3	3	1.5	1.1
MW-93	Boundary	TCE	0 00	0	40.8%	ND	5	0		
MW-102B	Boundary	TCE	0 00	0	40 8%	ND	5	0		
MW-219	Boundary	TCE	0 24	2	54 8%	NT	9	9	3.74	1 72
MW-34	Sentinel	TCE	0 48	33	99.5%	I	16	14	1.39	0 29
MW-38	Sentinel	TCE	1 28	-3	67 5%	NT	5	2	4.63	4.37
MW-63A	Sentinel	TCE	0 47	13	99 2%	I	6	6	1.81	0.63
MW-63B	Sentinel	TCE	0 67	13	99.2%	I	6	6	4 56	0.92
MW-89	Sentinel	TCE	0 26	-7	86 4%	S	6	6	2.13	1.1
MW-90	Sentinel	TCE	0 47	0	46 0%	S	10	10	8.47	2.28
MW-107B	Sentinel	TCE	0.45	10	99 2%	I	5	5	2 12	0.585
MW-107T	Sentinel	TCE	0.36	6	95 8%	I	4	4	2 51	0.999
MW-108	Sentinel	TCE	0.22	6	69 4%	NT	9	9	38 4	15
MW-140	Sentinel	TCE	0 24	5	68.3%	NT	10	9	1 49	0.54
MW-141	Sentinel	TCE	0 25	22	94 9%	PI	12	11	3 56	1 2
MW-199A	Sentinel	TCE	0.67	6	76 4%	NT	7	1	0.419	0.419
MW-202A	Sentinel	TCE	0.18	-14	91 0%	PD	9	9	2.22	1.21
MW-202B	Sentinel	TCE	0 47	32	100 0%	I	9	9	3.79	0.811
MW-207A	Sentinel	TCE	0.44	24	99.9%	I	9	9	52.7	18 6
MW-207B	Sentinel	TCE	0.54	12	91 1%	PI	8	8	109	12 1
MW-209A	Sentinel	TCE	0.13	6	72 6%	NT	8	8	0 611	0.404
MW-210A	Sentinel	TCE	0.07	2	54 8%	NT	9	9	6 28	4.92
MW-211	Sentinel	TCE	0.46	15	98 5%	I	7	7	1 38	0.436
MW-229	Sentinel	TCE	0 00	0	40.8%	ND	6	0		
MW-25A	-	TCE	0 23	-3	59.4%	S	8	8	0.644	0.352
MW-52	-	TCE	0 31	9	79 2%	NT	9	9	1.4	0.34
MW-97	-	TCE	0.56	34	100 0%	I	9	9	37.4	2.2
MW-216	-	TCE	1 62	2	55.7%	NT	7	1	1.5	1 5
DR1-2	TTA-1 North	TCE	1 78	5	68 3%	NT	8	1	1 83	1 83
DR1-7	TTA-1 North	TCE	0 43	-11	88.7%	S	8	8	2 2	0 622
DR1-8	TTA-1 North	TCE	1.20	9	83 2%	NT	8	2	1.03	0 341
IW-06	TTA-1 North	TCE	2.78	20	99 3%	I	8	4	283	0 581
MW-21	TTA-1 North	TCE	0 30	15	75 2%	NT	16	16	32 5	12.7
MW-100B	TTA-1 North	TCE	1.37	-1	50 0%	NT	13	8	43 1	0.309
MW-115	TTA-1 North	TCE	0 52	-46	98.8%	D	15	15	5.5	1.04
MW-125	TTA-1 North	TCE	0.65	-38	99 9%	D	11	10	26	3.33
DR1-1	TTA-1 South	TCE	0 36	8	80 1%	NT	8	6	0.399	0 255
DR1-1A	TTA-1 South	TCE	0 33	-25	97 0%	D	11	11	6 9	2.33
DR1-3	TTA-1 South	TCE	0 66	-29	91 6%	PD	15	14	5.13	0 303
DR1-4	TTA-1 South	TCE	0 62	-7	67 6%	S	11	9	1 69	0 393
DR1-5	TTA-1 South	TCE	2 49	6	64 8%	NT	11	1	4.28	4 28
DR1-5A	TTA-1 South	TCE	0 24	-8	70 3%	S	11	11	114	47
DR1-6	TTA-1 South	TCE	0 45	-21	94 0%	PD	11	11	4 61	1.27
DR1-6A	TTA-1 South	TCE	0 27	31	99 2%	I	12	12	163	9 1
MW-101B	TTA-1 South	TCE	1 07	35	99 7%	I	11	10	4.15	0 293

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TABLE 8
MANN-KENDALL TREND ANALYSIS - TCE
ANNUAL LONG-TERM MONITORING REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Well	Plume	COC	Coefficient of Variation	MK (S)	Confidence Factor (CF)	Concentration Trend	Number of Sample Rounds	Detects	Max	Min
MW-101T	TTA-1 South	TCE	0 87	36	99 8%	I	11	9	2 16	0 298
DR2-1	TTA-2	TCE	0 35	-55	99 7%	D	16	16	12 7	2 61
DR2-2	TTA-2	TCE	0 15	21	94 0%	PI	11	11	4 25	2 6
DR2-3	TTA-2	TCE	0 11	-22	94 9%	PD	11	11	2 7	2
DR2-4	TTA-2	TCE	0 12	-14	94 6%	PD	8	8	2 2	1 54
DR2-5	TTA-2	TCE	0 31	-25	88 0%	S	15	15	35	13.7
DR2-6	TTA-2	TCE	0 45	-3	56 0%	S	11	11	19 7	2.2
IW-01	TTA-2	TCE	0.71	-5	61 9%	S	12	11	14 8	0.353
MW-26	TTA-2	TCE	0.22	-31	99 2%	D	11	11	2.5	1.3
MW-64	TTA-2	TCE	0 12	14	91 0%	PI	9	9	41.5	28.9
MW-85	TTA-2	TCE	0.35	-46	98 8%	D	15	15	25 1	7
MW-86	TTA-2	TCE	1.00	33	99 5%	I	11	7	5 7	0 989
MW-88	TTA-2	TCE	0 16	-5	61 9%	S	12	12	4 8	2 7
MW-92	TTA-2	TCE	0 58	-32	99 4%	D	11	9	6.14	1.72
MW-96	TTA-2	TCE	0 56	-9	72.9%	S	11	2	0.419	0 22
MW-113	TTA-2	TCE	0 28	39	99 9%	I	11	11	29 5	8 8
MW-217	TTA-2	TCE	0.16	-12	91 1%	PD	8	8	40 6	25 6
MW-218	TTA-2	TCE	0.09	-17	97 7%	D	8	8	47 6	35 9
MW-39	West Central	TCE	0.23	13	79 0%	NT	12	12	13 9	6 15
MW-39A	West Central	TCE	0.36	3	56 0%	NT	11	11	11 8	4 04
MW-94A	West Central	TCE	0.20	31	99.2%	I	11	11	9 49	4.2
MW-98	West Central	TCE	0.20	21	94.0%	PI	11	11	2.79	1.2
MW-197A	West Central	TCE	0 08	7	72 8%	NT	10	10	2.47	2 04
MW-197B	West Central	TCE	0 15	24	99.4%	I	9	9	12 6	8 51
MW-200	West Central	TCE	0 27	-1	50 0%	S	10	10	8 04	3.42
MW-203A	West Central	TCE	0.20	28	100.0%	I	8	8	2 34	1 27
MW-203B	West Central	TCE	0 20	6	72 6%	NT	9	9	11.3	6.18
MW-204A	West Central	TCE	0 11	-10	86 2%	S	8	8	1 21	0 852
MW-204B	West Central	TCE	0 28	8	80.1%	NT	8	8	4 98	2 37
MW-205A	West Central	TCE	0 19	18	98 4%	I	9	9	7 56	3 69
MW-205B	West Central	TCE	0 22	10	86 2%	NT	8	8	11.8	5 15
MW-206A	West Central	TCE	0 12	12	91 1%	PI	8	8	13.9	9 81
MW-206B	West Central	TCE	0 10	-3	59 4%	S	8	8	11 7	8 94
MW-208A	West Central	TCE	0 12	19	98 9%	I	8	8	10.9	7.64
MW-208B	West Central	TCE	0 40	14	94 6%	PI	8	8	37.8	13 2
MW-210B	West Central	TCE	0 14	-8	80 1%	S	8	8	10 7	7 2
MW-214A	West Central	TCE	0.36	-22	99 8%	D	8	8	5 59	1 95
MW-214B	West Central	TCE	0 29	-26	100 0%	D	8	8	4.24	1.93
MW-215A	West Central	TCE	0 21	-10	86.2%	S	8	8	10 2	4 88
MW-215B	West Central	TCE	0 11	2	54 8%	NT	8	8	1.76	1.25
PZ-03	West Central	TCE	0 39	9	93 2%	PI	6	6	1 23	0 321
MW-62	Building 835	TCE	0 33	2	52 7%	NT	12	12	184	59 2
MW-142	Building 835	TCE	0 83	14	94 6%	PI	10	8	2.74	0.3
MW-198	Building 835	TCE	0 67	-8	76 2%	S	9	9	25 8	3.28
MW-199B	Building 835	TCE	0 24	-3	58 0%	S	9	9	136	56 5
MW-209B	Building 835	TCE	0.52	24	99.9%	I	8	8	30.8	6 4
MW-212	Building 835	TCE	0 11	-2	54 8%	S	9	9	47.9	34 4
MW-103	North Central	TCE	0 18	11	97 2%	I	6	6	6 63	4
MW-104	North Central	TCE	0 18	8	80.1%	NT	8	8	18 2	11
PZ-06	North Central	TCE	0 00	0	42.3%	ND	6	0		

TABLE 9
MANN-KENDALL TREND ANALYSIS - cDCE
ANNUAL LONG-TERM MONITORING REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Well	Plume	COC	Coefficient of Variation	MK (S)	Confidence Factor (CF)	Concentration Trend	Number of Sample Rounds	Detects	Max	Min
MW-16	Background	cDCE	0 00	0	0.0%	N/A	3	0		
MW-19	Background	cDCE	0 00	0	0.0%	N/A	3	0		
MW-53	Background	cDCE	0.00	0	0 0%	N/A	3	0		
MW-55	Background	cDCE	0 00	0	0 0%	N/A	3	0		
MW-66A	Background	cDCE	0.00	0	42 3%	ND	6	0		
MW-99	Background	cDCE	0 00	0	40 8%	ND	5	0		
MW-143	Background	cDCE	0.00	0	42 3%	ND	8	0		
MW-22	Boundary	cDCE	0 00	0	0 0%	N/A	3	1	0.527	0.527
MW-23	Boundary	cDCE	0.00	0	0 0%	N/A	3	0		
MW-24	Boundary	cDCE	0 00	0	0 0%	N/A	3	0		
MW-50	Boundary	cDCE	0 00	0	0 0%	N/A	3	3	0.52	0.321
MW-93	Boundary	cDCE	0 00	0	40 8%	ND	5	0		
MW-102B	Boundary	cDCE	0.00	0	40 8%	ND	5	0		
MW-219	Boundary	cDCE	0 17	10	86 2%	NT	9	9	1.15	0.643
MW-34	Sentinel	cDCE	0.00	0	46 9%	ND	16	0		
MW-38	Sentinel	cDCE	0.00	0	40 8%	ND	5	0		
MW-63A	Sentinel	cDCE	0 00	0	42 3%	ND	6	0		
MW-63B	Sentinel	cDCE	0 59	7	86.4%	NT	6	2	0.401	0 253
MW-89	Sentinel	cDCE	0 45	-6	81 5%	S	6	4	0 404	0.27
MW-90	Sentinel	cDCE	0 33	13	89 0%	NT	10	8	0 484	0.29
MW-107B	Sentinel	cDCE	0.66	3	67.5%	NT	5	2	0.449	0.265
MW-107T	Sentinel	cDCE	0 41	2	62.5%	NT	4	3	0 385	0.257
MW-108	Sentinel	cDCE	0 22	2	54 0%	NT	9	9	0.75	0 33
MW-140	Sentinel	cDCE	0.37	-11	88 7%	S	10	3	0 28	0 22
MW-141	Sentinel	cDCE	0 00	0	46 9%	ND	12	0		
MW-199A	Sentinel	cDCE	0 00	0	43 7%	ND	7	0		
MW-202A	Sentinel	cDCE	0.30	-2	54 0%	S	9	1	0 251	0.251
MW-202B	Sentinel	cDCE	0.00	0	46 0%	ND	9	0		
MW-207A	Sentinel	cDCE	0 35	16	96 9%	I	9	9	0.974	0.382
MW-207B	Sentinel	cDCE	0 85	7	76 4%	NT	8	1	0 558	0.558
MW-209A	Sentinel	cDCE	0 00	0	45 2%	ND	8	0		
MW-210A	Sentinel	cDCE	0.34	18	98 4%	I	9	9	1.63	0.727
MW-211	Sentinel	cDCE	0 00	0	43 7%	ND	7	0		
MW-229	Sentinel	cDCE	0 00	0	40 8%	ND	6	0		
MW-25A	-	cDCE	0 00	0	45 2%	ND	8	0		
MW-52	-	cDCE	0 19	16	94 0%	PI	9	9	0 993	0 58
MW-97	-	cDCE	0 00	0	46 0%	ND	9	0		
MW-216	-	cDCE	0.42	2	55 7%	NT	7	1	0 288	0.288
DR1-2	TTA-1 North	cDCE	0 15	-14	94.6%	PD	8	8	0 77	0.48
DR1-7	TTA-1 North	cDCE	0 28	-6	72 6%	S	8	8	0.787	0.344
DR1-8	TTA-1 North	cDCE	0 00	0	45 2%	ND	8	0		
IW-06	TTA-1 North	cDCE	1 66	23	99 9%	I	8	4	4 14	0.48
MW-21	TTA-1 North	cDCE	0 28	73	100 0%	I	16	16	2.47	0 99
MW-100B	TTA-1 North	cDCE	0 45	-25	97 0%	D	13	13	160	21.5
MW-115	TTA-1 North	cDCE	0 93	13	72 1%	NT	15	15	10 2	0.253
MW-125	TTA-1 North	cDCE	0 55	-4	59 0%	S	11	11	76	10 3
DR1-1	TTA-1 South	cDCE	0 37	-4	64 0%	S	8	7	1 2	0.8
DR1-1A	TTA-1 South	cDCE	0.56	-43	100 0%	D	11	10	1	0.262
DR1-3	TTA-1 South	cDCE	1 03	25	88 0%	NT	15	10	32 9	0 22
DR1-4	TTA-1 South	cDCE	1.78	14	84 0%	NT	11	5	8.09	0 582
DR1-5	TTA-1 South	cDCE	0 36	6	64 8%	NT	11	1	0.295	0 295
DR1-5A	TTA-1 South	cDCE	0.32	-10	75 3%	S	11	11	5 2	1.7
DR1-6	TTA-1 South	cDCE	0 65	-35	99 7%	D	11	11	6 2	1.09
DR1-6A	TTA-1 South	cDCE	0 29	23	95 7%	I	12	12	5 98	0.95
MW-101B	TTA-1 South	cDCE	1 05	25	97 0%	I	11	10	35 6	0 279

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TABLE 9
MANN-KENDALL TREND ANALYSIS - cDCE
ANNUAL LONG-TERM MONITORING REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Well	Plume	COC	Coefficient of Variation	MK (S)	Confidence Factor (CF)	Concentration Trend	Number of Sample Rounds	Detects	Max	Min
MW-101T	TTA-1 South	cDCE	1 83	33	99 5%	I	11	10	51 2	0 266
DR2-1	TTA-2	cDCE	0 85	-25	88 0%	S	16	16	86 4	4.69
DR2-2	TTA-2	cDCE	0 59	33	99 5%	I	11	10	7 39	1 9
DR2-3	TTA-2	cDCE	0 47	-16	87 5%	S	11	11	1 8	0 549
DR2-4	TTA-2	cDCE	0 46	8	80 1%	NT	8	5	0.414	0.22
DR2-5	TTA-2	cDCE	0 25	-5	57.7%	S	15	15	62	25 9
DR2-6	TTA-2	cDCE	0 60	29	98.7%	I	11	11	36	0 69
IW-01	TTA-2	cDCE	0 34	-1	50 0%	S	12	12	154	59 4
MW-26	TTA-2	cDCE	0 43	-33	99.5%	D	11	10	0 76	0.295
MW-64	TTA-2	cDCE	0 16	22	98 8%	I	9	9	0 519	0 31
MW-85	TTA-2	cDCE	0 62	4	55 8%	NT	15	15	59 2	1 3
MW-86	TTA-2	cDCE	0 24	-37	99 8%	D	11	11	180	85 7
MW-88	TTA-2	cDCE	0 42	-15	85 9%	S	12	12	1 8	0 325
MW-92	TTA-2	cDCE	0 98	24	96 4%	I	11	11	120	7.32
MW-96	TTA-2	cDCE	2 17	-23	95 7%	D	12	8	19	0 34
MW-113	TTA-2	cDCE	0.36	-31	99 2%	D	11	11	110	37.8
MW-217	TTA-2	cDCE	0 47	16	96 9%	I	8	8	4.8	1 34
MW-218	TTA-2	cDCE	0 12	-6	72 6%	S	8	8	0 508	0 352
MW-39	West Central	cDCE	2 04	43	99 9%	I	12	9	21 3	0 435
MW-39A	West Central	cDCE	1 80	28	98 4%	I	11	9	24.4	0 362
MW-94A	West Central	cDCE	0 83	13	82 1%	NT	11	11	3 06	0.42
MW-98	West Central	cDCE	2.67	18	90 5%	PI	11	5	8.6	0.22
MW-197A	West Central	cDCE	0 93	22	98 8%	I	10	10	3 69	0.345
MW-197B	West Central	cDCE	1 04	24	99 4%	I	9	9	48 7	0 484
MW-200	West Central	cDCE	1 70	16	94 0%	PI	10	10	11.6	0.303
MW-203A	West Central	cDCE	0 97	27	100 0%	I	8	6	3 38	0 294
MW-203B	West Central	cDCE	0.38	-16	96.9%	D	9	9	63 5	14 4
MW-204A	West Central	cDCE	1 23	20	99.3%	I	8	8	6 45	0.763
MW-204B	West Central	cDCE	0 93	18	98.4%	I	8	8	6.13	0.906
MW-205A	West Central	cDCE	1.28	26	100.0%	I	9	9	23 5	0 337
MW-205B	West Central	cDCE	0.82	20	99 3%	I	8	8	43	0.546
MW-206A	West Central	cDCE	1.38	22	99 8%	I	8	8	18 6	0 607
MW-206B	West Central	cDCE	1.07	22	99 8%	I	8	8	11	0.582
MW-208A	West Central	cDCE	2.12	8	80 1%	NT	8	8	23 5	0 517
MW-208B	West Central	cDCE	0 31	14	94 6%	PI	8	8	2 14	0 932
MW-210B	West Central	cDCE	0 31	8	80 1%	NT	8	8	0 995	0 433
MW-214A	West Central	cDCE	0 00	0	45 2%	ND	8	0		
MW-214B	West Central	cDCE	0 00	0	45 2%	ND	8	0		
MW-215A	West Central	cDCE	0 00	0	45 2%	ND	8	0		
MW-215B	West Central	cDCE	0 00	0	45 2%	ND	8	0		
PZ-03	West Central	cDCE	0.37	-3	64 0%	S	6	1	0 26	0 26
MW-62	Building 835	cDCE	1 01	4	58 0%	NT	12	7	1.3	0 26
MW-142	Building 835	cDCE	0 00	0	45.2%	ND	10	0		
MW-198	Building 835	cDCE	0 00	0	46 0%	ND	9	0		
MW-199B	Building 835	cDCE	0 00	0	46 0%	ND	9	0		
MW-209B	Building 835	cDCE	0 00	0	45 2%	ND	8	0		
MW-212	Building 835	cDCE	0 00	0	45 2%	ND	9	0		
MW-103	North Central	cDCE	0 34	-11	97 2%	D	6	5	0 44	0 314
MW-104	North Central	cDCE	0 25	8	80 1%	NT	8	8	0 63	0 305
PZ-06	North Central	cDCE	0 00	0	42 3%	ND	6	0		

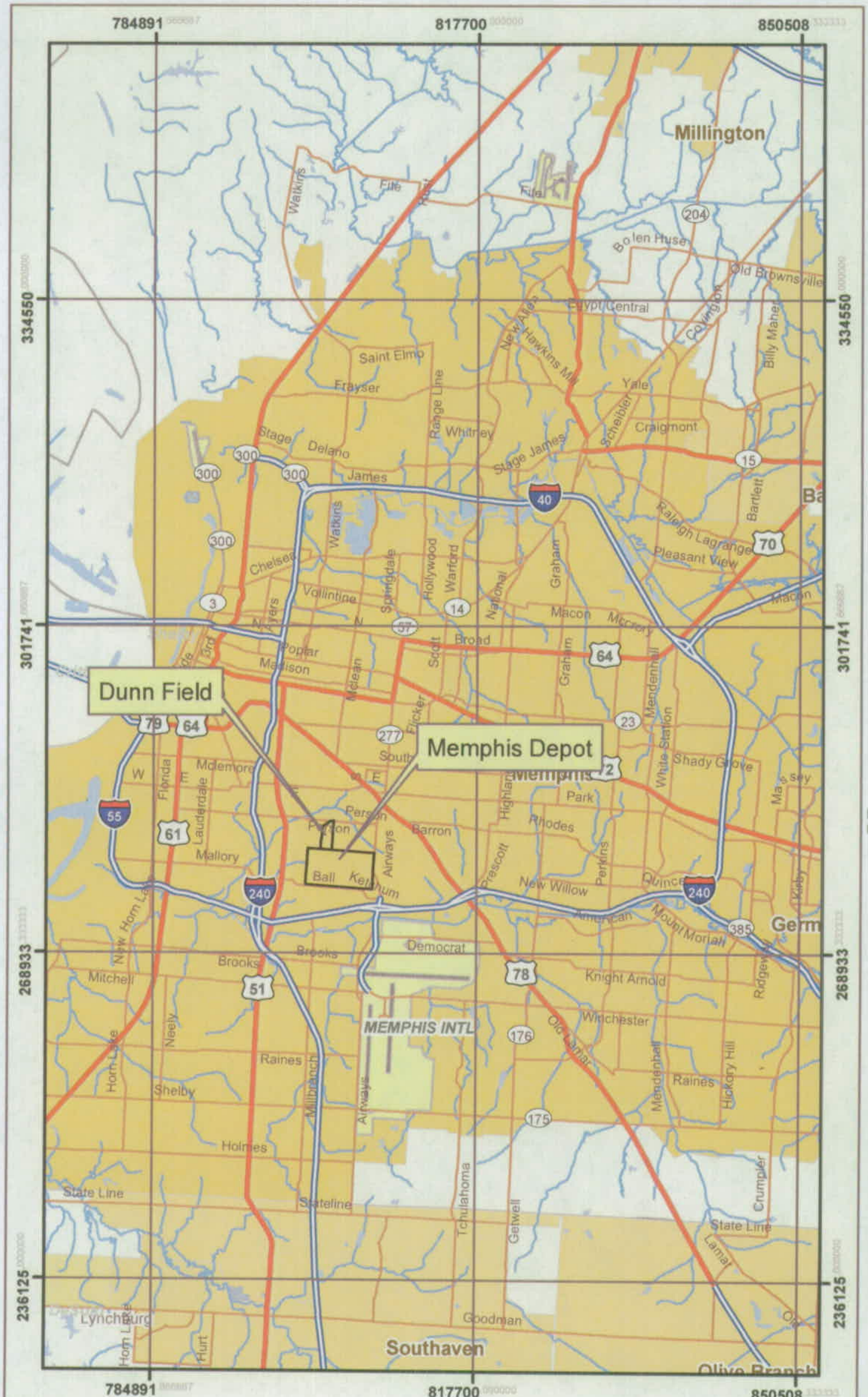
TABLE 10
MANN-KENDALL TREND ANALYSIS - CT
ANNUAL LONG-TERM MONITORING REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Well	Plume	COC	Coefficient of Variation	MK (S)	Confidence Factor (CF)	Concentration Trend	Number of Sample Rounds	Detects	Max	Min
DR2-1	TTA-2	CT	0 51	-55	99.7%	D	16	16	35	1 26
DR2-2	TTA-2	CT	0.59	37	99.8%	I	11	11	16 2	1 8
DR2-3	TTA-2	CT	0 17	9	72.9%	NT	11	11	6 66	4.1
DR2-4	TTA-2	CT	0 17	-2	54.8%	S	8	8	4 06	2 2
DR2-5	TTA-2	CT	0.35	-52	99.5%	D	15	15	260	94.4
DR2-6	TTA-2	CT	0 61	-5	61.9%	S	11	11	92	7.2
IW-01	TTA-2	CT	0 91	-18	90 5%	PD	12	10	30 6	0.353
MW-26	TTA-2	CT	0.18	-20	92 9%	PD	11	11	7 5	4 38
MW-64	TTA-2	CT	0.09	-1	50 0%	S	9	9	3.68	2.78
MW-85	TTA-2	CT	0.47	-44	98 4%	D	15	15	188	22.5
MW-86	TTA-2	CT	1.48	25	97 0%	I	11	3	1 79	0.436
MW-88	TTA-2	CT	0.36	-9	72.9%	S	12	12	8 59	2 66
MW-92	TTA-2	CT	0.87	-40	100 0%	D	11	8	27.2	6.3
MW-96	TTA-2	CT	2 45	-25	97.0%	D	12	12	150	0 69
MW-113	TTA-2	CT	0 40	33	99 5%	I	11	11	110	20
MW-217	TTA-2	CT	0.35	18	98 4%	I	8	8	96 3	34 8
MW-218	TTA-2	CT	0 16	0	45 2%	S	8	8	17.7	10.1

TABLE 11
MANN-KENDALL TREND ANALYSIS - CF
ANNUAL LONG-TERM MONITORING REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Well	Plume	COC	Coefficient of Variation	MK (S)	Confidence Factor (CF)	Concentration Trend	Number of Sample Rounds	Detects	Max	Min
DR2-1	TTA-2	CF	0 38	-72	100 0%	D	16	16	16	3 76
DR2-2	TTA-2	CF	0 57	36	99.8%	I	11	11	4.23	0.64
DR2-3	TTA-2	CF	0 35	-28	98 4%	D	11	11	1 9	0 76
DR2-4	TTA-2	CF	0.19	-14	94.6%	PD	8	8	1.06	0.575
DR2-5	TTA-2	CF	0.31	-33	94.3%	PD	15	15	82	35.8
DR2-6	TTA-2	CF	0 59	-3	56 0%	S	11	11	43.1	1.5
IW-01	TTA-2	CF	0.70	-13	82.1%	S	12	12	16 5	0.34
MW-26	TTA-2	CF	0 25	-21	94.0%	PD	11	11	1.8	0.871
MW-64	TTA-2	CF	0 11	12	87 0%	NT	9	9	1.16	0 818
MW-85	TTA-2	CF	0 48	-15	75 2%	S	15	15	51.5	8.03
MW-86	TTA-2	CF	1 84	29	98 7%	I	11	7	5 7	0.212
MW-88	TTA-2	CF	0 50	-25	97.0%	D	12	12	2.5	0 404
MW-92	TTA-2	CF	0 67	-22	94 9%	PD	11	8	13.2	7.6
MW-96	TTA-2	CF	2.28	-11	77.7%	NT	12	12	33	0.337
MW-113	TTA-2	CF	0.14	8	70.3%	NT	11	11	45.3	27
MW-217	TTA-2	CF	0 40	14	94 6%	PI	8	8	13.4	5.05
MW-218	TTA-2	CF	0.08	-8	80 1%	S	8	8	3.15	2.45

FIGURES



Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 0.6 1.2 1.8 2.4 3 Miles

Figure 1

SITE LOCATION MAP

ANNUAL LONG-TERM MONITORING REPORT – 2009

MAIN INSTALLATION DEFENSE DEPOT MEMPHIS, TENNESSEE

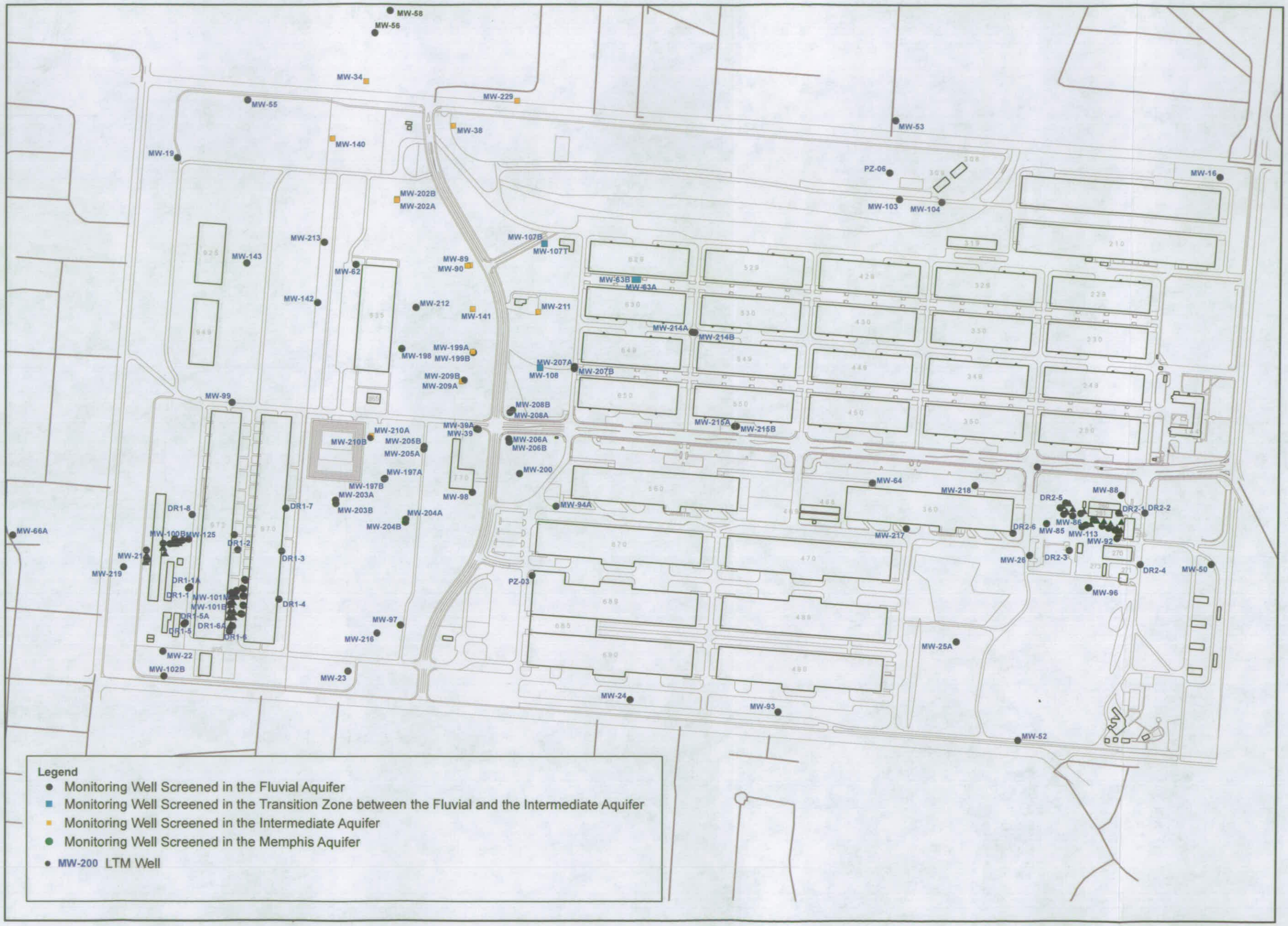
Installation Location
Memphis, Tennessee



Date: January 2010
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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
- MW-200 LTM Well

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Figure 2

WELL LOCATION MAP

ANNUAL LONG-TERM
MONITORING REPORT – 2009

MAIN INSTALLATION
DEFENSE DEPOT
MEMPHIS, TENNESSEE

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

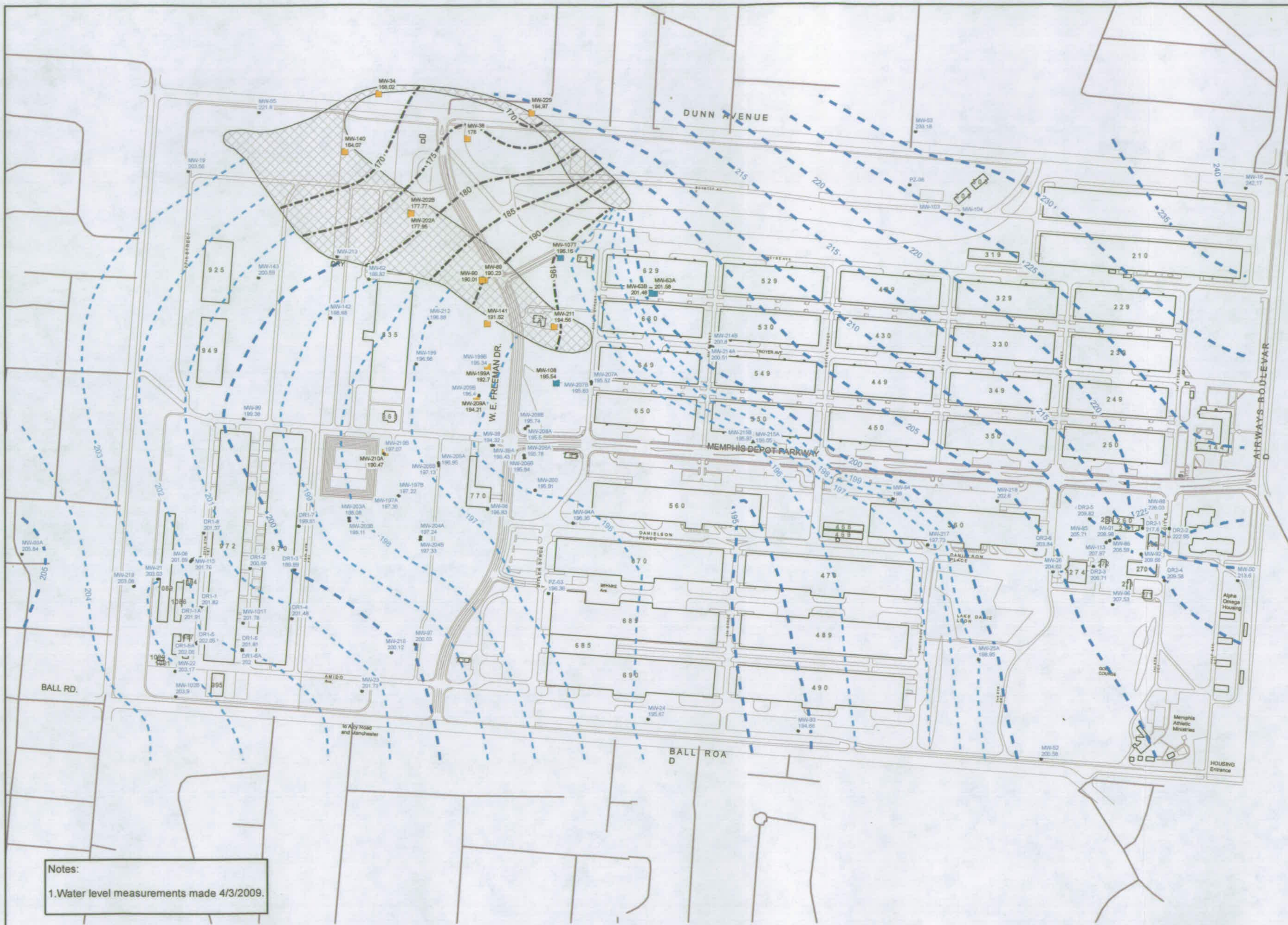
0 250 500 1,000
Feet

Installation Location
Memphis, Tennessee



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Figure 3

POTENTIOMETRIC SURFACE MAP, APRIL 2009

ANNUAL LONG-TERM MONITORING REPORT – 2009

MAIN INSTALLATION
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

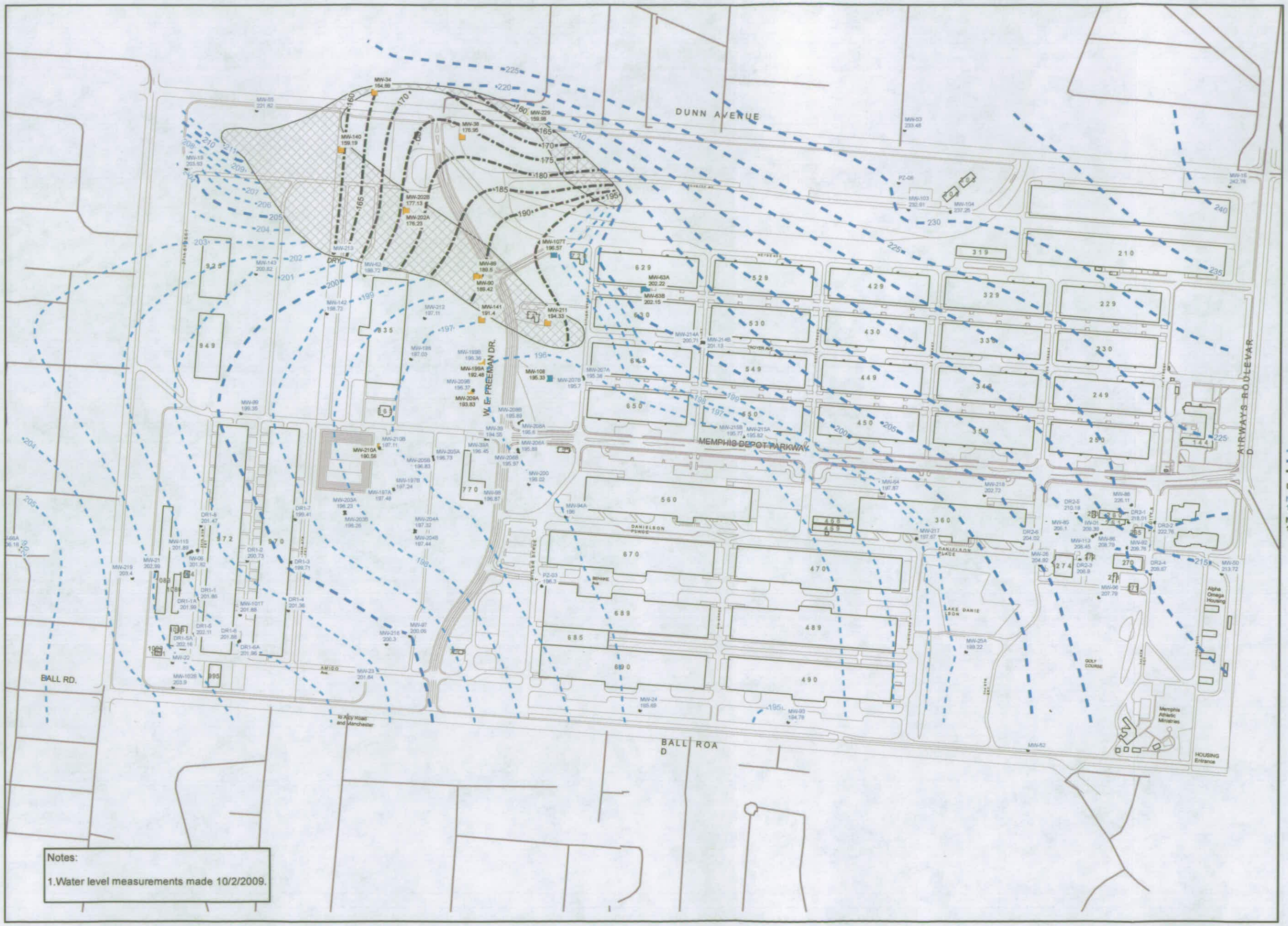
MW-237 100.15 Black: value used for Intermediate Aquifer groundwater contours

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 250 500 1,000
Feet

Installation Location
Memphis, Tennessee

Date: January 2010
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Figure 4

POTENTIOMETRIC SURFACE MAP, OCTOBER 2009

ANNUAL LONG-TERM MONITORING REPORT – 2009

MAIN INSTALLATION
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

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

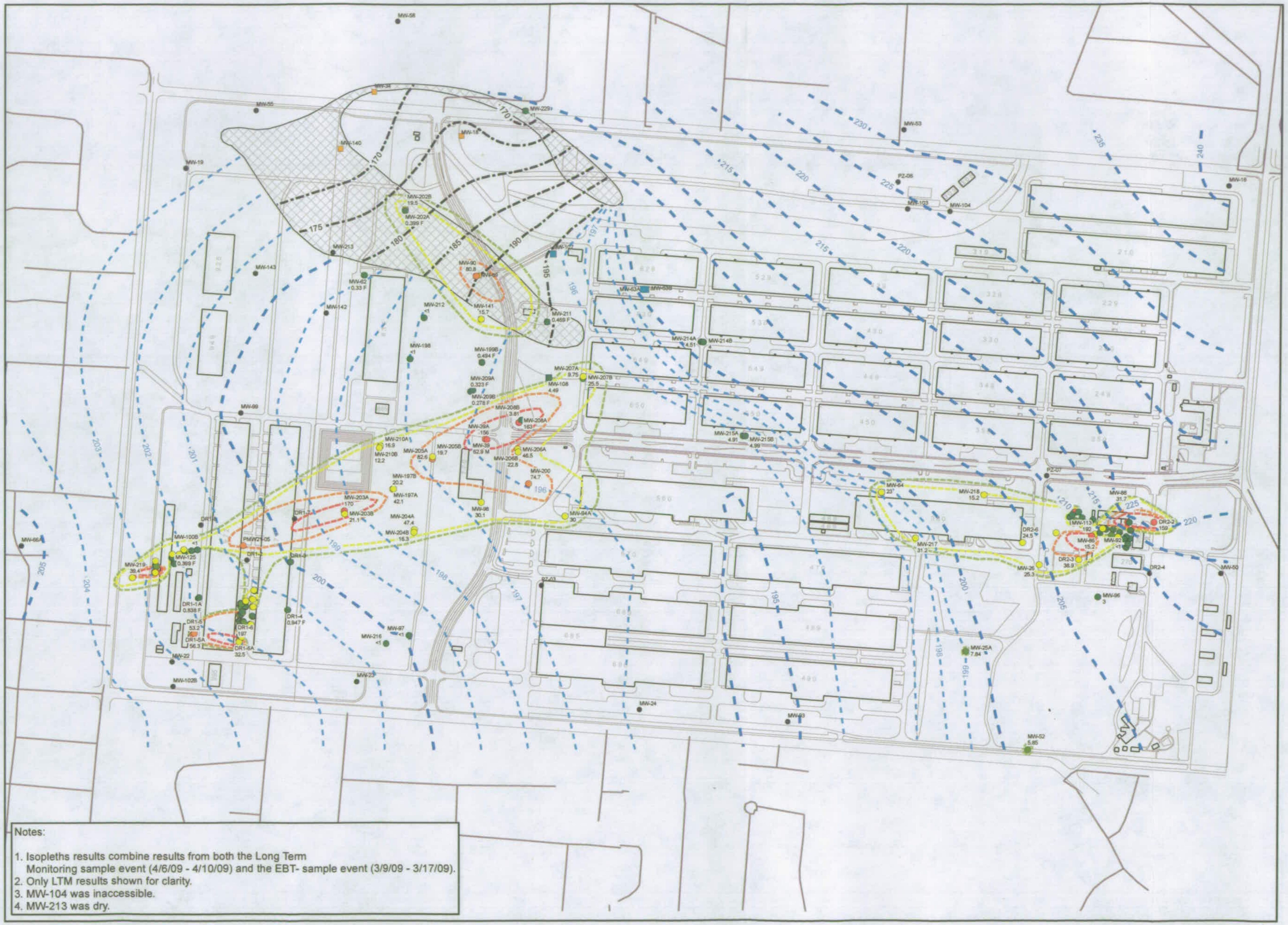
0 250 500 1,000
Feet

Installation Location
Memphis, Tennessee



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Figure 5

PCE ISOPLETH MAP, APRIL 2009

ANNUAL LONG-TERM MONITORING REPORT – 2009

MAIN INSTALLATION 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

- 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

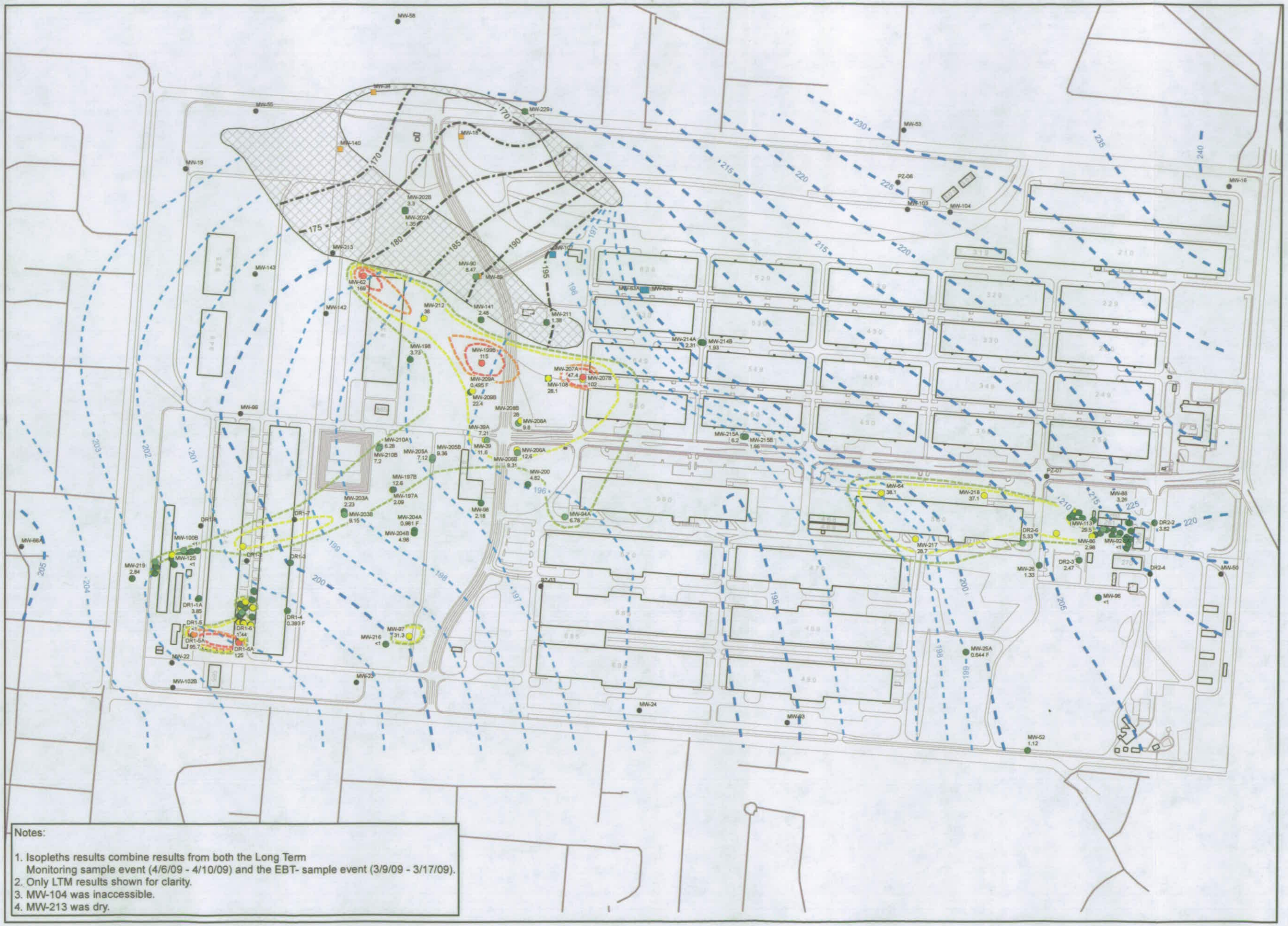
Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 200 400 800
Feet

Installation Location
Memphis, Tennessee

Date: January 2010
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Notes:

1. Isopleths results combine results from both the Long Term Monitoring sample event (4/6/09 - 4/10/09) and the EBT- sample event (3/9/09 - 3/17/09).
2. Only LTM results shown for clarity.
3. MW-104 was inaccessible.
4. MW-213 was dry.

Figure 6

TCE ISOPLETH MAP, APRIL 2009

ANNUAL LONG-TERM MONITORING REPORT – 2009

MAIN INSTALLATION
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

- 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

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 200 400 800
Feet

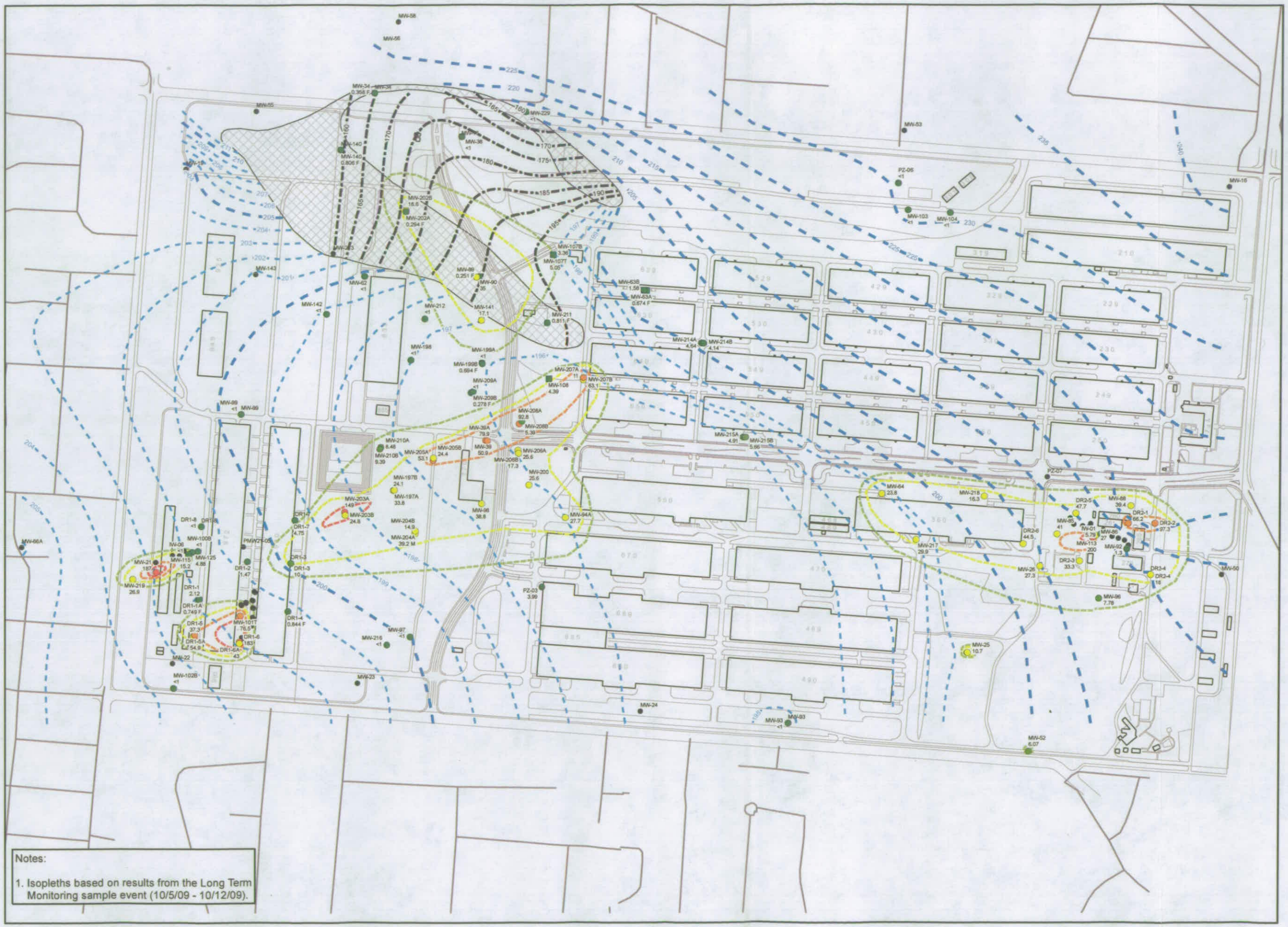
Installation Location
Memphis, Tennessee



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Figure 7

PCE ISOPLETH MAP, OCTOBER 2009

ANNUAL LONG-TERM MONITORING REPORT – 2009

MAIN INSTALLATION
DEFENSE DEPOT
MEMPHIS, TENNESSEE

Legend

PCE Ranges
ug/L
- 0 - 5
- 5 - 10
- 10 - 50
- 50 - 100
- 100 - 300

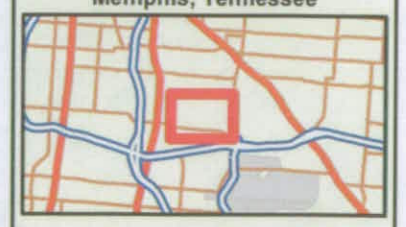
PCE Isopleth
ug/L
- 5
- 10
- 50
- 100

- 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

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 200 400 800
Feet

Installation Location
Memphis, Tennessee



Date: January 2010
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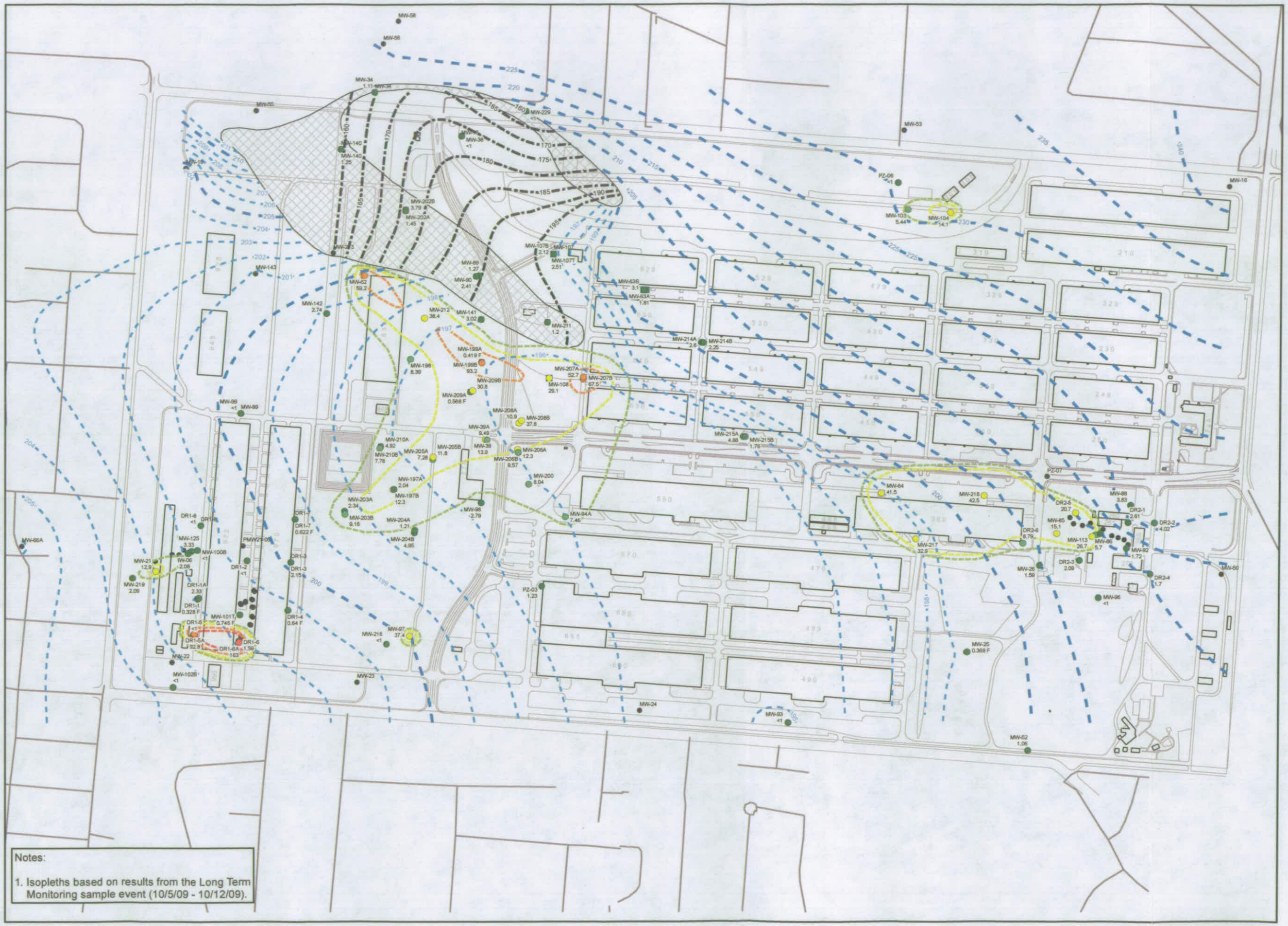


Figure 8

TCE ISOPLETH MAP, OCTOBER 2009

ANNUAL LONG-TERM MONITORING REPORT – 2009

MAIN INSTALLATION
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

- 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

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 200 400 800
Feet

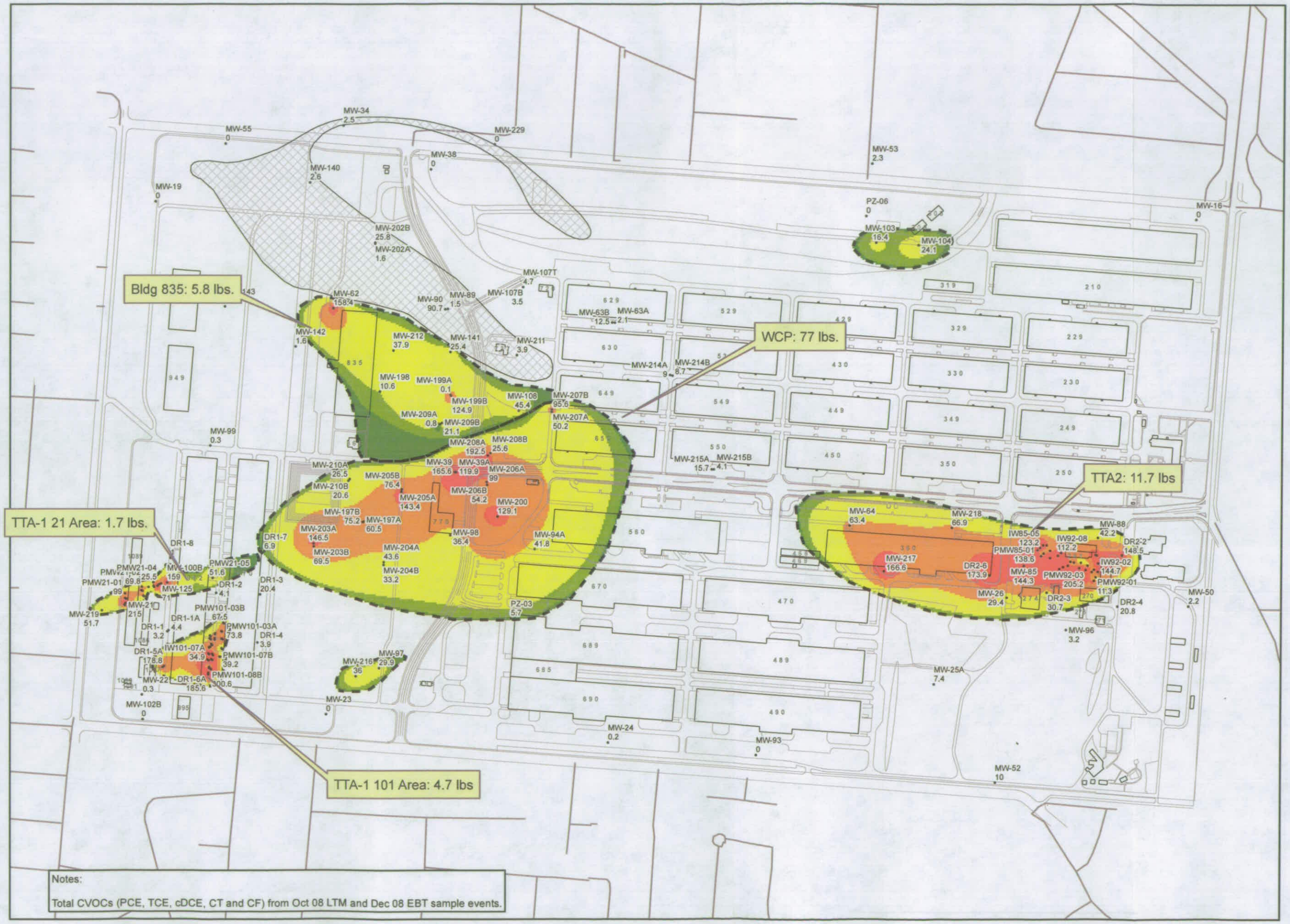
Installation Location
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Date: January 2010
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Notes:

Total CVOCs (PCE, TCE, cDCE, CT and CF) from Oct 08 LTM and Dec 08 EBT sample events.

G:\3202\016\LTM\2009 Annual Report\GIS\Fig 9 Estimated Mass in GW Oct 2008.mxd

Figure 9

ESTIMATED CVOC MASS IN GROUNDWATER OCTOBER 2008

ANNUAL LONG-TERM MONITORING REPORT – 2009

MAIN INSTALLATION
DEFENSE DEPOT
MEMPHIS, TENNESSEE

Legend

5 ug/L Contour line

TVOCs

ug/L

- 0 - 5
- 5 - 10
- 10 - 50
- 50 - 100
- 100 - 500

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 250 500 1,000

Feet

Installation Location
Memphis, Tennessee



Date: February 2010
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Notes:

1. Total CVOCs (PCE, TCE, cDCE, CT, CF and VC) from October 09 LTM sample event.

Figure 10

ESTIMATED CVOC MASS IN GROUNDWATER OCTOBER 2009

ANNUAL LONG-TERM MONITORING REPORT – 2009

MAIN INSTALLATION
DEFENSE DEPOT
MEMPHIS, TENNESSEE

Legend

- 5 ug/L Contour line

TVOCs

ug/L

- 0 - 5
- 5 - 10
- 10 - 50
- 50 - 100
- 100 - 500

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 250 500 1,000

Feet

Installation Location
Memphis, Tennessee

Date: February 2010
Edition: Rev 0

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G:\3202\016\LTM\2009 Annual Report\GIS\Fig 10 Estimated Mass in GW Oct 2009.mxd

MW-254

MW-252

MW-255

MW-253

Notes:

1. Isopleths based on results from the Long Term Monitoring sample event (10/5/09 - 10/12/09).

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Figure 11

PROPOSED DEEP MONITORING WELLS

ANNUAL LONG-TERM MONITORING REPORT – 2009

MAIN INSTALLATION
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

- Proposed Monitoring Well in the Memphis Aquifer
- Proposed Monitoring Well in the Intermediate Aquifer
- 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

0 200 400 800
Feet

Installation Location
Memphis, Tennessee



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A NORTH — A' SOUTH

DD' BB'

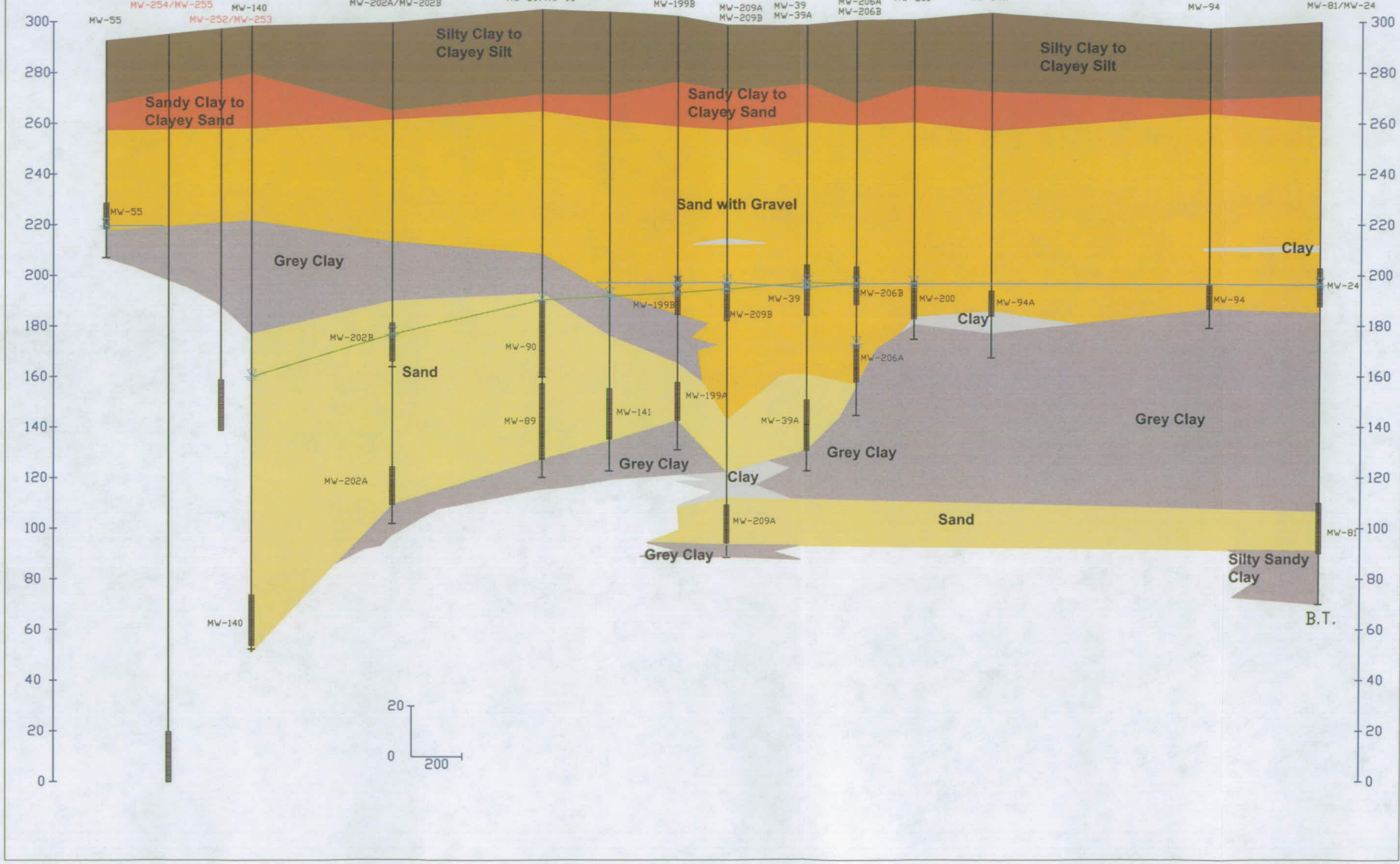


Figure 12

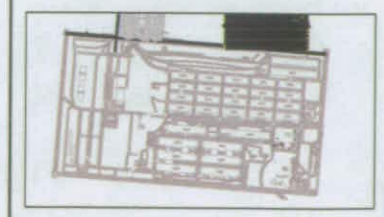
PROPOSED WELL DEPTHS

ANNUAL LONG-TERM MONITORING REPORT – 2009

MAIN INSTALLATION
DEFENSE DEPOT
MEMPHIS, TENNESSEE

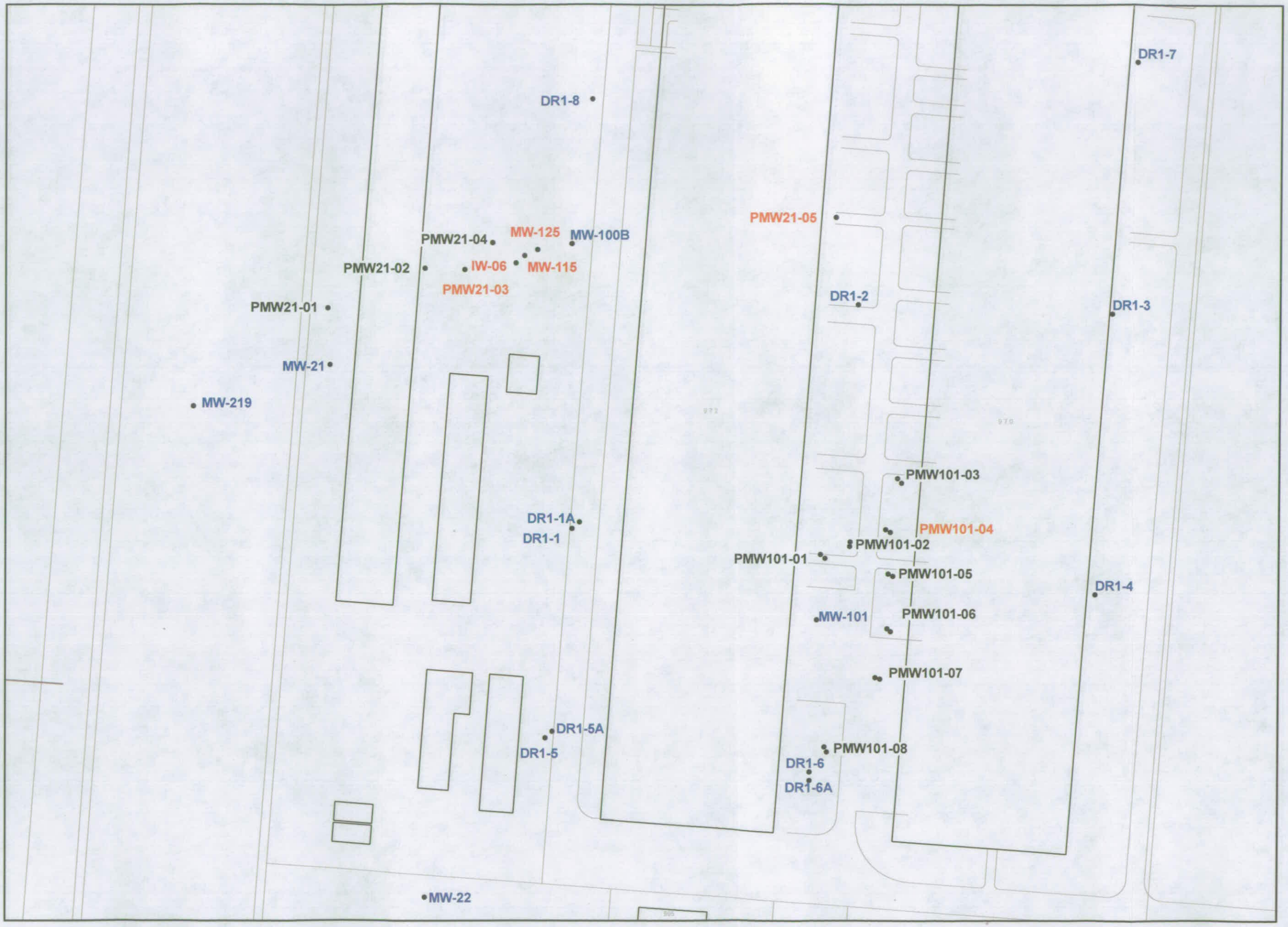
- Silty Clay to Clayey Silt
- Sandy Clay to Clayey Sand
- Fluvial Sand or Sand with Gravel
- Clayey Sand to Silty Clay
- Intermediated Sand
- Clay
- Groundwater Elevation Fluvial Aquifer 5/4/2007
- Groundwater Elevation Intermediate Aquifer 5/4/2007
- Well Screen Interval

Installation Location
Memphis, Tennessee



Date: August 2009
Edition: Rev 0

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Figure 13

PROPOSED LTM CHANGES
TTA-1

ANNUAL LONG-TERM
MONITORING REPORT – 2009

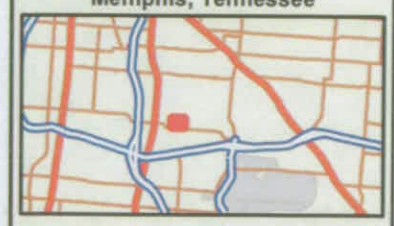
MAIN INSTALLATION
DEFENSE DEPOT
MEMPHIS, TENNESSEE

DR2-2: LTM Well
IW-01: LTM Well to be abandoned
PMW92-06: New LTM Well

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 25 50 100
Feet

Installation Location
Memphis, Tennessee

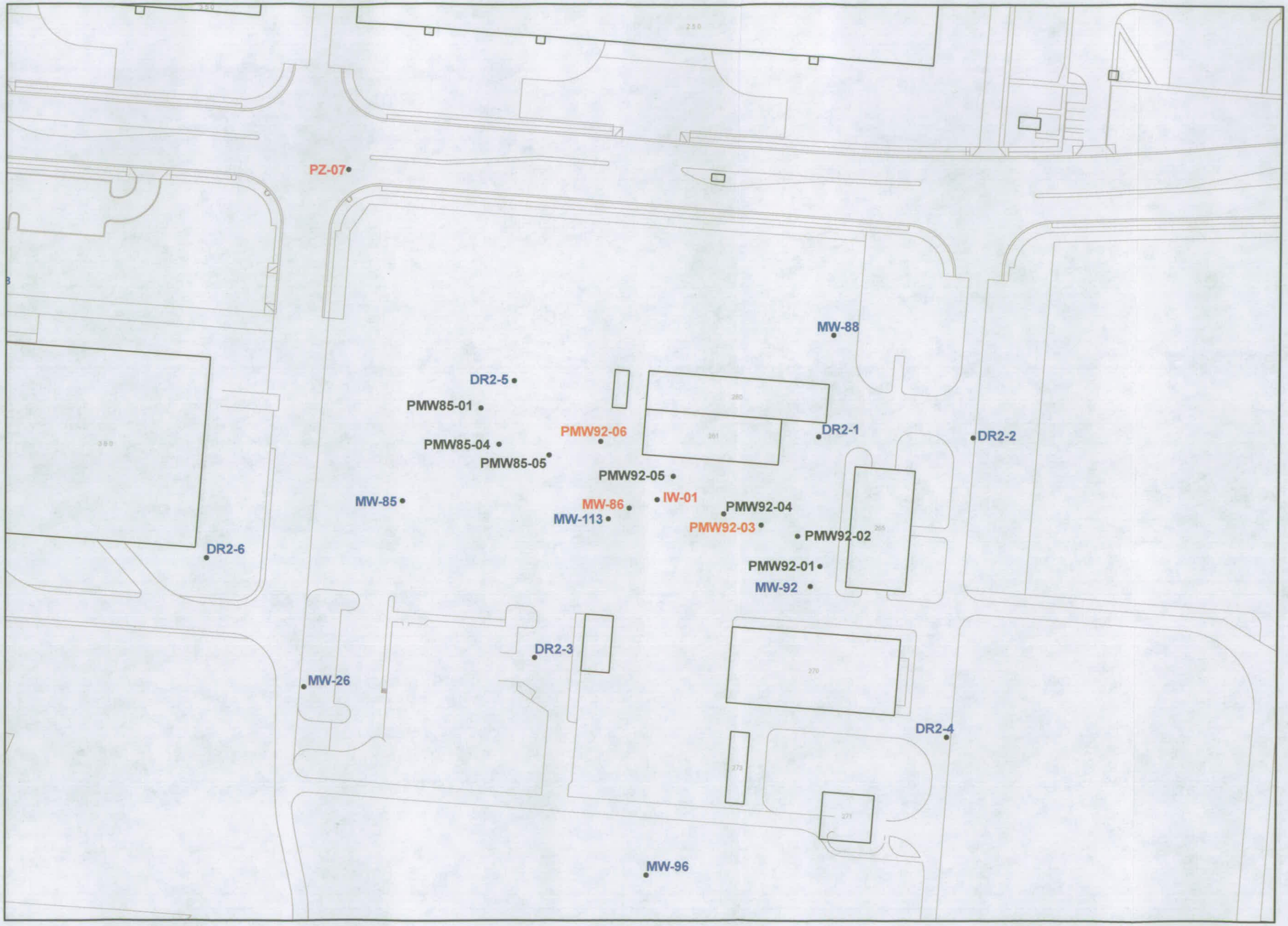


Date: January 2010
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Figure 14

PROPOSED LTM CHANGES
TTA-2

ANNUAL LONG-TERM
MONITORING REPORT – 2009

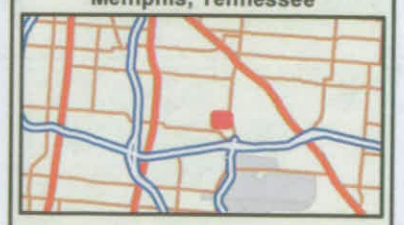
MAIN INSTALLATION
DEFENSE DEPOT
MEMPHIS, TENNESSEE

DR2-2: LTM Well
IW-01: LTM Well to be abandoned
PMW92-06: New LTM Well

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 25 50 100
Feet

Installation Location
Memphis, Tennessee



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APPENDIX A

COMPLETE ANALYTICAL RESULTS

TABLE A-1
ANALYTICAL RESULTS , VOCs - APRIL 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	DR1-1A	DR1-4	DR1-5A DUP7	DR1-5A	DR1-5
	Sample ID	DR1-1A-LS-9	DR1-4-LS-9	DR1-5A DUP7-LS-9	DR1-5A-LS-9	DR1-5-LS-9
	Lab ID	L09040270-25	L09040270-26	L09040270-32	L09040270-28	L09040270-27
	Date	4/8/2009	4/8/2009	4/8/2009	4/8/2009	4/8/2009
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	<0 5	<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	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
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	0 264 J	<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	4 07 JB	<10	<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	<1	<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	0 424	<0 3	0 237 J	0 217 J	<0 3
Chloromethane	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	0 295 J	0 755 J	3 4	3 19	<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	19 3	19	1 08 J
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	0 838 J	0 947 J	58	56 3	53 2
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	3 85	0 393 J	100	95 7	<1
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
DQE FLAGS·
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-1
ANALYTICAL RESULTS , VOCs - APRIL 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	DR1-6A	DR1-6	DR2-2	DR2-3	DR2-6
	Sample ID	DR1-6A-LS-9	DR1-6-LS-9	DR2-2-LS-9	DR2-3-LS-9	DR2-6-LS-9
	Lab ID	L09040270-30	L09040270-29	L09040275-05	L09040270-36	L09040213-17
	Date	4/8/2009	4/8/2009	4/10/2009	4/8/2009	4/7/2009
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	<0 5	<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	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
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	14 9
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	0 715
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	<10	<10	<10
Benzene	µg/L	0 146 J	<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	<1	16 2	6 66	12 9
Chlorobenzene	µg/L	<0 5	<0 5	<0 5	<0 5	<0 5
Chloroethane	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	0 214 J	<0 3	4 23	1 19	7 83
Chloromethane	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	4 33	1 31	7 39	1 41	29
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 J
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	32 5	197	159	38 9	24 5
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	125	1 44	3 82	2 47	5 33
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-1
ANALYTICAL RESULTS , VOCs - APRIL 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-25A	MW-26	MW-39A	MW-39	MW-52
	Sample ID	MW-25A-LS-9	MW-26-LS-9	MW-39A-LS-9	MW-39-LS-9	MW-52-LS-9
	Lab ID	L09040213-18	L09040213-14	L09040270-01	L09040270-14	L09040213-19
	Date	4/6/2009	4/7/2009	4/9/2009	4/9/2009	4/6/2009
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	<0 5	<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	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
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	3.36 J	<10	<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 54	5 91	<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	0 449	1 16	0 145 J	<0 3	0 891
Chloromethane	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	0 332 J	7.61	17 5	0 81 J
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 J	<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	0 569 J	<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	7 84	25 3	156	62 9 J	5.85
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	0 644 J	1 33	7 21	11 6	1 12
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-1
ANALYTICAL RESULTS , VOCs - APRIL 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-62	MW-64	MW-86 DUP	MW-86	MW-88
	Sample ID	MW-62-LS-9	MW-64-LS-9	MW-86 DUP-LS-9	MW-86-LS-9	MW-88-LS-9
	Lab ID	L09040275-07	L09040270-17	L09040270-12	L09040270-02	L09040270-03
	Date	4/10/2009	4/9/2009	4/9/2009	4/9/2009	4/9/2009
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	1 12	<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	<1	<1
1,1-Dichloroethene	µg/L	<1	0 648 J	<1	<1	<1
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 08	0 98 J	<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	0 18 J	0 134 J	<1
1,2-Dichloroethane	µg/L	<0 5	0 479 J	0 845	0 782	<0 5
1,2-Dichloropropane	µg/L	<1	<1	1 26	1 08	<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	0 616	0 533	<0 4
1,4-Dichlorobenzene	µg/L	0 431 J	<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	4 54 JB	3 4 JB	<10	2 67 JB
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	0 369 J	3 37	0 406 J	0 499 J	4 87
Chlorobenzene	µg/L	<0 5	<0 5	<0 5	<0 5	<0 5
Chloroethane	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	0 361	1 08	0 928	0 906	0 825
Chloromethane	µg/L	<1	<1	0 665 JB	<1	<1
cis-1,2-Dichloroethene	µg/L	0 424 J	0 481 J	117	120	0 732 J
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	0 33 J	23	15	15 2	31 7
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	169	38 1	3 15	2 98	3 26
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	<1	9 96	8	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-1
ANALYTICAL RESULTS , VOCs - APRIL 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-90	MW-92	MW-94A	MW-96	MW-97
	Sample ID	MW-90-LS-9	MW-92-LS-9	MW-94A-LS-9	MW-96-LS-9	MW-97-LS-9
	Lab ID	L09040213-01	L09040275-01	L09040270-18	L09040213-20	L09040275-02
	Date	4/7/2009	4/10/2009	4/9/2009	4/6/2009	4/10/2009
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	<0 5	<0 5	<0 5	<0 5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	1 09	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	0 931 J	<1	<1	<1	<1
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	3 29 J	31 7 B	<10	<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	0 268 J	<1	<1	0 69 J	<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	4 91	<0 3	<0 3	0.73	0.316
Chloromethane	µg/L	<1	<1	0 454 JB	<1	<1
cis-1,2-Dichloroethene	µg/L	0 481 J	119	3 06	<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	133	<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	80 8	<1	30	3	<1
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	8 47	<1	6 78	<1	31 3
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	1 64	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L , micrograms per liter
< Not detected at sample reporting limit
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-1
ANALYTICAL RESULTS , VOCs - APRIL 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-98	MW-100B	MW-108	MW-113	MW-125 DUP2
	Sample ID	MW-98-LS-9	MW-100B-LS-9	MW-108-LS-9	MW-113-LS-9	MW-125 DUP2-LS-9
	Lab ID	L09040275-03	L09040270-23	L09040213-02	L09040270-04	L09040270-31
	Date	4/10/2009	4/8/2009	4/7/2009	4/9/2009	4/8/2009
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	<0 5	<0 5	<0.5	<0 5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	0 228 J	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
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	16.8	<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	0 141 J	<1
1,2-Dichloroethane	µg/L	<0 5	<0 5	<0 5	0 667	0.279 J
1,2-Dichloropropane	µg/L	<1	<1	<1	0 622 J	<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	4 94 JB	35 1	<10	<10	7 91 J
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	<1	<1	101	<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	<0 3	10 1	39	<0 3
Chloromethane	µg/L	<1	0 354 J	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	0 346 J	22 3	0 674 J	57 1	75 2
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	142	<10	<10	25 8
Methyl t-butyl ether (MTBE)	µg/L	<5	55 4	<5	<5	36 4
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	30 1	<1	4 49	192	0 442 J
Toluene	µg/L	<1	1 04	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	0 312 J
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	2 18	<1	28 1	29 5	<1
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	94 6	<1	<1	0 525 J

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-1
ANALYTICAL RESULTS , VOCs - APRIL 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-125	MW-141	MW-197A	MW-197B	MW-198
	Sample ID	MW-125-LS-9	MW-141-LS-9	MW-197A-LS-9	MW-197B-LS-9	MW-198-LS-9
	Lab ID	L09040270-24	L09040270-05	L09040213-21	L09040213-22	L09040270-19
	Date	4/8/2009	4/9/2009	4/6/2009	4/6/2009	4/9/2009
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	<0 5	<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	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
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	0 313 J	<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	9 32 J	<10	<10	<10	3 19 JB
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	<1	<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	1 85	0 13 J	<0 3	<0 3
Chloromethane	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	76	<1	3 69	38 2	<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	26 1	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	µg/L	37 1	<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	0 399 J	15 7	42 1	20 2	<1
Toluene	µg/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	0 33 J	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	2 48	2 09	12 6	3 73
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	0 509 J	<1	<1	0 684 J	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
DQE FLAGS:
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-1
ANALYTICAL RESULTS , VOCs - APRIL 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-199B	MW-200	MW-202A	MW-202B	MW-203A DUP3
	Sample ID	MW-199B-LS-9	MW-200-LS-9	MW-202A-LS-9	MW-202B-LS-9	MW-203A DUP3-LS-9
	Lab ID	L09040270-20	L09040213-05	L09040213-06	L09040213-15	L09040270-13
	Date	4/9/2009	4/7/2009	4/7/2009	4/7/2009	4/9/2009
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	<0 5	<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 53 J	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
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	4 24 JB	<10	3 15 J	3 38 J	3 08 JB
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	0 476 J	<1	<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	0 217 J	<0 3	0 171 J	1 96	0 188 J
Chloromethane	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	5 68	<1	<1	2 36
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 J	<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	0 29 J	<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	0 494 J	74 7	0 399 J	19 5	167
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	115	4 82	1 35	3 3	2 13
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-1
ANALYTICAL RESULTS , VOCs - APRIL 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-203A	MW-203B	MW-204A	MW-204B	MW-205A
	Sample ID	MW-203A-LS-9	MW-203B-LS-9	MW-204A-LS-9	MW-204B-LS-9	MW-205A-LS-9
	Lab ID	L09040270-06	L09040270-07	L09040213-07	L09040270-33	L09040275-08
	Date	4/9/2009	4/9/2009	4/7/2009	4/8/2009	4/10/2009
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	<0 5	<0 5	1 31	<0 5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
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	6 97 JB	<10	<10	4.52 JB
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	<1	<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	0 203 J	<0 3	<0 3	<0 3	0 132 J
Chloromethane	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	1 68	26 6	1 21	1 29	16 8
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 J	<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	170	21 1	47 4	16 3	82 6
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	2 23	9 15	0 981 J	4 98	7 12
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	7 12	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
DQE FLAGS
J Estimated, based on QC data or reported below RL
B, Estimated, possibly biased high or false positive based on blank data

TABLE A-1
ANALYTICAL RESULTS , VOCs - APRIL 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-205B	MW-206A	MW-206B	MW-207A	MW-207B
	Sample ID	MW-205B-LS-9	MW-206A-LS-9	MW-206B-LS-9	MW-207A-LS-9	MW-207B-LS-9
	Lab ID	L09040213-16	L09040213-08	L09040213-09	L09040275-09	L09040275-04
	Date	4/7/2009	4/7/2009	4/7/2009	4/10/2009	4/10/2009
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	<0 5	<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	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
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	4 21 J	<10	<10	4 92 JB	4 38 JB
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	<1	<1	<1	0 851 J
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	<0 3	<0 3	10 3	1 6
Chloromethane	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	38 8	14 2	9 78	0 561 J	<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 J	<1 J	<1 J	<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	19 7	46 5	22 8	9 75	25 5
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	9 36	12 6	9 31	47 4	102
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-1
ANALYTICAL RESULTS , VOCs - APRIL 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Well ID Sample ID Lab ID Date Units	MW-208A DUP4 MW-208A DUP4-LS-9 L09040213-12 4/7/2009 µg/L	MW-208A MW-208A-LS-9 L09040213-10 4/7/2009 µg/L	MW-208B MW-208B-LS-9 L09040213-11 4/7/2009 µg/L	MW-209A MW-209A-LS-9 L09040270-08 4/9/2009 µg/L	MW-209B MW-209B-LS-9 L09040270-11 4/9/2009 µg/L
1,1,1,2-Tetrachloroethane		<0 5	<0 5	<0 5	<0 5	<0 5
1,1,1-Trichloroethane		<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane		<0 5	<0 5	0 393 J	<0 5	<0 5
1,1,2-Trichloroethane		<1	<1	<1	<1	<1
1,1-Dichloroethane		<1	<1	<1	<1	<1
1,1-Dichloroethene		<1	<1	<1	<1	<1
1,1-Dichloropropene		<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene		<1	<1	<1	<1	<1
1,2,3-Trichloropropane		<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene		<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene		<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane		<2	<2	<2	<2	<2
1,2-Dibromoethane		<1	<1	<1	<1	<1
1,2-Dichlorobenzene		<1	<1	<1	<1	<1
1,2-Dichloroethane		<0 5	<0 5	<0 5	<0 5	<0 5
1,2-Dichloropropane		<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene		<1	<1	<1	<1	<1
1,3-Dichlorobenzene		<1	<1	<1	<1	<1
1,3-Dichloropropane		<0 4	<0 4	<0 4	<0 4	<0 4
1,4-Dichlorobenzene		<0 5	<0 5	<0 5	<0 5	<0 5
1-Chlorohexane		<1	<1	<1	<1	<1
2,2-Dichloropropane		<1	<1	<1	<1	<1
2-Chlorotoluene		<1	<1	<1	<1	<1
2-Hexanone		<10	<10	<10	<10	<10
4-Chlorotoluene		<1	<1	<1	<1	<1
Acetone		3 8 J	<10	2 67 J	<10	3 07 J
Benzene		<0 4	<0 4	<0 4	<0 4	<0 4
Bromobenzene		<1	<1	<1	<1	<1
Bromochloromethane		<1	<1	<1	<1	<1
Bromodichloromethane		<0 5	<0 5	<0 5	<0 5	<0 5
Bromoform		<1	<1	<1	<1	<1
Bromomethane		<1	<1	<1	<1	<1
Carbon disulfide		<1	<1	<1	<1	<1
Carbon tetrachloride		<1	<1	<1	<1	0 668 J
Chlorobenzene		<0 5	<0 5	<0 5	<0 5	<0 5
Chloroethane		<1	<1	<1	<1	<1
Chloroform		0 202 J	0 18 J	0 165 J	<0 3	0 272 J
Chloromethane		0 379 J	<1	0 612 J	<1	<1
cis-1,2-Dichloroethene		3 35	3 61	2 14	<1	<1
cis-1,3-Dichloropropene		<0 5	<0 5	<0 5	<0 5	<0 5
Dibromochloromethane		<0 5	<0 5	<0 5	<0 5	<0 5
Dibromomethane		<1	<1	<1	<1	<1
Dichlorodifluoromethane		<1 J	<1 J	<1 J	<1	<1
Ethylbenzene		<1	<1	<1	<1	<1
Hexachlorobutadiene		<0 6	<0 6	<0 6	<0 6	<0 6
Isopropylbenzene		<1	<1	<1	<1	<1
m-,p-Xylene		<2	<2	<2	<2	<2
MEK (2-Butanone)		<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)		<5	<5	<5	2 35 J	<5
Methylene chloride		<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)		<10	<10	<10	<10	<10
Naphthalene		<1	<1	<1	<1	<1
n-Butylbenzene		<1	<1	<1	<1	<1
n-Propylbenzene		<1	<1	<1	<1	<1
o-Xylene		<1	<1	<1	<1	<1
p-Isopropyltoluene		<1	<1	<1	<1	<1
sec-Butylbenzene		<1	<1	<1	<1	<1
Styrene		<1	<1	<1	<1	<1
tert-Butylbenzene		<1	<1	<1	<1	<1
Tetrachloroethene		162	163	3 81	0 323 J	0 278 J
Toluene		<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		<1	<1	<1	<1	<1
trans-1,3-Dichloropropene		<1	<1	<1	<1	<1
Trichloroethene		9 45	9 8	28	0 495 J	22 4
Trichlorofluoromethane		<1	<1	<1	<1	<1
Vinyl acetate		<5	<5	<5	<5	<5
Vinyl chloride		<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

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TABLE A-1
ANALYTICAL RESULTS , VOCs - APRIL 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-210A	MW-210B	MW-211	MW-212 DUP5	MW-212
	Sample ID	MW-210A-LS-9	MW-210B-LS-9	MW-211-LS-9	MW-212 DUP5-LS-9	MW-212-LS-9
	Lab ID	L09040213-23	L09040213-24	L09040275-10	L09040275-15	L09040275-11
	Date	4/6/2009	4/6/2009	4/10/2009	4/10/2009	4/10/2009
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	<0 5	<0 5	<0 5	<0 5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	0 553 J	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
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	<10	<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	<1	<1	0 301 J	0 29 J
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	<0 3	2 71	<0 3	<0 3
Chloromethane	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	1 47	0 889 J	<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	0 692 J	<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	16 9	12 2	0 469 J	0 35 J	<1
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	6 28	7 2	1 38	38 6	38
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L , micrograms per liter
< Not detected at sample reporting limit
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-1
ANALYTICAL RESULTS , VOCs - APRIL 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Well ID Sample ID Lab ID Date Units	MW-214A MW-214A-LS-9 L09040275-12 4/10/2009 µg/L	MW-214B MW-214B-LS-9 L09040275-13 4/10/2009 µg/L	MW-215A MW-215A-LS-9 L09040275-14 4/10/2009 µg/L	MW-215B MW-215B-LS-9 L09040270-21 4/9/2009 µg/L	MW-216 MW-216-LS-9 L09040213-25 4/6/2009 µg/L
1,1,1,2-Tetrachloroethane		<0 5	<0 5	<0 5	<0 5	<0 5
1,1,1-Trichloroethane		<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane		0 238 J	0 316 J	0 289 J	<0 5	<0 5
1,1,2-Trichloroethane		<1	<1	<1	<1	<1
1,1-Dichloroethane		<1	<1	<1	<1	<1
1,1-Dichloroethene		<1	<1	<1	<1	<1
1,1-Dichloropropene		<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene		<1	<1	<1	<1	<1
1,2,3-Trichloropropane		<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene		<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene		<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane		<2	<2	<2	<2	<2
1,2-Dibromoethane		<1	<1	<1	<1	<1
1,2-Dichlorobenzene		<1	<1	<1	<1	<1
1,2-Dichloroethane		<0 5	<0 5	<0 5	<0 5	<0 5
1,2-Dichloropropane		<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene		<1	<1	<1	<1	<1
1,3-Dichlorobenzene		<1	<1	<1	<1	<1
1,3-Dichloropropane		<0 4	<0 4	<0 4	<0 4	<0 4
1,4-Dichlorobenzene		<0 5	<0 5	<0 5	<0 5	<0 5
1-Chlorohexane		<1	<1	<1	<1	<1
2,2-Dichloropropane		<1	<1	<1	<1	<1
2-Chlorotoluene		<1	<1	<1	<1	<1
2-Hexanone		<10	<10	<10	<10	<10
4-Chlorotoluene		<1	<1	<1	<1	<1
Acetone		<10	<10	<10	2 83 JB	<10
Benzene		<0 4	<0 4	<0 4	<0 4	<0 4
Bromobenzene		<1	<1	<1	<1	<1
Bromochloromethane		<1	<1	<1	<1	<1
Bromodichloromethane		<0 5	<0 5	<0 5	<0 5	<0 5
Bromoform		<1	<1	<1	<1	<1
Bromomethane		<1	<1	<1	<1	<1
Carbon disulfide		<1	<1	<1	<1	<1
Carbon tetrachloride		0 752 J	0 797 J	0 591 J	0 97 J	<1
Chlorobenzene		<0 5	<0 5	<0 5	<0 5	<0 5
Chloroethane		<1	<1	<1	<1	<1
Chloroform		2 22	1 47	1 52	0 767	<0 3
Chloromethane		<1	<1	0 357 JB	<1	<1
cis-1,2-Dichloroethene		<1	<1	<1	<1	<1
cis-1,3-Dichloropropene		<0 5	<0 5	<0 5	<0 5	<0 5
Dibromochloromethane		<0 5	<0 5	<0 5	<0 5	<0 5
Dibromomethane		<1	<1	<1	<1	<1
Dichlorodifluoromethane		<1	<1	<1	<1	<1 J
Ethylbenzene		<1	<1	<1	<1	<1
Hexachlorobutadiene		<0 6	<0 6	<0 6	<0 6	<0 6
Isopropylbenzene		<1	<1	<1	<1	<1
m-,p-Xylene		<2	<2	<2	<2	<2
MEK (2-Butanone)		<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)		1 13 J	0 715 J	1 13 J	0 567 J	<5
Methylene chloride		<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)		<10	<10	<10	<10	<10
Naphthalene		<1	<1	<1	<1	<1
n-Butylbenzene		<1	<1	<1	<1	<1
n-Propylbenzene		<1	<1	<1	<1	<1
o-Xylene		<1	<1	<1	<1	<1
p-Isopropyltoluene		<1	<1	<1	<1	<1
sec-Butylbenzene		<1	<1	<1	<1	<1
Styrene		<1	<1	<1	<1	<1
tert-Butylbenzene		<1	<1	<1	<1	<1
Tetrachloroethene		4 51	4	4 91	4 99	<1
Toluene		<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		<1	<1	<1	<1	<1
trans-1,3-Dichloropropene		<1	<1	<1	<1	<1
Trichloroethene		2 31	1 93	6 2	1 66	<1
Trichlorofluoromethane		<1	<1	<1	<1	<1
Vinyl acetate		<5	<5	<5	<5	<5
Vinyl chloride		<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-1
ANALYTICAL RESULTS , VOCs - APRIL 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-217	MW-218 DUP6	MW-218	MW-219	MW-229
	Sample ID	MW-217-LS-9	MW-218 DUP6-LS-9	MW-218-LS-9	MW-219-LS-9	MW-229-LS-9
	Lab ID	L09040270-34	L09040270-37	L09040270-35	L09040213-26	L09040270-39
	Date	4/8/2009	4/8/2009	4/8/2009	4/6/2009	4/8/2009
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	0 524	1 15	0 976	<0 5	<0 5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
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	2 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	0 475 J	1 03	<0 5
1,2-Dichloropropane	µg/L	<1	0 493 J	0 426 J	<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	0 218 J
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	4 53 JB	<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	92 4	16 7	15 7	<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	9 43	2 66	2 75	<0 3	<0 3
Chloromethane	µg/L	<1	<1	<1	0 336 JB	<1
cis-1,2-Dichloroethene	µg/L	3 58	0 36 J	0 426 J	1 15	<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 J	<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	31 2	15 7	15 2	39 4	<1
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	28 7	41 4	37 1	2 84	<1
Trichlorofluoromethane	µg/L	<1	0 609 J	0 638 J	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-2
ANALYTICAL RESULTS , VOCs - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	DR1-1A	DR1-1	DR1-2	DR1-3	DR1-4
	Sample ID	DR1-1A-LA-10	DR1-1-LA-10	DR1-2-LA-10	DR1-3-LA-10	DR1-4-LA-10
	Lab ID	L09100165-13	L09100165-12	L09100165-14	L09100165-15	L09100165-16
	Date	10/6/2009	10/6/2009	10/6/2009	10/6/2009	10/6/2009
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	<0 5	<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	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
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	<10	<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 tetrachlonde	µg/L	<1	<1	<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	0 518	<0 3	0 17 J	<0 3	<0 3
Chloromethane	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	1 08	0 607 J	1 5	<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	0 749 J	2 12	1 47	10	0 844 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	2 33	0 328 J	<1	2 15	0 64 J
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
MW-213 was Dry
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-2
ANALYTICAL RESULTS , VOCs - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	DR1-5A	DR1-5	DR1-6A	DR1-6	DR1-7
	Sample ID	DR1-5A-LA-10	DR1-5-LA-10	DR1-6A-LA-10	DR1-6-LA-10	DR1-7-LA-10
	Lab ID	L09100165-35	L09100165-34	L09100165-18	L09100165-17	L09100165-19
	Date	10/5/2009	10/5/2009	10/6/2009	10/6/2009	10/6/2009
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	<0 5	<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	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
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	0 367 J	<1	0 411 J	<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	<10	<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	<1	<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	0 204 J	<0 3	0 245 J	<0 3	<0 3
Chloromethane	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	3 39	<1	4 89	1 49	0 449 J
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	10 8	1 98 J	<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	54 9	37 3	43	183	4 75
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	92 8	<1	163	1 59	0 622 J
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
<, Not detected at sample reporting limit
MW-213 was Dry
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-2
ANALYTICAL RESULTS , VOCs - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	DR1-8	DR2-1	DR2-1	DR2-2	DR2-3
	Sample ID	DR1-8-LA-10	DR2-1 -LA-10 DUP9	DR2-1-LA-10	DR2-2-LA-10	DR2-3-LA-10
	Lab ID	L09100165-36	L09100300-07	L09100300-03	L09100300-32	L09100300-04
	Date	10/5/2009	10/10/2009	10/10/2009	10/11/2009	10/10/2009
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	<0 5	<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	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
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	0 125 J	<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	<10	<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	8 52	7 39	7 75	4 62
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	4 14	3 76	1 91	0 861
Chloromethane	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	4 69	4 89	4 79	0 816 J
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	58 8	66 2	97 3	33 3
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	2 66	2 61	4 02	2 09
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
MW-213 was Dry
DQE FLAGS.
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-2
ANALYTICAL RESULTS , VOCs - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	DR2-4	DR2-5	DR2-6	IW-01	IW-01
	Sample ID	DR2-4-LA-10	DR2-5-LA-10	DR2-6-LA-10	IW-01 -LA-10 DUP10	IW-01-LA-10
	Lab ID	L09100300-33	L09100300-05	L09100256-26	L09100300-08	L09100300-06
	Date	10/11/2009	10/10/2009	10/8/2009	10/10/2009	10/10/2009
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	<0 5	<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	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
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	27 3	8 18	<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	0 156 J	<1	<1	<1
1,2-Dichloroethane	µg/L	<0 5	0 441 J	0 342 J	<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	<10	28	25 5
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	0 684 J	0 572 J
Carbon tetrachloride	µg/L	3 34	94 4	26 4	0 353 J	0 361 J
Chlorobenzene	µg/L	<0 5	0 173 J	<0 5	<0 5	<0 5
Chloroethane	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	0 575	52	10 3	1 03	0 97
Chloromethane	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	0 414 J	47 2	23 8	101	93 6
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	210 J	199 J
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	<5	<5	<5
Methylene chloride	µg/L	<1	<1	<1	0 553 JB	0 526 JB
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	18	47 7	44 5	5 99	5 79
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 7	20 7	8 79	1 87	1 75
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
<, Not detected at sample reporting limit
MW-213 was Dry
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-2
ANALYTICAL RESULTS , VOCs - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Well ID Sample ID Lab ID Date Units	IW-06 IW-06-LA-10 L09100165-37 10/5/2009 µg/L	MW-21 MW-21-LA-10 L09100165-31 10/5/2009 µg/L	MW-21 MW-21-LA-10 DUP1 L09100165-38 10/5/2009 µg/L	MW-25 MW-25-LA-10 L09100256-27 10/8/2009 µg/L	MW-26 MW-26-LA-10 L09100256-20 10/8/2009 µg/L
1,1,1,2-Tetrachloroethane		<0 5	<0 5	<0 5	<0 5	<0 5
1,1,1-Trichloroethane		<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane		<0 5	<0 5	<0 5	<0 5	<0 5
1,1,2-Trichloroethane		<1	<1	<1	<1	<1
1,1-Dichloroethane		<1	<1	<1	<1	<1
1,1-Dichloroethene		<1	<1	<1	<1	<1
1,1-Dichloropropene		<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene		<1	<1	<1	<1	<1
1,2,3-Trichloropropane		<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene		<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene		<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane		<2	<2	<2	<2	<2
1,2-Dibromoethane		<1	<1	<1	<1	<1
1,2-Dichlorobenzene		<1	<1	<1	<1	<1
1,2-Dichloroethane		<0 5	<0 5	<0 5	<0 5	<0 5
1,2-Dichloropropane		<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene		<1	<1	<1	<1	<1
1,3-Dichlorobenzene		<1	<1	<1	<1	<1
1,3-Dichloropropane		<0 4	<0 4	<0 4	<0 4	<0 4
1,4-Dichlorobenzene		<0 5	<0 5	<0 5	<0 5	<0 5
1-Chlorohexane		<1	<1	<1	<1	<1
2,2-Dichloropropane		<1	<1	<1	<1	<1
2-Chlorotoluene		<1	<1	<1	<1	<1
2-Hexanone		48 3	<10	<10	<10	<10
4-Chlorotoluene		<1	<1	<1	<1	<1
Acetone		159	<10	<10	<10	<10
Benzene		0 13 J	<0 4	<0 4	<0 4	<0 4
Bromobenzene		<1	<1	<1	<1	<1
Bromochloromethane		<1	<1	<1	<1	<1
Bromodichloromethane		<0 5	<0 5	<0 5	<0 5	<0 5
Bromoform		<1	<1	<1	<1	<1
Bromomethane		<1	<1	<1	<1	<1
Carbon disulfide		<1	<1	<1	<1	<1
Carbon tetrachloride		<1	<1	<1	2 34	4 81
Chlorobenzene		<0 5	<0 5	<0 5	<0 5	<0 5
Chloroethane		<1	<1	<1	<1	<1
Chloroform		<0 3	<0 3	<0 3	0 373	0 871
Chloromethane		<1	<1	<1	<1	<1
cis-1,2-Dichloroethene		4 14	2 3	2 47	<1	0 411 J
cis-1,3-Dichloropropene		<0 5	<0 5	<0 5	<0 5	<0 5
Dibromochloromethane		<0 5	<0 5	<0 5	<0 5	<0 5
Dibromomethane		<1	<1	<1	<1	<1
Dichlorodifluoromethane		<1	<1	<1	<1	<1
Ethylbenzene		<1	<1	<1	<1	<1
Hexachlorobutadiene		<0 6	<0 6	<0 6	<0 6	<0 6
Isopropylbenzene		<1	<1	<1	<1	<1
m-,p-Xylene		<2	<2	<2	<2	<2
MEK (2-Butanone)		663	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)		16 2	21 1	20 8	<5	<5
Methylene chloride		<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)		<10	<10	<10	<10	<10
Naphthalene		<1	<1	<1	<1	<1
n-Butylbenzene		<1	<1	<1	<1	<1
n-Propylbenzene		<1	<1	<1	<1	<1
o-Xylene		<1	<1	<1	<1	<1
p-Isopropyltoluene		<1	<1	<1	<1	<1
sec-Butylbenzene		<1	<1	<1	<1	<1
Styrene		<1	<1	<1	<1	<1
tert-Butylbenzene		<1	<1	<1	<1	<1
Tetrachloroethene		<1	187	180	10 7	27.3
Toluene		<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		<1	<1	<1	<1	<1
trans-1,3-Dichloropropene		<1	<1	<1	<1	<1
Trichloroethene		2 08	12 9	12 7	0 369 J	1 59
Trichlorofluoromethane		<1	<1	<1	<1	<1
Vinyl acetate		<5	<5	<5	<5	<5
Vinyl chloride		0 33 J	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
MW-213 was Dry
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-2
ANALYTICAL RESULTS , VOCs - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-34	MW-38	MW-39A	MW-39	MW-52
	Sample ID	MW-34-LA-10	MW-38-LA-10	MW-39A-LA-10	MW-39-LA-10	MW-52-LA-10
	Lab ID	L09100256-28	L09100165-20	L09100165-21	L09100300-10	L09100300-35
	Date	10/8/2009	10/5/2009	10/5/2009	10/10/2009	10/12/2009
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	<0 5	<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	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
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	<10	<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	0 978 J	<1	<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	0 236 J	<0 3	<0 3	<0 3	0 842
Chloromethane	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	24 4	21 3	0 831 J
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	0 358 J	<1	79 9	50 9	6 07
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 11	<1	9 49	13 9	1 06
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
MW-213 was Dry
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-2
ANALYTICAL RESULTS , VOCs - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-62	MW-63A	MW-63B	MW-64	MW-85
	Sample ID	MW-62-LA-10	MW-63A-LA-10	MW-63B-LA-10	MW-64-LA-10	MW-85-LA-10
	Lab ID	L09100300-11	L09100300-12	L09100300-13	L09100256-21	L09100300-42
	Date	10/10/2009	10/10/2009	10/10/2009	10/8/2009	10/12/2009
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	<0 5	<0 5	1 4	0 237 J
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	0 625 J	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	0 527 J	<1
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	0 354 J	<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	<10	<10	13 4
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	<1	<1	2 78	108
Chlorobenzene	µg/L	<0 5	<0 5	<0 5	<0 5	<0 5
Chloroethane	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	0 154 J	0 194 J	1 23	0 926	10 4
Chloromethane	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	0 308 J	<1	0 253 J	0 519 J	1 3
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	0 674 J	1 58	23 8	41
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	59 2	1 81	3 1	41 5	15 1
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
MW-213 was Dry
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-2
ANALYTICAL RESULTS , VOCs - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-86	MW-88	MW-89	MW90	MW-90
	Sample ID	MW-86-LA-10	MW-88-LA-10	MW-89-LA-10	MW90 -LA-10 DUP2	MW-90-LA-10
	Lab ID	L09100300-27	L09100300-28	L09100165-22	L09100300-18	L09100300-14
	Date	10/11/2009	10/11/2009	10/5/2009	10/10/2009	10/10/2009
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	<0 5	<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	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
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 39	<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	0 172 J	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	0 738	<0 5	<0 5	<0 5	<0 5
1,2-Dichloropropane	µg/L	1 19	<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	0 554	<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	<10	<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 79	7 12	<1	<1	<1
Chlorobenzene	µg/L	0 126 J	<0 5	<0 5	<0 5	<0 5
Chloroethane	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	1 23	1 32	0 145 J	0 804	0 817
Chloromethane	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	85 7	1 53	<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	27	39 4	0 251 J	33 9	35
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	5 7	3 83	1 27	2 28	2 41
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	65 8	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
MW-213 was Dry
DQE FLAGS
J Estimated based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-2
ANALYTICAL RESULTS , VOCs - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Well ID / Sample ID / Lab ID / Date	Units	MW-92 / MW-92-LA-10 / L09100300-01 / 10/10/2009	MW-93 / MW-93-LA-10 / L09100300-29 / 10/11/2009	MW-94A / MW-94A-LA-10 / L09100300-38 / 10/12/2009	MW-96 / MW-96-LA-10 / L09100256-29 / 10/8/2009	MW-97 / MW-97-LA-10 / L09100256-01 / 10/7/2009
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	<0 5	0.322 J	<0 5	<0 5
1,1,2-Trichloroethane		µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethane		µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1
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	35 2	<10	<10	<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	<1	<1	2	<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	<0 3	<0 3	0 58	0 277 J
Chloromethane		µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene		µg/L	120	<1	2 74	<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	56 4	<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 3	<1	27.7	7.78	<1
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 72	<1	7 46	<1	37 4
Trichlorofluoromethane		µg/L	<1	<1	<1	<1	<1
Vinyl acetate		µg/L	<5	<5	<5	<5	<5
Vinyl chloride		µg/L	<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
MW-213 was Dry
DQE FLAGS
J Estimated based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-2
ANALYTICAL RESULTS , VOCs - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-98	MW-99	MW100B	MW-100B	MW-101B
	Sample ID	MW-98-LA-10	MW-99-LA-10	DUP3	MW-100B-LA-10	MW-101B
	Lab ID	L09100256-02	L09100256-14	L09100256-18	L09100256-15	L09100256-16
	Date	10/7/2009	10/7/2009	10/7/2009	10/7/2009	10/7/2009
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	<0 5	<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	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
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	29 3	28 3	<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	<1	<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	0 238 J	<0 3	<0 3	<0 3
Chloromethane	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	0 304 J	<1	21 7	21 5	2 03
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	122	118	<10
Methyl t-butyl ether (MTBE)	µg/L	<5	<5	47 6	47	1 06 J
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	38 8	<1	<1	<1	96.2
Toluene	µg/L	<1	<1	0.54 J	0.453 J	<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	2 79	<1	<1	<1	0 809 J
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	<1	84 5 J	85 2 J	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
MW-213 was Dry
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-2
ANALYTICAL RESULTS , VOCs - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-101-TOP	MW-102B	MW-103	MW-104	MW-107B
	Sample ID	MW-101-TOP-LA-10	MW-102B-LA-10	MW-103-LA-10	MW-104-LA-10	MW-107B-LA-10
	Lab ID	L09100256-36	L09100256-22	L09100300-21	L09100300-22	L09100256-04
	Date	10/7/2009	10/8/2009	10/11/2009	10/11/2009	10/7/2009
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	<0 5	<0 5	<0 5	<0 5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	2 05	0 974 J	<1
1,1-Dichloroethene	µg/L	<1	<1	1 56	1 54	<1
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	<10	<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	<1	<1	<1	0 773 J
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	<0 3	8 02	8 45	0 238 J
Chloromethane	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	1 85	<1	0 314 J	0 473 J	<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	1 37 J	<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	76 5	<1	<1	<1	3 36
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	0 746 J	<1	5 44	14 1	2 12
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
MW-213 was Dry
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-2
ANALYTICAL RESULTS , VOCs - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-107T	MW-108	MW-113	MW-115	MW-125
	Sample ID	MW-107T-LA-10	MW-108-LA-10	MW-113-LA-10	MW-115-LA-10	MW-125-LA-10
	Lab ID	L09100256-03	L09100165-23	L09100300-02	L09100165-32	L09100165-33
	Date	10/7/2009	10/5/2009	10/10/2009	10/5/2009	10/5/2009
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	<0 5	<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	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
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	11 2	<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	0 146 J	<1	<1
1,2-Dichloroethane	µg/L	<0 5	<0 5	0 383 J	<0.5	0 323 J
1,2-Dichloropropane	µg/L	<1	<1	0 486 J	<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	<10	<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	0 787 J	<1	67 4	<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	0 239 J	9 44	29 5	<0.3	<0 3
Chloromethane	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	0 257 J	0 584 J	49 5	5 74	33 8
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	7 8	26
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	5.05	4 39	200	15.2	4 88
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	2 51	29 1	26 7	4 26	3.33
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	<1	<1	<1	0 265 J

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
MW-213 was Dry
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-2
ANALYTICAL RESULTS , VOCs - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW140	MW-140	MW-141	MW-142	MW-197A
	Sample ID	MW140 -LA-10 DUP4	MW-140-LA-10	MW-141-LA-10	MW-142-LA-10	MW-197A-LA-10
	Lab ID	L09100300-41	L09100300-39	L09100165-24	L09100256-30	L09100165-01
	Date	10/12/2009	10/12/2009	10/5/2009	10/8/2009	10/6/2009
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	<0 5	<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	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
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	<10	<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	0 314 J	0 558 J	<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	0 252 J	0 205 J	1 78	0 128 J	0 187 J
Chloromethane	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	2 57
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	4 47 J	<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	0 736 J	0 806 J	17 1	<1	33 8
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 36	1 25	3 02	2 74	2 04
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
MW-213 was Dry
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-2
ANALYTICAL RESULTS , VOCs - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-197B	MW-198	MW-199A	MW-199B	MW-200
	Sample ID	MW-197B-LA-10	MW-198-LA-10	MW-199A-LA-10	MW-199B-LA-10	MW-200-LA-10
	Lab ID	L09100165-02	L09100300-40	L09100165-25	L09100256-05	L09100300-15
	Date	10/6/2009	10/12/2009	10/5/2009	10/7/2009	10/10/2009
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	<0 5	<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	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
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	<10	<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	<1	<1	0 324 J	<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	<0 3	<0 3	0 158 J	<0 3
Chloromethane	µg/L	<1	<1	<1	0 265 JB	<1
cis-1,2-Dichloroethene	µg/L	25 9	<1	<1	<1	11 6
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	2 79 J	<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	24 1	<1	<1	0 694 J	25 6
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	12 3	8 39	0 419 J	93 2	8 04
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	3 09	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
MW-213 was Dry
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-2
ANALYTICAL RESULTS , VOCs - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID..	MW-200	MW-202A	MW-202B	MW-203A	MW-203B
	Sample ID	MW-200-LA-10 DUP5	MW-202A-LA-10	MW-202B-LA-10	MW-203A-LA-10	MW-203B-LA-10
	Lab ID	L09100300-19	L09100165-03	L09100165-04	L09100165-05	L09100165-06
	Date	10/10/2009	10/6/2009	10/6/2009	10/6/2009	10/6/2009
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	<0 5	<0 5	<0 5	<0 5
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	0 457 J	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
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	<10	<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	0 466 J	0 506 J	<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	<0 3	1 92	0 158 J	<0 3
Chloromethane	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	10 8	<1	<1	3 38	14 4
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	24 5	0 294 J	18 6	149	24 8
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	7 83	1 45	3 79	2 34	9 16
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	<1	<1	<1	5 14

Notes:
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
MW-213 was Dry
DQE FLAGS
J. Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

1017120

TABLE A-2
ANALYTICAL RESULTS , VOCs - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-204A	MW-204B	MW-205A	MW-205B	MW-206A
	Sample ID	MW-204A-LA-10	MW-204B-LA-10	MW-205A-LA-10	MW-205B-LA-10	MW-206A-LA-10
	Lab ID	L09100256-06	L09100165-07	L09100165-26	L09100256-09	L09100256-10
	Date	10/7/2009	10/6/2009	10/5/2009	10/7/2009	10/7/2009
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	0 614	<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	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
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	<10	<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	<1	<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	0 177 J	<0 3	<0 3	<0 3
Chloromethane	µg/L	<1	<1	<1	0 382 JB	<1
cis-1,2-Dichloroethene	µg/L	6 45	6 13	23 5	29 5	18 6
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	39 2 J	14 9	53 1	24 4	25 6
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 21	4 95	7 28	11 8	12 3
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	<1	<1	2 06 J	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
MW-213 was Dry
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-2
ANALYTICAL RESULTS , VOCs - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-206B	MW-207A	MW-207A	MW-207B	MW-208A
	Sample ID	MW-206B-LA-10	MW-207A-LA-10	DUP6	MW-207B-LA-10	MW-208A-LA-10
	Lab ID	L09100256-11	L09100165-27	L09100165-29	L09100165-08	L09100256-31
	Date	10/7/2009	10/5/2009	10/5/2009	10/6/2009	10/8/2009
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	<0 5	<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	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
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	<10	<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	<1	<1	1 23	<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	9 72	9 65	3 64	<0 3
Chloromethane	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	11	0 974 J	0 942 J	0 558 J	23 5
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	0 805 J	0 805 J	0 992 J	<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	17 3	11	10 7	63 1	92 8
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	9 57	52 7	52 7	67 5	10 9
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
MW-213 was Dry
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-2
ANALYTICAL RESULTS , VOCs - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-208B	MW-209A	MW-209B	MW-210A	MW-210B
	Sample ID	MW-208B-LA-10	MW-209A-LA-10	MW-209B-LA-10	MW-210A-LA-10	MW-210B-LA-10
	Lab ID	L09100256-32	L09100165-28	L09100300-16	L09100165-09	L09100165-10
	Date	10/8/2009	10/5/2009	10/10/2009	10/6/2009	10/6/2009
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	0 678	<0 5	<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	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
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	<10	<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	<1	0 725 J	<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	0 136 J	0 132 J	0 194 J	<0 3	<0 3
Chloromethane	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	2 06	<1	<1	1 63	0 995 J
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	2 49 J	<5	0 731 J	<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	5 39	<1	0 278 J	8 48	9 39
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	37 8	0 568 J	30 8	4 92	7 78
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
MW-213 was Dry
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-2
ANALYTICAL RESULTS , VOCs - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-211	MW-212	MW-212	MW-214A	MW-214B
	Sample ID	MW-211-LA-10	MW-212-LA-10	MW-212-LA-10 DUP7	MW-214A-LA-10	MW-214B-LA-10
	Lab ID	L09100256-12	L09100300-17	L09100300-20	L09100300-30	L09100300-31
	Date	10/7/2009	10/10/2009	10/10/2009	10/11/2009	10/11/2009
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	<0 5	<0 5	0 247 J	0 353 J
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	0 263 J	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
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	<10	<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	0 271 J	0 256 J	0 891 J	0 92 J
Chlorobenzene	µg/L	<0 5	<0 5	<0 5	<0 5	<0 5
Chloroethane	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	1 24	<0 3	<0 3	2 21	1 8
Chloromethane	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<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	0 565 J	<5	<5	1 54 J	1 21 J
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	0 811 J	<1	<1	4 64	4 14
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 2	38 4	39 3	2 6	2 25
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	<1
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
MW-213 was Dry
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

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TABLE A-2
ANALYTICAL RESULTS , VOCs - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-215A	MW-215B	MW-216	MW-217	MW-218
	Sample ID	MW-215A-LA-10	MW-215B-LA-10	MW-216-LA-10	MW-217-LA-10	MW-218-LA-10
	Lab ID	L09100300-43	L09100300-46	L09100300-47	L09100256-23	L09100256-24
	Date	10/12/2009	10/12/2009	10/12/2009	10/8/2009	10/8/2009
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	0 305 J	0 199 J	<0 5	0 52	0 987
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
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	0 705 J	<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	0 344 J
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	0 507 J
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	<10	<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	0 579 J	1 17	<1	55 6	10 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	1 43	0 686	<0 3	5 24	2 49
Chloromethane	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	1 8	0 404 J
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	1 52 J	0 578 J	<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	4 91	5 66	<1	29 9	16 3
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	4 88	1 76	<1	32 9	42 5
Trichlorofluoromethane	µg/L	<1	<1	<1	<1	0 598 J
Vinyl acetate	µg/L	<5	<5	<5	<5	<5
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using method 8260B
µg/L micrograms per liter
< Not detected at sample reporting limit
MW-213 was Dry
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

TABLE A-2
ANALYTICAL RESULTS , VOCs - OCTOBER 2009
ANNUAL LONG-TERM MONITORING REPORT – 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Well ID Sample ID Lab ID Date Units	MW-219 MW-219-LA-10 L09100256-25 10/8/2009 µg/L	MW-229 MW-229-LA-10 L09100256-33 10/8/2009 µg/L	MW-229 MW-229-LA-10 DUP8 L09100256-34 10/8/2009 µg/L	PZ-03 PZ-03-LA-10 L09100300-25 10/11/2009 µg/L	PZ-06 PZ-06-LA-10 L09100300-26 10/11/2009 µg/L
1,1,1,2-Tetrachloroethane		<0 5	<0 5	<0 5	<0 5	<0 5
1,1,1-Trichloroethane		<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane		<0 5	<0 5	<0 5	<0 5	<0 5
1,1,2-Trichloroethane		<1	<1	<1	<1	<1
1,1-Dichloroethane		<1	<1	<1	<1	<1
1,1-Dichloroethene		<1	<1	<1	<1	<1
1,1-Dichloropropene		<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene		<1	<1	<1	<1	<1
1,2,3-Trichloropropane		<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene		<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene		<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane		<2	<2	<2	<2	<2
1,2-Dibromoethane		<1	<1	<1	<1	<1
1,2-Dichlorobenzene		<1	<1	<1	<1	<1
1,2-Dichloroethane		0.875	<0 5	<0 5	<0 5	<0 5
1,2-Dichloropropane		<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene		<1	<1	<1	<1	<1
1,3-Dichlorobenzene		<1	<1	<1	<1	<1
1,3-Dichloropropane		<0 4	<0 4	<0 4	<0 4	<0 4
1,4-Dichlorobenzene		<0 5	0 217 J	0 181 J	0 147 J	<0 5
1-Chlorohexane		<1	<1	<1	<1	<1
2,2-Dichloropropane		<1	<1	<1	<1	<1
2-Chlorotoluene		<1	<1	<1	<1	<1
2-Hexanone		<10	<10	<10	<10	<10
4-Chlorotoluene		<1	<1	<1	<1	<1
Acetone		<10	<10	<10	<10	<10
Benzene		<0 4	<0 4	<0 4	<0 4	<0 4
Bromobenzene		<1	<1	<1	<1	<1
Bromochloromethane		<1	<1	<1	<1	<1
Bromodichloromethane		<0 5	<0 5	<0 5	<0 5	<0 5
Bromoform		<1	<1	<1	<1	<1
Bromomethane		<1	<1	<1	<1	<1
Carbon disulfide		<1	<1	<1	<1	<1
Carbon tetrachloride		<1	<1	<1	<1	<1
Chlorobenzene		<0 5	<0 5	<0 5	<0 5	<0 5
Chloroethane		<1	<1	<1	<1	<1
Chloroform		<0 3	<0 3	<0 3	0 192 J	<0 3
Chloromethane		<1	<1	<1	<1	<1
cis-1,2-Dichloroethene		0 935 J	<1	<1	<1	<1
cis-1,3-Dichloropropene		<0 5	<0 5	<0 5	<0 5	<0 5
Dibromochloromethane		<0 5	<0 5	<0 5	<0 5	<0 5
Dibromomethane		<1	<1	<1	<1	<1
Dichlorodifluoromethane		<1	<1	<1	<1	<1
Ethylbenzene		<1	<1	<1	<1	<1
Hexachlorobutadiene		<0 6	<0 6	<0 6	<0 6	<0 6
Isopropylbenzene		<1	<1	<1	<1	<1
m-,p-Xylene		<2	<2	<2	<2	<2
MEK (2-Butanone)		<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)		<5	<5	<5	<5	<5
Methylene chloride		<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)		<10	<10	<10	<10	<10
Naphthalene		<1	<1	<1	<1	<1
n-Butylbenzene		<1	<1	<1	<1	<1
n-Propylbenzene		<1	<1	<1	<1	<1
o-Xylene		<1	<1	<1	<1	<1
p-Isopropyltoluene		<1	<1	<1	<1	<1
sec-Butylbenzene		<1	<1	<1	<1	<1
Styrene		<1	<1	<1	<1	<1
tert-Butylbenzene		<1	<1	<1	<1	<1
Tetrachloroethene		26 9	<1	<1	3 99	<1
Toluene		<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		<1	<1	<1	<1	<1
trans-1,3-Dichloropropene		<1	<1	<1	<1	<1
Trichloroethene		2 09	<1	<1	1 23	<1
Trichlorofluoromethane		<1	<1	<1	<1	<1
Vinyl acetate		<5	<5	<5	<5	<5
Vinyl chloride		<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
µg/L - micrograms per liter
< Not detected at sample reporting limit
MW-213 was Dry
DQE FLAGS
J Estimated, based on QC data or reported below RL
B Estimated, possibly biased high or false positive based on blank data

APPENDIX B

DATA QUALITY EVALUATION

DATA QUALITY EVALUATION

Long-Term Monitoring (LTM) at the Main Installation was conducted by HDR|e²M during two sample events in 2009. Wells were selected for sampling in accordance with the *Long-Term Groundwater Monitoring Plan (LTM Plan)* (CH2M Hill, 2004). Groundwater samples were submitted to Microbac Laboratories in Marietta, Ohio for analysis. The field and laboratory procedures were performed in accordance with the *Remedial Action Sampling and Analysis Plan, Rev. 0* (RA SAP) (MACTEC, 2005).

The data quality evaluation (DQE) process involves assessment of all field and laboratory procedures, including independent data validation completed by Diane Short and Associates, Inc (DSA) in accordance with the RA SAP. The data validation forms 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

The field effort included the collection of groundwater samples from designated wells and piezometers during the semi-annual and annual LTM events in April and October 2009, respectively. The LTM well locations are shown on Figure 2 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. Documentation of the sampling was performed in the field to ensure that the sample collected, labeling, chain-of-custody, and request for analysis were in agreement. 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, and chain-of-custody (COC) records, which were generated electronically using a personal digital assistant (PDA) supplied by the laboratory were consistent. Where necessary, 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. 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 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, Matrix Spike/Matrix Spike Duplicates (MS/MSD), LCS Recoveries)
- Laboratory Performance Criteria (Blanks, Instrument Performance Check)

Field QC parameters were evaluated through field duplicates, field 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 B-1.

The following sections discuss only those deficiencies encountered during the evaluation that resulted in qualified and/or unusable data.

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, field blanks, method blanks, internal standards, surrogate recoveries, matrix spike/matrix spike duplicate (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). 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).

Although there were two elevated LCS recoveries observed in the October event, all associated data and qualified J 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 field blank analysis help in providing this assessment.

Sampling procedures followed the RA SAP 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 LTM events. Past LTM data are comparable to recent events. 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.

Data from the two LTM events in April and October 2009 were greater than 97% 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. The analytical method RLs and MDLs were compared to groundwater protection standards and were determined to meet the overall project objectives.

The following sections discuss only those deficiencies encountered during the evaluation that resulted in qualified and/or unusable data.

Semi-Annual Event – April 2009

A total of 81 groundwater samples including 63 field samples and 18 QA/QC samples (duplicates, MS/MSD, trip blanks, rinsate blanks) were collected from 63 LTM wells in April 2009. Two planned wells were not sampled; MW-213 was dry and MW-104 was inaccessible. Samples were analyzed for TCL VOCs. The data are usable with qualifications as described below:

- PCE was qualified as estimated J in one sample (MW-36-LS-9) based on MS/MSD recovery. The result could be biased low approximately proportional to the recovery.

- 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, the result is qualified as J. Data could be biased high proportional to the LCS %R. All results associated with low recoveries are qualified J. Only three samples had detections above the RL including MW-100B-LS-9, MW-125-LS-9, and MW-208-LS-9. Based on marginal exceedance guidelines, only those analytes falling outside of 60-140 retained the J flag. Only one sample MW-39 had a low LCS for PCE and was qualified J. The other analytes with low LCS recoveries were not contaminants of concern and will not impact the use of the data.

- Contamination was observed in some method blanks. Whenever methylene chloride, acetone, 2-butanone or phthalate esters are detected in associated samples at a level less than 10x the method blank (corrected for dilution), the result is qualified as UB, the corrected method blank level. Such results are usable as non-detects.

- There were detections observed below the reporting limit in the field blanks, including methylene chloride, chloromethane, and acetone. When analytes are present in both the field blank and the associated samples, the results in the samples are qualified in the same manner as for method blanks.

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

Annual Event – October 2009

A total of 122 groundwater samples including 95 field samples and 27 QA/QC samples (duplicates, MS/MSD, trip blanks, rinsate blanks) were collected from 93 LTM wells in October 2009. Samples were collected from two screened intervals in MW101 and MW107. Two planned wells were not sampled; MW-213 was dry and MW-104 was inaccessible. Samples were analyzed for TCL VOCs. The data are usable with qualifications as described below:

- Several COC discrepancies were reviewed and determined not to have impacted data quality.

- PCE was qualified as estimated J in one sample (MW-204A-LS-10) based on MS/MSD recovery. The result could be biased low approximately proportional to the recovery.

- 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, the result is qualified as J. Data could be biased high proportional to the LCS %R. All results associated with low recoveries are qualified.

Vinyl chloride in two samples (MW100B-LS-10 and MW205B-LS-10) and MEK in one sample (MW01-LS-10) were qualified J based on elevated LCS recoveries.

- Contamination was observed in some method and trip blanks and resulted in B qualifications for associated data. Whenever methylene chloride or acetone is detected in associated samples at a level less than 10x the method blank (corrected for dilution), the result is qualified as UB. Such results are usable as nondetects. For other targets, the factor used is 5x.
- Any result reported below the reporting limit (RL) but above the method detection limit (MDL) was flagged "J" and considered an estimated result (unless overridden by other QC flags).

SUMMARY

The sample data from the April and October 2009 LTM events at the Main Installation met the data quality objectives and are of sufficient quality to support the evaluation of remedial actions.

TABLE B-1
SDG SUMMARY TABLE
ANNUAL LONG-TERM MONITORING REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

SDG	Groundwater Samples			Quality Control Samples
Semi-Annual Sampling Event - April 2009				
L09040213	MW-25A-LS-9	MW-200-LS-9	MW-208A-LS-9	DUP4-LS-9
	MW-26-LS-9	MW-202A-LS-9	MW-208B-LS-9	MW-108-LS-9-MS
	MW-52-LS-9	MW-202B-LS-9	MW-210A-LS-9	MW-108-LS-9-MSD
	MW-90-LS-9	MW-204A-LS-9	MW-210B-LS-9	TB-040609-LS-9
	MW-96-LS-9	MW-205B-LS-9	MW-216-LS-9	TB-040709-LS-9
	MW-108-LS-9	MW-206A-LS-9	MW-219-LS-9	
	MW-197A-LS-9	MW-206B-LS-9	DR2-6-LS-9	
	MW-197B-LS-9			
L09040270	MW-39-LS-9	MW-198-LS-9	MW-218-LS-9	DUP1-LS-9
	MW-39A-LS-9	MW-199B-LS-9	MW229-LS-9	DUP2-LS-9
	MW-64-LS-9	MW-203A-LS-9	DR1-1A-LS-9	DUP3-LS-9
	MW-86-LS-9	MW-203B-LS-9	DR1-4-LS-9	DUP6-LS-9
	MW-88-LS-9	MW-204B-LS-9	DR1-5-LS-9	DUP7-LS-9
	MW-94A-LS-9	MW-209A-LS-9	DR1-5A-LS-9	MW-39-LS-9-MS
	MW-100B-LS-9	MW-209B-LS-9	DR1-6-LS-9	MW-39-LS-9-MSD
	MW-113-LS-9	MW-215B-LS-9	DR1-6A-LS-9	MW-209A-LS-9-MS
	MW-125-LS-9	MW-217-LS-9	DR2-3-LS-9	MW-209A-LS-9-MSD
	MW-141-LS-9			TB-040809-LS-9
				TB-040909-LS-9
L09040275	MW-62-LS-9	MW-207B-LS-9	MW-214A-LS-9	DUP5-LS-9
	MW-92-LS-9	MW-207A-LS-9	MW-214B-LS-9	TB-041009-LS-9
	MW-97-LS-9	MW-211-LS-9	MW-215A-LS-9	
	MW-98-LS-9	MW-212-LS-9	DR2-2-LS-9	
	MW-205A-LS-9			

TABLE B-1
SDG SUMMARY TABLE
ANNUAL LONG-TERM MONITORING REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

SDG	Groundwater Samples			Quality Control Samples
Annual Sampling Event - October 2009				
L09100165	MW21-LA-10	MW-202B-LA-10	DR1-1-LA-10	DUP-1-LA-10
	MW38-LA-10	MW-203A-LA-10	DR1-1A-LA-10	DUP-6-LA-10
	MW39A-LA-10	MW-203B-LA-10	DR1-2-LA-10	TB-100609-LA-10
	MW89-LA-10	MW-204B-LA-10	DR1-3-LA-10	TB-100509-LA-10
	MW108-LA-10	MW205A-LA-10	DR1-4-LA-10	
	MW115-LA-10	MW207A-LA-10	DR1-5-LA-10	
	MW125-LA-10	MW-207B-LA-10	DR1-5A-LA-10	
	MW141-LA-10	MW209A-LA-10	DR1-6-LA-10	
	MW-197A-LA-10	MW-210A-LA-10	DR1-6A-LA-10	
	MW-197B-LA-10	MW-210B-LA-10	DR1-7-LA-10	
	MW199A-LA-10	IW-06-LA-10	DR1-8-LA-10	
	MW-202A-LA-10			
L09100256	MW25-LA-10	MW-101-TOP-LA-10	MW206B-LA-10	DUP-3-LA-10
	MW26-LA-10	MW102B-LA-10	MW208A-LA-10	DUP-8-LA-10
	MW34-LA-10	MW107T-LA-10	MW208B-LA-10	LTM-RB1-LA-10
	MW64-LA-10	MW107B-LA-10	MW211-LA-10	LTM-RB2-LA-10
	MW96-LA-10	MW142-LA-10	MW217-LA-10	MW204A-LA-10-MS
	MW97-LA-10	MW199B-LA-10	MW218-LA-10	MW204A-LA-10-MSD
	MW98-LA-10	MW204A-LA-10	MW219-LA-10	TB-100709-LA-10
	MW99-LA-10	MW205B-LA-10	MW229-LA-10	TB-100809-LA-10
	MW100B-LA-10	MW206A-LA-10	DR2-6-LA-10	
	MW101-LA-10			
L09100300	MW39-LA-10	MW94A-LA-10	MW-214A-LA-10	DUP-2-LA-10
	MW52-LA-10	MW103-LA-10	MW-214B-LA-10	DUP-4-LA-10
	MW62-LA-10	MW104-LA-10	MW-216-LA-10	DUP-5-LA-10
	MW63A-LA-10	MW113-LA-10	IW-01-LA-10	DUP-7-LA-10
	MW63B-LA-10	MW140-LA-10	DR2-1-LA-10	DUP-9-LA-10
	MW85-LA-10	MW-200-LA-10	DR2-2-LA-10	DUP-10-LA-10
	MW86-LA-10	MW-198-LA-10	DR2-3-LA-10	MW52-LA-10-MS
	MW88-LA-10	MW-209B-LA-10	DR2-4-LA-10	MW52-LA-10-MSD
	MW93-LA-10	MW-212-LA-10	DR2-5-LA-10	MW104-LA-10-MS
	MW90-LA-10	MW-215A-LA-10	PZ-03-LA-10	MW104-LA-10-MSD
	MW92-LA-10	MW-215B-LA-10	PZ-06-LA-10	MW-215A-LA-10-MS
				MW-215A-LA-10-MSD
				TB-100909-LA-10
				TB-101209-LA-10
				TB-101609-LA-10

ORGANIC DATA QUALITY REVIEW REPORT
VOLATILE ORGANICS SW-846 METHOD 8260B

SDG: L09040213, L09040270, L09040275

PROJECT: Memphis Defense Depot, LS-9 for e2m, Texas

LABORATORY: Microbac Laboratories, Inc., Marietta, OH

SAMPLE MATRIX: Water

SAMPLING DATE (Month/Year): April 2009

NO. OF SAMPLES: 8260B: 81 aqueous samples; including 5 trip blanks

ANALYSES REQUESTED: SW-846 8260B

SAMPLE NO.: See attached result forms and associated EDD

DATA REVIEWER: Richard Kulp

QA REVIEWER: Diane Short and Associates Inc. INITIALS/DATE: _____

Telephone Logs included Yes____ No _X__

Contractual Violations Yes____ No _X___

The project QAPP (11/05), 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: Holding times and sample integrity (chains of custody, sample log in), Calibrations, Summary QC.

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 receipt conditions are fully compliant with applicable regulations.
8260B samples cannot be checked for pH on receipt. pH is checked for 8260B samples at run time.

As has been noted in previous samplings from this site, a number of the 8260B samples were not at pH < 2, due to the buffering capacity of the water. No qualifiers are added. Most samples were analyzed within 7 days. Thus the practical implications of pH outliers are minimal.

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).
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 >0.01 for volatiles and 0.05 for semi-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". Acetone, 2-butanone, and 4-methyl-2-pentanone are the compounds for which any calibration response factors below 0.05 have been observed. 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 these data sets. The laboratory has been tasked with providing to the client verification that the 0.01 RF is valid. Given the spectral verification is available, the data are not qualified for response >0.01 < 0.05. 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.
Yes _X_ No_____ NA____

B. Continuing Calibrations
1. The midpoint standard was analyzed for each analysis at the required frequency and the QC criteria of > 0.05 (.01 for CLP 2001 VOA) were 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 (pr). For other compounds the QAPP notes rejection of detected compounds with %D > 40%.
Yes _____ No _X_ NA___
See the tables below. When there are no detections, unless the %D is biased low and so large as to indicate a significant probability of false negatives, no qualifiers are added for %D outliers when targets are not detected or for a high recovery for undetected compounds. Data are qualified JC#, where # is the %D. There could be variability to the data as there is variability to the response.

The QAPP indicates that compounds in a run should be rejected if the %D is > 40%. We interpret this to mean that non-detects should be rejected and that detected targets should be J-qualified, which is the normal validation process for rejection. Note that in the cases below where %Ds are above 40%, the bias of the CCV is high. Professional judgment is that high bias CCVs with a %D above 40% should not be rejected for non-detects.

Method 8260 Outliers: The table below shows the outliers observed in CCVs for this method. This compound is also low in most of the LCS's and data have been qualified for those low recoveries.

SDG	BATCH	Analysis Date	Analyte	Bias	%D	Qualifier
L09040270	WG299719	04/14/2009 08:41	Vinyl Acetate	low	47.4	None, ND
L09040270	WG299729	04/14/2009 12:19	Vinyl Acetate	high	81.4	None, ND
L09040275	WG299729	04/14/2009 12:19	Vinyl Acetate	high	81.4	None, ND

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____

The Case Narrative for SDG L09030265 lists internal standards out for two samples, but the samples listed are not part of this set.

VI. SURROGATE

Surrogate spikes were analyzed with every sample.
Yes _X_ No ____

And met the recovery limits defined in the QAPP of 70 – 130% for VOA and 45-135% for SVOA base/neutral fraction or 35-140% for the acid fraction. For SVOA, one surrogate per fraction is allowed to be at 15 – 150%.
Yes _X_ No ____

VII. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A. Matrix spike (MS) and matrix spike duplicates (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 3 MS/MSDs.

Method	SDG	Client Sample ID	Lab Sample ID
8260B\5030B	L09040213	MW-108-LS-9	L09040213-02
8260B\5030B	L09040270	MW-209A-LS-9	L09040270-08
8260B\5030B	L09040270	MW-39-LS-9	L09040270-14

B. The MS and MSD percent recoveries were within the limits defined in the QAPP of VOA at 70 – 130% with 5 compounds allowed to be within 60 – 140%;
Yes _____ No _X_ NA___
The full target list has been spiked. All data having recovery outliers out of QAPP limits have been qualified and the project manager will make the decision regarding which qualifiers can be removed per the 5 compound allowances.

Method 8260 MS/MSD Outliers: Outliers observed per the QAPP limits for Method 8260 MS/MSD runs are shown in the table below. Only the parent sample is qualified.

SDG	Parent	Analyte	%Rec	MSD Rec	%RPD	Vflag	Vdflag	Qualifiers
L09040213	L09040213-02	Dichlorodifluoromethane	69.6	69.3	0.382	low	low	JMS69
L09040270	L09040270-14	Tetrachloroethene	36	49.7	3.8	low	low	JMS36
L09040270	L09040270-14	Vinyl acetate	48.5	54.8	12.2	low	low	JMS49

C. The MSD relative percent differences (RPD) were within the defined contract limits for VOA of 30% water, 40 soil, with 5 compounds allowed to be < 40%.RPD.
Yes _X_ No ___NA____
Qualifiers are added only when the MS or MSD recovery is also out of limits. Data are qualified JD#, where # is the RPD. As the RPD increases, the matrix precision decreases. No precision outliers were reported.

D. The MS/MSD were client samples.
Yes _X_ No ___NA____

VIII. LABORATORY CONTROL SAMPLE

A. Laboratory Control Samples (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 QAPP for VOA of 80-120% for water and 75 – 125% for soil. Five marginal exceedance compounds are allowed to be 60 – 140%. 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, the result is qualified as JL#, where # is the elevated recovery. Data could be biased high proportional to the LCS %R. All results associated with low recoveries are qualified.

8260B: The table below shows the outliers and the limits applied per the QAPP. The limits are specified per matrix. Outliers associated with the marginal exceedance indicated (60-140) are also shown. Qualifiers are added for all outliers as described here but the project manager may consider reversing some of these when the limits fall within the marginal exceedance limits. Please see table at the end of the report for a detailed list of qualifiers added.

8260B LCS Outliers:

SDG	BATCH	Analyte	Recovery	Bias	Qualifiers Required
L09040213	WG299393	Dichlorodifluoromethane	72.9	low	JL73
L09040270	WG299729	2,2-Dichloropropane	124	high	OK
	WG299716	n-Butyl benzene	122	high	OK
	WG299716	Vinyl acetate	66.1	low	JL66
	WG299719	1,2,3-Trichlorobenzene	78.6	low	JL79
	WG299719	Acetone	78.9	low	JL79
	WG299719	Hexachlorobutadiene	78.8	low	JL79

8260 LCS/LCSD Recoveries: In some cases, the laboratory analyzed both an LCS and an LCSD. In such cases, per the QAPP only results in which both recoveries are out of limits are qualified. Outliers are shown in the table below for LCS/LCSDs. Please see table at the end of the report for a detailed list of qualifiers added.

8260B LCS/LCSD Outliers:

SDG	BATCH	Analytes	LCS Recov	LCSD Recov	Qualifiers Required
L09040213	WG299545	Chloromethane	77.8	75.2	JL75
	WG299545	Dichlorodifluoromethane	52.1	49.2	JL49
	WG299395	2-Hexanone	77.7	82.8	OK
	WG299395	Dichlorodifluoromethane	63.2	60.9	JL61
	WG299498	Chloromethane	76.6	71.9	JL72
	WG299498	Dichlorodifluoromethane	49	44.4	JL44
L09040270	WG299852	Vinyl acetate	66.1	64.7	JL65
	WG299729	2,2-Dichloropropane	124	118	OK
L09040275	WG299852	Vinyl acetate	66.1	64.7	JL65
	WG299729	2,2-Dichloropropane	124	118	OK

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___
Contamination was observed in some method blanks. Whenever methylene chloride, acetone, 2-butanone or phthalate esters are detected in associated samples at a level less than 10x the method blank (corrected for dilution), the result is qualified as UMB#, where # is the corrected method blank level. Such results are usable as nondetects. For other targets, the factor used is 5x.

Method 8260: Please see table at the end of the report for a detailed list of qualifiers added.

SDG	Batch	Analytes	MB Level	DVAL
L09040213	WG299393	Methylene chloride	0.275F	OK, All non-detect
	WG299545	Methylene chloride	0.286F	OK, All non-detect
	WG299395	1,2,3-Trichlorobenzene	0.192F	OK, All non-detect
	WG299395	Hexachlorobutadiene	0.403	OK, All non-detect
	WG299395	Naphthalene	0.251F	OK, All non-detect
L09040270	WG299729	Methylene chloride	0.302F	UMB0.302 detects < 10x
L09040275	WG299729	Methylene chloride	0.302F	UMB0.302 detects < 10x

C. If Field Blanks were identified, no blank contamination was found.
Yes____ No __X__
There are 5 trip blanks for 8260. There are detections observed below the reporting limit in the field blanks. When analytes are present in both the field blank and the associated samples, the results in the samples are qualified in the same manner as for method blanks. For clarity, the qualifiers used in this case are UTB# for trip blanks, where # is the associated blank value. Qualifiers added are shown in the table below. Results so qualified are usable as non-detects.

SDG	Sample ID	Sample Date	Analyte	Result	Qualifier
L09040213-13	TB-040709-LS-9	4/7/2009 12:01 AM	Chloromethane	0.395F	UTB0.395 detects <5x
		4/7/2009 12:01 AM	Methylene chloride	0.682F	None, All non-detects
L09040213-27	TB-040609-LS-9	4/6/2009 12:01 AM		All OK	OK
L09040270-22	TB-040909-LS-9	4/9/2009 12:01 AM	Acetone	3.23F	UTB3.23 detects <10x
		4/9/2009 12:01 AM	Chloromethane	0.696F	UTB0.696 detects < 5x
		4/9/2009 12:01 AM	Methylene chloride	0.324F	None, became ND from method blank
L09040270-38	TB-040809-LS-9	4/8/2009 12:01 AM	Acetone	6.13F	UTB6.1 detects < 10x
		4/8/2009 12:01 AM	Methylene chloride	1.22	None, became ND from method blank
L09040275-06	TB-041009-LS-9	4/10/2009 12:01 AM	Acetone	3.52	UTB3.5 detects < 10x
		4/10/2009 12:01 AM	Chloromethane	0.402	UTB0.02 detects < 5x
		4/10/2009 12:01 AM	Methylene chloride	0.752	None , became ND from method blank

X. FIELD QC

If Field duplicates were identified, they met guidance for VOA of RPD of < 35% for water or < 50% for soils. For values reported at < 5 x the reporting limit (RL), a difference of 2 x RL is used as guidance (4 x RL for soils). Data are not qualified for field duplicates as these are evaluated for the total project by the client.
Yes _X__ No ___ NA____
There are 9 identified field duplicates, all in control.

SDG	Matrix	Field Dup	Parent Sample	Observations
L09040213	Water	DUP-4	MW-208A-LS-9	OK
L09040270	Water	DUP-1	MW-86-LS-9	OK

L09040270	Water	DUP-2	MW-125-LS-9	OK
L09040270	Water	DUP-3	MW-203A-LS-9	OK
L09040270	Water	DUP-6	MW-218-LS-9	OK
L09040270	Water	DUP-7	DR1-5A-LS-9	OK
L09040275	Water	DUP-5	MW-212-LS-9	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. 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:

Sample Condition:

As has been noted in previous samplings from this site, a number of the 8260B samples were not at pH < 2, due to the buffering capacity of the water. No qualifiers are added. Most samples were analyzed within 7 days, with 13 samples being analyzed between 8-10 days of sampling. Thus the practical implications of pH outliers are minimal.

Matrix Spikes:

There are 3 MS/MSDs.

The full target list has been spiked.

All data having recovery outliers out of QAPP limits have been qualified and the project manager will make the decision regarding which qualifiers can be removed per the 5 compound allowances.

Method 8260 MS/MSD Outliers: Outliers observed per the QAPP limits for Method 8260 MS/MSD runs are shown in the table within the body of this report.

Method Blanks:

Contamination was observed in some method blanks. Whenever methylene chloride, acetone, 2-butanone or phthalate esters are detected in associated samples at a level less than 10x the method blank (corrected for dilution), the result is qualified as UMB#, where # is the corrected method blank level. Such results are usable as nondetects. For other targets, the factor used is 5x.
Please see table at the end of the report for a detailed list of qualifiers added.

Field Blanks:
There are 5 trip blanks for 8260. There are detections observed below the reporting limit in the field blanks. When analytes are present in both the field blank and the associated samples, the results in the samples are qualified in the same manner as for method blanks. For clarity, the qualifiers used in this case are UTB# for trip blanks, where # is the associated blank value. Results so qualified are usable as non-detects.

LCS Recoveries:
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, the result is qualified as JL#, where # is the elevated recovery. Data could be biased high proportional to the LCS %R. All results associated with low recoveries are qualified.

8260B: The table within the body of this report shows the outliers and the limits applied per the QAPP. The limits are specified per matrix. Outliers associated with the contingency limits indicated (60-140) are also shown. Qualifiers are added for all outliers as described here but the project manager may consider reversing some of these when the limits fall within the contingency limits. Please see table at the end of the report for a detailed list of qualifiers added.

Field QC:
There are 7 identified field duplicates, all in control.

Qualified Data

			ug/l						
Lab ID	Client ID	Compound	result	flag	RL	Dil'n	worknum	MDL	Qualifier
L09040270-01	MW-39A-LS-9	Vinyl acetate		Q	5	1	WG299716	2.5	JL66
L09040270-02	MW-86-LS-9	Vinyl acetate		Q	5	1	WG299716	2.5	JL66
L09040270-03	MW-88-LS-9	Acetone	2.67	F	10	1	WG299716	2.5	UTB6.13
L09040270-03	MW-88-LS-9	Vinyl acetate		Q	5	1	WG299716	2.5	JL66
L09040270-04	MW-113-LS-9	Vinyl acetate		Q	5	1	WG299716	2.5	JL66
L09040270-05	MW-141-LS-9	Vinyl acetate		Q	5	1	WG299716	2.5	JL66
L09040270-06	MW-203A-LS-9	Vinyl acetate		Q	5	1	WG299716	2.5	JL66
L09040270-07	MW-203B-LS-9	Acetone	6.97	F	10	1	WG299716	2.5	UTB6.13
L09040270-07	MW-203B-LS-9	Vinyl acetate		Q	5	1	WG299716	2.5	JL66
L09040270-08	MW-209A-LS-9	1,2,3-Trichlorobenzene		U	1	1	WG299719	0.15	JL79
L09040270-08	MW-209A-LS-9	Acetone		U	10	1	WG299719	2.5	JL79
L09040270-08	MW-209A-LS-9	Hexachlorobutadiene		U	0.6	1	WG299719	0.25	JL79
L09040270-11	MW-209B-LS-9	Vinyl acetate		Q	5	1	WG299852	2.5	JL65
L09040270-12	DUP1-LS-9	Acetone	3.4	F	10	1	WG299729	2.5	UTB3.23
L09040270-12	DUP1-LS-9	Chloromethane	0.665	F	1	1	WG299729	0 25	UTB0.696

L09040270-13	DUP3-LS-9	Acetone	3.08	F	10	1	WG299729	2.5	UTB3.23
L09040270-14	MW-39-LS-9	Vinyl acetate		Q	5	1	WG299716	2.5	JL66MS49
L09040270-14	MW-39-LS-9	Tetrachloroethene	69.2		1	1	WG299716	0.25	JMS36
L09040270-17	MW-64-LS-9	Acetone	4.54	F	10	1	WG299729	2.5	UTB3.23
L09040270-18	MW-94A-LS-9	Chloromethane	0.454	F	1	1	WG299729	0.25	UTB0.696
L09040270-19	MW-198-LS-9	Acetone	3 19	F	10	1	WG299729	2.5	UTB3.23
L09040270-20	MW-199B-LS-9	Acetone	4.24	F	10	1	WG299729	2.5	UTB3.23
L09040270-21	MW-215B-LS-9	Acetone	2.83	F	10	1	WG299729	2.5	UTB3.23
L09040270-22	TB-040909-LS-9	Methylene chloride	0.324	F	1	1	WG299729	0.25	UMB0.302
L09040270-23	MW-100B-LS-9	1,2,3-Trichlorobenzene		U	1	1	WG299719	0.15	JL79
L09040270-23	MW-100B-LS-9	Acetone	35.1		10	1	WG299719	2.5	JL79
L09040270-23	MW-100B-LS-9	Hexachlorobutadiene		U	0.6	1	WG299719	0.25	JL79.
L09040270-24	MW-125-LS-9	1,2,3-Trichlorobenzene		U	1	1	WG299719	0.15	JL79
L09040270-24	MW-125-LS-9	Acetone	9.32	F	10	1	WG299719	2.5	JL79
L09040270-24	MW-125-LS-9	Hexachlorobutadiene		U	0.6	1	WG299719	0.25	JL79
L09040270-25	DR1-1A-LS-9	1,2,3-Trichlorobenzene		U	1	1	WG299719	0.15	JL79
L09040270-25	DR1-1A-LS-9	Acetone		U	10	1	WG299719	2.5	JL79
L09040270-25	DR1-1A-LS-9	Hexachlorobutadiene		U	0.6	1	WG299719	0.25	JL79
L09040270-26	DR1-4-LS-9	Acetone	4.07	F	10	1	WG299716	2.5	UTB6.13
L09040270-26	DR1-4-LS-9	Vinyl acetate		Q	5	1	WG299716	2.5	JL66
L09040270-27	DR1-5-LS-9	1,2,3-Trichlorobenzene		U	1	1	WG299719	0.15	JL79
L09040270-27	DR1-5-LS-9	Acetone		U	10	1	WG299719	2.5	JL79
L09040270-27	DR1-5-LS-9	Hexachlorobutadiene		U	0.6	1	WG299719	0.25	JL79
L09040270-28	DR1-5A-LS-9	1,2,3-Trichlorobenzene		U	1	1	WG299719	0 15	JL79
L09040270-28	DR1-5A-LS-9	Acetone		U	10	1	WG299719	2.5	JL79
L09040270-28	DR1-5A-LS-9	Hexachlorobutadiene		U	0.6	1	WG299719	0.25	JL79
L09040270-29	DR1-6-LS-9	1,2,3-Trichlorobenzene		U	1	1	WG299719	0.15	JL79
L09040270-29	DR1-6-LS-9	Acetone		U	10	1	WG299719	2.5	JL79
L09040270-29	DR1-6-LS-9	Hexachlorobutadiene		U	0.6	1	WG299719	0.25	JL79
L09040270-30	DR1-6A-LS-9	1,2,3-Trichlorobenzene		U	1	1	WG299719	0.15	JL79
L09040270-30	DR1-6A-LS-9	Acetone		U	10	1	WG299719	2.5	JL79
L09040270-30	DR1-6A-LS-9	Hexachlorobutadiene		U	0.6	1	WG299719	0.25	JL79
L09040270-31	DUP2-LS-9	1,2,3-Trichlorobenzene		U	1	1	WG299719	0.15	JL79
L09040270-31	DUP2-LS-9	Acetone	7.91	F	10	1	WG299719	2.5	JL79
L09040270-31	DUP2-LS-9	Hexachlorobutadiene		U	0.6	1	WG299719	0.25	JL79
L09040270-32	DUP7-LS-9	1,2,3-Trichlorobenzene		U	1	1	WG299719	0.15	JL79
L09040270-32	DUP7-LS-9	Acetone		U	10	1	WG299719	2.5	JL79
L09040270-32	DUP7-LS-9	Hexachlorobutadiene		U	0.6	1	WG299719	0.25	JL79
L09040270-33	MW-204B-LS-9	1,2,3-Trichlorobenzene		U	1	1	WG299719	0.15	JL79
L09040270-33	MW-204B-LS-9	Acetone		U	10	1	WG299719	2.5	JL79
L09040270-33	MW-204B-LS-9	Hexachlorobutadiene		U	0.6	1	WG299719	0.25	JL79
L09040270-34	MW-217-LS-9	1,2,3-Trichlorobenzene		U	1	1	WG299719	0.15	JL79

L09040270-34	MW-217-LS-9	Acetone		U	10	1	WG299719	2.5	JL79
L09040270-34	MW-217-LS-9	Hexachlorobutadiene		U	0.6	1	WG299719	0.25	JL79
L09040270-35	MW-218-LS-9	Acetone	4.53	F	10	1	WG299729	2.5	UTB3.23
L09040270-36	DR2-3-LS-9	1,2,3-Trichlorobenzene		U	1	1	WG299719	0.15	JL79
L09040270-36	DR2-3-LS-9	Acetone		U	10	1	WG299719	2.5	JL79
L09040270-36	DR2-3-LS-9	Hexachlorobutadiene		U	0.6	1	WG299719	0.25	JL79
L09040270-37	DUP6-LS-9	Vinyl acetate		Q	5	1	WG299716	2.5	JL66
L09040270-38	TB-040809-LS-9	Vinyl acetate		Q	5	1	WG299716	2.5	JL66
L09040270-39	MW229-LS-9	Vinyl acetate		Q	5	1	WG299716	2.5	JL66
L09040275-01	MW-92-LS-9	Acetone	31.7		10	1	WG299852	2.5	UTB3.5
L09040275-01	MW-92-LS-9	Vinyl acetate		Q	5	1	WG299852	2.5	JL65
L09040275-03	MW-98-LS-9	Acetone	4.94	F	10	1	WG299852	2.5	UTB3.5
L09040275-03	MW-98-LS-9	Vinyl acetate		Q	5	1	WG299852	2.5	JL65
L09040275-04	MW-207B-LS-9	Acetone	4.38	F	10	1	WG299852	2.5	UTB3.5
L09040275-04	MW-207B-LS-9	Vinyl acetate		Q	5	1	WG299852	2.5	JL65
L09040275-05	DR2-2-LS-9	Vinyl acetate		Q	5	1	WG299852	2.5	JL65
L09040275-06	TB-041009-LS-9	Methylene chloride	0.752	F	1	1	WG299729	0.25	UMB0.302
L09040275-08	MW-205A-LS-9	Acetone	4.52	F	10	1	WG299852	2.5	UTB3.5
L09040275-08	MW-205A-LS-9	Vinyl acetate		Q	5	1	WG299852	2.5	JL65
L09040275-09	MW-207A-LS-9	Acetone	4.92	F	10	1	WG299852	2.5	UTB3.5
L09040275-09	MW-207A-LS-9	Vinyl acetate		Q	5	1	WG299852	2.5	JL65
L09040275-10	MW-211-LS-9	Vinyl acetate		Q	5	1	WG299852	2.5	JL65
L09040275-12	MW-214A-LS-9	Vinyl acetate		Q	5	1	WG299852	2.5	JL65
L09040275-13	MW-214B-LS-9	Vinyl acetate		Q	5	1	WG299852	2.5	JL65
L09040275-14	MW-215A-LS-9	Chloromethane	0.357	F	1	1	WG299852	0.25	UTB0.402
L09040275-14	MW-215A-LS-9	Vinyl acetate		Q	5	1	WG299852	2.5	JL65
L09040213-01	MW-90-LS-9	Dichlorodifluoromethane		U	1	1	WG299393	0.25	JL73
L09040213-02	MW-108-LS-9	Dichlorodifluoromethane		U	1	1	WG299393	0.25	JL73MS69
L09040213-05	MW-200-LS-9	Dichlorodifluoromethane		U	1	1	WG299393	0.25	JL73
L09040213-06	MW-202A-LS-9	Dichlorodifluoromethane		U	1	1	WG299393	0.25	JL73
L09040213-07	MW-204A-LS-9	Chloromethane		U	1	1	WG299498	0.25	JL72
L09040213-07	MW-204A-LS-9	Dichlorodifluoromethane		U	1	1	WG299498	0.25	JL44
L09040213-08	MW-206A-LS-9	Chloromethane		U	1	1	WG299498	0.25	JL72
L09040213-08	MW-206A-LS-9	Dichlorodifluoromethane		U	1	1	WG299498	0.25	JL44
L09040213-09	MW-206B-LS-9	Chloromethane		U	1	1	WG299498	0.25	JL72
L09040213-09	MW-206B-LS-9	Dichlorodifluoromethane		U	1	1	WG299498	0.25	JL44
L09040213-10	MW-208A-LS-9	Chloromethane		U	1	1	WG299545	0.25	JL75
L09040213-10	MW-208A-LS-9	Dichlorodifluoromethane		U	1	1	WG299545	0.25	JL49
L09040213-11	MW-208B-LS-9	Chloromethane	0.612	F	1	1	WG299545	0.25	JL75
L09040213-11	MW-208B-LS-9	Dichlorodifluoromethane		U	1	1	WG299545	0.25	JL49

L09040213-12	DUP4-LS-9	Chloromethane	0.379	F	1	1	WG299545	0.25	JL75
L09040213-12	DUP4-LS-9	Dichlorodifluoromethane		U	1	1	WG299545	0.25	JL49
L09040213-13	TB-040709-LS-9	Chloromethane	0.395	F	1	1	WG299498	0.25	JL72
L09040213-13	TB-040709-LS-9	Dichlorodifluoromethane		U	1	1	WG299498	0.25	JL44
L09040213-14	MW-26-LS-9	Chloromethane		U	1	1	WG299545	0.25	JL75
L09040213-14	MW-26-LS-9	Dichlorodifluoromethane		U	1	1	WG299545	0.25	JL49
L09040213-15	MW-202B-LS-9	Chloromethane		U	1	1	WG299545	0.25	JL75
L09040213-15	MW-202B-LS-9	Dichlorodifluoromethane		U	1	1	WG299545	0.25	JL49
L09040213-16	MW-205B-LS-9	Chloromethane		U	1	1	WG299545	0.25	JL75
L09040213-16	MW-205B-LS-9	Dichlorodifluoromethane		U	1	1	WG299545	0.25	JL49
L09040213-17	DR2-6-LS-9	Chloromethane		U	1	1	WG299545	0.25	JL75
L09040213-17	DR2-6-LS-9	Dichlorodifluoromethane		U	1	1	WG299545	0.25	JL49
L09040213-18	MW-25A-LS-9	Dichlorodifluoromethane		U	1	1	WG299395	0.25	JL61
L09040213-19	MW-52-LS-9	Dichlorodifluoromethane		U	1	1	WG299395	0.25	JL61
L09040213-20	MW-96-LS-9	Dichlorodifluoromethane		U	1	1	WG299395	0.25	JL61
L09040213-21	MW-197A-LS-9	Dichlorodifluoromethane		U	1	1	WG299395	0.25	JL61
L09040213-22	MW-197B-LS-9	Dichlorodifluoromethane		U	1	1	WG299395	0.25	JL61
L09040213-23	MW-210A-LS-9	Dichlorodifluoromethane		U	1	1	WG299395	0.25	JL61
L09040213-24	MW-210B-LS-9	Dichlorodifluoromethane		U	1	1	WG299395	0.25	JL61
L09040213-25	MW-216-LS-9	Chloromethane		U	1	1	WG299498	0.25	JL72
L09040213-25	MW-216-LS-9	Dichlorodifluoromethane		U	1	1	WG299498	0.25	JL44
L09040213-26	MW-219-LS-9	Chloromethane	0.336	F	1	1	WG299498	0.25	UTB0.395JL72
L09040213-26	MW-219-LS-9	Dichlorodifluoromethane		U	1	1	WG299498	0.25	JL44
L09040213-27	TB-040609-LS-9	Dichlorodifluoromethane		U	1	1	WG299395	0.25	JL61

ORGANIC DATA QUALITY REVIEW REPORT
VOLATILE ORGANICS SW-846 METHOD 8260B
8260B/5030B

SDG: L09100165, L09100256, L09100300

PROJECT: Memphis Defense Depot, LA-10 for e2m, Texas

LABORATORY: Microbac Laboratories, Inc., Marietta, OH

SAMPLE MATRIX: Water

SAMPLING DATE (Month/Year): October, 2009

NO. OF SAMPLES: 8260B: 114 aqueous samples; including 7 trip blanks

ANALYSES REQUESTED: SW-846 8260B

SAMPLE NO.: See attached result forms and associated EDD

DATA REVIEWER: Sammy Huntington and John Huntington

QA REVIEWER: Diane Short and Associates Inc. INITIALS/DATE: _____

Telephone Logs included Yes____ No _X__

Contractual Violations Yes____ No _X___

The project QAPP (11/05), the EPA Contract Laboratory Program National Functional Guidelines for Organic Review, 1999 and 2001, and the SW-846 Method 8260B and 8270C 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: Holding times and sample integrity (chains of custody, sample log in), Calibrations, Summary QC.

B. Chain of Custody Documentation was complete and accurate.
Yes _____ No _X_
No qualifiers have been added for chain of custody issues and the project manager will update chains per the following notes to complete the project record.

L09100165: Documents were properly executed and signed in this SDG.
L09100256: Most chain of custody documents were not signed by the laboratory in this SDG. There is a confirmation of sample receipt by the laboratory present in the data package, but the chain of custody documents themselves should be signed and dated by the laboratory as well as the sampler.
L09100300: Only one of the chain of custody documents was signed in this SDG. There is a confirmation of sample receipt by the laboratory present in the data package, but the chain of custody documents themselves should be signed and dated by the laboratory as well as the sampler.

These are electronically-generated chain of custody documents, so there may be an electronic signature chain that can be demonstrated. There is not sufficient information available to evaluate that possibility.

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 receipt conditions are fully compliant with applicable regulations.

As has been noted in previous samplings from this site, several of the 8260B samples were not at pH < 2, due to the buffering capacity of the water. No qualifiers are added. Most samples were analyzed within 7 days, the remaining samples analyzed on the 8th day of hold. Thus the practical implications of pH outliers are minimal.

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 extraction and from extraction to 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 >0.01 for volatiles and 0.05 for semi-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". Acetone, 2-butanone, and 4-methyl-2-pentanone are the compounds for which any calibration response factors below 0.05 have been observed. 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 these data sets. The laboratory has been tasked with providing to the client verification that the 0.01 RF is valid. Given the spectral verification is available, the data are not qualified for response >0.01 < 0.05. 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.
Yes __X__ No_____ NA____

B. Continuing Calibrations
1. The midpoint standard was analyzed for each analysis at the required frequency and the QC criteria of > 0.05 (.01 for CLP 2001 VOA) were 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 (pr). For other compounds the QAPP notes rejection of detected compounds with %D > 40%.
Yes _____ No __X__ NA___
See the tables below. When there are no detections, unless the %D is biased low and so large as to indicate a significant probability of false negatives, no qualifiers are added for %D outliers when targets are not detected or for a high recovery for undetected compounds. Data are qualified JC#, where # is the %D. There could be variability to the data as there is variability to the response. No data have been qualified for this event.

The QAPP indicates that compounds in a run should be rejected if the %D is > 40%. We interpret this to mean that non-detects should be rejected and that detected targets should be J-qualified, which is the normal validation process for rejection. Note that in the cases below where %Ds are above 40%, the bias of the CCV is high. Professional judgment is that high bias CCVs with a %D above 40% should not be rejected for non-detects.

Method 8260 Outliers: The table below shows the outliers observed in CCVs for this method. No qualifiers have been added.

SDG	Batch	Analyte	%D	Bias	Qualifier
L09100165	WG314147	Vinyl Acetate	65.0	high	OK, ND
L09100165	WG314162	Vinyl Acetate	45.6	high	OK, ND
L09100165	WG314199	Vinyl Acetate	47.5	high	OK, ND
L09100165	WG314274	Vinyl Acetate	66.0	high	OK, ND
L09100165	WG314333	Vinyl Acetate	40.9	high	OK, ND
L09100256	WG314410	2-Hexanone	21.7	low	OK, ND
L09100256	WG314425	Vinyl Acetate	27.7	high	OK, ND
L09100256	WG314533	Dichlorodifluoromethane	22.8	high	OK, ND
L09100256	WG314554	2-Hexanone	23.0	low	OK, ND
L09100256	WG314554	Bromomethane	28.9	high	OK, ND
L09100300	WG314554	2-Hexanone	23.0	low	OK, ND
L09100300	WG314554	Bromomethane	28.9	high	OK, ND
L09100300	WG314591	Vinyl Acetate	51.9	high	OK, ND
L09100300	WG314650	Bromomethane	20.9	high	OK, ND
L09100300	WG314650	Dichlorodifluoromethane	21.3	low	OK, ND
L09100300	WG314650	Vinyl Acetate	23.5	low	OK, ND
L09100300	WG314732	1,1,1-Trichloroethane	20.5	high	OK, ND
L09100300	WG314732	2,2-Dichloropropane	22.5	high	OK, ND
L09100300	WG314732	Dichlorodifluoromethane	22.5	high	OK, ND
L09100300	WG314732	Trichlorofluoromethane	20.6	high	OK, ND
L09100300	WG314732	Vinyl Acetate	23.7	high	OK, ND

IV. GC/MS INSTRUMENT PERFORMANCE CHECK

The BFB (VOA) and DFTPP (SVOA) 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____

There are no SVOA in this set.

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

Surrogate spikes were analyzed with every sample.

Yes __X__ No ____

And met the recovery limits defined in the QAPP of 70 – 130% for VOA and 45-135% for SVOA base/neutral fraction or 35-140% for the acid fraction. For SVOA, one surrogate per fraction is allowed to be at 15 – 150%.

Yes __X___ No ____

VII. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A. Matrix spike (MS) and matrix spike duplicates (MSD) were analyzed for every analysis performed and for every 20 samples or for every matrix whichever is more frequent.

Yes _____ No __X___

There are 4 MS/MSDs, which does not meet the 1:20 recommendation.

SDG	Client Sample ID	Lab Sample ID
L09100256	MW204A-LA-10	L09100256-06
L09100300	MW104-LA-10	L09100300-22

SDG	Client Sample ID	Lab Sample ID
	MW52-LA-10	L09100300-35
	MW-215A-LA-10	L09100300-43

B. The MS and MSD percent recoveries were within the limits defined in the QAPP of VOA at 70 – 130% with 5 compounds allowed to be within 60 – 140%; SVOA at 45- 135%, 5 compounds allowed to be at 15 – 150%. Reject non-detects at < 15% for SVOA.
Yes _____ No __X__NA___
The full target list has been spiked.

All data having recovery outliers out of QAPP limits have been qualified and the project manager will make the decision regarding which qualifiers can be removed per the 5 compound allowances. In this case, the one outlier would be removed and no data would be considered to be qualified.

Method 8260 MS/MSD Outliers: Outliers observed per the QAPP limits for Method 8260 MS/MSD runs are shown in the table below.

SDG	Parent	Analyte	Parent	MS Rec	MSD Rec	MS Bias	MSD Bias	Qualifiers
L09100256	MW204A-LA-10	Tetrachloroethene	39.2	38.1	46.4	LOW	LOW	JMS38
L09100256	MW204A-LA-10	Vinyl chloride	U	133	136	HIGH	HIGH	OK
L09100300	MW104-LA-10	Vinyl acetate	U	61.5	73.2	LOW		OK
L09100300	MW52-LA-10	Vinyl acetate	U	66.7	67.6	LOW	LOW	OK

C. The MSD relative percent differences (RPD) were within the defined contract limits for VOA of 30% water, 40 soil, with 5 compounds allowed to be < 40%.RPD; for SVOA of 50% for water and 60% for soil and 5 compounds allowed to be > 60% RPD.
Yes __X__ No ____NA____
Qualifiers are added only when the MS or MSD recovery is also out of limits. Data are qualified JD#, where # is the RPD. As the RPD increases, the matrix precision decreases. No precision outliers are present.

D. The MS/MSD were client samples.
Yes _X__ No ____NA____

VIII. LABORATORY CONTROL SAMPLE
A. Laboratory Control Samples (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 QAPP for VOA of 80-120% for water and 75 – 125% for soil. Five compounds are allowed to be 60 – 140%. For SVOA 60 -120 for PAH and phthalates, 20 – 150% for phenols and amines. All other compounds 45 – 135% with 5 compounds allowed to be 15 – 150%. No soil limits are defined in the QAPP and laboratory limits will be applied. 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, the result is qualified as JL#, where # is the elevated recovery. Data could be biased high proportional to the LCS %R. All results associated with low recoveries are qualified.

8260B: The table below shows the outliers and the limits applied per the QAPP. The limits are specified per matrix. None of the outliers are outside the marginal exceedance limits of 60-140. Qualifiers are added for all outliers as described here but the project manager may consider reversing some of these when the limits fall within the marginal exceedance limits. Please see the project EDD for a detailed list of qualifiers added.

8260B LCS Outliers:

SDG	Batch	Analyte	Recovery	Bias	Qualifier
L09100256	WG314425	Vinyl chloride	134	HIGH	JL134 detects
L09100256	WG314533	Dichlorodifluoromethane	123	HIGH	OK, ND
L09100300	WG314732	1,1,1-Trichloroethane	121	HIGH	OK, ND
L09100300	WG314732	Bromochloromethane	125	HIGH	OK, ND
L09100300	WG314732	Bromodichloromethane	121	HIGH	OK, ND

8260 LCS/LCSD Recoveries: In some cases, the laboratory analyzed both an LCS and an LCSD. In such cases, per the QAPP only results in which both recoveries are out of limits are qualified. Outliers are shown in the table below for LCS/LCSDs. Again, see the project EDD for detailed lists of qualifiers added.
8260B LCSD Outliers:

SDG	Batch	Analyte	Recov	LCSD Recov	LCS Bias	LCSD Bias	Qualifiers
L09100165	WG314274	Acetone	125	130	HIGH	HIGH	OK, ND
L09100165	WG314274	Dichlorodifluoromethane	127	128	HIGH	HIGH	OK, ND
L09100165	WG314274	Vinyl acetate	143	138	HIGH	HIGH	OK, ND
L09100165	WG314199	Vinyl acetate	137	147	HIGH	HIGH	OK, ND
L09100165	WG314333	MEK (2-Butanone)	122	122	HIGH	HIGH	OK, ND
L09100165	WG314333	Vinyl acetate	133	129	HIGH	HIGH	OK, ND
L09100300	WG314591	Acetone	127	126	HIGH	HIGH	JL127 detects
L09100300	WG314591	Dichlorodifluoromethane	128	127	HIGH	HIGH	OK, ND
L09100300	WG314591	MEK (2-Butanone)	124	126	HIGH	HIGH	JL126 detects
L09100300	WG314848	Vinyl acetate	133	129	HIGH	HIGH	OK, ND

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___
Contamination was observed in some method blanks. Whenever methylene chloride, acetone, 2-butanone or phthalate esters are detected in associated samples at a level less than 10x the method blank (corrected for dilution), the result is qualified as UMB#, where # is the corrected method blank level. Such results are usable as nondetects. For other targets, the factor used is 5x.

Method 8260 Method Blank Detections:

SDG	Batch	Analytes	Result	Flag	Qualifiers
L09100165	WG314274	Methylene chloride	**0.330**	F	UMB.33 detect

L09100165	WG314274	Trichloroethene	**0.363**	F	OK, result > 5x MB
L09100165	WG314199	Methylene chloride	**0.353**	F	OK, results ND
L09100165	WG314333	Methylene chloride	**0.264**	F	OK, results ND
L09100165	WG314147	Methylene chloride	**0.298**	F	OK, results ND
L09100165	WG314162	Methylene chloride	**0.322**	F	UMB.32 detect
L09100256	WG314410	m-,p-Xylene	**1.11**	*	OK, results ND
L09100256	WG314533	Methylene chloride	**0.253**	F	OK, results ND
L09100300	WG314848	Methylene chloride	**0.298**	F	UMB.3 detect

C. If Field Blanks were identified, no blank contamination was found.
Yes____ No __X__
There are 7 trip blanks for 8260. There are detections observed below the reporting limit in the field and trip blanks. When analytes are present in both the field blank and the associated samples, the results in the samples are qualified in the same manner as for method blanks. For clarity, the qualifiers used in this case are UTB# for trip blanks and UFB# for rinse blanks, where # is the associated blank value. Qualifiers added are shown in the table below. Results so qualified are usable as non-detects.

SDG	Sample ID	Sample Date	Analyte	Result	Qualifier
L09100165	TB-100509-LA-10	10/5/2009	Methylene chloride	0.493F	OK, samples ND
L09100256	TB-100709-LA-10	10/7/2009	Chloromethane	0.298F	UTB.3 detects
L09100256	TB-100709-LA-10	10/7/2009	Methylene chloride	0.445F	OK, samples ND
L09100256	TB-100809-LA-10	10/8/2009	Chloromethane	0.268F	OK, samples ND
L09100256	TB-100809-LA-10	10/8/2009	Methylene chloride	0.359F	OK, samples ND
L09100300	TB-100909-LA-10	10/10/2009	Methylene chloride	0.463F	UTB.46 detects < 10x
L09100300	TB-101209-LA-10	10/12/2009	Methylene chloride	0.58F	OK, U from MB
L09100300	TB-101609-LA-10	10/11/2009	Methylene chloride	0.483F	UTB.48 detects < 10x
L09100165	TB-100609	10/6/2009	Methylene chloride	0.399F	OK, samples ND

X. FIELD QC

If Field duplicates were identified, they met guidance for VOA of RPD of < 35% for water or < 50% for soils. For SVOA < 50% RPD for water, no soils RPD is defined in the QAPP. For values reported at < 5 x the reporting limit (RL), a difference of 2 x RL is used as guidance (4 x RL for soils). Data are not qualified for field duplicates as these are evaluated for the total project by the client.
Yes __ No _X__ NA____
There are 10 identified field duplicates, all in control.

SDG	Parent Sample	Field Duplicate	Observations
L09100165	MW21 -LA-10	DUP-1	OK
L09100300	MW90 -LA-10	DUP-2	OK
L09100256	MW100B -LA-10	DUP-3	OK
L09100300	MW140 -LA-10	DUP-4	OK
L09100300	MW-200-LA-10	DUP-5	OK
L09100165	MW-207A-LA-10	DUP-6	OK
L09100300	MW-212-LA-10	DUP-7	OK
L09100256	MW-229-LA-10	DUP-8	OK
L09100300	DR2-1 -LA-10	DUP-9	OK
IW-01	IW-01 -LA-10	DUP-10	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. 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:

Chain of Custody:
No qualifiers have been added for chain of custody issues and the project manager will update chains per the following notes to complete the project record.

L09100165: Documents were properly executed and signed in this SDG.
L09100256: Most chain of custody documents were not signed by the laboratory in this SDG. There is a confirmation of sample receipt by the laboratory present in the data package, but the chain of custody documents themselves should be signed and dated by the laboratory as well as the sampler.
L09100300: Only one of the chain of custody documents was signed in this SDG. There is a confirmation of sample receipt by the laboratory present in the data package, but the chain of custody documents themselves should be signed and dated by the laboratory as well as the sampler.

These are electronically-generated chain of custody documents, so there may be an electronic signature chain that can be demonstrated. There is not sufficient information available to evaluate that possibility.

Continuing Calibrations:
There were several %D outliers in the CCVs, as shown in the table within the body of this report. There are no qualifiers added since all were associated with non-detected results.

Matrix Spikes:

There are 4 MS/MSDs, which does not meet the 1:20 recommendation. There are a few outliers, but only one required qualification. Using the QAPP allowance for 5 compounds to be out of limits, the one outlier could be removed and no data would be considered to be qualified.

Method Blanks:
Contamination was observed in some method blanks. Whenever methylene chloride, acetone, 2-butanone or phthalate esters are detected in associated samples at a level less than 10x the method blank (corrected for dilution), the result is qualified as UMB#, where # is the corrected method blank level. Such results are usable as nondetects. For other targets, the factor used is 5x.

Field Blanks:
There are 7 trip blanks for 8260. There are detections observed below the reporting limit in the trip blanks. When analytes are present in both the trip blank and the associated samples, the results in the samples are qualified in the same manner as for method blanks. For clarity, the qualifiers used in this case are UTB# for trip blanks, where # is the associated blank value. Qualifiers added are shown in the table within the body of this report. Results so qualified are usable as non-detects.

LCS Recoveries:
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, the result is qualified as JL#, where # is the elevated recovery. Data could be biased high proportional to the LCS %R. All results associated with low recoveries are qualified.

8260B: The table within the body of this report shows the outliers and the limits applied per the QAPP. The limits are specified per matrix. None of the outliers are outside the marginal exceedance limits of 60-140. Qualifiers are added for all outliers as described here but the project manager may consider reversing some of these when the limits fall within the marginal exceedance limits. Please see the project EDD for a detailed list of qualifiers added.

Field QC:
There are 10 identified field duplicates. All are in control.

APPENDIX C

HISTORICAL CVOC RESULTS

MW-16

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW162 6/19/1997	MW163 9/23/1997	MW164 3/24/1998	MW364 3/24/1998	MW165 10/16/1998	MW16-63-68BL 3/20/2002	MW-16 5/18/2004	MW-16-LB-1 10/16/2006	MW-16 10/10/2008
1,1,1-Trichloroethane		µg/L	<10	<10	<10	<10	<10	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<10	<10	<10	<10	<10	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	<10	<10	<10	<10	<10	--	<2	--	
Carbon tetrachloride		µg/L	<10	<10	<10	<10	<10	<1	<1J	<1	<1
Chloroform		µg/L	<10	<10	<10	<10	<10	<1	<1	<0.3	<0 3
cis-1,2-Dichloroethene		µg/L	--	--	--	--	--	<1	<1	<1	<1
Tetrachloroethene		µg/L	<10	<10	<10	<10	<10	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	--	--	--	--	--	<1	<1	<1	<1
Trichloroethene		µg/L	<10	<10	<10	<10	<10	<1	<1	<1	<1
Vinyl chloride		µg/L	<10	<10	<10	<10	<10	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017159

1017157

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW192 6/18/1997	MW193 9/24/1997	MW194 3/26/1998	MW195 10/17/1998	MW19-90-92BL 3/18/2002	MW-19 5/5/2004	MW-19-LB-1 10/17/2006	MW-19 10/9/2008
1,1,1-Trichloroethane		µg/L	<10	<10	<10	<10	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<10	<10	<10	<10	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	<10	<10	<10	<10	--	<2	--	--
Carbon tetrachloride		µg/L	<10	<10	<10	<10	<1	<1	<1	<1
Chloroform		µg/L	<10	<10	<10	<10	<1	<1	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	--	--	--	--	<1	<1	<1	<1
Tetrachloroethene		µg/L	<10	<10	<10	<10	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	--	--	--	--	<1	<1J	<1	<1
Trichloroethene		µg/L	<10	<10	<10	<10	<1	<1	<1	<1
Vinyl chloride		µg/L	<10	<10	<10	<10	<1	<1	<1	<1

NOTES:

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-21

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW212 6/20/1997	MW213 9/27/1997	MW214 3/27/1998	MW215 10/19/1998	MW21NA 3/24/2000	MW21-98-103BL 3/20/2002	MW21-EBT-TS1-98.5-103.5 7/8/2002	MW21-EBT-TS2-98.5-103.5 7/29/2002	MW21-EBT-TS3-98.5-103.5 9/3/2002
1,1,1-Trichloroethane		µg/L	<10	<10	<10	<10	<1	<1	<0.25	<0 25	<0 25
1,1-Dichloroethene		µg/L	<10	<10	<10	<10	0.2J	<1	<0.5	<0.5	<0.5
1,2-Dichloroethene (Total)		µg/L	<10	<10	<10	2J	--	--	--	--	--
Carbon tetrachloride		µg/L	<10	<10	<10	<10	0.4J	<1	<0.25	<0.25	<0 25
Chloroform		µg/L	<10	<10	<10	<10	6	<1	<0 125	<0 141	0 132J
cis-1,2-Dichloroethene		µg/L	--	--	--	--	1	1 9	1.7	1.27	1.02
Tetrachloroethene		µg/L	63	62	76	120	78	90	110	125	178
trans-1,2-Dichloroethene		µg/L	--	--	--	--	0.2J	<1	0 25J	0.4J	0.516J
Trichloroethene		µg/L	14	12	16	31	39	76	66	53.6	38.1
Vinyl chloride		µg/L	<10	<10	<10	<10	<1	<1	<0.25	<0.25	<0.25

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

0101715

10017159

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	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	MW21-EBT-TS8-98.5-103.5	MW21-EBT-TS9-98.5-103.5	MW21-EBT-TS10-98.5-103 5	MW21-EBT-TS11-98.5-103 5	MW21-EBT-TS12-98.5-103.5
	Sample Date	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
	UNIT									
1,1,1-Trichloroethane	µg/L	<0.25	<0 25	<0.25	<0.25	<0.25	<0 25	<0.25	<0 25	<0.25
1,1-Dichloroethene	µg/L	<0.5	<0.5	<0 5	<0.5	<0 5	<0.5	<0.5	<0.5	<0 5
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	<0.25	<0.25	<0.25	<0 25	<0 25	<0 25	<0.25	<0 25	<0.25
Chloroform	µg/L	0 18J	<0.125	0.171J	<0.125	<0.125	0 14J	<0.134	<0.131	<0.125
cis-1,2-Dichloroethene	µg/L	1 63	1 32	1.22	0.985J	1.68	1 28	1.12	1 25	1.36
Tetrachloroethene	µg/L	152	188	195	194	200	190	171	172	159
trans-1,2-Dichloroethene	µg/L	0.518J	0 481J	0.416J	0 403J	0.331J	0.342J	0.304J	<0 25	<0.25
Trichloroethene	µg/L	49.2	37.6	38.3	32 4	50.7	38.6	33.8	38 6	34
Vinyl chloride	µg/L	<0.25	<0.25	<0 25	<0 25	<0.25	<0.25	<0 25	<0 25	<0 25

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	MW21-EBT-TS13-98.5-103 5 7/21/2003	MW-21 3/31/2004	MW-21 11/12/2004	MW-21 2/21/2005	MW-21 5/19/2005	MW-21-BL 8/8/2006	MW-21-EBT-1 12/6/2006	MW-21-EBT-2 3/7/2007
	UNIT								
1,1,1-Trichloroethane	µg/L	<0 25	<2.5	<2.5	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<0.5	<2.5	<2.5	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	1 5J	--	--	--	--	--	--
Carbon tetrachloride	µg/L	<0.25	<2.5	<2 5	<1	<1	<1	<1	<1
Chloroform	µg/L	<0 125	<2 5	<2 5	<1	<1	<0.3	0.129 J	0.126 J
cis-1,2-Dichloroethene	µg/L	1.25	1.5J	1 6J	1.1	0.99J	1.33	1 17	1 66
Tetrachloroethene	µg/L	120	75	71	61	53	106	129	130 J
trans-1,2-Dichloroethene	µg/L	<0.25	<2 5	<2.5	<1	<1	<1	<1	<1
Trichloroethene	µg/L	33 6	20	17	14	13	16.3	19.8	25
Vinyl chloride	µg/L	<0.25	<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

ug/L micrograms per liter

DQE FLAGS:

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017160

31017161

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-21-EBT-3	MW-21-EBT-4	MW-21-EBT-5	MW-21	MW-21	MW-21	MW-21	MW-21
Analyte	Sample Date	6/4/2007	9/18/2007	12/18/2007	3/14/2008	6/16/2008	12/11/2008	3/13/2009	10/5/2009
	UNIT								
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	0.137	0 184 J	0 157 J	0.183 J	<0 3	<0 3
cis-1,2-Dichloroethene	µg/L	1.53	1 95	2 12	1.83	2.26	2.44	2.3	2 3
Tetrachloroethene	µg/L	134	132	178	173	154	192	179	187
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	0 252 J	0.274 J	<1	<1
Trichloroethene	µg/L	28.3	27 5	32 5	28.9	26.1	20 4	16.6	12 9
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW222	MW223	MW224	MW225	MW22NA	MW22-99-104BL	MW-022	MW-22-LB-1	MW-22
	Sample Date	6/19/1997	9/25/1997	3/28/1998	10/19/1998	3/23/2000	3/18/2002	3/30/2004	10/18/2006	10/9/2008
	UNIT									
1,1,1-Trichloroethane	µg/L	<10	<10	<10	<10	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<10	<10	<10	<10	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	<10	<10	<10	<10	--	--	<2	--	
Carbon tetrachloride	µg/L	<10	<10	<10	<10	<1	<1	<1	<1	<1
Chloroform	µg/L	<10	<10	<10	<10	<1	<1	<1	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	--	--	--	--	0.5J	<1	<1	0.527 J	<1
Tetrachloroethene	µg/L	<10	2J	<10	<10	0.9J	0.27J	<1	0 79 J	<1
trans-1,2-Dichloroethene	µg/L	--	--	--	--	<1	<1	<1	<1	<1
Trichloroethene	µg/L	2J	4J	1J	<10	1	<1	<1	0 531 J	0.329 J
Vinyl chloride	µg/L	<10	<10	<10	<10	<1	<1	<1	<1	<1

NOTES:

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

3101716

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HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW232	MW233	MW234	MW235	MW23NA	MW23-95-100BL	MW-23	MW-23-LB-1	MW-23
Analyte	**Sample Date**	6/18/1997	9/26/1997	3/26/1998	10/19/1998	3/23/2000	3/18/2002	5/19/2004	10/18/2006	10/14/2008
	UNIT									
1,1,1-Trichloroethane	µg/L	<10	<10	<10	<10	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<10	<10	<10	<10	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	<10	<10	<10	<10	--	--	<2	--	--
Carbon tetrachloride	µg/L	<10	<10	<10	<10	<1	<1	<1	<1	<1
Chloroform	µg/L	<10	<10	<10	<10	<1	<1	<1	<0 3	<0.3
cis-1,2-Dichloroethene	µg/L	--	--	--	--	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<10	<10	<10	<10	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	--	--	--	--	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<10	<10	<10	<10	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<10	<10	<10	<10	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW242	MW243	MW244	MW245	MW24NA	MW24-109-111BL	MW-24	MW-24-LB-1	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	10/18/2006	10/14/2008
	UNIT									
1,1,1-Trichloroethane	µg/L	<10	<10	<10	<10	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<10	<10	<10	<10	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	<10	<10	<10	<10	--	--	<2	--	--
Carbon tetrachloride	µg/L	<10	<10	<10	<10	<1	<1	<1	<1	<1
Chloroform	µg/L	<10	<10	<10	<10	<1	<1	<1	<0.3	0.181 J
cis-1,2-Dichloroethene	µg/L	--	--	--	--	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<10	<10	<10	<10	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	--	--	--	--	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<10	<10	<10	<10	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<10	<10	<10	<10	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

10171164

1017165

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW25A-111102	MW-25A	MW-25A	MW-25A-LB-1	MW-25A-LS-3	MW-25A-LA-5	MW-25A	MW-25A	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	10/10/2008	4/6/2009
	UNIT									
1,1,1-Trichloroethane	µg/L	<0 25	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<0.5	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	<2	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	2.01	2 3	2.4	2.66	2 54	2.38	2.15	1.67	1.54
Chloroform	µg/L	0.517J	0.57J	0.59B	0.608	0.507	0.531	0.399	0.377	0.449
cis-1,2-Dichloroethene	µg/L	<0.25	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	5.64	8	9.3	8 61	10.3	9.24	6.64	4.91	7.84
trans-1,2-Dichloroethene	µg/L	<0 25	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0 453J	0.6J	0.57J	0.352 J	0 525 J	0 433 J	0 352 J	0.45 J	0.644 J
Vinyl chloride	µg/L	<0.25	<1	<1	<1	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-26

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW262 6/20/1997	MW263 9/26/1997	MW264 3/28/1998	MW265 10/20/1998	MW-26-106-BL 3/21/2002	MW26-EBT-TS13 7/24/2003	MW26-EBT-TS14 8/18/2003	MW-26 4/2/2004	MW-26 11/13/2004
1,1,1-Trichloroethane		µg/L	<10	<10	<10	<10	<5	<0 25	<0.25	<2.5	<1
1,1-Dichloroethene		µg/L	<10	<10	<10	<10	<5	<0 5	<0.5	<2.5	<1
1,2-Dichloroethene (Total)		µg/L	<10	<10	<10	<10	--	--	--	<5	--
Carbon tetrachloride		µg/L	4J	4J	4J	4J	3.7J	3.29	5.17J	5 3	7.2
Chloroform		µg/L	1J	<10	2J	1J	<1	1.11	1.28	1.4B	1.6
cis-1,2-Dichloroethene		µg/L	--	--	--	--	<5	<0 25	<0.25	0.76J	0.64J
Tetrachloroethene		µg/L	12	11	14	16	8.1	7.92	13.8	25	40
trans-1,2-Dichloroethene		µg/L	--	--	--	--	<5	<0.25	<0.25	<2.5	<1
Trichloroethene		µg/L	2J	2J	2J	2J	1.6J	1 72	1 9	2 1J	2.3
Vinyl chloride		µg/L	<10	<10	<10	<10	<10	<0.25	<0.25	<2 5	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected reporting limit is inaccurate or imprecise

2 1107166

10.5171.67

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	MW-26 4/7/2008	MW-26 10/8/2008	MW-26 4/7/2009	MW-26 10/8/2009
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	--	--	--	--	--	--	--	--	--
Carbon tetrachloride		µg/L	7 5	7.2	5 24	5.23	6 52	4 38	5.31	5.91	4 81
Chloroform		µg/L	1 7	1 8B	0.935	1.05	1.29	0 976	1.14	1.16	0 871
cis-1,2-Dichloroethene		µg/L	0 71J	0.57J	0 45 J	0.313 J	0.41 J	<1	0.295 J	0.332 J	0.411 J
Tetrachloroethene		µg/L	40	35	25.5	20 1	29	13.7	21.1	25.3	27 3
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2.2	2.5	1.77	1.56	1.75	1 3	1.54	1.33	1.59
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW342	MW343	MW344	MW-34-Y1Q1	MW-34-Y1Q2	MW-34-Y1Q3	MW-34-Y1Q4	MW-34-Y2Q1	MW-34
	Sample Date	6/19/1997	9/26/1997	3/27/1998	2/4/1999	5/25/1999	8/27/1999	11/3/1999	2/16/2000	5/18/2000
	UNIT									
1,1,1-Trichloroethane	µg/L	<10	<10	<10	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<10	<10	<10	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	<10	<10	<10	--	--	--	--	--	--
Carbon tetrachloride	µg/L	<10	<10	<10	1 01	1 23	0 51J	<1	1.04	1.03
Chloroform	µg/L	2J	1J	<10	4 34	<1	0.66J	<1	1.98	3.49
cis-1,2-Dichloroethene	µg/L	--	--	--	1.03	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<10	<10	<10	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	--	--	--	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<10	<10	<10	4 39	<1	0.64J	<1	0.85J	2.15
Vinyl chloride	µg/L	<10	<10	<10	<1	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017168

1017169

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-34-Y2Q3	MW-34-Y2Q4	MW-34	MW-34-Y3S2-A	MW-34-Y3S2-B	MW-34-Y3S2-C	MW34-147-152BL	MW-34-3_020410	MW-34-2_020410
Analyte	**Sample Date**	8/24/2000	11/7/2000	2/20/2001	10/3/2001	10/3/2001	10/3/2001	3/18/2002	4/10/2002	4/10/2002
	UNIT									
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	0.86J	<1	0.82J	<1	<1	0.96J	0 7J	<1	<1
Chloroform	µg/L	<1	<1	4.24	1 46	<1	<1	3	<1	7 78
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	2.55	1 43	1.62	<1	1.48	2	0.93J	0.9J	0.97J
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-34

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-34-1_020410	MW-34-3_021001	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	4/10/2002	10/1/2002	10/1/2002	10/1/2002	4/8/2003	4/8/2003	4/8/2003	7/24/2003	10/28/2003
	UNIT									
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<0.25	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<0.5	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	1.08	<0 25	<1
Chloroform	µg/L	10 5	<1	2.56	1 26	4.45	7.66	13.9	<0 125	3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<0.25	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<0 25	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<0.25	<1
Trichloroethene	µg/L	1 16	<1	<1	<1	0.74	120	1.75	0.476J	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<0 25	<1

NOTES.

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

101711.70

10171171

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-34-2	MW-34-3	MW-34,152	MW-34,147	MW-34,142	MW-34,138	MW-34	MW34,152	MW34,147 3
Analyte	Sample Date	10/28/2003	10/28/2003	4/28/2004	4/28/2004	4/28/2004	4/28/2004	5/23/2004	10/20/2004	10/20/2004
	UNIT									
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<4	<4	<1	<1J	<1J
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<4	<4	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	<2	--	--
Carbon tetrachloride	µg/L	<1	<1	<1	0.19J	<4	<4	0 4J	0 35J	0.64J
Chloroform	µg/L	<1	<1	1.2	1 2	1 2J	1.1J	0.29J	1.7	2.4
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<4	<4	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<4	<4	0 55J	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1J	<1J	<4J	<4J	<1	<1	<1
Trichloroethene	µg/L	<1	<1	0.29J	0.39J	<4	<4	0.5J	0 54J	0 83J
Vinyl chloride	µg/L	<1	<1	<1	<1	<4	<4	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-34

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW34,142.3	MW-34	MW-34	MW-34	MW-34-LB-1	MW-34	MW-34	MW-34	MW-34
	Sample Date	10/20/2004	11/11/2004	2/23/2005	5/23/2005	10/16/2006	10/1/2007	11/7/2007	10/13/2008	10/8/2009
	UNIT									
1,1,1-Trichloroethane	µg/L	<1J	<1	<1	<1	<1	<1	<1	<1 J	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1 J	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	--	--	
Carbon tetrachloride	µg/L	0.62J	0.55J	0.41J	0.44J	0.381 J	1.05	0.479	0.826 J	0.978 J
Chloroform	µg/L	3.8	0.51B	1.1	0.31B	0.531	0.434	0.371	0.345 J	0.236 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1 J	<1
Tetrachloroethene	µg/L	<1	0 52J	0 37J	0.46J	0.336 J	0.753 J	0.34	0.451 J	0.358 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1 J	<1
Trichloroethene	µg/L	0.98J	0.49J	0.4J	0 67J	1.06	1.38	1.39	0.885 J	1.11
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<1 J	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

AR 401717.2

1101721173

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW382 6/19/1997	MW383 9/25/1997	MW384 3/26/1998	MW385 10/17/1998	MW38-145-150BL 3/18/2002	MW-38 5/20/2004	MW-38-LB-1 10/17/2006	MW-38-LA-5 10/1/2007
1,1,1-Trichloroethane		µg/L	<10	<10	<10	<10	<1	<9.1	<1	<1
1,1-Dichloroethene		µg/L	<10	<10	<10	<10	<1	<9.1	<1	<1
1,2-Dichloroethene (Total)		µg/L	<10	<10	<10	<10	--	<18	--	--
Carbon tetrachloride		µg/L	<10	<10	<10	<10	<1	<9.1	1 24	1 37
Chloroform		µg/L	<10	<10	<10	<10	<1	<9.1	0.513	0 646
cis-1,2-Dichloroethene		µg/L	--	--	--	--	<1	<9.1	<1	<1
Tetrachloroethene		µg/L	<10	<10	<10	<10	<1	<9.1	<1	0.446 J
trans-1,2-Dichloroethene		µg/L	--	--	--	--	<1	<9.1	<1	<1
Trichloroethene		µg/L	<10	1J	1J	<10	<1	<9.1	4.63	4 37
Vinyl chloride		µg/L	<10	<10	<10	<10	<1	<9.1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-38	MW-38
	Sample Date	10/8/2008	10/5/2009
	UNIT		
1,1,1-Trichloroethane	µg/L	<1	<1
1,1-Dichloroethene	µg/L	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

10174174

1017175

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW392	MW393	MW394	MW395	MW39NA	MW39-107-112BL	MW-39	MW-39	MW-39
	Sample Date	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
	UNIT									
1,1,1-Trichloroethane	µg/L	<10	<10	<10	<10	<1	<1	<3.3	<2 5	<4
1,1-Dichloroethene	µg/L	<10	<10	<10	<10	<1	<1	<3.3	<2.5	<4
1,2-Dichloroethene (Total)	µg/L	<10	<10	<10	<10	--	--	<6.7	<5	--
Carbon tetrachloride	µg/L	<10	<10	<10	<10	<1	<1	<3.3	<2 5	<4
Chloroform	µg/L	<10	<10	<10	<10	<1	0.18J	<3 3	<2 5	<4
cis-1,2-Dichloroethene	µg/L	--	--	--	--	0 4J	0.48J	<3.3	<2.5	<4
Tetrachloroethene	µg/L	6J	9J	8J	8J	12	8.2	120	95	130
trans-1,2-Dichloroethene	µg/L	--	--	--	--	<1	<1	<3.3	<2 5	<4
Trichloroethene	µg/L	5J	8J	7J	7J	5	3.8	10	7.2	10
Vinyl chloride	µg/L	<10	<10	<10	<10	<1	<1	<3.3	<2.5	<4

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-39

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW-39 2/15/2005	MW-39 5/16/2005	MW-39-LB-1 10/17/2006	MW-39-LS-3 4/13/2007	MW-39-LA-5 10/1/2007	MW-39 4/9/2008	MW-39 10/9/2008	MW-39 4/9/2009	MW-39 10/10/2009
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	--	--	--	--	--	--	--	--	--
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0 17J	0 17B	<0.3	0.155 J	0.225 J	0.161 J	0.237 J	<0 3	<0.3
cis-1,2-Dichloroethene		µg/L	0.52J	0 68J	0.622 J	0.462 J	0 435 J	0.525 J	1.26 J	17.5	21 3
Tetrachloroethene		µg/L	79	110	149	106	111	100	158 J	62.9 J	50 9
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	7.6	11	8 94	8.17	8.81	9 3	6.15 J	11.6	13.9
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

9717101

1017177

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-39A	MW-39A	MW-39A	MW-39A	MW-39A-LB-1	MW-39A-LS-3	MW-39A-LA-5	MW-39A
Analyte	**Sample Date**	5/23/2004	11/9/2004	2/15/2005	5/16/2005	10/17/2006	4/13/2007	10/2/2007	4/7/2008
	UNIT								
1,1,1-Trichloroethane	µg/L	<5	<6.7	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<5	<6.7	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	<10	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	<5J	<6.7	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<5	<6.7	0.22J	0 23B	0 251 J	0.215 J	0.215 J	0 257 J
cis-1,2-Dichloroethene	µg/L	<5	<6 7	0.59J	0.51J	0.418 J	0.4 J	0.362 J	0.499 J
Tetrachloroethene	µg/L	140	150	190	150	196	176	162	234
trans-1,2-Dichloroethene	µg/L	<5	<6.7	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5.8	8 3	8.7	7.9	4.68	4 04	4.4	4.63
Vinyl chloride	µg/L	<5	<6.7	<1	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-39A

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-39A	MW-39A	MW-39A
	Sample Date	10/9/2008	4/9/2009	10/5/2009
	UNIT			
1,1,1-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	0.866 J	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--
Carbon tetrachlonde	µg/L	<1	<1	<1
Chloroform	µg/L	0.16 J	0.145 J	<0.3
cis-1,2-Dichloroethene	µg/L	12 2	7.61	24.4
Tetrachloroethene	µg/L	95.7	156	79.9
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	11.8	7.21	9 49
Vinyl chloride	µg/L	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

T1701178

1101179

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW502	MW503	MW504	MW505	MW50-117 5-122.5BL	MW-50	MW-50-LB-1	MW-50
	Sample Date	6/19/1997	9/24/1997	3/25/1998	10/16/1998	3/19/2002	5/17/2004	10/18/2006	10/13/2008
	UNIT								
1,1,1-Trichloroethane	µg/L	<10	<10	<10	<10	<1	<1J	<1	<1
1,1-Dichloroethene	µg/L	<10	<10	<10	<10	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	<10	<10	<10	<10	--	0.52J	--	--
Carbon tetrachloride	µg/L	<10	<10	<10	<10	<1	<1	<1	<1
Chloroform	µg/L	<10	<10	<10	<10	0.25 J	0.23 J	0.746	0.469
cis-1,2-Dichloroethene	µg/L	--	--	--	--	0.48 J	0.52 J	0.483 J	0 321 J
Tetrachloroethene	µg/L	<10	<10	<10	<10	<1	<1	0 263 J	0.335 J
trans-1,2-Dichloroethene	µg/L	--	--	--	--	<1	<1	<1	<1
Trichloroethene	µg/L	<10	<10	<10	<10	1 2	1 1	1 5	1 12
Vinyl chloride	µg/L	<10	<10	<10	<10	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-52

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW522 6/18/1997	MW523 9/24/1997	MW524 3/25/1998	MW525 10/16/1998	MW52-96.5-101.5BL 3/19/2002	MW-52 5/6/2004	MW-52 2/21/2005	MW-52 10/2/2006
1,1,1-Trichloroethane		µg/L	<10	<10	<10	<10	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<10	<10	<10	<10	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	1 J	<10	1 J	<10	--	0 58 J	--	--
Carbon tetrachloride		µg/L	<10	<10	<10	<10	<1	<1	<1	<1
Chloroform		µg/L	<10	<10	<10	<10	0 35 J	0.68 J	0 77B	0.899
cis-1,2-Dichloroethene		µg/L	--	--	--	--	0.53 J	0.58 J	0.6 J	0 639 J
Tetrachloroethene		µg/L	4 J	2 J	4 J	<10	6.4	4 7	6 2	10.2
trans-1,2-Dichloroethene		µg/L	--	--	--	--	<1	<1 J	<1	<1
Trichloroethene		µg/L	<10	<10	1 J	<10	0.59 J	0.34 J	0.67 J	1.04
Vinyl chloride		µg/L	<10	<10	<10	<10	<1	<1 J	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS.

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017180

10017181

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	MW-52 4/16/2007	MW-52 10/3/2007	MW-52 4/8/2008	MW-52 10/10/2008	MW-52 4/6/2009	MW-52 10/12/2009
	UNIT						
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.828	0.75	0 861	1.12 J	0.891	0 842
cis-1,2-Dichloroethene	µg/L	0.938 J	0.993 J	0 805 J	0.866 J	0 81 J	0.831 J
Tetrachloroethene	µg/L	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
Trichloroethene	µg/L	1 4	1.17	1 16	1.17 J	1.12	1.06
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW532	MW533	MW534	MW535	MW53-75-80BL	MW-53	MW-53-LB-1	MW-53
Analyte	Sample Date	6/19/1997	9/26/1997	3/26/1998	10/19/1998	3/18/2002	5/10/2004	10/17/2006	10/13/2008
	UNIT								
1,1,1-Trichloroethane	µg/L	<10	<10	<10	<10	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<10	<10	<10	<10	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	<10	<10	<10	<10	--	<2	--	--
Carbon tetrachloride	µg/L	<10	<10	<10	<10	<1	<1	<1	<1
Chloroform	µg/L	<10	<10	<10	<10	<1	<1	<0 3	<0.3
cis-1,2-Dichloroethene	µg/L	--	--	--	--	<1	<1	<1	<1
Tetrachloroethene	µg/L	<10	<10	<10	<10	0.6 J	0 59 J	2.26	2.25
trans-1,2-Dichloroethene	µg/L	--	--	--	--	<1	<1	<1	<1
Trichloroethene	µg/L	<10	<10	<10	<10	<1	<1	<1	<1
Vinyl chloride	µg/L	<10	<10	<10	<10	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS:

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

10171182

10172183

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW552	MW553	MW554	MW555	MW55-71-73BL	MW-55	MW-55-LB-1	MW-55
Analyte	**Sample Date**	6/18/1997	9/26/1997	3/25/1998	10/16/1998	3/18/2002	5/20/2004	10/16/2006	10/13/2008
	UNIT								
1,1,1-Trichloroethane	µg/L	<10	<10	<10	<10	<1	<1	<1	<1 J
1,1-Dichloroethene	µg/L	<10	<10	<10	<10	<1	<1	<1	<1 J
1,2-Dichloroethene (Total)	µg/L	<10	<10	<10	<10	--	<2	--	--
Carbon tetrachloride	µg/L	<10	<10	<10	<10	<1	<1	<1	<1 J
Chloroform	µg/L	<10	<10	<10	<10	<1	<1	<0.3	<0.3 J
cis-1,2-Dichloroethene	µg/L	--	--	--	--	<1	<1	<1	<1 J
Tetrachloroethene	µg/L	<10	<10	<10	<10	<1	<1	<1	<1 J
trans-1,2-Dichloroethene	µg/L	--	--	--	--	<1	<1	<1	<1 J
Trichloroethene	µg/L	<10	<10	<10	<10	<1	<1	<1	<1 J
Vinyl chloride	µg/L	<10	<10	<10	<10	<1	<1	<1	<1 J

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS.

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-62

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW625 10/26/1998	MW62NA 3/23/2000	MW62-94-95BL 3/18/2002	MW62 2/4/2004	MW62 4/7/2004	MW-62 5/11/2004	MW-62 2/18/2005	MW-62 5/16/2005
1,1,1-Trichloroethane		µg/L	<10	<1	<1	<0.25	<0.25	<3.3	<1	<1
1,1-Dichloroethene		µg/L	<10	<1	1.3	<0.5	<0.5	<3.3	0 23J	0.35J
1,2-Dichloroethene (Total)		µg/L	<10	--	--	--	--	<6.7	--	--
Carbon tetrachloride		µg/L	<10	<1	<1	1.38	1.19	<3 3	0 56J	0.84J
Chloroform		µg/L	<10	0.2J	0.18J	0 368J	0 431J	<3.3	0.46J	0.23B
cis-1,2-Dichloroethene		µg/L	--	<1	190	0.418J	<0.25	<3 3	<1	1.3
Tetrachloroethene		µg/L	<10	<1	<1	0 318J	0.853	<3.3	1 1	0.34J
trans-1,2-Dichloroethene		µg/L	--	<1	<1	<0 25	<0.25	<3.3	<1	<1
Trichloroethene		µg/L	37	32	6.5	134	183	100	150	92
Vinyl chloride		µg/L	<10	<1	28	1 27	<0.25	<3 3	<1	1 2J

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

10171184

10171185

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	MW-62 10/10/2009
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	0 72 J	1.02 J	<1	<1
1,2-Dichloroethene (Total)		µg/L	--	--	--	--	--	--	--
Carbon tetrachloride		µg/L	0.279 J	0.703 J	0.744 J	0.525 J	0 634 J	0.369 J	<1
Chloroform		µg/L	0.25 J	0.311	0.476	0.416	0 394 J	0.361	0.154 J
cis-1,2-Dichloroethene		µg/L	0.26 J	1 16	0.33 J	<1	<1	0 424 J	0.308 J
Tetrachloroethene		µg/L	<1	0.362 J	0.8 J	0 413 J	0.39 J	0 33 J	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	77.7 J	102	184	152	157 J	169	59.2
Vinyl chloride		µg/L	<1	2.71	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-63A

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW63A 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
1,1,1-Trichloroethane		µg/L	<0 25	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<0 5	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	--	<2	--	--	--	--	
Carbon tetrachloride		µg/L	<0.25	<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	0.42J	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	0.466J	0 32J	0.64J	1.24	1.23	<1	0.674 J
trans-1,2-Dichloroethene		µg/L	<0.25	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1 67	0.68J	0 63J	0.765 J	1.09	1.66 J	1.81
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017186

10171187

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW63B	MW63B	MW63B	MW-63B-LB-1	MW-63B-LA-5	MW-63B	MW-63B
	Sample Date	11/11/2002	5/7/2004	2/22/2005	10/23/2006	10/2/2007	10/7/2008	10/10/2009
	UNIT							
1,1,1-Trichloroethane	µg/L	<0.25	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	0.709J	<1	<1	<1	<1	1 45	<1
1,2-Dichloroethene (Total)	µg/L	--	<2	--	--	--		
Carbon tetrachloride	µg/L	<0.25	<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	<0 25	<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	<0 25	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	7.9	0.92J	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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-64

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW645	MW64-108-110BL	MW-64	MW-64	MW-64-LB-1	MW-64-LS-3	MW-64-LA-5	MW-64
	Sample Date	10/25/1998	3/18/2002	4/1/2004	2/21/2005	10/23/2006	4/17/2007	10/3/2007	4/7/2008
	UNIT								
1,1,1-Trichloroethane	µg/L	<10	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<10	<1	0.55 J	0 35 J	<1	<1	<1	0.934 J
1,2-Dichloroethene (Total)	µg/L	<10	--	<2	--	--	--	--	--
Carbon tetrachloride	µg/L	2 J	3.3	3.3	3	2.9	3.26	2.82	3.68
Chloroform	µg/L	1 J	0 85 J	0.86 B	0.92 B	1.01	0.818	0 891	1.16
cis-1,2-Dichloroethene	µg/L	--	0.45 J	0.41 J	0.31 J	0.397	0.345 J	0.363 J	0.401 J
Tetrachloroethene	µg/L	10	10	16	18	18.2	18.1	17.1	22.5
trans-1,2-Dichloroethene	µg/L	--	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	28	45	39	34	28 9	30.6	30.2	35.7
Vinyl chloride	µg/L	<10	<1	<1	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

10171188

1017189

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	MW-64 10/8/2008	MW-64 4/9/2009	MW-64 10/8/2009
	UNIT			
1,1,1-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	1 22	0.648 J	0.527 J
1,2-Dichloroethene (Total)	µg/L	--	--	--
Carbon tetrachloride	µg/L	3.3	3.37	2 78
Chloroform	µg/L	0.989	1.08	0 926
cis-1,2-Dichloroethene	µg/L	0 439 J	0.481 J	0.519 J
Tetrachloroethene	µg/L	22.3	23	23.8
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	36.4	38 1	41.5
Vinyl chloride	µg/L	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS.

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-66A

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	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
	UNIT						
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	<2	--	--	--	--	--
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<1	<1	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	1.7	2.2	1 8	2	1.79	1.78
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

AR 301.7190

10171911

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	MW-85 11/14/2004
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<4	<3.3
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<4	<3.3
1,2-Dichloroethene (Total)		µg/L	--	--	--	--	--	--	17	--
Carbon tetrachloride		µg/L	77	110	140	130	120	110	110	120
Chloroform		µg/L	27	61	66	67	63	64	30	36
cis-1,2-Dichloroethene		µg/L	10	25	30	30	28	28	17	21
Tetrachloroethene		µg/L	34	45	67	54	49	31	46	57
trans-1,2-Dichloroethene		µg/L	<1	0.49 J	0.74 J	0 62 J	0.96 J	0 58 J	<4	<3 3
Trichloroethene		µg/L	20	21	26	23	25	21	18	22
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<4	<3.3

NOTES:

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS:

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-85

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	MW-85-EBT-4 9/11/2007	MW-85-EBT-5 12/10/2007
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1 J	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	--	--	--	--	--	--	--	--
Carbon tetrachloride		µg/L	110	110	188	179	123	106 J	75.1	34 3
Chloroform		µg/L	35	38	43.8	49.5	36 2	34.6	44.2	51 5
cis-1,2-Dichloroethene		µg/L	21	24	26 1	32 2	23 8	18.6	37.4	51
Tetrachloroethene		µg/L	51	48	74 8	73 4	58 6	37.8	32.5	21
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	22	24	25.1	24.4	20.3	15.5	14 3	9 15
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017192

10171193

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	MW-85 3/12/2008	MW-85 6/16/2008	MW-85 12/17/2008	MW-85 3/17/2009	MW-85 10/12/2009
	UNIT					
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L					
Carbon tetrachloride	µg/L	22 5	47.2	76.2	69.9	108
Chloroform	µg/L	38.6	8.03	9.84	8.51	10.4
cis-1,2-Dichloroethene	µg/L	59.2	39 1	7.45	7.29	1.3
Tetrachloroethene	µg/L	14.4	22	36 4	33.9	41
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	7	10.4	14.4	11 6	15 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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-86

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-86-1	MW-86-2	MW-86-3	MW-86-4	MW-86-5	MW-86-6	MW-86-7	MW-86-8	MW-86-9
	Sample Date	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001
	UNIT									
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	26	79	94	95	93	89	90	89	37
Chloroform	µg/L	34	73	84	81	80	80	78	83	98
cis-1,2-Dichloroethene	µg/L	18	47	58	59	57	55	53	56	76
Tetrachloroethene	µg/L	18	190	280	280	280	230	240	200	60
trans-1,2-Dichloroethene	µg/L	0 28 J	0.39 J	0.92 J	1.7	1	1.1	0.69 J	0.63 J	<1
Trichloroethene	µg/L	5.2	21	25	25	25	23	24	24	12
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

10171941

01-01-1195

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW86-EBT-TS1-100-105	MW86-EBT-TS2-100-105	MW86-EBT-TS3-100-105	MW86-EBT-TS4-100-105	MW86-EBT-TS5-100-105	MW86-EBT-TS6-100-105	MW86-EBT-TS7-100-105	MW86-EBT-TS9-100-105
	Sample Date	7/8/2002	7/29/2002	9/3/2002	10/7/2002	11/11/2002	12/16/2002	1/20/2003	3/24/2003
	UNIT								
1,1,1-Trichloroethane	µg/L	<0 25	<0.25	<0 25	<0.25	<0.25	<0.25	<0.25	<0.25
1,1-Dichloroethene	µg/L	<0.5	<0.5	<0.5	<0 5	<0.5	<0 5	<0.5	0 6 J
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	65	1.74	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Chloroform	µg/L	57	88.1	94.4	85	70.1	46.8	19.7	13 1
cis-1,2-Dichloroethene	µg/L	27	29	33 1	29.3	63 3	201	196	177
Tetrachloroethene	µg/L	160	182	197	205	180	21.4	5.06	2 99
trans-1,2-Dichloroethene	µg/L	<0 25	<0 25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Trichloroethene	µg/L	18	21.1	22 7	20 7	25	10.2	3 25	2.37
Vinyl chloride	µg/L	<0 25	<0 25	<0 25	<0.25	<0.25	<0.25	<0 25	<0.25

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	MW86-EBT-TS10-100-105 4/21/2003	MW86-EBT-TS11-100-105 5/19/2003	MW86-EBT-TS12-100-105 6/23/2003	MW86-EBT-TS13-100-105 7/21/2003	MW86-EBT-TS14-100-105 8/18/2003	MW-86 4/1/2004	MW-86 11/13/2004	MW-86 2/23/2005
	UNIT								
1,1,1-Trichloroethane	µg/L	<0.25	<0.25	<0.25	<0.25	<0.25	<5.7	<5.7	<1
1,1-Dichloroethene	µg/L	0.567 J	<0.5	<0.5	<0.5	<0 5	<5.7	<5 7	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	170	--	--
Carbon tetrachloride	µg/L	<0.25	<0.25	<0.25	<0.25	<0.25	<5.7	<5.7	<1
Chloroform	µg/L	17.1	11.9	6.72	11	12.1	5.7B	<5 7	<1
cis-1,2-Dichloroethene	µg/L	173	144	127	137 J	120	170	180	170 J
Tetrachloroethene	µg/L	14.4	28 9	60 4	73 4	89.8	6.2	<5.7	<1
trans-1,2-Dichloroethene	µg/L	<0 25	<0.25	<0 25	<0 25	<0.25	<5.7	<5.7	<1
Trichloroethene	µg/L	7.63	16.7	25.8	28 7	26 7	2 7 J	<5.7	<1
Vinyl chloride	µg/L	<0 25	<0.25	<0 25	<0.25	<0.25	<5.7	<5.7	0 59 J

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

10171196

1017197

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW-86 5/20/2005	MW-86-LB-1 10/25/2006	MW-86-LS-3 4/16/2007	MW-86-LA-5 10/4/2007	MW-86 4/7/2008	MW-86 10/8/2008	MW-86 4/9/2009	MW-86 10/11/2009
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	0.867 J	<1	<1
1,2-Dichloroethene (Total)		µg/L	--	--	--	--	--	--	--	--
Carbon tetrachloride		µg/L	<1	<1	<1	<1	0 436 J	<1	0 499 J	1.79
Chloroform		µg/L	<1	<0 3	0.212 J	0.341	0.477	0 705	0.906	1 23
cis-1,2-Dichloroethene		µg/L	130	180	119	117	115	110	120	85 7
Tetrachloroethene		µg/L	<1	0 388 J	2 11	5 14	7 7	12.2	15.2	27
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	<1	0.989 J	1.79	1 72	2.87	2.98	5.7
Vinyl chloride		µg/L	0 38J	0.976 J	<1	<1	0 491 J	1.07	8	65 8

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-88

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-88-1	MW-88-2	MW-88-3	MW-88-4	MW-88-5	MW-88-6	MW-88-7	MW-88-8
Analyte	Sample Date	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001
	UNIT								
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	3.2	2.9	1.8	1 3	1	3.1	5 2	5 6
Chloroform	µg/L	1.1	1	0 64 J	0.51 J	0.42 J	1 2	1.9	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	1.5
Tetrachloroethene	µg/L	8.1	5 3	2 5	2 3	2.2	8 8	29	27
trans-1,2-Dichloroethene	µg/L	<1	<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	6.1
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

T01719B

1017199

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW-88 7/8/2002	MW-88 7/29/2002	MW-88 9/3/2002	MW-88 10/7/2002	MW-88 11/11/2002	MW-88 12/16/2002	MW-88 1/20/2003	MW-88 3/24/2003
1,1,1-Trichloroethane		µg/L	<0.25	<0.25	<0.25	<0 25	<0.25	<0.25	<0.25	<0.25
1,1-Dichloroethene		µg/L	<0 5	<0.5	<0 5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethene (Total)		µg/L	--	--	--	--	--	--	--	--
Carbon tetrachloride		µg/L	4.7	5.54	6.61	5.3	5.79	6.76 J	6 98	4.63
Chloroform		µg/L	1.9	2 1	1 86	1.81	1 89	1.88	1.64	1.23
cis-1,2-Dichloroethene		µg/L	1 5	1 37	0.93 J	1.23	1.66	1 22	0 99 J	0.793 J
Tetrachloroethene		µg/L	17	17 2	21.8	16.1	23 8	22.2	19.8	13.4
trans-1,2-Dichloroethene		µg/L	<0 25	<0.25	<0 25	<0.25	<0.25	<0.25	<0.25	<0 25
Trichloroethene		µg/L	7.1	7 55	7.72	6.9	7.66	7 41	7.24	6.49
Vinyl chloride		µg/L	<0 25	<0.25	<0.25	<0.25	<0 25	<0.25	<0.25	<0 25

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-88

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	MW-88 4/1/2004	MW-88 11/13/2004	MW-88 2/22/2005
1,1,1-Trichloroethane		µg/L	<0.25	<0.25	<0.25	<0.25	<0 25	<1	<1	<1
1,1-Dichloroethene		µg/L	<0.5	<0.5	<0.5	<0.5	<0 5	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	--	--	--	--	--	1.5 J	--	--
Carbon tetrachloride		µg/L	5.61 J	5.08	6.17 J	8.17	7.3	7 9	6	6.2
Chloroform		µg/L	1 43	1.71	1.93	2.08	1.51	1.9 B	2 5	1.6
cis-1,2-Dichloroethene		µg/L	0.869 J	1.1	1.32	1.41 J	1 34	1.5	1.8	1.2
Tetrachloroethene		µg/L	18.2	14.5	19.9	21.8	21	22	22	20
trans-1,2-Dichloroethene		µg/L	<0.25	<0.25	<0.25	<0.25	<0 25	<1	<1	<1
Trichloroethene		µg/L	6.65	5.34	5.98	6.26	5.37	4.8	3 6	3.8
Vinyl chloride		µg/L	<0.25	<0.25	<0.25	<0 25	<0.25	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017200

10017201

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	MW-88 4/7/2008	MW-88 10/6/2008	MW-88 4/9/2009	MW-88 10/11/2009
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	--	--	--	--	--	--	--	--
Carbon tetrachloride		µg/L	3.5	8 59	3.88	4.83	2.66	3 69	4.87	7 12
Chloroform		µg/L	1.1 B	1.78	0.671	0.827	0 406	0.878	0 825	1.32
cis-1,2-Dichloroethene		µg/L	0.87 J	1.3	0.588 J	0.751 J	0.325 J	1 21	0 732 J	1.53
Tetrachloroethene		µg/L	14	26.4	18 5	21.3	16 6	32.8	31 7	39.4
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2.7	3.5	2 94	3.42	3.11	3.65	3 26	3.83
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-89

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	MW-89 10/5/2009
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	--	--	<2	--	--	--	--	
Carbon tetrachloride		µg/L	<1	<1	0.49 J	0.44 J	0.7 J	0 56 J	0.252 J	<1
Chloroform		µg/L	<1	<1	0.32 J	0.3B	0 348	0 224 J	0.156 J	0.145 J
cis-1,2-Dichloroethene		µg/L	<1	<1	0.27 J	0 37 J	0.404 J	0 279 J	<1	<1
Tetrachloroethene		µg/L	<1	<1	0.3 J	0 29 J	0.363 J	0.644 J	<1	0.251 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0 89 J	<1	2	2 1	2.13	1.55	1.1	1 27
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

2017101

1017203

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	-- 3/19/2002	-- 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	MW-90 4/7/2008
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	0.49 J	0 46 J	<1	0 526 J	0.579 J	1.3
1,2-Dichloroethene (Total)		µg/L	--	--	<2	--	--	--	--	--
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	<1
Chloroform		µg/L	8.9	3 5	7.4	6.1	3.11	3.18	3.64	4.66
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	0 484 J
Tetrachloroethene		µg/L	58	8 8	19	19	26.7	26 7	50.7	77.7
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	10	2.7	7 2	4.3	2.53	2.4	3.69	5.9
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	MW-90 10/6/2008	MW-90 4/7/2009	MW-90 10/10/2009
	UNIT			
1,1,1-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	0.605 J	0.931 J	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--
Carbon tetrachloride	µg/L	0 288 J	0.268 J	<1
Chloroform	µg/L	4.65	4.91	0 817
cis-1,2-Dichloroethene	µg/L	0.335 J	0 481 J	<1
Tetrachloroethene	µg/L	79.3	80.8	35
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	6.08	8.47	2.41
Vinyl chloride	µg/L	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017204

1017205

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-92	MW-92	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	11/14/2004	2/24/2005
	UNIT									
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<5	<6.7	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<5	<6 7	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	12	--	--
Carbon tetrachloride	µg/L	18	19	18	20	20	18	24	23	25
Chloroform	µg/L	6.2	6.5	6.1	6 7	6.9	7.7	9 B	9.4	8 6
cis-1,2-Dichloroethene	µg/L	6.1	6.6	6 2	7	7	3 2	12	12	11
Tetrachloroethene	µg/L	130	160	150	160	150	110	170	180	140
trans-1,2-Dichloroethene	µg/L	0.21 J	0.19 J	<1	<1	<1	<1	<5	<6.7	<1
Trichloroethene	µg/L	4 3	4.5	4.2	4.5	4.5	3	5.2	5 7 J	5.8
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<5	<6 7	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS.

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-92

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	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	MW-92 10/9/2008	MW-92 4/10/2009	MW-92 10/10/2009
	UNIT								
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	0.984 J	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	21	27 2	7.67	6.45	6 3	<1	<1	<1
Chloroform	µg/L	7 6	8.02	13.2	11	8 91	<0 3	<0 3	<0 3
cis-1,2-Dichloroethene	µg/L	11	10.8	7 32	67.5	66.2	119	119	120
Tetrachloroethene	µg/L	160	193	159	55	65 9	0.499 J	<1	1.3
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	0.727 J	<1	<1	<1
Trichloroethene	µg/L	5 5	6 14	5.01	3.12	4 22	<1	<1	1 72
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	1.64	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017206

DSI017207

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW-93 11/30/2001	MW-93 11/30/2001	MW-93 11/30/2001	MW-93 11/30/2001	MW-93 11/30/2001	MW-93 11/30/2001	MW-93 11/30/2001	MW-93 5/7/2004
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	--	--	--	--	--	--	--	<2
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.69 J	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	2 4	7	7.5	7.1	7.3	0 16 J
trans-1,2-Dichloroethene		µg/L	<1	<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	<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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-93

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-93-LB-1	MW-93	MW-93	MW-93
	Sample Date	10/18/2006	10/4/2007	10/13/2008	10/11/2009
	UNIT				
1,1,1-Trichloroethane	µg/L	<1	<1	<1 J	<1
1,1-Dichloroethene	µg/L	<1	<1	<1 J	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--
Carbon tetrachloride	µg/L	<1	<1	<1 J	<1
Chloroform	µg/L	<0.3	<0.3	<0.3 J	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1 J	<1
Tetrachloroethene	µg/L	<1	<1	<1 J	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1 J	<1
Trichloroethene	µg/L	<1	<1	<1 J	<1
Vinyl chloride	µg/L	<1	<1	<1 J	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

017208

01/12/09

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	MW-94A 4/8/2008
1,1,1-Trichloroethane		µg/L	<1 4	<2	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1 4	<2	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	<2.9	--	--	--	--	--	--	--
Carbon tetrachloride		µg/L	<1 4 J	<2	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<1.4	<2	0.19 J	<1	0 139 J	0.196 J	0.129 J	0.138 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	0.42 J
Tetrachloroethene		µg/L	37	47	42	47	52.2	48	43.5	27.3
trans-1,2-Dichloroethene		µg/L	<1.4	<2	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	4.2	6	6 5	5 8	5.58	6.08	7 44	9 49
Vinyl chloride		µg/L	<1 4	<2	<1	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-94A	MW-94A	MW-94A
	Sample Date	10/13/2008	4/9/2009	10/12/2009
	UNIT			
1,1,1-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	0.147 J	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	1 93	3.06	2.74
Tetrachloroethene	µg/L	32 8	30	27 7
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	6.89	6 78	7.46
Vinyl chloride	µg/L	<1	<1	<1

NOTES:

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017210

1017211

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	MW-96 11/15/2004
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	--	--	--	--	--	--	0 67 J	--
Carbon tetrachloride		µg/L	1.8	<1	<1	<1	<1	<1	3 6	2.9
Chloroform		µg/L	2	2 7	3.8	5 6	6.3	5.9	0 69 B	0.6 J
cis-1,2-Dichloroethene		µg/L	0.23 J	<1	<1	<1	<1	<1	0.67 J	0 52 J
Tetrachloroethene		µg/L	19	0.88 J	0.21 J	0.3 J	0 13 J	0.14 J	8 9	6.1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.19 J	<1	<1	<1	<1	<1	0.22 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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-96	MW-96	MW-96	MW-96-LS-3	MW-96-LA-5	MW-96	MW-96	MW-96
	Sample Date	2/21/2005	5/20/2005	5/20/2005	4/16/2007	10/4/2007	10/10/2008	4/6/2009	10/8/2009
	UNIT								
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	1 5	3 4	3 4	3.47	3 4	1.03 J	0.69 J	2
Chloroform	µg/L	0.5 B	0.64 B	0.64 B	0.901	0.739	0.663 J	0 73	0 58
cis-1,2-Dichloroethene	µg/L	0 34 J	19	0 6 J	0.814 J	0.836 J	<1	<1	<1
Tetrachloroethene	µg/L	3.4	6.5	6.5	4.35	4.33	1.46 J	3	7.78
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	0.419 J	<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

ug/L micrograms per liter

DQE FLAGS.

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

SS1017213

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-97	MW-97	MW-97	MW-97	MW-97	MW-97	MW-97	MW-97	MW-97
Analyte	**Sample Date**	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	3/31/2004
	UNIT									
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	--	--	<2
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	0 14 J	2.2
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS:

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-97

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	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	MW-97 10/13/2008	MW-97 4/10/2009	MW-97 10/7/2009
	UNIT								
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.16 B	0.228 J	0.292 J	0.255 J	0 164 J	0.267 J	0 316	0.277 J
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	5 8	14.7	18 8	25.7	21 8	29 6	31.3	37.4
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

10017214

10172151

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	--	--	--	--	--	<2	--	--
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-98

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	MW-98 5/19/2005	MW-98-LB-1 10/25/2006	MW-98-LS-3 4/13/2007	MW-98-LA-5 10/3/2007	MW-98 4/7/2008	MW-98 10/10/2008	MW-98 4/10/2009	MW-98 10/7/2009
	UNIT								
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	<1	<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	<0.3
cis-1,2-Dichloroethene	µg/L	<1	0 252 J	<1	<1	<1	8.6 J	0 346 J	0 304 J
Tetrachloroethene	µg/L	28	33.1	35.2	36.9	34.8	25.5 J	30.1	38 8
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	2	2 37	2 63	2.69	1.93	2.34 J	2 18	2.79
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017216

1101721?

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-99	MW-99	MW-99	MW-99	MW-99	MW-99	MW-99	MW-99
Analyte	**Sample Date**	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001
	UNIT								
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	<1	<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	<1
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	0.14 J	<1	0.28 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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-99

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-99	MW-99	MW-99	MW-99-LB-1	MW-99-LA-5	MW-99	MW-99
	Sample Date	11/30/2001	11/30/2001	5/18/2004	10/18/2006	10/3/2007	10/9/2008	10/7/2009
	UNIT							
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	<2	--	--	--	
Carbon tetrachloride	µg/L	<1	<1	<1 J	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<1	0 22 J	0.2 J	0 265 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	0.38 J	0.58 J	0.28 J	<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

ug/L micrograms per liter

DQE FLAGS:

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017218

10172119

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW100B-EBT-TS1-110-115	MW100B-EBT-TS2-110-115	MW100B-EBT-TS3-110-115	MW100B-EBT-TS4-110-115	MW100B-EBT-TS5-110-115	MW100B-EBT-TS6-100-115	MW100B-EBT-TS7	MW100B-EBT-TS8-110-115
Analyte	**Sample Date**	7/8/2002	7/29/2002	9/3/2002	10/7/2002	11/11/2002	12/16/2002	1/20/2003	2/24/2003
	UNIT								
1,1,1-Trichloroethane	µg/L	<0.25	<0 25	<0.25	<0.25	<0.25	<0 25	<0.25	<0.25
1,1-Dichloroethene	µg/L	<0.5	<0.5	<0 5	<0 5	<0.5	<0.5	<0 5	<0.5
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	<0 25	<0 25	<0.25	<0.25	<0.25	<0 25	<0.25	<0.25
Chloroform	µg/L	0.19 J	<0 125	<0.125	<0.125	<0 125	<0.125	<0.125	<0.125
cis-1,2-Dichloroethene	µg/L	1.3	0.509 J	17.7	33.4	31.4	24 1	26 4	28 7
Tetrachloroethene	µg/L	49	1.56	25 3	14 5	1.77	2.35	0 395 J	0 53
trans-1,2-Dichloroethene	µg/L	<0.25	<0.25	<0.25	0 269 J	<0.25	0.321 J	<0 25	<0 25
Trichloroethene	µg/L	72	22.8	33.1	11 6	2 27	2.06	0.4 J	0 407 J
Vinyl chloride	µg/L	<0.25	<0 25	<0.25	<0 25	<0 25	<0.25	2.57	0.436 J

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW100B-EBT-TS9-100-115	MW100B-EBT-TS10-110-115	MW100B-EBT-TS11-110-115	MW100B-EBT-TS12-110-115	MW100B-EBT-TS13-110-115	MW-100B	MW-100B	MW-100B
	Sample Date	3/24/2003	4/21/2003	5/19/2003	6/23/2003	7/21/2003	3/30/2004	11/12/2004	2/18/2005
	UNIT								
1,1,1-Trichloroethane	µg/L	<0.25	<0.25	<0.25	<0 25	<0.25	<5	<5	<1
1,1-Dichloroethene	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	0 41 J
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	140	--	--
Carbon tetrachloride	µg/L	<0 25	<0.25	<0.25	<0.25	<0 25	<5	<5	<1
Chloroform	µg/L	<0.125	<0.125	<0 125	<0.125	<0 125	<5	<5	<1
cis-1,2-Dichloroethene	µg/L	59.4	61 3	75.2	88.2	89	140	160	120
Tetrachloroethene	µg/L	0.341 J	<0.25	<0.25	<0.25	<0 25	<5	<5	2 8
trans-1,2-Dichloroethene	µg/L	0.274 J	0 323 J	0.333 J	0.356 J	0.312 J	<5	<5	<1
Trichloroethene	µg/L	<0.25	<0.25	<0.25	<0 25	<0.25	<5	<5	3 4
Vinyl chloride	µg/L	0.968 J	0 797 J	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

ug/L micrograms per liter

DQE FLAGS:

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017220

1017221

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW-100B 5/18/2005	MW-100B 10/23/2006	MW-100B 4/13/2007	MW-100B 10/2/2007	MW-100B 4/7/2008	MW-100B 10/8/2008	MW-100B 4/8/2009	MW-100B 10/7/2009
1,1,1-Trichloroethane		µg/L	<3.3	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	0.3 J	<1	<1	<1	0.746 J	0.973 J	<1	<1
1,2-Dichloroethene (Total)		µg/L	--	--	--	--	--	--	--	--
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<1	<0.3	<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	21.5
Tetrachloroethene		µg/L	5 8	101	98.9	29 6	64.2	0.706 J	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	0.39 J	0 432 J	0 605 J	0.92 J	0 783 J	<1	<1
Trichloroethene		µg/L	6.2	43.1	39.4	12.6	31.4	0 309 J	<1	<1
Vinyl chloride		µg/L	0 29 J	0 716 J	0.595 J	1 02	0 836 J	1.75	94.6	85.2 J

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-101

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-101-89	MW-101-109	MW-101-124	MW-101	MW-101	MW-101,97.5	MW-101,129	MW-101,97 5
	Sample Date	12/21/2001	12/21/2001	12/21/2001	3/30/2004	11/11/2004	2/18/2005	2/18/2005	5/20/2005
	UNIT								
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<20	<17	<1 4	<1 3	<1.2
1,1-Dichloroethene	µg/L	<1	<1	<1	<20	<17	<1 4	<1.3	<1.2
1,2-Dichloroethene (Total)	µg/L	--	--	--	<40	--	--	--	--
Carbon tetrachloride	µg/L	<1	<1	<1	<20	<17	<1.4	<1.3	<1.2
Chloroform	µg/L	0.38 J	<1	0 42 J	<20	<17	0.27 B	0.31 B	0.24 B
cis-1,2-Dichloroethene	µg/L	0.34 J	0.27 J	0.39 J	<20	<17	<1·4	0 3 J	0 32 J
Tetrachloroethene	µg/L	530	450	460	450	450 J	470	460	350
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<20	<17	<1.4	<1.3	<1 2
Trichloroethene	µg/L	0.95 J	0.87 J	0.84 J	<20	<17	0 47 J	0 43 J	<1 2
Vinyl chloride	µg/L	<1	<1	<1	<20	<17	<1.4	<1.3	<1 2

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS:

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017222

1017223

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	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	MW-101B 3/6/2007	MW-101T 5/30/2007
	UNIT								
1,1,1-Trichloroethane	µg/L	<1.2	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1.2	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	<1 2	<1	<1	<1	<1	<1	<1	<1 J
Chloroform	µg/L	0.23 B	0.261 J	0.233 J	0.155 J	0.156 J	0 164 J	0.129 J	0.148 J
cis-1,2-Dichloroethene	µg/L	<1.2	0 266 J	0.279 J	<1	<1	0 621 J	9 4	0.428 J
Tetrachloroethene	µg/L	340	251	239	196	192	192	193	123
trans-1,2-Dichloroethene	µg/L	<1.2	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0 35 J	0.298 J	0.293 J	<1	<1	<1	0.358 J	0 364 J
Vinyl chloride	µg/L	<1.2	<1	<1	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-101

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-101B	MW-101T	MW-101B	MW-101T	MW-101B	MW-101T	MW-101B	MW-101T
	Sample Date	5/30/2007	9/11/2007	9/11/2007	12/11/2007	12/11/2007	3/14/2008	3/14/2008	6/10/2008
	UNIT								
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--			
Carbon tetrachloride	µg/L	<1 J	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.206 J	0.162 J	0.164 J	<0.3	<0.3	0.149 J	<0 3	0 137 J
cis-1,2-Dichloroethene	µg/L	1.01	0.609 J	7.35	0 578	5 26	10 1	35.6	3.22
Tetrachloroethene	µg/L	135	134	147	125	120	113	81 3	101
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0 311 J	0 46 J	0 646 J	0.305	0.843	1 37	2.17	1.09
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

10117224

10172.25

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	MW-101B 6/10/2008	MW-101T 12/10/2008	MW-101B 12/10/2008	MW-101T 3/11/2009	MW-101B 3/11/2009	MW-101T 10/7/2009	MW-101B 10/7/2009
	UNIT							
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L							
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	23.3	51 2	29.1	35 2	31.2	1.85	2.03
Tetrachloroethene	µg/L	78.9	16 5	47	46 9	55.6	76.5	96 2
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	4 15	1 63	0 923 J	2.16	3.53	0.746 J	0.809 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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-102B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW-102B 5/8/2004	MW-102B-LB-1 10/19/2006	MW-102B-LA-5 10/3/2007	MW-102B 10/13/2008	MW-102B 10/8/2009
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1 J	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1 J	<1
1,2-Dichloroethene (Total)		µg/L	<2	--	--	--	--
Carbon tetrachloride		µg/L	<1	<1	<1	<1 J	<1
Chloroform		µg/L	<1	<0.3	<0 3	<0.3 J	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1 J	<1
Tetrachloroethene		µg/L	<1	<1	0.308 J	<1 J	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1 J	<1
Trichloroethene		µg/L	<1	<1	<1	<1 J	<1
Vinyl chloride		µg/L	<1	<1	<1	<1 J	<1

NOTES:

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017226

1017227

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-103-10	MW-103-9	MW-103-8	MW-103-7	MW-103-6	MW-103-5	MW-103-4	MW-103-3
	Sample Date	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001
	UNIT								
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	1.1	1 1	1.2	1.4	1 2	1.5	1.1	1.4
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	16	17	16	17	16	15	14	16
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	0.39 J
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	5 8	5.6	4 9	4.9	4.6	4 4	3.9	4 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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-103

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW-103-2 11/30/2001	MW-103-1 11/30/2001	MW-103 5/11/2004	MW-103 2/20/2005	MW-103-LB-1 10/3/2006	MW-103-LA-5 10/4/2007	MW-103 10/6/2008	MW-103 10/11/2009
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	1.3	1 6	1.7	1.94	1.18	1.56
1,2-Dichloroethene (Total)		µg/L	--	--	0.44 J	--	--	--	--	--
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	4.3	1 9	12	13	12 2	11.7	11.1	8.02
cis-1,2-Dichloroethene		µg/L	<1	<1	0.44 J	0.43 J	0.322 J	0.35 J	<1	0.314 J
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	0.69 J	0.3 J	4	4.4	5.04	6.63	5.27	5.44
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017228

1017229

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-104-10	MW-104-9	MW-104-8	MW-104-7	MW-104-6	MW-104-5	MW-104-4	MW-104-3	MW-104-2
	Sample Date	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001
	UNIT									
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	1.3	1 3	1.2	1 4	1.1	0.48 J	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	20	19	14	18	17	10	5	4.8	4.6
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	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	24	20	19	19	16	6.4	1.3	1 1	1.1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS:

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-104

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-104-1	MW-104	MW-104	MW-104-LB-1	MW-104-LS-3	MW-104-LA-5	MW-104	MW-104	MW-104
	Sample Date	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
	UNIT									
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	1.3	1.6	1.68	1.83	1 98	2.57	1.24	1.54
1,2-Dichloroethene (Total)	µg/L	--	<2	--	--	--	--	--	--	--
Carbon tetrachlonde	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	4	13	16	15.9	13.7	12.8	13.6	11.2	8 45
cis-1,2-Dichloroethene	µg/L	<1	0.36 J	0.38 J	0.446 J	0 589 J	0.554 J	0.63 J	0.305 J	0 473 J
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.89 J	11	14	17.6	17	17.8	18.2	12.6	14 1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DOE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1.01.72.30

10172231

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-107-147	MW-107-125B	MW-107	MW-107,153	MW-107,135.5	MW-107T-LB-1	MW-107B-LB-1	MW-107B-LA-5
	Sample Date	12/21/2001	12/21/2001	5/26/2004	2/20/2005	2/20/2005	10/17/2006	10/17/2006	10/2/2007
	UNIT								
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	<2	--	--	--	--	--
Carbon tetrachloride	µg/L	0.6 J	0.52 J	0.28 J	0 31 J	0.34 J	<1	<1	0.415 J
Chloroform	µg/L	0.16 J	0.14 J	<1	<1	<1	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	0 29 J	0.34 J	0 25 J	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	0 67 J	0.95 J	<1	0.21 J	0 32 J	0.564 J	0.377 J	0.476 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<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	0.585 J	0 95 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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-107

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-107T	MW-107B	MW-107T	MW-107B	MW-107T	MW-107B
	Sample Date	4/9/2008	4/9/2008	10/10/2008	10/10/2008	10/7/2009	10/7/2009
	UNIT						
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--
Carbon tetrachloride	µg/L	0.616 J	0.574 J	<1	<1	0.787 J	0 773 J
Chloroform	µg/L	0.324	0.262 J	0.287 J	0.32 J	0 239 J	0 238 J
cis-1,2-Dichloroethene	µg/L	0 283 J	0 265 J	0.385 J	0.449 J	0 257 J	<1
Tetrachloroethene	µg/L	0.411 J	0 291 J	1.93	0.965 J	5.05	3 36
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	1.67	1.56	2.11	1.8 J	2.51	2.12
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

10017232

10172-33

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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-LA-5 10/1/2007	MW-108 4/7/2008	MW-108 10/10/2008
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	0.19 J	0 618 J	0.553 J	0.657 J	1 1	1.13 J
1,2-Dichloroethene (Total)		µg/L	--	0 46 J	--	--	--	--	--	--
Carbon tetrachloride		µg/L	<1	0 19 J	0.26 J	<1	<1	0.461 J	0 477 J	0.272 J
Chloroform		µg/L	6.4	8.2	6.9	11.7	10.8	12 1	11.7	12.3 J
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	0.598 J
Tetrachloroethene		µg/L	2.6	3.3	3 3	5.41	6 03	5.03	3 93	3.72 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	6.4	15	28	32	33.5	38.4 J	32 7	28.5 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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-108

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-108	MW-108
	Sample Date	4/7/2009	10/5/2009
	UNIT		
1,1,1-Trichloroethane	µg/L	<1	<1
1,1-Dichloroethene	µg/L	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--
Carbon tetrachloride	µg/L	<1	<1
Chloroform	µg/L	10.1	9.44
cis-1,2-Dichloroethene	µg/L	0 674 J	0.584 J
Tetrachloroethene	µg/L	4.49	4.39
trans-1,2-Dichloroethene	µg/L	<1	<1
Trichloroethene	µg/L	28 1	29.1
Vinyl chloride	µg/L	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

10172934

10117235

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	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	MW113-EBT-TS6-99.5-104.5	MW113-EBT-TS7-99.5-104.5
	Sample Date	5/20/2002	7/8/2002	7/29/2002	9/3/2002	10/7/2002	11/11/2002	12/16/2002	1/20/2003
	UNIT								
1,1,1-Trichloroethane	µg/L	<0.25	<0.25	<0.25	<0.25	<0 25	<0.25	<0.25	<0.25
1,1-Dichloroethene	µg/L	<0.5	<0 5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	30	50	69 1	60 7	64.5	59	69.6 J	71 6
Chloroform	µg/L	76	79	98	90 6	83.2	78.2	87.6	93 8
cis-1,2-Dichloroethene	µg/L	44	48	55 5	59.9	92.4	77.3	83.4	94.1
Tetrachloroethene	µg/L	30	45	59 3	112	80.4	97	96.9	91 1
trans-1,2-Dichloroethene	µg/L	<0 25	<0.25	<0.25	<0.25	<0.25	<0 25	<0.25	<0.25
Trichloroethene	µg/L	15	20	26.7	29.4	28	31 6	32.7	30.4
Vinyl chloride	µg/L	<0 25	<0.25	<0 25	<0.25	<0 25	<0.25	<0.25	<0.25

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DOE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW113-EBT-TS9-99.5-104.5	MW113-EBT-TS10-99 5-104.5	MW113-EBT-TS11-99 5-104.5	MW113-EBT-TS12-99.5-104.5	MW113-EBT-TS13-99 5-104.5	MW113-EBT-TS14-99 5-104.5	MW-113	MW-113
	Sample Date	3/24/2003	4/21/2003	5/19/2003	6/23/2003	7/21/2003	8/18/2003	5/24/2004	11/14/2004
	UNIT								
1,1,1-Trichloroethane	µg/L	<0 25	<0.25	<0.25	<0.25	<0.25	<0.25	<5	<5
1,1-Dichloroethene	µg/L	<0.5	<0 5	<0.5	<0.5	<0.5	<0.5	<5	<5
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	100	--
Carbon tetrachloride	µg/L	50 8	53 2 J	26	43 6 J	38	42 7	20	44
Chloroform	µg/L	70.8	81	84.4	89.8	89 7	80 4	27	34
cis-1,2-Dichloroethene	µg/L	69.7	71.2	71.6	93 9	102 J	109	100	110
Tetrachloroethene	µg/L	48.7	49.4	27.5	54 5	56.1	63 6	64	100
trans-1,2-Dichloroethene	µg/L	<0.25	0 266 J	<0.25	<0.25	<0 25	<0.25	<5	<5
Trichloroethene	µg/L	23.3	21.1	15 3	19 7	19.3	18.5	8.8	15
Vinyl chloride	µg/L	<0 25	<0 25	<0 25	<0.25	<0.25	<0 25	<5	<5

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017236

10172371

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-113	MW-113	MW-113-LB-1	MW-113-LS-3	MW-113-LA-5	MW-113	MW-113	MW-113	MW-113
	Sample Date	2/24/2005	5/20/2005	10/23/2006	4/16/2007	10/4/2007	4/7/2008	10/8/2008	4/9/2009	10/10/2009
	UNIT									
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1 J	<1	<1	<1	<1	<1	0.892 J	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	49	47	75.6	89 1	96.9	75 1	110	101	67.4
Chloroform	µg/L	39	36	33.8	35 9	36.4	30.9	45.3	39	29 5
cis-1,2-Dichloroethene	µg/L	87	78	54 9	46.3	50.2	37.8	59 6	57.1	49.5
Tetrachloroethene	µg/L	130	130	182	163	151	170	156 J	192	200
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	0.354 J	<1	<1	<1
Trichloroethene	µg/L	21	22	25 9	24.1	26	20.2	28 9	29.5	26 7
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-115

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW115-EBT-B-94-99 5/21/2002	MW115-EBT-TS1-94-99 7/8/2002	MW115-EBT-TS2-94-99 7/29/2002	MW115-EBT-TS3-94-99 9/3/2002	MW115-EBT-TS4-94-99 10/7/2002	MW115-EBT-TS5-94-99 11/11/2002	MW115-EBT-TS6-94-99 12/16/2002	MW115-EBT-TS7-94-99 1/20/2003
1,1,1-Trichloroethane		µg/L	<0 25	<0.25	<0.25	<0.25	<0 25	<0 25	<0.25	<0.25
1,1-Dichloroethene		µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethene (Total)		µg/L	--	--	--	--	--	--	--	--
Carbon tetrachloride		µg/L	<0.25	<0.25	<0.25	<0.25	<0.25	<0 25	<0 25	<0.25
Chloroform		µg/L	<0.125	<0.125	<0.159	<0.125	<0.125	<0 125	<0 125	<0.125
cis-1,2-Dichloroethene		µg/L	<0.25	<0.25	0.334 J	<0.25	<0.25	<0 25	<0 25	<0.25
Tetrachloroethene		µg/L	1.3	1.4	<0.25	0.744	1.35	1.76	2.11	1.83
trans-1,2-Dichloroethene		µg/L	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Trichloroethene		µg/L	59	60	255	117	49 5	47	36	49
Vinyl chloride		µg/L	<0.25	<0 25	<0 25	<0 25	<0.25	<0.25	<0 25	<0.25

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017238

1017239

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW115-EBT-TS8-94-99 2/24/2003	MW115-EBT-TS9-94-99 3/24/2003	MW115-EBT-TS10-94-99 4/21/2003	MW115-EBT-TS11-94-99 5/19/2003	MW115-EBT-TS12-94-99 6/23/2003	MW115-EBT-TS13-94-99 7/21/2003	MW115 5/26/2004	MW-115 11/12/2004
1,1,1-Trichloroethane		µg/L	<0.25	<0.25	<0 25	<0.25	<0.25	<0.25	<1	<1
1,1-Dichloroethene		µg/L	<0 5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1
1,2-Dichloroethene (Total)		µg/L	--	--	--	--	--	--	7.2	--
Carbon tetrachloride		µg/L	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<1	<1
Chloroform		µg/L	<0 125	<0.125	<0.125	<0 125	<0.125	<0 125	<1	<1
cis-1,2-Dichloroethene		µg/L	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	7 2	0.81 J
Tetrachloroethene		µg/L	1 89	1 95	1.52	0.367 J	0 584	1 85	5.7	6 7
trans-1,2-Dichloroethene		µg/L	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<1	<1
Trichloroethene		µg/L	23.6	15 2	12.9	12 1	12.8	8 41	5 5	4.6
Vinyl chloride		µg/L	<0.25	<0 25	<0 25	<0.25	<0 25	<0 25	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-115

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	MW-115 2/18/2005	MW-115 5/18/2005	MW-115-BL 8/10/2006	MW-115-EBT-1 12/6/2006	MW-115-EBT-2 3/7/2007	MW-115-EBT-3 6/5/2007	MW-115-EBT-4 9/19/2007	MW-115-EBT-5 12/18/2007
	UNIT								
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	<1	<1	<1	J	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<0.3	<0.3	<0 3	<0 3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	5.3	0.47 J	4 2	0.664 J	0.253 J	0.492 J	10.2	2.49
Tetrachloroethene	µg/L	7.6	8.1	10 1	9.16	10 4	12.1	9.62	9.81
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	4 1	4.6	4.96	2.18	1.85	2.14	1.5	1.35
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017240

10172A1

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-115	MW-115	MW-115	MW-115	MW-115
Analyte	Sample Date	3/17/2008	6/13/2008	12/12/2008	3/12/2009	10/5/2009
	UNIT					
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--
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	0 583 J	1.56	3.63	7.47	5.74
Tetrachloroethene	µg/L	8 94	8.89	9.46	10.8	15.2
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	1.04	1.81	1.74	2.44	4.26
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-125

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW125-EBT-B-99-104	MW125-EBT-TS1-99-104	MW125-EBT-TS2-99-104	MW125-EBT-TS3-99-104	MW125-EBT-TS4-99-104	MW125-EBT-TS5-99-104	MW125-EBT-TS6-99-104	MW125-EBT-TS7-99-104
	Sample Date	5/21/2002	7/8/2002	7/29/2002	9/3/2002	10/7/2002	11/11/2002	12/16/2002	1/20/2003
	UNIT								
1,1,1-Trichloroethane	µg/L	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
1,1-Dichloroethene	µg/L	<0 5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	<0 25	<0 25	<0.25	<0.25	<0.25	<0 25	<0.25	<0 25
Chloroform	µg/L	0.5 J	<0.125	<0.125	<0.125	<0.125	<0.125	<0.125	<0.125
cis-1,2-Dichloroethene	µg/L	<0.25	<0.25	<0.25	<0.25	<0.25	0.399 J	8.99	40.8
Tetrachloroethene	µg/L	8.9	8.1	<0.25	1.32	2 01	3.65	7.07	6.57
trans-1,2-Dichloroethene	µg/L	<0 25	<0 25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Trichloroethene	µg/L	75	40	43.2	36 7	20 8	19.4	17.5	12.4
Vinyl chloride	µg/L	<0.25	<0 25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

10172412

1017243

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW125-EBT-TS8-99-104	MW125-EBT-TS9-99-104	MW125-EBT-TS10-99-104	MW125-EBT-TS11-99-104	MW125-EBT-TS12-99-104	MW125-EBT-TS13-99-104	MW-125	MW-125
	Sample Date	2/24/2003	3/24/2003	4/21/2003	5/19/2003	6/23/2003	7/21/2003	5/21/2004	11/12/2004
	UNIT								
1,1,1-Trichloroethane	µg/L	<0.25	<0 25	<0.25	<0.25	<0 25	<0.25	<1.7	<3.3
1,1-Dichloroethene	µg/L	<0.5	<0 5	<0.5	<0.5	<0.5	<0.5	<1.7	<3.3
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	62	--
Carbon tetrachloride	µg/L	<0.25	<0.25	<0 25	<0 25	<0.25	<0 25	<1.7	<3.3
Chloroform	µg/L	<0.125	<0.125	<0.125	<0.125	<0 125	<0.125	<1.7	<3 3
cis-1,2-Dichloroethene	µg/L	19 7	15 4	34.9	8 1	15	1.99	62	38
Tetrachloroethene	µg/L	7.17	5.68	7 79	3 24	8.85	6 55	28	52 J
trans-1,2-Dichloroethene	µg/L	<0.25	<0 25	<0 25	<0.25	<0.25	<0 25	<1.7	<3 3
Trichloroethene	µg/L	17	19	16.5	8 49	13 9	5.53	18	26 J
Vinyl chloride	µg/L	<0 25	<0.25	<0 25	<0.25	<0.25	<0 25	<1 7	<3 3

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-125

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW-125 2/18/2005	MW-125 5/18/2005	MW-125-LB-1 10/2/2006	MW-125-LS-3 4/13/2007	MW-125-LA-5 10/2/2007	MW-125 4/7/2008	MW-125 10/7/2008	MW-125 4/8/2009	MW-125 10/5/2009
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	0.19 J	<1	<1	<1	<1	<1	0.872 J	<1	<1
1,2-Dichloroethene (Total)		µg/L	--	--	--	--	--	--	--	--	--
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<1	<1	0.168 J	<0 3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	34	47	16.3	10.3	26 3	16 3	54 4	76	33.8
Tetrachloroethene		µg/L	44	48	35.6	33.1	48 3	39 3	11	0 399 J	4 88
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	0.274 J	0 33 J	<1
Trichloroethene		µg/L	24	26	13 3	9 27	16	11 8	5 58	<1	3.33
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	0 289	0 509 J	0.265 J

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260 SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

A1017244

1017245

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	MW-140 10/12/2009
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	<2	--	--	--	--	--	--	--
Carbon tetrachloride		µg/L	<1	0 48 J	0 44 J	0 92 J	0.313 J	<1	<1	0 558 J
Chloroform		µg/L	0.42 J	0 21 B	0.18 J	0.16 B	0 162 J	0 16 J	0 259 J	0 205 J
cis-1,2-Dichloroethene		µg/L	<1	0.28 J	0 22 J	0.22 J	<1	<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	0 806 J
trans-1,2-Dichloroethene		µg/L	<1	<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	1.25
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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-LA-5 10/2/2007	MW-141 4/8/2008
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	<2	--	--	--	--	--	--	--
Carbon tetrachloride		µg/L	<1	<1	<1	0 82 J	<1	<1	<1	0 418 J
Chloroform		µg/L	1 4	1.5 B	1 8	2 B	2.37	2.46	2 09	2 31
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	5.9	19	26	31	27 6	21.3	18	16 9
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1.2	2.1	2 2	2 8	3 56	3 02	2.52	2 47
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017246

1017247

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-141	MW-141	MW-141
	Sample Date	10/10/2008	4/9/2009	10/5/2009
	UNIT			
1,1,1-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	2.48 J	1.85	1.78
cis-1,2-Dichloroethene	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	19.7 J	15.7	17.1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	3.24 J	2 48	3.02
Vinyl chloride	µg/L	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-142

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	MW-142 10/8/2009
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	0 3 J	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	<2	--	--	--	--	--	--	--
Carbon tetrachloride		µg/L	<1	0 36 J	<1	0 77 J	<1	<1	<1	<1
Chloroform		µg/L	<1	0 25 B	0 17 B	<1	<0.3	<0.3	<0.3	0.128 J
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	0.3 J	1.4	0.65 J	0.39 J	0 371 J	0.709 J	1.61	2 74
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

A31017248

N1017249

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	MW-143 5/5/2004	MW-143 11/11/2004	MW-143 2/17/2005	MW-143 5/17/2005	MW-143-LB-1 10/19/2006	MW-143 10/13/2008
	UNIT						
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1 J
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1 J
1,2-Dichloroethene (Total)	µg/L	<2	--	--	--	--	--
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1 J
Chloroform	µg/L	<1	<1	<1	<1	<0.3	<0 3 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1 J
Tetrachloroethene	µg/L	<1	<1 J	<1	<1	<1	<1 J
trans-1,2-Dichloroethene	µg/L	<1 J	<1	<1	<1	<1	<1 J
Trichloroethene	µg/L	<1	<1	<1	0 31 J	0 7 J	1.19 J
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1 J

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS:

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-197A

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	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	MW-197A 10/6/2008	MW-197A 4/6/2009	MW-197A 10/6/2009
	UNIT									
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<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	0.174 J	0.13 J	0.187 J
cis-1,2-Dichloroethene	µg/L	0.447 J	0.345 J	0.432 J	0.419 J	0 445 J	1 48	3.13	3.69	2 57
Tetrachloroethene	µg/L	130	125	114	103	87.3	82.8	54 8	42.1	33.8
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	2.04	2.04	2.28	2.31	2.42	2.42	2.4	2.09	2.04
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

10172250

1017251

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-197B-LB-1	MW-197B-RW-2	MW-197B-LS-3	MW-197B-LQ-4	MW-197B-LA-5	MW-197B	MW-197B	MW-197B	MW-197B
	Sample Date	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
	UNIT									
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	0 227 J	0 208 J	<0.3	0.166 J	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	0.625 J	0 484 J	0.792 J	5.29	10.7	47.6	48.7	38.2	25.9
Tetrachloroethene	µg/L	179	166	138	134	105 J	38.6	16.7	20.2	24.1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	8 51	8 76	9.11	10.2	10 3	9.01	9.77	12.6	12.3
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1	0 684 J	3 09

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	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	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	4/9/2009	10/12/2009
	UNIT									
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	0.657 J	<1	<1	<1	0 679 J	0.524 J	<1	<1
Carbon tetrachloride	µg/L	<1	0.915 J	0.32 J	0.267 J	0 438 J	0 326 J	<1	<1	<1
Chloroform	µg/L	<0.3	0.2 J	0.146 J	<0 3	<0 3	<0.3	0 171 J	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<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	3 73	8 39
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

10172525

1017253

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-199A-LB-1	MW-199A-RW-2	MW-199A-LS-3	MW-199A-LQ-4	MW-199A-LA-5	MW-199A	MW-199A
Analyte	**Sample Date**	10/23/2006	1/24/2007	4/13/2007	7/12/2007	10/2/2007	10/9/2008	10/5/2009
	UNIT							
1,1,1-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	0 126 J	<0.3	<0.3	0.132 J	<0 3	0.137 J	<0 3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	0.361 J	<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	0 419 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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

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R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW-199B-LB-1 10/23/2006	MW-199B-RW-2 1/24/2007	MW-199B-LS-3 4/13/2007	MW-199B-LQ-4 7/11/2007	MW-199B-LA-5 10/2/2007	MW-199B 4/8/2008	MW-199B 10/9/2008	MW-199B 4/9/2009	MW-199B 10/7/2009
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	0.581 J	<1	0.773 J	0 996 J	<1	<1
Carbon tetrachloride		µg/L	0.719 J	0.949 J	0 555 J	1.05	0.376 J	0.6 J	<1	0.476 J	0.324 J
Chloroform		µg/L	0.197 J	0.179 J	0.232 J	0.279 J	0.146 J	0.177 J	0.24 J	0.217 J	0 158 J
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<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	0.612 J	0.494 J	0.694 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	99 2 J	115	115	136	78.6	56.5	124	115	93 2
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

3810172541

1017255

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	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	MW-200-LB-8	MW-200	MW-200
Analyte	**Sample Date**	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
	UNIT									
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	0.146 J	<0.3	<0.3	0.206 J	0 175 J	<0.3	<0 3
cis-1,2-Dichloroethene	µg/L	0 466 J	0 303 J	0.532 J	0.543 J	0.419 J	0 345 J	0.531 J	5.68	11 6
Tetrachloroethene	µg/L	72	81.9	70 2	62 9	73.9	132	125	74 7	25 6
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5 47	5 94	7.49	7 49	6.88	4.13	3.42	4.82	8.04
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<1,	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-202A-LB-1	MW-202A-RW-2	MW-202A-LS-3	MW-202A-LQ-4	MW-202A-LA-5	MW-202A	MW-202A	MW-202A	MW-202A
	Sample Date	10/23/2006	1/24/2007	4/16/2007	7/11/2007	10/1/2007	4/7/2008	10/7/2008	4/7/2009	10/6/2009
	UNIT									
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	0 365 J	0 749 J	0.382 J	0.904 J	0.552 J	0.695 J	<1	<1	0.466 J
Chloroform	µg/L	0 232 J	0.198 J	0.213 J	0.249 J	0.238 J	0.225 J	0.17 J	0.171 J	<0 3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	0.251 J	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	0.257 J	0 326 J	0.316 J	0 371 J	0 672 J	0.443 J	0.262 J	0.399 J	0 294 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	1.85	1.59	1 88	2.22	1.66	1.77	1.21	1.35	1 45
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017256

3-10172577

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	MW-202B 10/7/2008	MW-202B 4/7/2009	MW-202B 10/6/2009
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	0.263 J	<1	<1	0.506 J
Chloroform		µg/L	0.778	0 857	0.752	1.05	0 907	1.46	1.92	1 96	1.92
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	5.51	8 42	8.6	8 16	3 82	16.3	21.3	19.5	18.6
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.811 J	1 27	1.46	2 2	1.36	2.21	2 57	3 3	3.79
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-203A

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-203A	MW-203A-LQ-4	MW-203A-LA-5	MW-203A-LQ-6	MW-203A	MW-203A	MW-203A	MW-203A
	Sample Date	4/17/2007	7/9/2007	10/3/2007	1/8/2008	4/8/2008	10/6/2008	4/9/2009	10/6/2009
	UNIT								
1,1,1-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 J	<1	<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	0 158 J
cis-1,2-Dichloroethene	µg/L	<1	<1	0.294 J	0 972 J	1.14	1.2	1.68	3.38
Tetrachloroethene	µg/L	62 6	69.1 J	86.8	108	144	143	170	149
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	1.27	1.46	1.69	1 93	2.03	2.11	2.23	2.34
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017258

1012259

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-203B	MW-203B-LQ-4	MW-203B-LA-5	MW-203B-LQ-6	MW-203B	MW-203B	MW-203B	MW-203B
	Sample Date	4/27/2007	7/9/2007	10/3/2007	1/8/2008	4/8/2008	10/6/2008	4/9/2009	10/6/2009
	UNIT								
1,1,1-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 J	<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	50.1	63.5	55	58 6	59.7	39.2	26.6	14.4
Tetrachloroethene	µg/L	38 4	21.1	13.9	9.39	10 8	19	21.1	24.8
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	8 97	7.68	7 92	6.31	6 25	11.3	9.15	9.16
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	0.358 J	7.12	5.14

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-204A

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-204A	MW-204A-LQ-4	MW-204A-LA-5	MW-204A-LQ-6	MW-204A	MW-204A	MW-204A	MW-204A
Analyte	**Sample Date**	4/23/2007	7/10/2007	10/2/2007	1/8/2008	4/7/2008	10/6/2008	4/7/2009	10/7/2009
	UNIT								
1,1,1-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	0.763 J	0.785 J	0.846 J	0 922 J	1.05	0.769 J	1 21	6 45
Tetrachloroethene	µg/L	38 8	36.2	37	42.7	44.6 J	42	47.4	39.2 J
trans-1,2-Dichloroethene	µg/L	<1	<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	1 21
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017260

1017261

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-204B	MW-204B-LQ-4	MW-204B-LA-5	MW-204B-LQ-6	MW-204B	MW-204B	MW-204B	MW-204B
	Sample Date	4/23/2007	7/11/2007	10/2/2007	1/8/2008	4/9/2008	10/6/2008	4/8/2009	10/6/2009
	UNIT								
1,1,1-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	0.125 J	<0.3	<0 3	0.13	<0 3	<0.3	0 177 J
cis-1,2-Dichloroethene	µg/L	0.906 J	0 916 J	1.05	2 3	1.39	1 26	1.29	6 13
Tetrachloroethene	µg/L	26 3	17.2	19	24.5	20.2	29.4	16 3	14.9
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	2 37	4.88	4.7	3.2	4.27	2.53	4 98	4.95
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-205A

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-205A	MW-205A-LQ-4	MW-205A-LA-5	MW-205A-LQ-6	MW-205A	MW-205A	MW-205A	MW-205A
	Sample Date	4/23/2007	7/10/2007	10/3/2007	1/8/2008	4/7/2008	10/9/2008	4/10/2009	10/5/2009
	UNIT								
1,1,1-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	0 238 J	0 222 J	0.185 J	0.165 J	0.212 J	0.223 J	0 132 J	<0.3
cis-1,2-Dichloroethene	µg/L	0.337 J	0 465 J	0.538 J	3.12	1.14	9.58 J	16.8	23.5
Tetrachloroethene	µg/L	102	180	145	153	141	126 J	82.6	53.1
trans-1,2-Dichloroethene	µg/L	<1	<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	7 28
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

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HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	MW-205B 10/7/2009
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	0.891 J	<1	<1
Carbon tetrachloride		µg/L	<1	<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	<0 3
cis-1,2-Dichloroethene		µg/L	.0 546 J	0.616 J	4.41	26.4	22.4	43	38 8	29.5
Tetrachloroethene		µg/L	129	149	100	82.3	31 2	24.9	19.7	24.4
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	7.2	9 22	8.74	9 75	5.15	8.48	9.36	11.8
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1	2.06 J

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-206A

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-206A	MW-206A-LQ-4	MW-206A-LA-5	MW-206A-LQ-6	MW-206A	MW-206A	MW-206A	MW-206A
	Sample Date	4/15/2007	7/11/2007	10/3/2007	1/8/2008	4/9/2008	10/13/2008	4/7/2009	10/7/2009
	UNIT								
1,1,1-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	0.155 J	<0.3	0.166 J	0 174 J	0.173 J	0.134 J	<0.3	<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	18.6
Tetrachloroethene	µg/L	76.6	99.2	76.4	114	96 5	80.5	46.5	25.6
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	9.81	10.1	12.4	12	13 9	13.2	12.6	12 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

ug/L micrograms per liter

DQE FLAGS.

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

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1017265

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-206B	MW-206B-LQ-4	MW-206B-LA-5	MW-206B-LQ-6	MW-206B	MW-206B	MW-206B	MW-206B
	Sample Date	4/15/2007	7/11/2007	10/3/2007	1/9/2008	4/9/2008	10/13/2008	4/7/2009	10/7/2009
	UNIT								
1,1,1-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	0.139 J	0 14 J	0.148 J	0 147 J	0 136 J	<0.3	<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	11
Tetrachloroethene	µg/L	57 2	77.5	64 9	69.5	69.1	36 4	22.8	17.3
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	8.94	11	11	11.7	11 5	9 91	9.31	9.57
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-207A

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	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	MW-207A 10/5/2009
	UNIT								
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	0.867 J	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	0.44 J	<1	<1	<1	<1
Chloroform	µg/L	5.86	9.99	8.28	10.6	9 12	9.13	10.3	9.72
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	0.974 J
Tetrachloroethene	µg/L	7.92	8.32	10.3	10.5	12 1	13 7	9 75	11
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	21.4	18 6	21.6	24 3	24 2	26.9	47 4	52 7
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017266

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HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	MW-207B 10/6/2009
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	0.935 J	<1	<1	<1
Carbon tetrachloride		µg/L	1 36	1 91	1.37	1.13	1.22	0 916 J	0.851 J	1.23
Chloroform		µg/L	3.09	2 54	1.9	1.26	1.27	1.41	1 6	3.64
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	0 558 J
Tetrachloroethene		µg/L	35 7	32.5	23.7	13	13 1	18	25.5	63.1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	12 1	17.6	62	109	96 2	75 3	102	67.5
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-208A

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	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	MW-208A 10/8/2009
	UNIT								
1,1,1-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	0.216 J	0 228 J	0.214 J	0.221 J	0.217 J	0.21 J	0.18 J	<0 3
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	23 5
Tetrachloroethene	µg/L	174 J	193	163	198	189	182	163	92 8
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	8 12	8 26	8.44	8 45	7 64	9.8	9.8	10 9
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

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HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	MW-208B 10/8/2009
1,1,1-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	0 131 J	<0.3	<0 3	<0.3	<0.3	0 165 J	0 136 J
cis-1,2-Dichloroethene		µg/L	1 12	1.3	1.08	0.932 J	1.51	1.4	2.14	2.06
Tetrachloroethene		µg/L	3.42	2.8	3.02	1 68	2.22	2.94	3.81	5.39
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	18 4	15.7	15	13.2	17.1	21 3	28	37.8
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-209A

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	MW-209A 10/5?2009
1,1,1-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	0.165 J	0.136 J	0 131 J	0.159 J	0.175 J	<0.3	0 132 J
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	0 326 J	<1	<1	<1	<1	<1	0.323 J	<1
trans-1,2-Dichloroethene		µg/L	<1	<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	0.568 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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

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10017271

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	MW-209B 10/10/2009
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1 J	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1 J	<1	<1
Carbon tetrachloride		µg/L	0.327 J	0 962 J	1.86	0.474 J	0.681 J	0 611 J	0.668 J	0.725 J
Chloroform		µg/L	0.251 J	0 56	0.215 J	0.198 J	0.22 J	0 183 J	0.272 J	0 194 J
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1 J	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	0.357 J	<1	0.33 J	0.278 J	0.278 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1 J	<1	<1
Trichloroethene		µg/L	6 4	7 2	14.8	11.7	13	20 J	22.4	30.8
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1 J	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected reporting limit is inaccurate or imprecise

MW-210A

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-210A	MW-210A-LQ-4	MW-210A-LA-5	MW-210A-LQ-6	MW-210A	MW-210A	MW-210A	MW-210A
	Sample Date	4/27/2007	7/9/2007	10/4/2007	1/8/2008	4/8/2008	10/6/2008	4/6/2009	10/6/2009
	UNIT								
1,1,1-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 J	<1	<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	<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	1.63
Tetrachloroethene	µg/L	38.2	36.1	28 8	23.3	28.2	19.4	16 9	8.48
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5.85	6.05	5.63	5 55	6 2	6.09	6.28	4.92
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

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1017273

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	MW-210B 10/6/2009
1,1,1-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 tetrachlonde		µg/L	<1 J	<1	<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	<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	0.995 J
Tetrachloroethene		µg/L	32.4	24 4	21	19 8	20	12 6	12.2	9 39
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	7 29	8.42	10 7	8.46	7 84	7.49	7.2	7 78
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

ug/L micrograms per liter

DQE FLAGS:

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	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
	UNIT							
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	0.995 J	<1	<1
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

USACE 1017277

10017275

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-212	MW-212-LQ-4	MW-212-LA-5	MW-212-LQ-6	MW-212	MW-212	MW-212	MW-212
	Sample Date	4/27/2007	7/9/2007	10/3/2007	1/9/2008	4/8/2008	10/8/2008	4/10/2009	10/10/2009
	UNIT								
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	0.761 J	<1	<1	<1
Carbon tetrachloride	µg/L	0.257 J	0 479 J	0 568 J	0.635 J	0.519 J	<1	0.29 J	0 271 J
Chloroform	µg/L	0.289 J	0.135 J	0.13 J	<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	0.516 J	<1	0.477 J	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	34.4	47.9	41.7	43.9	45 1	37 9 J	38	38.4
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-214A

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-214A	MW-214A-LQ-4	MW-214A-LA-5	MW-214A-LQ-6	MW-214A	MW-214A	MW-214A	MW-214A
	Sample Date	4/16/2007	7/10/2007	10/3/2007	1/9/2008	4/7/2008	10/7/2008	4/10/2009	10/11/2009
	UNIT								
1,1,1-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 tetrachlonde	µg/L	0 601 J	0.476 J	0.725 J	0.575 J	0.709 J	0 647 J	0.752 J	0.891 J
Chloroform	µg/L	2 63	2.32	2.26	2 02	2.06	1.58	2.22	2.21
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	8.83	6 81	6.99	7.29	6.22	4.81	4.51	4 64
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5.59	4.49	4.11	3.65	3.02	1.95	2.31	2 6
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

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HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-214B	MW-214B-LQ-4	MW-214B-LA-5	MW-214B-LQ-6	MW-214B	MW-214B	MW-214B	MW-214B
Analyte	**Sample Date**	4/17/2007	7/11/2007	10/3/2007	1/9/2008	4/7/2008	10/21/2008	4/10/2009	10/11/2009
	UNIT								
1,1,1-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	0.645 J	1.05	0.76 J	0.959 J	0 843 J	0.772 J	0.797 J	0.92 J
Chloroform	µg/L	2.06	1.85	1.47	1.44	1.22	1.27	1.47	1.8
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	6.4	6	4.89	5.44	4 55	4 39	4	4 14
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	4 24	3.83	3.06	2.88	2 36	2.28	1 93	2 25
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-215A

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	MW-215A 10/12/2009
1,1,1-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	0.679 J	0 538 J	0.671 J	0.552 J	0.651 J	0.382 J	0.591 J	0.579 J
Chloroform		µg/L	1.66	1 67	1.76	1 68	1.66	1.44	1.52	1.43
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	5.81	5.58	6.95	7.01	6.27	5.85	4.91	4.91
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	7 82	8.12	7.79	10.2	8.96	7.99	6.2	4.88
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

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HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-215B	MW-215B-LQ-4	MW-215B-LA-5	MW-215B-LQ-6	MW-215B	MW-215B	MW-215B	MW-215B
Analyte	**Sample Date**	4/16/2007	7/9/2007	10/4/2007	1/9/2008	4/9/2008	10/7/2008	4/9/2009	10/12/2009
	UNIT								
1,1,1-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	0 956 J	1.01	0.894 J	0.856 J	0 988 J	0.271 J	0.97 J	1.17
Chloroform	µg/L	0 68	0.71	0.651	0.61	0.663	0 474	0.767	0.686
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	4.36	4.39	4 49	4.71	4.7	2 1	4.99	5.66
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	1 52	1.53	1.47	1 36	1 46	1.25	1 66	1.76
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

ug/L micrograms per liter

DQE FLAGS:

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-216

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	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
	UNIT							
1,1,1-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 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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017280

10017281

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	MW-217 10/8/2009
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	0.736 J	<1	<1	<1
Carbon tetrachloride		µg/L	34.8	42.3 J	53.4	57.3	72 1	96.3 J	92.4	55.6
Chloroform		µg/L	5 05	5 33	5.18	7 43	8.56	13.4 J	9.43	5.24
cis-1,2-Dichloroethene		µg/L	1 34	1 45	1.89	2.43	2.88	4.8 J	3.58	1.8
Tetrachloroethene		µg/L	18.4	25 4 J	31.3	31 7	34.7	26.5 J	31.2	29 9
trans-1,2-Dichloroethene		µg/L	<1	<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	32 9
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-218

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-218	MW-218-LQ-4	MW-218-LA-5	MW-218-LQ-6	MW-218	MW-218	MW-218	MW-218
Analyte	Sample Date	4/17/2007	7/9/2007	10/2/2007	1/9/2008	4/7/2008	10/8/2008	4/8/2009	10/8/2009
	UNIT								
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	0.626 J	0.652 J	0 651 J	<1	0.886 J	0.691 J	<1	<1
Carbon tetrachloride	µg/L	15.1	13 3	17.6	15	17.7	15.6 J	15.7	10 1
Chloroform	µg/L	3 15	2.79	2.45	2.58	2.62	2.78 J	2.75	2.49
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	0.404 J
Tetrachloroethene	µg/L	17.7	16.7	18 5	17.2	17 4	12.2 J	15.2	16.3
trans-1,2-Dichloroethene	µg/L	<1	<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	42.5
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017282

10172283

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-219	MW-219-LQ-4	MW-219-LA-5	MW-219-LQ-6	MW-219	MW-219	MW-219	MW-219
Analyte	**Sample Date**	4/27/2007	7/10/2007	10/3/2007	1/9/2008	4/7/2008	10/10/2008	4/6/2009	10/8/2009
	UNIT								
1,1,1-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	0.643 J	1.06	1.01	0.875 J	0.928 J	1.14 J	1 15	0.935 J
Tetrachloroethene	µg/L	16.3	27.6	33.9	48	41.4	47 J	39.4	26 9
trans-1,2-Dichloroethene	µg/L	<1	<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	2.09
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

MW-229

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-229	MW-229	MW-229	MW-229	MW-229
	Sample Date	10/5/2007	1/9/2008	10/8/2008	4/8/2009	10/8/2009
	UNIT					
1,1,1-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

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

ENV01728

1017285

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	DR1-1-LA-10 10/6/2009
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	0.8J	--	--	--	--	--	--	--
Carbon tetrachloride		µg/L	<1J	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	0.24J	<1	<1	<1	<0 3	<0.3	0.126 J	<0.3
cis-1,2-Dichloroethene		µg/L	0.8J	1 2	1	1 1	1.02	0 969 J	<1	1.08
Tetrachloroethene		µg/L	2 8	3.3	3 3J	3	2.46	2.49	2 69	2.12
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	<1	0.3J	0.29J	0.3J	0.255 J	<1	0 399 J	0.328 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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	DR1 CLUSTER A	DR1-1A	DR1-1A	DR1-1A	DR1-1A-LB-1	DR1-1A-LS-3	DR1-1A-LA-5	DR1-1A-LS-7
Analyte	**Sample Date**	5/27/04	11/13/04	2/16/05	5/18/05	10/2/06	4/13/07	10/1/2007	4/8/2008
	UNIT								
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	0 72J	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.66J	0.18J	0 21B	0.16B	0 324	0.313	0.307	0 274 J
cis-1,2-Dichloroethene	µg/L	0.72J	0 85J	1	0.75J	0.634	0.416 J	0 312 J	0 273 J
Tetrachloroethene	µg/L	1 5	1 8	1.8	1.6	1.18	0 959 J	0 813 J	0 776 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	3 5	4	6.9	5.2	6 28	4.57	3.61	3 21
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017286

1017287

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	DR1-1A-LB-8	DR1-1A-LQ-9	DR1-1A-LA-10
Analyte	**Sample Date**	10/8/2008	4/8/2009	10/6/2009
	UNIT			
1,1,1-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	0 372 J	0 424	0 518
cis-1,2-Dichloroethene	µg/L	0.262 J	0 295 J	<1
Tetrachloroethene	µg/L	0 747 J	0 838 J	0 749 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	3 03 J	3.85	2 33
Vinyl chloride	µg/L	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

DR1-2

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	DR1-2-LA-10 10/6/2009
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1 J	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1 J	<1
1,2-Dichloroethene (Total)		µg/L	0.68J	--	--	--	--	--	--	--
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1	<1 J	<1
Chloroform		µg/L	<1	<1	<1	<1	0.163	<0.3	0.131 J	0 17 J
cis-1,2-Dichloroethene		µg/L	0 68J	0.77J	0 67J	0 75J	0.602	0 48 J	0.595 J	0.607 J
Tetrachloroethene		µg/L	1.8	2 5J	2 3	2 1	1.82	1.52	1 5 J	1.47
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1 J	<1
Trichloroethene		µg/L	<1	<1	<1	<1	<1	<1	1.83 J	<1
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1 J	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

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< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

0017288

0172289

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	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	DR1-3-EBT-3 6/1/2007
	UNIT								
1,1,1-Trichloroethane	µg/L	<1	<1.2	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1.2	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	<2	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	<1	<1.2	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1.2	<1	<1	<0.3	<1	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1.2	<1	0 22J	<1	<1	27 6	32.9
Tetrachloroethene	µg/L	34	43J	46	47	45 7	54.7	8.31	2.18
trans-1,2-Dichloroethene	µg/L	<1	<1 2	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	2 6	3.2	3.7	4.1	4.18	5 13	2 74	0 572 J
Vinyl chloride	µg/L	<1	<1 2	<1	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020 SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS.

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	DR1-3-EBT-4	DR1-3-EBT-5	DR1-3-EBT-6	DR1-3-EBT-7	DR1-3-EBT-8	DR1-3-EBT-9	DR1-3-LA-10
Analyte	**Sample Date**	9/19/2007	12/13/2007	3/14/2008	6/13/2008	12/11/2008	3/12/2009	10/6/2009
	UNIT							
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<0 3	<0 3	<0 3	<0 3	<0 3
cis-1,2-Dichloroethene	µg/L	30.7	22 6	17	19 5	16 5	13 3	1 5
Tetrachloroethene	µg/L	0.45 J	0 904 J	2 12	2 95	2 59	2 43	10
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	0.303 J	1 28	2 02	1 32	1 26	2.15
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

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1017290

1017291

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	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	DR1-4 4/7/2008
	UNIT								
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	<2	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	<1J	<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	8.09	5.29	0.582.J
Tetrachloroethene	µg/L	4.8	8 3J	9.3	8.9	12.4	<1	<1	2 74
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.72J	1 1	1.1	1	1.33	<1	<1	0.573 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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

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HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	DR1-4 10/7/2008	DR1-4 4/8/2009	DR1-4 10/6/2009
	UNIT			
1,1,1-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	0 987 J	0.755 J	<1
Tetrachloroethene	µg/L	1.22	0.947 J	0.844 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	1.69	0.393 J	0.64 J
Vinyl chloride	µg/L	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

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UJ Undetected, reporting limit is inaccurate or imprecise

1017292

1017293

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	DR1-5 5/22/2004	DR1-5 11/12/2004	DR1-5 2/18/2005	DR1-5 5/19/2005	DR1-5-LB-1 10/24/2006	DR1-5-LS-3 4/16/2007	DR1-5-LA-5 10/1/2007	DR1-5 4/7/2008
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1J	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	<2	--	--	--	--	--	--	--
Carbon tetrachloride		µg/L	<1J	<1	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<1	<1	<1	<1	0.129	<0 3	0.148 J	0.165 J
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	4 3	11	17	15	57	69.2	69.9	95.8
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

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HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	DR1-5 10/9/2008	DR1-5 4/8/2009	DR1-5 10/5/2009
	UNIT			
1,1,1-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	0 181 J	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	0.295 J	<1	<1
Tetrachloroethene	µg/L	69 2 J	53 2	37.3
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	4 28 J	<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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017294

1017295

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	DR1 CLUSTER B	DR1-5A	DR1-5A	DR1-5A	DR1-5A-LB-1	DR1-5A-LS-3	DR1-5A-LA-5	DR1-5A
	Sample Date	5/27/2004	11/12/2004	2/21/2005	5/19/2005	10/23/2006	4/13/2007	10/1/2007	4/8/2008
	UNIT								
1,1,1-Trichloroethane	µg/L	<1 7	<5	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1 7	<5	0 25J	0.19J	<1	<1	<1	0.655 J
1,2-Dichloroethene (Total)	µg/L	1.7J	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	<1.7	<5	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.71J	<5	0.4B	0 29B	0.306	0.274 J	0.252 J	0.187 J
cis-1,2-Dichloroethene	µg/L	1 7	5 2	4 6	4.1	3.46	3 19	3 16	1.82
Tetrachloroethene	µg/L	24	47	55	47	50.9	49.6	46.8	34.9
trans-1,2-Dichloroethene	µg/L	<1.7	<5	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	47	110	110	100	98.1	84	78.6	58.7
Vinyl chloride	µg/L	<1 7	<5	<1	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS:

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

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R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

DR1-5A

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	DR1-5A 10/9/2008	DR1-5A 4/8/2009	DR1-5A 10/5/2009
1,1,1-Trichloroethane		µg/L	<1	<1	<1
1,1-Dichloroethene		µg/L	1.09 J	<1	<1
1,2-Dichloroethene (Total)		µg/L	--	--	--
Carbon tetrachloride		µg/L	<1	<1	<1
Chloroform		µg/L	0.343 J	0.217 J	0.204 J
cis-1,2-Dichloroethene		µg/L	4 75 J	3.19	3.39
Tetrachloroethene		µg/L	59 7 J	56.3	54.9
trans-1,2-Dichloroethene		µg/L	<1	<1	<1
Trichloroethene		µg/L	114 J	95.7	92.8
Vinyl chloride		µg/L	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

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R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017296

1017297

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	DR1-6 4/8/2008
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	3.3	--	--	--	--	--	--	--
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	3 3	6 2	4 1	3 8	1 59	1 91	1 42	1 09
Tetrachloroethene		µg/L	13	21	20	26	184	173	191 J	195
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1 6	2 4	2 2	2 1	1 85	1 83	1 58	1 27
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

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HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	DR1-6 10/7/2008	DR1-6 4/8/2009	DR1-6 10/6/2009
	UNIT			
1,1,1-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	<0.3	<0 3	<0.3
cis-1,2-Dichloroethene	µg/L	1.38	1.31	1.49
Tetrachloroethene	µg/L	122	197	183
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	4.61	1.44	1.59
Vinyl chloride	µg/L	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

TOL7298

1017299

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	DR1-6A 4/8/2008
1,1,1-Trichloroethane		µg/L	<3.3	<3 3	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	0.32B	<3.3	0.4J	0.21J	<1	<1	<1	0.781 J
1,2-Dichloroethene (Total)		µg/L	<6.7	--	--	--	--	--	--	--
Carbon tetrachloride		µg/L	<1	<3.3	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<1	<3.3	0 17 J	<1	0.18	0.236 J	0.183 J	0.215 J
cis-1,2-Dichloroethene		µg/L	--	3J	4 1	3.5	4.81	5.98	4.24	2.99
Tetrachloroethene		µg/L	--	17	28	21	28.4	34.4	30 2	30.8
trans-1,2-Dichloroethene		µg/L	--	<3.3	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	9.1	88	140	97	118	139	107	110
Vinyl chloride		µg/L	--	<3 3	<1	<2	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

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R Unusable

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DR1-6A

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	DR1-6A 10/7/2008	DR1-6A 4/8/2009	DR1-6A 10/6/2009
	UNIT			
1,1,1-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	1 08	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	0.238 J	0.214 J	0.245 J
cis-1,2-Dichloroethene	µg/L	3.81	4 33	4.89
Tetrachloroethene	µg/L	39.6	32.5	43
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	142	125	163
Vinyl chloride	µg/L	<1	<1	<1

NOTES:

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017300

1017301

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	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	DR1-7 10/6/2009
	UNIT								
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	0.46 J	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	<1	<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	<0.3
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	0 449 J
Tetrachloroethene	µg/L	30	26	27	27	5.68	5 15	4 35	4 75
trans-1,2-Dichloroethene	µg/L	<1	<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	0 622 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

ug/L micrograms per liter

DQE FLAGS:

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

DR1-8

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	DR1-8 10/5/2009
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	<2	--	--	--	--	--	--	--
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	<1J	<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	0.341 J	1.03	<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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

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< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

10173302

1017303

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	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	DR2-1-EBT-3 5/29/2007
	UNIT								
1,1,1-Trichloroethane	µg/L	<5.3	<8.3	<1	<1	<1	<1	<1	<1 J
1,1-Dichloroethene	µg/L	<5.3	<8 3	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	16	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	25	35	24	32	32.3	29 J	22.6	25 7 J
Chloroform	µg/L	16	16	12	13	9.91	13.3	10	8.76
cis-1,2-Dichloroethene	µg/L	16	24	21	22	17	34 7	19 3	15 2
Tetrachloroethene	µg/L	180	280	190	250	176	191	194	160
trans-1,2-Dichloroethene	µg/L	<5 3	<8.3	<1	<1	0.319 J	<1	<1	<1
Trichloroethene	µg/L	7.3	9.8	7.8	9 1	8.51	8 49	7.91	7 21
Vinyl chloride	µg/L	<5 3	<8.3	<1	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	DR2-1-EBT-4	DR2-1-EBT-5	DR2-1	DR2-1	DR2-1	DR2-1	DR2-1
Analyte	Sample Date	9/12/2007	12/10/2007	3/10/2008	6/9/2008	12/12/2008	3/12/2009	10/10/2009
	UNIT							
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	13.4	15.5	1.26	2.8	20.4	22.7	7.39
Chloroform	µg/L	8.58	11.3	4.19	5.75	9.18	7.53	3 76
cis-1,2-Dichloroethene	µg/L	50.4	7.71	86.4	38.1	9.14	7.59	4.89
Tetrachloroethene	µg/L	138	192	33.7	50.7	137	150	66 2
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	4.54	5 72	12.7	5.36	5.46	5 09	2.61
Vinyl chloride	µg/L	1.25	<1	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS.

J Estimated results based on QC data or reported below RL

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R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017304

1101305

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	DR2-2 4/8/2008
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	<2	--	--	--	--	--	--	--
Carbon tetrachloride		µg/L	1.8	5	4.2	4.7	4.19	6.78	10.8	13 4
Chloroform		µg/L	0.64J	1.5	1.5	1 2B	1 05	1.76	2.86	3.65
cis-1,2-Dichloroethene		µg/L	<1	2.7	2.5	2.4	1.9	3.47	5.7	7.04
Tetrachloroethene		µg/L	10	36	16	40	23.2	49.2	76 7	124
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2 6	4.1	2.8	3.8	3 13	3.49	4 04	4 25
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

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R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	DR2-2	DR2-2	DR2-2
Analyte	Sample Date	10/9/2008	4/10/2009	10/11/2009
	UNIT			
1,1,1-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--
Carbon tetrachloride	µg/L	13 8	16.2	7.75
Chloroform	µg/L	3.87	4.23	1.91
cis-1,2-Dichloroethene	µg/L	6.86	7.39	4.79
Tetrachloroethene	µg/L	120	159	97.3
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	3 96	3 82	4.02
Vinyl chloride	µg/L	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

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R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017306

1017307

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	DR2-3 4/8/2008
1,1,1-Trichloroethane		µg/L	<1.7	<1 4	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1.7	<1.4	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	1 4J	--	--	--	--	--	--	--
Carbon tetrachloride		µg/L	4 1J	5.6	6 1	4 7	4.2	4.29	4.12	4.72
Chloroform		µg/L	1.8	1.9	1.8B	1.2B	0.939	0.913	0 76	0 933
cis-1,2-Dichloroethene		µg/L	1 4J	1.8	1.8	1 2	0 601 J	0.673 J	0.549 J	0 683 J
Tetrachloroethene		µg/L	47	43	33	33	22.8	23.9	20.6	28 3
trans-1,2-Dichloroethene		µg/L	<1.7	<1.4	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2	2.7	2 7	2.6	2.47	2.28	2.15	2.15
Vinyl chloride		µg/L	<1 7	<1.4	<1	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

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R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

DR2-3

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	DR2-3 10/10/2008	DR2-3 4/8/2009	DR2-3 10/10/2009
	UNIT			
1,1,1-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--
Carbon tetrachloride	µg/L	4.97 J	6.66	4 62
Chloroform	µg/L	0 978 J	1.19	0 861
cis-1,2-Dichloroethene	µg/L	0.594 J	1.41	0.816 J
Tetrachloroethene	µg/L	22.1 J	38 9	33 3
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	2.03 J	2 47	2.09
Vinyl chloride	µg/L	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

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R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017308

1017309

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	DR2-4 10/11/2009
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	<2	--	--	--	--	--	--	--
Carbon tetrachloride		µg/L	2 2	3.8	3.7	3 6	4.06	3 96	3 55	3 34
Chloroform		µg/L	1	0.94J	0 84J	0 77B	1.06	0.973	0.715	0.575
cis-1,2-Dichloroethene		µg/L	<1	0.27J	0 22J	0.22J	<1	<1	0.304 J	0.414 J
Tetrachloroethene		µg/L	12	14	12	10	7.15	9 28	14.5	18
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	1 9	2.2	1.9	1 7	1.61	1.54	1.74	1 7
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

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R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	DR2-5	DR2-5	DR2-5	DR2-5	DR2-5-BL	DR2-5-EBT-1	DR2-5-EBT-2	DR2-5-EBT-3
	Sample Date	6/23/2004	11/14/2004	2/23/2005	5/23/2005	8/31/2006	12/7/2006	3/13/2007	5/29/2007
	UNIT								
1,1,1-Trichloroethane	µg/L	<6 7	<5.7	<1	<1	<1	<1	<1	<1 J
1,1-Dichloroethene	µg/L	<6 7	<5.7	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	44	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	240	200	200	260	142	100	130	132 J
Chloroform	µg/L	82	68	64	79	46.7	35.8	43	37.6
cis-1,2-Dichloroethene	µg/L	44	39	41	35J	31	27 7	32 9	25.9
Tetrachloroethene	µg/L	88	71	75	88	54 2	45.3	48 4	41.1
trans-1,2-Dichloroethene	µg/L	<6 7	<5.7	<1	<1	0.506 J	0.287 J	<1	<1
Trichloroethene	µg/L	29	25	32	21J	18 3	15.4	18.5	14.4
Vinyl chloride	µg/L	<6.7	<5.7	<1	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

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R Unusable

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10173

1017311

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	DR2-5-EBT-4	DR2-5-EBT-5	DR2-5	DR2-5	DR2-5	DR2-5	DR2-5
Analyte	**Sample Date**	9/13/2007	12/10/2007	3/12/2008	6/18/2008	12/17/2008	3/13/2009	10/10/2009
	UNIT							
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	123	138	114	103	112 J	206	94.4
Chloroform	µg/L	42 2	43.6	40.9	37.2	37.9	68.8	52
cis-1,2-Dichloroethene	µg/L	30.5	33.7	32	29.2	34 5	62	47.2
Tetrachloroethene	µg/L	46.8	57.3	49.5	41.7	48.9	114	47.7
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	1 62	1.07	<1	<1
Trichloroethene	µg/L	16	18 9	17.5	13.7	17	35	20.7
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

ug/L micrograms per liter

DQE FLAGS.

J Estimated results based on QC data or reported below RL

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R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

DR2-6

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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	DR2-6 4/8/2008
1,1,1-Trichloroethane		µg/L	<1 7	<2	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1 7	<2	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	7.3	--	--	--	--	--	--	--
Carbon tetrachloride		µg/L	34	66	7.2	68	82 7	92	82.8	29.2
Chloroform		µg/L	16	25	1.5B	29	27.3	33.1	43.1	16.3
cis-1,2-Dichloroethene		µg/L	7 3	13	0.69J	16	9.97	14.1	31.6	36
Tetrachloroethene		µg/L	44	75	36	78	77 2	90.8	115	48.3
trans-1,2-Dichloroethene		µg/L	<1.7	<2	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	11	13	2.2	16	15.5	16.4	19 7	7.55
Vinyl chloride		µg/L	<1 7	<2	<1	<1	<1	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS:

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

10017312

1017313

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	DR2-6	DR2-6	DR2-6
Analyte	Sample Date	10/8/2008	4/7/2009	10/8/2009
	UNIT			
1,1,1-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	0.862 J	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--
Carbon tetrachloride	µg/L	39.6	12.9	26.4
Chloroform	µg/L	18.4	7.83	10 3
cis-1,2-Dichloroethene	µg/L	33	29	23.8
Tetrachloroethene	µg/L	70.5	24 5	44.5
trans-1,2-Dichloroethene	µg/L	0 552 J	<1	<1
Trichloroethene	µg/L	12.4	5.33	8.79
Vinyl chloride	µg/L	<1	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

IW-01

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	IW1-EBT-B-97-99	IW1-EBT-TS7-97-99	IW-1	IW-1	IW-1	IW-1	IW-01-BL	IW-01-EBT-1
	Sample Date	5/20/2002	1/20/2003	5/24/2004	11/18/2004	2/23/2005	5/24/2005	9/5/2006	12/7/2006
	UNIT								
1,1,1-Trichloroethane	µg/L	<0.25	<0.25	<3.3	<4	<1	<2.5	<1	<1
1,1-Dichloroethene	µg/L	<0 5	<0.5	<3.3	<4	<1	<2 5	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	110	--	--	--	--	--
Carbon tetrachlonde	µg/L	35	1.67	24	19	29	25	9.79	1.39
Chloroform	µg/L	30	5.3	19	20B	17	16	8.72	3.31
cis-1,2-Dichloroethene	µg/L	26	248	110	100	100	84	149	154
Tetrachloroethene	µg/L	120	3 68	120	110	92	110	40 4	8.25
trans-1,2-Dichloroethene	µg/L	<0.25	<0.25	<3.3	<4	<1	<2.5	<1	0.959 J
Trichloroethene	µg/L	13	1 19	11	8	9 4	10	5.85	1.89
Vinyl chloride	µg/L	<0.25	<0.25	<3.3	<4	<1	<2 5	0.453	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017314

1017315

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	IW-1-EBT-2	IW-1-EBT-3	IW-1-EBT-4	IW-1-EBT-5	IW-01	IW-01	IW-01	IW-01	IW-01
Analyte	**Sample Date**	3/12/2007	5/30/2007	9/14/2007	12/11/2007	3/13/2008	6/16/2008	12/10/2008	3/16/2009	10/10/2009
	UNIT									
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<10	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<10	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	16.6	13.9	30.6 J	16.1	16 6	8.41	<1	<10	0.361 J
Chloroform	µg/L	9 98	9.16	16.5	8.36	11.5	10.8	0.34	1.48 J	0.97
cis-1,2-Dichloroethene	µg/L	73.2	65 5	59 4 J	76.6	64.9	108	119	114	93.6
Tetrachloroethene	µg/L	78.4	78.4	148 J	70 9	74.4	50.8	2.49	<10	5 79
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<10	<1
Trichloroethene	µg/L	9 04	9.36	14.8	8 6	9.53	11.6	0.353 J	<10	1.75
Vinyl chloride	µg/L	<1	<1	0.474 J	<1	<1	<1	<1	<10	<1

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	IW6-EBT-B-101-106 5/21/2002	IW6-EBT-TS7-101-106 1/20/2003	IW6-EBT-TS7-OIL 1/23/2003	IW-6 5/27/2004	IW-6 11/13/2004	IW-6 2/23/2005	IW-6 5/23/2005	IW-6-LB-1 10/18/2006
1,1,1-Trichloroethane		µg/L	<0.25	<0 25	<0U	<2.5	<10	<2.8	<1	<1
1,1-Dichloroethene		µg/L	<0 5	<0 5	<0U	<2.5	<10	<2.8	<1	<1
1,2-Dichloroethene (Total)		µg/L	--	--	<0U	<5	--	--	--	--
Carbon tetrachloride		µg/L	<0 25	<0 25	<0U	<2.5	<10	<2.8	<1	<1
Chloroform		µg/L	<0 125	<0.125	<0U	<2.5	<10	<2.8	<1	<0.3
cis-1,2-Dichloroethene		µg/L	0.67J	<0.25	<0U	<2.5	<10	<2.8	0.48J	0.835 J
Tetrachloroethene		µg/L	17	<0 25	<0U	<2 5	<10	<2.8	0.29J	<1
trans-1,2-Dichloroethene		µg/L	<0.25	<0.25	<0U	<2.5	<10	<2.8	<1	<1
Trichloroethene		µg/L	34	<0.25	<0U	<2 5	<10	<2.8	<1	0 581 J
Vinyl chloride		µg/L	<0 25	<0.25	<0U	<2 5	<10	<2.8	<1	<1

NOTES:

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017317

1017317

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	IW-6-LA-5	IW-6	IW-6
Analyte	**Sample Date**	10/2/2007	10/7/2008	10/5/2009
	UNIT			
1,1,1-Trichloroethane	µg/L	<1	<100 J	<1
1,1-Dichloroethene	µg/L	<1	<100 J	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--
Carbon tetrachloride	µg/L	<1	<100 J	<1
Chloroform	µg/L	<0.3	<30 J	<0 3
cis-1,2-Dichloroethene	µg/L	2 16	<100 J	4.14
Tetrachloroethene	µg/L	<1	<100 J	<1
trans-1,2-Dichloroethene	µg/L	<1	<100 J	<1
Trichloroethene	µg/L	1 38	283 J	2.08
Vinyl chloride	µg/L	<1	<100 J	0.33 J

NOTES

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

PZ-03

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	PZ-03	PZ03	PZ-03	PZ-03-LB-1	PZ-03-LA-5	PZ-03	PZ-03
	Sample Date	3/20/2002	5/26/2004	2/23/2005	10/5/2006	10/5/2007	10/14/2008	10/11/2009
	UNIT							
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	<2	--	--	--	--	--
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	0.2J	0.198 J	0.139 J	0.29 J	0 192 J
cis-1,2-Dichloroethene	µg/L	0.55J	<1	0.26J	<1	<1	<1	<1
Tetrachloroethene	µg/L	7.1	4.4	5	3.89	0.523 J	4 38	3.99
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.86J	0 6J	0.85J	0.917 J	0.321 J	1.07	1.23
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

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

1017318

10173.19

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORINIG REPORT - 2009
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	PZ-06 3/20/2002	PZ-06 5/12/2004	PZ-06 2/22/2005	PZ-06-LB-1 10/4/2006	PZ-06-LA-5 10/5/2007	PZ-06 10/14/2008	PZ-06 10/11/2009
	UNIT							
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	<2	--	--	--	--	--
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<1	<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	<1	<1

NOTES:

VOC samples analyzed using methods SW8010/8020, SW8240, SW8260, SW8260A, SW8260B, or CV3990

-- not analyzed

ug/L micrograms per liter

DQE FLAGS

J Estimated results based on QC data or reported below RL

B Estimated results possibly biased high or false positive based on blank data

< Not detected at sample reporting limit

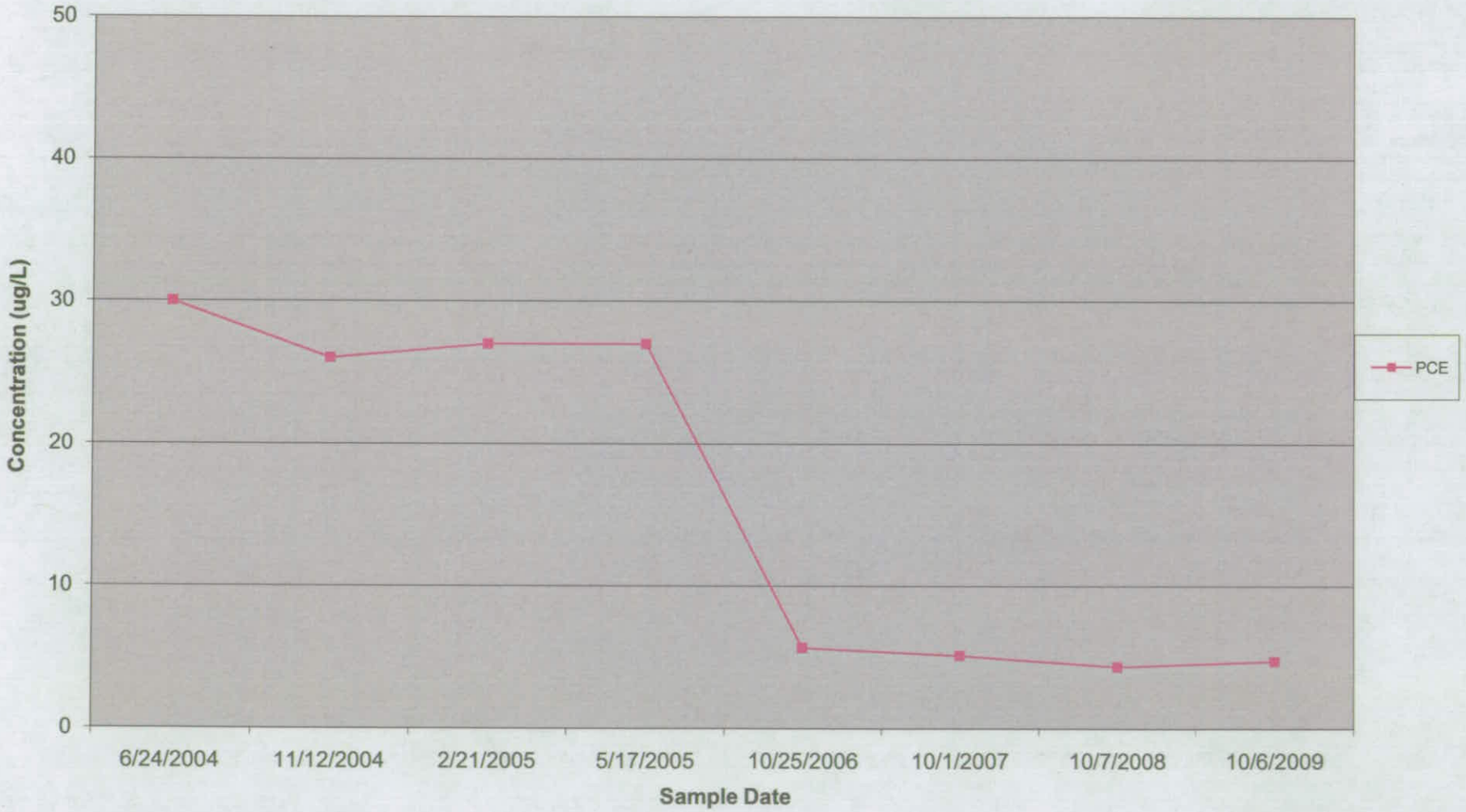
R Unusable

UJ Undetected, reporting limit is inaccurate or imprecise

APPENDIX D

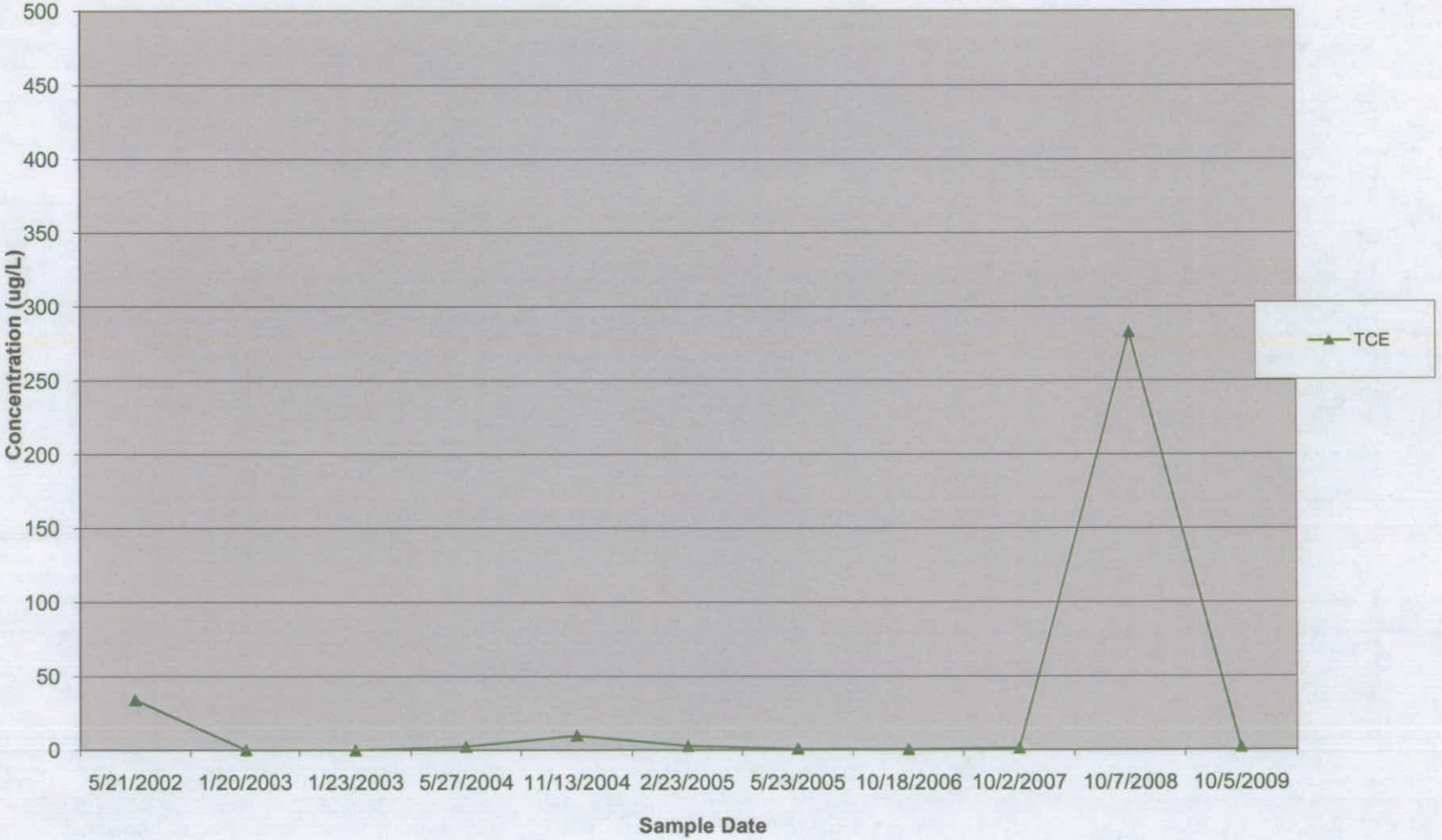
CVOC TIME-TREND PLOTS

DR1-7
TTA-1 NORTH



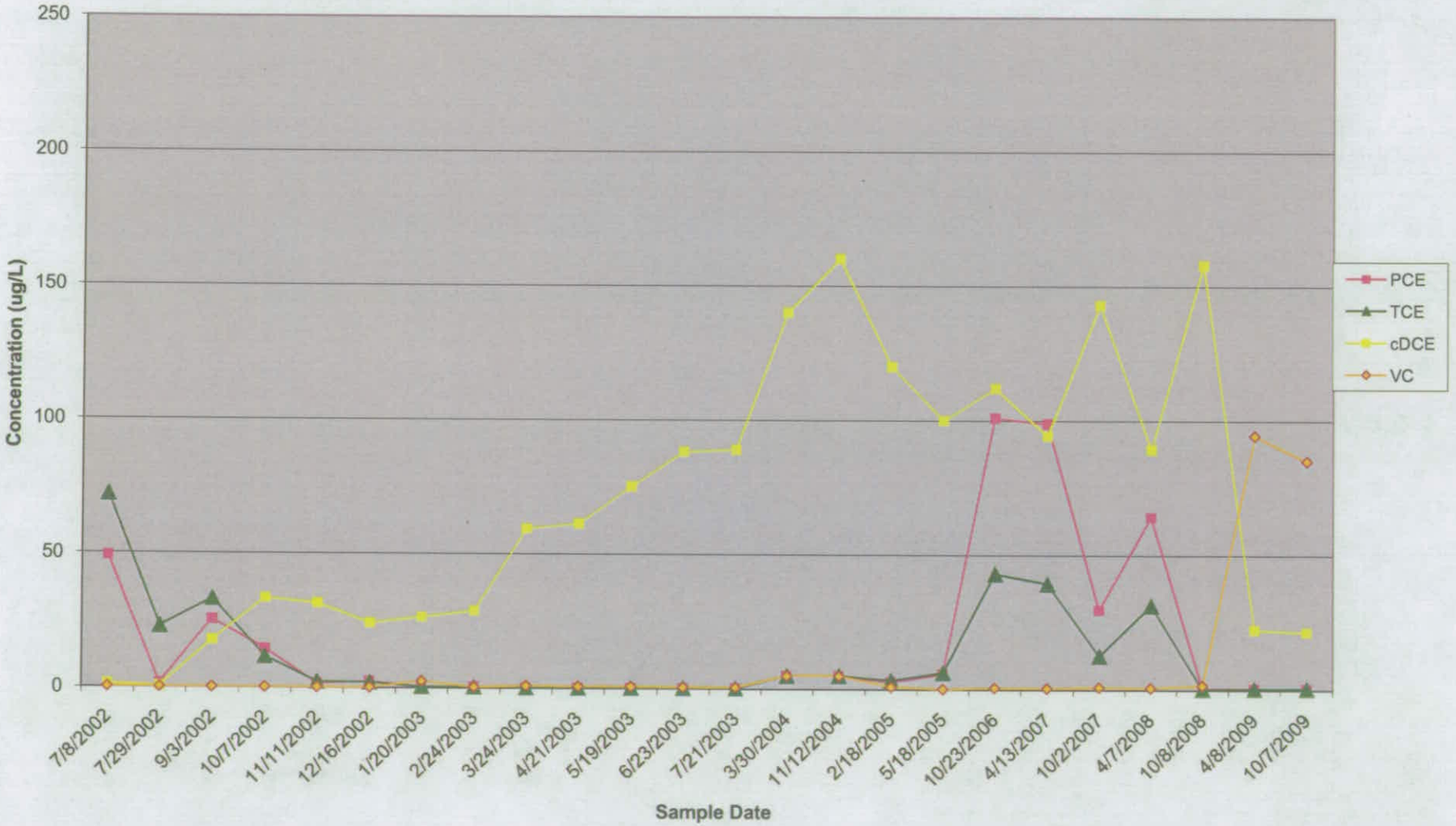
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IW-06
TTA-1 NORTH



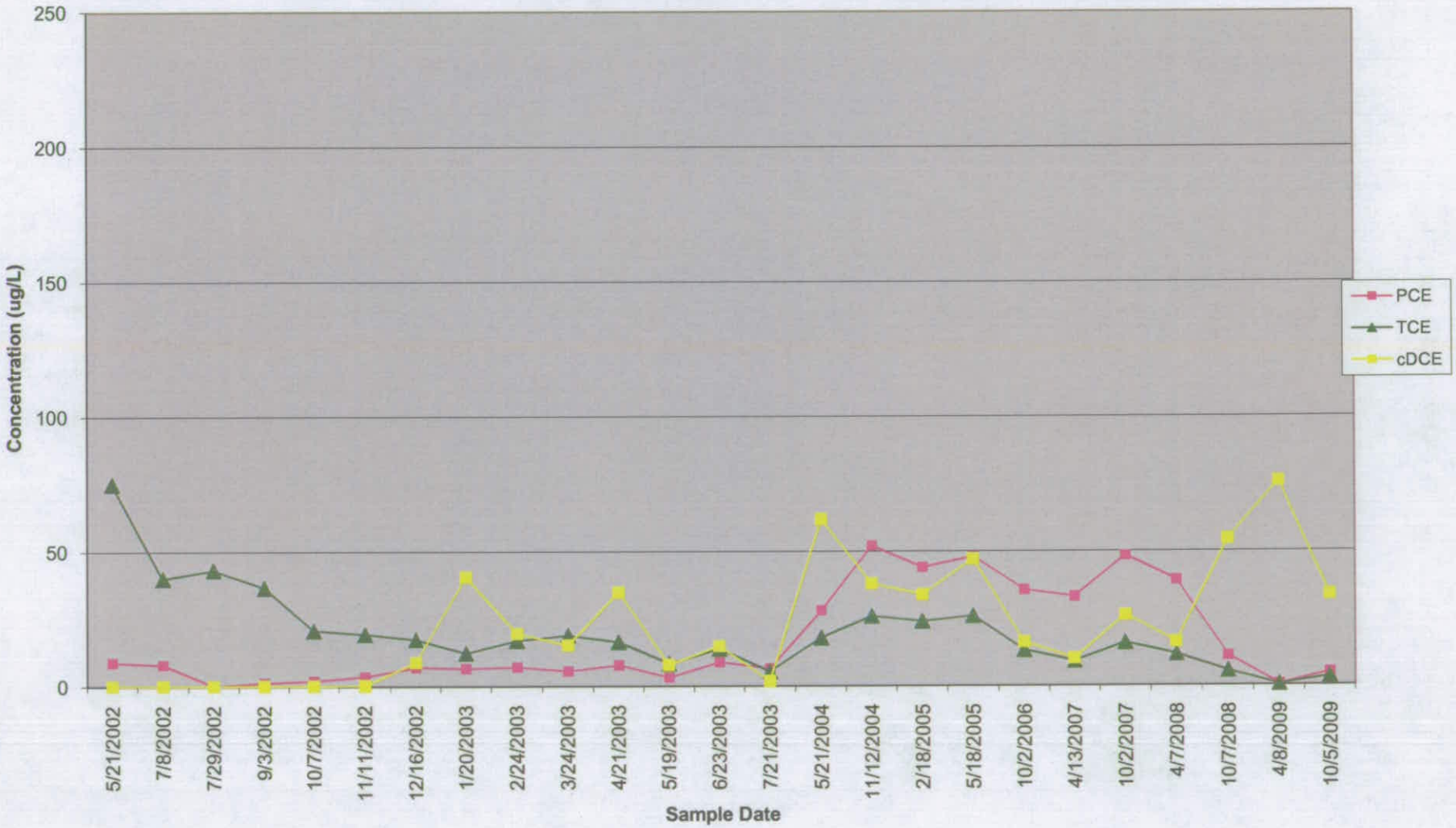
1017322

MW-100B
TTA-1 NORTH



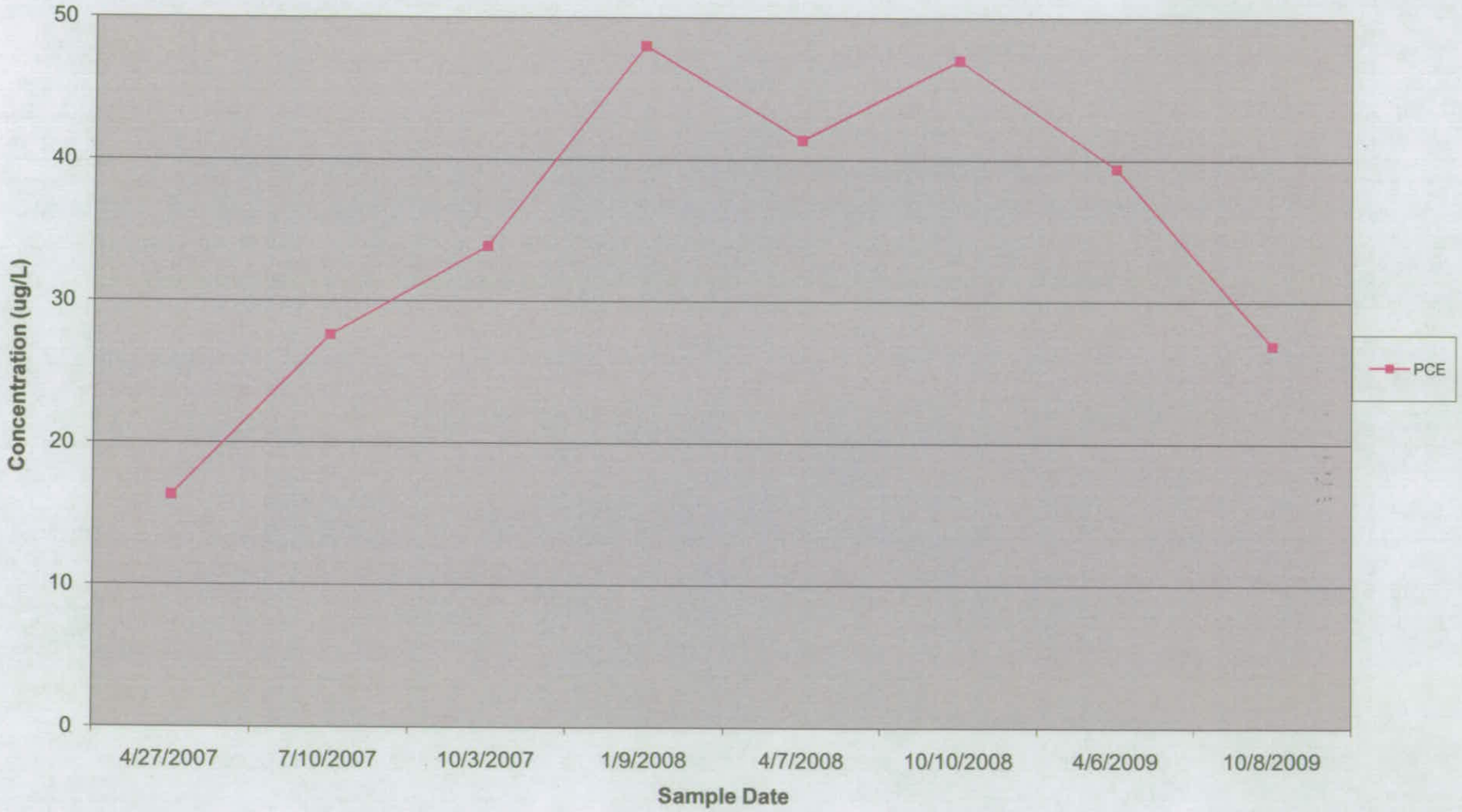
10173223

MW-125
TTA-1 NORTH



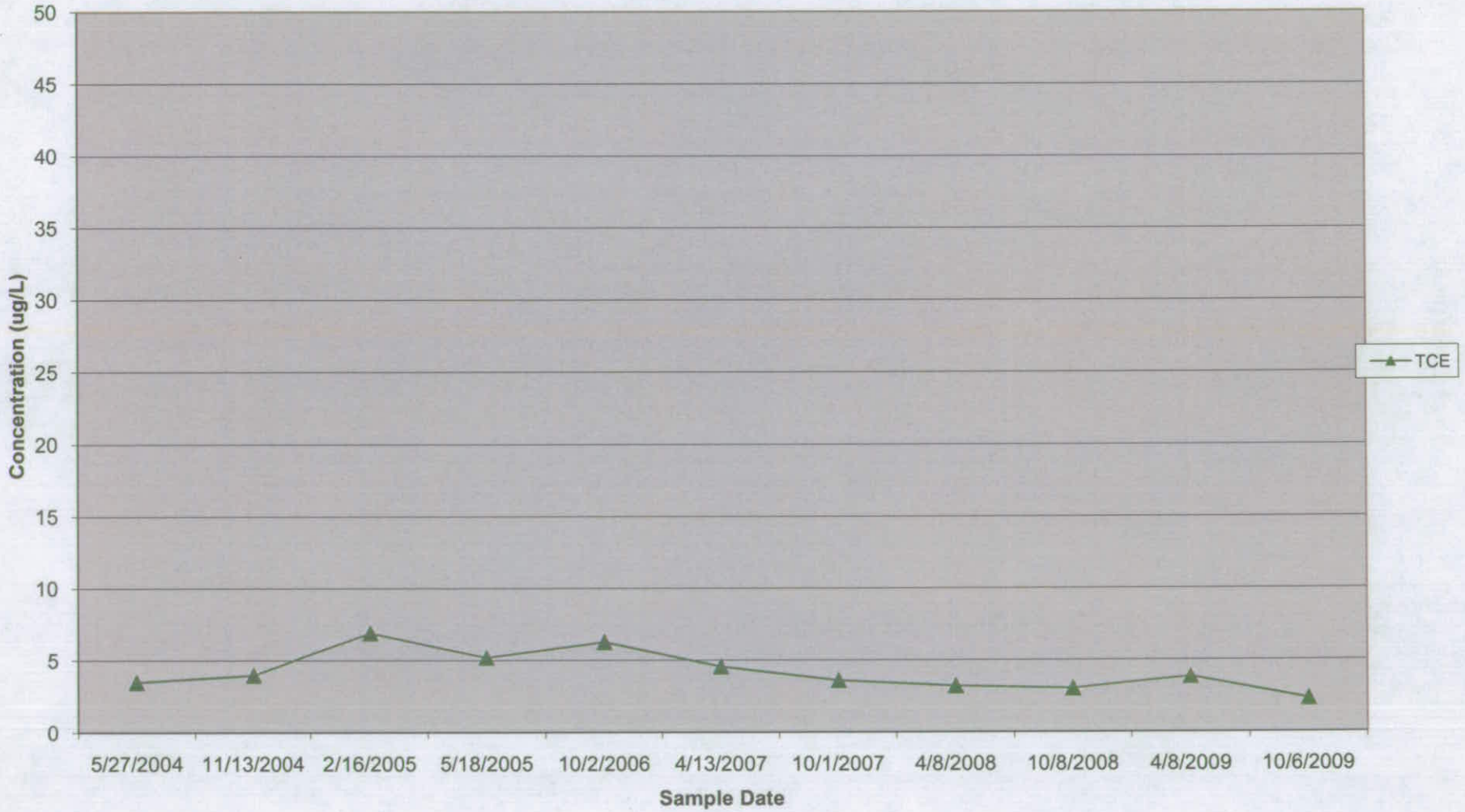
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MW-219
TTA-1 NORTH



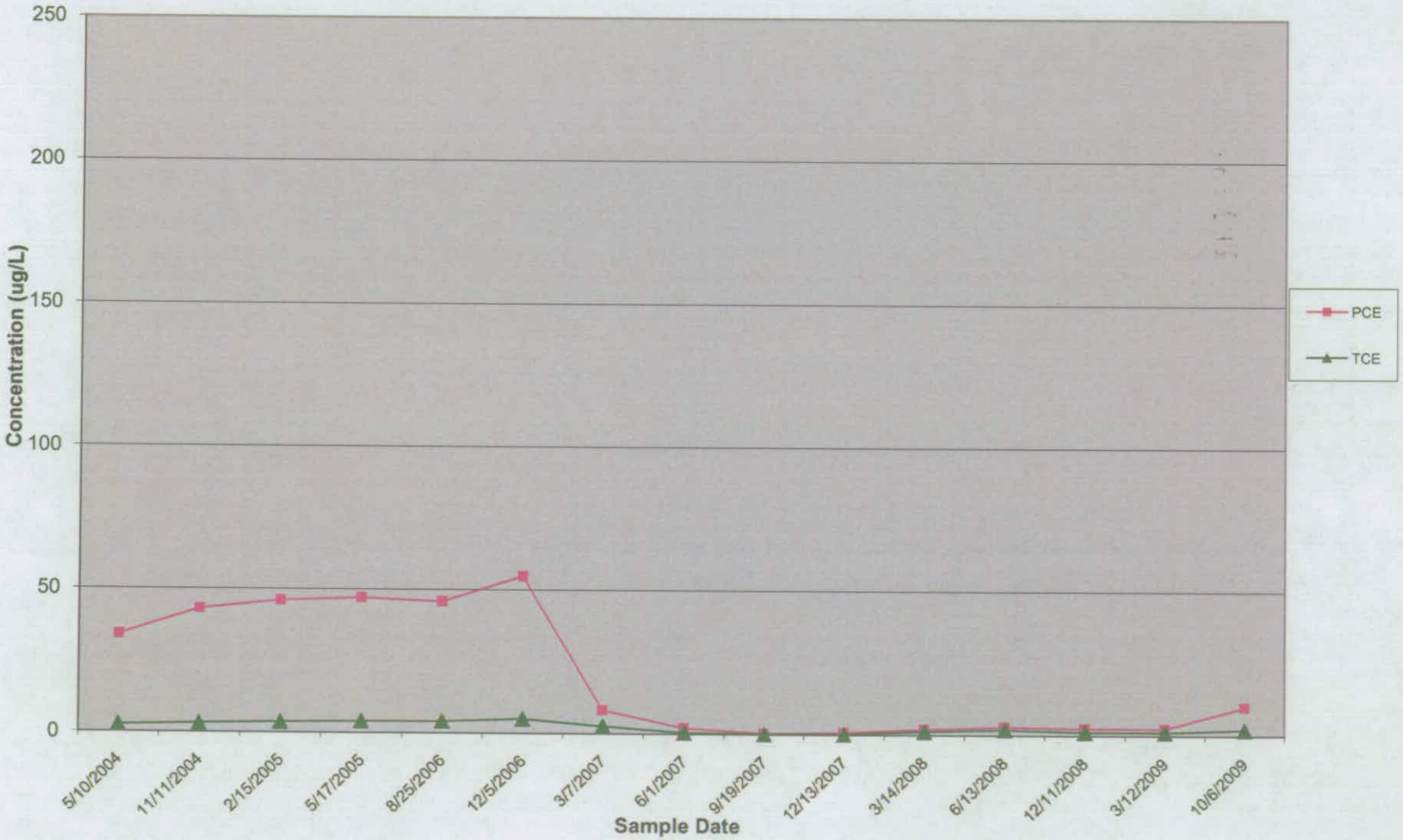
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DR1-1A
TTA-1 SOUTH



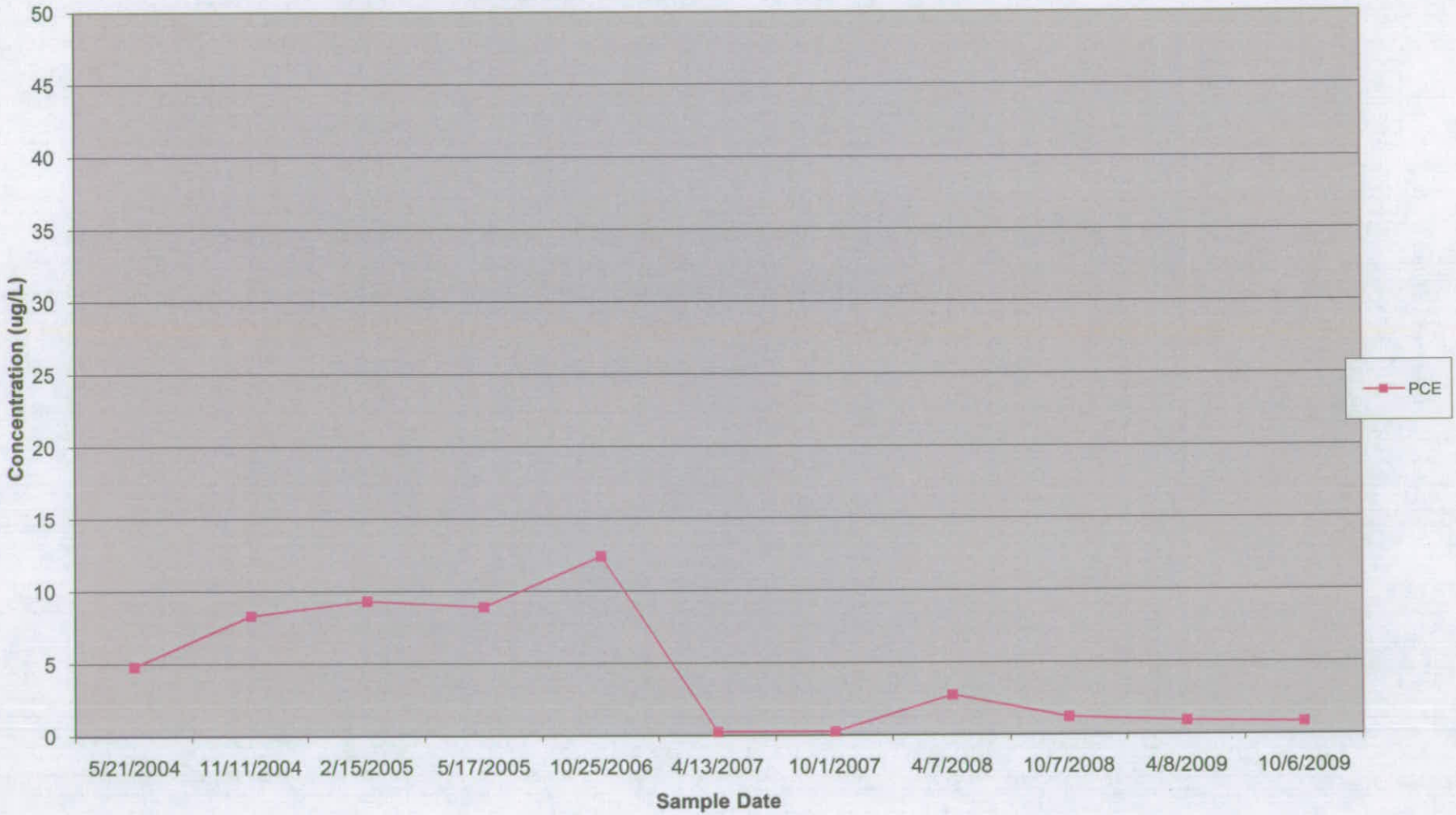
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DR1-3
TTA-1 SOUTH



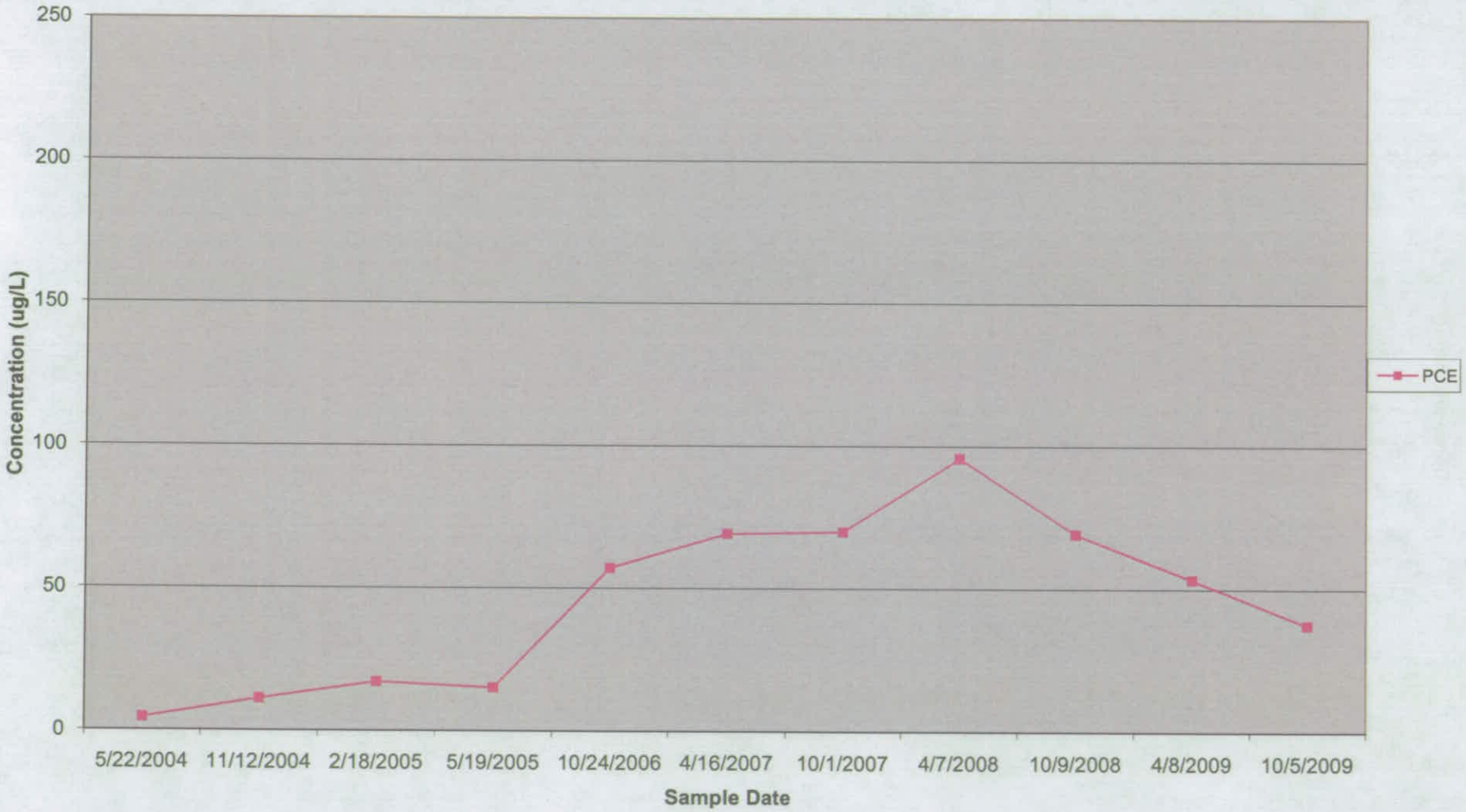
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DR1-4
TTA-1 SOUTH



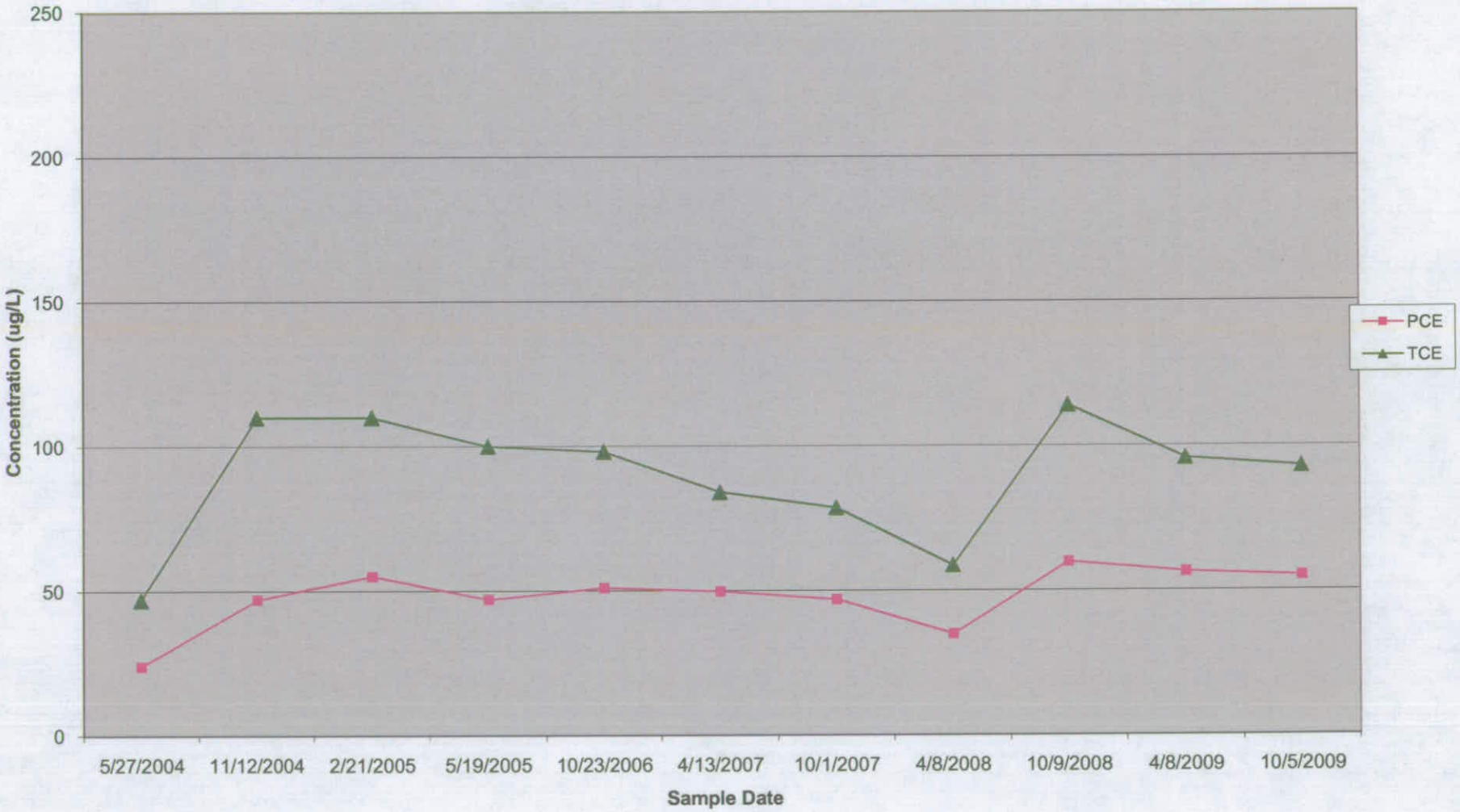
10173328

DR1-5
TTA-1 SOUTH



10017329

DR1-5A
TTA-1 SOUTH



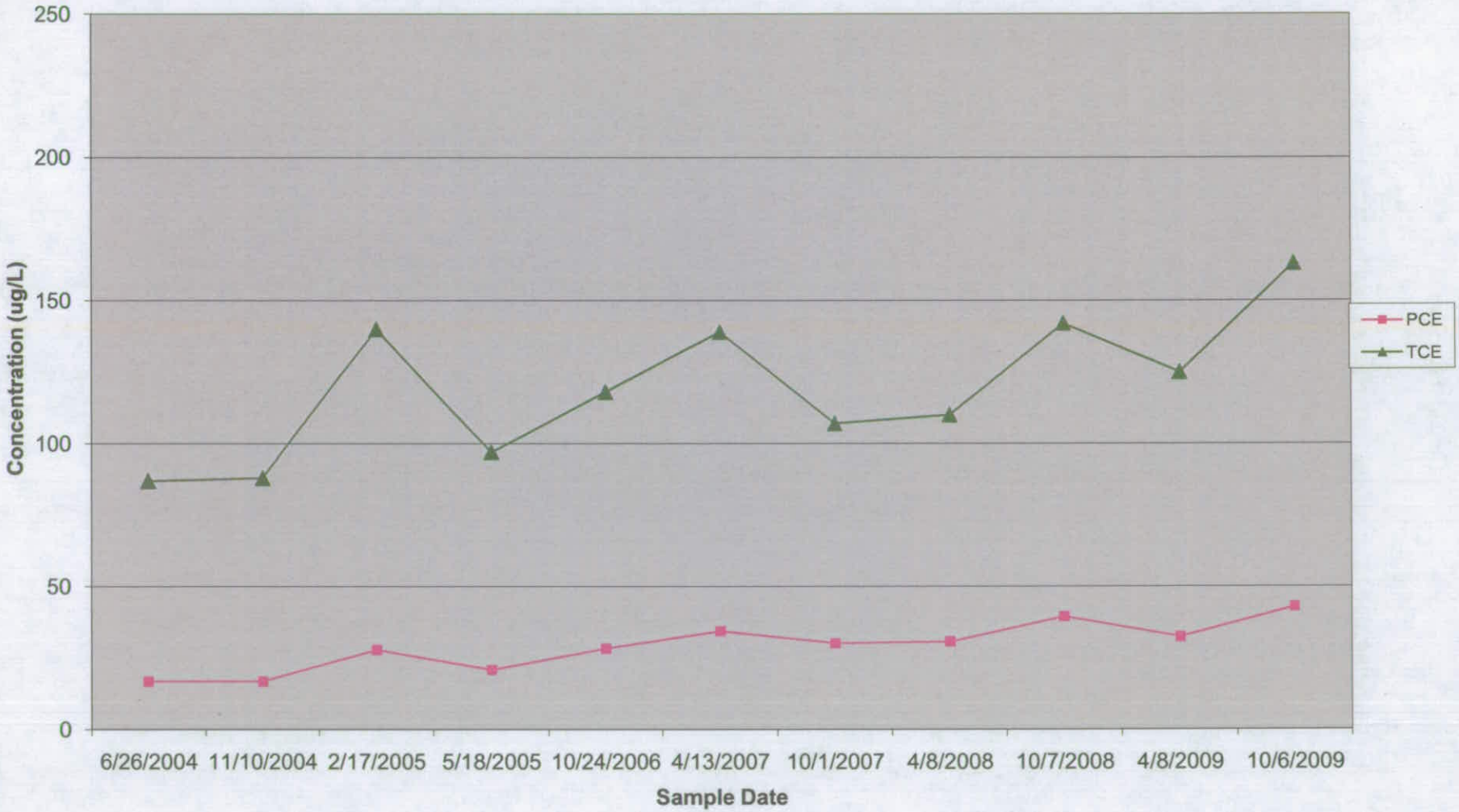
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DR1-6
TTA-1 SOUTH



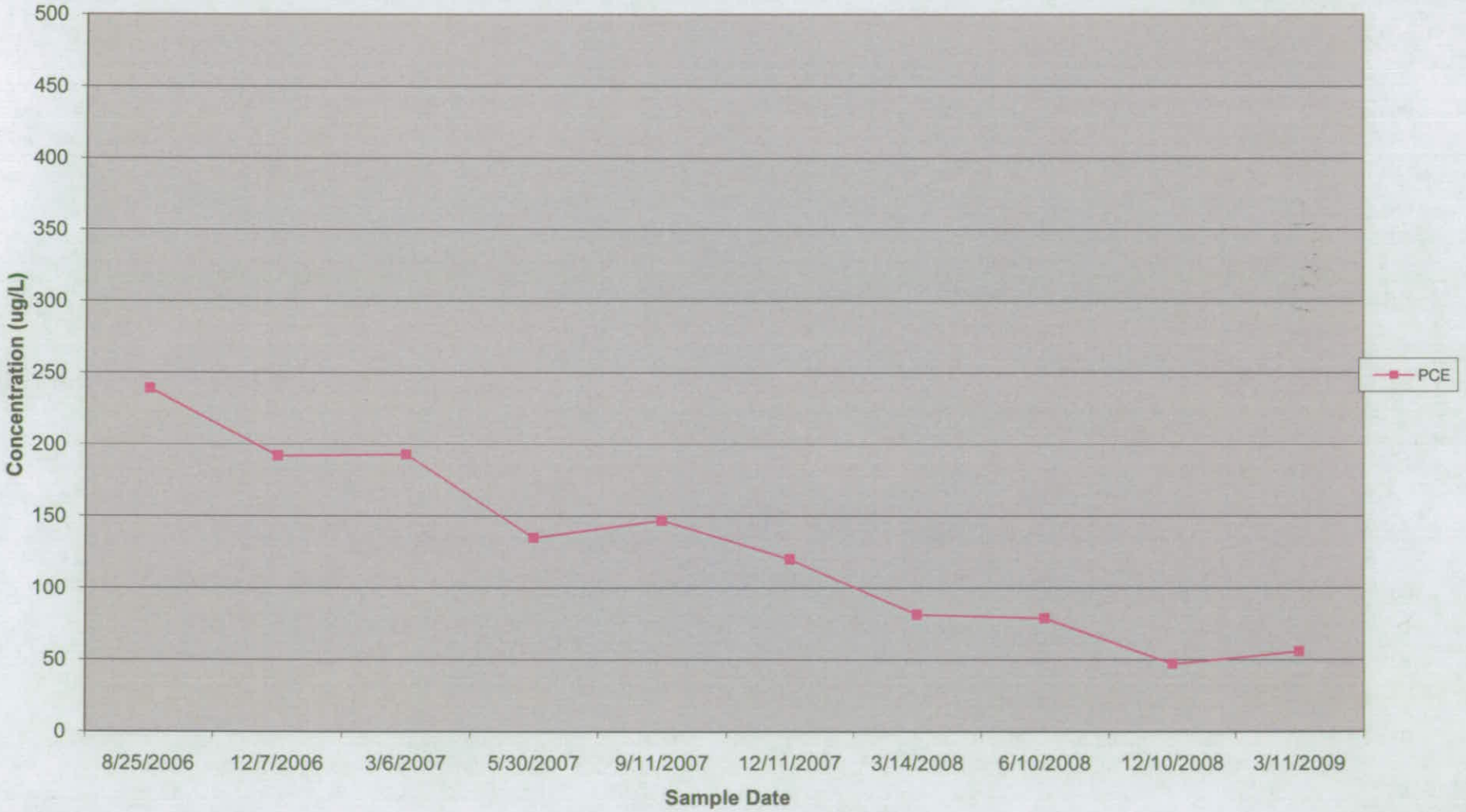
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DR1-6A
TTA-1 SOUTH



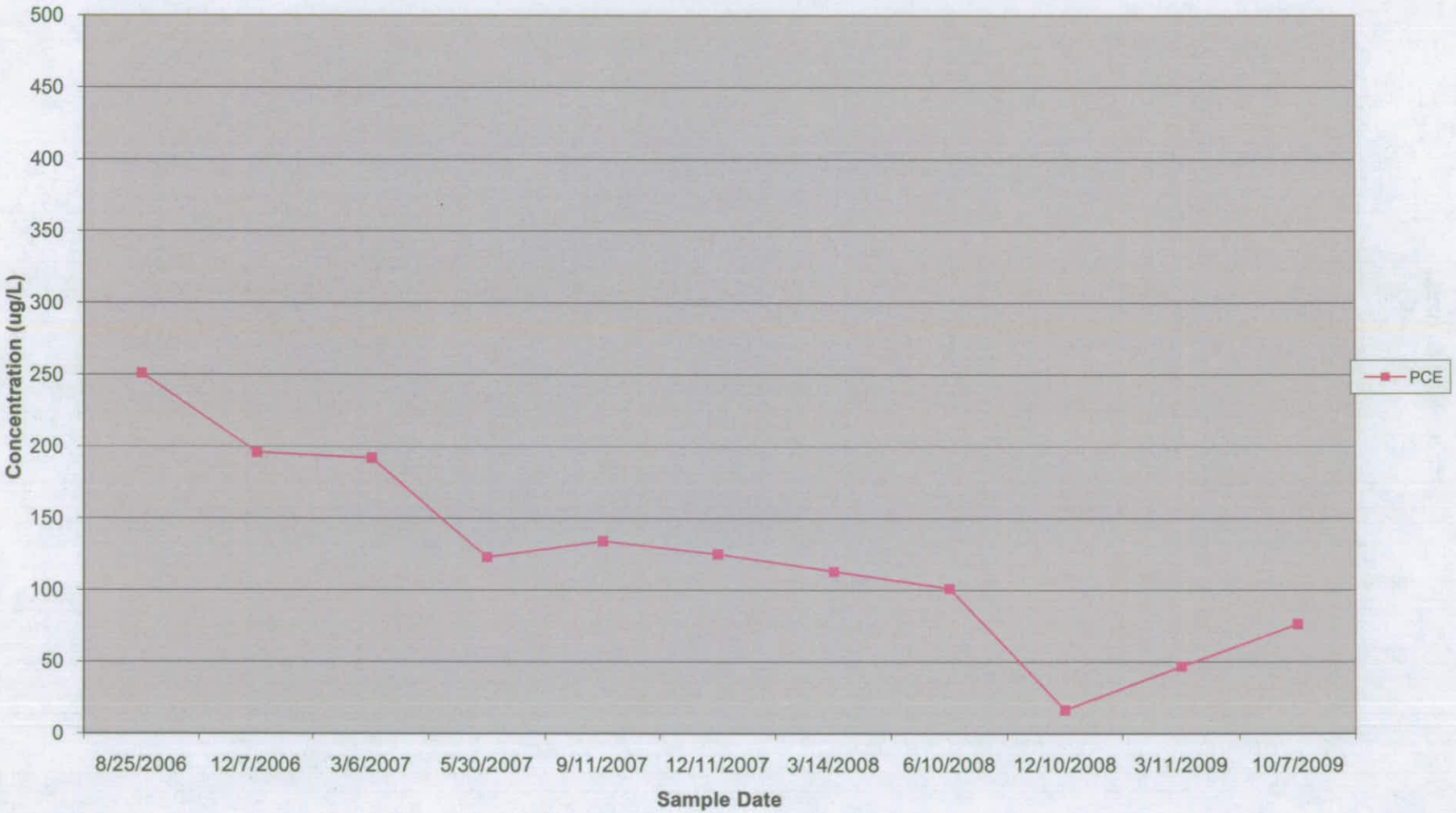
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MW-101 Bottom
TTA-1 SOUTH



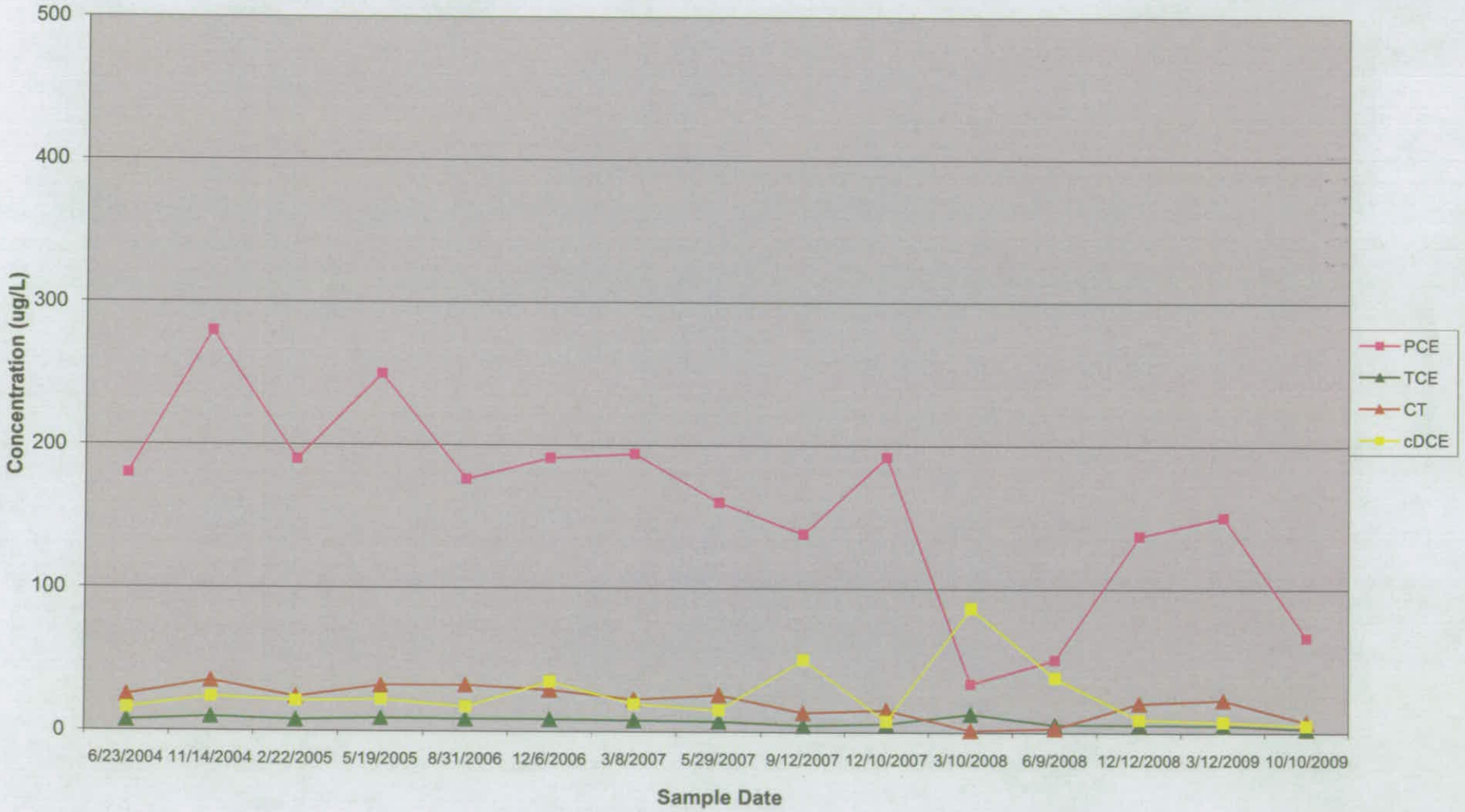
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MW-101 Top
TTA-1 SOUTH



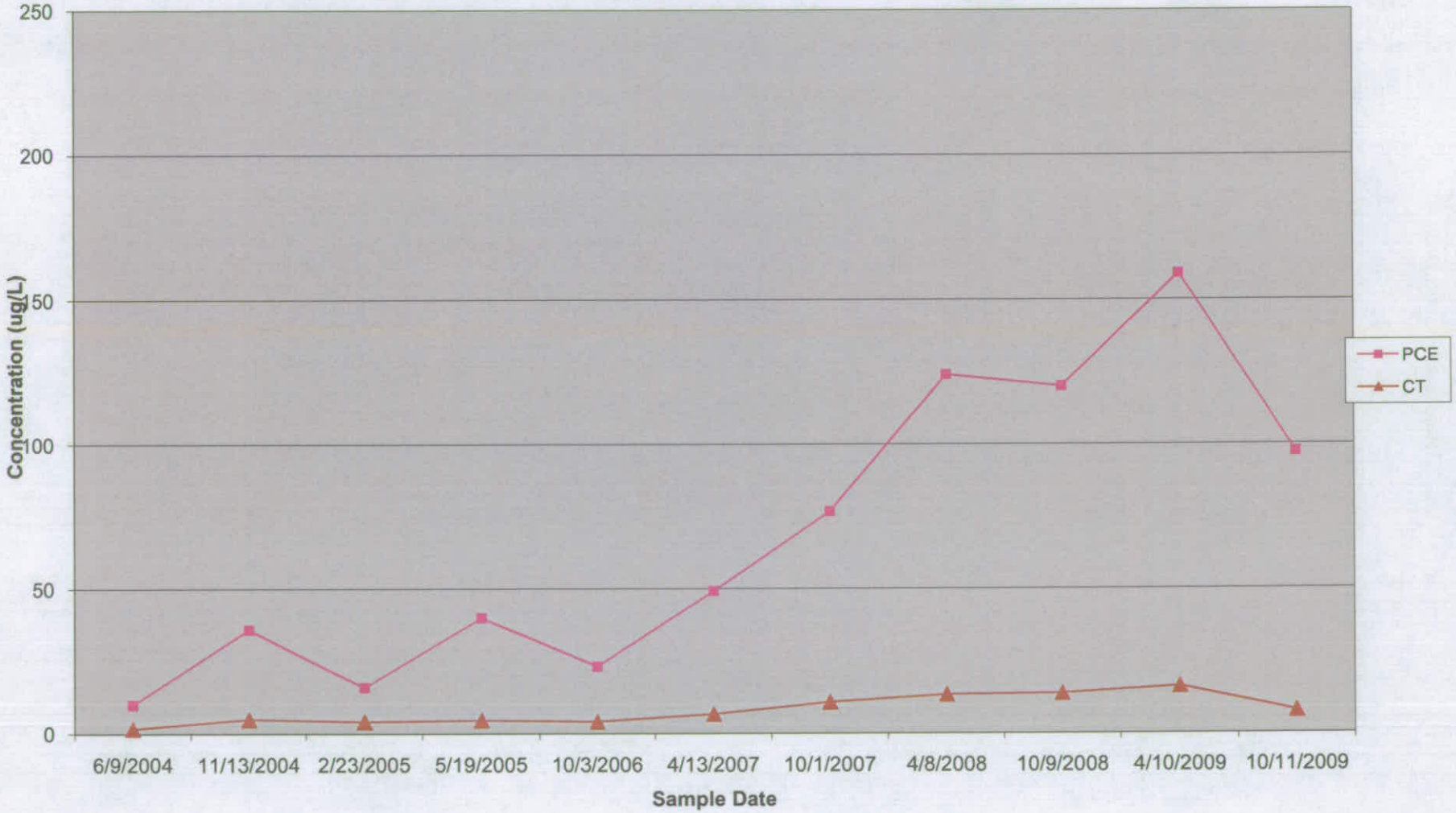
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DR2-1
TTA-2



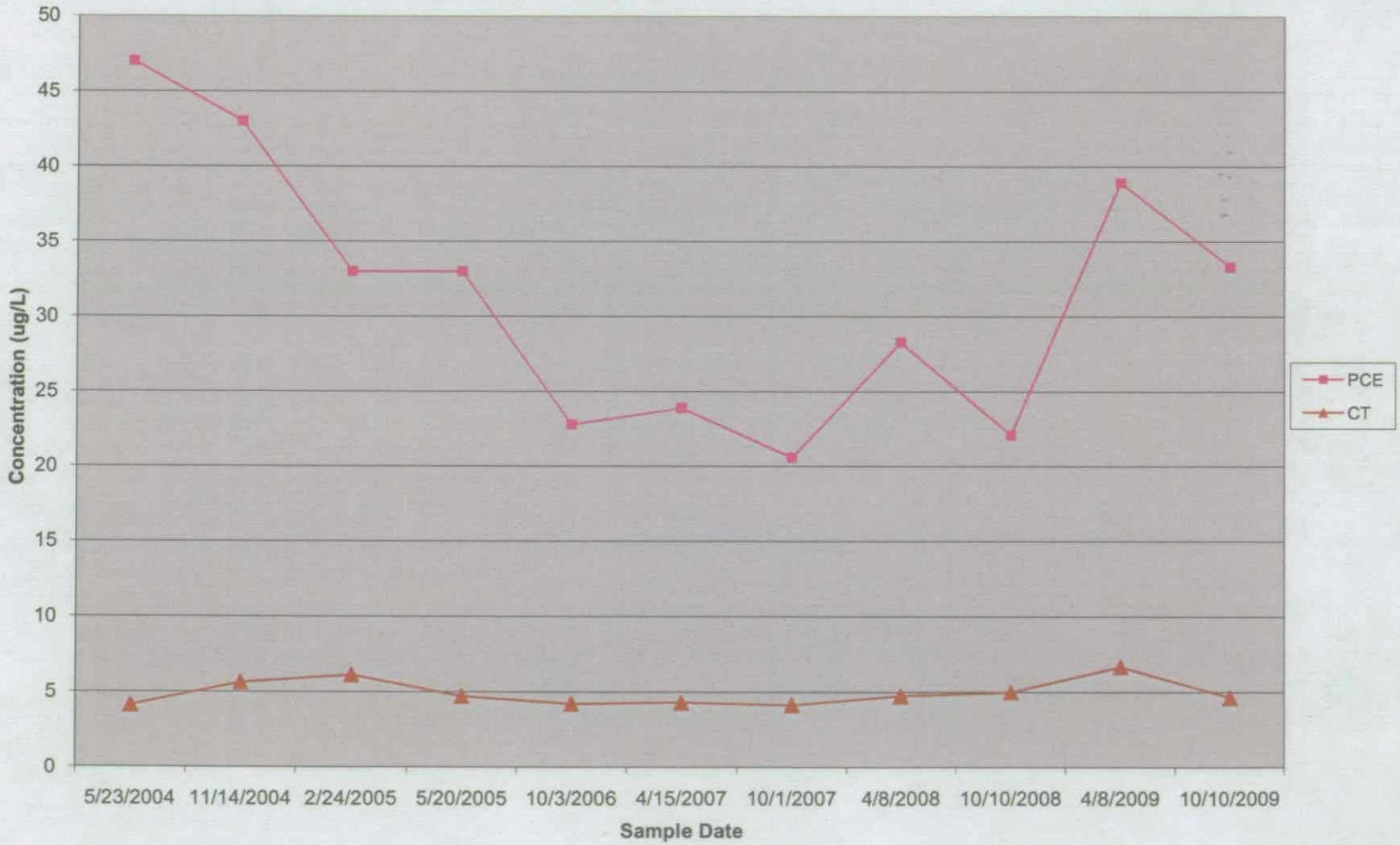
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DR2-2
TTA-2



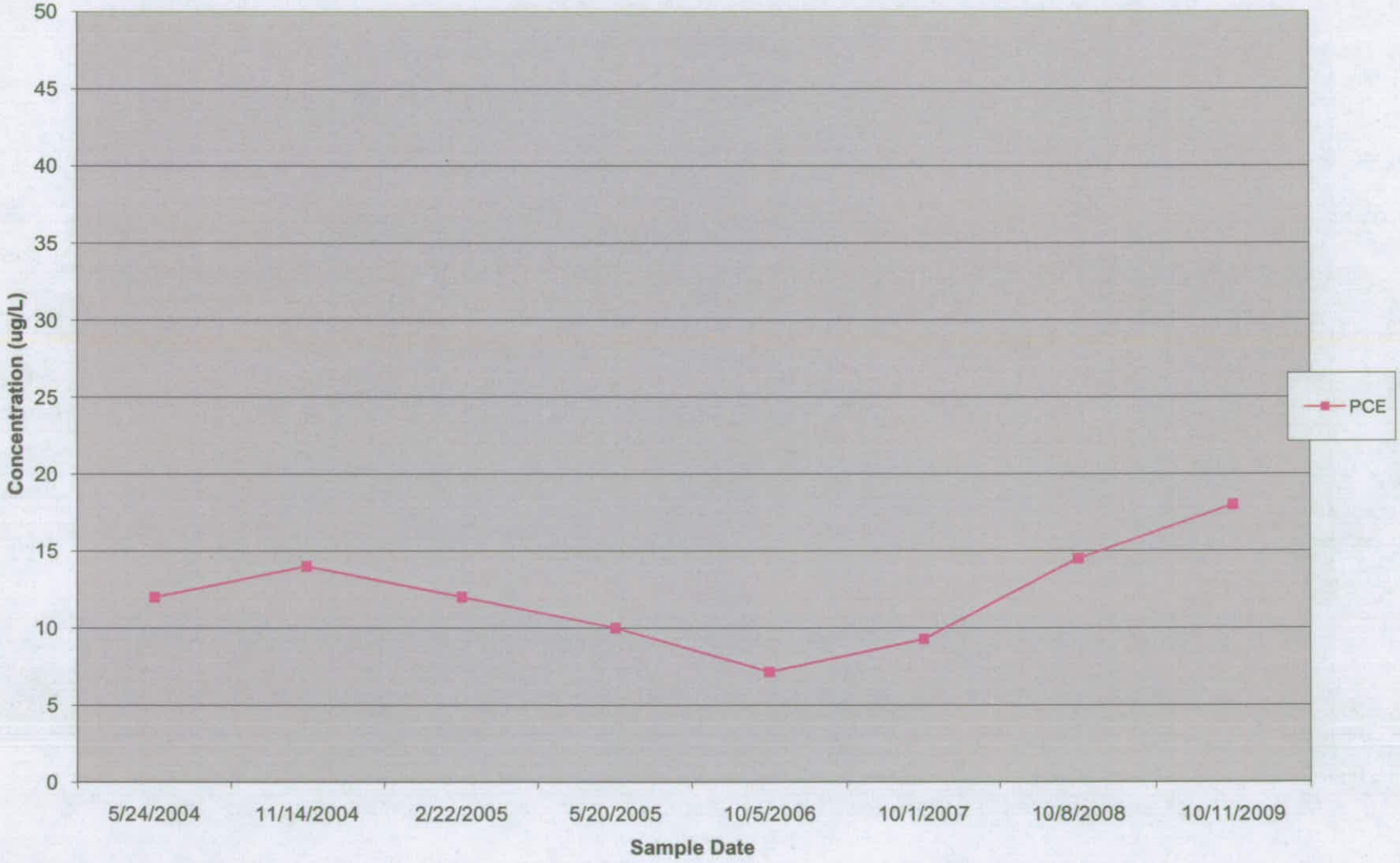
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DR2-3
TTA-2



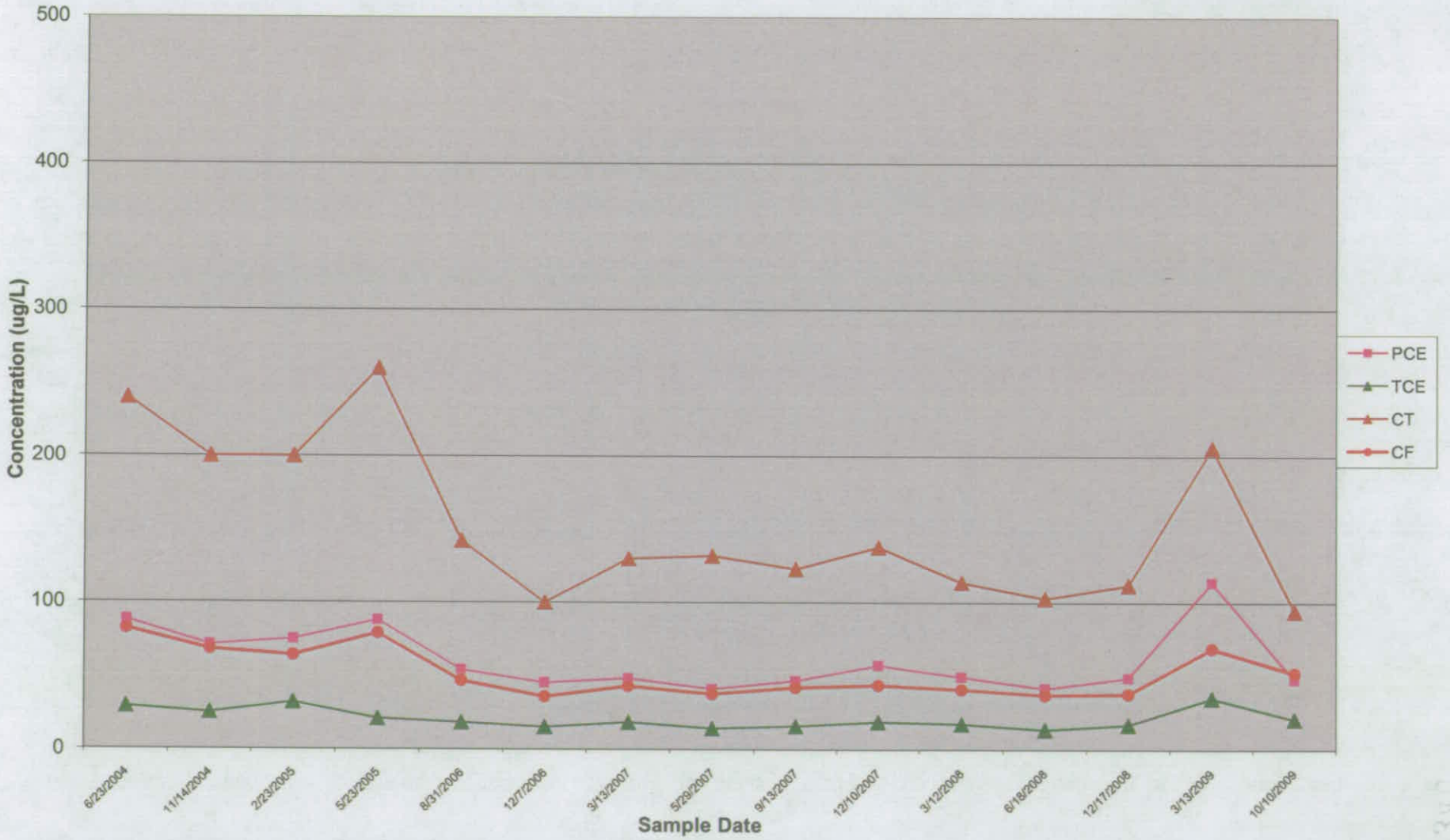
10,017,337

DR2-4
TTA-2



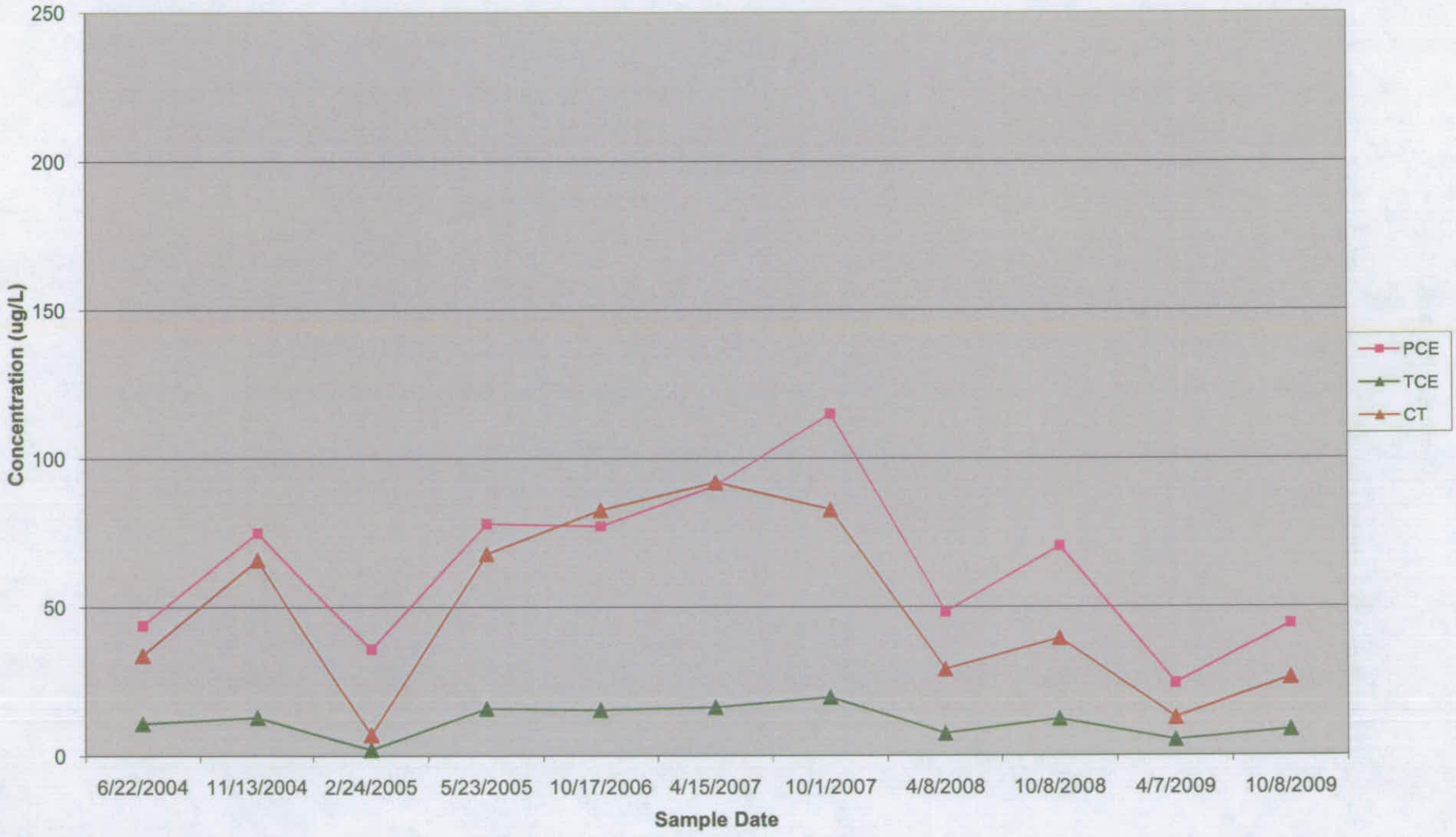
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DR2-5
TTA-2



10173390

DR2-6
TTA-2



1017340

IW-1
TTA-2

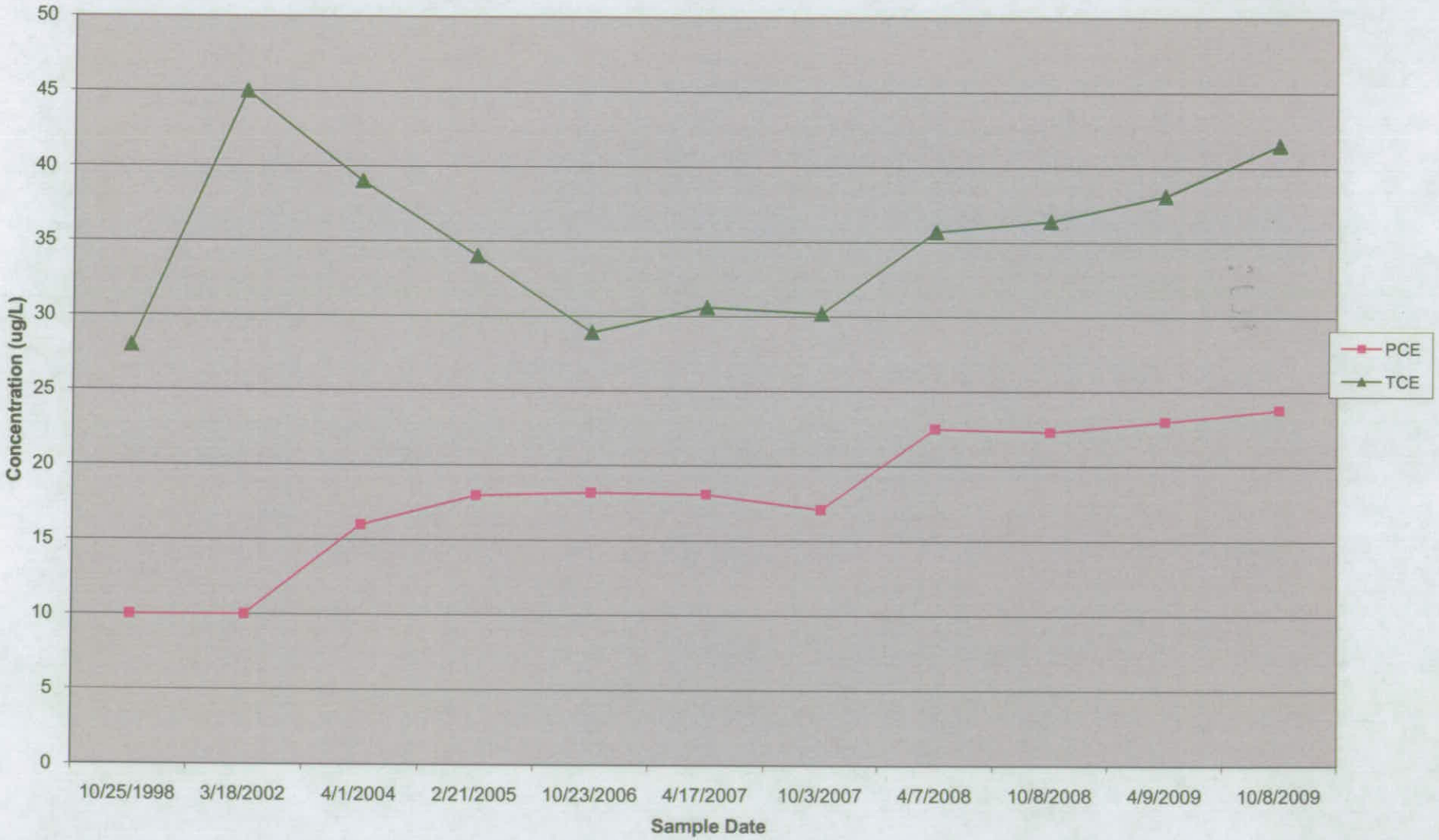


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1017342

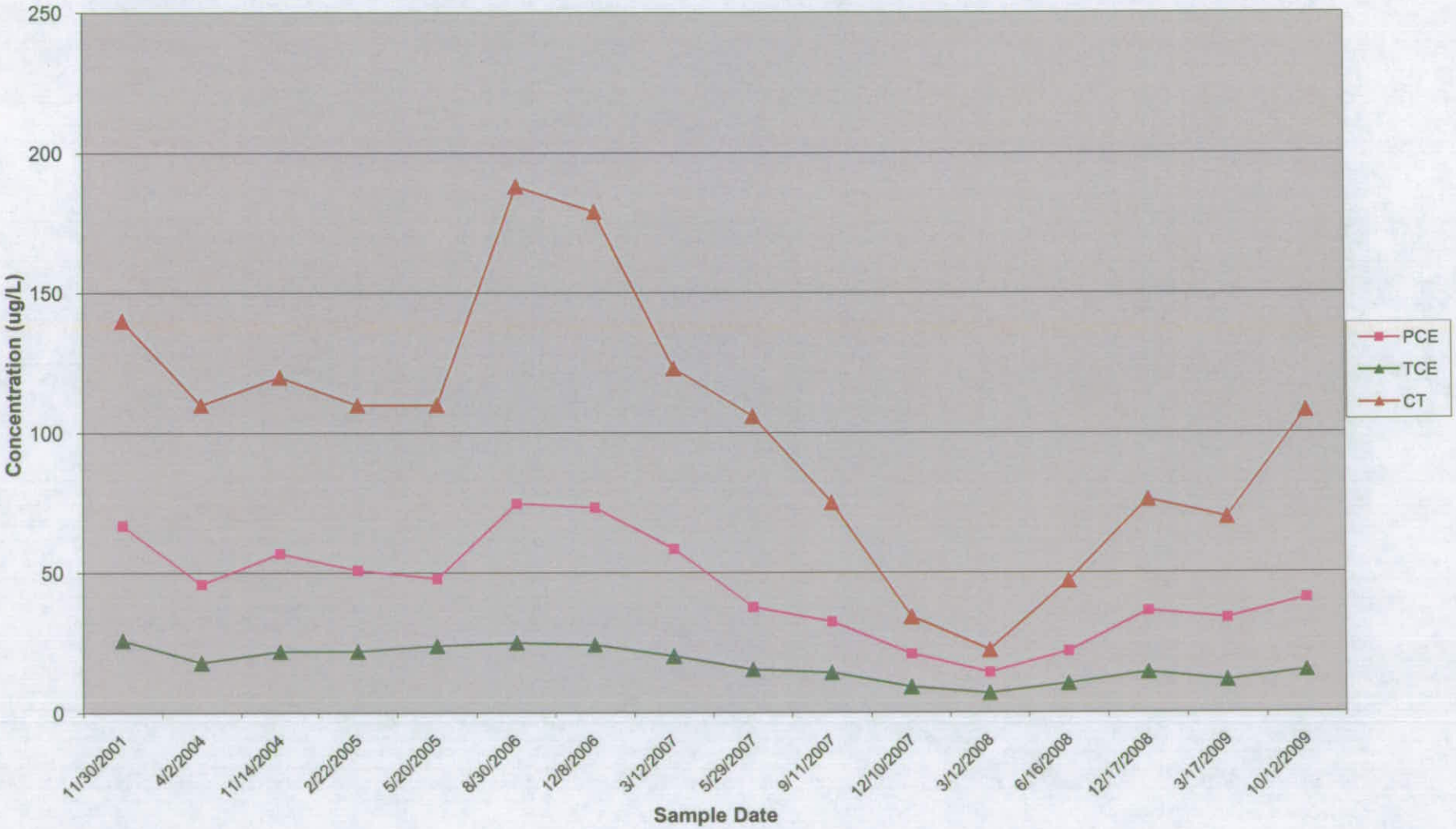
MW-26
TTA-2

MW-64
TTA-2



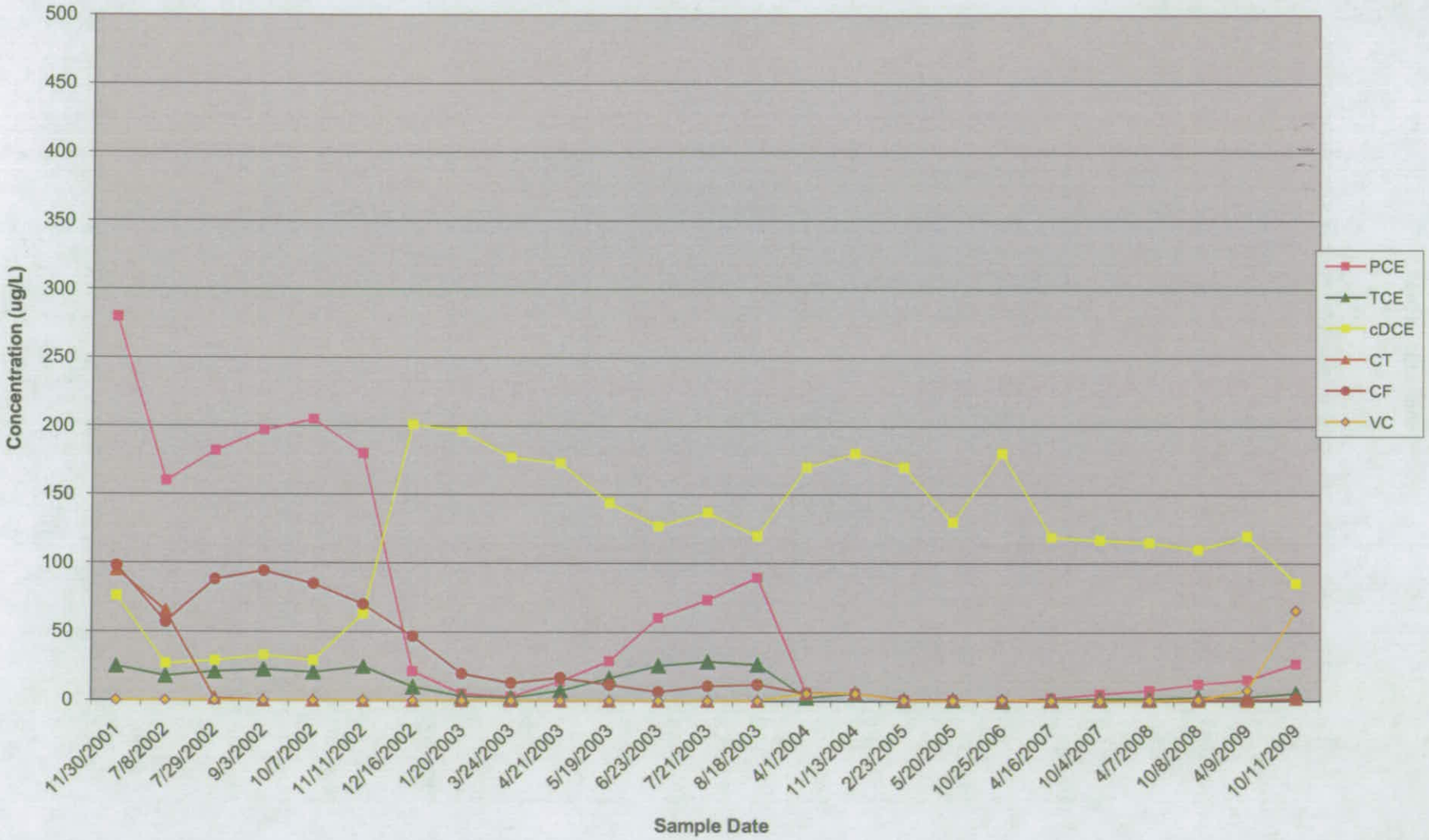
10173431

MW-85
TTA-2



1017344

MW-86
TTA-2

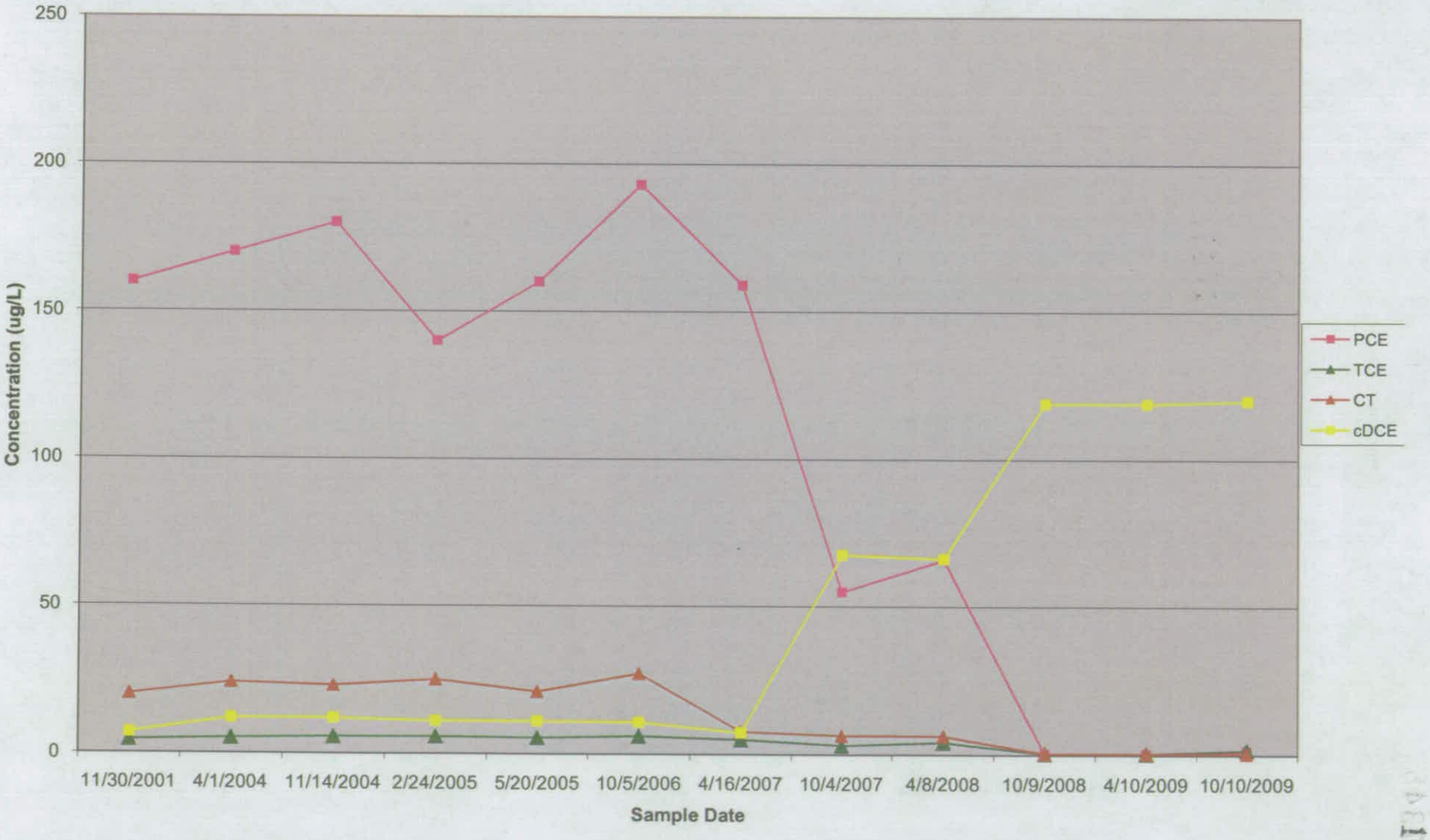


10017345

1017346

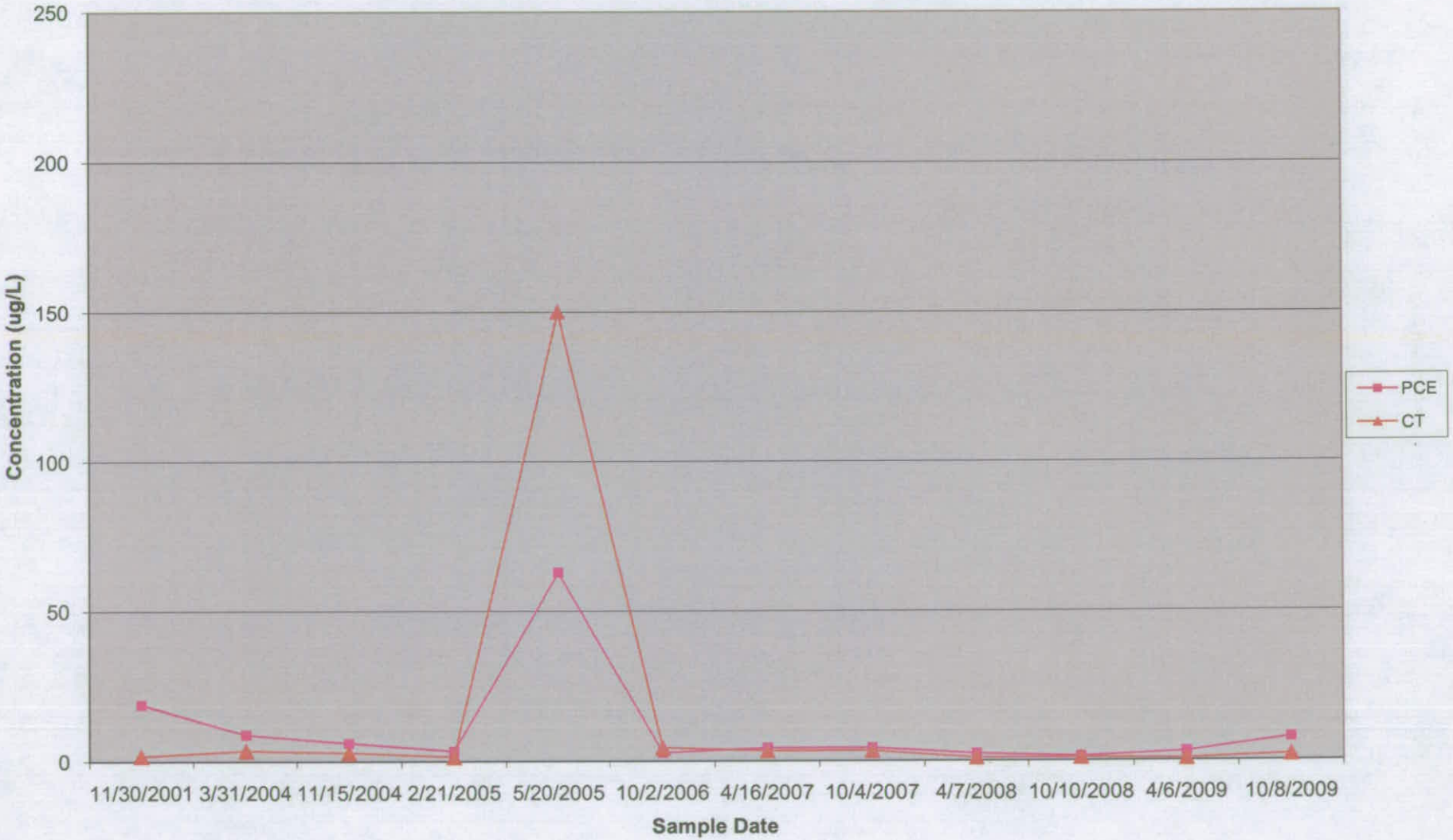
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TTA-2

MW-92
TTA-2



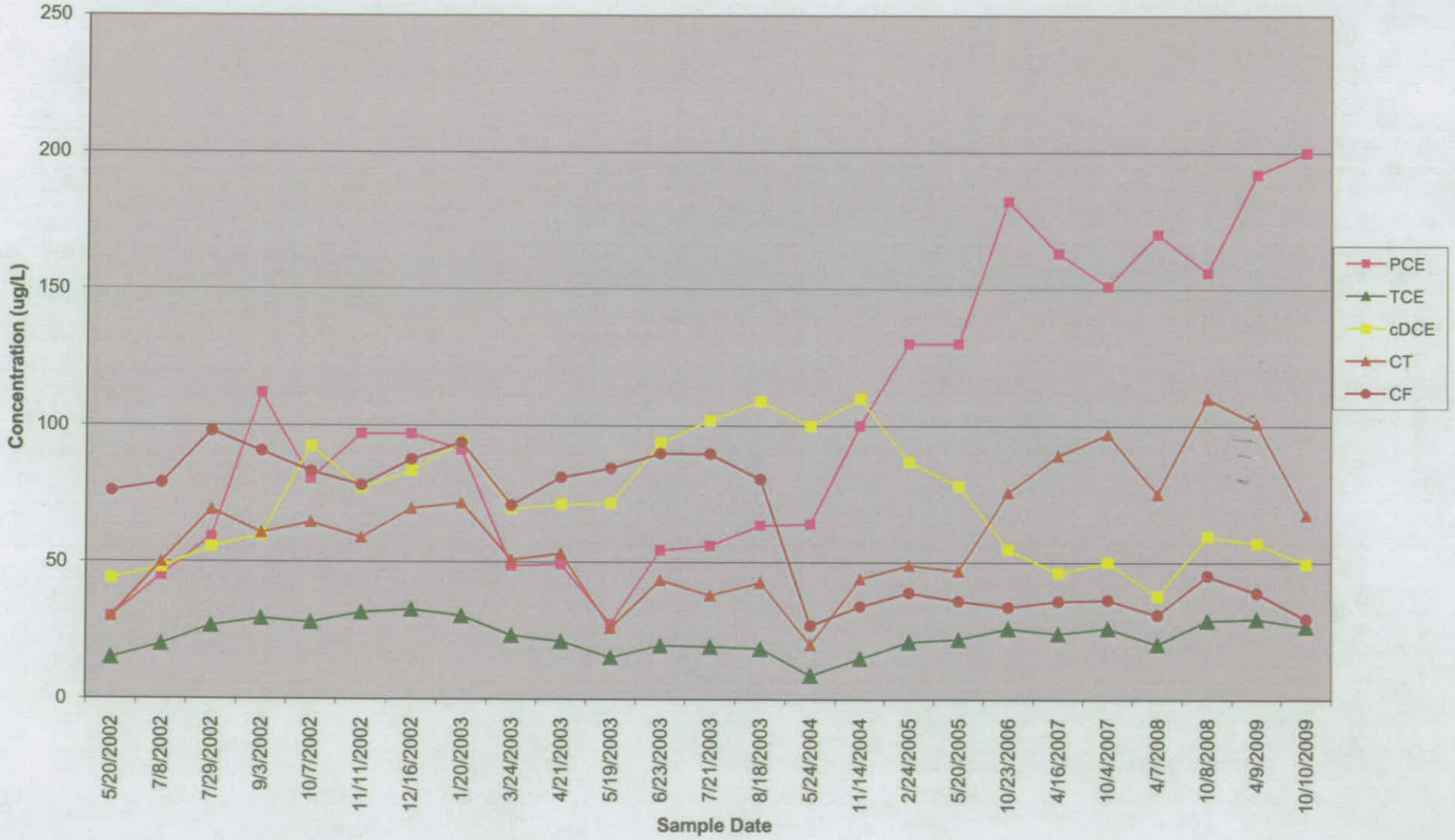
10173477

MW-96
TTA-2



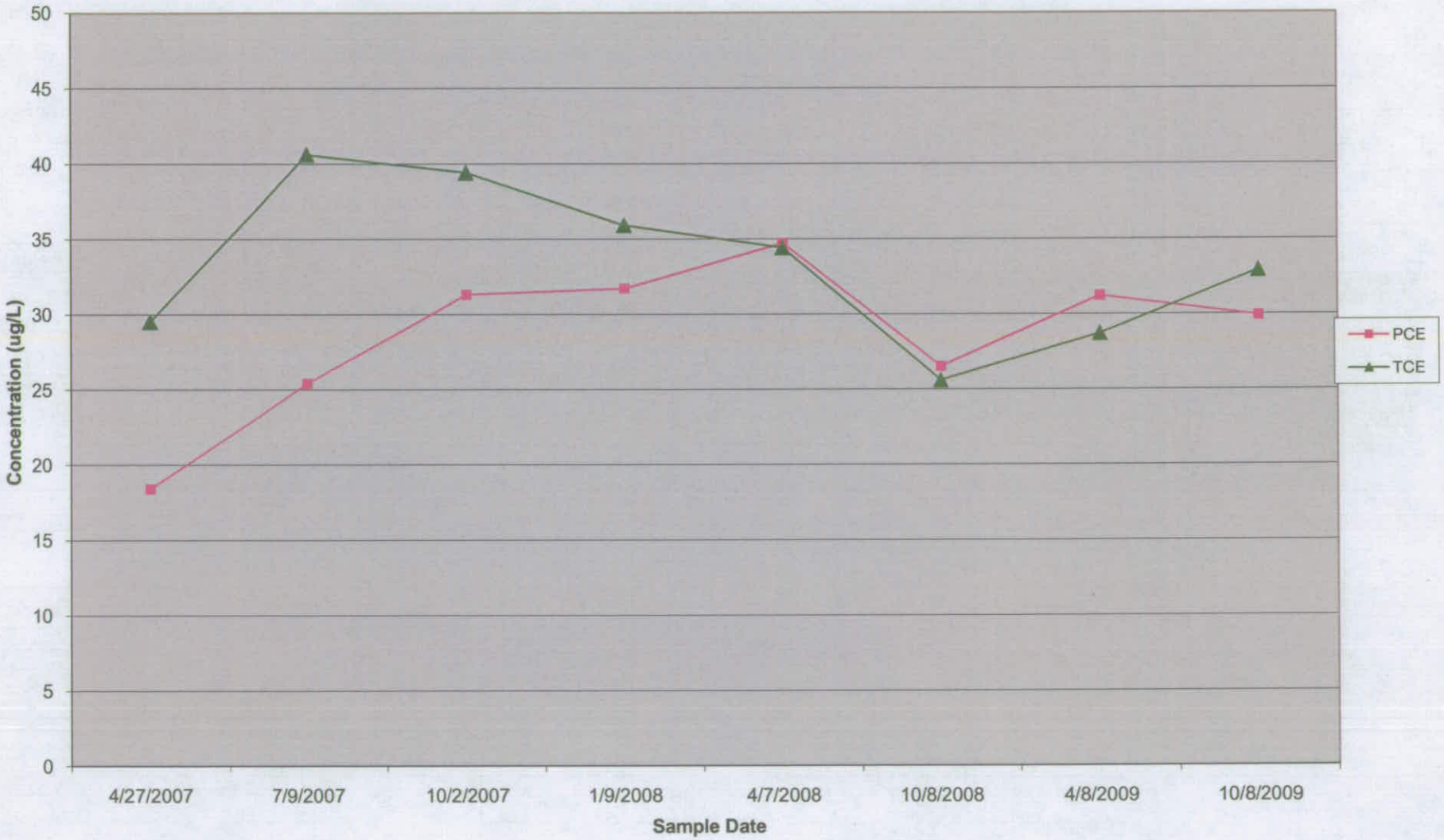
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MW-113
TTA-2



10173449

MW-217
TTA-2



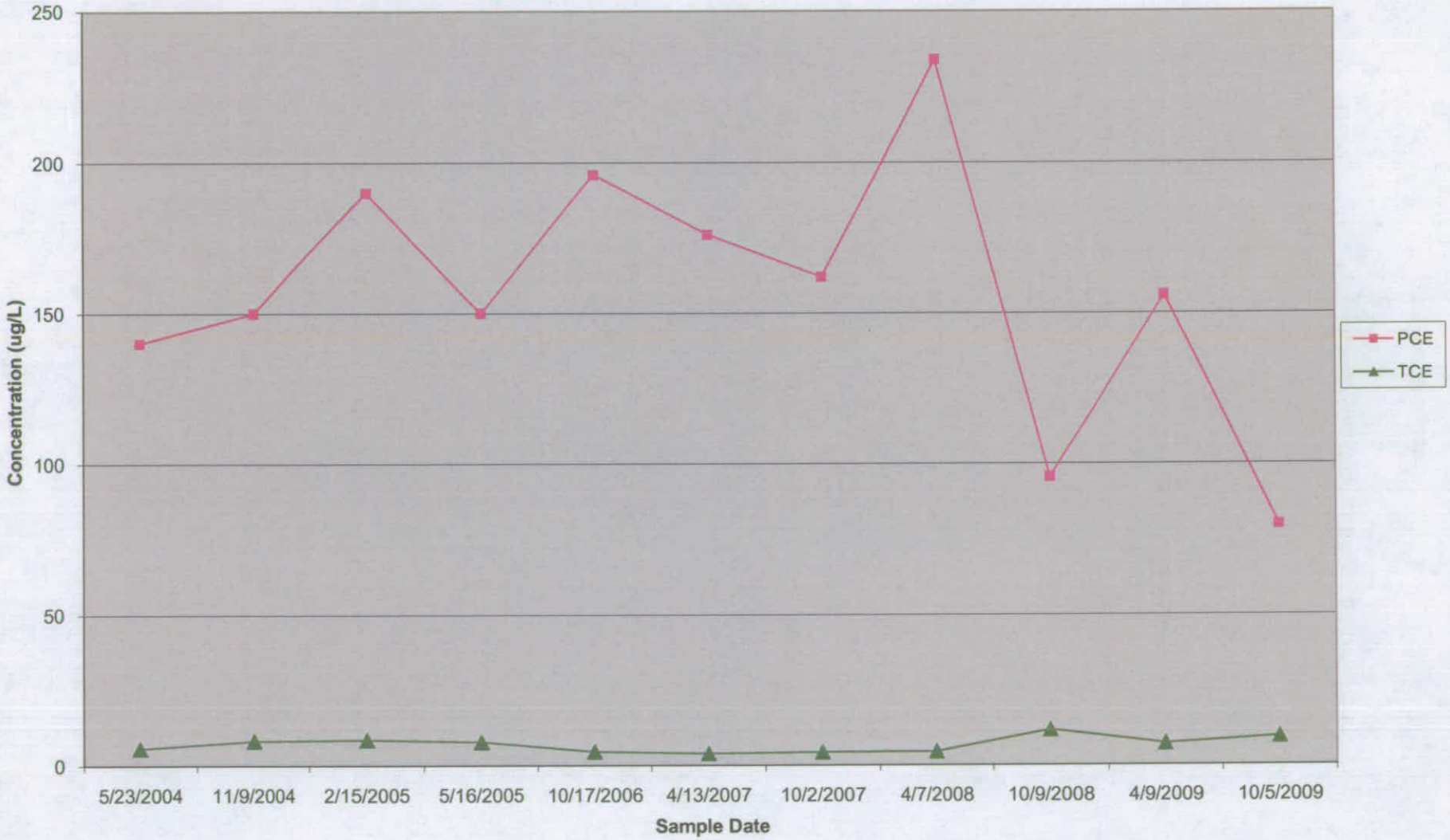
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MW-218
TTA-2



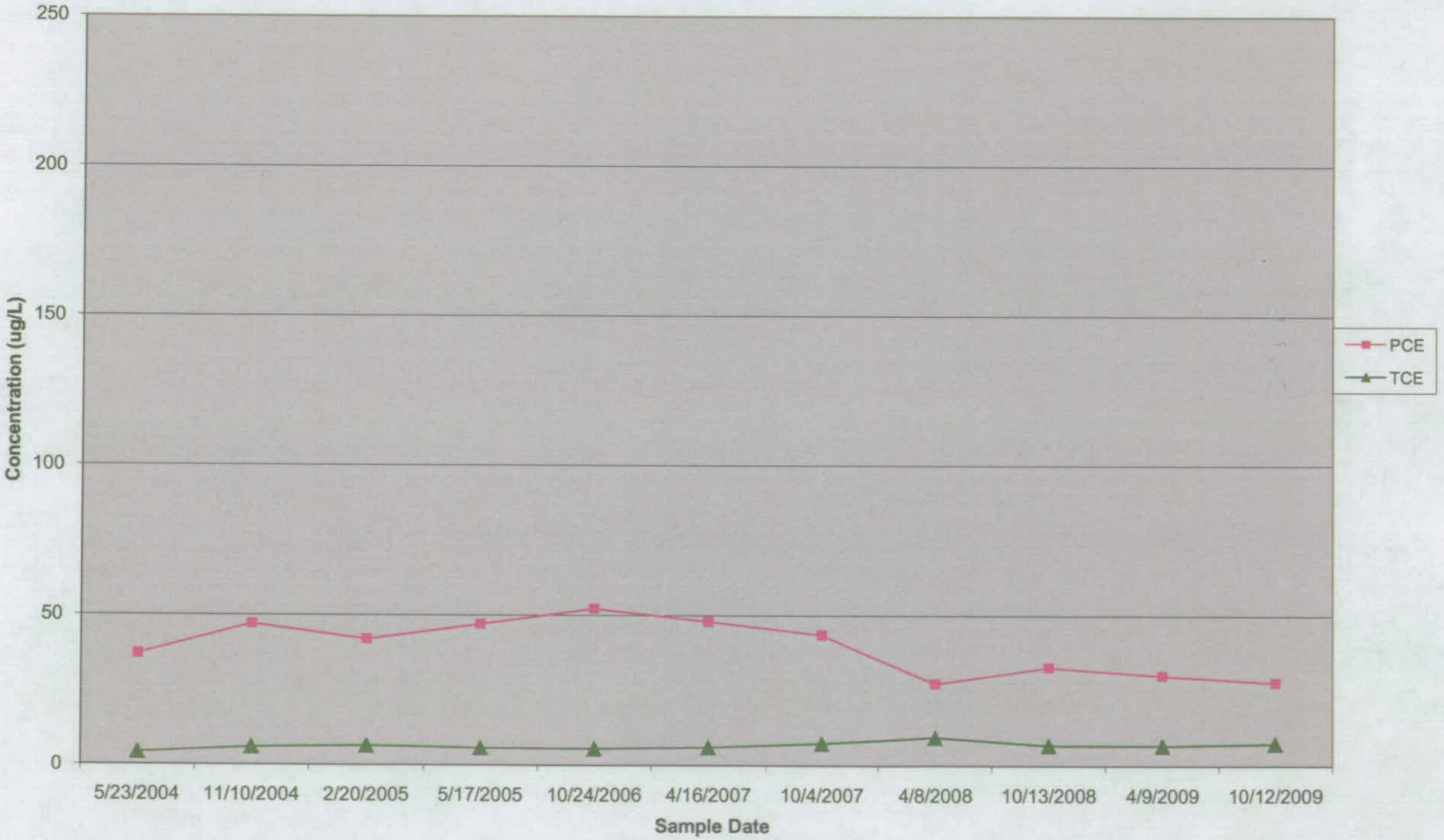
10173511

MW-39A
WEST - CENTRAL MI



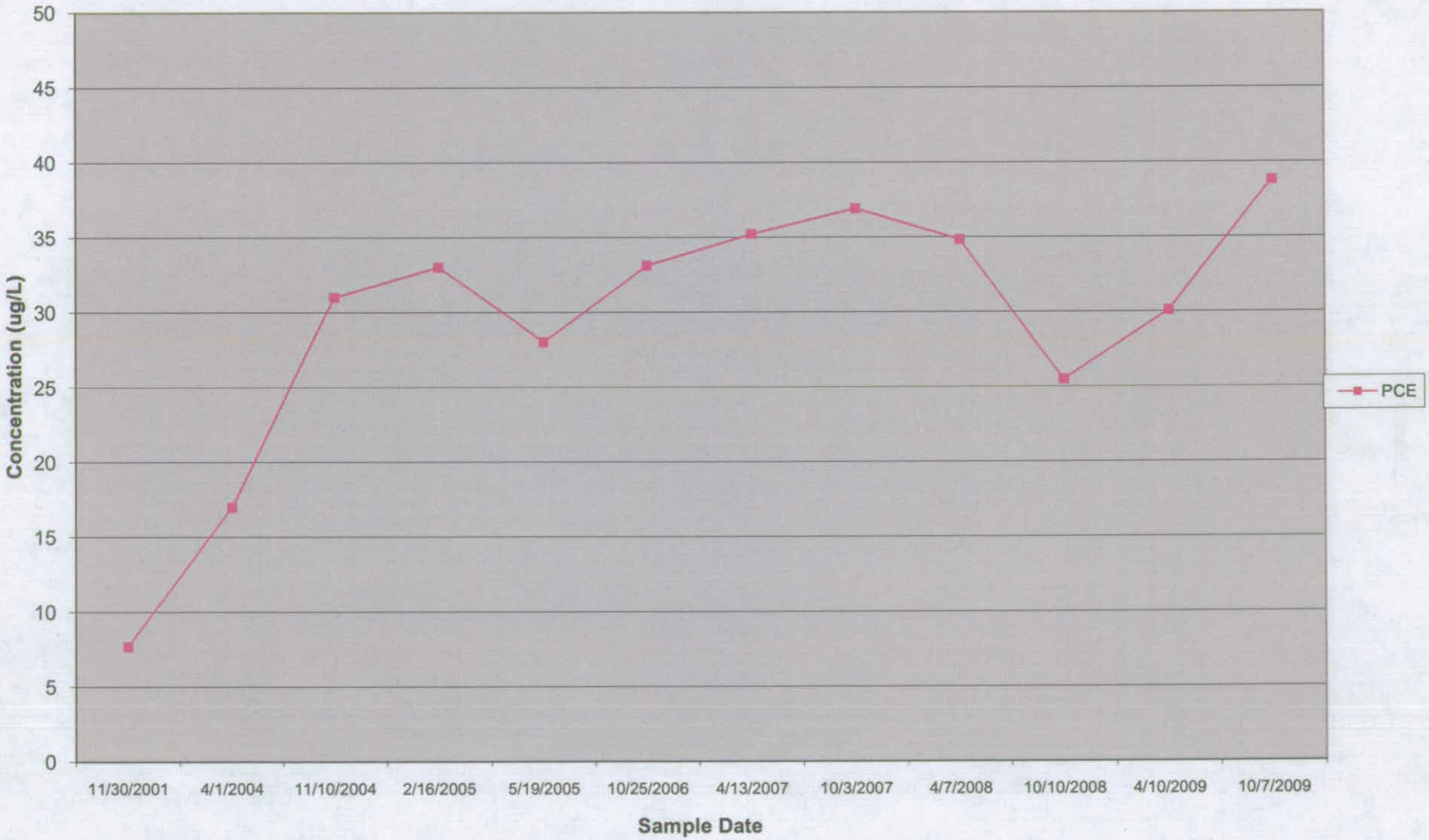
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MW-94A
WEST - CENTRAL MI



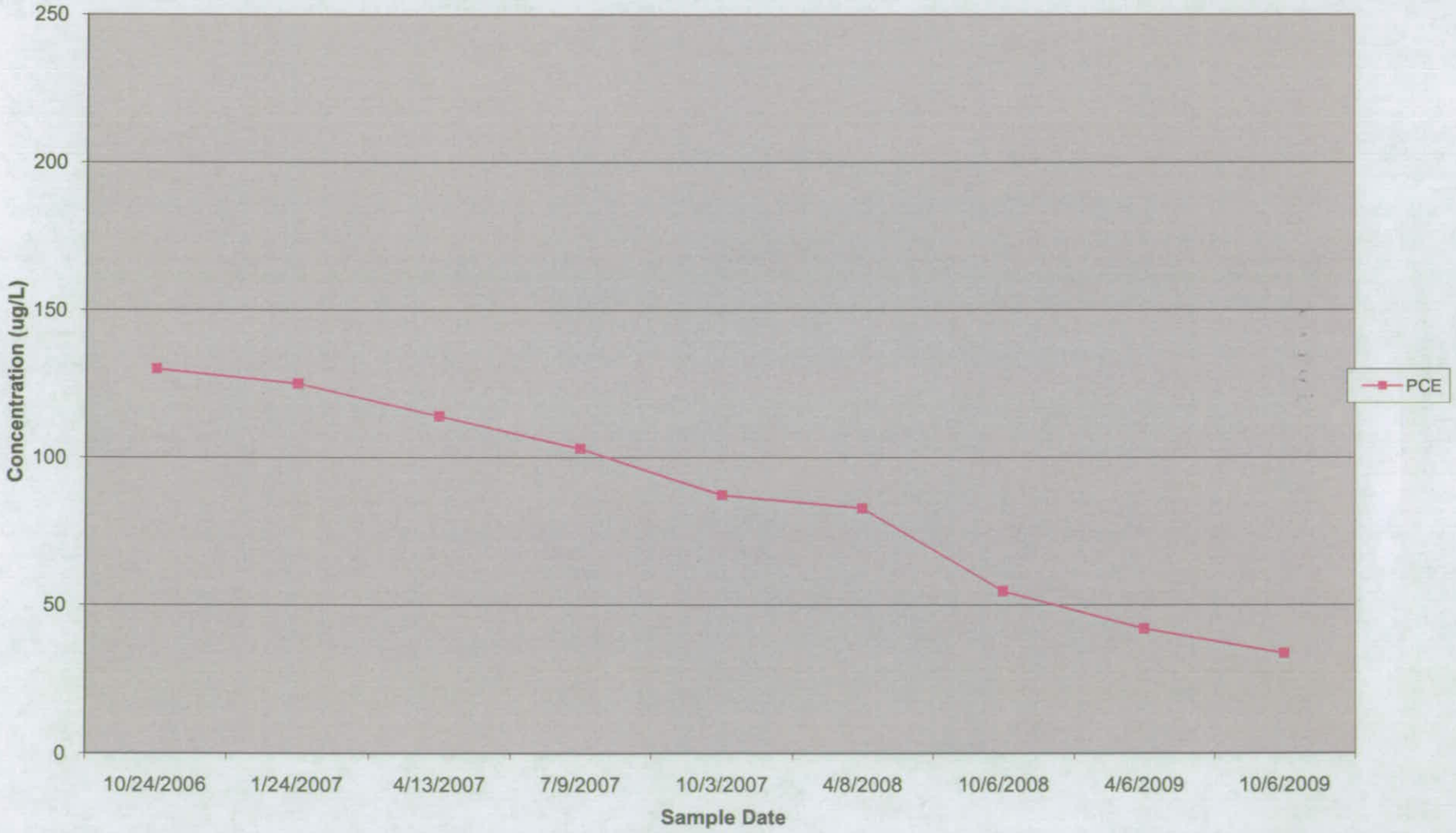
10173353

MW-98
WEST - CENTRAL MI



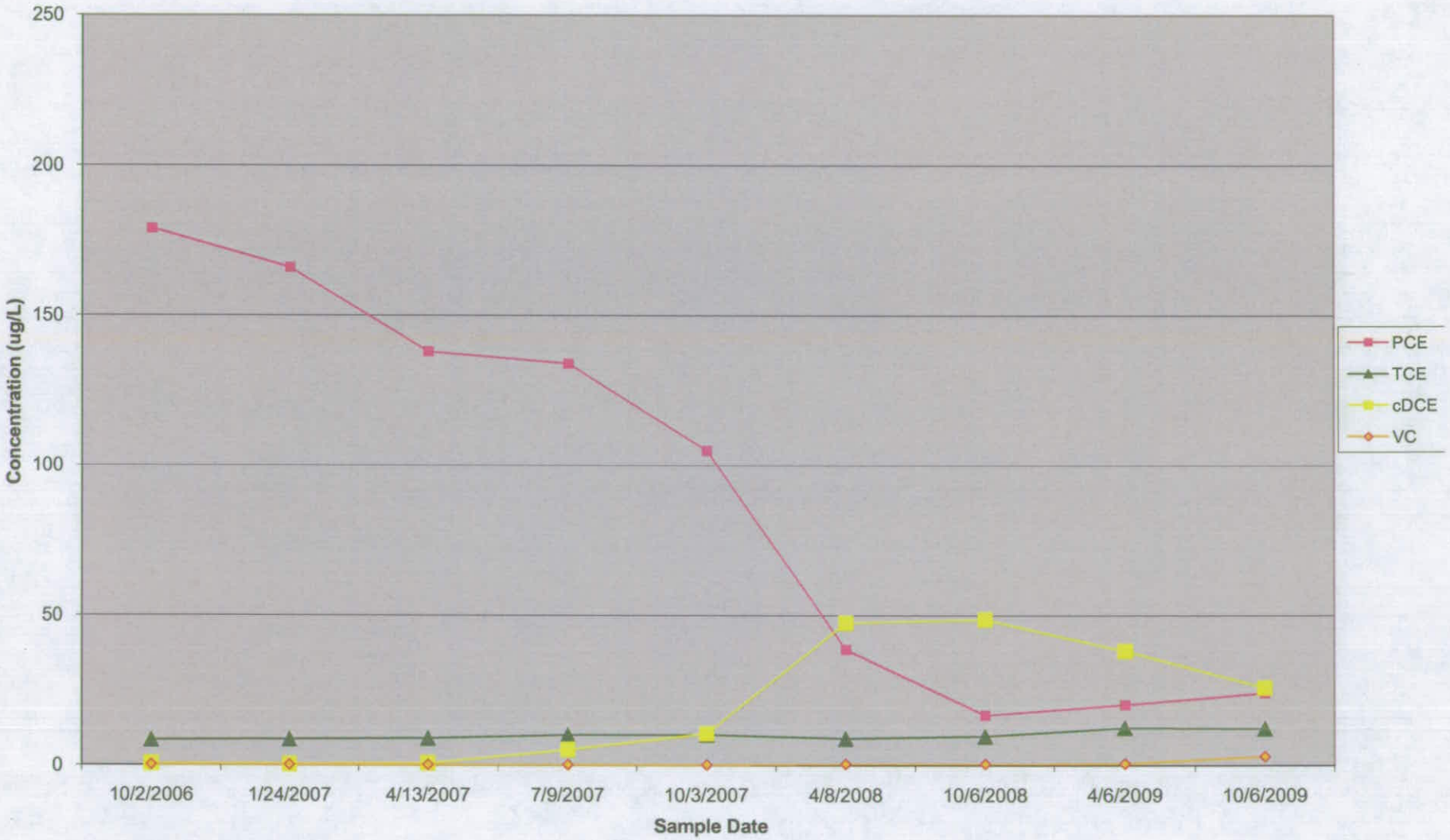
1017354

MW-197A
WEST - CENTRAL MI



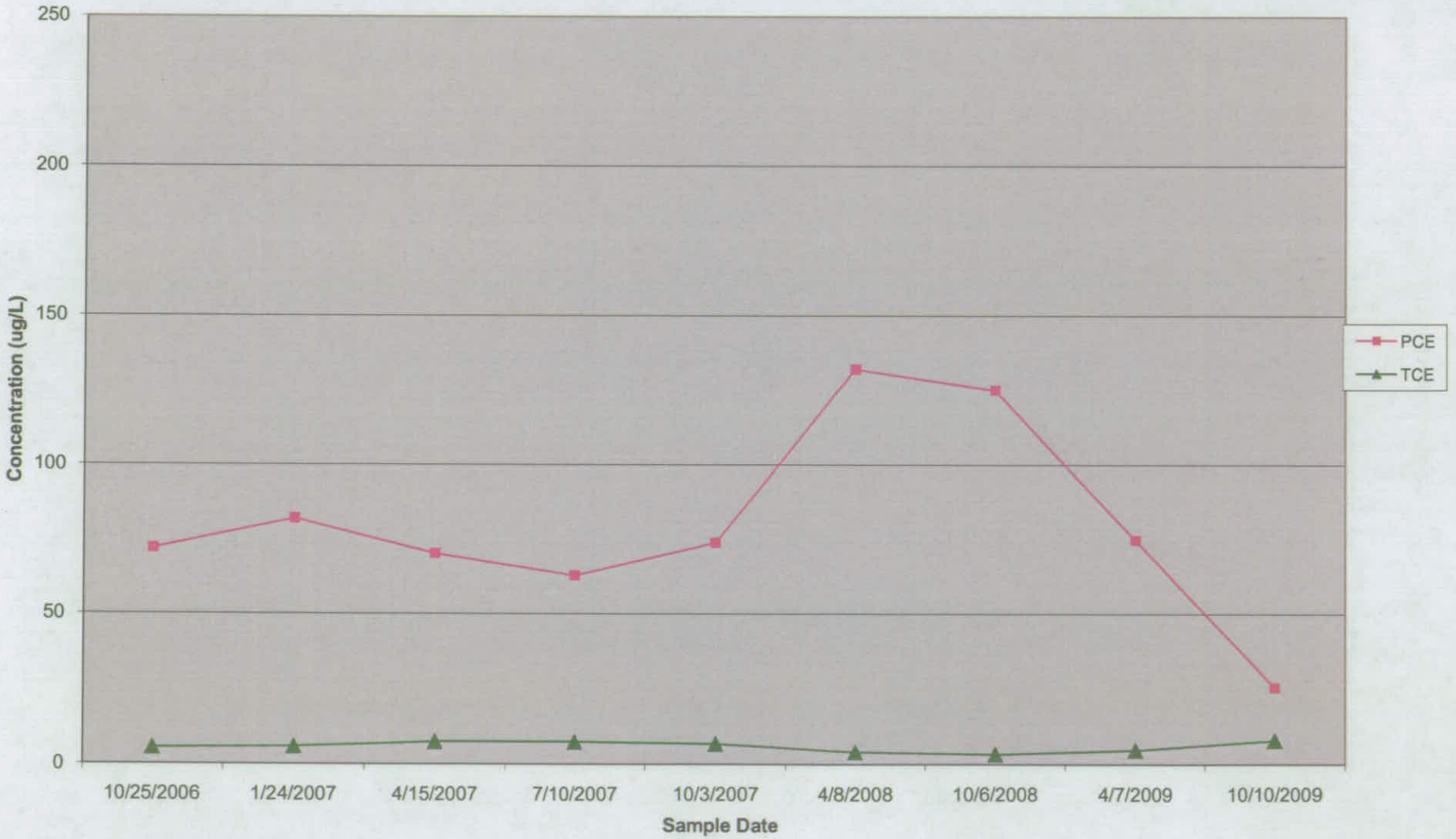
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MW-197B
WEST - CENTRAL MI



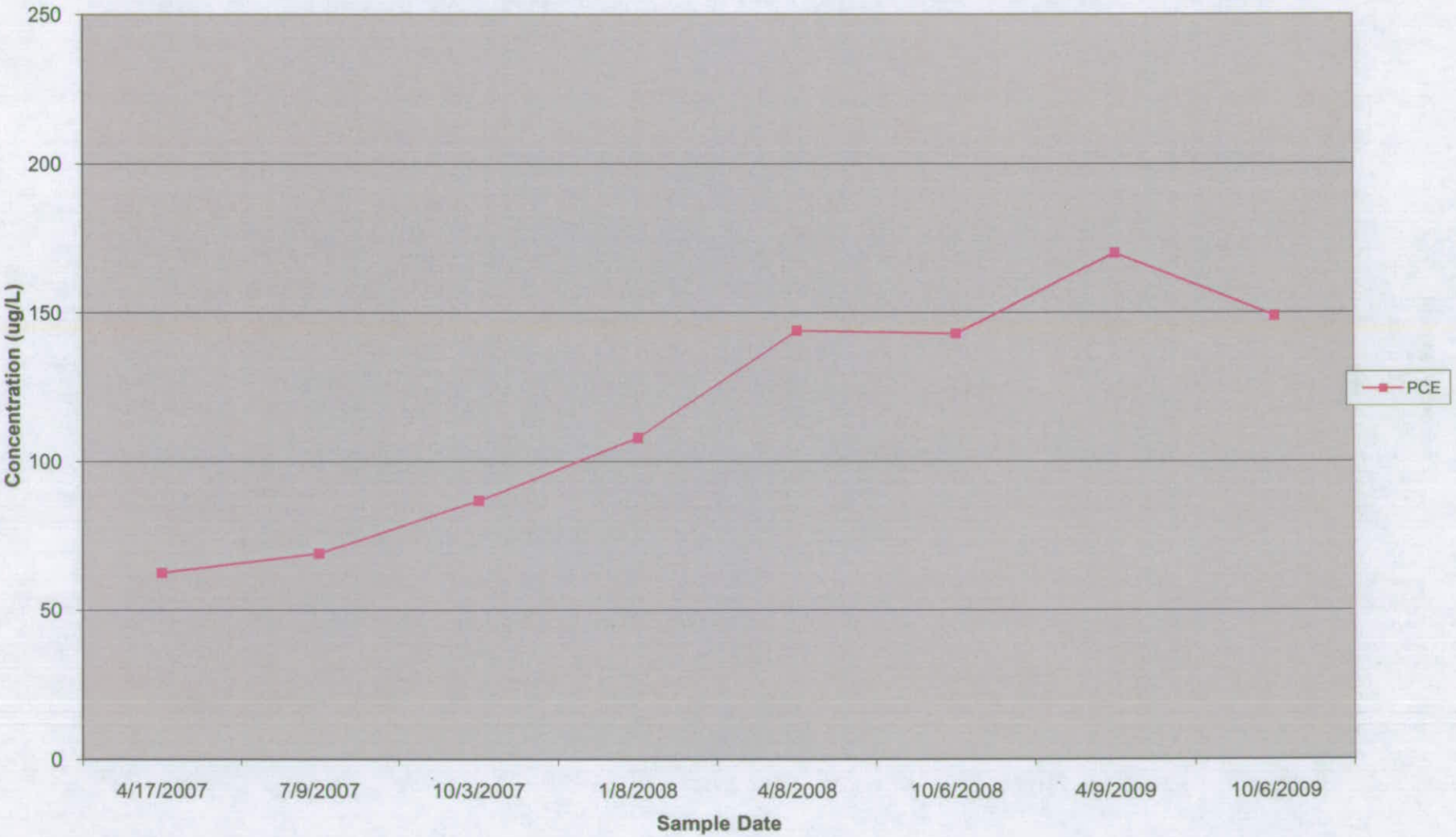
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MW-200
WEST - CENTRAL MI



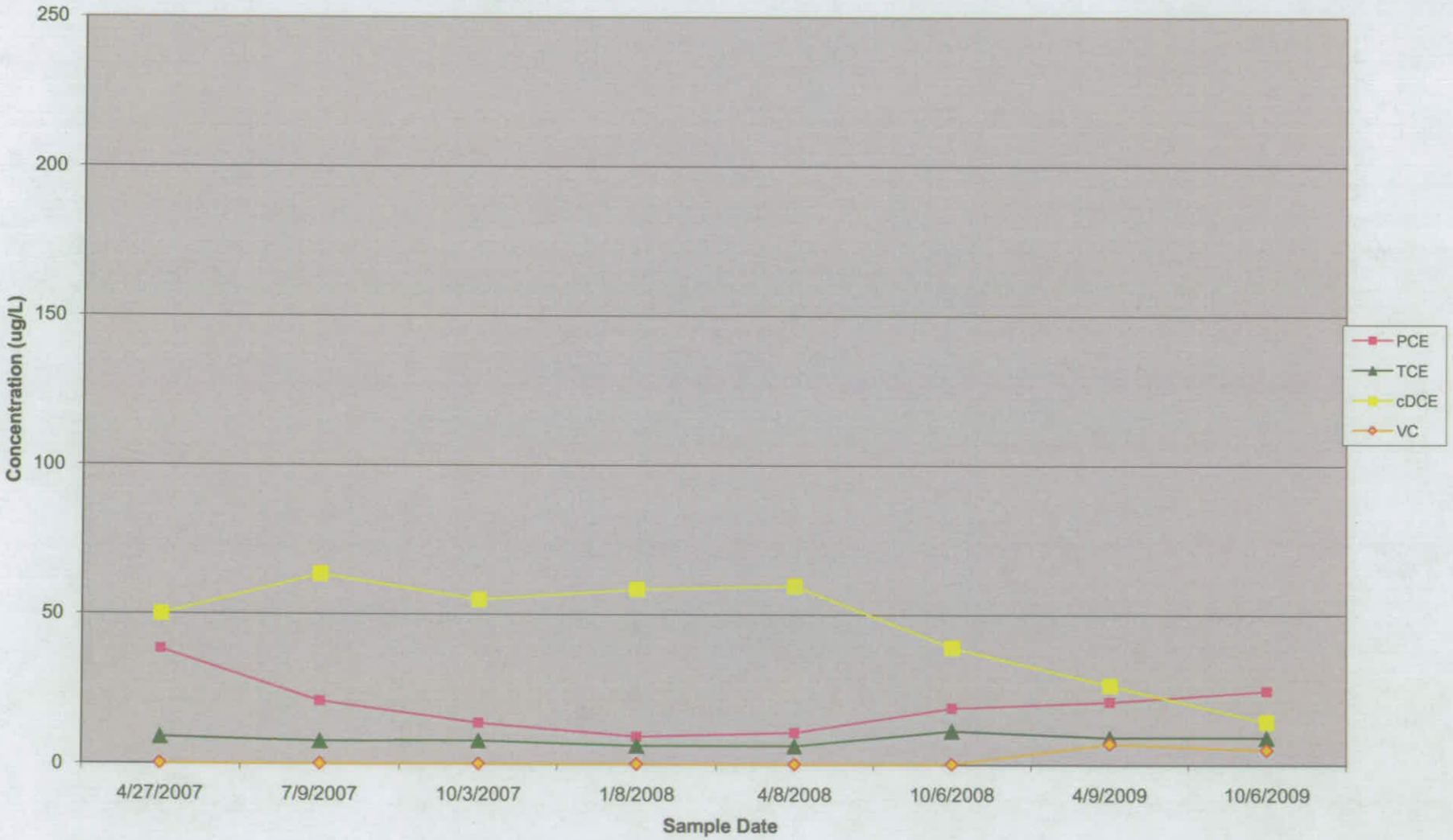
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MW-203A
WEST - CENTRAL MI



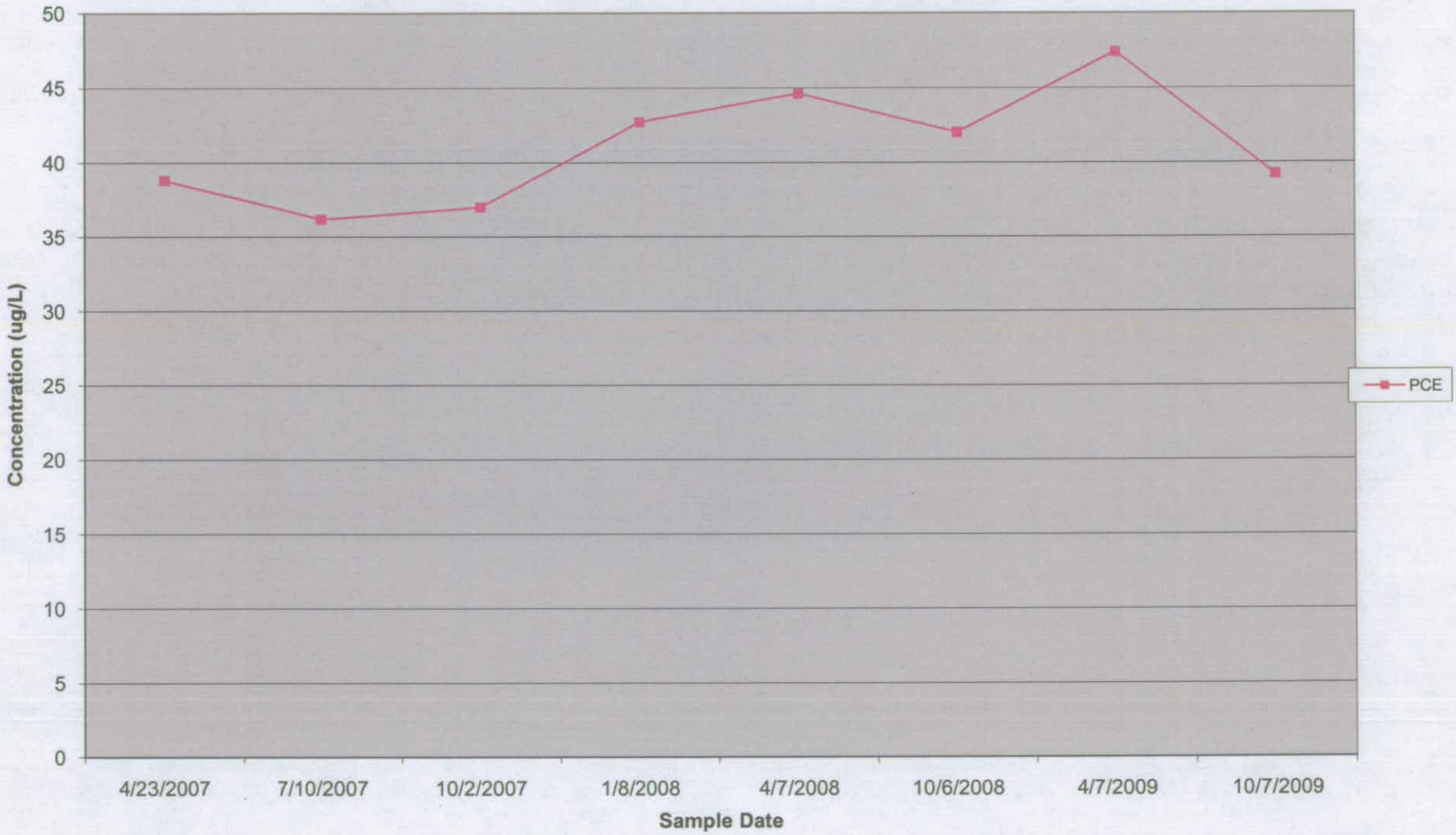
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MW-203B
WEST - CENTRAL MI



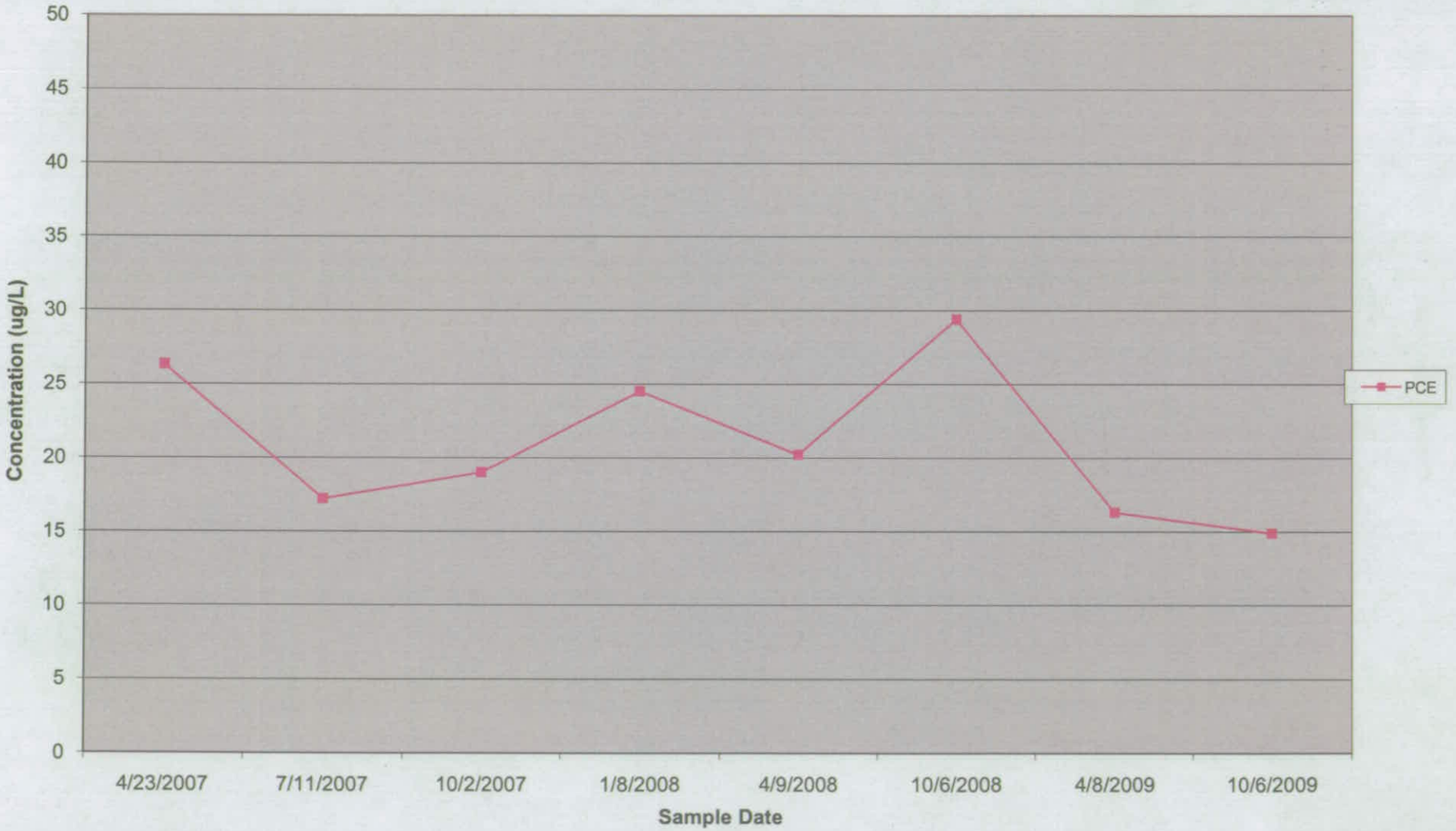
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MW-204A
WEST - CENTRAL MI



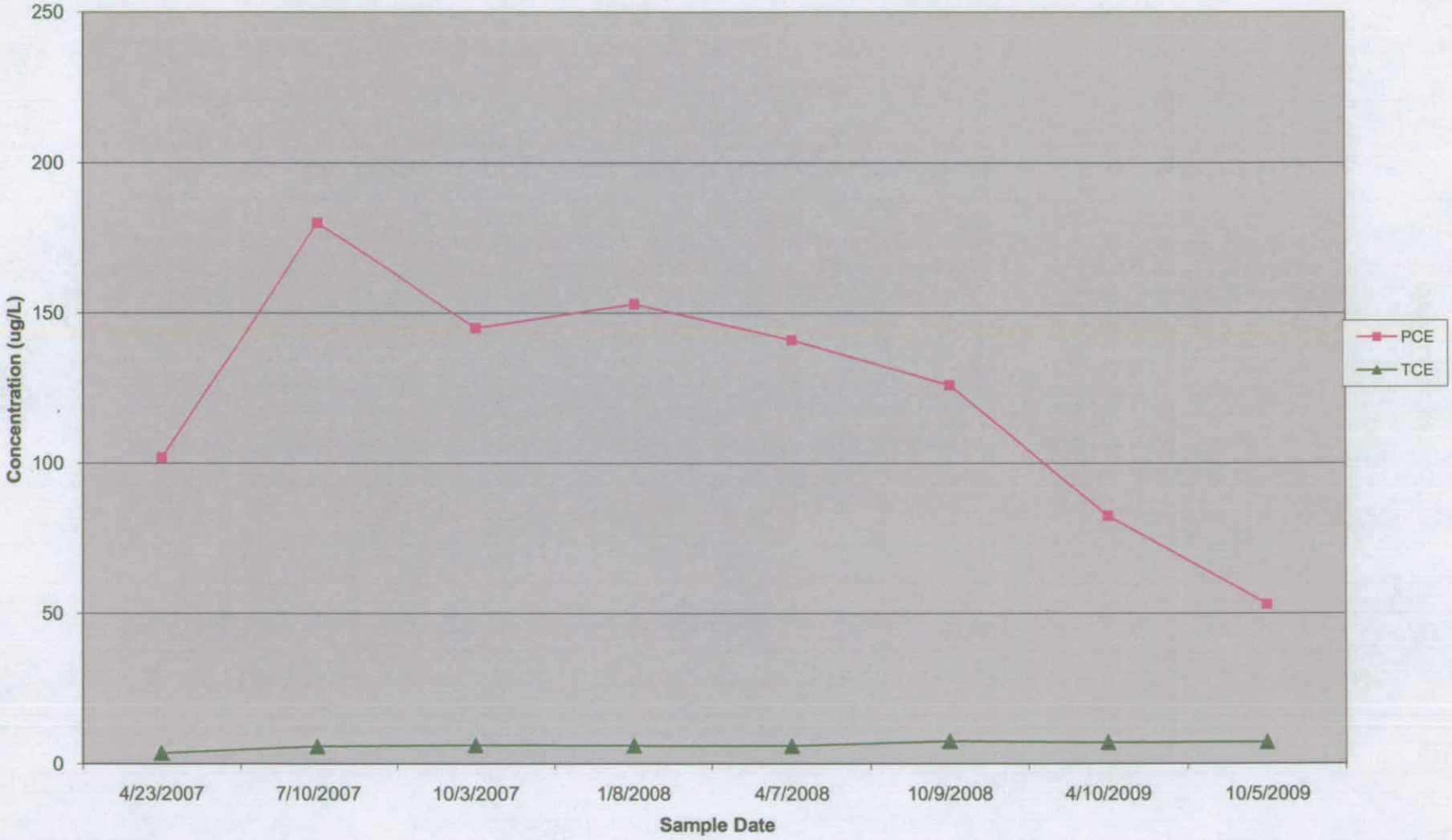
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MW-204B
WEST - CENTRAL MI



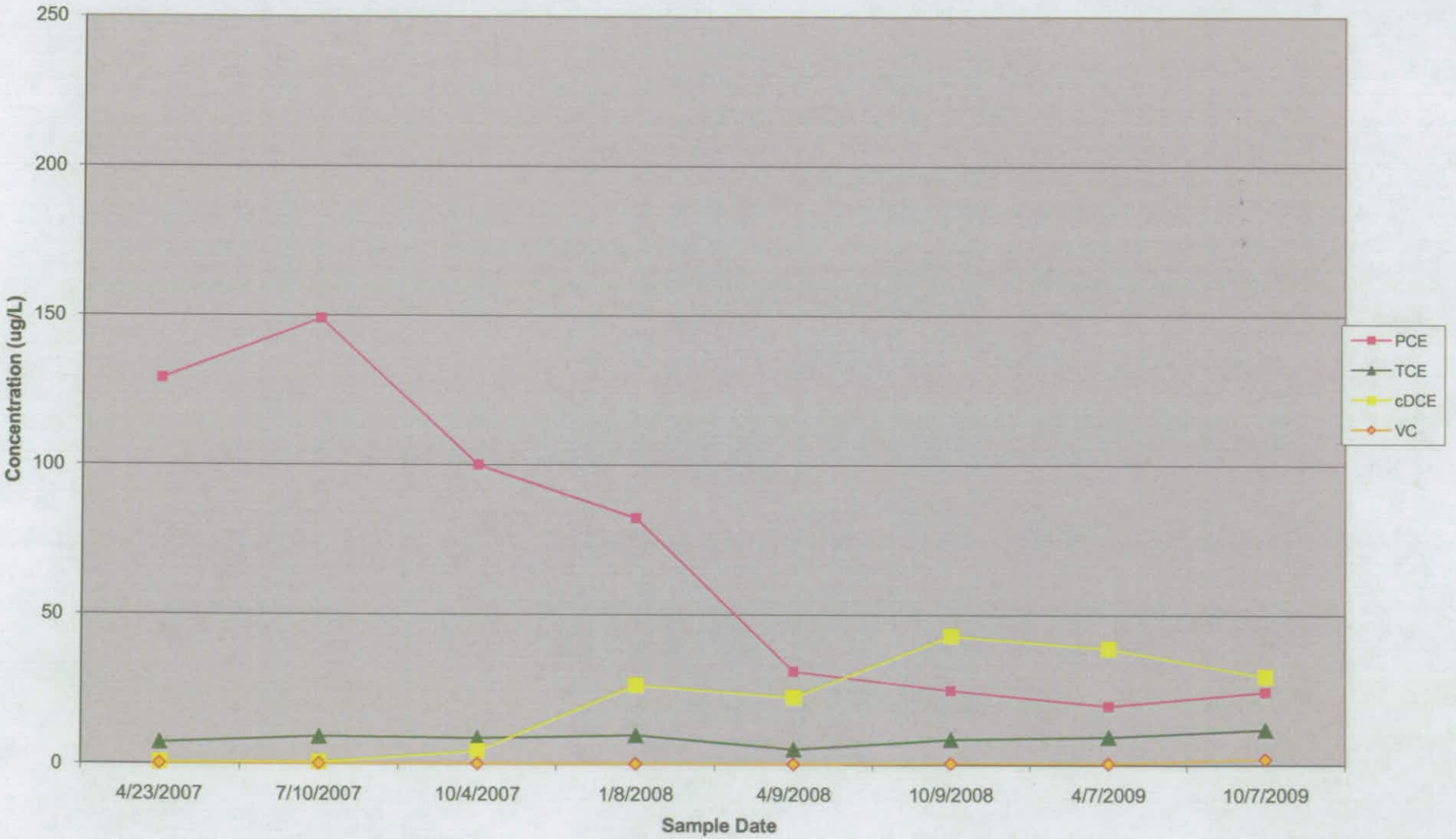
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MW-205A
WEST - CENTRAL MI



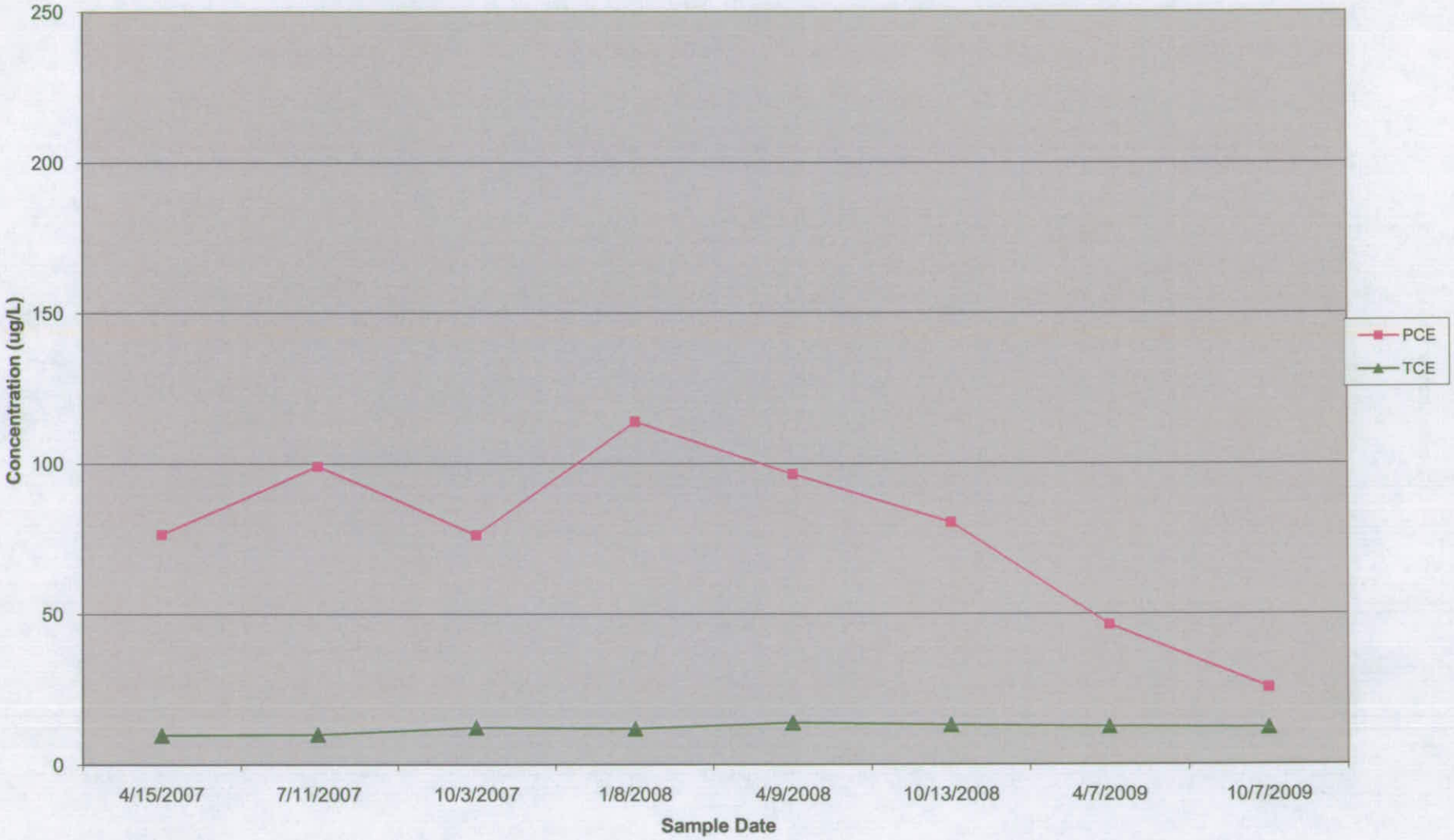
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MW-205B
WEST - CENTRAL MI



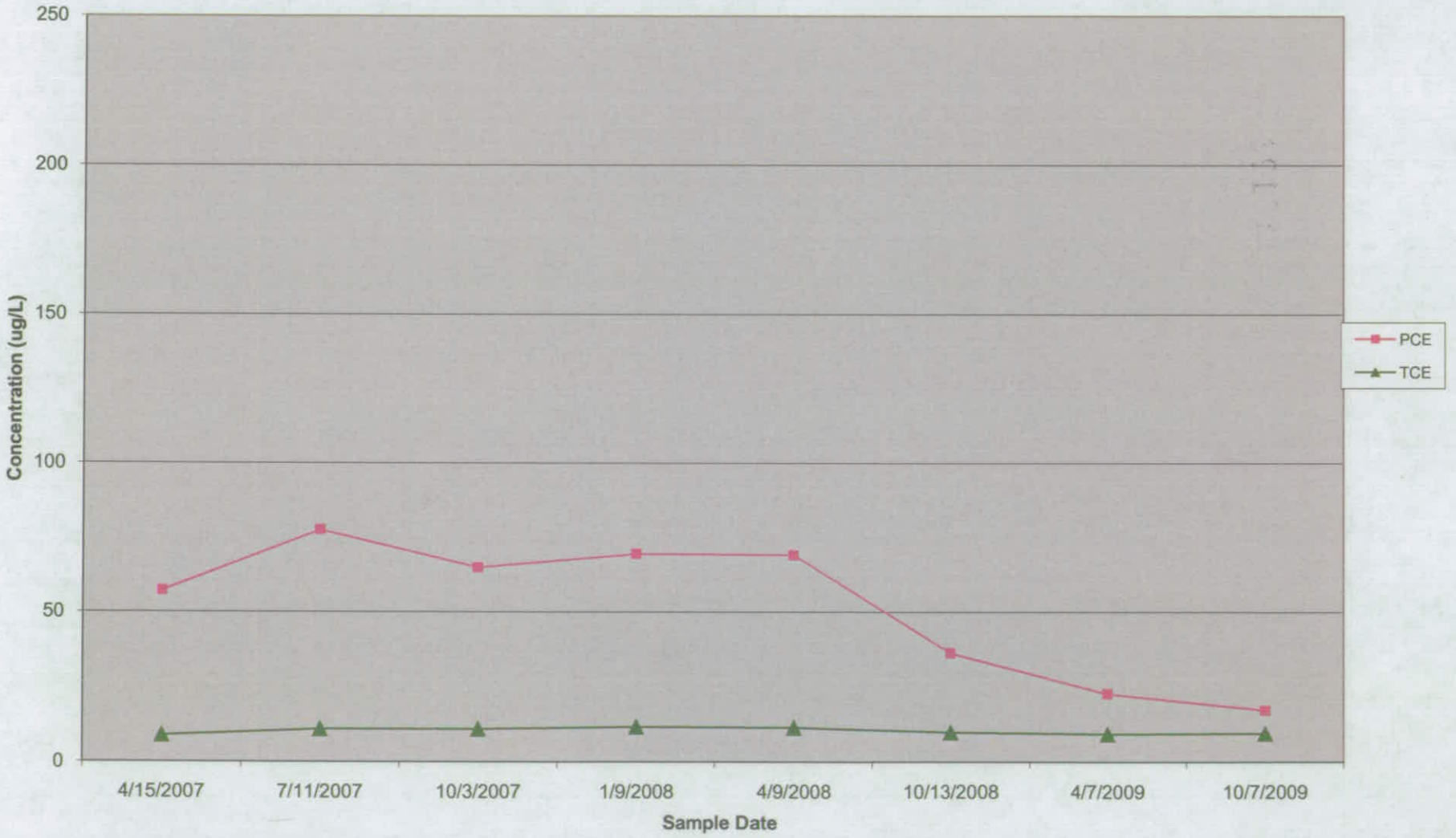
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MW-206A
WEST - CENTRAL MI



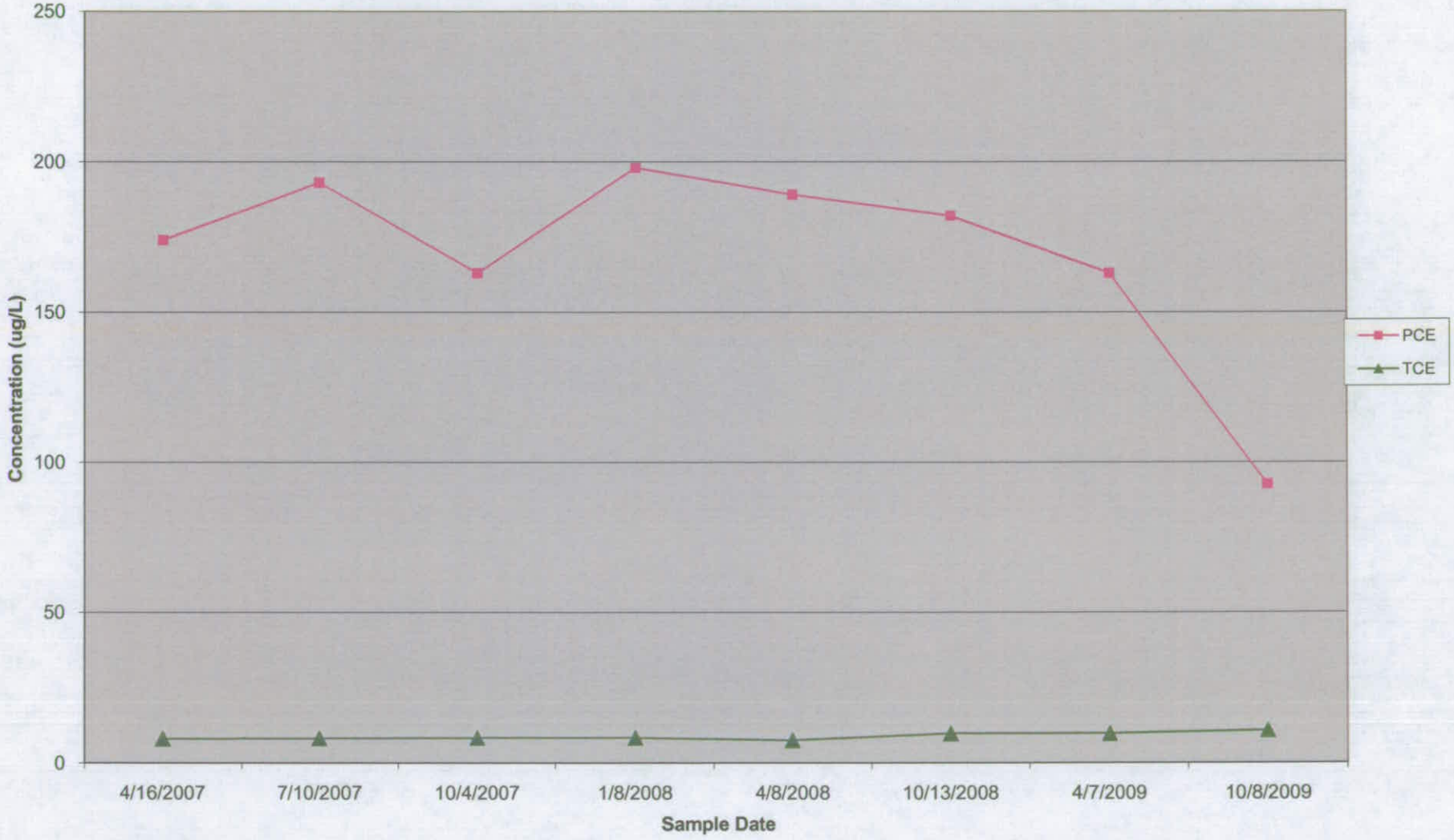
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MW-206B
WEST - CENTRAL MI



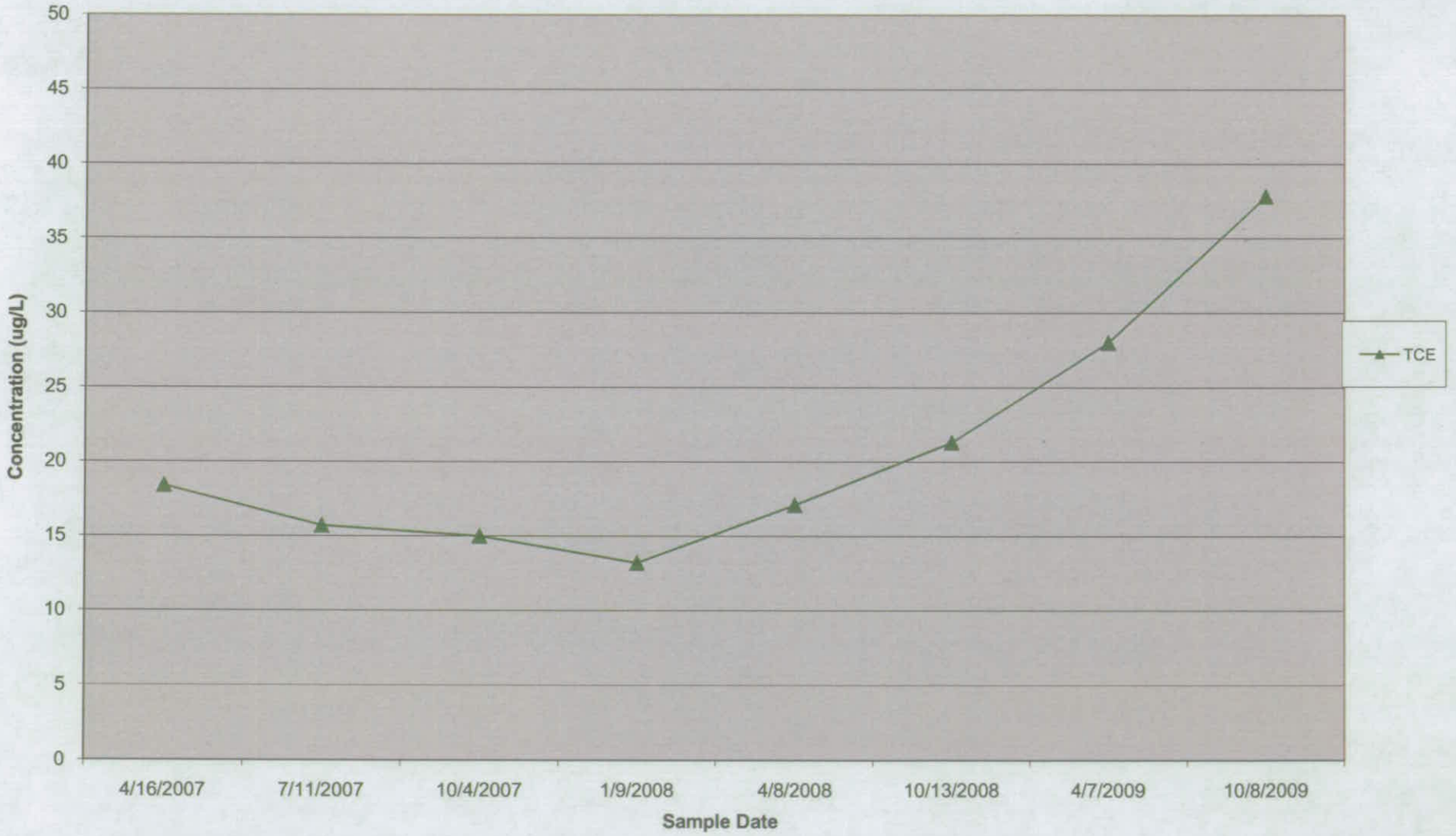
10173655

MW-208A
WEST - CENTRAL MI



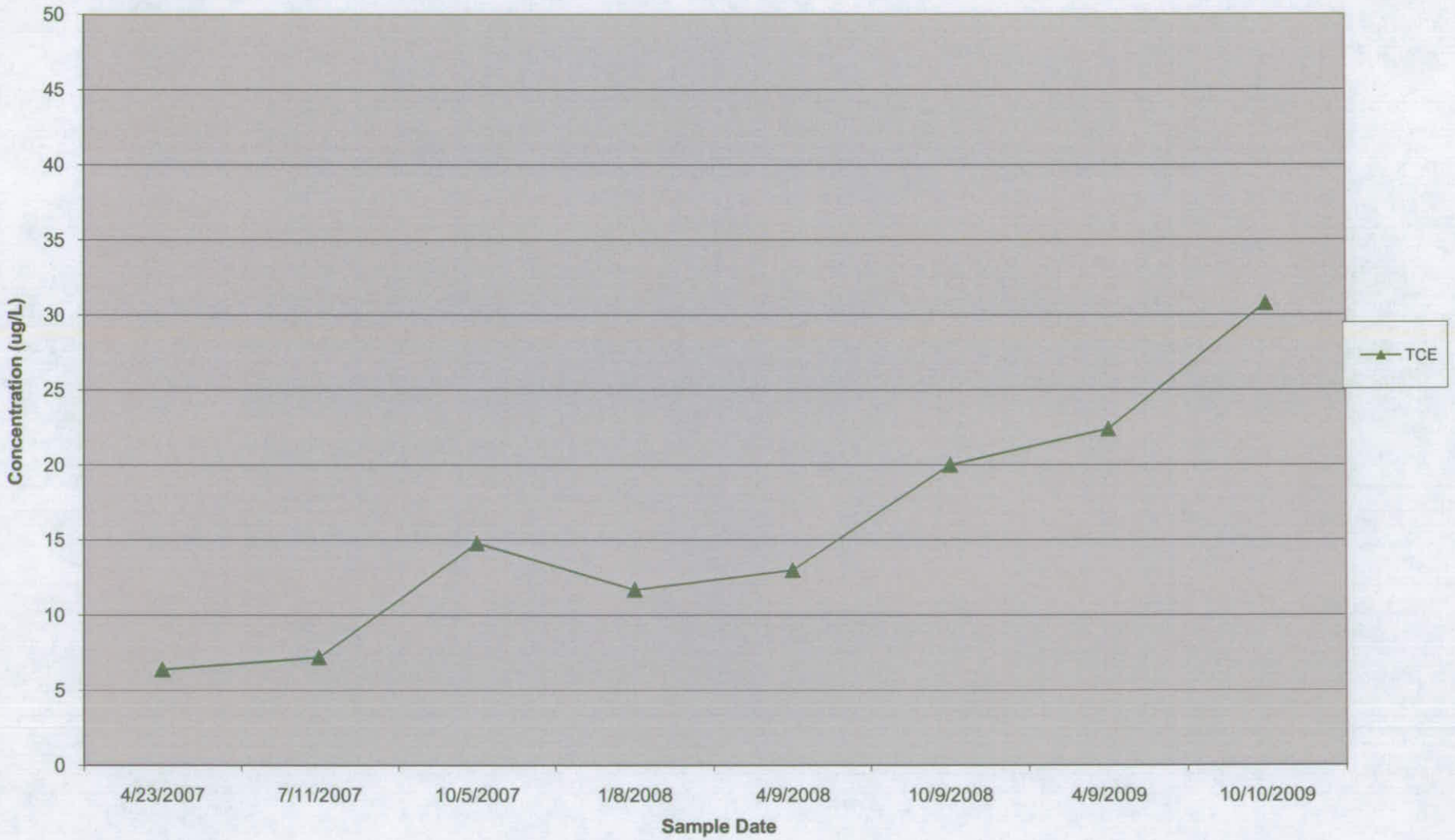
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MW-208B
WEST - CENTRAL MI



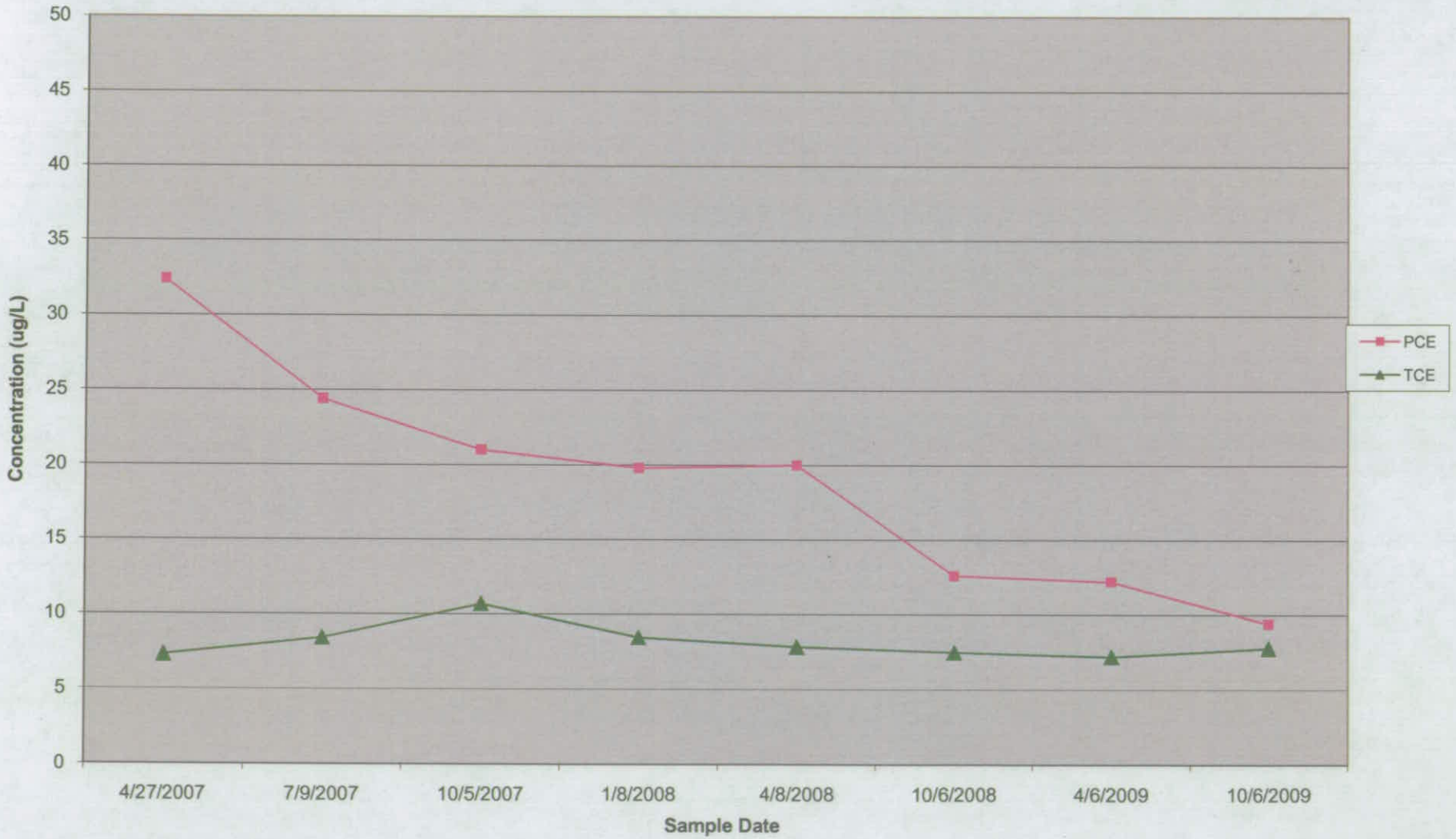
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MW-209B
WEST - CENTRAL MI



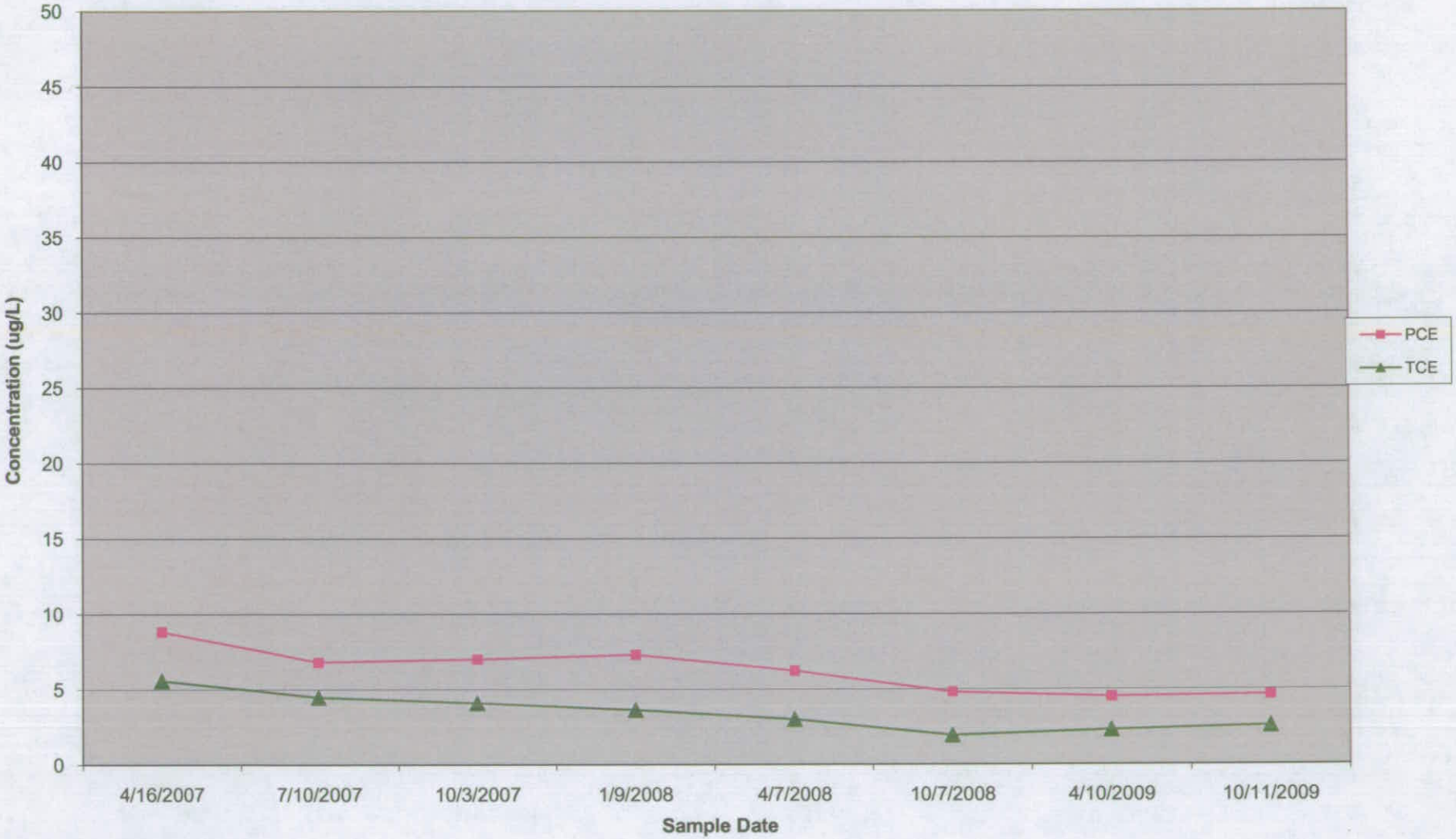
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MW-210B
WEST - CENTRAL MI



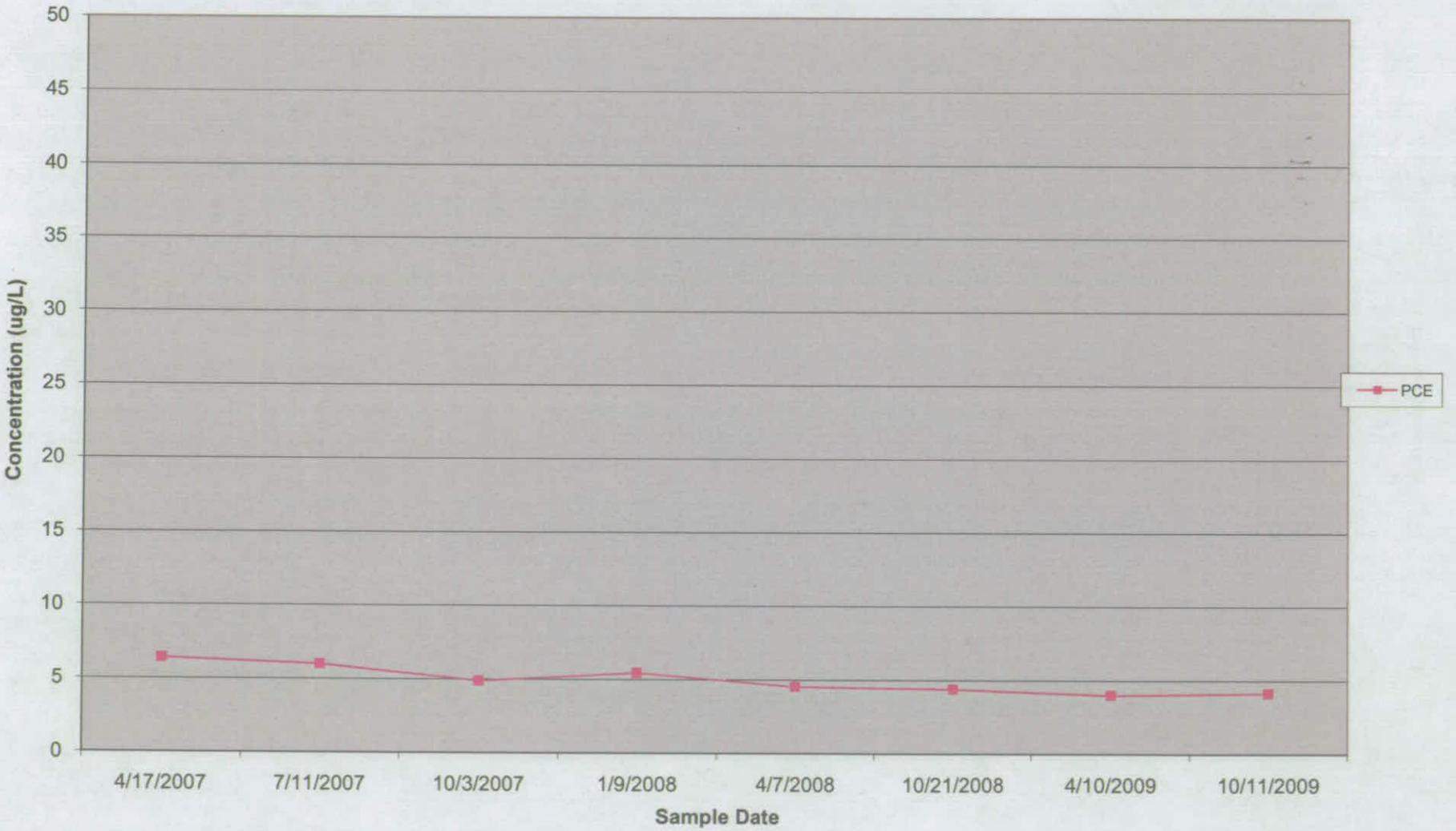
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MW-214A
WEST - CENTRAL MI



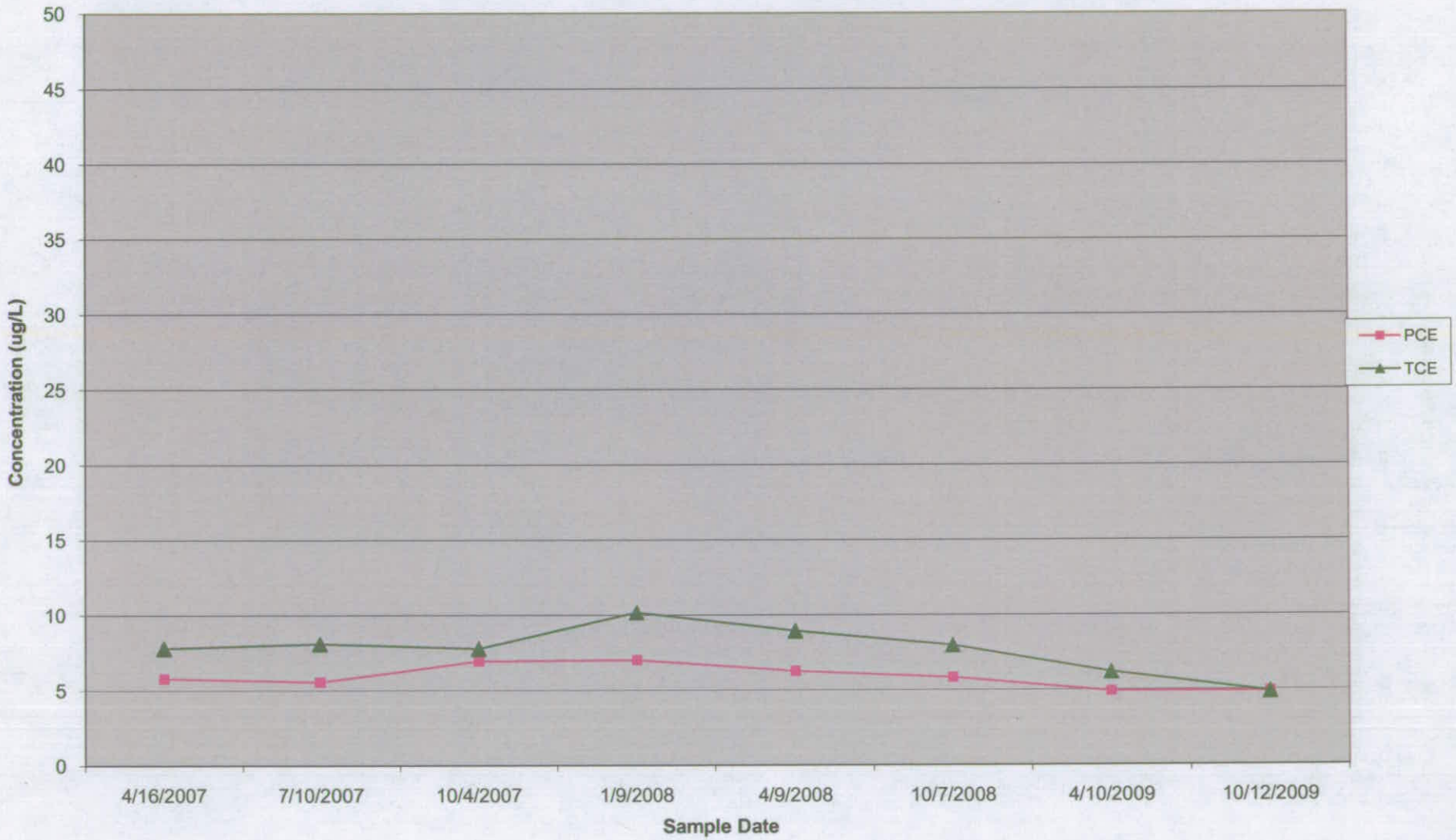
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MW-214B
WEST - CENTRAL MI



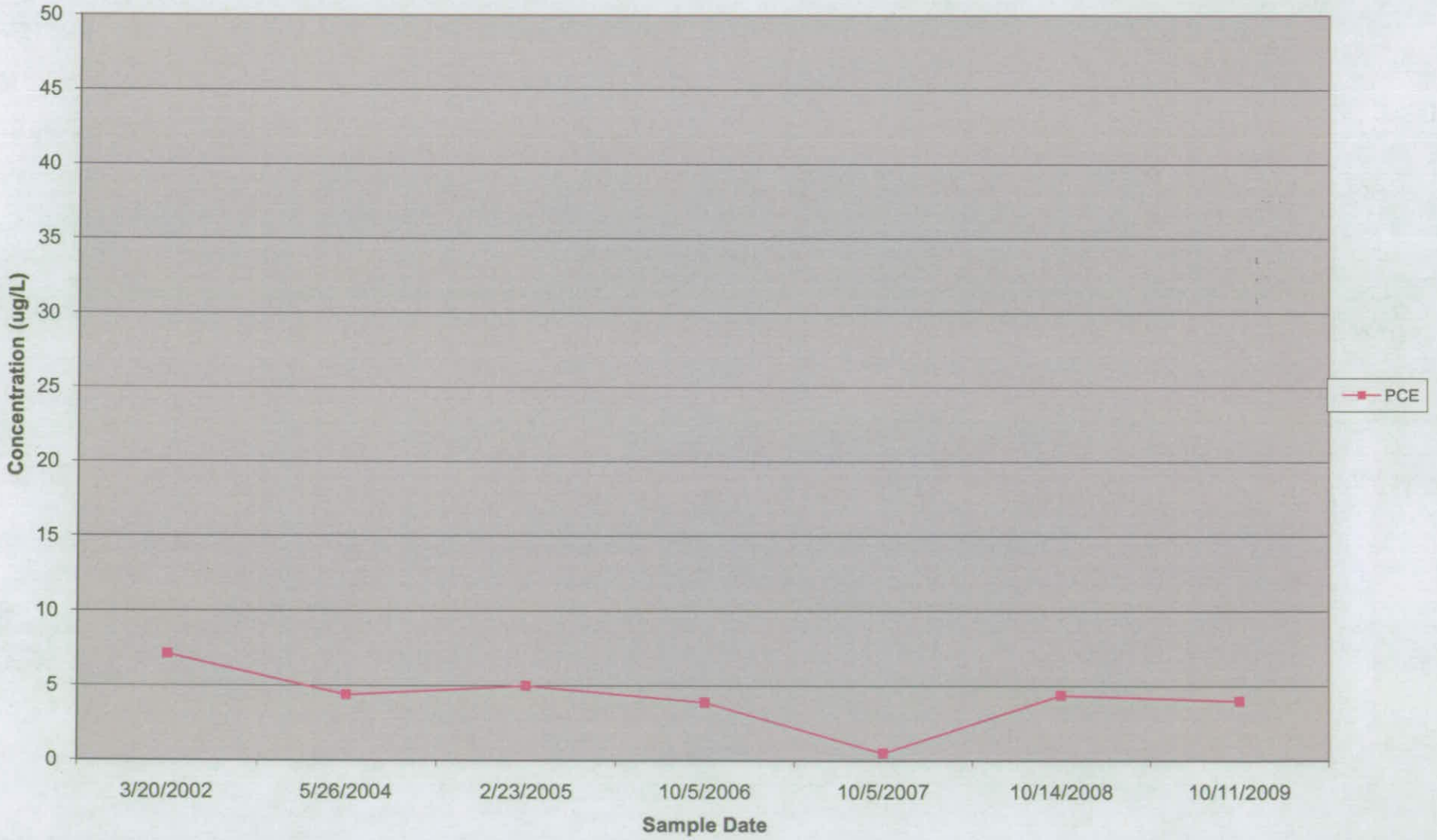
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MW-215A
WEST - CENTRAL MI



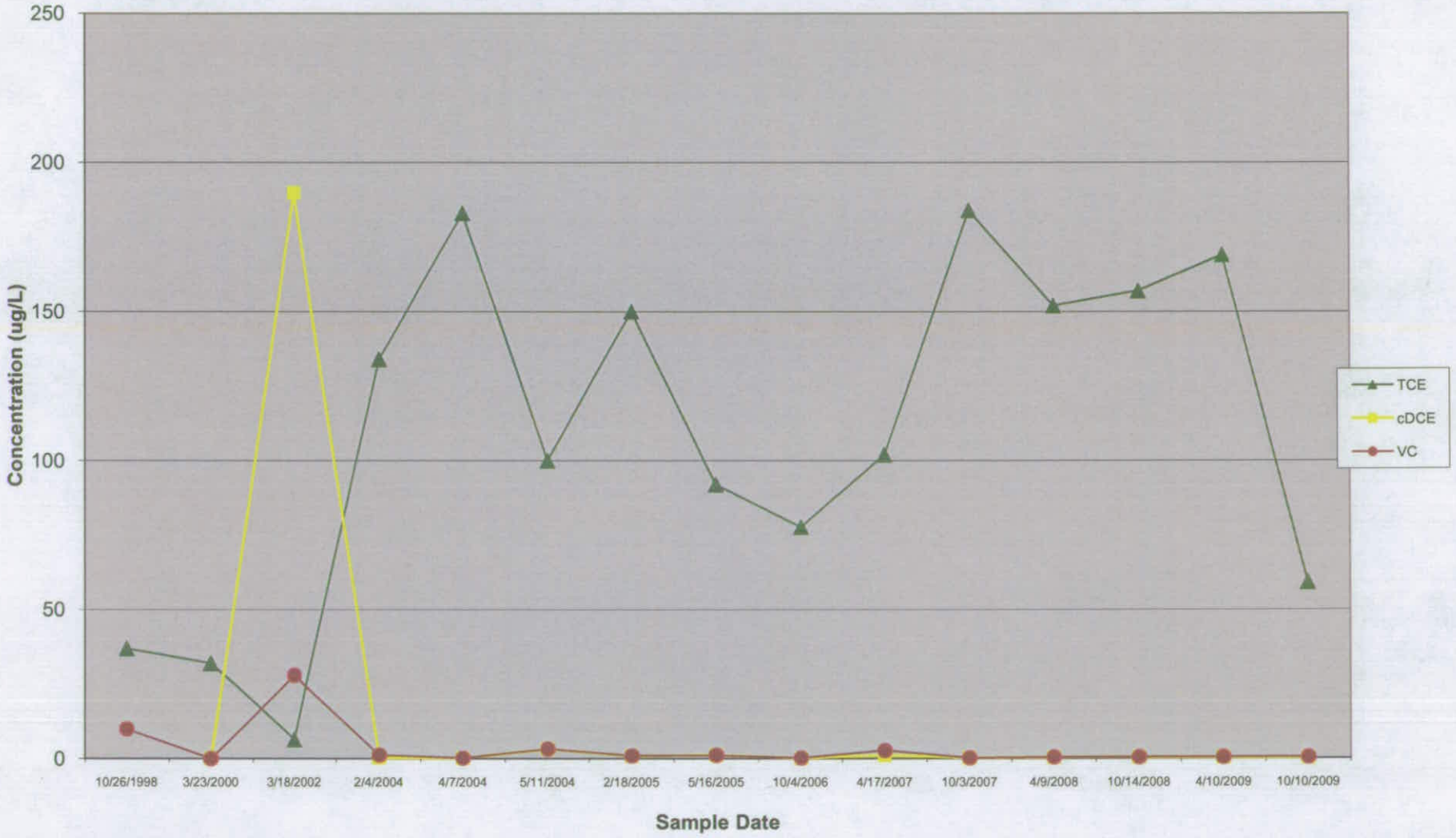
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PZ-03
SINGLE WELL - SOUTH-CENTRAL MI



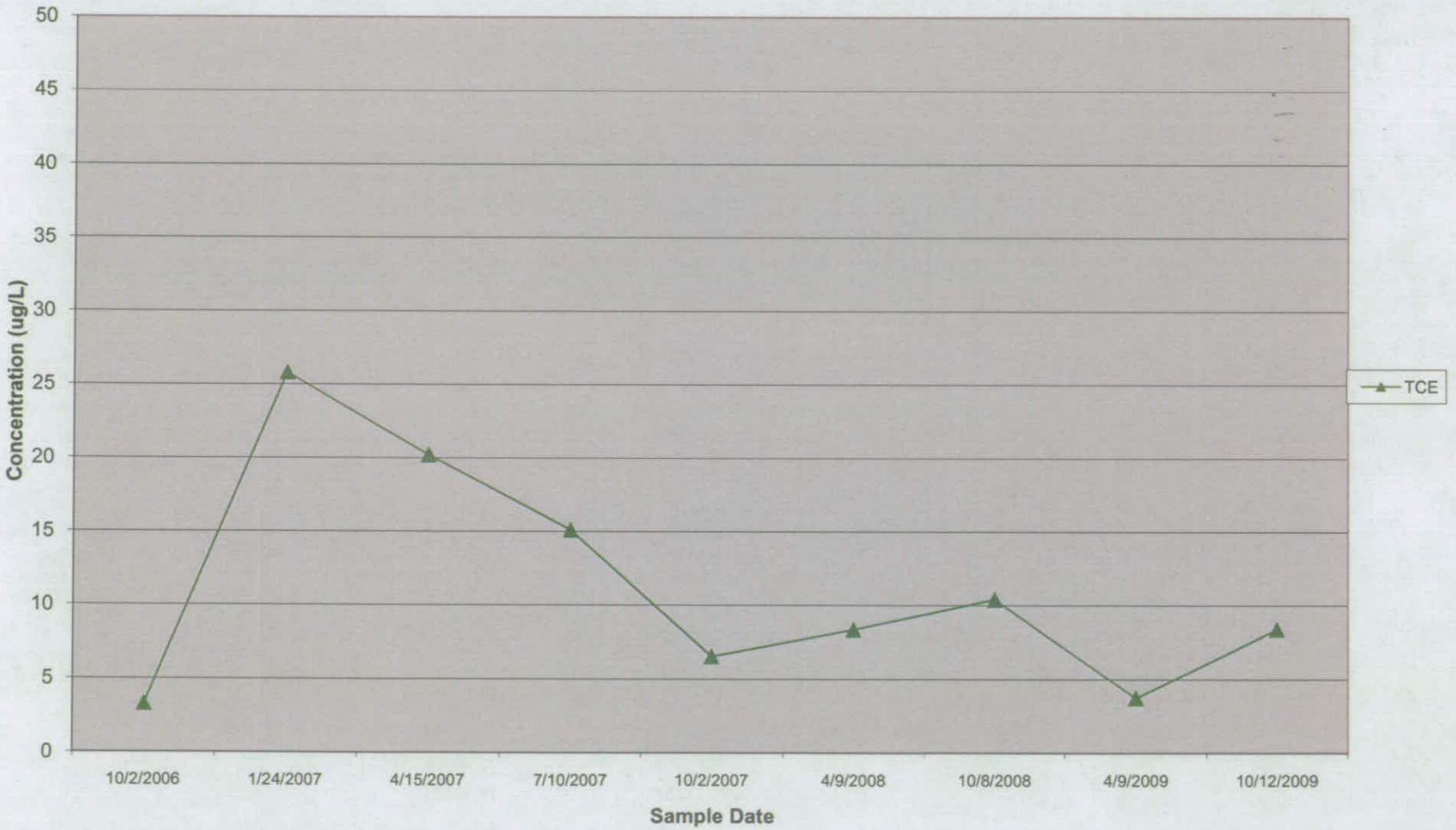
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MW-62
BLDG 835



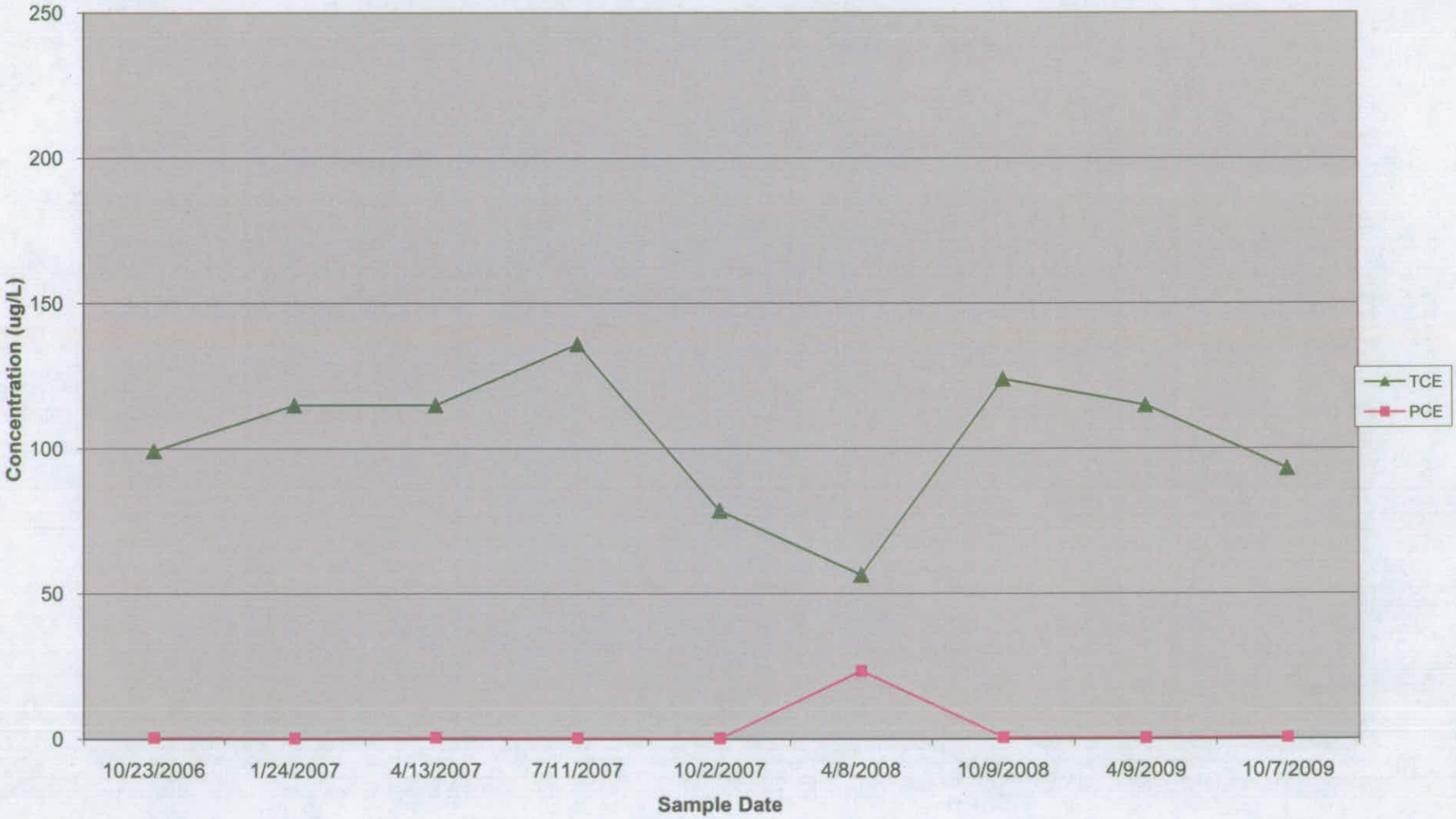
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MW-198
BLDG 835



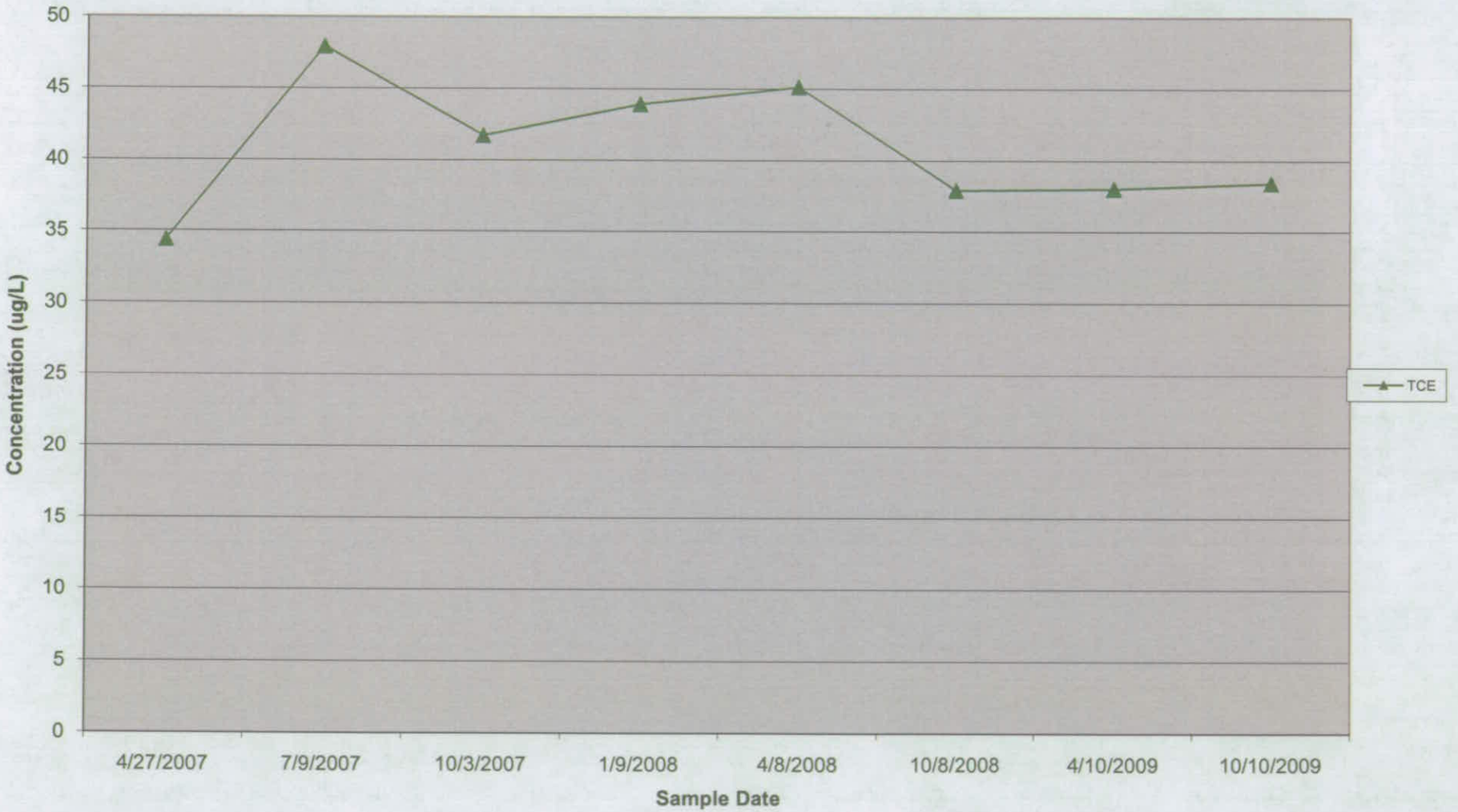
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MW-199B
BLDG 835



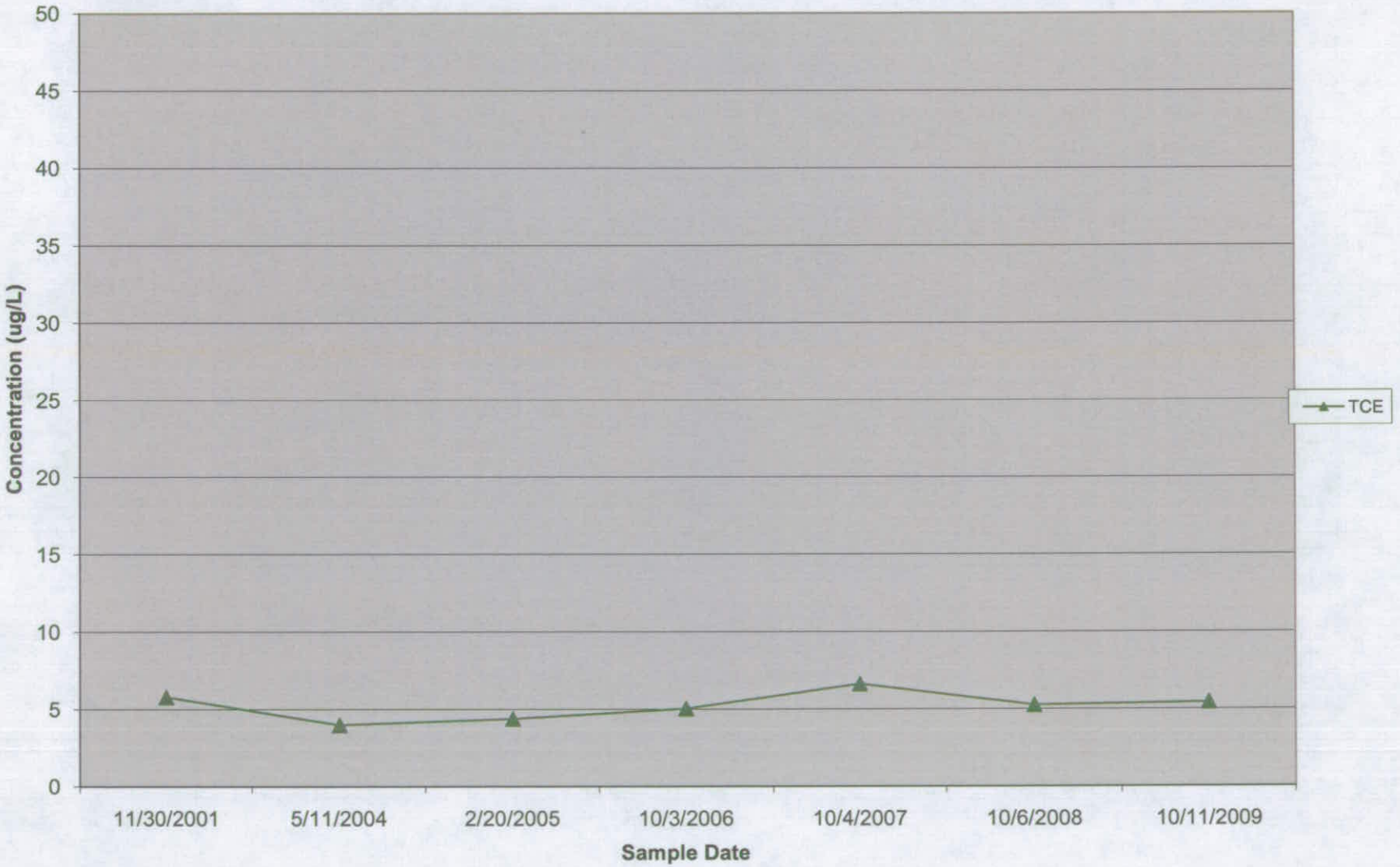
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MW-212
BLDG 835



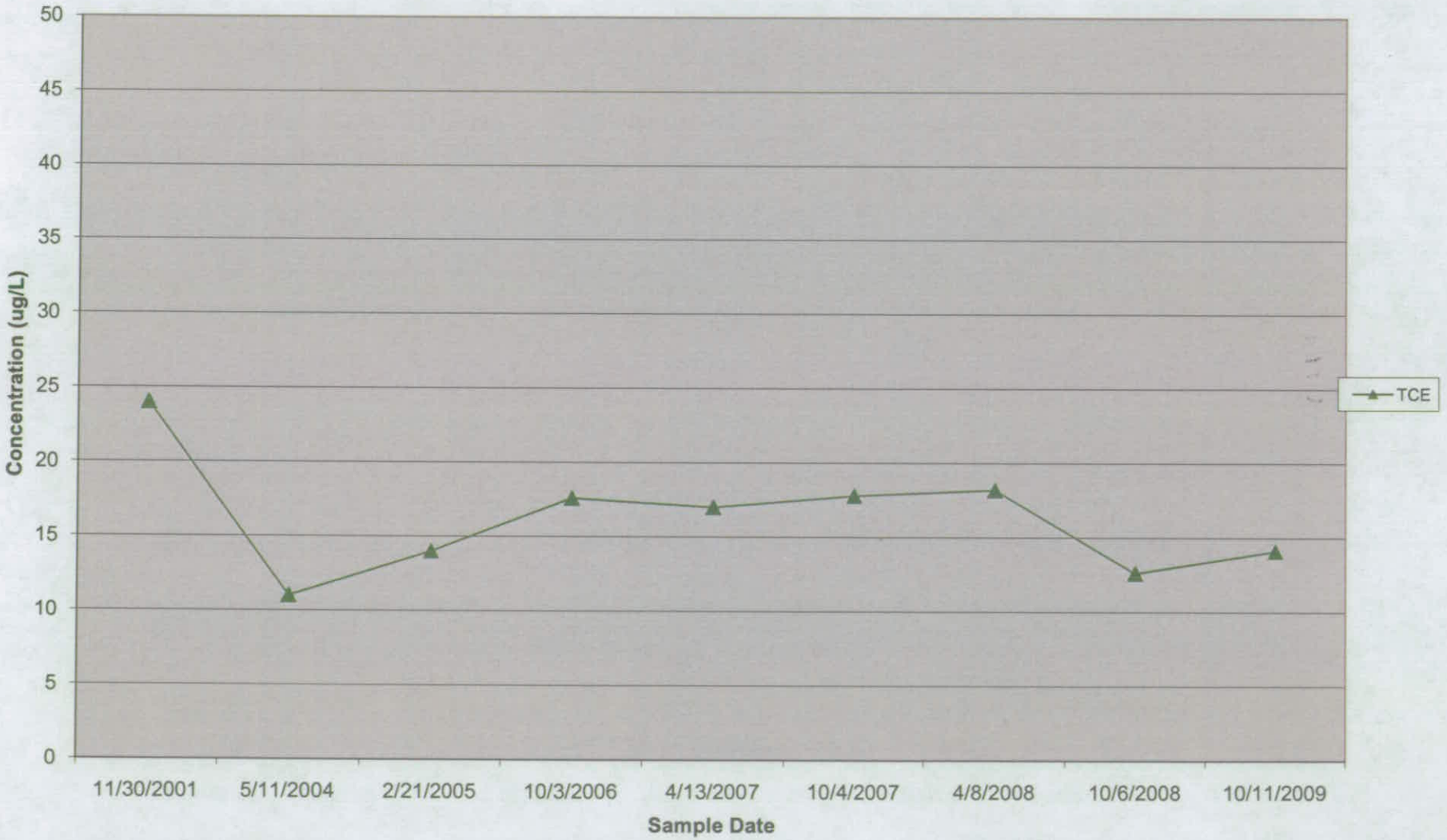
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MW-103
NORTH CENTRAL MI



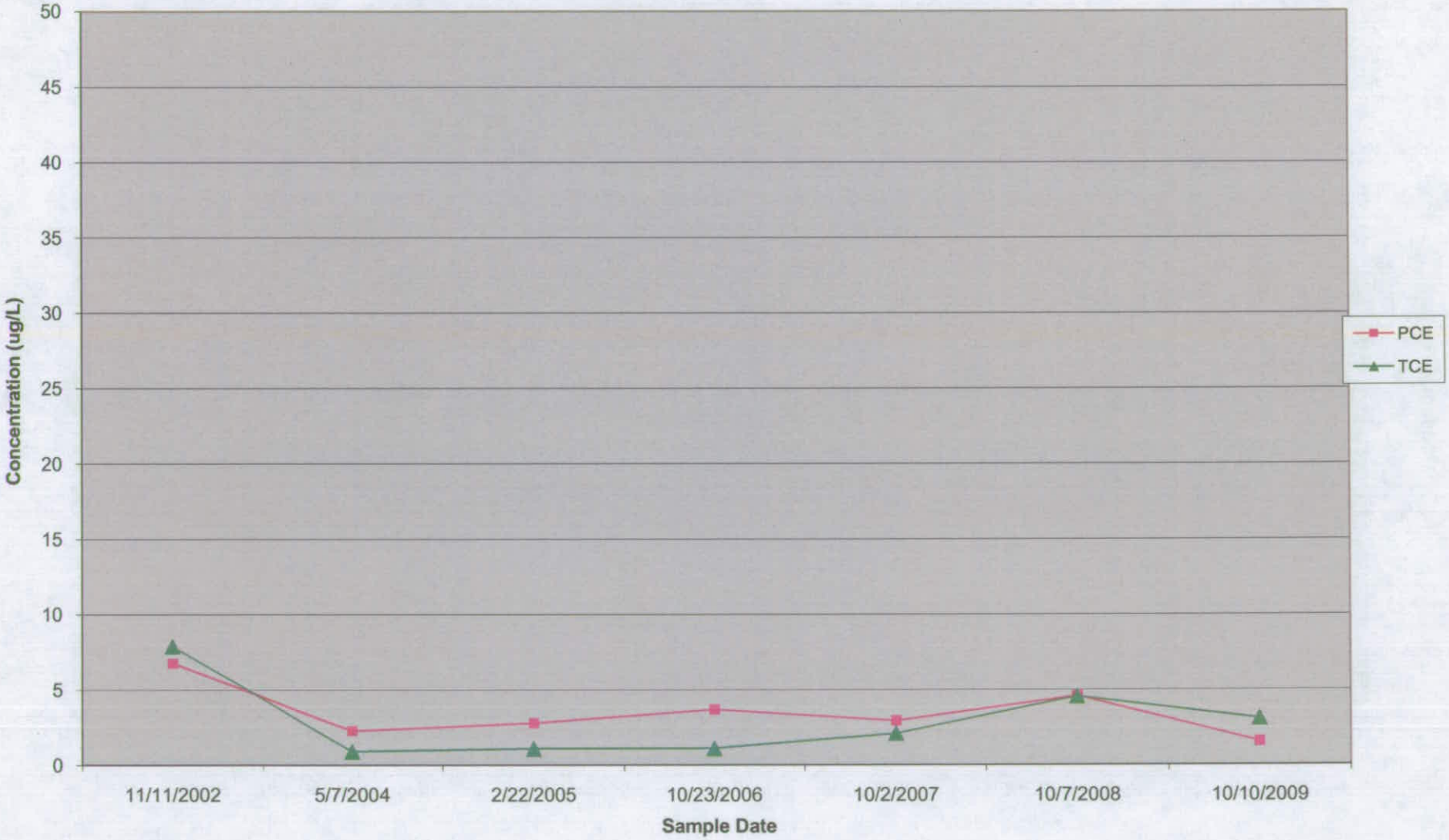
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MW-104
NORTH CENTRAL MI



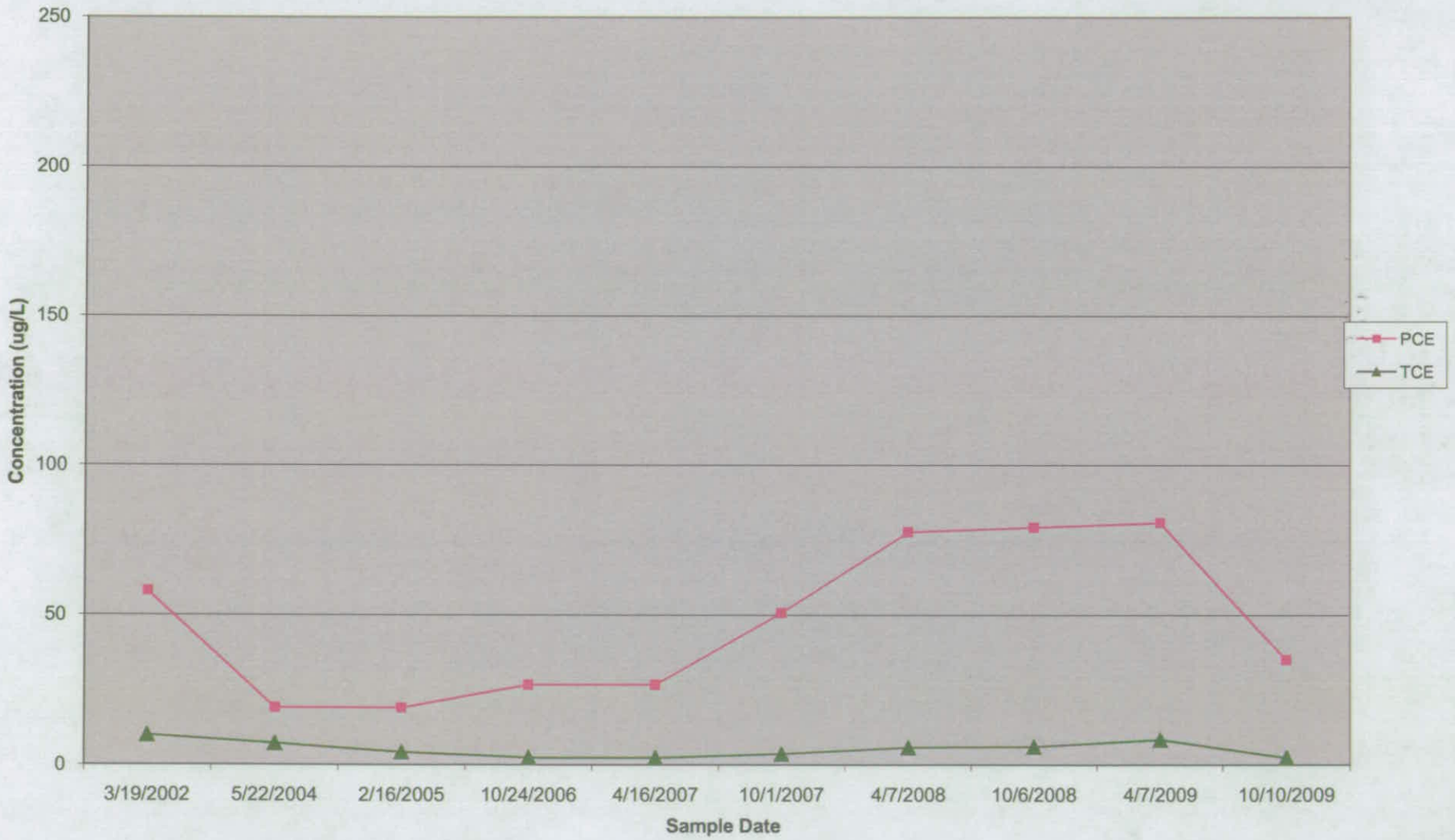
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MW-63B
SENTINEL



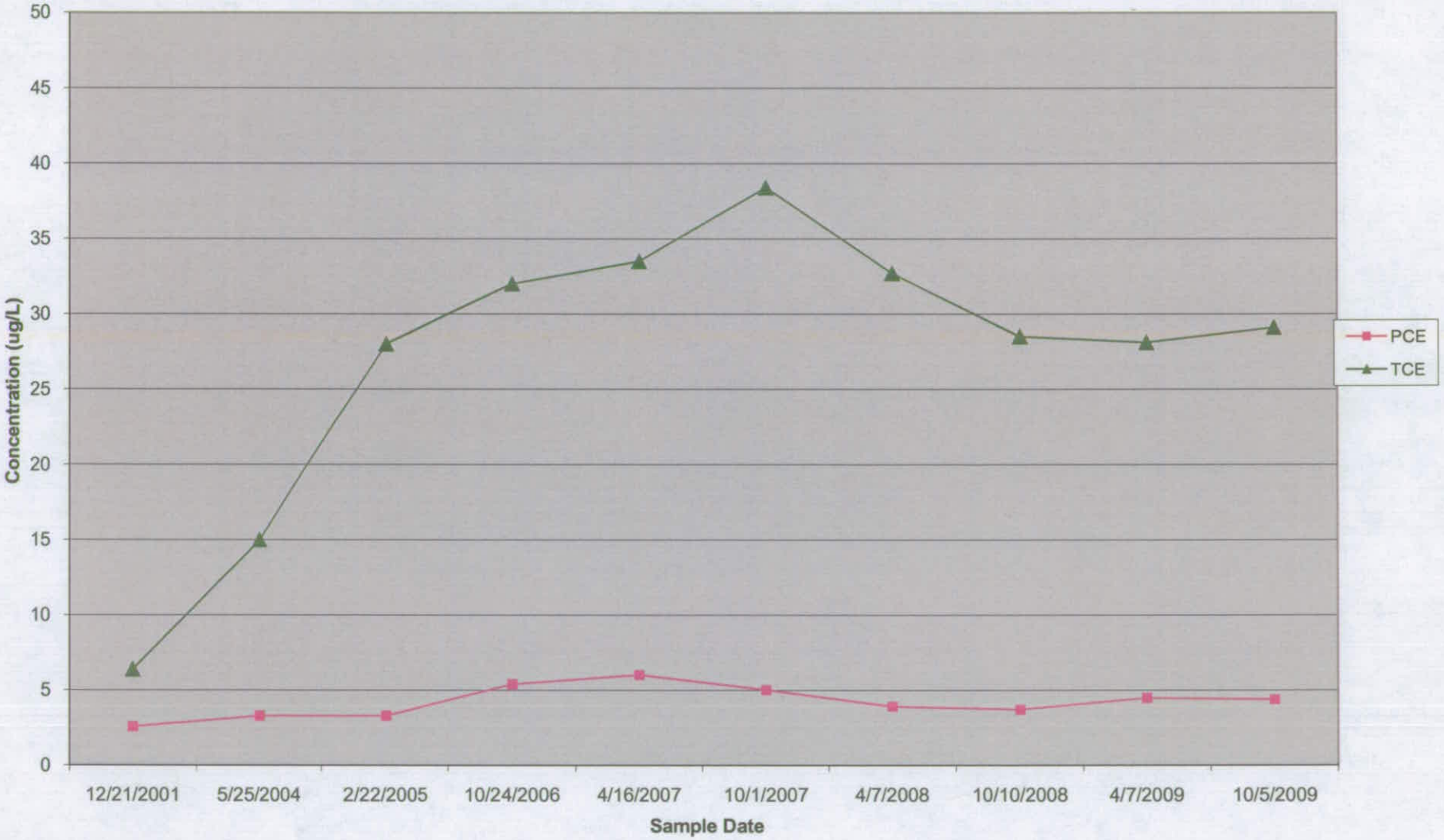
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MW-90
SENTINEL



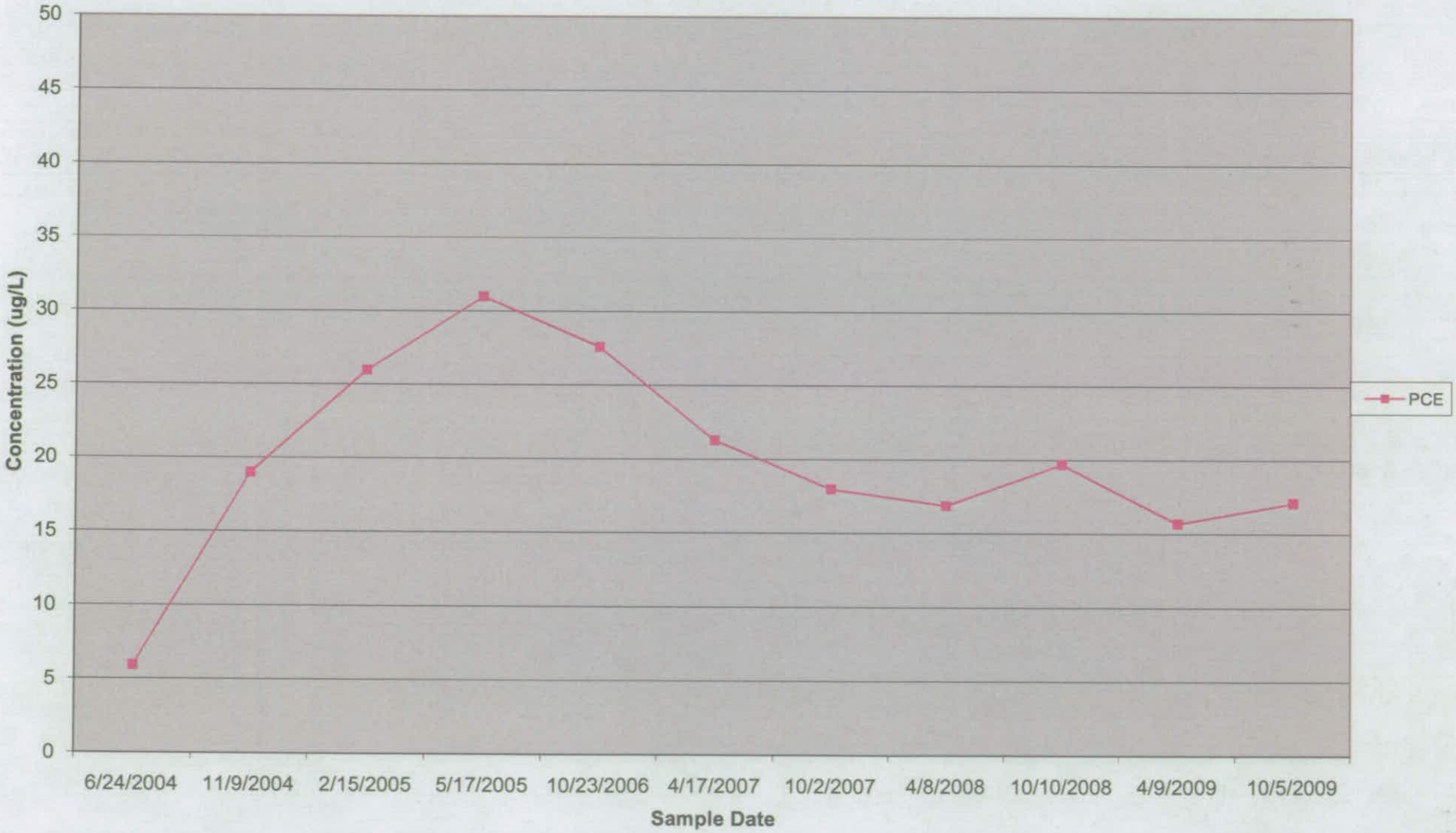
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MW-108
SENTINEL



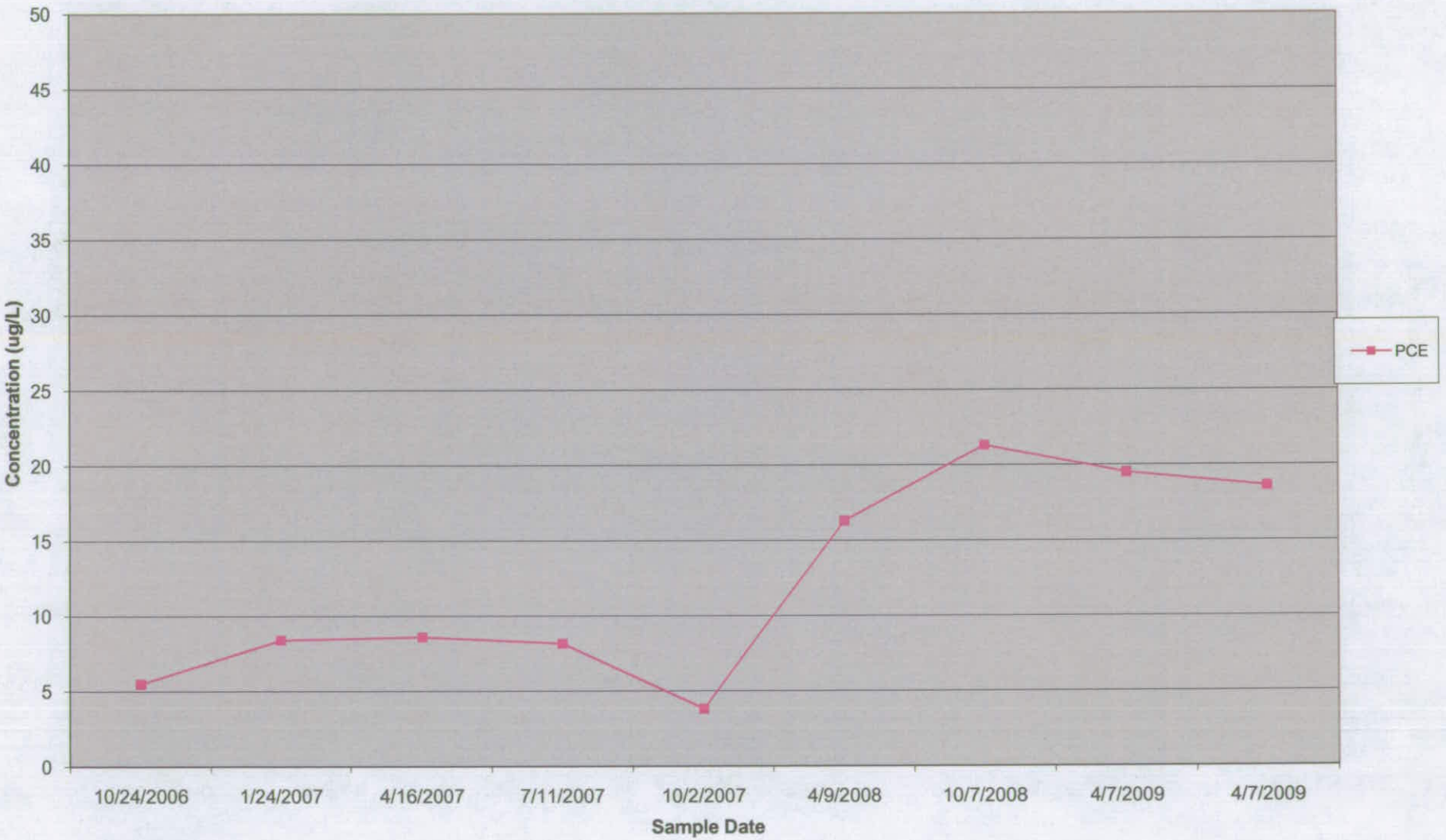
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MW-141
SENTINEL



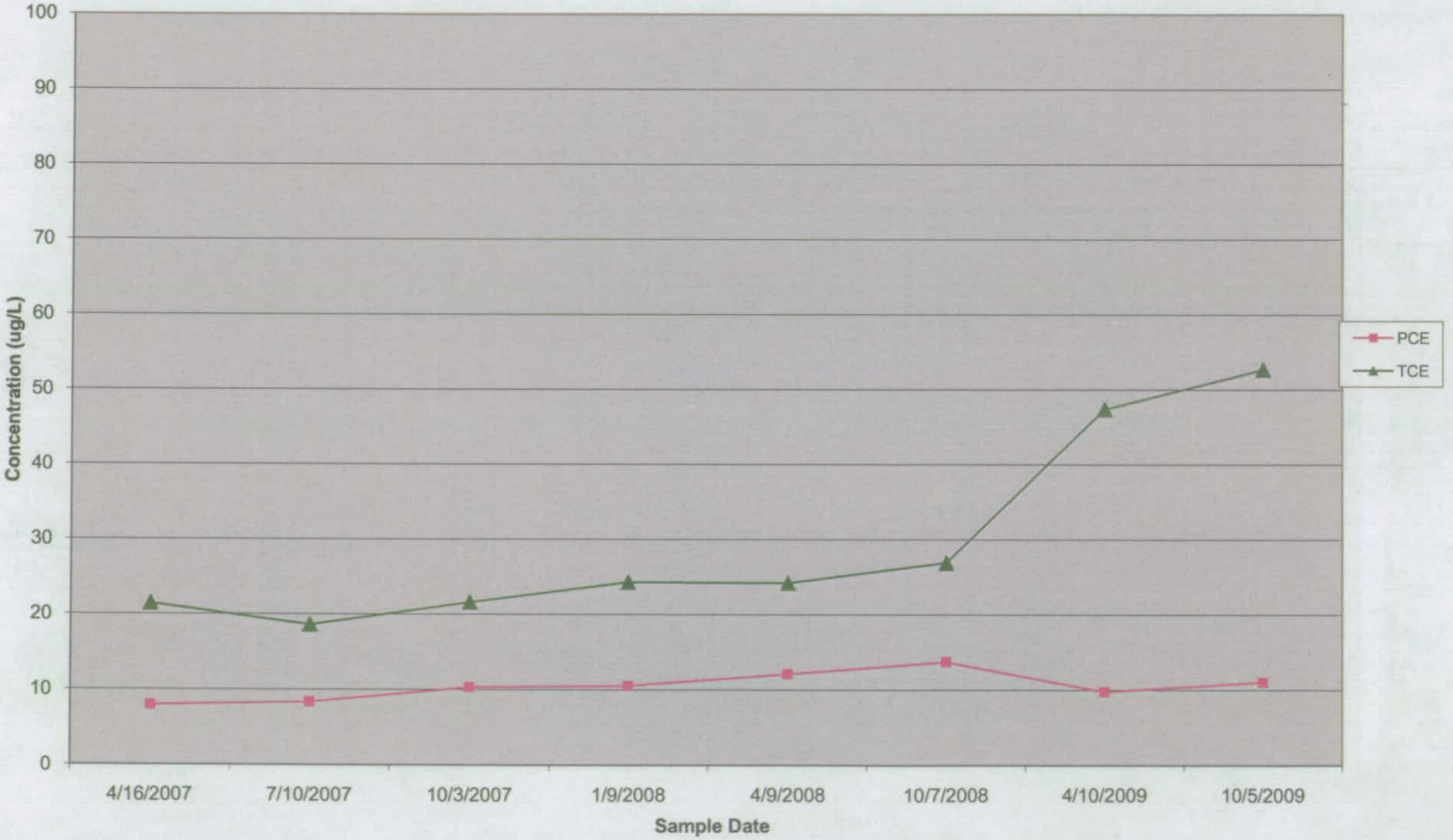
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MW-202B
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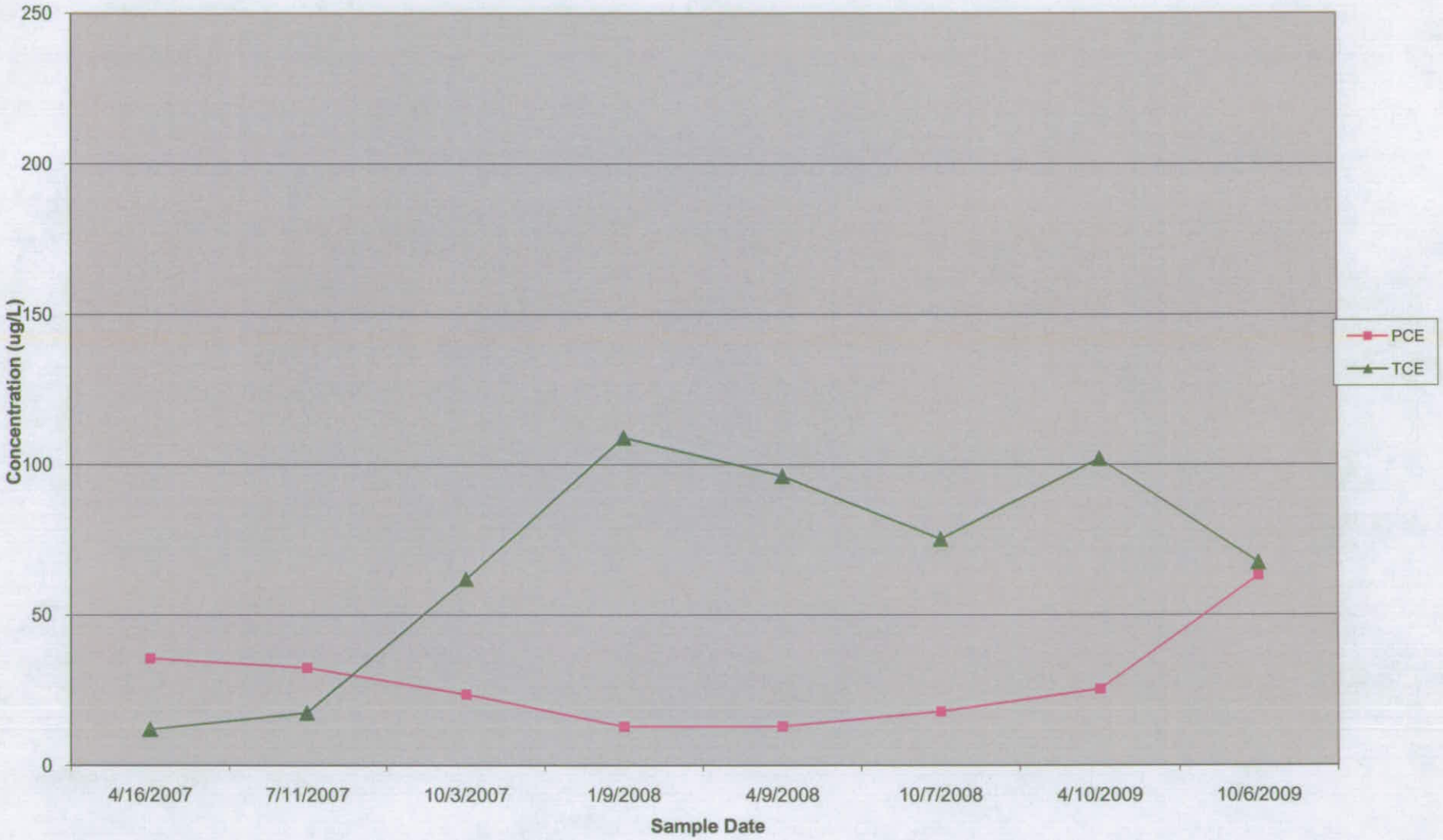
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MW-207A
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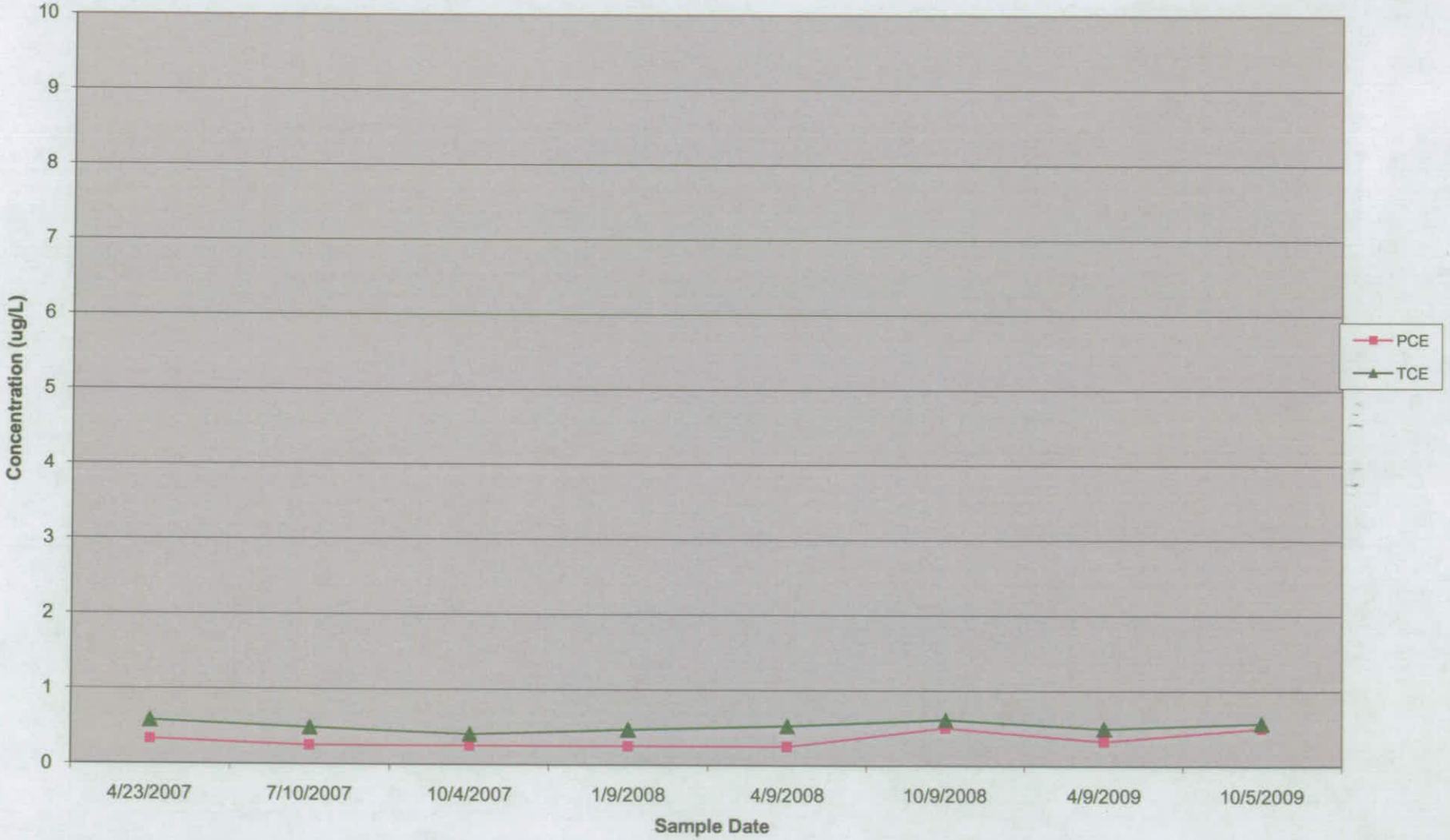
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MW-207B
SENTINEL



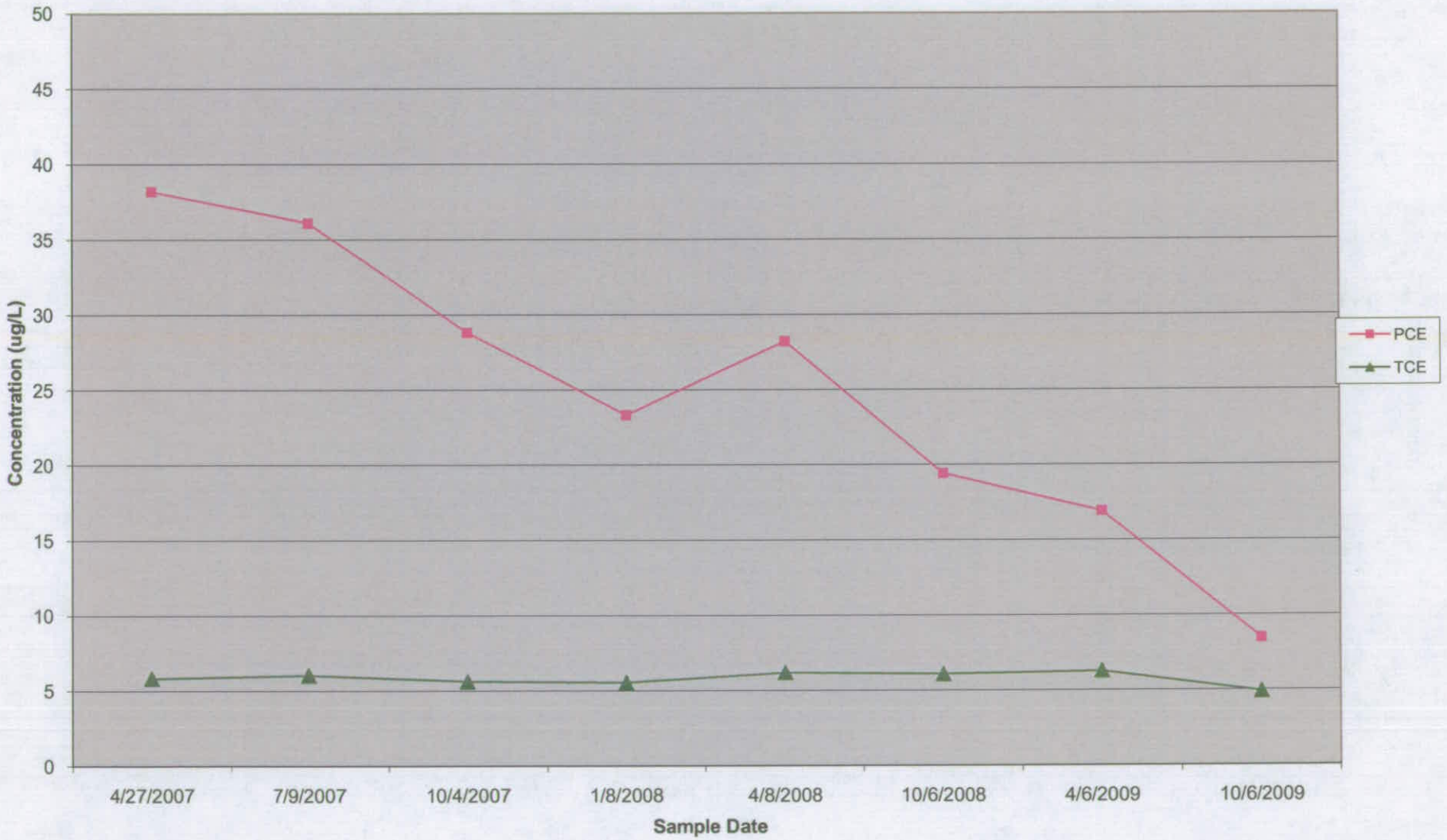
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MW-209A
SENTINEL



1017939

MW-210A
SENTINEL



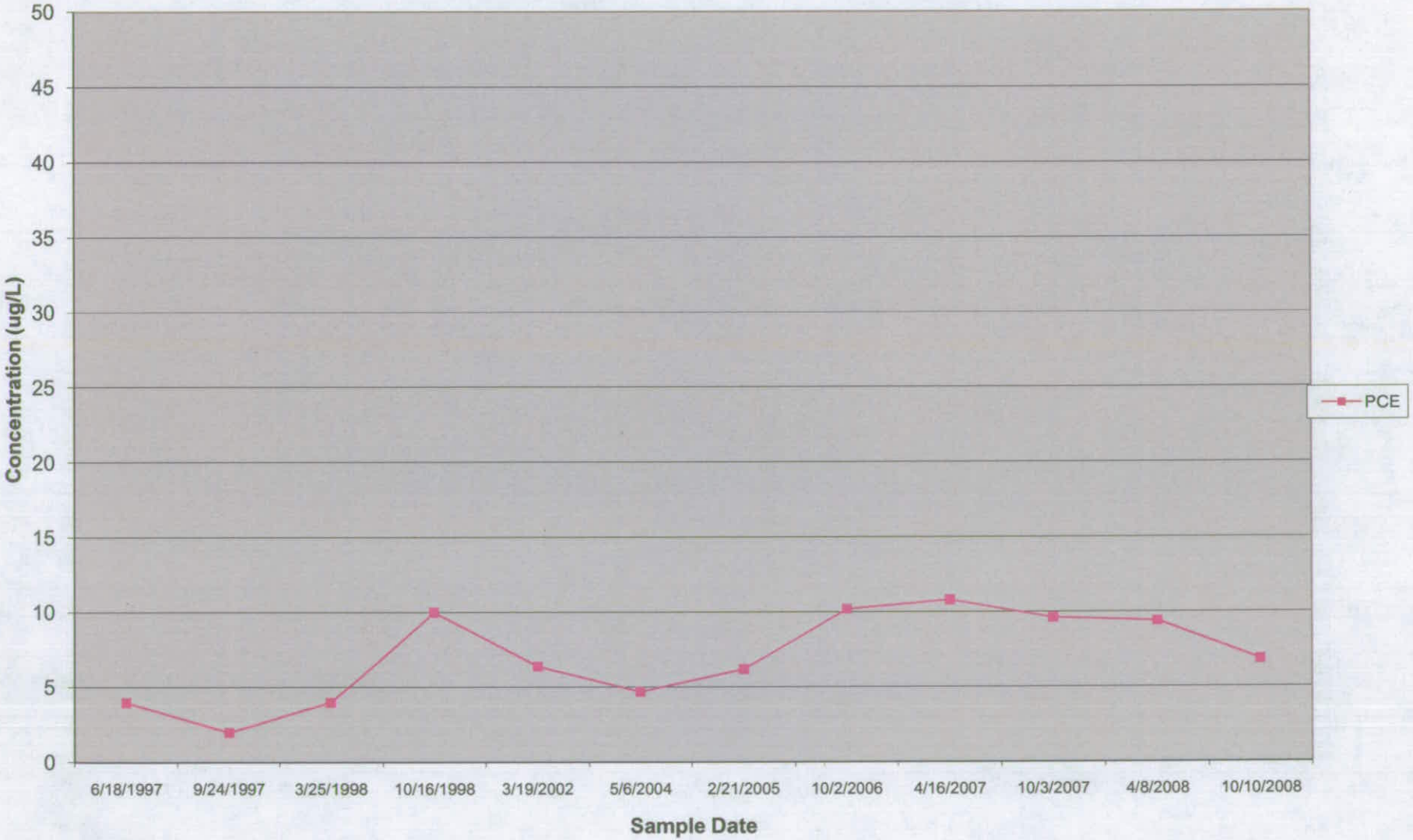
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MW-25A
SINGLE WELL - SOUTHEAST MI



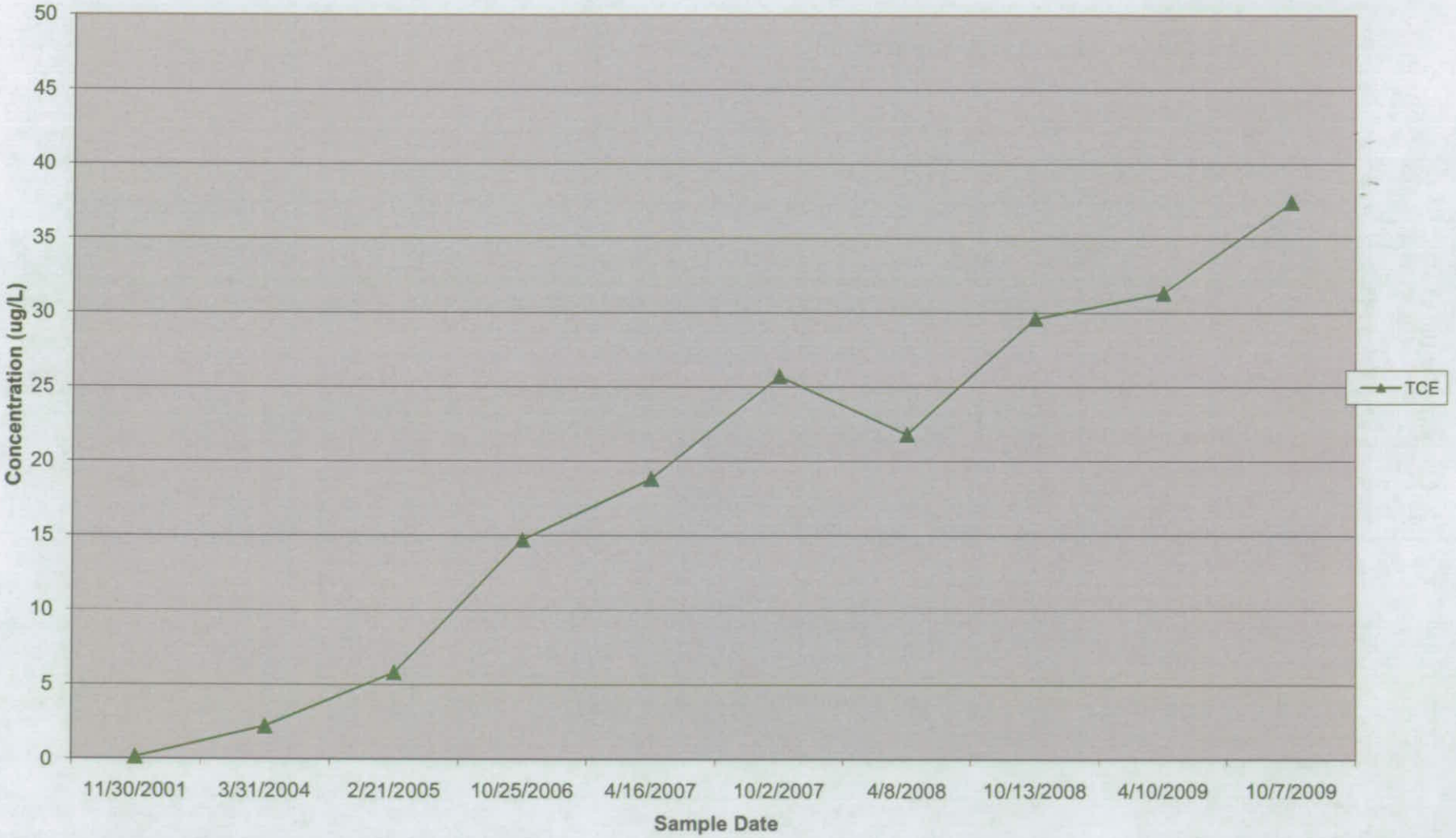
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MW-52
SINGLE WELL - SOUTHEAST MI



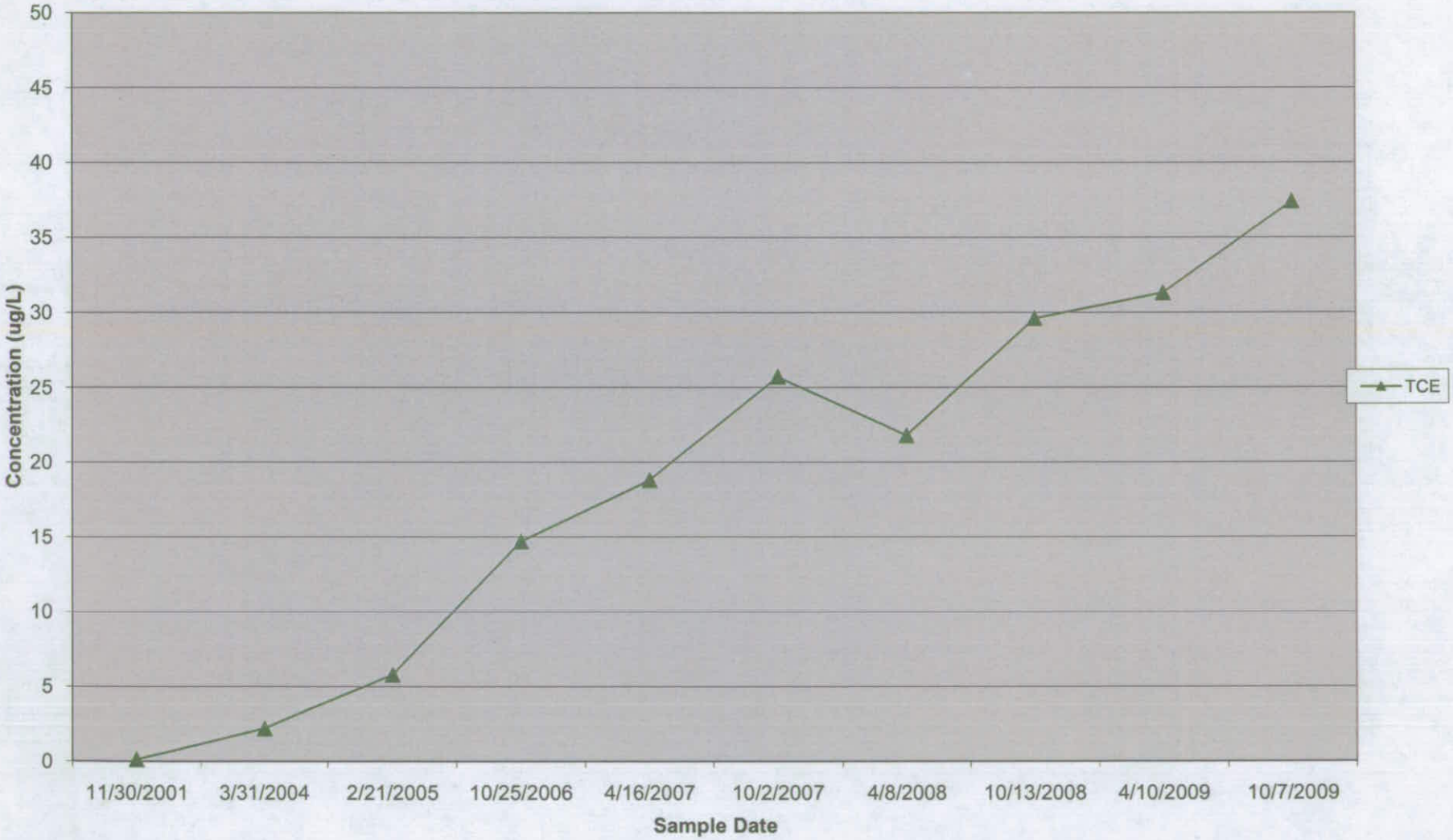
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MW-97
SINGLE WELL - SOUTHWEST MI



10173391

MW-97
SINGLE WELL - SOUTHWEST MI



10017392

FINAL PAGE

ADMINISTRATIVE RECORD

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